

1970

Water Resources Data for Idaho

Part 2. Water Quality Records



**UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY**

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

CALENDAR FOR WATER YEAR 1970

OCTOBER 1969

S	M	T	W	T	F	S
			1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30	31	

NOVEMBER 1969

S	M	T	W	T	F	S
						1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	29
30						

DECEMBER 1969

S	M	T	W	T	F	S
			1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30	31	

JANUARY 1970

S	M	T	W	T	F	S
				1	2	3
4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29	30	31

FEBRUARY 1970

S	M	T	W	T	F	S
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28

MARCH 1970

S	M	T	W	T	F	S
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30	31				

APRIL 1970

S	M	T	W	T	F	S
			1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30		

MAY 1970

S	M	T	W	T	F	S
					1	2
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28	29	30
31						

JUNE 1970

S	M	T	W	T	F	S
			1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30		

JULY 1970

S	M	T	W	T	F	S
			1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30	31	

AUGUST 1970

S	M	T	W	T	F	S
						1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	29
30	31					

SEPTEMBER 1970

S	M	T	W	T	F	S
			1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30		

1970

**Water Resources Data
for
Idaho**

Part 2. Water Quality Records



**UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY**

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

Prepared in cooperation with

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

Water resources records, 1970, for Idaho are in
the following reports of the U.S. Geological Survey:

1. Water Resources Data for Idaho
Part 1. Surface Water Records
2. Water Resources Data for Idaho
Part 2. Water Quality Records

Copies of this report may be obtained from
District Chief, Water Resources Division
U.S. Geological Survey
P.O. Box 036, Federal Building
550 West Fort Street
Boise, Idaho 83702

CONTENTS

	Page
List of water-quality stations, in downstream order, for which records are published.....	IV
Introduction.....	1
Cooperation.....	1
Definition of terms.....	2
Special networks and programs.....	6
Downstream order and station numbers.....	6
Collection and examination of data.....	7
Solutes.....	8
Temperature.....	8
Sediment.....	9
Water-supply papers.....	9
Selected references.....	10
Water quality records.....	12
Index.....	109

ILLUSTRATION

	Page
Figure 1. Map of Idaho showing locations of water-quality stations, 1970 water year.....	107

WATER-QUALITY STATIONS, IN DOWNSTREAM ORDER,
FOR WHICH RECORDS ARE PUBLISHED

[Letters after station name designate type of data: (c), chemical;
(t), water temperature; (s), sediment]

	Page
<u>THE GREAT BASIN</u>	
<u>GREAT SALT LAKE BASIN:</u>	
<u>BEAR RIVER BASIN</u>	
Bear River at Border, Wyo. (c).....	12
Rainbow inlet canal near Dingle (c).....	15
Bear Lake outlet canal near Paris (c).....	16
Bear River at Cornish, Utah (c).....	17
Analyses of samples collected at partial-record sites (c).....	18
 <u>UPPER COLUMBIA RIVER BASIN</u>	
<u>Columbia River:</u>	
<u>KOOTENAI RIVER BASIN</u>	
Kootenai River at Leonia (ct).....	20
Kootenai River near Copeland (cts).....	23
Kootenai River at Porthill (t).....	28
<u>PEND OREILLE RIVER BASIN</u>	
Clark Fork at Clark Fork (c).....	29
<u>SPOKANE RIVER BASIN</u>	
Coeur d'Alene River (head of Spokane River):	
South Fork Coeur d'Alene River at Smelterville (c).....	31
Spokane River:	
Hayden Creek below North Fork, near Hayden Lake (c).....	32
Spokane River above Liberty Bridge, near Otis Orchards, Wash. (c).....	35
 <u>SNAKE RIVER BASIN</u>	
Snake River above reservoir, near Alpine, Wyo. (c).....	36
<u>SALT RIVER BASIN</u>	
Salt River above reservoir, near Etna, Wyo. (c).....	37
Snake River near Heise (ct).....	38
<u>HENRYS FORK BASIN</u>	
Henrys Fork:	
Teton River near St. Anthony (ct).....	40
<u>WILLOW CREEK BASIN</u>	
Willow Creek near Ririe (c).....	41
<u>LAKE MILNER:</u>	
Lake Milner at Milner Dam (c).....	42
Snake River at King Hill (ct).....	54
Snake River near Hammett (c).....	57
<u>BRUNEAU RIVER BASIN</u>	
Bruneau River:	
Big Jacks Creek near Bruneau (c).....	59
Snake River at Marsing (c).....	60
<u>BOISE RIVER BASIN</u>	
Boise River:	
Mores Creek above Robie Creek, near Arrowrock Dam (t).....	62
Five Mile Creek near Nampa (c).....	63
Mason Creek at Caldwell (c).....	64
Indian Creek at Caldwell (c).....	65
Boise River at Notus (ct).....	66
Dixie Slough near Wilder (c).....	68
Boise River near Parma (c).....	69
<u>WEISER RIVER BASIN</u>	
Weiser River:	
West Branch Weiser River near Tamarack (t).....	71
Snake River at Weiser (ct).....	72
Snake River below Pine Creek, at Oxbow, Oreg. (t).....	75
Snake River at Hells Canyon Dam, Idaho-Oregon State line (c).....	76

SNAKE RIVER BASIN--Continued

Page

SALMON RIVER BASIN

East Fork Salmon River:

Little Boulder Creek above Baker Lake, near Clayton (c).....	78
Little Boulder Creek below Boulder Chain Lakes outlet, near Clayton (c).....	79
Little Boulder Creek near Clayton (ct).....	80
Big Boulder Creek at Livingston Mill, near Clayton (c).....	82
Jim Creek at Livingston Mill, near Clayton (c).....	83
Salmon River at White Bird (ct).....	84
Snake River near Anatone, Wash. (t).....	85

CLEARWATER RIVER BASIN

Selway River (head of Clearwater River):

Meadow Creek near Lowell (t).....	86
Clearwater River:	
North Fork Clearwater River near Canyon ranger station (t).....	87
North Fork Clearwater River at Ahsahka (t).....	88
Clearwater River near Peck (t).....	89
Clearwater River at Spalding (ct).....	90
Snake River near Clarkston, Wash. (c).....	91
Analyses of samples collected at partial-record sites (c).....	92
Analyses of samples collected at miscellaneous sites (c).....	104

WATER RESOURCES DATA FOR IDAHO, 1970

Part 2. Water Quality Records

INTRODUCTION

Water resources data for the 1970 water year for Idaho include records of data for the chemical and physical characteristics of surface and ground water. Records for a few pertinent water-quality stations and selected data on chemical quality of ground water in bordering States are also included. The records were collected by the Water Resources Division of the U.S. Geological Survey under the direction of W. L. Burnham, district chief. These data represent that portion of the National Water Data System collected by the U.S. Geological Survey and cooperating State and Federal agencies in Idaho.

The Geological Survey has published records of chemical quality, suspended sediment, and water temperatures since 1941 in an annual series of water-supply papers entitled, "Quality of Surface Waters of the United States." Beginning with the 1964 water year, water-quality records also have been released by the Geological Survey in annual reports on a State-boundary basis. Distribution of these reports is limited; they are designed primarily for rapid release of data shortly after the end of the water year to meet local needs. These records will be published later in Geological Survey water-supply papers.

COOPERATION

This report was prepared by the U.S. Geological Survey under cooperative agreement with the following organization:

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

Agencies furnishing assistance were:

Environmental Protection Agency
Corps of Engineers, Department of the Army
Forest Service, U.S. Department of Agriculture
U.S. Department of State
Bureau of Commercial Fisheries, U.S. Department of the Interior

DEFINITION OF TERMS

Definition of terms related to water-quality and hydrologic data, as used in this report are defined as follows:

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

Bed material is the shifting portion of fragmented alluvial material of which the streambed is composed.

Biochemical oxygen demand (BOD) is the amount of oxygen required by bacteria while stabilizing decomposable organic matter under aerobic conditions.

Cfs-day is the volume of water represented by a flow of 1 cubic foot per second for 24 hours. It is equivalent to 86,400 cubic feet, 1.983471 acre-feet, or 646,317 gallons.

Chemical oxygen demand (COD) indicates the quantity of oxidizable compounds present in a water and will vary with water compositions, concentration of reagent, temperature, period of contact, and other factors.

Coliform organisms are a group of bacteria used as an indicator of the sanitary quality of the water. The number of coliform colonies per 100 milliliters is determined by the immediate or delayed incubation membrane filter method.

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

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

Mean discharge is the arithmetic mean of individual daily mean discharges during a specific period.

Instantaneous discharge is the discharge at a particular instant of time. If this discharge is reported instead of the daily mean, the heading of the discharge column in the tables is "Discharge (cfs)."

Drainage area of a stream at a specified location is that area, measured in horizontal plane, enclosed by a topographic divide from which direct surface runoff from precipitation normally drains by gravity into the river above the specified point.

Drainage basin is a part of the surface of the earth that is occupied by a drainage system, which consists of a surface stream or body of impounded surface water together with all tributary surface stream and bodies of impounded surface water.

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

Hardness of water is a physical-chemical characteristic attributable to the presence of alkaline earths (principally calcium and magnesium) and is expressed as equivalent calcium carbonate (CaCO_3).

Methylene blue active substance (MBAS) is a measure of apparent detergents. This determination depends on the formation of a blue color when methylene blue dye reacts with synthetic detergent compounds.

Micromgrams per liter (ug/l,UG/L) is a more precise unit for expressing the concentration of chemical constituents in solution. One thousand micrograms per liter is equivalent to one milligram per liter. See below.

Milligrams per liter (mg/l,MG/L) is a unit for expressing the concentration of chemical constituents in solution. Milligrams per liter represents the weight of solute per unit volume of water. Milligrams or micrograms per liter may be converted to milliequivalents (one thousandth of a gram-equivalent weight of a constituent) per liter by multiplying by the factors in table 1 below. Concentration of suspended sediment also is expressed in mg/l, and is based on the weight of sediment per liter of water-sediment mixture. Sediment concentrations are determined in the laboratory as parts per million (ppm) and are converted to mg/l by using the factors in table 2, page 4.

Table 1.--Factors for conversion of chemical constituents in milligrams or micrograms per liter to milliequivalents per liter

<u>Ion</u>	<u>Multi- ply by</u>	<u>Ion</u>	<u>Multi- ply by</u>
Aluminum (Al^{+3})*.....	0.11119	Iodide (I^{-1}).....	0.00788
Ammonia as NH_4^{+1}	.05544	Iron (Fe^{+3})*.....	.05372
Barium (Ba^{+2}).....	.01456	Lead (Pb^{+2})*.....	.00965
Bicarbonate (HCO_3^{-1}).....	.01639	Lithium (Li^{+1})*.....	.14411
Bromide (Br^{-1}).....	.01251	Magnesium (Mg^{+2}).....	.08226
Calcium (Ca^{+2}).....	.04990	Manganese (Mn^{+2})*.....	.03640
Carbonate (CO_3^{-2}).....	.03333	Nickel (Ni^{+2})*.....	.03406
Chloride (Cl^{-1}).....	.02821	Nitrate (NO_3^{-1}).....	.01613
Chromium (Cr^{+6})*.....	.11539	Nitrite (NO_2^{-1}).....	.02174
Cobalt (Co^{+2})*.....	.03394	Phosphate (PO_4^{-3}).....	.03159
Copper (Cu^{+2})*.....	.03148	Potassium (K^{+1}).....	.02557
Cyanide (CN^{-1})*.....	.03844	Sodium (Na^{+1}).....	.04350
Fluoride (F^{-1}).....	.05264	Strontium (Sr^{+2})*.....	.02283
Hydrogen (H^{+1}).....	.99209	Sulfate (SO_4^{-2}).....	.02082
Hydroxide (OH^{-1}).....	.05880	Zinc (Zn^{+2})*.....	.03060

*Constituent reported in micrograms per liter; multiply by factor and divide results by 1,000.

Table 2.--Factors for conversion of sediment concentration in parts per million to milligrams per liter*
(All values calculated to three significant figures)

Range of concentration (ppm)	Multi- ply by	Range of concentration (ppm)	Multi- ply by
0 - 15,900	1.00	322,000 - 341,000	1.26
16,000 - 46,800	1.02	342,000 - 361,000	1.28
46,900 - 76,500	1.04	362,000 - 380,000	1.30
76,600 - 105,000	1.06	381,000 - 399,000	1.32
106,000 - 133,000	1.08	400,000 - 416,000	1.34
134,000 - 159,000	1.10	417,000 - 434,000	1.36
160,000 - 185,000	1.12	435,000 - 451,000	1.38
186,000 - 210,000	1.14	452,000 - 467,000	1.40
211,000 - 233,000	1.16	468,000 - 483,000	1.42
234,000 - 256,000	1.18	484,000 - 498,000	1.44
257,000 - 279,000	1.20	499,000 - 514,000	1.46
280,000 - 300,000	1.22	515,000 - 528,000	1.48
301,000 - 321,000	1.24	529,000 - 542,000	1.50

*Based on water density of 1.000 g/ml and sediment density of 2.65 g/cc.

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

Particle size is the diameter, in millimeters (mm), of suspended sediment or bed material determined by sieve, sedimentation (fall diameter), or optical methods.

Particle size classification, used in this report, agrees with recommendations made by the American Geophysical Union Subcommittee on Sediment Terminology. The classification is as follows:

Clay: Smaller than 0.004 mm.
Silt: Between 0.004 and 0.062 mm.
Sand: Between 0.062 and 2.0 mm.
Gravel: Between 2.0 and 64.0 mm.

The particle size distributions given in this report are not necessarily representative of the particle sizes of sediment in transport in the natural stream. Most of the organic matter is removed and the sample is subjected to mechanical and chemical dispersion before analysis of the silt and clay.

Plankton is the floating (or weakly swimming) animal or plant life in a body of water consisting chiefly of minute plants (as diatoms and blue-green algae) and of minute animals (as protozoan, entomostracans, and various larvae).

Sediment is solid material that originates mostly from disintegrated rocks and is transformed by, suspended in, or deposited from water; it includes chemical and biochemical precipitates and decomposed organic material such as humus. The quantity, characteristics, and cause of the occurrence of sediment in streams are influenced by environmental factors. Some major factors are degree of slope, length of slope, soil characteristics, land usage, and quantity and intensity of precipitation.

Suspended sediment is the sediment that at any given time is maintained in suspension by the upward components of turbulent currents or that exists in suspension as a colloid.

Suspended-sediment discharge is the rate at which dry weight of sediment passes a section of a stream or is the quantity of sediment, as measured by dry weight, or by volume, that is discharged in a given time. It is computed by multiplying discharge times mg/l times 0.0027.

Total sediment discharge or total sediment load is the sum of the suspended-sediment discharge and the bedload discharge. It is the total quantity of sediment, as measured by dry weight or volume, that is discharged during a given time (Colby and Hembree, 1955).

Suspended-sediment concentration is the velocity-weighted concentration of suspended sediment in the sampled zone (from the water surface to a point approximately 0.3 ft above the bed) expressed as milligrams of dry sediment per liter of water-sediment mixture (mg/l).

Mean concentration is the time-weighted concentration of suspended sediment passing a stream section during a 24-hour day.

Sodium adsorption ratio (SAR) is the expression of relative activity of sodium ions in exchange reactions with soil and is an index of sodium or alkali hazard to the soil. This ratio should be known especially for water used for irrigating farmland.

Solute is any substance derived from the atmosphere, vegetation, soil, or rocks that is dissolved in water.

Specific conductance is a measure of the ability of a water to conduct an electrical current and is expressed in micromhos per centimeter at 25° C. Because the specific conductance is related to the number and specific chemical types of ions in solution, it can be used for approximating the dissolved-solids content in the water. Commonly, the amount of dissolved-solids (in milligrams per liter) is about 65 percent of the specific conductance (in micromhos). This relation is not constant from stream to stream or from well to well, and it may even vary in the same source with changes in the composition of the water.

Streamflow is the discharge that occurs in a natural channel. Although the term "discharge" can be applied to the flow of a canal, the word "streamflow" uniquely describes the discharge in a surface stream course. The term "streamflow" is more general than "runoff." Streamflow may be applied to discharge whether or not it is affected by diversion or regulation.

Thermograph is a thermometer that continuously and automatically records, on a chart, the water temperature of a stream. "Temperature recorder" is the term used to indicate the location of the thermograph or a digital mechanism that automatically records water temperature on paper tape.

Time-weighted average is computed by multiplying the number of days in the sampling period by the concentrations of individual constituents for the corresponding period and dividing the sum of the products by the total number of days. A time-weighted average represents the composition of water that would be contained in a vessel or reservoir that had received equal quantities of water from the stream each day for the water year.

Tons per acre-foot indicates the dry weight of dissolved solids in 1 acre-foot of water. It is computed by multiplying the concentration in milligrams per liter by 0.00136.

Tons per day is the quantity of a substance in solution or suspension that passes a stream section during a 24-hour day.

Weighted average is used in this report to indicate discharge-weighted average. It is computed by multiplying the discharge for a sampling period by the concentrations of individual constituents for the corresponding period and dividing the sum of the products by the sum of the discharges. A discharge-weighted average approximates the composition of water that would be found in a reservoir containing all the water passing a given location during the water year after thorough mixing in the reservoir.

SPECIAL NETWORKS AND PROGRAMS

Some of the stations for which data are published in this report are included in special networks and programs. These stations are identified by their title, set in parentheses, under the station name.

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

International Hydrological Decade (IHD) River Stations provide a general index of runoff and materials in the water balance (discharge of water, and dissolved and transported solids) of the world. In the United States, IHD Stations provide indices of runoff and the general distribution of water in the principal river basins of the conterminous United States and Alaska.

Irrigation network stations are water-quality stations located at or near certain streamflow gaging stations west of the main stem of the Mississippi River. Data collected at these stations are used to evaluate the chemical quality of surface waters used for irrigation and the changes resulting from the drainage of irrigated lands. Prior to water year 1966, the data for these stations were published in the annual water-supply paper series, "Quality of Surface Water for Irrigation, Western States."

Pesticide program is a network of regularly sampled water-quality stations where additional monthly samples are collected to determine the concentration and distribution of pesticides in streams whose waters are used for irrigation or in streams in areas where potential contamination could result from the application of the commonly used insecticides and herbicides.

Radiochemical program is a network of regularly sampled water-quality stations where additional samples are collected twice a year (at high and low flow) to be analyzed for radioisotopes. The streams that are sampled represent major drainage basins in the conterminous United States.

DOWNSTREAM ORDER AND STATION NUMBER

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

As an added means of identification, each water-quality station, gaging station, and partial-record station has been assigned a station number. These are in the same downstream order used in this report. In assigning station numbers, no distinction is made between partial-record and continuous-record stations; therefore, the station number for a partial-record station indicates downstream order position in a list made up of both types of stations. Water-quality stations located at or near gaging stations or partial-record stations have the same number as the gaging or partial-record station. Gaps are left in the numbers to allow for new stations that may be established, hence the numbers are not consecutive. The complete 8-digit number for each station, such as 13037500, includes the part number "13" and a 6-digit station number. This complete number appears just to the left of the station name. In this report, the records are listed in downstream order by parts. All records for a drainage basin encompassing more than one State could be arranged in downstream order by assembling pages from the various State reports by station number to include all records in the basin.

COLLECTION AND EXAMINATION OF DATA

Water samples for analyses usually are collected at or near gaging stations. The discharge records at these stations are used in conjunction with the computations of the chemical constituents and sediment loads. Discharge records for streams in Idaho have been released in the report, "Water Resources Data for Idaho, 1970, Part 1. Surface Water Records."

The data in this report include a description of the sampling station and tabulations of the samples analyzed. The description of the sampling station gives the location, drainage area, periods of record for the various water-quality data, extremes of the pertinent data, and general remarks, in a format similar to that used for streamflow gaging stations.

Data on the quality of surface water were collected from designated sampling sites (see fig. 1) at predetermined intervals such as once daily, weekly, monthly or less frequently. Whereas at some sites it was necessary to continuously record data.

Water-quality information is presented for chemical quality, biological, microbiological, water temperature, and fluvial sediment. Chemical quality includes concentrations of individual dissolved constituents and certain properties or characteristics such as hardness, sodium adsorption ratio, specific conductance, and pH. The biological information includes qualitative and quantitative analyses of plankton, bottom organisms, and particulate inorganic and amorphous matter present. Microbiological information includes quantitative identification of certain bacteriological indicator organisms. Water-temperature data represent once-daily observations except for stations where a continuous temperature recorder furnishes information from which daily minimums and maximums are obtained. Fluvial-sediment information is given for suspended-sediment discharges and concentrations and for particle-size distribution of suspended sediment and bed material.

Prior to the 1968 water year, data for chemical constituents and concentrations of suspended sediment were reported in parts per million (ppm) and water temperatures were reported in degrees Fahrenheit (°F). In October 1967, the U.S. Geological Survey began to use the metric system; data for chemical constituents and concentrations of suspended sediment are now reported in milligrams per liter (mg/l) and water temperatures are given in degrees Celsius (centigrade, °C). In waters with a density of 1.000 g/ml (grams per milliliter), parts per millions and milligrams per liter can be considered equal. In waters with a density greater than 1.000 g/ml, values

in parts per million should be multiplied by the density to convert to milligrams per liter. (See table 2 on pg. 4.) To convert temperature in degrees Fahrenheit to degrees Celsius, see table 3, below.

Table 3.--Degrees Fahrenheit (°F) to degrees Celsius (°C)*
(Temperature reported to nearest 0.5° C)

°F	°C	°F	°C	°F	°C	°F	°C	°F	°C
32	0.0	50	10.0	68	20.0	86	30.0	104	40.0
33	.5	51	10.5	69	20.5	87	30.5	105	40.5
34	1.0	52	11.0	70	21.0	88	31.0	106	41.0
35	1.5	53	11.5	71	21.5	89	31.5	107	41.5
36	2.0	54	12.0	72	22.0	90	32.0	108	42.0
37	3.0	55	13.0	73	23.0	91	33.0	109	43.0
38	3.5	56	13.5	74	23.5	92	33.5	110	43.5
39	4.0	57	14.0	75	24.0	93	34.0	111	44.0
40	4.5	58	14.5	76	24.5	94	34.5	112	44.5
41	5.0	59	15.0	77	25.0	95	35.0	113	45.0
42	5.5	60	15.5	78	25.5	96	35.5	114	45.5
43	6.0	61	16.0	79	26.0	97	36.0	115	46.0
44	6.5	62	16.5	80	26.5	98	36.5	116	46.5
45	7.0	63	17.0	81	27.0	99	37.0	117	47.0
46	8.0	64	18.0	82	28.0	100	38.0	118	48.0
47	8.5	65	18.5	83	28.5	101	38.5	119	48.5
48	9.0	66	19.0	84	29.0	102	39.0	120	49.0
49	9.5	67	19.5	85	29.5	103	39.5	121	49.5

* $C = 5/9 (°F - 32)$ or $°F = 9/5 (°C) + 32$.

In October 1968, the Geological Survey began reporting many of the chemical constituents as well as the minor elements in micrograms per liter instead of milligrams per liter. (See "Definitions of Terms," p. 2.)

Solutes

The methods of collecting and analyzing water samples for determining the kinds and concentrations of solutes are described by Brown, Skougstad, and Fishman (1970). One sample can define adequately the water quality at a given time if the mixture of solutes throughout the stream cross section is homogeneous. However, the concentration of solutes at different locations in the cross section may vary widely with different rates of water discharge depending on the source of material and the turbulence and the mixing of the stream. Some must be sampled at several verticals across the channel to determine accurately the solute load.

The daily chemical quality data in this report generally represent equal-volume composites for 2- to 30-day periods; the composite periods are selected on the basis of specific conductance of the daily samples and fluctuation of water discharge.

At chemical quality stations where monitors are installed, the records consist of daily maximum, minimum, and mean values for each constituent measured.

Temperature

Water temperatures are measured at most of the water-quality stations. For daily stations, the water temperatures are taken at about the same time each day when sample is collected. Large streams have a small diurnal temperature change; shallow streams may have a daily range of several degrees

and may follow closely the changes in air temperature. Some streams may be affected by waste-heat discharges.

At stations where continuously recording thermographs are present, the records consist of maximum and minimum temperatures for each day and the monthly averages.

Sediment

Suspended-sediment concentrations are determined from samples collected by using depth-integrating samplers. Samples usually are obtained at several verticals in the cross-section, or a single sample may be obtained at a fixed point and a coefficient applied to determine the mean concentration in the cross sections.

During periods of rapidly changing flow or rapidly changing concentration, samples may have been collected more frequently (twice daily or, in some instances, hourly). The published sediment discharges for days of rapidly changing flow or concentration were computed by the subdivided day method (time-discharge weighted average). Therefore, for those days when the published sediment discharge value differs from the value computed as the product of discharge times mean concentration times 0.0027, the reader can assume that the sediment discharge for that day was computed by the subdivided day method. For periods when no samples were collected, daily loads of suspended sediment were estimated on the basis of water discharge, sediment concentrations observed immediately before and after the periods, and suspended-sediment loads for other periods of similar discharge.

At other stations, suspended-sediment samples were collected periodically at many verticals in the stream cross section. Although data collected periodically may represent conditions only at the time of observations, such data are useful in establishing seasonal relations between quality and streamflow in predicting long-term sediment-discharge characteristics of the stream.

In addition to the records of the quantities of suspended sediment, records of the periodic measurements of the particle-size distribution of the suspended sediment and bed material are included.

WATER-SUPPLY PAPERS

Table 4 below shows the annual series of water-supply paper that give information on quality of surface waters in Idaho. Data for The Great Basin are given in part 10; for upper Columbia River basin in part 12; and for Snake River basin in part 13.

Table 4.--Water-supply paper numbers and parts, water years, 1947-67

<u>Year</u>	<u>Parts</u> <u>9-14</u>	<u>Year</u>	<u>Parts</u> <u>9-14</u>	<u>Year</u>	<u>Parts</u> <u>9-11</u>	<u>Parts</u> <u>12-16</u>
1947	1102	1956	1453	1964	1958	A1959
1948	1133	1957	1523	1965	1965	1966
1949	1163	1958	1574	1966	1995	1996
1950	1189	1959	1645	1967	B2015	B2016
1951	1200	1960	1745	1968	B2098	B2100
1952	1253	1961	1885			
1953	1293	1962	1945			
1954	1353	1963	1951			
1955	1401					

A Parts 12-15.

B In preparation.

SELECTED REFERENCES

- American Public Health Association, and others 1965, Standard methods for the examination of water and wastewater, 12th ed.: Am. Public Health Assoc., New York, 769 p.
- Brown, Eugene, Skougstad, M. W., and Fishman, M. J., 1970, Methods for collection and analysis of water samples for dissolved minerals and gases: U.S. Geol. Survey Techniques of Water-Resources Inv., book 5, chap. A1, 160 p.
- Colby, B. R., 1963, Fluvial sediments--a summary of source, transportation, deposition, and measurement of sediment discharge: U.S. Geol. Survey Bull. 1181-A, 47 p.
- Colby, B. R., and Hembree, C. H., 1955, Computations of total sediment discharge, Niobrara River near Cody, Nebraska: U.S. Geol. Survey Water-Supply Paper 1357, 187 p.
- Colby, B. R., and Hubbell, D. W., 1961, Simplified methods for computing total sediment discharge with the modified Einstein procedure: U.S. Geol. Survey Water-Supply Paper 1593, 17 p.
- Guy, H. P., 1970, Fluvial sediment concepts: U.S. Geol. Survey Techniques of Water-Resources Inv., book 3, chap. C1, 55 p.
- _____, 1969, Laboratory theory and methods for sediment analysis: U.S. Geol. Survey Techniques of Water-Resources Inv., book 5, chap. C1, 57 p.
- Guy, H. P., and Norman, V. W., 1970, Field methods for measurement of fluvial sediment: U.S. Geol. Survey Techniques of Water-Resources Inv., book 3, chap. C2, 59 p.
- Hem, J. D., 1970, Study and interpretation of the chemical characteristics of natural water--Revised edition: U.S. Geol. Survey Water-Supply Paper 1473, 363 p.
- Langbein, W. G., and Iseri, K. T., 1960, General introduction and hydrologic definitions: U.S. Geol. Survey Water-Supply Paper 1541-A, 29 p.
- Ritter, J. R., and Helley, E. J., 1969, Optical method for determining particle sizes of coarse sediment: U.S. Geol. Survey Techniques of Water-Resources Inv., book 5, chap. C3.

U.S. Inter-Agency Committee on Water Resources, Subcommittee on Sedimentation, A study of methods used in measurement and analysis of sediment loads in streams. Published by the St. Anthony Falls Hydraulic Laboratory, Minneapolis, Minn.

_____ 1941, Methods of analyzing sediment samples: Rept. 4.

_____ 1953, Accuracy of sediment size analyses made by the bottom-withdrawal-tube method: Rept. 10.

_____ 1957, The development and calibration of visual accumulation tube: Rept. 11.

_____ 1957, Some fundamentals of particle size analysis: Rept. 12.

_____ 1959, Federal Inter-agency sedimentation instruments and reports: Rept. AA.

_____ 1961, The single stage sampler for suspended sediment: Rept. 13.

_____ 1963, Determinations of fluvial sediment discharge: Rept. 14.

WATER QUALITY RECORDS

THE GREAT BASIN

BEAR RIVER BASIN

10039500 BEAR RIVER AT BORDER, WYO.

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

DRAINAGE AREA.--2,490 sq mi, approximately.

PERIOD OF RECORD.--Chemical analyses: October 1965 to September 1970.

Water Temperatures: October 1965 to September 1969.

EXTREMES, 1969-70.--Dissolved solids: Maximum, 369 mg/l July 1-31; minimum, 273 mg/l May 1-31.

Hardness: Maximum, 265 mg/l July 1-31; minimum, 200 mg/l Apr. 1-30.

Specific conductance: Maximum daily, 688 micromhos July 19; minimum daily, 464 micromhos May 21.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

DATE	DIS- CHARGE (CFS)	SILICA (SiO ₂) (MG/L)	TOTAL IRON (FE) (UG/L)	DIS- SOLVED CAL- CIUM (CA) (MG/L)	DIS- SOLVED MAG- NE- SIUM (MG)	SODIUM (NA) (MG/L)	PO- TAS- SIUM (K) (MG/L)	BICAR- BONATE (HCO ₃) (MG/L)	CAR- BONATE (CO ₃) (MG/L)	SULFATE (SO ₄) (MG/L)	CHLO- RIDE (CL) (MG/L)	DIS- SOLVED FLUO- RIDE (F) (MG/L)
OCT.												
01-31	168	11	--	48	26	22	1.6	201	0	66	30	.2
NOV.												
01-19	181	8.1	--	44	22	22	1.6	171	0	67	29	.3
20-30	174	9.4	--	46	25	25	1.9	177	0	77	34	.3
DEC.												
01-31	168	8.2	--	54	27	23	1.9	204	0	67	34	.3
JAN.												
01-11	165	9.9	--	51	22	26	1.6	198	0	73	30	.3
12-29	198	9.4	--	52	23	19	1.6	199	0	64	27	.3
30-31	184	9.1	--	54	25	22	1.6	207	0	72	25	.3
FEB.												
01-28	184	9.1	--	54	25	22	1.6	207	0	72	25	.3
MAR.												
01-31	181	7.4	--	59	24	25	2.1	214	15	58	29	.3
APR.												
01-30	195	9.2	--	42	23	25	2.0	186	0	71	22	.3
MAY												
01-31	461	10	--	46	22	22	2.1	153	21	52	22	.2
JUNE												
01-17	1380	12	--	53	24	28	3.0	255	0	43	27	.3
18-30	910	12	--	63	24	32	2.8	271	0	52	35	.3
JULY												
01-31	409	9.8	--	61	27	34	2.3	300	0	56	30	.3
AUG.												
01-31	161	8.6	--	49	25	29	2.2	195	12	65	27	.7
SEPT.												
01-15	155	7.3	--	63	25	26	2.2	250	0	73	22	.3
16-30	164	6.5	--	63	26	25	2.1	250	0	69	24	.2
WTD. AVG.	--	10	--	53	24	27	2.3	226	4	57	28	.3
TIME												
WTD. AVG.	302	9.2	--	52	25	25	2.0	212	4	64	28	.3
TONS												
PER DAY	--	8.2	--	44	20	22	1.9	184	3	47	23	.2

ANALYSES OF ADDITIONAL SAMPLES

OCT.												
12...	153	9.0	20	69	24	22	1.4	267	0	71	22	.2
DEC.												
04...	200	--	--	64	28	25	1.7	276	0	65	29	--
MAR.												
09...	205	7.2	100	64	24	25	1.6	238	0	74	30	.3
11...	240	--	--	61	25	28	1.8	233	9	62	30	--
JUNE												
10...	1430	--	--	49	24	24	2.8	248	0	48	24	--
AUG.												
05...	216	--	--	62	27	30	2.3	288	0	57	29	--
SEPT.												
01...	129	8.5	0	59	28	28	2.3	247	6	75	30	.4

10039500 BEAR RIVER AT BORDER, WYO.--Continued

EXTREMES, 1965-70.--Dissolved solids: Maximum, 480 mg/l Mar. 29 to Apr. 6, 1967; minimum, 219 mg/l Mar. 31 to Apr. 6, 1969.

Hardness: Maximum, 311 mg/l July 1-15, 1969; minimum, 159 mg/l Mar. 31 to Apr. 6, 1969.

Specific conductance: Maximum daily, 883 micromhos July 21, 1966; minimum daily, 312 micromhos Apr. 3, 1969.

Water temperatures: Maximum, 22° C on several days during 1966-69; minimum, freezing point on many days during winter period.

REMARKS.--Daily samples for chemical analysis composited by discharge. Additional samples were collected for more comprehensive definition of water quality.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

DATE	NITRATE (NO ₃) (MG/L)	DIS- SOLVED BORON (B) (UG/L)	DIS- SOLVED SOLIDS (SUM OF CONSTITUENTS) (MG/L)	DIS- SOLVED SOLIDS (TONS PER AC-FT)	DIS- SOLVED SOLIDS (TONS PER DAY)	HARD- NESS (CA, MG) (MG/L)	NON- CAR- BONATE HARD- NESS (MG/L)	SODIUM AD- SORP- TION RATIO	SPECI- FIC COND- UCTANCE (MICRO- MHOS)	PH (UNITS)	DIS- SOLVED OXYGEN (MG/L)	TEMP- ERATURE (DEG C)
OCT.												
01-31	.3	80	304	.40	134	229	64	.6	512	8.2	--	--
NOV.												
01-19	.5	100	279	.36	130	200	60	.7	471	8.0	--	--
20-30	.6	60	306	.39	135	218	73	.7	509	7.9	--	--
DEC.												
01-31	2.8	20	318	.44	146	245	78	.6	529	8.0	--	--
JAN.												
01-11	1.0	80	312	.43	140	218	56	.8	533	8.0	--	--
12-29	1.0	20	295	.41	159	225	62	.6	501	8.0	--	--
30-31	.4	40	311	.41	149	239	69	.6	542	8.2	--	--
FEB.												
01-28	.4	40	311	.41	149	239	69	.6	542	8.2	--	--
MAR.												
01-31	.3	50	325	.46	164	246	45	.7	590	8.4	--	--
APR.												
01-30	.0	40	286	.40	154	200	47	.8	504	8.2	--	--
MAY												
01-31	.8	10	273	.36	326	205	44	.7	468	8.5	--	--
JUNE												
01-17	.5	70	316	.44	1190	230	21	.8	538	8.1	--	--
18-30	.3	80	354	.50	904	255	33	.9	603	8.2	--	--
JULY												
01-31	.4	80	369	.52	422	265	19	.9	643	8.2	--	--
AUG.												
01-31	.2	80	315	.44	141	225	45	.8	538	8.5	--	--
SEPT.												
01-15	.1	70	342	.47	144	260	55	.7	578	8.0	--	--
16-30	.1	60	339	.48	156	264	59	.6	586	8.0	--	--
WTD. AVG. TIME	.6	.06	318	--	--	233	41	.8	545	8.2	--	--
WTD. AVG. TONS PER DAY	.6	56	314	.43	--	232	51	.7	540	8.2	--	--
	.5	.05	259	--	--	--	--	--	--	--	--	--

ANALYSES OF ADDITIONAL SAMPLES

OCT.												
12...	.6	.00	350	.48	146	271	52	.6	603	8.1	--	3.5
DEC.												
04...	--	--	349	.47	187	276	50	.7	607	7.6	17.6	.0
MAR.												
09...	.0	40	343	.47	190	259	64	.7	577	8.2	--	1.5
11...	--	--	331	.46	220	254	48	.8	572	8.4	12.2	.0
JUNE												
10...	--	--	293	.44	1240	220	13	.7	503	7.9	8.0	11.5
AUG.												
05...	--	--	349	.49	209	266	30	.8	603	8.1	8.2	19.0
SEPT.												
01...	.1	80	358	.51	130	265	52	.8	633	8.4	--	20.0

10039500 BEAR RIVER AT BORDER, WYO.--Continued

SPECIFIC CONDUCTANCE (MICROMHOS AT 25° C), WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

[illegible]

10046000 RAINBOW INLET CANAL NEAR DINGLE, IDAHO

LOCATION.--Lat 42°13'48", long 111°17'43", in SE¼ sec.3, T.14 S., R.44 E., Bear Lake County, at gaging station, 1.5 miles west of Dingle, and 1.8 miles downstream from headworks of Stewart Dam.

PERIOD OF RECORD.--Chemical analyses: October 1965 to September 1970.

REMARKS.--Canal diverts from Bear River at Stewart Dam in NE¼ sec.34, T.13 S., R.44 E., for storage in Bear Lake. At times flow in canal is augmented by surplus water from Black Otter Slough entering at station and by seepage and wastage from irrigation lands on both sides of canal.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

DATE	DIS- CHARGE (CFS)	SILICA (SiO ₂) (MG/L)	DIS- SOLVED CAL- CIUM (CA) (MG/L)	DIS- SOLVED MAG- NE- SIUM (MG)	SODIUM (NA) (MG/L)	PO- TAS- SIUM (K) (MG/L)	BICAR- BONATE (HCO ₃) (MG/L)	CAR- BONATE (CO ₃) (MG/L)	SULFATE (SO ₄) (MG/L)	CHLO- RIDE (CL) (MG/L)	DIS- SOLVED FLUO- RIDE (F) (MG/L)	NITRATE (NO ₃) (MG/L)
OCT. 10...	180	6.2	66	27	36	1.8	271	0	66	39	.2	1.0
NOV. 06...	182	5.9	65	25	34	1.2	270	0	64	39	.2	.1
DEC. 04...	130	--	63	35	36	1.6	286	0	68	44	--	--
JAN. 09...	85	--	71	29	37	1.9	323	0	69	44	--	--
FEB. 09...	145	--	71	26	36	1.8	290	0	74	42	--	--
MAR. 11...	112	--	63	24	32	1.7	220	16	65	38	--	--
APR. 10...	267	--	59	29	43	2.5	258	0	80	54	--	--
MAY 13...	173	--	60	24	33	2.3	257	0	50	40	--	--
JUNE 10...	1030	--	54	23	28	2.8	257	0	42	29	--	--
AUG. 05...	195	--	60	27	39	2.3	140	71	61	44	--	--

DATE	DIS- SOLVED ORTHO- PHOS- PHATE (PO ₄) (MG/L)	DIS- SOLVED BORON (B) (UG/L)	DIS- SOLVED SOLIDS (RESI- DUE AT 180 C) (MG/L)	DIS- SOLVED SOLIDS (TONS PER DAY)	HARD- NESS (CA, MG) (MG/L)	NON- CAR- BONATE HARD- NESS (MG/L)	SODIUM AD- SORP- TION RATIO	SPECI- FIC COND- UCTANCE (MICRO- MHOS)	PH (UNITS)	DIS- SOLVED OXYGEN (MG/L)	TEMP- ERATURE (DEG C)
OCT. 10...	.00	.00	393	191	274	51	.9	644	6.7	9.7	7.5
NOV. 06...	.02	40	390	192	267	46	.9	637	7.9	10.7	4.0
DEC. 04...	--	--	416	146	300	65	.9	671	7.8	12.0	1.0
JAN. 09...	--	--	429	98.5	296	31	.9	715	7.6	10.5	.0
FEB. 09...	--	--	408	160	282	44	.9	670	7.7	11.4	1.0
MAR. 11...	--	--	354	107	258	50	.9	604	8.4	11.6	3.0
APR. 10...	--	--	412	297	265	53	1.1	667	7.8	9.8	9.0
MAY 13...	--	--	356	166	250	39	.9	577	7.6	9.3	9.0
JUNE 10...	--	--	330	918	228	17	.8	532	8.1	8.0	15.0
AUG. 05...	--	--	383	202	260	28	1.1	646	8.3	8.0	20.0

BEAR RIVER BASIN

10059500 BEAR LAKE OUTLET CANAL NEAR PARIS, IDAHO

LOCATION.--Lat 42°13'00", long 111°20'35", in SW¼ sec.8, T.14 S., R.44 E., Bear Lake County, at gaging station on right bank, 2,000 ft downstream from headgates (at dike), and 3 miles southeast of Paris.
 PERIOD OF RECORD.--October 1965 to September 1970.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

DATE	DIS- CHARGE (CFS)	SILICA (SiO ₂) (MG/L)	DIS- SOLVED CAL- CIUM (CA) (MG/L)	DIS- SOLVED MAG- NE- SIUM (MG)	SODIUM (NA) (MG/L)	PO- TA- SIUM (K) (MG/L)	BICAR- BONATE (HCO ₃) (MG/L)	CAR- BONATE (CO ₃) (MG/L)	SULFATE (SO ₄) (MG/L)	CHLO- RIDE (CL) (MG/L)	DIS- SOLVED FLUO- RIDE (F) (MG/L)	NITRATE (NO ₃) (MG/L)
OCT. 10...	16	8.3	65	43	51	3.7	335	0	89	54	.3	.1
NOV. 06...	463	5.9	66	27	36	1.3	276	0	64	41	.2	.1
DEC. 04...	408	--	83	28	38	3.5	330	0	62	44	--	--
JAN. 09...	400	--	40	55	41	4.4	350	0	69	46	--	--
FEB. 09...	6.0	--	64	42	42	4.1	336	0	87	47	--	--
MAR. 11...	5.0	--	60	30	43	9.7	275	7	69	47	--	--
APR. 10...	5.0	--	60	37	45	2.3	304	0	83	51	--	--
MAY 13...	8.0	--	51	25	22	2.6	261	0	32	26	--	--
JUNE 10...	8.0	--	58	53	59	4.0	366	0	104	66	--	--
AUG. 05...	750	--	42	42	37	3.3	170	67	54	40	--	--

DATE	DIS- SOLVED ORTHO PHOS- PHATE (PO ₄) (MG/L)	DIS- SOLVED BORON (B) (UG/L)	DIS- SOLVED SOLIDS (RESI- DUE AT 180 C) (MG/L)	DIS- SOLVED SOLIDS (TONS PER DAY)	HARD- NESS (CA, MG) (MG/L)	NON- CAR- BONATE HARD- NESS (MG/L)	SODIUM AD- SORP- TION RATIO	SPECI- FIC COND- UCTANCE (MICRO- MHOS)	PH (UNITS)	DIS- SOLVED OXYGEN (MG/L)	TEMP- ERATURE (DEG C)
OCT. 10...	.05	80	497	21.5	338	64	1.2	798	7.3	10.0	5.5
NOV. 06...	.03	40	388	485	274	48	.9	647	8.0	10.8	4.0
DEC. 04...	--	--	435	479	324	53	.9	704	8.2	12.3	1.5
JAN. 09...	--	--	432	467	328	41	1.0	749	8.2	11.2	.0
FEB. 09...	--	--	468	7.58	332	56	1.0	770	7.8	12.7	.0
MAR. 11...	--	--	418	5.64	274	36	1.1	701	8.4	12.0	5.5
APR. 10...	--	--	452	6.10	304	55	1.1	729	7.9	10.5	8.5
MAY 13...	--	--	301	6.50	230	16	.6	495	7.7	9.1	7.5
JUNE 10...	--	--	580	12.5	360	60	1.4	886	8.0	10.5	16.0
AUG. 05...	--	--	391	792	278	27	1.0	654	8.3	7.2	21.0

10092200 BEAR RIVER AT CORNISH, UTAH

LOCATION.--Lat 41°58'32", long 111°56'11", in SW $\frac{1}{4}$ SE $\frac{1}{4}$ sec.3, T.14 N., R.1 E., Cache County, on upstream side of bridge on State Highway 61, and 0.9 mile east of Cornish.
DRAINAGE AREA.--4,500 sq mi, approximately.
PERIOD OF RECORD.--September 1969 to September 1970.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

DATE	DIS- CHARGE (CFS)	SILICA (SiO ₂) (MG/L)	DIS- SOLVED CAL- CIUM (CA) (MG/L)	DIS- SOLVED MAG- NE- SIUM (MG)	SODIUM (NA) (MG/L)	PO- TAS- SIUM (K) (MG/L)	BICAR- BONATE (HCO ₃) (MG/L)	CAR- BONATE (CO ₃) (MG/L)	SULFATE (SO ₄) (MG/L)	CHLO- RIDE (CL) (MG/L)
OCT. 1969										
06...	340	11	63	50	90	14	416	0	70	105
NOV.										
05...	310	--	59	50	94	15	399	0	67	118
DEC.										
08...	800	--	58	54	52	7.8	386	0	60	68
JAN. 1970										
13...	850	--	59	49	47	7.2	398	0	65	54
FEB.										
06...	580	--	68	44	98	14	405	0	70	137
MAR.										
12...	900	--	78	38	57	2.0	362	16	60	68
APR.										
08...	800	--	67	39	51	9.5	372	0	57	62
MAY										
11...	750	--	58	36	46	8.9	335	0	52	58
JUNE										
12...	530	--	57	26	43	8.6	296	0	39	54
AUG.										
04...	500	--	96	18	59	9.3	345	0	62	80

DATE	DIS- SOLVED SOLIDS (RESI- DUE AT 180 C) (MG/L)	DIS- SOLVED SOLIDS (TONS PER DAY)	HARD- NESS (CA, MG) (MG/L)	NON- CAR- BONATE HARD- NESS (MG/L)	SODIUM AD- SORP- TION RATIO	SPECI- FIC COND- UCTANCE (MICRO- MHOS)	PH (UNITS)	DIS- SOLVED OXYGEN (MG/L)	TEMP- ERATURE (DEG C)
OCT.									
06...	623	572	364	22	2.1	1030	7.9	9.6	14.0
NOV.									
05...	610	511	352	25	2.2	1060	7.6	10.4	9.0
DEC.									
08...	501	1080	364	47	1.2	857	8.0	12.1	1.5
JAN.									
13...	497	1140	349	23	1.1	835	8.2	12.4	.0
FEB.									
06...	636	996	352	20	2.3	1090	8.1	11.6	5.0
MAR.									
12...	526	1280	352	28	1.3	881	8.5	10.9	6.5
APR.									
08...	489	1060	330	25	1.2	813	8.0	11.9	10.0
MAY									
11...	448	907	294	19	1.2	727	7.6	9.2	11.0
JUNE									
12...	396	567	250	7	1.2	667	8.1	9.1	16.0
AUG.									
04...	492	664	316	33	1.4	849	8.1	10.6	23.0

ANALYSES OF SAMPLES COLLECTED AT PARTIAL-RECORD STATIONS
 CHEMICAL ANALYSES, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

DATE	DIS- CHARGE (CFS)	SILICA (SI02) (MG/L)	CAL- CIUM (CA) (MG/L)	MAG- NE- SIUM (MG) (MG/L)	SODIUM (NA) (MG/L)	PO- TAS- SIUM (K) (MG/L)	BICAR- BONATE (HCO3) (MG/L)	CAR- BONATE (CO3) (MG/L)	SULFATE (SO4) (MG/L)	CHLO- RIDE (CL) (MG/L)	FLUO- RIDE (F) (MG/L)	NITRATE (NO3) (MG/L)
BEAR RIVER BASIN												
10041000 - THOMAS FORK NR WYOMING-IDAHO STATE LINE (LAT 42 24 10 LONG 111 01 30)												
DEC., 1969												
04...	17	--	66	25	167	1.2	258	0	60	260	--	--
MAR., 1970												
03...	18	--	76	21	207	1.1	266	0	60	325	--	--
JUNE												
10	103	--	63	17	50	1.1	259	7	25	66	--	--
10042700 - THOMAS FORK NR BORDER WYO (LAT 42 12 56 LONG 111 04 17)												
APR., 1970												
23...	53	11	73	24	108	1.7	286	0	66	151	.1	2.2
JUNE												
25...	38	9.3	66	28	78	1.8	299	0	56	105	.2	2.4
AUG.												
17...	7.7	2.0	55	24	81	1.7	244	0	43	119	.1	2.5
10079500 - BEAR R AT ALEXANDER IDAHO (LAT 42 38 45 LONG 111 41 55)												
JAN., 1970												
14...	681	8.6	55	51	33	4.2	374	0	68	36	.3	.1
JUNE												
16...	800	12	56	26	23	2.5	263	0	45	25	.2	1.5
AUG.												
18...	962	.0	38	55	40	5.0	345	0	71	44	.3	2.5
10090450 - WEST CACHE CANAL AT CORNISH UTAH (LAT 41 59 10 LONG 111 57 14)												
DEC., 1969												
08...	2	--	106	50	86	8.0	414	0	112	134	--	--
MAR., 1970												
12...	.5	--	92	41	75	10	373	0	100	114	--	--
JUNE												
12...	120	--	59	27	38	5.1	295	0	44	48	--	--
10095400 - CUB RIVER AT FRANKLIN IDAHO (LAT 42 00 50 LONG 111 49 10)												
DEC., 1969												
08...	12	--	56	24	21	3.0	302	0	7.5	16	--	--
MAR., 1970												
12...	23	--	55	16	14	2.6	242	7	12	9.9	--	--
JUNE												
12...	350	--	40	10	3.6	1.3	173	0	8.5	1.1	--	--
AUG.												
04...	3.0	--	42	21	34	7.7	283	0	7.5	28	--	--
10098800 - WORM CREEK NR FAIRVIEW IDAHO (LAT 42 00 15 LONG 111 51 00)												
DEC., 1969												
08...	5	--	64	40	31	9.4	421	0	17	24	--	--
MAR., 1970												
03...	6	--	71	37	47	14	416	0	26	52	--	--
JUNE												
06...	7	--	45	19	9.7	5.1	248	0	8.0	6.0	--	--
10125500 - MALAC R AT WOODRUFF IDAHO (LAT 42 02 00 LONG 112 14 00)												
DEC., 1969												
09...	36	--	136	23	625	52	478	0	160	1100	--	--
MAR., 1970												
05...	70	--	119	70	511	45	478	0	208	850	--	--
JUNE												
11...	24	--	141	60	936	86	548	0	98	1580	--	--
AUG.												
04...	17	--	172	66	1520	115	499	0	55	2600	--	--

ANALYSES OF SAMPLES COLLECTED AT PARTIAL-RECORD STATIONS

19

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

DATE	ORTHO PHOS- PHATE (PC4) (MG/L)	PHOS- PHATE (PO4) (MG/L)	BORON (B) (UG/L)	DIS- SOLVED SOLIDS (RESI- DUE AT 180 C) (MG/L)	DIS- SOLVED SOLIDS (TONS PER DAY) (MG/L)	HARD- NESS (CA, MG) (MG/L)	NON- CAR- BONATE HARD- NESS (MG/L)	SODIUM AD- SORP- TION RATIO	SPECI- FIC COND- UCTANCE (MICRO- MHOS)	PH (UNITS)	DIS- SOLVED OXYGEN (MG/L)	TEMP- ERATURE (DEG C)
BEAR RIVER BASIN												
10041000 - THOMAS FORK NR WYOMING-IDAHO STATE LINE (LAT 42 24 10 LONG 111 01 30)												
DEC., 1969												
04...	--	--	--	724	32.3	268	56	4.4	1290	8.1	--	0.0
MAR., 1970												
03...	--	--	--	860	41.8	276	58	5.4	1500	8.2	--	1.0
JUNE												
10...	--	--	--	364	101	226	2	1.5	635	8.4	--	9.5
10042700 - THOMAS FORK NR BORDER WYO (LAT 42 12 56 LONG 111 04 17)												
APR., 1970												
23...	--	.00	--	592	86.0	280	46	2.8	1030	7.9	--	6.0
JUNE												
25...	--	.20	--	512	52.5	280	35	2.0	876	7.5	--	20.0
AUG.												
17...	--	.00	--	452	9.46	236	36	2.3	829	7.8	--	18.0
10079500 - BEAR R AT ALEXANDER IDAHO (LAT 42 38 45 LONG 111 41 55)												
JAN., 1970												
14...	--	.02	--	447	822	347	40	.8	755	8.2	--	.5
JUNE												
16...	--	.21	--	326	704	246	31	.6	551	7.4	--	8.5
AUG.												
18...	--	.01	--	429	1110	321	38	1.0	753	7.4	--	19.0
10090450 - WEST CACHE CANAL AT CORNISH UTAH (LAT 41 59 10 LONG 111 57 14)												
DEC., 1969												
08...	--	--	--	770	4.16	470	131	1.7	1250	8.0	--	3.0
MAR., 1970												
12...	--	--	--	676	.91	400	94	1.6	1100	7.8	--	10.0
JUNE												
12...	--	--	--	378	122	250	15	1.0	644	8.1	--	14.5
10095400 - CUB RIVER AT FRANKLIN IDAHO (LAT 42 00 50 LONG 111 49 10)												
DEC., 1969												
08...	--	--	--	290	9.40	240	0	.6	481	7.5	11.5	.5
MAR., 1970												
12...	--	--	--	242	15.0	201	0	.4	425	8.4	12.0	3.0
JUNE												
12...	--	--	--	169	160	140	0	.1	268	7.9	10.7	7.0
AUG.												
04...	--	--	--	293	2.37	190	0	1.1	504	8.0	4.8	22.0
10098800 - WORM CREEK NR FAIRVIEW IDAHO (LAT 42 00 15 LONG 111 51 00)												
DEC., 1969												
08...	--	--	--	444	59.9	324	0	.7	711	8.1	--	2.5
MAR., 1970												
03...	--	--	--	461	74.7	330	0	1.1	786	8.2	--	4.5
JUNE												
06...	--	--	--	215	40.6	192	0	.3	395	8.0	--	10.0
10125500 - MALAD R AT WOODRUFF IDAHO (LAT 42 02 00 LONG 112 14 00)												
DEC., 1969												
09...	--	--	--	2480	241	640	248	11	4160	7.9	--	8.5
MAR., 1970												
05...	--	--	--	2090	395	585	193	9.2	3420	8.0	9.7	10.0
JUNE												
11...	--	--	--	3350	217	600	151	17	5540	8.1	7.8	22.0
AUG.												
04...	--	--	--	4870	224	700	291	25	7960	8.0	10.0	27.0

UPPER COLUMBIA RIVER BASIN

KOOTENAI RIVER BASIN

12305000 KOOTENAI RIVER AT LEONIA, IDAHO

LOCATION.--Lat 48°37'04", long 116°03'47", in NW¼NW¼ sec.20, T.33 N., R.34 W. (Principal meridian), Lincoln County, Mont., temperature recorder at gaging station at Leonia, 450 ft east of Montana-Idaho State line, 0.5 mile upstream from Boulder Creek, and at mile 171.6.

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

PERIOD OF RECORD.--Chemical analyses: October 1969 to September 1970.

Water temperatures: July 1962 to May 1963, April 1965 to September 1970.

EXTREMES, 1969-70.--Water temperatures: Maximum recorded, 19.5° C July 9.

EXTREMES, 1962-63, 1965-70.--Water temperatures: Maximum, 20° C Aug. 4, 1966; minimum (1962-63), freezing point on many days during winter months.

REMARKS.--No temperature record Oct. 9 to Mar. 24, July 17 to Aug. 17.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

DATE	DIS- CHARGE (CFS)	SILICA (SiO ₂) (MG/L)	DIS- SOLVED CAL- CIUM (CA) (MG/L)	DIS- SOLVED MAG- NE- SIUM (MG)	SODIUM (NA) (MG/L)	PO- TAS- SIUM (K) (MG/L)	BICAR- BONATE (HCO ₃) (MG/L)	CAR- BONATE (CO ₃) (MG/L)	SULFATE (SO ₄) (MG/L)	CHLO- RIDE (CL) (MG/L)	DIS- SOLVED SOLIDS (RESI- DUE AT 180 C) (MG/L)	DIS- SOLVED SOLIDS (TONS PER DAY)
OCT.												
20...	5790	--	--	--	--	.9	133	7	--	4.0	176	2750
NOV.												
18...	4990	--	--	--	--	.9	122	6	--	4.0	177	2390
DEC.												
16...	3670	7.0	40	13	4.1	.4	133	8	33	4.0	180	1780
JAN.												
28...	3690	7.0	38	13	4.6	1.0	143	0	36	6.0	169	1680
FEB.												
25...	3510	--	--	--	--	--	139	0	--	4.0	164	1550
MAR.												
24...	4380	--	--	--	--	--	116	8	--	4.5	154	1820
APR.												
27...	6490	7.7	31	9.6	3.7	.9	115	2	20	3.0	128	2240
MAY												
18...	38000	--	--	--	--	--	74	0	--	1.5	80	8210
JUNE												
16...	34400	5.7	25	6.2	1.6	.7	92	0	13	2.0	89	8270
JULY												
14...	14900	4.1	31	8.6	2.3	1.4	110	2	19	3.5	116	4670
AUG.												
17...	6830	--	--	--	--	--	129	2	--	--	164	3020
SEP.												
22...	6760	--	--	--	--	--	132	6	34	3.5	177	3230

DATE	HARD- NESS (CA, MG) (MG/L)	NON- CAR- BONATE HARD- NESS (MG/L)	SODIUM AD- SORP- TION RATIO	SPECI- FIC COND- UCTANCE (MICRO- MHOS)	FIELD PH (UNITS)	COLOR (PLAT- INUM- COBALT UNITS)	TUR- BID- ITY (JTU)	TEMP- ERATURE (DEG C)	AIR TEMP- ERATURE (DEG C)	COLI- FORM (COL- ONIES PER 100 ML)	FECAL COLI- FORM (COL. PER 100 ML)
OCT.											
20...	148	27	--	283	8.7	5	1	5.0	12.0	40	--
NOV.											
18...	149	39	--	284	8.6	5	3	2.5	3.5	500	--
DEC.											
16...	152	30	.1	289	8.4	5	4	.5	.5	1600	--
JAN.											
28...	149	32	.2	292	8.3	5	5	.0	4.0	490	--
FEB.											
25...	141	27	--	285	8.1	5	2	2.0	7.0	16	--
MAR.											
24...	144	36	--	281	8.8	5	1	7.5	11.0	190	--
APR.											
27...	120	22	.1	235	8.7	5	2	7.0	4.5	270	--
MAY											
18...	68	7	--	144	8.0	20	15	10.5	22.5	--	40
JUNE											
16...	96	21	.1	171	8.3	5	3	11.0	13.5	810	77
JULY											
14...	114	20	.1	225	8.6	5	1	17.0	28.5	88	2
AUG.											
17...	--	--	--	264	8.4	--	0	19.0	22.0	52	1
SEP.											
22...	145	27	--	298	8.4	5	--	10.0	10.0	970	100

12305000 KOOTENAI RIVER AT LEONIA, IDAHO--Continued

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

DATE	NITRATE (N) (MG/L)	NITRITE (N) (MG/L)	AMMONIA NITRO- GEN (N) (MG/L)	ORGANIC NITRO- GEN (N) (MG/L)	TOTAL NITRO- GEN (N) (MG/L)	TOTAL ORTHO- PHOS- PHOSUS (P) (MG/L)	DIS- HYDRO- LYZABLE PHOS- PHORUS (P) (MG/L) ¹	TOTAL PHOS- PHORUS (P) (MG/L)	FIELD DIS- SOLVED OXYGEN (MG/L)	PER- CENT SATUR- ATION	BIO- CHEM- ICAL OXYGEN DEMAND (MG/L)	TOTAL ORGANIC CARBON (C) (MG/L)
OCT. 20...	.0	.00	.02	.02	.04	--	.03	.03	13.3	110	.8	8.0
NOV. 18...	.0	.00	.04	.06	.10	--	.05	.06	14.1	110	2.6	6.5
DEC. 16...	.1	.01	.00	.01	.11	--	.01	.01	13.6	100	1.9	.5
JAN. 28...	.1	.00	.02	.06	.19	--	.03	.04	13.5	100	1.6	6.0
FEB. 25...	.1	.00	.00	.01	.08	--	.05	.05	12.9	101	1.9	.0
MAR. 24...	.0	.00	.00	.04	.09	--	.00	.01	12.0	107	1.0	1.0
APR. 27...	.0	.00	.02	.02	.06	--	.00	.02	11.8	103	3.1	1.5
MAY 18...	.2	.01	.02	.07	.28	--	.01	.10	11.4	109	1.8	2.0
JUNE 16...	.1	.00	.03	.08	.20	--	.06	.06	11.6	111	2.7	.5
JULY 14...	.0	.01	.01	.04	.08	.10	.11	.13	10.1	112	.5	1.0
AUG. 17...	.0	.00	.01	.06	.07	.05	.05	.05	10.4	118	.5	--
SEPT. 22...	.0	.00	.01	.07	.08	.08	.09	.09	11.4	107	1.2	1.5

1 The value reported for dissolved hydrolyzable phosphorus includes dissolved orthophosphorus as well as dissolved hydrolyzable phosphorus.

12305000 KOOTENAI RIVER AT LEONIA, IDAHO--Continued

TEMPERATURE (°C) OF WATER, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

DAY	OCT		NOV		DEC		JAN		FEB		MAR	
	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	11.5	10.5	--	--	--	--	--	--	--	--	--	--
2	10.5	10.0	--	--	--	--	--	--	--	--	--	--
3	10.0	9.5	--	--	--	--	--	--	--	--	--	--
4	9.5	9.0	--	--	--	--	--	--	--	--	--	--
5	9.0	8.5	--	--	--	--	--	--	--	--	--	--
6	8.5	8.5	--	--	--	--	--	--	--	--	--	--
7	8.5	8.5	--	--	--	--	--	--	--	--	--	--
8	8.5	8.5	--	--	--	--	--	--	--	--	--	--
9	--	--	--	--	--	--	--	--	--	--	--	--
10	--	--	--	--	--	--	--	--	--	--	--	--
11	--	--	--	--	--	--	--	--	--	--	--	--
12	--	--	--	--	--	--	--	--	--	--	--	--
13	--	--	--	--	--	--	--	--	--	--	--	--
14	--	--	--	--	--	--	--	--	--	--	--	--
15	--	--	--	--	--	--	--	--	--	--	--	--
16	--	--	--	--	--	--	--	--	--	--	--	--
17	--	--	--	--	--	--	--	--	--	--	--	--
18	--	--	--	--	--	--	--	--	--	--	--	--
19	--	--	--	--	--	--	--	--	--	--	--	--
20	--	--	--	--	--	--	--	--	--	--	--	--
21	--	--	--	--	--	--	--	--	--	--	--	--
22	--	--	--	--	--	--	--	--	--	--	--	--
23	--	--	--	--	--	--	--	--	--	--	--	--
24	--	--	--	--	--	--	--	--	--	--	--	--
25	--	--	--	--	--	--	--	--	--	--	5.5	4.5
26	--	--	--	--	--	--	--	--	--	--	5.5	4.5
27	--	--	--	--	--	--	--	--	--	--	5.5	5.0
28	--	--	--	--	--	--	--	--	--	--	6.5	5.5
29	--	--	--	--	--	--	--	--	--	--	6.5	5.5
30	--	--	--	--	--	--	--	--	--	--	6.5	5.5
31	--	--	--	--	--	--	--	--	--	--	6.0	5.5
AVG	--	--	--	--	--	--	--	--	--	--	--	--
DAY	APR		MAY		JUN		JUL		AUG		SEP	
	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	6.5	6.0	10.0	8.5	11.5	10.0	13.5	12.0	--	--	16.5	16.0
2	7.0	6.5	10.5	9.5	12.5	11.0	14.0	12.5	--	--	16.5	16.0
3	6.5	5.5	11.0	10.0	13.5	12.0	15.0	14.0	--	--	16.0	15.0
4	6.5	6.0	10.5	10.0	14.0	12.5	16.5	15.0	--	--	15.0	14.5
5	6.5	6.0	10.5	10.0	14.0	13.5	17.5	16.5	--	--	14.5	14.5
6	7.0	6.0	10.5	9.5	13.5	12.5	17.5	17.5	--	--	14.5	14.0
7	7.0	6.5	10.0	9.0	12.5	12.5	18.5	17.5	--	--	14.5	14.0
8	7.0	6.5	9.0	8.5	12.5	12.5	19.0	18.5	--	--	14.0	12.5
9	6.5	6.0	9.0	8.5	12.5	12.0	19.5	19.0	--	--	12.5	12.5
10	6.5	6.0	9.0	8.5	12.0	11.0	19.0	18.5	--	--	12.5	12.5
11	6.5	6.0	8.5	7.5	11.0	10.5	18.5	17.5	--	--	12.5	11.5
12	6.5	6.0	7.5	7.0	10.5	10.5	17.5	16.5	--	--	11.5	9.5
13	6.0	6.0	7.5	7.0	10.5	10.5	16.5	15.5	--	--	9.5	9.0
14	6.0	5.5	8.5	7.5	11.0	10.5	16.0	15.5	--	--	9.0	9.0
15	6.0	5.5	9.5	8.5	11.0	11.0	17.0	16.0	--	--	9.0	8.5
16	6.0	5.5	10.5	9.5	11.0	11.0	18.5	17.0	--	--	9.0	9.0
17	6.0	5.5	10.5	10.0	11.5	11.0	--	--	--	--	9.0	8.5
18	6.5	6.0	10.5	9.5	12.5	11.5	--	--	--	--	9.5	8.5
19	7.5	7.0	10.0	9.5	14.0	12.5	--	--	--	--	9.5	9.5
20	7.5	7.5	10.0	9.5	15.0	14.0	--	--	--	--	10.0	9.5
21	7.5	7.5	10.0	9.5	15.5	14.5	--	--	--	--	10.0	10.0
22	8.5	7.5	10.0	9.5	16.0	15.0	--	--	--	--	10.0	9.5
23	8.5	7.5	10.0	9.5	16.0	15.5	--	--	--	--	9.5	9.5
24	8.5	7.5	10.0	9.5	16.5	16.0	--	--	--	--	9.5	9.0
25	7.5	6.5	10.5	9.5	16.5	16.0	--	--	--	--	9.0	8.5
26	7.5	7.0	10.5	10.0	16.5	16.0	--	--	--	--	9.0	8.5
27	7.5	6.0	10.5	10.0	16.5	16.0	--	--	--	--	9.5	9.0
28	7.5	6.5	10.0	9.5	16.5	15.5	--	--	--	--	9.5	9.0
29	7.5	7.0	9.5	9.0	15.5	15.0	--	--	16.0	15.5	10.0	9.5
30	8.5	7.0	9.5	8.5	15.0	13.5	--	--	16.0	15.5	10.0	10.0
31	--	--	10.5	9.0	--	--	--	--	16.0	15.5	--	--
AVG	7.0	6.5	9.5	9.0	13.5	13.0	--	--	--	--	11.5	11.0

12318500 KOOTENAI RIVER NEAR COPELAND, IDAHO

LOCATION.--Lat 48°54'43", long 116°24'59", in NW¼NW¼SW¼ sec.12, T.64 N., R.1 W., Boundary County, at county highway bridge, approximately 1 mile upstream from gaging station near Copeland, and at mile 123.2.
DRAINAGE AREA.--13,400 sq mi, approximately (upstream from gaging station).
PERIOD OF RECORD.--Chemical analyses: May 1966 to September 1970.

Water temperatures: May 1966 to September 1970.

Sediment records: May 1966 to September 1970.

EXTREMES, 1969-70.--Water temperatures: Maximum, 21.0° C July 13, 19-23; minimum, freezing point on many days during December and January.

Sediment concentrations: Maximum daily, 211 mg/l May 28; minimum daily, 1 mg/l many days during October, August, and September.

Sediment loads: Maximum daily, 49,800 tons June 7; minimum daily, 13 tons Sept. 18-20.

EXTREMES, 1966-70.--Water temperatures: Maximum, 21° C Aug. 20, 1966, July 13, 19-23, 1971; minimum, freezing point on several days during February 1969, also probably sometime during period of missing record during January and February 1969, and many days during December and January 1971.

Sediment concentrations: Maximum daily, 740 mg/l May 30, 1966; minimum daily, 1 mg/l on many days during 1968, 1969, and 1971.

Sediment loads: Maximum daily, 155,000 tons May 30, 1966; minimum daily, 10 tons Jan. 13, 1968.

REMARKS.--This station is maintained by the United States in cooperation with Canada. No temperature record available Jan. 5 and Mar. 23. Sediment loads are estimated for Nov. 17, Mar. 31, Sept. 23, 30, 31.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

DATE	DIS- CHARGE (CFS)	SILICA (SiO ₂) (MG/L)	DIS- SOLVED CAL- CIUM (CA) (MG/L)	DIS- SOLVED MAG- NE- SIUM (MG)	SODIUM (NA) (MG/L)	PO- TAS- SIUM (K) (MG/L)	BICAR- BONATE (HCO ₃) (MG/L)	CAR- BONATE (CO ₃) (MG/L)	SULFATE (SO ₄) (MG/L)	CHLO- RIDE (CL) (MG/L)	DIS- SOLVED SOLIDS (RESI- DUE AT 180 C) (MG/L)	DIS- SOLVED SOLIDS (TONS PER DAY)
OCT.												
20...	5840	--	--	--	--	.8	126	6	--	4.5	165	2600
NOV.												
18...	5200	--	--	--	--	1.0	123	0	--	4.0	153	2150
DEC.												
16...	4370	7.9	40	12	4.1	.6	149	0	37	4.0	188	2220
JAN.												
27...	3960	7.2	38	11	4.6	1.1	143	0	53	4.0	186	1990
FEB.												
25...	4190	--	--	--	--	--	134	0	--	3.0	160	1810
MAR.												
24...	4560	--	--	--	--	--	130	0	--	4.0	155	1910
APR.												
27...	7460	9.0	28	8.1	3.5	.9	104	0	25	3.5	120	2420
MAY												
18...	33400	--	--	--	--	--	68	0	--	2.0	91	8210
JUNE												
16...	35000	6.2	24	6.0	1.6	.7	90	0	13	1.5	100	9450
JULY												
14...	15000	4.0	31	8.3	2.2	1.6	109	2	18	3.0	132	5350
AUG.												
17...	6540	--	--	--	--	--	116	4	--	--	149	2630
SEP.												
22...	6440	--	--	--	--	--	134	2	30	3.5	164	2850

DATE	HARD- NESS (CA, MG) (MG/L)	NON- CAR- BONATE HARD- NESS (MG/L)	SODIUM AD- SORP- TION RATIO	SPECI- FIC COND- UCTANCE (MICRO- MHOS)	FIELD PH	COLOR (PLAT- INUM- COBALT UNITS)	TUR- BID- ITY (JTU)	TEMP- ERATURE (DEG C)	AIR TEMP- ERATURE (DEG C)	COLI- FORM (COL- ONIES PER 100 ML)	FECAL COLI- FORM (COL. PER 100 ML)
OCT.											
20...	135	22	--	280	8.6	5	2	5.5	14.0	--	--
NOV.											
18...	138	37	--	261	6.6	5	2	4.0	2.0	69	--
DEC.											
16...	152	30	.1	278	8.2	5	2	.0	1.0	100	--
JAN.											
27...	142	25	.2	282	8.3	0	1	.5	5.5	84	--
FEB.											
25...	133	23	--	266	8.1	5	2	.0	4.5	63	--
MAR.											
24...	141	34	--	276	8.2	5	2	5.0	8.5	50	--
APR.											
27...	103	18	.1	208	8.2	5	0	7.5	4.0	60	--
MAY											
18...	64	8	--	129	8.2	10	6	10.5	10.5	--	14
JUNE											
16...	87	13	.1	169	8.1	5	3	11.0	13.0	680	36
JULY											
14...	110	17	.1	221	8.5	5	2	18.0	21.0	38	4
AUG.											
17...	--	--	--	243	8.5	--	0	19.5	22.0	370	1
SEP.											
22...	140	30	--	283	8.6	5	1	10.0	10.0	330	17

KOOTENAI RIVER BASIN

12318500 KOOTENAI RIVER NEAR COPELAND, IDAHO--Continued

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

DATE	NITRATE (N) (MG/L)	NITRITE (N) (MG/L)	AMMONIA NITRO- GEN (N) (MG/L)	ORGANIC NITRO- GEN (N) (MG/L)	TOTAL NITRO- GEN (N) (MG/L)	TOTAL ORTHO PHOS- PHOSUS (P) (MG/L)	DIS- HYDRO- LYZABLE PHOS- PHORUS (P) (MG/L) ¹	TOTAL PHOS- PHORUS (P) (MG/L)	FIELD DIS- SOLVED OXYGEN (MG/L)	PER- CENT SATUR- ATION	BIO- CHEM- ICAL OXYGEN DEMAND (MG/L)	TOTAL ORGANIC CARBON (C) (MG/L)
OCT. 20...	.0	.00	.01	.06	.07	--	.03	.04	12.0	101	.2	1.5
NOV. 18...	.0	.00	.08	.10	.20	--	.07	.07	2.6	102	2.2	5.0
DEC. 16...	.1	.00	.07	.01	.15	--	.00	.01	13.1	95	1.5	2.5
JAN. 27...	.1	.01	.03	.04	.17	--	.01	.03	13.0	96	1.3	1.5
FEB. 25...	.2	.01	.00	.00	.24	--	.02	.02	13.4	99	2.3	1.5
MAR. 24...	.1	.00	.00	.05	.14	--	.01	.02	11.8	99	.6	2.5
APR. 27...	.0	.00	.00	.00	.02	--	.01	.03	11.2	98	1.5	3.0
MAY 18...	.1	.01	.02	.06	.18	--	.03	.08	10.8	103	1.5	1.5
JUNE 16...	.1	.00	.02	.08	.19	--	.06	.09	11.0	108	2.2	.5
JULY 14...	.0	.00	.05	.06	.13	.08	.08	.11	9.0	101	.3	1.5
AUG. 17...	.0	.00	.00	.07	.07	.06	.06	.06	9.4	107	1.4	--
SEPT. 22...	.0	.01	.00	.05	.08	.07	.07	.11	11.3	107	1.0	.0

¹ The value reported for dissolved hydrolyzable phosphorus includes dissolved orthophosphorus as well as dissolved hydrolyzable phosphorus.

DATE	DIS- SOLVED ALUM- INUM (AL) (UG/L)	DIS- SOLVED IRON (FE) (UG/L)	DIS- SOLVED MAN- GANESE (MN) (UG/L)	DIS- SOLVED STRON- TIUM (SR) (UG/L)	DIS- SOLVED CHRO- MIUM (CR) (UG/L)	DIS- SOLVED NICKEL (NI) (UG/L)	DIS- SOLVED COPPER (CU) (UG/L)	DIS- SOLVED LEAD (PB) (UG/L)	DIS- SOLVED ZINC (ZN) (UG/L)	DIS- SOLVED COBALT (CO) (UG/L)
NOV. 18...	60	20	20	160	2	9	30	11	30	2
JAN. 27...	100	40	30	180	0	10	4	23	10	3
APR. 27...	0	20	20	120	0	6	5	7	10	2
MAY 18...	100	40	0	90	0	4	4	8	10	3
JULY 14...	100	10	0	200	0	5	8	7	10	3

DATE	DIS- SOLVED ARSENIC (AS) (UG/L)	DIS- SOLVED CAD- MIUM (CD) (UG/L)	DIS- SOLVED BARIUM (BA) (UG/L)	DIS- SOLVED VANA- DIUM (V) (UG/L)	DIS- SOLVED SILVER (AG) (UG/L)	DIS- SOLVED BERYL- LIUM (BE) (UG/L)	DIS- SOLVED SELE- NIUM (SE) (UG/L)	DIS- SOLVED MOLY- BDENUM (MO) (UG/L)	DIS- SOLVED BORON (B) (UG/L)
NOV. 18...	5	3	200	0	0	0	2	2	0
JAN. 27...	3	3	0	1	1	0	0	3	20
APR. 27...	1	1	0	0	10	0	2	0	20
MAY 18...	0	1	0	0	5	0	2	0	10
JULY 14...	2	3	0	0	1	0	1	2	0

12318500 KOOTENAI RIVER NEAR COPELAND, IDAHO--Continued

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

DATE	DIS- SOLVED MERCURY (MG) (UG/L)	TOTAL IRON (FE) (UG/L)	TOTAL MAN- GANESE (MN) (UG/L)	TOTAL COPPER (CU) (UG/L)	TOTAL LEAD (PB) (UG/L)	TOTAL ZINC (ZN) (UG/L)	TOTAL ARSENIC (AS) (UG/L)	TOTAL CADMIUM (CD) (UG/L)	TOTAL BORON (B) (UG/L)
SEPT. 22...	<0.1	200	20	<10	<1	30	<10	<1	20

TEMPERATURE (°C) OF WATER, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	14.0	10.0	2.0	0.0	1.0	2.0	7.0	9.0	12.0	13.0	15.0	16.0
2	14.0	10.0	2.0	0.0	1.0	2.0	7.0	9.0	12.0	13.0	15.0	16.0
3	14.0	9.0	1.0	0.0	1.0	2.0	7.0	9.0	13.0	13.0	15.0	16.0
4	14.0	8.0	1.0	0.0	1.0	1.0	7.0	9.0	13.0	14.0	15.0	16.0
5	13.0	8.0	1.0	--	1.0	1.0	7.0	9.0	13.0	14.0	15.0	16.0
6	13.0	8.0	0.0	0.0	1.0	1.0	8.0	10.0	13.0	14.0	15.0	16.0
7	13.0	8.0	0.0	0.0	1.0	2.0	8.0	9.0	14.0	14.0	16.0	15.0
8	13.0	8.0	0.0	0.0	1.0	2.0	8.0	9.0	14.0	14.0	16.0	15.0
9	13.0	8.0	0.0	0.0	1.0	2.0	8.0	9.0	14.0	15.0	16.0	15.0
10	13.0	8.0	0.0	0.0	1.0	2.0	8.0	9.0	13.0	17.0	16.0	15.0
11	13.0	7.0	0.0	0.0	1.0	2.0	8.0	9.0	11.0	19.0	17.0	15.0
12	13.0	7.0	0.0	0.0	1.0	2.0	8.0	6.0	11.0	20.0	17.0	15.0
13	13.0	6.0	0.0	0.0	1.0	3.0	8.0	6.0	11.0	21.0	18.0	15.0
14	12.0	6.0	1.0	0.0	2.0	3.0	8.0	7.0	13.0	18.0	18.0	15.0
15	12.0	6.0	1.0	0.0	2.0	3.0	8.0	8.0	13.0	19.0	18.0	14.0
16	12.0	6.0	1.0	0.0	2.0	3.0	8.0	9.0	13.0	20.0	18.0	14.0
17	11.0	6.0	0.0	0.0	1.0	3.0	8.0	9.0	13.0	20.0	18.0	14.0
18	11.0	6.0	0.0	0.0	1.0	4.0	8.0	9.0	12.0	20.0	19.0	14.0
19	11.0	6.0	0.0	0.0	1.0	4.0	8.0	10.0	12.0	21.0	17.0	14.0
20	10.0	5.0	0.0	0.0	1.0	5.0	8.0	10.0	13.0	21.0	17.0	14.0
21	11.0	4.0	0.0	0.0	1.0	5.0	8.0	10.0	13.0	21.0	17.0	14.0
22	11.0	4.0	0.0	0.0	1.0	5.0	8.0	10.0	13.0	21.0	17.0	14.0
23	11.0	4.0	1.0	1.0	1.0	--	8.0	10.0	14.0	21.0	16.0	13.0
24	11.0	4.0	1.0	1.0	1.0	5.0	8.0	10.0	14.0	20.0	16.0	13.0
25	11.0	3.0	0.0	1.0	2.0	6.0	8.0	10.0	14.0	19.0	16.0	12.0
26	11.0	3.0	0.0	1.0	2.0	6.0	7.0	11.0	14.0	19.0	16.0	12.0
27	11.0	3.0	0.0	1.0	2.0	6.0	7.0	11.0	14.0	18.0	16.0	11.0
28	10.0	2.0	0.0	2.0	2.0	6.0	7.0	11.0	14.0	18.0	16.0	11.0
29	10.0	2.0	0.0	1.0	--	6.0	8.0	11.0	14.0	18.0	16.0	13.0
30	10.0	2.0	0.0	1.0	--	6.0	8.0	12.0	13.0	16.0	16.0	13.0
31	10.0	--	0.0	1.0	--	6.0	--	12.0	--	16.0	16.0	--
AVG	11.9	5.9	0.3	0.3	1.2	3.5	7.7	9.4	13.0	17.6	16.4	14.2

INSTANTANEOUS SUSPENDED SEDIMENT AND PARTICLE SIZE, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970
(METHODS OF ANALYSIS: B, BOTTOM WITHDRAWAL TUBE; C, CHEMICALLY DISPERSED; N, IN NATIVE WATER; P, PIPET; S, SIEVE;
V, VISUAL ACCUMULATION TUBE; W, IN DISTILLED WATER)

DATE	TIME	WATER TEMP- PERA- TURE (°C)	DISCHARGE (CFS)	CONCEN- TRATION (MG/L)	SUSPENDED SEDIMENT DISCHARGE (TONS/DAY)	PARTICLE SIZE											METHOD OF ANALY- SIS
						PERCENT FINER THAN THE SIZE (IN MILLIMETERS) INDICATED											
						.002	.004	.008	.016	.031	.062	.125	.250	.500	1.00	2.00	
JUN 5, 1970	1150	14.0	59500	179	28800	16	18	29	45	60	80	96	100	--	--	--	VPWC

KOOTENAI RIVER BASIN

12318500 KOOTENAI RIVER NEAR COPELAND, IDAHO--Continued

SUSPENDED-SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

DAY	OCTOBER			NOVEMBER			DECEMBER		
	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
1	8250	10	223	5140	4	56	4170	3	34
2	9300	5	126	5020	2	27	4440	4	48
3	9850	8	213	5090	2	27	4560	4	49
4	9850	6	160	4840	6	78	4730	4	51
5	9260	10	250	5080	7	96	4780	4	52
6	8740	8	189	5390	3	44	4640	4	50
7	8400	4	91	5480	4	59	4680	4	51
8	7940	2	43	5740	4	62	4520	4	49
9	7790	3	63	5630	5	76	4420	4	48
10	7670	1	21	5530	5	75	4330	4	47
11	7720	1	21	5490	4	59	4250	4	46
12	7460	2	40	5400	4	58	4130	4	45
13	7200	1	19	5310	3	43	4320	4	47
14	6830	5	92	5350	4	58	4460	4	48
15	6720	3	54	5310	8	115	4330	4	47
16	6600	2	36	5200	7	98	4370	4	47
17	6330	1	17	5250	5	71	4510	4	49
18	6270	2	34	5250	4	57	4540	4	49
19	6230	3	50	5190	4	56	4350	4	47
20	6130	4	66	5150	3	42	4220	4	46
21	5870	1	16	5140	3	42	4160	4	45
22	5830	1	16	5380	4	58	3980	4	43
23	5790	1	16	5240	4	57	4000	3	32
24	5630	2	30	5070	4	55	4010	4	43
25	5650	1	15	5230	5	71	3970	4	43
26	5870	1	16	5270	2	28	3800	3	31
27	5710	1	15	4900	4	53	3670	6	59
28	5580	4	60	4800	4	52	3470	2	19
29	5410	2	29	4650	6	75	3430	4	37
30	5200	2	28	4320	5	58	3270	3	26
31	5080	2	27	--	--	--	3150	3	26
TOTAL	216160	--	2076	155840	--	1806	129660	--	1354

SUSPENDED-SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

DAY	JANUARY			FEBRUARY			MARCH		
	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
1	3060	4	33	4100	4	44	3780	4	41
2	2990	2	16	4140	4	45	3700	4	40
3	2900	2	16	4200	4	45	3550	7	67
4	2870	4	31	4160	4	45	3620	6	59
5	2730	2	15	4180	4	45	3400	6	55
6	2630	3	21	4180	4	45	3650	4	39
7	2690	2	15	4280	4	46	3760	6	61
8	2630	2	14	4220	4	46	4040	7	76
9	2560	3	21	4240	4	46	3920	6	64
10	2580	2	14	4300	4	46	3810	6	62
11	2650	4	29	4260	4	46	3750	7	71
12	2760	4	30	4320	4	47	3850	10	104
13	2940	4	32	4320	4	47	3860	6	63
14	3320	2	18	4500	4	49	3920	6	64
15	3370	2	18	4490	4	48	4140	8	89
16	3600	4	39	4650	7	88	4330	10	117
17	3390	4	37	4710	6	76	4590	10	124
18	3490	4	38	4810	7	91	4560	8	98
19	3390	4	37	4730	7	89	4480	10	121
20	3510	4	38	4610	6	75	4370	8	94
21	3560	4	38	4540	9	110	4330	10	117
22	3680	4	40	4540	9	110	4430	12	144
23	3740	4	40	4440	10	120	4500	11	134
24	3880	2	21	4230	5	57	4670	19	240
25	4000	4	43	4170	6	68	5150	12	167
26	4040	4	44	3900	6	63	5080	14	192
27	4080	4	44	3920	6	64	5010	11	149
28	4260	4	46	3820	6	62	4970	14	188
29	4180	4	45	--	--	--	5170	14	195
30	4140	4	45	--	--	--	5230	12	169
31	4020	4	43	--	--	--	5140	10	139
TOTAL	103640	--	961	120960	--	1763	132760	--	3343

12318500 KOOTENAI RIVER NEAR COPELAND, IDAHO--Continued

SUSPENDED-SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

DAY	APRIL			MAY			JUNE		
	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
1	4930	8	106	7070	6	115	38100	63	6480
2	4980	8	108	7280	6	118	37300	49	4930
3	5140	8	111	9020	6	146	40400	40	4360
4	4900	8	106	12400	8	268	48600	85	11200
5	5010	7	95	18200	26	1280	57400	173	26800
6	5170	9	126	26100	83	5850	62300	217	36500
7	6100	17	280	31900	140	12100	64000	288	49800
8	7240	12	235	34200	151	13900	62200	288	48400
9	7420	11	220	34600	139	13000	58900	202	32100
10	7650	12	248	34000	99	9090	55400	165	24700
11	8650	14	327	32600	69	6070	50700	142	19400
12	8500	10	229	30300	54	4420	44800	92	11100
13	8300	8	179	27300	39	2870	38200	83	8560
14	8070	6	131	24500	27	1790	33600	50	4540
15	7550	6	122	22600	24	1460	32200	50	4350
16	7040	3	57	22600	20	1220	35100	50	4740
17	6660	3	54	27900	35	2640	39400	43	4570
18	6360	4	69	38100	110	11300	42500	85	9750
19	6200	3	50	44100	140	16700	43300	92	10800
20	6470	5	87	45200	188	22900	41600	100	11200
21	6630	4	72	45200	135	16500	39600	96	10300
22	7060	7	133	45600	112	13800	37500	54	5470
23	7310	8	158	46500	112	14100	35600	36	3460
24	7330	7	139	48900	112	14800	34100	25	2300
25	7710	8	167	50100	143	19300	31800	15	1290
26	8000	8	173	53200	148	21300	29200	18	1420
27	7870	8	170	57000	150	23100	27300	16	1180
28	7670	8	166	60400	211	34400	25900	20	1400
29	7260	6	118	56200	189	28700	25500	18	1240
30	6990	6	113	47800	135	17400	25300	12	820
31	--	--	--	41700	87	9800	--	--	--
TOTAL	206170	--	4349	1082570	--	340437	1237800	--	363160

SUSPENDED-SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

DAY	JULY			AUGUST			SEPTEMBER		
	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
1	24700	13	867	10900	8	235	5820	2	31
2	24200	12	784	10900	10	294	5710	2	31
3	23200	14	877	10700	7	202	5630	3	46
4	21900	10	591	10100	7	191	5810	1	16
5	20700	10	559	9730	6	158	6000	1	16
6	20200	10	545	9270	7	175	5830	2	31
7	20400	9	496	9000	7	170	6120	1	17
8	19800	8	428	8600	10	232	5980	1	16
9	18600	8	402	8720	9	212	5880	7	111
10	17600	6	285	8660	4	94	5960	11	177
11	17100	8	369	8520	7	161	6260	2	34
12	16600	12	538	8220	4	89	6030	4	65
13	16000	10	432	7490	5	101	5770	1	16
14	15300	6	248	7310	6	118	5410	1	15
15	14600	10	394	7260	5	98	5420	1	15
16	14000	14	529	7110	6	115	5240	2	28
17	13300	10	359	6830	4	74	5040	1	14
18	13000	10	351	6660	4	72	4890	1	13
19	12600	16	544	6610	2	36	4870	1	13
20	12400	8	268	6410	4	69	4880	1	13
21	12000	10	324	6380	2	34	5540	1	15
22	11700	16	505	6130	2	33	6290	1	17
23	11400	9	277	5980	4	65	6570	3	53
24	11200	7	212	5870	3	48	6490	2	35
25	11200	6	181	6040	4	65	6510	4	70
26	10800	6	175	5790	3	47	6310	3	51
27	10400	6	168	5900	2	32	6030	3	49
28	10300	6	167	5600	1	15	5780	2	31
29	10300	6	167	6210	11	184	5580	1	15
30	10600	6	172	5770	10	156	5520	1	15
31	11000	6	178	5670	4	61	--	--	--
TOTAL	477100	--	12392	234340	--	3636	173170	--	1069

TOTAL DISCHARGE FOR YEAR (CFS-DAYS)

TOTAL SUSPENDED-SEDIMENT DISCHARGE FOR YEAR (TONS)

4270170

736346

12322000 KOOTENAI RIVER AT PORTHILL, IDAHO

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

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

PERIOD OF RECORD.--Chemical analyses: January 1949 to September 1950.

Water temperatures: January 1949 to September 1950, May 1963 to September 1970.

EXTREMES, 1969-70.--Water temperatures: Maximum, 21.5° C July 21.

EXTREMES, 1949-50, 1963-70.--Water temperatures: Maximum (1949-50, 1963-70), 21.5° C July 21, 1970; minimum (1949-50, 1963-65, 1966-70), freezing point on many days during winter months of most years.

REMARKS.--No record available Oct. 1 to Mar. 13.

TEMPERATURE (°C) OF WATER, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

DAY	OCT		NOV		DEC		JAN		FEB		MAR	
	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	--	--	--	--	--	--	--	--	--	--	--	--
2	--	--	--	--	--	--	--	--	--	--	--	--
3	--	--	--	--	--	--	--	--	--	--	--	--
4	--	--	--	--	--	--	--	--	--	--	--	--
5	--	--	--	--	--	--	--	--	--	--	--	--
6	--	--	--	--	--	--	--	--	--	--	--	--
7	--	--	--	--	--	--	--	--	--	--	--	--
8	--	--	--	--	--	--	--	--	--	--	--	--
9	--	--	--	--	--	--	--	--	--	--	--	--
10	--	--	--	--	--	--	--	--	--	--	--	--
11	--	--	--	--	--	--	--	--	--	--	--	--
12	--	--	--	--	--	--	--	--	--	--	--	--
13	--	--	--	--	--	--	--	--	--	--	--	--
14	--	--	--	--	--	--	--	--	--	--	1.0	0.5
15	--	--	--	--	--	--	--	--	--	--	2.0	1.0
16	--	--	--	--	--	--	--	--	--	--	2.5	2.0
17	--	--	--	--	--	--	--	--	--	--	3.5	2.5
18	--	--	--	--	--	--	--	--	--	--	3.5	2.5
19	--	--	--	--	--	--	--	--	--	--	4.5	3.5
20	--	--	--	--	--	--	--	--	--	--	4.0	3.5
21	--	--	--	--	--	--	--	--	--	--	4.5	4.0
22	--	--	--	--	--	--	--	--	--	--	5.0	4.5
23	--	--	--	--	--	--	--	--	--	--	4.5	4.5
24	--	--	--	--	--	--	--	--	--	--	5.0	4.5
25	--	--	--	--	--	--	--	--	--	--	5.0	4.5
26	--	--	--	--	--	--	--	--	--	--	5.0	4.5
27	--	--	--	--	--	--	--	--	--	--	5.5	4.5
28	--	--	--	--	--	--	--	--	--	--	5.5	4.5
29	--	--	--	--	--	--	--	--	--	--	5.5	5.0
30	--	--	--	--	--	--	--	--	--	--	8.5	5.0
31	--	--	--	--	--	--	--	--	--	--	10.0	4.5
AVG DAY	APR		MAY		JUN		JUL		AUG		SEP	
	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	8.5	4.5	10.0	5.5	9.5	8.5	16.0	15.0	18.5	18.5	19.0	19.0
2	7.0	5.0	9.0	6.0	10.5	9.5	15.0	14.0	18.5	18.5	19.0	18.5
3	9.5	5.5	9.0	7.5	11.0	10.0	14.5	14.5	18.5	18.5	19.0	18.5
4	7.0	6.0	9.0	7.5	12.5	11.0	15.5	14.5	18.5	18.5	18.5	17.5
5	7.5	6.0	10.0	9.0	13.5	12.5	17.0	15.5	19.0	18.5	17.5	17.5
6	7.5	6.5	10.0	9.5	13.5	13.5	18.5	17.0	19.5	19.0	17.5	17.0
7	7.0	6.5	10.0	9.0	13.5	13.5	19.0	18.5	19.5	19.5	17.0	17.0
8	7.0	6.5	9.0	7.5	13.5	12.5	19.5	19.0	19.5	19.5	17.0	16.5
9	6.5	6.5	7.5	7.0	13.5	12.5	20.0	19.5	19.5	19.5	16.5	16.0
10	7.0	6.5	7.0	7.0	12.0	12.0	20.5	20.0	20.0	19.5	16.0	15.5
11	7.0	6.0	7.0	6.0	12.0	11.0	20.5	20.5	20.0	20.0	15.5	15.5
12	7.0	6.0	6.0	6.0	11.0	11.0	20.5	20.5	20.0	20.0	15.5	15.5
13	6.0	6.0	6.0	6.0	10.5	10.5	20.5	20.0	20.0	20.0	16.0	15.5
14	6.0	6.0	6.0	6.0	10.5	10.5	20.0	20.0	20.0	19.5	15.5	15.0
15	6.5	5.5	6.5	6.0	10.5	10.5	20.0	20.0	19.5	19.0	15.0	14.5
16	6.0	4.5	7.0	6.5	10.5	10.5	20.0	19.5	19.5	19.5	14.5	14.0
17	8.5	4.5	9.0	7.0	11.0	10.5	19.5	19.5	19.5	19.5	14.0	13.5
18	6.5	4.5	9.0	9.0	11.5	11.0	20.0	19.5	19.5	19.0	13.5	12.5
19	9.0	5.0	9.0	8.5	12.5	11.5	20.0	20.0	19.5	19.0	12.5	12.0
20	6.5	5.5	9.0	9.0	14.0	12.5	21.0	20.0	19.5	19.0	12.0	11.5
21	10.0	5.5	9.0	9.0	15.0	14.0	21.5	21.0	19.5	19.0	11.5	11.5
22	8.5	6.0	9.0	8.5	16.0	15.0	21.0	21.0	19.5	19.0	11.5	11.5
23	7.5	6.5	9.0	9.0	16.0	16.0	21.0	20.5	19.0	19.0	11.5	11.0
24	9.0	6.5	9.0	9.0	17.0	16.0	21.0	20.5	19.0	19.0	11.0	11.0
25	7.5	6.5	9.5	9.0	17.0	17.0	20.5	20.5	19.0	19.0	11.5	11.0
26	8.5	6.5	10.0	10.0	17.0	17.0	20.5	19.5	19.0	19.0	11.5	11.0
27	7.0	6.5	10.0	10.0	17.0	17.0	19.5	19.5	19.0	19.0	11.5	11.5
28	7.5	6.5	10.0	9.5	17.0	17.0	19.5	18.5	19.0	19.0	11.5	11.5
29	7.0	6.5	9.5	9.0	17.0	16.5	18.5	17.5	19.0	19.0	11.5	11.5
30	9.0	6.0	9.5	8.5	16.5	16.0	18.5	17.5	19.0	19.0	11.5	11.0
31	--	--	8.5	8.5	--	--	18.5	17.5	19.0	19.0	--	--
AVG	7.5	6.0	8.5	8.0	13.5	13.0	19.0	18.5	19.0	19.0	14.5	14.0

12392050 CLARK FORK AT CLARK FORK, IDAHO

LOCATION.--Lat 48°08'17", long 116°10'46", in SW¼SW¼ sec.2, T.56 N., R.2 E., Bonner County, 6.5 miles downstream from gaging station, at county road crossing, and 0.5 mile south of Clark Fork.
 DRAINAGE AREA.--22,067 sq mi (at gaging station).
 PERIOD OF RECORD.--Chemical analyses: October 1969 to September 1970.
 REMARKS.--600 cfs added to discharge at gaging station for inflow.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

DATE	DIS- CHARGE (CFS)	SILICA (SiO ₂) (MG/L)	DIS- SOLVED CAL- CIUM (CA) (MG/L)	DIS- SOLVED MAG- NE- SIUM (MG)	SODIUM (NA) (MG/L)	PO- TAS- SIUM (K) (MG/L)	BICAR- BONATE (HCO ₃) (MG/L)	CAR- BONATE (CO ₃) (MG/L)	SULFATE (SO ₄) (MG/L)	CHLO- RIDE (CL) (MG/L)	DIS- SOLVED FLUO- RIDE (F) (MG/L)	DIS- SOLVED SOLIDS (RESI- DUE AT 180 C) (MG/L)
OCT.												
21...	22000	--	--	--	--	1.0	120	0	--	2.5	--	130
NOV.												
19...	16200	--	--	--	--	1.1	116	0	--	2.0	--	122
DEC.												
17...	14300	6.9	31	8.2	3.4	.5	122	2	18	1.0	--	125
JAN.												
28...	12000	5.8	26	7.5	3.1	1.0	110	4	16	1.5	--	121
FEB.												
26...	13700	--	--	--	--	--	115	0	--	3.0	--	118
MAR.												
25...	26300	--	--	--	--	--	113	0	--	2.0	--	115
APR.												
27...	26700	7.4	28	7.2	3.3	1.0	110	0	18	3.0	--	100
MAY												
18...	23800	--	--	--	--	--	86	0	--	2.0	--	97
JUNE												
16...	72100	7.7	19	4.7	2.2	.8	78	0	7.0	1.0	--	82
JULY												
14...	30000	7.1	24	6.0	3.0	1.7	122	0	11	1.0	.1	97
AUG.												
18...	12000	--	--	--	--	--	109	0	--	--	--	99
SEP.												
23...	18400	--	--	--	--	--	108	0	11	2.0	--	128

DATE	DIS- SOLVED SOLIDS (TONS PER DAY)	HARD- NESS (CA, MG) (MG/L)	NON- CAR- BONATE HARD- NESS (MG/L)	SODIUM AD- SORP- TION RATIO	SPECI- FIC COND- UCTANCE (MICRO- MHOS)	FIELD PH	COLOR (PLAT- INUM- COBALT UNITS)	TUR- BID- ITY (JTU)	TEMP- ERATURE (DEG C)	AIR TEMP- ERATURE (DEG C)	COLI- FORM (COL- ONIES PER 100 ML)	FECAL COLI- FORM (COL. PER 100 ML)
OCT.												
21...	7720	107	9	--	211	8.3	5	1	11.5	12.0	--	--
NOV.												
19...	5340	108	13	--	209	7.1	5	1	7.0	3.5	20	--
DEC.												
17...	4830	110	7	.1	216	8.4	5	0	3.5	2.0	37	--
JAN.												
28...	3920	108	11	.1	232	8.5	0	2	1.5	3.5	3	--
FEB.												
26...	4370	108	14	--	213	8.0	5	1	2.5	1.5	0	--
MAR.												
25...	8170	108	15	--	219	7.9	5	3	4.5	7.5	0	--
APR.												
27...	7210	102	12	.1	206	8.2	5	0	7.5	7.0	8	--
MAY												
18...	6230	73	2	--	162	8.1	10	2	9.5	10.0	560	9
JUNE												
16...	16000	70	6	.1	138	8.1	10	5	12.0	11.5	1200	19
JULY												
14...	7860	80	0	.1	176	8.3	5	2	18.0	26.0	23	0
AUG.												
18...	3210	--	--	--	202	8.3	--	0	19.5	22.5	5800	0
SEP.												
23...	6360	100	11	--	207	7.0	5	0	13.0	9.5	1200	92

PEND OREILLE RIVER BASIN

12392050 CLARK FORK AT CLARK FORK, IDAHO--Continued

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

DATE	NITRATE (N) (MG/L)	NITRITE (N) (MG/L)	AMMONIA NITRO- GEN (N) (MG/L)	ORGANIC NITRO- GEN (N) (MG/L)	TOTAL NITRO- GEN (N) (MG/L)	TOTAL ORTHO PHOS- PHORUS (P) (MG/L)	DIS- HYDRO- LYZABLE PHOS- PHORUS (P) (MG/L) ¹	TOTAL PHOS- PHORUS (P) (MG/L)	FIELD DIS- SOLVED OXYGEN (MG/L)	PER- CENT SATUR- ATION	BIO- CHEM- ICAL OXYGEN DEMAND (MG/L)	TOTAL ORGANIC CARBON (C) (MG/L)
OCT.												
21...	.0	.00	.13	.12	.27	--	.00	.02	10.3	102	1.0	2.0
NOV.												
19...	.0	.00	.20	.25	.45	--	.00	.01	11.6	103	.2	4.5
DEC.												
17...	.0	.01	.00	.00	.03	--	.00	.00	12.1	98	.9	1.5
JAN.												
28...	.0	.01	.02	.06	.11	--	.00	.01	12.8	99	1.6	.5
FEB.												
26...	.0	.00	.00	.00	.02	--	.00	.00	12.7	100	1.8	2.0
MAR.												
25...	.1	.00	.00	.02	.07	--	.00	.00	12.2	102	.6	1.0
APR.												
27...	.0	.00	.00	.00	.02	--	.00	.05	11.2	99	1.8	.5
MAY												
18...	.1	.00	.01	.05	.13	--	.00	.01	10.7	101	1.7	.5
JUNE												
16...	.1	.01	.03	.10	.19	--	.02	.02	13.1	131	2.8	1.0
JULY												
14...	.0	.00	.04	.09	.15	.01	.00	.01	9.1	103	.1	4.0
AUG.												
18...	.0	.00	.00	.07	.07	.00	.00	.00	9.6	111	1.1	--
SEPT.												
23...	.1	.01	.02	.12	.20	.01	.01	.01	9.4	95	.4	.0

¹ The value reported for dissolved hydrolyzable phosphorus includes dissolved orthophosphorus as well as dissolved hydrolyzable phosphorus.

DATE	DIS- SOLVED ALUM- INUM (AL) (UG/L)	DIS- SOLVED IRON (FE) (UG/L)	DIS- SOLVED MAN- GANESE (MN) (UG/L)	DIS- SOLVED STRON- TIUM (SR) (UG/L)	DIS- SOLVED CHRO- MIUM (CR) (UG/L)	DIS- SOLVED NICKEL (NI) (UG/L)	DIS- SOLVED COPPER (CU) (UG/L)	DIS- SOLVED LEAD (PB) (UG/L)	DIS- SOLVED ZINC (ZN) (UG/L)	DIS- SOLVED COBALT (CO) (UG/L)
NOV.										
19...	30	10	0	60	2	8	9	18	20	1
JAN.										
28...	0	0	20	80	1	9	7	18	0	4
APR.										
27...	0	0	20	80	0	8	5	8	0	1
MAY										
18...	100	20	0	120	0	5	4	7	0	2
JULY										
14...	0	10	0	110	0	5	6	7	0	3

DATE	DIS- SOLVED ARSENIC (AS) (UG/L)	DIS- SOLVED CAD- MIUM (CD) (UG/L)	DIS- SOLVED BARIUM (BA) (UG/L)	DIS- SOLVED VANA- DIUM (Y) (UG/L)	DIS- SOLVED SILVER (AG) (UG/L)	DIS- SOLVED BERYL- LIUM (BE) (UG/L)	DIS- SOLVED SELE- NIUM (SE) (UG/L)	DIS- SOLVED MOLY- BDENUM (MO) (UG/L)	DIS- SOLVED BORON (B) (UG/L)
NOV.									
19...	1	2	200	0	0	0	2	2	.00
JAN.									
28...	2	3	0	2	1	0	0	3	.00
APR.									
27...	1	2	0	0	0	0	0	1	10
MAY									
18...	0	1	0	0	0	0	1	0	10
JULY									
14...	3	3	0	0	0	0	1	0	10

DATE	DIS- SOLVED MERCURY (MG) (UG/L)	TOTAL IRON (FE) (UG/L)	TOTAL MAN- GANESE (MN) (UG/L)	TOTAL STRON- TIUM (SR) (UG/L)	TOTAL COPPER (CU) (UG/L)	TOTAL LEAD (PB) (UG/L)	TOTAL ZINC (ZN) (UG/L)	TOTAL ARSENIC (AS) (UG/L)	TOTAL CADMIUM (CD) (UG/L)	TOTAL BORON (B) (UG/L)
AUG.										
18...	--	350	<10	50	30	2	50	--	--	10
SEPT.										
23...	<0.1	30	10	--	<10	<1	40	<10	<1	20

12413300 SOUTH FORK COEUR D'ALENE RIVER AT SMELTERVILLE, IDAHO

LOCATION.--Lat 47°32'55", long 116°10'25", in SW¼ sec.35, T.49 N., R.2 E., Shoshone County, at gaging station on left bank 490 ft downstream from county road bridge, 0.2 mile downstream from Government Gulch, 0.6 mile northwest of Smelterville Post Office, and at mile 5.0.

DRAINAGE AREA.--202 sq mi.

PERIOD OF RECORD.--Chemical analyses: October 1967 to September 1970.

REMARKS.--This station was reported as a miscellaneous site for the period October 1967 to September 1968.

CHEMICAL ANALYSES. WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

DATE	DIS- CHARGE (CFS)	SILICA (SiO ₂) (MG/L)	DIS- SOLVED CAL- CIUM (CA) (MG/L)	DIS- SOLVED MAG- NE- SIUM (MG) (MG/L)	SODIUM (NA) (MG/L)	PO- TAS- SIUM (K) (MG/L)	BICAR- BONATE (HCO ₃) (MG/L)	CAR- BONATE (CO ₃) (MG/L)	SULFATE (SO ₄) (MG/L)	CHLO- RIDE (CL) (MG/L)	DIS- SOLVED FLUO- RIDE (F) (MG/L)	NITRATE (NO ₃) (MG/L)
NOV. 12...	93	11	33	11	28	1.9	19	0	163	1.0	.6	.9
JUNE 23...	729	8.6	16	4.2	3.2	.8	19	0	44	.0	.2	.9

DATE	DIS- SOLVED SOLIDS (RESI- DUE AT 180 C) (MG/L)	DIS- SOLVED SOLIDS (TONS PER AC-FT)	DIS- SOLVED SOLIDS (TONS PER DAY)	HARD- NESS (CA,MG) (MG/L)	NON- CAR- BONATE HARD- NESS (MG/L)	SODIUM AD- SORP- TION RATIO	PERCENT SODIUM	SPECI- FIC COND- UCTANCE (MICRO- MHOS)	PH (UNITS)	COLOR (PLAT- INUM- COBALT UNITS)	TEMP- ERATURE (DEG C)
NOV. 12...	267	.36	67.0	12	97	1.1	32	397	6.3	0	--
JUNE 23...	91	.12	179	58	42	.2	11	143	6.6	--	11.0

DATE	DIS- SOLVED ALUM- INUM (AL) (UG/L)	DIS- SOLVED IRON (FE) (UG/L)	DIS- SOLVED MAN- GANESE (MN) (UG/L)	DIS- SOLVED STRON- TIUM (SR) (UG/L)	DIS- SOLVED CHRO- MIUM (CR) (UG/L)	DIS- SOLVED NICKEL (NI) (UG/L)	DIS- SOLVED COPPER (CU) (UG/L)	DIS- SOLVED LEAD (PB) (UG/L)	DIS- SOLVED ZINC (ZN) (UG/L)
NOV. 12...	400	920	7960	200	4	26	2	181	40
JUNE 23...	3900	3100	1280	60	2	34	27	70	4220

DATE	DIS- SOLVED COBALT (CO) (UG/L)	DIS- SOLVED ARSENIC (AS) (UG/L)	DIS- SOLVED CAD- MIUM (CD) (UG/L)	DIS- SOLVED BARIUM (BA) (UG/L)	DIS- SOLVED VANA- DIUM (V) (UG/L)	DIS- SOLVED SILVER (AG) (UG/L)	DIS- SOLVED BERYL- LIUM (BE) (UG/L)
NOV. 12...	22	17	>125	<5	1	2	--
JUNE 23...	19	0	60	0	--	2	0

INSTANTANEOUS SUSPENDED SEDIMENT, WATER YEARS OCTOBER 1968 TO SEPTEMBER 1970

DATE	TIME	WATER TEM- PERA- TURE (°C)	DISCHARGE (CFS)	CONCEN- TRATION (MG/L)	SUSPENDED SEDIMENT DISCHARGE (TONS/DAY)
APR. 10, 1969	1725	7.0	1230	63	209
NOV. 12.....	1620	--	93	35	8.8
JUNE 23, 1970	1200	11.0	729	17	34

SPOKANE RIVER BASIN

12416000 HAYDEN CREEK BELOW NORTH FORK, NEAR HAYDEN LAKE, IDAHO
(Hydrologic bench-mark and pesticide station)

LOCATION.--Lat 47°49'22", long 116°39'10", in NW¼SW¼ sec.25, T.52 N., R.3 W., Kootenai County, at gaging station on right bank, 0.3 mile downstream from confluence of East Fork and North Fork, and 7.5 miles northeast of Hayden Lake Post Office.

DRAINAGE AREA.--22.0 sq mi.

PERIOD OF RECORD.--Chemical analyses: November 1966 to September 1970.

REMARKS.--This station was reported as a miscellaneous site for the period November 1966 to September 1967.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

DATE	DIS-CHARGE (CFS)	SILICA (SiO ₂) (MG/L)	DIS-SOLVED CAL- CIUM (CA) (MG/L)	DIS-SOLVED MAG- NE- SIUM (MG)	SODIUM (NA) (MG/L)	PO-TAS- SIUM (K) (MG/L)	BICAR- BONATE (HCO ₃) (MG/L)	CAR- BONATE (CO ₃) (MG/L)	SULFATE (SO ₄) (MG/L)	CHLO- RIDE (CL) (MG/L)	DIS-SOLVED FLUO- RIDE (F) (MG/L)	NITRATE (NO ₃) (MG/L)
OCT. 14...	4.2	13	11	3.2	1.6	.6	50	0	3.0	.0	.1	.0
NOV. 28...	3.2	12	11	3.2	1.5	.5	48	0	3.2	.0	.1	.0
DEC. 30...	5.2	11	8.6	3.0	1.5	.3	44	0	3.2	.0	.2	.4
FEB. 04...	13	12	7.2	2.6	1.3	.4	38	0	2.4	.0	.2	.1
MAR. 12...	44	13	5.9	2.1	1.3	.3	31	0	2.6	.0	.2	.1
MAY 04...	124	14	4.9	1.8	1.1	.6	25	0	2.4	.0	.1	.1
JUNE 15...	59	12	6.6	2.2	1.1	.6	34	0	.4	.5	.0	.5
JULY 22...	9.2	--	--	--	--	--	--	--	--	--	--	--
AUG. 18...	5.0	14	9.2	3.1	1.6	.5	47	0	2.0	.0	.1	.0
SEP. 23...	4.8	15	9.1	3.4	1.7	.8	48	0	5.5	1.0	.0	--

DATE	PHOS- PHATE (PO ₄) (MG/L)	DIS-SOLVED SOLIDS (RESI- DUE AT 180 C) (MG/L)	DIS-SOLVED SOLIDS (TONS PER DAY)	HARD- NESS (CA,MG) (MG/L)	NON- CAR- BONATE HARD- NESS (MG/L)	SODIUM AD- SORP- TION RATIO	PERCENT SODIUM	SPECI- FIC COND- UCTANCE (MICRO- MHOS)	FIELD PH (UNITS)	COLOR (PLAT- INUM- COBALT UNITS)	TEMP- ERATURE (DEG C)	AIR TEMP- ERATURE (DEG C)
OCT. 14...	.21	61	.69	40	0	.1	8	69	7.4	0	3.0	--
NOV. 28...	.00	52	.45	40	1	.1	7	69	7.4	0	.5	--
DEC. 30...	.01	47	.66	34	0	.1	9	68	7.2	0	1.0	--
FEB. 04...	.02	43	1.51	28	0	.1	9	68	7.2	0	1.5	--
MAR. 12...	.04	39	4.63	23	0	.1	11	--	7.2	0	3.0	--
MAY 04...	.01	39	13.1	20	0	.1	10	45	7.2	0	5.5	--
JUNE 15...	.05	46	7.33	26	0	.1	8	53	7.0	25	9.5	--
JULY 22...	--	--	--	--	--	--	--	70	--	--	12.5	18.5
AUG. 18...	.00	49	.66	36	0	.1	9	77	7.5	0	11.5	--
SEP. 23...	.00	58	.75	36	0	.0	2	82	8.1	--	9.5	11.5

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

[illegible]

INSTANTANEOUS SUSPENDED SEDIMENT AND PARTICLE SIZE, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970
(METHODS OF ANALYSIS: B, BOTTOM WITHDRAWAL TUBE; C, CHEMICALLY DISPERSED; N, IN NATIVE WATER; P, PIPET; S, SIEVE;
V, VISUAL ACCUMULATION TUBE; W, IN DISTILLED WATER)

[illegible]

12419500 SPOKANE RIVER ABOVE LIBERTY BRIDGE, NEAR OTIS ORCHARDS, WASH.

LOCATION.--Lat 47°41'55", long 117°02'35", in NW¼NW¼ sec.6, T.25 N., R.46 E., Spokane County, at bridge on U.S. Highway 10 at State line, 2.1 miles upstream from gaging station, 3.3 miles upstream from Liberty Bridge, 3.5 miles east of Otis Orchards, and at mile 96.0.

DRAINAGE AREA.--3,880 sq mi, approximately (at gaging station).

PERIOD OF RECORD.--Chemical analyses: July 1959 to September 1970.

Water temperatures: December 1963 to September 1965.

REMARKS.--Coliform, dissolved oxygen, and temperature data furnished by Washington State Water Pollution Control Commission. No appreciable inflow between sampling point and gaging station except during period of heavy local runoff.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

DATE	MEAN DIS- CHARGE (CFS)	SILICA (SiO ₂) (MG/L)	DIS- SOLVED CAL- CIUM (CA) (MG/L)	DIS- SOLVED MAG- NE- SIUM (MG) (MG/L)	SODIUM (NA) (MG/L)	PO- TAS- SIUM (K) (MG/L)	BICAR- BONATE (HCO ₃) (MG/L)	CAR- BONATE (CO ₃) (MG/L)	SULFATE (SO ₄) (MG/L)	CHLO- RIDE (CL) (MG/L)	DIS- SOLVED FLUO- RIDE (F) (MG/L)	NITRATE (NO ₃) (MG/L)
OCT. '69												
12...	1610	8.0	5.9	1.7	1.3	.7	22	0	7.4	.2	.2	.6
NOV.												
16...	1950	7.8	6.2	1.7	1.6	.8	23	0	8.2	.0	.2	.5
DEC.												
14...	1950	9.1	6.2	1.7	1.8	.9	19	0	12	.3	.2	.6
JAN. '70												
10...	1620	10	6.1	1.7	1.6	.8	22	0	9.0	.4	.2	.5
FEB.												
15...	5420	9.0	6.3	1.8	1.4	.8	20	0	10	.3	.2	.5
MAR.												
15...	7040	8.7	6.5	1.9	2.0	1.0	22	0	11	.4	.2	.5
APR.												
19...	9830	8.4	6.7	2.0	1.8	1.0	22	0	12	.3	.2	.6
MAY												
17...	17600	9.4	6.1	1.8	1.8	1.0	21	0	10	.1	.2	.3
JUNE												
21...	12900	8.1	4.9	1.4	1.4	.6	21	0	58	.1	.1	.2
JULY												
26...	1190	--	--	--	--	--	--	--	--	--	--	--
AUG.												
23...	1140	7.5	5.4	1.5	1.5	.6	21	0	6.4	.2	.1	.3
SEPT.												
20...	1410	7.2	5.8	1.6	1.7	.9	22	0	7.0	.1	.1	.4

DATE	DIS- SOLVED SOLIDS (SUM OF CONSTITUENTS) (MG/L)	DIS- SOLVED SOLIDS (TONS PER AC-FT)	DIS- SOLVED SOLIDS (TONS PER DAY)	HARD- NESS (CA, MG) (MG/L)	NON- CAR- BONATE HARD- NESS (MG/L)	SODIUM AD- SORP- TION RATIO	SPECI- FIC COND- UCTANCE (MICRO- MHOS)	PH (UNITS)	COLOR (PLAT- INUM- COBALT UNITS)	TEMP- ERATURE (DEG C)	DIS- SOLVED OXYGEN (MG/L)	COLI- FORM (MPN)
OCT.												
12...	37	.05	148	22	4	.1	56	7.3	0	11.7	11.0	40
NOV.												
16...	38	.06	216	23	4	.1	59	6.7	0	7.0	10.0	750
DEC.												
14...	42	.06	216	23	7	.2	64	6.6	0	6.0	10.1	90
JAN.												
10...	41	.06	184	22	4	.1	59	7.0	5	3.0	12.7	2400
FEB.												
15...	40	.05	556	23	7	.1	62	6.9	0	4.0	10.2	930
MAR.												
15...	43	.06	893	24	6	.2	65	6.8	5	4.0	13.8	150
APR.												
19...	44	.07	1330	25	7	.2	67	6.9	5	7.0	17.0	90
MAY												
17...	41	.06	2000	23	6	.2	61	7.2	5	12.0	11.2	930
JUNE												
21...	33	.04	1150	18	1	.1	47	7.2	10	19.0	9.0	90
JULY												
26...	--	--	--	--	--	--	--	--	--	24.0	9.0	150
AUG.												
23...	34	.05	105	20	3	.1	51	6.9	5	24.0	8.6	430
SEPT.												
20...	36	.05	145	21	3	.2	55	7.0	5	16.0	8.8	40

DATE	DIS- SOLVED COPPER (CU) (UG/L)	DIS- SOLVED ZINC (ZN) (UG/L)
NOV.		
16...	0	360
FEB.		
15...	0	370

SNAKE RIVER BASIN

SNAKE RIVER MAIN STEM

13022500 SNAKE RIVER ABOVE RESERVOIR, NEAR ALPINE, WYO.

LOCATION.--Lat 43°11'47", long 110°53'18", Lincoln County, sampled at bridge at Astoria Springs, Teton County, 3 miles downstream from Hoback River, 13 miles upstream from gaging station, and 15 miles northeast of Alpine.
 DRAINAGE AREA.--3,465 sq mi (at gaging station).
 PERIOD OF RECORD.--Chemical analyses: October 1965 to September 1970.
 Water temperatures: October 1965 to September 1966.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

DATE	TIME	DIS- CHARGE (CFS)	SILICA (SiO ₂) (MG/L)	DIS- SOLVED CAL- CIUM (CA) (MG/L)	DIS- SOLVED MAG- NE- SIUM (MG)	SODIUM (NA) (MG/L)	PO- TAS- SIUM (K) (MG/L)	BICAR- BONATE (HCO ₃) (MG/L)	CAR- BONATE (CO ₃) (MG/L)	SULFATE (SO ₄) (MG/L)	CHLO- RIDE (CL) (MG/L)	DIS- SOLVED FLUO- RIDE (F) (MG/L)
OCT.												
11...	1500	1700	10	56	10	6.9	1.6	159	0	60	4.4	.4
NOV.												
17...	1600	1300	14	60	11	6.4	1.4	143	12	54	13	.4
JAN.												
18...	1415	1430	13	53	10	7.4	1.6	140	0	48	18	.6
FEB.												
04...	0950	1490	11	58	13	7.4	1.4	153	0	68	10	.6
MAR.												
09...	1525	1480	12	51	11	7.8	1.6	146	0	58	8.1	.6
APR.												
07...	0850	1690	18	47	12	5.9	2.6	146	0	54	6.1	.5
MAY												
08...	1200	5900	13	39	8.0	8.3	2.0	132	0	33	3.3	.6
JUNE												
02...	0900	13300	11	32	6.8	6.7	1.4	114	0	24	2.4	.5
JULY												
08...	0945	10800	11	34	4.3	5.4	1.4	104	0	23	6.7	.5
AUG.												
04...	1335	5660	13	38	2.6	7.4	1.6	98	6	25	7.7	.6
SEP.												
01...	1140	4470	13	32	5.1	7.8	1.5	101	0	18	3.9	.6

DATE	NITRATE (NO ₃) (MG/L)	DIS- SOLVED BORON (B) (UG/L)	DIS- SOLVED SOLIDS (SUM OF CONSTITUENTS) (MG/L)	DIS- SOLVED SOLIDS (TONS PER AC-FT)	DIS- SOLVED SOLIDS (TONS PER DAY)	HARD- NESS (CA, MG) (MG/L)	NON- CAR- BONATE HARD- NESS (MG/L)	SODIUM AD- SORP- TION RATIO	SPECI- FIC COND- UCTANCE (MICRO- MHOS)	PH (UNITS)	TEMP- ERATURE (DEG C)
OCT.											
11...	.0	160	227	.30	1030	180	50	.2	373	8.2	6.0
NOV.											
17...	.2	30	243	.33	849	193	56	.2	380	8.4	4.0
JAN.											
18...	.2	50	221	.30	842	174	59	.2	352	7.9	4.0
FEB.											
04...	.2	0	245	.31	917	198	72	.2	380	7.8	1.5
MAR.											
09...	.0	130	222	.30	887	172	52	.3	356	8.1	2.5
APR.											
07...	.2	30	218	.31	1040	165	45	.2	355	--	7.5
MAY											
08...	.0	70	172	.24	2800	130	22	.3	288	7.0	5.0
JUNE											
02...	.1	40	141	.19	5030	108	14	.3	238	7.3	7.5
JULY											
08...	.2	0	138	.19	4080	102	17	.2	226	7.8	12.0
AUG.											
04...	.1	30	150	.20	2290	105	15	.3	244	8.3	15.0
SEP.											
01...	.1	40	132	.18	1620	100	17	.3	241	8.0	16.0

13027500 SALT RIVER ABOVE RESERVOIR, NEAR ETNA, WYO.

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

DRAINAGE AREA.--829 sq mi.

PERIOD OF RECORD.--Chemical analyses: October 1965 to September 1970.

Water temperatures: October 1965 to September 1966.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

DATE	TIME	DIS-CHARGE (CFS)	SILICA (SiO ₂) (MG/L)	DIS-SOLVED CAL- CIUM (CA) (MG/L)	DIS-SOLVED MAG- NE- SIUM (MG) (MG/L)	SODIUM (NA) (MG/L)	PO- TAS- SIUM (K) (MG/L)	BICAR- BONATE (HCO ₃) (MG/L)	CAR- BONATE (CO ₃) (MG/L)	SULFATE (SO ₄) (MG/L)	CHLO- RIDE (CL) (MG/L)	DIS-SOLVED FLUO- RIDE (F) (MG/L)
OCT. 11...	1550	591	7.1	68	17	11	.9	238	0	37	14	.2
NOV. 17...	1700	549	11	37	35	5.9	.9	253	0	17	11	.1
JAN. 18...	1230	422	8.3	50	28	13	1.2	229	0	36	28	.3
FEB. 04...	1055	448	7.3	62	21	7.8	.9	244	0	24	24	.2
MAR. 09...	1425	390	6.4	59	24	7.8	1.9	232	0	41	23	.3
APR. 07...	1010	492	12	61	18	20	2.0	232	0	39	34	.2
MAY 08...	1050	1550	9.4	60	12	14	1.6	210	0	23	21	.1
JUNE 02...	0935	1820	7.1	53	13	8.5	1.1	214	0	21	7.7	.2
JULY 08...	1115	888	8.7	65	16	7.8	.9	244	0	26	9.8	.2
AUG. 04...	1440	786	7.9	65	16	11	1.2	235	6	34	17	.2
SEP. 01...	1300	679	6.9	63	17	9.7	1.1	244	0	26	11	.3

DATE	NITRATE (NO ₃) (MG/L)	DIS-SOLVED BORON (B) (UG/L)	DIS-SOLVED SOLIDS (SUM OF CONSTITUENTS) (MG/L)	DIS-SOLVED SOLIDS (TONS PER AC-FT)	DIS-SOLVED SOLIDS (TONS PER DAY)	HARD- NESS (CA, MG) (MG/L)	NON- CAR- BONATE HARD- NESS (MG/L)	SODIUM AD- SORP- TION RATIO	SPECI- FIC COND- UCTANCE (MICRO- MHOS)	PH (UNITS)	TEMP- ERATURE (DEG C)
OCT. 11...	3.4	10	276	.37	434	239	44	.3	483	8.0	7.0
NOV. 17...	9.7	200	252	.36	388	236	28	.2	458	8.2	5.0
JAN. 18...	2.7	10	280	.36	305	240	52	.4	478	7.9	2.0
FEB. 04...	8.2	0	275	.35	312	240	40	.2	455	8.0	1.0
MAR. 09...	2.3	10	280	.39	305	245	55	.2	504	8.1	3.0
APR. 07...	1.7	0	302	.42	414	227	37	.6	534	7.5	10.0
MAY 08...	1.3	10	246	.33	1020	199	27	.4	445	7.4	5.5
JUNE 02...	.2	0	217	.32	1170	186	10	.3	398	7.7	9.0
JULY 08...	6.1	0	261	.36	643	230	30	.2	456	7.8	12.0
AUG. 04...	3.4	10	277	.37	573	230	27	.3	444	8.3	14.5
SEP. 01...	4.2	20	259	.36	488	226	26	.3	468	8.1	14.0

SNAKE RIVER MAIN STEM

13037500 SNAKE RIVER NEAR HEISE, IDAHO
(Irrigation network station)

LOCATION.--Lat 43°37'43", long 111°41'03", in SW¼SW¼ sec.31, T.4 N., R.41 E., Jefferson County, at Eagle Rock canal headgate 1.2 miles upstream from Heise, 1.6 miles downstream from Anderson canal headgate, 1.8 miles downstream from gaging station, approximately 4.8 miles east of Ririe, approximately 21 miles upstream from Henrys Fork, and at mile 859.8.

DRAINAGE AREA.--5,752 sq mi (upstream from gaging station).

PERIOD OF RECORD.--Chemical analyses: January 1953 to September 1970.

Water temperatures: January 1953 to September 1970.

EXTREMES, 1969-70.--Specific conductance: Maximum daily, 547 micromhos Mar. 31; minimum daily, 268 micromhos July 19.

Water temperatures: Maximum, 20° C Aug. 6, 7; minimum, freezing point on several days during November, December, and January.

EXTREMES, 1953-70.--Specific conductance: Maximum daily, 791 micromhos Nov. 13, 1956; minimum daily, 240 micromhos June 27, 1954.

Water temperatures: Maximum, 20° C Aug. 6, 7, 1970; minimum, freezing point on many days during winter months of most years.

REMARKS.--Approximately 2.5 percent of normal annual streamflow of 5,000,000 acre-feet is diverted by Anderson canal between sampling point and gaging station. This diversion occurs during the months of May to November. Except for leakage through the headgate, no other diversion or appreciable inflow between sampling point and gaging station except during periods of heavy local runoff.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

DATE	DIS- CHARGE (CFS)	SILICA (SI02) (MG/L)	DIS- SOLVED CAL- CIUM (CA) (MG/L)	DIS- SOLVED MAG- NE- SIUM (MG)	SODIUM (NA) (MG/L)	PO- TAS- SIUM (K) (MG/L)	BICAR- BONATE (HCO3) (MG/L)	CAR- BONATE (CO3) (MG/L)	SULFATE (SO4) (MG/L)	CHLO- RIDE (CL) (MG/L)	DIS- SOLVED FLUO- RIDE (F) (MG/L)
OCT.											
15...	2750	4.3	33	13	15	2.6	120	2	--	15	.4
NOV.											
15...	1850	4.2	46	15	16	2.7	162	0	--	15	.4
DEC.											
15...	1350	4.6	48	16	18	2.9	166	0	--	20	.4
JAN.											
15...	1760	8.8	66	17	20	3.0	210	0	--	28	.4
FEB.											
15...	1440	8.4	54	17	20	3.1	188	0	--	22	.4
MAR.											
15...	1570	7.1	64	16	19	3.5	190	6	--	22	.4
APR.											
15...	6220	8.1	56	15	13	2.2	186	0	--	12	.4
JUNE											
15...	16100	10	43	10	8.8	1.7	152	0	32	8.0	.3
JULY											
15...	11300	9.2	37	8.6	7.2	1.5	122	8	23	6.0	.3
AUG.											
15...	10900	13	38	9.2	7.6	1.5	142	0	42	6.0	.3
SEP.											
15...	5510	9.8	44	11	10	1.9	155	0	36	11	.4

DATE	NITRATE (NO3) (MG/L)	DIS- SOLVED SOLIDS (RESI- DUE AT 180 C) (MG/L)	DIS- SOLVED SOLIDS (TONS PER AC-FT)	DIS- SOLVED SOLIDS (TONS PER DAY)	HARD- NESS (CA, MG) (MG/L)	NON- CAR- BONATE HARD- NESS (MG/L)	SODIUM AD- SORP- TION RATIO	PERCENT SODIUM	SPECI- FIC COND- UCTANCE (MICRO- MHOS)	PH (UNITS)	TEMP- ERATURE (DEG C)
OCT.											
15...	--	199	.27	1480	136	38	.6	19	355	8.4	--
NOV.											
15...	--	255	.35	1270	176	44	.5	16	434	7.7	--
DEC.											
15...	--	246	.33	897	186	50	.6	17	464	7.6	--
JAN.											
15...	--	313	.43	1490	234	62	.6	15	538	8.0	--
FEB.											
15...	--	288	.39	1120	204	50	.6	17	503	8.0	--
MAR.											
15...	--	313	.43	1330	226	70	.6	15	510	8.6	--
APR.											
15...	--	269	.37	4520	201	48	.4	12	457	8.0	--
JUNE											
15...	.1	197	.27	8560	148	24	.3	11	329	7.8	9.0
JULY											
15...	.0	158	.21	4820	128	14	.3	11	272	8.8	16.0
AUG.											
15...	.0	190	.26	5590	133	16	.3	11	293	7.9	16.0
SEP.											
15...	.0	202	.27	3010	155	28	.3	12	341	7.9	12.0

13037500 SNAKE RIVER NEAR HEISE, IDAHO--Continued

SPECIFIC CONDUCTANCE (MICROMHOS AT 25°C), WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

DAY	OCTOBER	NOVEMBER	DECEMBER	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE	JULY	AUGUST	SEPTEMBER
1.....	368	451	537	525	512	517	540	425	359	291	271	318
2.....	370	461	508	535	525	523	533	432	351	291	275	318
3.....	371	469	501	521	516	527	523	432	357	284	275	318
4.....	387	469	523	530	417	528	528	433	353	284	278	329
5.....	387	477	524	533	525	528	537	429	343	279	280	329
6.....	387	478	504	537	532	484	536	417	345	275	278	332
7.....	397	477	530	529	518	518	537	417	338	277	278	327
8.....	404	477	538	509	524	522	533	413	328	279	278	327
9.....	399	473	523	498	521	522	460	412	343	279	282	333
10.....	397	473	513	490	521	523	444	349	339	284	285	339
11.....	416	473	458	525	453	531	448	417	341	277	282	345
12.....	414	470	482	530	506	530	448	413	310	277	285	343
13.....	414	477	506	528	528	535	450	413	313	277	288	347
14.....	416	490	524	528	461	502	454	414	325	282	286	340
15.....	355	434	464	538	503	510	457	--	329	272	293	341
16.....	429	466	514	529	520	515	453	408	313	279	288	340
17.....	427	478	509	512	430	--	452	390	316	272	295	333
18.....	434	476	513	531	471	541	445	365	313	275	300	351
19.....	422	488	523	527	495	528	441	365	--	268	295	341
20.....	434	476	522	514	525	531	439	381	305	275	296	341
21.....	437	481	522	526	524	532	446	375	305	270	304	344
22.....	447	489	523	506	529	533	444	379	307	272	301	343
23.....	426	430	527	513	517	539	449	378	307	269	303	341
24.....	472	423	526	514	532	533	444	380	296	269	303	342
25.....	465	501	521	514	524	535	435	381	291	278	305	358
26.....	461	508	526	516	525	541	439	370	289	271	306	357
27.....	472	506	524	512	532	528	431	363	291	273	306	358
28.....	469	511	527	509	522	539	430	372	291	278	315	357
29.....	466	453	533	523	--	536	435	379	277	271	311	360
30.....	469	500	531	517	--	531	432	368	286	275	314	361
31.....	454	--	515	527	--	547	--	359	--	275	314	--
AVERAGE	421	474	515	520	507	526	468	394	319	276	292	340

TEMPERATURE (°C) OF WATER, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	13.5	9.0	1.0	0.0	1.0	6.5	4.5	6.5	10.0	--	15.5	13.5
2	12.5	6.5	2.5	0.0	1.5	5.0	4.5	4.5	10.0	14.5	15.5	16.0
3	12.0	8.5	3.5	1.5	4.0	5.0	6.5	4.5	7.5	14.5	15.5	13.5
4	12.0	7.5	2.5	0.0	2.5	5.0	8.5	4.5	10.0	14.5	14.5	16.5
5	11.5	7.5	2.5	0.0	2.0	3.5	9.0	7.5	7.5	15.0	14.5	13.5
6	12.0	7.5	4.0	0.0	2.0	6.5	11.0	4.5	10.0	14.0	15.5	12.5
7	12.0	8.5	2.0	0.0	4.0	5.0	11.0	4.5	10.0	14.5	15.5	12.5
8	12.0	8.5	2.0	0.0	4.0	5.0	9.5	4.5	9.5	15.0	15.5	--
9	11.5	--	2.5	0.5	1.5	--	5.5	4.5	7.5	15.0	15.5	12.0
10	11.5	9.0	3.5	0.5	2.0	4.5	6.0	4.5	9.5	15.0	16.0	12.5
11	9.0	8.5	2.5	2.0	2.0	5.0	4.0	4.5	8.5	14.5	--	12.5
12	10.5	8.5	5.5	2.5	4.0	5.5	6.0	4.5	9.0	14.5	16.0	12.0
13	9.0	8.5	5.5	3.5	4.0	5.0	4.5	4.5	10.0	14.0	16.0	14.0
14	10.0	5.5	5.0	2.5	4.0	5.0	4.5	6.5	10.0	15.0	16.0	12.0
15	--	--	--	--	--	--	--	--	9.5	15.5	16.0	12.0
16	9.0	5.5	4.0	3.5	5.5	4.5	4.5	7.5	7.5	15.5	16.5	12.0
17	10.5	5.0	4.0	3.5	4.5	--	4.0	9.0	10.5	15.5	12.5	14.0
18	11.0	5.0	4.0	4.0	3.5	5.0	4.5	7.5	11.0	15.5	13.5	12.5
19	10.5	5.5	4.5	4.5	3.5	5.0	3.5	8.5	--	15.5	12.5	14.5
20	10.0	2.5	4.5	4.0	4.5	5.0	4.5	8.5	11.0	--	16.0	12.0
21	10.5	5.5	5.5	4.0	3.5	6.0	4.0	8.5	12.0	--	13.5	12.5
22	10.5	5.0	4.5	4.0	4.5	7.5	3.5	9.0	9.5	--	16.5	12.0
23	11.0	5.0	4.5	4.5	4.5	6.5	3.5	7.5	10.5	14.5	13.5	12.0
24	11.0	5.5	2.5	4.5	2.0	--	4.0	8.5	10.0	15.0	13.5	12.5
25	10.0	2.5	2.5	4.0	4.0	6.5	4.0	9.0	--	15.0	13.5	10.0
26	10.0	4.5	3.5	4.0	4.0	6.0	4.0	9.0	13.5	15.0	16.5	10.0
27	10.5	4.5	2.0	5.0	6.0	6.0	4.5	7.5	12.0	14.5	16.5	10.5
28	7.5	4.0	1.5	3.5	4.0	4.5	4.5	9.0	12.0	14.5	17.0	10.0
29	7.0	3.5	0.5	1.0	--	4.0	4.5	9.0	12.0	14.5	16.5	10.5
30	7.5	1.5	0.5	1.0	--	6.5	4.5	8.5	12.0	14.5	13.5	12.5
31	6.5	--	0.5	1.0	--	6.5	--	8.5	--	15.0	--	--
AVG	11.0	6.0	3.0	2.0	3.5	5.0	5.0	7.0	10.5	14.5	15.0	12.5

HENRYS FORK BASIN

13055000 TETON RIVER NEAR ST. ANTHONY, IDAHO

LOCATION.--Lat 43°55'40", long 111°36'55", in SW¼ sec.15, T.7 N., R.41 E., Fremont County, temperature recorder at gaging station on right bank, 0.5 mile upstream from railroad bridge, 4 miles southeast of St. Anthony, and at mile 22.

DRAINAGE AREA.--890 sq mi, approximately.

PERIOD OF RECORD.--Water temperatures: April 1964 to September 1970.

EXTREMES, 1969-70.--Water temperatures: Maximum, 21° C Aug. 8; minimum, freezing point many days during November, December, and January.

EXTREMES, 1964-70.--Water temperatures: Maximum, 22° C on several days during July and August in 1966, 1968-69; minimum, freezing point on many days during winter months of most years.

TEMPERATURE (°C) OF WATER, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

DAY	OCT		NOV		DEC		JAN		FEB		MAR	
	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	12.0	10.0	5.5	5.0	0.0	0.0	0.5	0.0	1.0	1.0	4.5	3.0
2	11.0	8.0	5.5	4.0	0.0	0.0	0.0	0.0	1.0	1.0	4.5	3.5
3	8.0	6.5	4.5	2.5	0.0	0.0	0.0	0.0	1.0	1.0	3.5	2.0
4	7.0	6.0	4.0	3.0	0.0	0.0	0.0	0.0	1.5	1.0	2.5	2.0
5	7.0	5.5	4.5	4.0	0.0	0.0	0.5	0.0	2.0	1.5	4.0	2.5
6	8.0	6.0	5.0	4.5	0.0	0.0	0.5	0.5	2.5	2.0	4.0	2.5
7	9.5	7.0	5.0	4.5	0.0	0.0	0.5	0.0	3.0	2.5	4.5	3.5
8	9.5	8.5	5.0	4.0	0.0	0.0	0.0	0.0	3.0	2.5	5.0	4.5
9	9.0	8.0	4.0	4.0	0.0	0.0	0.0	0.0	2.5	1.0	4.5	3.5
10	8.0	6.5	4.0	4.0	0.0	0.0	0.0	0.0	1.5	1.0	3.5	2.0
11	7.0	5.0	4.0	4.0	0.0	0.0	0.0	0.0	2.0	1.0	3.5	2.5
12	5.0	3.5	4.0	4.0	1.0	0.0	0.0	0.0	3.0	2.0	4.0	2.5
13	4.5	3.5	4.0	4.0	2.0	1.0	0.0	0.0	3.0	3.0	4.0	4.0
14	5.0	4.0	4.0	4.0	2.0	2.0	0.0	0.0	3.0	2.5	5.0	4.0
15	5.0	4.0	4.0	3.5	2.0	0.5	0.0	0.0	3.0	3.0	6.0	5.0
16	5.0	4.5	3.5	3.5	0.5	0.5	0.0	0.0	3.5	3.0	6.0	5.0
17	6.0	4.5	3.5	1.5	1.0	0.5	0.0	0.0	3.5	3.5	5.0	3.5
18	6.5	5.5	1.5	0.5	2.0	1.0	0.0	0.0	3.5	2.5	4.5	3.0
19	6.5	6.0	0.5	0.5	2.0	2.0	2.0	0.5	2.5	1.5	4.5	2.5
20	6.5	5.5	0.5	0.0	2.0	2.0	2.5	2.0	2.0	1.0	4.0	2.5
21	7.0	5.5	0.0	0.0	2.0	2.0	2.5	2.5	1.5	1.0	5.5	3.5
22	7.0	6.0	0.0	0.0	2.0	1.5	2.5	2.5	2.0	1.0	5.5	4.5
23	7.0	6.0	0.0	0.0	1.5	1.0	2.5	2.5	3.0	2.0	6.0	5.5
24	7.0	6.5	0.0	0.0	1.0	0.5	2.5	2.5	3.0	2.5	6.5	5.5
25	8.0	7.0	0.0	0.0	0.5	0.5	2.5	2.0	3.5	2.5	6.5	5.0
26	8.0	6.0	0.0	0.0	0.5	0.5	2.0	2.0	3.5	2.5	6.0	5.0
27	6.5	5.5	0.0	0.0	0.5	0.5	2.5	2.0	3.5	2.5	6.0	4.0
28	6.5	5.5	0.0	0.0	0.5	0.0	2.5	1.0	3.5	3.0	5.5	4.0
29	5.5	4.5	0.0	0.0	0.0	0.0	1.0	0.5	--	--	6.0	4.0
30	5.0	4.0	0.0	0.0	0.0	0.0	1.0	1.0	--	--	6.0	4.0
31	5.0	4.5	--	--	0.0	0.0	1.0	1.0	--	--	5.5	3.5
AVG DAY	7.0	5.7	2.5	2.1	0.7	0.5	0.9	0.7	2.5	1.9	4.9	3.6
DAY	APR		MAY		JUN		JUL		AUG		SEP	
	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	5.5	4.0	9.0	6.0	11.0	9.0	13.0	11.0	19.5	15.5	18.0	15.5
2	5.5	4.5	11.0	7.5	11.5	10.5	15.5	13.0	19.0	16.0	18.0	15.5
3	6.5	4.5	11.5	9.0	11.5	11.0	16.0	15.0	19.0	15.5	17.5	14.0
4	7.0	5.5	11.5	10.0	11.5	10.5	16.0	14.5	18.0	15.0	15.5	13.0
5	9.0	6.5	11.5	9.0	11.5	10.5	16.0	14.5	18.5	16.5	14.5	11.5
6	10.0	7.5	11.0	8.0	11.0	10.0	15.0	13.5	20.0	16.5	11.5	10.5
7	8.5	6.5	11.0	7.5	10.5	9.5	13.5	12.5	20.0	17.0	12.5	10.5
8	7.5	5.5	7.5	6.5	10.0	9.5	15.0	13.0	21.0	18.0	13.5	12.0
9	8.5	6.0	6.5	6.0	10.0	8.5	16.0	14.5	19.0	16.0	13.5	11.0
10	8.5	7.0	6.0	5.5	8.5	7.0	16.0	13.5	18.5	15.0	13.0	10.5
11	7.0	6.5	7.0	4.5	7.5	7.5	14.0	13.0	19.0	15.0	13.5	11.0
12	6.0	5.5	7.5	6.5	7.5	7.0	15.5	14.0	19.0	16.0	13.0	10.0
13	6.0	4.5	7.0	5.5	7.0	7.0	15.5	14.5	19.0	15.5	11.5	9.5
14	5.0	4.0	10.0	5.5	9.0	7.5	15.5	13.0	18.5	15.0	10.0	9.0
15	7.0	4.5	12.0	8.0	10.0	9.0	16.5	13.5	18.0	14.5	10.0	8.0
16	7.0	4.5	14.5	10.5	10.0	9.5	17.0	15.0	18.5	15.5	10.0	8.0
17	7.5	6.0	14.5	12.5	12.0	10.0	17.5	15.0	18.5	16.0	11.5	9.0
18	8.5	6.5	13.5	11.0	12.5	11.0	18.0	16.0	18.0	15.0	12.5	10.0
19	8.5	6.5	11.0	8.5	12.5	11.5	19.0	17.0	18.0	14.5	12.5	11.0
20	6.5	5.5	9.0	8.5	13.0	12.5	19.0	16.5	18.0	14.5	11.0	10.0
21	8.0	4.5	10.0	8.0	13.5	12.5	19.0	17.5	18.0	15.5	10.0	9.0
22	8.0	6.0	9.5	8.0	13.5	13.0	19.0	16.5	18.5	15.0	9.5	8.5
23	7.5	5.5	10.0	9.0	14.5	14.0	17.5	15.0	18.5	15.0	10.0	8.5
24	7.5	5.5	10.5	8.0	14.5	13.5	18.0	15.0	18.0	14.5	10.0	9.0
25	6.5	5.0	11.0	9.5	15.0	14.0	18.5	16.0	17.5	15.5	8.5	6.5
26	6.5	5.5	11.0	9.5	15.5	15.0	19.0	16.0	18.5	15.5	8.5	6.5
27	5.5	4.5	10.5	9.0	15.5	15.5	19.0	16.5	18.5	16.0	10.0	7.0
28	7.0	6.0	9.0	8.0	15.5	14.0	17.0	15.0	17.5	15.5	11.0	8.0
29	6.5	5.0	9.0	8.5	14.5	13.0	17.0	14.5	17.5	15.0	11.5	8.5
30	8.0	5.5	10.0	7.5	13.0	12.0	17.5	15.5	17.5	15.5	11.5	9.0
31	--	--	9.0	6.0	--	--	18.0	15.0	18.0	16.0	--	--
AVG	7.2	5.4	10.0	7.9	11.7	10.8	16.7	14.6	18.5	15.5	12.1	10.0

13058000 WILLOW CREEK NEAR RIRIE, IDAHO

LOCATION.--Lat 43°35'35", long 111°46'30", in SE¼NW¼ sec.17, T.3 N., R.40 E., Bonneville County, at gaging station, on left bank about 1 mile upstream from mouth of canyon, 1.5 miles upstream from Eagle Rock canal, and 2.6 miles south of Ririe.

DRAINAGE AREA.--627 sq mi.

PERIOD OF RECORD.--Chemical analyses: October 1967 to September 1970.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

DATE	DIS- CHARGE (CFS)	SILICA (SI02) (MG/L)	CAL- CIUM (CA) (MG/L)	MAG- NE- SIUM (MG) (MG/L)	SCDIUM (NA) (MG/L)	PO- TAS- SIUM (K) (MG/L)	BICAR- BONATE (HCO3) (MG/L)	CAR- BONATE (CO3) (MG/L)	SULFATE (SO4) (MG/L)	CHLO- RIDE (CL) (MG/L)	FLUO- RIDE (F) (MG/L)
DEC. 29...	23	23	59	17	22	2.6	258	0	22	25	.3
JAN. 27...	99	16	42	14	16	2.4	191	0	19	18	.2
FEB. 24...	60	23	58	18	23	2.4	249	4	25	26	.3
MAR. 13...	70	18	55	16	20	2.4	235	2	21	22	.2
26...	42	19	53	16	20	3.0	238	0	21	22	.2
APR. 27...	153	17	58	16	16	2.0	254	0	17	18	.2
JULY 28...	72	13	40	16	16	2.1	198	0	15	16	.2
AUG. 27...	35	10	34	14	18	2.5	185	0	4.4	20	.3
SEPT. 25...	53	13	46	15	18	2.4	213	2	15	18	.2

DATE	NITRATE (NO3) (MG/L)	PHOS- PHATE (PO4) (MG/L)	DIS- SOLVED SOLIDS (RESI- DUE AT 180 C) (MG/L)	DIS- SOLVED SOLIDS (TONS PER DAY)	HARD- NESS (CA,MG) (MG/L)	NON- CAR- BONATE HARD- NESS (MG/L)	SODIUM AD- SORP- TION RATIO	SPECI- FIC COND- UCTANCE (MICRO- MHOS)	PH (UNITS)	TEMP- ERATURE (DEG C)
DEC. 29...	.7	--	291	18.1	217	6	.6	494	8.2	.0
JAN. 27...	.2	.03	224	60.1	162	6	.5	373	8.1	.5
FEB. 24...	.5	--	301	48.9	218	8	.7	502	8.4	.5
MAR. 13...	.4	--	267	50.5	203	7	.6	461	8.3	--
26...	.8	--	274	31	198	3	.6	469	7.9	2.5
APR. 27...	.3	.05	282	116	212	2	.5	469	8.2	4.0
JULY 28...	.5	.13	223	43.5	166	4	.5	379	8.1	19.5
AUG. 27...	.0	.01	188	17.9	142	0	.7	362	8.1	20.5
SEPT. 25...	.2	.01	239	33.9	176	2	.6	407	8.3	6.0

SNAKE RIVER MAIN STEM

13087900 LAKE MILNER AT MILNER DAM, IDAHO

LOCATION.--Lat 42°31'26", long 114°00'40", in SE¼NE¼SE¼ sec.29, T.10 S., R.21 E., Twin Falls County, on left bank end of concrete gate structure on Milner Dam and 0.6 mile northeast of Milner.

DRAINAGE AREA.--17,180 sq mi, approximately, excluding indeterminate nontributary area on Snake River Plain, at gaging station 0.4 mile downstream from Milner Dam.

PERIOD OF RECORD.--Chemical analyses: October 1968 to September 1970.

Water temperatures: October 1968 to September 1970 except for summer months.

REMARKS.--Discharge computed using gaging station 13088000, 0.4 mile downstream and releases into canals at Milner Dam. Values of pH, dissolved oxygen, specific conductance, and water temperatures from monitor available for most of fall and winter months of most water years.

CHEMICAL ANALYSES, JULY 1969 TO SEPTEMBER 1970

DATE	DIS- CHARGE (CFS)	SILICA (SiO ₂) (MG/L)	DIS- SOLVED CAL- CIUM (CA) (MG/L)	DIS- SOLVED MAG- NE- SIUM (MG)	SODIUM (NA) (MG/L)	PO- TAS- SIUM (K) (MG/L)	BICAR- BONATE (HCO ₃) (MG/L)	CAR- BONATE (CO ₃) (MG/L)	SULFATE (SO ₄) (MG/L)	CHLO- RIDE (CL) (MG/L)	DIS- SOLVED SOLIDS (RESI- DUE AT 180 C) (MG/L)	DIS- SOLVED SOLIDS (TONS PER DAY)
JULY 30...	9570	--	47	15	--	--	181	7	--	17	238	6150
AUG. 24...	9560	--	43	16	--	--	160	12	--	18	235	6070
SEP. 16...	7030	--	46	17	--	--	172	16	--	21	276	5240
OCT. 23...	2500	--	--	--	--	5.8	182	26	--	28	201	1360
NOV. 25...	1550	--	--	--	--	7.5	259	0	--	24	296	1240
DEC. 22...	1350	21	58	20	35	8.0	246	3	55	37	366	1330
JAN. 20...	3500	--	--	--	--	--	253	25	--	32	341	3220
FEB. 17...	2620	--	--	--	--	--	210	11	--	28	334	2360
MAR. 18...	550	--	--	--	--	--	214	6	--	29	306	454
APR. 21...	4670	14	45	17	26	4.8	179	11	41	25	270	3400
MAY 12...	11400	--	--	--	--	--	184	10	--	24	259	7970
JUNE 09...	9360	--	--	--	--	--	190	0	--	20	263	6650
JULY 09...	9500	13	45	14	17	3.7	174	4	34	16	236	6050
AUG. 17...	9310	--	--	--	--	--	175	11	--	--	245	6160
SEP. 22...	5900	--	--	--	--	--	164	23	38	20	259	4130

DATE	HARD- NESS (CA, MG/L)	NON- CAR- BONATE HARD- NESS (MG/L)	SODIUM AD- SORP- TION RATIO	SPECI- FIC COND- UCTANCE (MICRO- MHOS)	FIELD PH (UNITS)	COLOR (PLAT- INUM- COBALT UNITS)	TUR- BID- ITY (JTU)	TEMP- ERATURE (DEG C)	AIR TEMP- ERATURE (DEG C)	COLI- FORM (COL- ONIES PER 100 ML)	FECAL COLI- FORM (COL. PER 100 ML)
JULY 30...	180	20	--	419	8.6	5	4	22.5	--	--	--
AUG. 24...	174	23	--	409	8.9	5	2	23.5	35.5	380	--
SEP. 16...	185	18	--	443	9.0	10	10	17.5	--	2400	60
OCT. 23...	211	19	--	502	8.6	5	3	8.0	17.0	48000	--
NOV. 25...	227	15	--	540	7.4	5	6	3.0	3.5	7000	--
DEC. 22...	233	26	1.0	571	8.4	5	6	3.0	--	98000	--
JAN. 20...	227	0	--	505	8.8	0	2	4.0	--	76000	--
FEB. 17...	214	24	--	488	8.7	5	4	3.5	1.0	3900	--
MAR. 18...	200	15	--	512	8.6	5	3	5.0	--	25000	--
APR. 21...	173	8	.8	438	8.9	5	1	5.5	8.0	10000	--
MAY 12...	190	23	--	442	8.8	5	4	9.5	4.0	6400	28
JUNE 09...	188	32	--	431	8.2	5	1	17.0	10.0	1800	48
JULY 09...	164	14	.6	393	8.5	5	2	21.0	28.5	40000	--
AUG. 17...	--	--	--	394	8.8	--	2	21.5	29.0	12000	46
SEP. 22...	170	0	--	425	9.2	5	2	13.0	4.0	70000	86

13087900 LAKE MILNER AT MILNER DAM, IDAHO--Continued

CHEMICAL ANALYSES, JULY 1969 TO SEPTEMBER 1970

DATE	NITRATE (N) (MG/L)	NITRITE (N) (MG/L)	AMMONIA NITRO- GEN (N) (MG/L)	ORGANIC NITRO- GEN (N) (MG/L)	TOTAL NITRO- GEN (N) (MG/L)	TOTAL ORTHO PHOS- PHOSUS (P) (MG/L)	DIS- HYDRO- LYZABLE PHOS- PHORUS (P) (MG/L) ¹	TOTAL PHOS- PHORUS (P) (MG/L)	FIELD DIS- SOLVED OXYGEN (MG/L)	PER- CENT SATUR- ATION	BIO- CHEM- ICAL OXYGEN DEMAND (MG/L)	TOTAL ORGANIC CARBON (C) (MG/L)
JULY 30...	.0	.00	.01	.09	.19	--	.02	.10	7.3	101	10	2.0
AUG. 24...	.2	.00	.05	.15	.43	--	.03	.14	8.4	114	8.0	2.5
SEP. 16...	.0	.02	.13	.18	.35	--	.03	.20	8.5	103	3.8	4.0
OCT. 23...	.4	.00	.08	.10	.61	--	.08	.09	12.6	124	4.0	7.5
NOV. 25...	1.2	.00	.09	.48	1.8	--	.22	.23	5.9	51	8.1	7.0
DEC. 22...	1.1	.01	.43	.19	1.6	--	.09	.13	8.0	69	8.2	4.5
JAN. 20...	.8	.01	.13	.22	1.2	--	.11	.14	10.0	88	5.8	6.5
FEB. 17...	.7	.00	.03	.04	.73	--	.04	.04	10.7	89	6.9	2.0
MAR. 18...	.3	.01	.01	.09	.40	--	.01	.03	9.1	83	5.2	3.5
APR. 21...	.0	.00	.01	.03	.06	--	.01	.14	10.4	96	2.7	.5
MAY 12...	.0	.01	.03	.15	.24	--	.04	.13	9.1	93	2.5	2.0
JUNE 09...	.0	.00	.11	.11	.27	--	.03	.03	8.2	99	2.0	1.0
JULY 09...	.0	.01	.04	.13	.23	.00	.01	.09	8.5	110	2.9	3.5
AUG. 17...	.0	.01	.06	.16	.25	.09	.13	.14	--	--	3.3	6.0
SEPT. 22...	.0	.01	.01	.00	.04	.05	.07	.18	10.8	119	3.5	3.0

¹ The value reported for dissolved hydrolyzable phosphorus includes dissolved orthophosphorus as well as dissolved hydrolyzable phosphorus.

DATE	TOTAL IRON (FE) (UG/L)	TOTAL MAN- GANESE (MN) (UG/L)	TOTAL COPPER (CU) (UG/L)	TOTAL LEAD (PB) (UG/L)	TOTAL ZINC (ZN) (UG/L)	TOTAL ARSENIC (AS) (UG/L)	TOTAL CAD- MIUM (CD) (UG/L)	TOTAL BORON (B) (UG/L)	DIS- SOLVED MERCURY (HG) (UG/L)
AUG. 17...	--	--	--	--	--	--	--	--	<.1
SEP. 22...	190	40	10	<1	60	<10	<1	90	<.1

SNAKE RIVER MAIN STEM

13087900 LAKE MILNER AT MILNER DAM, IDAHO--Continued

PH (STANDARD UNITS), WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

OCTOBER				NOVEMBER			DECEMBER			JANUARY		
DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	8.6	8.4	8.6	---	---	---	---	---	---	8.8	8.4	8.6
2	8.7	8.4	8.5	---	---	---	---	---	---	8.4	8.2	8.2
3	8.6	8.4	8.5	8.0	7.8	8.0	---	---	---	8.4	8.2	8.3
4	8.6	8.4	8.5	8.0	7.9	8.0	8.4	8.4	8.4	8.6	8.4	8.5
5	8.5	8.2	8.4	8.0	7.9	8.0	8.4	8.4	8.4	8.5	8.3	8.4
6	8.6	8.2	8.4	8.0	8.0	8.0	8.4	8.2	8.4	8.8	8.8	8.8
7	8.4	8.2	8.3	8.0	7.9	8.0	8.3	8.2	8.2	8.1	7.9	8.1
8	8.4	8.2	8.3	8.0	7.9	8.0	8.4	8.2	8.3	8.1	7.6	7.7
9	8.6	8.2	8.3	8.1	7.9	8.0	8.2	8.1	8.2	7.8	7.6	7.7
10	8.5	8.2	8.3	---	---	---	8.2	8.0	8.1	7.8	7.6	7.7
11	8.6	8.2	8.4	---	---	---	8.2	7.3	7.8	7.8	7.7	7.7
12	8.2	8.0	8.1	---	---	---	8.2	8.2	8.2	7.6	7.4	7.6
13	8.0	7.8	7.9	---	---	---	8.2	8.1	8.1	7.8	7.6	7.6
14	8.0	7.9	8.0	8.0	8.2	8.1	8.1	8.0	8.1	8.0	7.8	7.8
15	8.0	7.8	7.9	8.0	8.0	8.0	8.1	8.0	8.1	7.9	7.6	7.8
16	8.0	7.9	8.0	8.0	8.0	8.0	8.2	8.1	8.2	7.7	7.6	7.6
17	8.3	8.1	8.2	8.0	7.9	8.0	8.2	8.1	8.2	7.7	7.6	7.7
18	8.3	8.1	8.2	7.9	7.8	7.9	8.4	8.3	8.4	7.7	7.6	7.7
19	8.4	8.2	8.3	8.2	7.9	8.0	8.4	8.3	8.3	7.7	7.6	7.7
20	8.4	8.2	8.3	8.2	8.2	8.2	8.3	8.1	8.2	7.8	7.8	7.8
21	8.5	8.3	8.4	8.0	7.9	8.0	8.3	8.3	8.3	7.8	7.7	7.7
22	8.7	8.5	8.6	7.9	7.8	7.8	8.0	8.0	8.0	7.8	7.5	7.7
23	8.5	8.3	8.4	---	---	---	8.0	8.0	8.0	7.7	7.5	7.8
24	8.5	8.4	8.4	---	---	---	8.1	8.1	8.1	7.8	7.7	7.7
25	8.3	8.3	8.3	---	---	---	8.2	7.8	8.0	---	---	---
26	8.3	8.3	8.3	---	---	---	---	---	---	---	---	---
27	7.9	7.8	7.8	---	---	---	---	---	---	7.8	7.7	7.8
28	8.0	7.8	7.9	---	---	---	8.8	8.4	8.6	7.9	7.8	7.8
29	---	---	---	---	---	---	8.8	8.6	8.7	7.8	7.7	7.8
30	---	---	---	---	---	---	8.6	8.6	8.6	7.8	7.7	7.7
31	---	---	---	---	---	---	8.8	8.6	8.8	7.8	7.7	7.7
MONTH	8.7	7.8	8.3	---	---	---	8.8	7.3	8.3	8.8	7.4	7.9
FEBRUARY				MARCH			APRIL			MAY		
DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	7.7	7.7	7.7	---	---	---	---	---	---	8.8	8.7	8.7
2	7.7	7.7	7.7	7.7	7.5	7.6	---	---	---	8.7	8.7	8.7
3	7.7	7.7	7.7	7.7	7.6	7.7	---	---	---	8.7	8.6	8.6
4	8.4	8.0	8.1	8.0	8.0	8.0	---	---	---	8.8	8.6	8.7
5	8.0	8.0	8.0	8.4	7.9	8.0	---	---	---	8.8	8.7	8.7
6	8.0	8.0	8.0	7.9	7.8	7.8	---	---	---	8.9	8.8	8.8
7	8.2	8.0	8.0	---	---	---	---	---	---	8.9	8.7	8.8
8	8.2	8.0	8.0	7.6	7.4	7.4	---	---	---	8.9	8.7	8.8
9	8.1	8.0	8.0	7.5	7.4	7.5	8.5	8.3	8.4	8.9	8.7	8.8
10	8.2	8.0	8.0	7.6	7.4	7.4	8.5	8.2	8.3	8.8	8.7	8.7
11	8.0	8.0	8.0	7.6	7.4	7.5	8.4	8.2	8.3	8.8	8.7	8.7
12	---	---	---	---	---	---	8.3	8.1	8.2	8.8	8.6	8.7
13	8.0	7.9	7.9	---	---	---	8.2	8.0	8.1	8.8	8.6	8.6
14	8.0	7.9	7.9	---	---	---	8.3	8.1	8.2	8.7	8.6	8.6
15	8.2	7.9	8.0	---	---	---	8.4	8.2	8.3	8.7	8.5	8.6
16	8.0	7.9	8.0	---	---	---	8.6	8.3	8.5	8.7	8.5	8.5
17	7.9	7.7	7.8	---	---	---	8.5	8.4	8.4	8.6	8.4	8.4
18	8.0	7.7	7.9	---	---	---	8.4	8.2	8.3	8.5	8.4	8.4
19	7.9	7.8	7.8	---	---	---	8.4	8.2	8.3	8.6	8.4	8.4
20	7.8	7.8	7.8	---	---	---	8.5	8.3	8.4	8.6	8.4	8.5
21	7.8	7.6	7.6	---	---	---	8.7	8.3	8.5	8.4	8.4	8.4
22	7.8	7.7	7.7	---	---	---	8.7	8.6	8.6	---	---	---
23	---	---	---	---	---	---	8.7	8.6	8.6	8.3	8.2	8.2
24	---	---	---	---	---	---	8.6	8.5	8.5	8.2	8.0	8.1
25	---	---	---	---	---	---	8.6	8.4	8.5	8.1	8.0	8.0
26	---	---	---	---	---	---	8.7	8.5	8.6	8.1	8.0	8.1
27	---	---	---	---	---	---	8.7	8.6	8.6	8.2	8.0	8.1
28	---	---	---	---	---	---	8.8	8.6	8.7	8.3	8.1	8.2
29	---	---	---	---	---	---	8.7	8.7	8.7	8.3	8.1	8.2
30	---	---	---	---	---	---	8.8	8.7	8.7	8.2	8.1	8.1
31	---	---	---	---	---	---	---	---	---	8.2	8.0	8.1
MONTH	---	---	---	---	---	---	---	---	---	8.9	8.0	8.5

13087900 LAKE MILNER AT MILNER DAM, IDAHO--Continued

PH (STANDARD UNITS), WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	JUNE			JULY			AUGUST			SEPTEMBER		
	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	8.2	8.1	8.1	8.4	8.2	8.3	---	---	---	---	---	---
2	8.2	8.1	8.1	8.4	8.2	8.3	---	---	---	---	---	---
3	8.2	8.1	8.1	8.5	8.4	8.4	---	---	---	---	---	---
4	8.2	8.1	8.1	8.6	8.4	8.5	---	---	---	---	---	---
5	8.1	8.0	8.1	8.6	8.3	8.4	---	---	---	---	---	---
6	8.0	7.9	8.0	8.5	8.4	8.4	---	---	---	---	---	---
7	7.9	7.8	7.9	8.6	8.4	8.5	---	---	---	---	---	---
8	7.9	7.7	7.8	8.6	8.4	8.5	---	---	---	---	---	---
9	8.0	7.7	7.8	8.6	8.5	8.5	---	---	---	---	---	---
10	7.9	7.8	7.8	8.5	8.4	8.4	---	---	---	8.6	8.5	8.5
11	8.0	7.8	7.9	8.5	8.4	8.4	---	---	---	8.6	8.1	8.5
12	8.0	7.8	7.9	8.4	8.3	8.3	---	---	---	8.6	8.4	8.5
13	8.0	7.9	7.9	8.3	8.2	8.2	---	---	---	8.5	8.1	8.4
14	8.0	8.0	8.0	8.2	8.1	8.1	---	---	---	8.5	6.1	8.4
15	8.0	7.9	8.0	8.2	8.1	8.1	---	---	---	8.7	8.4	8.5
16	8.1	8.0	8.0	8.2	8.1	8.1	---	---	---	---	---	---
17	8.1	8.0	8.1	8.3	8.0	8.1	---	---	---	---	---	---
18	8.2	8.0	8.1	8.3	8.1	8.2	---	---	---	---	---	---
19	8.1	8.1	8.1	8.2	8.1	8.1	---	---	---	---	---	---
20	8.1	7.9	8.0	8.2	8.1	8.1	---	---	---	---	---	---
21	8.2	8.0	8.1	8.3	8.1	8.2	---	---	---	---	---	---
22	8.1	8.0	8.0	8.3	8.2	8.2	---	---	---	---	---	---
23	8.1	8.0	8.0	8.3	8.2	8.2	---	---	---	---	---	---
24	8.1	8.0	8.0	8.3	8.1	8.2	---	---	---	---	---	---
25	8.0	8.0	8.0	8.2	8.1	8.1	---	---	---	---	---	---
26	8.4	8.2	8.2	8.3	8.1	8.2	---	---	---	---	---	---
27	8.2	8.2	8.2	8.2	8.1	8.1	---	---	---	---	---	---
28	8.2	8.1	8.2	8.1	8.0	8.1	---	---	---	---	---	---
29	8.4	8.1	8.2	8.3	8.1	8.2	---	---	---	---	---	---
30	8.3	8.2	8.2	---	---	---	---	---	---	---	---	---
31	---	---	---	---	---	---	---	---	---	---	---	---
MONTH	8.4	7.7	8.0	8.6	8.0	8.3	---	---	---	---	---	---

DISSOLVED OXYGEN (MG/L), WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	11.6	9.8	10.7	---	---	---	---	---	---	9.5	9.2	9.3
2	11.0	9.4	10.2	---	---	---	---	---	---	9.2	9.0	9.0
3	11.0	8.6	9.2	8.0	5.9	7.1	---	---	---	9.2	8.8	8.8
4	10.6	8.2	8.8	8.4	6.2	7.8	11.0	10.4	10.8	8.9	8.5	8.7
5	8.9	7.4	8.2	8.6	7.9	8.3	11.0	10.6	10.8	8.8	8.4	8.5
6	9.9	6.8	8.0	8.3	7.7	8.2	10.8	10.4	10.6	8.8	8.5	8.5
7	7.4	5.6	6.8	7.9	7.5	7.8	10.6	9.2	9.9	9.0	8.5	8.8
8	7.1	5.9	6.9	7.5	6.4	7.4	10.6	9.4	10.3	9.1	8.6	8.9
9	8.4	5.7	6.8	8.4	6.1	7.4	10.0	9.4	9.8	9.3	9.0	9.1
10	8.4	5.5	6.4	---	---	---	9.6	6.0	9.2	9.2	8.4	8.9
11	7.1	4.8	6.2	---	---	---	7.6	5.8	6.8	9.2	8.5	8.8
12	6.8	4.1	5.2	---	---	---	9.4	7.9	9.0	8.8	8.0	8.4
13	6.1	4.8	5.6	---	---	---	10.0	9.2	9.6	8.9	8.6	8.8
14	6.2	4.2	5.6	8.4	8.0	8.1	10.0	8.6	9.3	8.8	7.7	8.4
15	7.5	5.4	6.3	8.4	7.9	8.2	10.2	6.0	8.0	8.6	8.0	8.4
16	11.4	10.5	11.1	8.2	8.3	8.2	8.5	7.6	8.0	8.7	7.4	8.4
17	11.1	8.4	10.2	8.6	8.3	8.4	9.8	8.4	8.0	8.8	7.4	8.4
18	10.1	8.1	9.0	8.4	7.9	8.3	10.4	8.4	9.8	9.0	8.4	8.6
19	11.5	9.3	11.1	8.4	8.0	8.2	10.6	9.8	10.0	8.8	7.2	8.4
20	10.6	9.6	10.3	8.2	8.2	8.0	11.2	10.0	10.6	8.5	7.6	8.0
21	12.5	10.4	10.6	8.2	8.0	8.0	11.2	10.7	11.0	7.7	7.2	7.5
22	12.1	11.9	10.9	8.2	8.2	8.0	11.2	11.0	10.8	8.8	7.6	7.9
23	12.7	10.4	12.4	---	---	---	11.2	10.8	11.0	8.4	7.4	8.0
24	9.7	10.0	10.3	---	---	---	10.9	10.7	10.8	8.4	7.5	8.0
25	9.7	9.2	9.2	---	---	---	11.0	7.5	9.2	---	---	---
26	8.9	6.3	7.3	---	---	---	---	---	---	---	---	---
27	9.2	5.4	7.4	---	---	---	---	---	---	8.4	7.4	7.8
28	8.3	7.2	8.1	---	---	---	8.7	8.5	8.7	7.8	7.0	7.6
29	---	---	---	---	---	---	9.2	8.5	9.1	9.0	7.4	8.0
30	---	---	---	---	---	---	9.2	8.8	9.0	9.4	8.0	8.4
31	---	---	---	---	---	---	9.6	9.3	9.5	9.4	8.2	9.2
MONTH	12.7	4.1	8.5	---	---	---	11.2	5.8	9.6	9.5	7.0	8.5

SNAKE RIVER MAIN STEM

13087900 LAKE MILNER AT MILNER DAM, IDAHO--Continued

DISSOLVED OXYGEN (MG/L), WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	FEBRUARY			MARCH			APRIL			MAY		
	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	9.4	9.0	9.2	---	---	---	---	---	---	9.0	7.4	8.2
2	9.0	8.8	9.0	---	---	---	---	---	---	8.6	7.4	8.2
3	9.0	9.0	9.0	---	---	---	---	---	---	8.6	6.8	7.2
4	12.0	11.8	12.0	9.6	9.2	9.3	---	---	---	10.6	6.9	9.0
5	11.8	11.6	11.8	9.2	9.0	9.2	---	---	---	9.4	8.0	8.8
6	11.6	11.4	11.4	9.2	9.0	9.1	---	---	---	11.6	10.4	11.0
7	11.6	11.4	11.4	---	---	---	---	---	---	11.4	10.2	10.8
8	11.6	11.2	11.3	9.2	9.0	9.1	---	---	---	11.0	10.0	10.2
9	11.4	11.2	11.2	9.4	9.0	9.2	9.8	9.1	9.4	10.2	9.3	9.4
10	11.2	11.0	11.2	9.6	9.4	9.4	9.2	8.5	8.9	9.4	8.6	9.2
11	11.4	11.0	11.1	9.8	9.4	9.6	8.7	7.5	8.2	9.1	8.1	8.5
12	---	---	---	---	---	---	8.1	6.8	7.5	10.4	9.4	10.0
13	9.6	7.8	8.1	---	---	---	7.9	6.9	7.4	10.7	9.0	9.2
14	9.8	9.4	9.6	---	---	---	8.6	7.7	8.7	9.4	8.8	9.0
15	10.2	9.6	9.8	---	---	---	9.5	8.5	9.0	9.0	8.2	8.6
16	10.0	9.4	9.6	---	---	---	10.8	9.0	9.7	9.0	8.0	8.5
17	10.0	9.2	9.6	---	---	---	9.5	8.5	9.0	8.8	8.0	8.4
18	9.2	8.8	9.0	---	---	---	9.1	8.2	8.7	8.4	7.7	8.0
19	9.6	9.2	9.4	---	---	---	9.7	8.5	9.2	9.6	8.0	9.0
20	9.6	8.6	9.0	---	---	---	9.4	8.6	9.0	10.0	9.0	9.4
21	8.8	8.4	8.6	---	---	---	10.3	8.6	9.4	8.6	8.2	8.4
22	8.8	8.6	8.8	---	---	---	10.6	9.9	10.2	---	---	---
23	---	---	---	---	---	---	8.4	7.6	8.0	9.2	8.9	8.4
24	---	---	---	---	---	---	8.2	7.2	7.7	7.9	7.0	7.6
25	---	---	---	---	---	---	9.0	8.2	8.6	7.4	6.6	7.0
26	---	---	---	---	---	---	9.6	8.8	8.3	7.8	6.3	7.0
27	---	---	---	---	---	---	9.6	8.4	9.0	7.6	7.0	7.4
28	---	---	---	---	---	---	9.4	9.0	8.4	7.5	7.0	7.0
29	---	---	---	---	---	---	8.6	7.6	7.4	7.4	6.9	7.0
30	---	---	---	---	---	---	8.8	7.8	8.0	---	---	---
31	---	---	---	---	---	---	---	---	---	---	---	---
MONTH	---	---	---	---	---	---	---	---	---	11.6	6.3	8.6

DAY	JUNE			JULY			AUGUST			SEPTEMBER		
	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	---	---	---	10.6	9.2	9.7	---	---	---	---	---	---
2	---	---	---	10.3	8.9	9.8	---	---	---	---	---	---
3	---	---	---	10.4	8.6	9.4	---	---	---	---	---	---
4	---	---	---	10.0	7.6	8.4	---	---	---	---	---	---
5	---	---	---	10.2	8.2	8.4	---	---	---	---	---	---
6	---	---	---	9.7	8.3	9.0	---	---	---	---	---	---
7	---	---	---	8.5	7.7	8.4	---	---	---	---	---	---
8	---	---	---	9.4	8.4	8.8	---	---	---	---	---	---
9	---	---	---	10.1	8.7	9.0	---	---	---	---	---	---
10	---	---	---	10.0	8.8	9.4	---	---	---	6.4	5.2	5.9
11	---	---	---	9.9	8.1	9.0	---	---	---	6.3	4.5	5.4
12	---	---	---	9.4	8.2	8.4	---	---	---	7.1	5.4	6.6
13	---	---	---	9.1	7.0	8.0	---	---	---	6.9	5.8	6.3
14	---	---	---	8.4	7.1	7.8	---	---	---	7.0	5.0	6.6
15	---	---	---	9.0	6.7	7.8	---	---	---	8.2	5.4	6.2
16	---	---	---	8.1	7.0	7.4	---	---	---	---	---	---
17	---	---	---	8.1	6.3	7.0	---	---	---	---	---	---
18	---	---	---	8.2	6.7	7.0	---	---	---	---	---	---
19	---	---	---	7.8	6.6	7.0	---	---	---	---	---	---
20	---	---	---	7.8	6.2	7.0	---	---	---	---	---	---
21	---	---	---	7.8	6.4	6.8	---	---	---	---	---	---
22	---	---	---	7.5	6.5	6.8	---	---	---	---	---	---
23	---	---	---	7.6	6.4	6.6	---	---	---	---	---	---
24	---	---	---	7.8	6.6	7.0	---	---	---	---	---	---
25	---	---	---	7.1	6.3	6.8	---	---	---	---	---	---
26	9.8	8.0	9.0	7.0	5.9	6.4	---	---	---	---	---	---
27	8.5	7.9	8.0	7.0	6.1	6.4	---	---	---	---	---	---
28	8.9	7.7	8.4	6.8	6.1	6.4	---	---	---	---	---	---
29	10.3	8.3	8.7	7.2	6.0	6.6	---	---	---	---	---	---
30	9.9	8.8	9.3	---	---	---	---	---	---	---	---	---
31	---	---	---	---	---	---	---	---	---	---	---	---
MONTH	---	---	---	10.6	5.9	7.8	---	---	---	---	---	---

13-87900 LAKE MILNER AT MILNER DAM, IDAHO--CONTINUED

SPECIFIC CONDUCTANCE (MICROMHOS AT 25° C), WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	---	---	---	---	---	---	---	---	---	484	468	475
2	---	---	---	---	---	---	---	---	---	472	460	466
3	---	---	---	---	---	---	487	487	487	460	460	460
4	---	---	---	---	---	---	487	487	487	460	460	460
5	---	---	---	---	---	---	487	487	487	460	460	460
6	---	---	---	---	---	---	487	487	487	460	448	450
7	---	---	---	---	---	---	487	487	487	544	544	544
8	---	---	---	---	---	---	487	487	487	544	536	544
9	---	---	---	---	---	---	487	487	487	560	540	550
10	---	---	---	---	---	---	487	487	487	560	552	558
11	---	---	---	---	---	---	487	480	485	556	548	552
12	---	---	---	485	485	485	480	480	480	548	544	546
13	---	---	---	490	490	490	480	480	480	540	532	536
14	---	---	---	495	495	495	480	480	480	540	532	536
15	---	---	---	490	490	490	510	480	495	544	536	540
16	---	---	---	495	495	495	480	480	480	548	540	546
17	---	---	---	500	500	500	472	472	472	548	548	548
18	---	---	---	500	500	500	488	472	484	548	548	548
19	---	---	---	500	500	500	488	484	488	548	540	546
20	---	---	---	500	500	500	484	484	484	540	540	540
21	---	---	---	500	500	500	484	484	484	540	540	540
22	---	---	---	500	500	500	488	488	488	540	540	540
23	---	---	---	---	---	---	488	488	488	540	535	535
24	---	---	---	---	---	---	484	484	484	545	540	540
25	---	---	---	---	---	---	472	472	480	---	---	---
26	---	---	---	---	---	---	---	---	---	---	---	---
27	---	---	---	---	---	---	---	---	---	535	530	535
28	---	---	---	---	---	---	480	472	476	530	530	530
29	---	---	---	---	---	---	480	480	480	530	530	530
30	---	---	---	---	---	---	476	476	476	530	530	530
31	---	---	---	---	---	---	488	488	484	550	550	550
MONTH	---	---	---	---	---	---	510	472	484	560	448	525

DAY	FEBRUARY			MARCH			APRIL			MAY		
	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	550	---	550	---	---	---	---	---	---	435	435	435
2	540	550	540	525	520	520	---	---	---	435	430	433
3	540	530	535	530	525	525	---	---	---	430	430	430
4	540	540	540	530	525	530	---	---	---	430	430	430
5	540	535	540	525	525	525	---	---	---	435	430	430
6	535	530	530	525	520	520	---	---	---	435	430	430
7	535	535	530	---	---	---	---	---	---	430	430	430
8	530	530	530	500	500	500	---	---	---	440	430	435
9	530	530	530	---	---	---	480	475	477	440	435	435
10	530	525	525	510	500	505	480	470	475	435	435	435
11	530	525	525	515	500	505	485	475	480	445	435	440
12	---	---	---	---	---	---	485	480	482	440	440	440
13	530	525	525	---	---	---	485	480	482	440	435	435
14	525	520	520	---	---	---	485	480	480	440	440	440
15	525	520	520	---	---	---	485	475	470	440	440	440
16	520	520	520	---	---	---	480	470	475	435	435	435
17	520	520	520	---	---	---	485	475	480	440	435	440
18	520	520	520	---	---	---	485	480	482	435	435	435
19	515	510	515	---	---	---	485	480	482	435	435	435
20	510	510	510	---	---	---	480	480	480	430	430	430
21	510	510	510	---	---	---	485	475	480	435	435	435
22	515	505	510	---	---	---	475	465	470	---	---	---
23	---	---	---	---	---	---	470	460	465	380	375	375
24	---	---	---	---	---	---	465	460	463	380	375	380
25	---	---	---	---	---	---	460	450	455	380	375	375
26	---	---	---	---	---	---	450	450	450	380	375	375
27	---	---	---	---	---	---	450	495	450	375	365	368
28	---	---	---	---	---	---	445	440	445	375	375	375
29	---	---	---	---	---	---	440	435	440	375	370	375
30	---	---	---	---	---	---	435	435	435	375	370	372
31	---	---	---	---	---	---	---	---	---	375	370	375
MONTH	---	---	---	---	---	---	---	---	---	445	365	417

SNAKE RIVER MAIN STEM

13087900 LAKE MILNER AT MILNER DAM, IDAHO--Continued

SPECIFIC CONDUCTANCE (MICROMHOS AT 25° C), WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	JUNE			JULY			AUGUST			SEPTEMBER		
	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	375	370	373	375	365	370	---	---	---	---	---	---
2	375	370	371	370	365	368	---	---	---	---	---	---
3	375	370	370	370	365	368	---	---	---	---	---	---
4	375	370	375	365	365	365	---	---	---	---	---	---
5	375	375	375	370	365	366	---	---	---	---	---	---
6	385	375	380	365	360	363	---	---	---	---	---	---
7	385	380	380	365	360	363	---	---	---	---	---	---
8	380	380	380	365	360	362	---	---	---	---	---	---
9	380	380	380	365	360	363	---	---	---	---	---	---
10	380	380	380	365	360	362	---	---	---	385	375	375
11	385	380	383	370	355	360	---	---	---	400	375	380
12	385	380	385	365	360	364	---	---	---	400	380	390
13	380	375	378	370	365	368	---	---	---	400	377	380
14	375	375	375	375	370	371	---	---	---	415	385	390
15	375	370	370	375	365	368	---	---	---	390	385	385
16	370	370	370	370	365	368	---	---	---	---	---	---
17	375	370	373	370	365	369	---	---	---	---	---	---
18	375	370	370	375	365	368	---	---	---	---	---	---
19	375	370	373	370	360	365	---	---	---	---	---	---
20	375	375	375	370	365	368	---	---	---	---	---	---
21	375	375	375	370	370	370	---	---	---	---	---	---
22	370	370	370	370	365	368	---	---	---	---	---	---
23	370	365	370	370	365	367	---	---	---	---	---	---
24	375	365	370	375	370	371	---	---	---	---	---	---
25	365	365	365	375	370	373	---	---	---	---	---	---
26	370	365	368	373	370	372	---	---	---	---	---	---
27	370	368	370	375	370	373	---	---	---	---	---	---
28	370	365	368	375	375	375	---	---	---	---	---	---
29	375	368	370	375	370	374	---	---	---	---	---	---
30	375	368	370	370	370	370	---	---	---	---	---	---
31	---	---	---	---	---	---	---	---	---	---	---	---
MONTH	385	365	374	375	355	368	---	---	---	---	---	---
YEAR	560	355	450									

TEMPERATURE (°C) OF WATER, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	14.5	14.0	14.5	---	---	---	---	---	---	1.0	1.0	1.0
2	14.5	14.0	14.5	---	---	---	---	---	---	1.0	1.0	1.0
3	14.5	13.5	14.0	8.5	8.0	8.0	---	---	---	1.0	1.0	1.0
4	14.0	13.5	13.5	8.0	8.0	8.0	1.0	1.0	1.0	1.0	1.0	1.0
5	13.5	13.0	13.5	8.0	7.0	8.0	2.0	1.5	1.5	1.0	1.0	1.0
6	13.5	13.0	13.5	7.0	6.5	7.0	2.0	2.0	2.0	1.0	0.5	0.5
7	13.5	12.0	13.5	6.5	6.5	6.5	2.0	2.0	2.0	1.5	1.0	1.0
8	11.0	13.0	12.0	6.5	6.5	6.5	2.0	1.5	2.0	1.0	0.5	1.0
9	12.0	11.0	11.0	6.5	6.5	6.5	2.0	1.5	2.0	1.0	0.5	1.0
10	11.5	10.0	11.0	---	---	---	1.5	1.0	1.5	1.0	0.5	1.0
11	11.0	10.0	11.0	---	---	---	3.0	1.5	2.0	1.0	1.0	1.0
12	11.5	10.5	11.0	---	---	---	1.5	0.5	1.0	1.0	1.0	1.0
13	11.5	11.0	11.0	---	---	---	0.5	0.5	0.5	1.0	1.0	1.0
14	11.0	11.0	11.0	5.0	4.5	4.5	0.5	0.5	0.5	1.0	1.0	1.0
15	11.0	11.0	11.0	4.0	3.5	3.5	---	0.5	1.0	2.0	1.0	1.5
16	10.5	9.5	10.0	3.5	3.0	3.0	1.5	1.0	1.0	2.0	1.0	1.5
17	9.5	9.0	9.0	3.5	3.5	3.5	1.0	1.0	1.0	1.0	1.0	1.0
18	9.0	8.5	9.0	3.0	3.0	3.0	1.0	1.0	1.0	1.0	1.0	1.0
19	9.0	8.0	8.5	3.5	2.0	3.0	1.0	1.0	1.0	1.5	1.0	1.0
20	9.0	8.5	9.0	4.0	3.5	3.5	1.0	1.0	1.0	3.5	3.5	3.5
21	9.0	8.5	9.0	4.0	3.5	3.5	1.0	1.0	1.0	3.5	3.5	3.5
22	8.5	8.5	8.5	4.5	4.0	4.0	1.0	1.0	1.0	3.5	1.5	1.0
23	9.0	8.5	9.0	---	---	---	1.0	1.0	1.0	1.5	1.0	1.5
24	9.5	8.5	9.0	---	---	---	1.0	1.0	1.0	1.0	0.5	1.0
25	10.0	9.5	10.0	---	---	---	1.0	1.0	1.0	---	---	---
26	10.0	9.5	10.0	---	---	---	---	---	---	---	---	---
27	10.5	9.5	10.0	---	---	---	---	---	---	2.0	1.0	1.0
28	10.0	9.5	10.0	---	---	---	1.0	1.0	1.0	1.0	1.5	1.0
29	---	---	---	---	---	---	1.0	1.0	1.0	0.5	0	0.5
30	---	---	---	---	---	---	1.0	1.0	1.0	0.5	0	0.5
31	---	---	---	---	---	---	1.0	1.0	1.0	1.0	0.5	0.5
MONTH	14.5	8.0	11.0	---	---	---	3.0	0.5	1.5	3.5	0	1.0

TEMPERATURE (°C) OF WATER, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

	FEBRUARY			MARCH			APRIL			MAY		
DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	0.5	0.5	0.5	---	---	---	---	---	---	11.0	10.0	10.5
2	0.5	0.5	0.5	3.0	1.5	2.0	---	---	---	11.0	10.5	11.0
3	0.5	0.5	0.5	3.0	2.0	3.0	---	---	---	11.0	10.0	10.5
4	1.0	0.5	1.0	3.0	3.0	3.0	---	---	---	12.0	11.0	11.0
5	1.0	1.0	1.0	3.0	2.0	3.0	---	---	---	12.0	11.5	12.0
6	0.5	0.5	0.5	2.0	1.5	1.5	---	---	---	13.5	12.0	13.0
7	1.0	0.5	1.0	---	---	---	---	---	---	14.0	12.0	13.5
8	1.0	0.5	0.5	1.0	0.5	0.5	---	---	---	14.5	13.5	13.5
9	1.0	0.5	0.5	1.0	0	0.5	9.0	6.5	8.0	15.5	14.5	14.5
10	1.5	1.0	1.0	0	0	0	9.0	8.0	8.0	15.0	14.5	14.5
11	2.0	1.5	1.5	0.5	0	0	10.5	8.5	9.5	16.0	15.0	15.5
12	---	---	---	---	---	---	12.0	10.0	11.0	15.5	15.0	15.0
13	2.0	1.0	1.5	---	---	---	11.0	10.5	11.0	16.0	15.5	15.5
14	0.5	0.5	0.5	---	---	---	10.5	10.0	10.0	16.0	15.0	15.5
15	0.5	0	0.5	---	---	---	10.0	9.5	10.0	15.5	15.0	15.5
16	1.5	0	1.0	---	---	---	10.0	9.0	9.5	16.0	14.5	15.5
17	2.0	1.5	1.5	---	---	---	10.0	8.5	9.0	16.5	15.5	16.0
18	1.5	1.5	1.5	---	---	---	10.0	9.5	10.0	17.0	16.0	16.5
19	0.5	0.5	0.5	---	---	---	11.0	10.0	10.5	17.0	16.5	16.5
20	0.5	0	0.5	---	---	---	11.0	10.0	10.5	17.0	15.5	16.0
21	0.5	0.5	0.5	---	---	---	12.0	10.0	11.0	16.0	15.5	16.0
22	1.0	0.5	1.0	---	---	---	13.0	11.5	12.0	---	---	---
23	---	---	---	---	---	---	12.0	11.0	11.5	16.5	15.5	16.5
24	---	---	---	---	---	---	11.0	10.0	10.5	19.0	16.5	18.0
25	---	---	---	---	---	---	10.0	9.0	9.0	19.0	18.0	18.5
26	---	---	---	---	---	---	9.0	8.5	9.0	19.5	19.0	19.0
27	---	---	---	---	---	---	10.5	9.5	10.0	19.0	18.0	18.5
28	---	---	---	---	---	---	11.0	10.0	10.5	17.0	16.5	16.5
29	---	---	---	---	---	---	10.5	10.0	11.0	18.0	16.5	16.5
30	---	---	---	---	---	---	10.0	9.0	9.5	19.0	17.0	18.0
31	---	---	---	---	---	---	---	---	---	18.0	18.0	18.0
MONTH	---	---	---	---	---	---	---	---	---	19.5	10.0	15.5
	JUNE			JULY			AUGUST			SEPTEMBER		
DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	16.0	16.5	17.0	16.5	16.0	16.0	---	---	---	---	---	---
2	19.0	16.5	18.0	19.0	18.0	18.0	---	---	---	---	---	---
3	19.0	18.0	16.5	20.0	19.0	19.0	---	---	---	---	---	---
4	20.0	19.0	19.0	19.5	18.5	19.0	---	---	---	---	---	---
5	20.0	19.0	19.0	18.5	17.0	18.0	---	---	---	---	---	---
6	20.0	19.0	19.5	18.5	18.0	18.0	---	---	---	---	---	---
7	20.5	19.5	20.0	18.5	18.0	18.0	---	---	---	---	---	---
8	19.5	18.5	19.0	18.5	17.0	18.0	---	---	---	---	---	---
9	19.5	18.5	18.5	19.0	18.5	19.0	---	---	---	---	---	---
10	19.0	18.5	18.5	20.5	19.0	20.0	---	---	---	20.5	20.0	20.0
11	18.0	18.0	18.0	21.0	20.0	21.0	---	---	---	23.0	20.0	20.5
12	19.0	17.0	18.0	21.0	20.0	21.0	---	---	---	26.0	19.0	21.0
13	19.5	18.0	19.0	21.0	20.5	20.5	---	---	---	26.5	20.0	21.5
14	19.0	19.0	19.0	21.0	20.0	20.0	---	---	---	24.0	18.5	20.0
15	19.0	18.5	19.0	21.0	20.0	20.5	---	---	---	19.0	18.0	18.0
16	19.0	18.5	19.0	21.5	20.0	21.0	---	---	---	18.0	18.0	18.0
17	19.0	18.5	18.5	21.5	21.0	21.0	---	---	---	---	---	---
18	19.0	18.0	18.5	22.0	21.0	21.0	---	---	---	---	---	---
19	20.5	19.0	19.0	22.0	21.0	21.5	---	---	---	---	---	---
20	21.0	20.0	20.5	22.0	21.5	21.5	---	---	---	---	---	---
21	20.5	20.0	20.0	23.0	21.5	22.0	---	---	---	---	---	---
22	19.5	18.5	19.0	23.5	22.0	22.0	---	---	---	---	---	---
23	18.5	18.5	18.5	23.0	22.0	22.0	---	---	---	---	---	---
24	17.0	15.5	16.0	22.0	21.0	21.5	---	---	---	---	---	---
25	---	15.5	15.5	22.0	21.5	22.0	---	---	---	---	---	---
26	14.5	14.5	14.5	22.0	21.0	21.5	---	---	---	---	---	---
27	15.5	14.5	14.5	22.0	21.0	21.0	---	---	---	---	---	---
28	15.5	15.0	15.5	22.0	21.0	21.5	---	---	---	---	---	---
29	16.5	15.5	15.5	24.0	22.0	23.5	---	---	---	---	---	---
30	16.5	15.5	15.5	---	---	---	---	---	---	---	---	---
31	---	---	---	---	---	---	---	---	---	---	---	---
MONTH	21.0	14.5	18.0	24.0	16.0	20.5	---	---	---	---	---	---
YEAR	26.5	0	10.0									

13087900 LAKE MILNER AT MILNER DAM, IDAHO--Continued

PH (STANDARD UNITS), WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

DAY	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	---	---	---	8.2	8.1	8.2	7.7	7.4	7.4	8.3	8.2	8.3
2	---	---	---	8.1	8.0	8.0	7.8	7.5	7.7	8.4	8.2	8.2
3	---	---	---	8.2	7.9	7.9	7.8	7.8	7.8	8.6	8.3	8.3
4	---	---	---	8.2	8.0	8.0	7.8	7.8	7.8	8.5	8.1	8.3
5	---	---	---	8.1	8.0	8.1	7.9	7.8	7.8	8.6	8.0	8.5
6	---	---	---	8.1	8.0	8.0	7.7	7.7	7.7	8.6	8.4	8.5
7	---	---	---	8.0	7.8	7.8	7.7	7.6	7.6	8.6	8.4	8.5
8	---	---	---	7.9	7.8	7.8	8.5	7.6	7.6	8.8	8.6	8.6
9	8.3	8.2	8.3	7.9	7.8	7.8	8.2	7.8	7.8	8.8	8.8	8.8
10	8.3	8.2	8.3	7.8	7.7	7.7	8.2	7.7	7.9	9.0	8.3	8.9
11	8.4	8.2	8.2	7.7	7.6	7.7	8.3	7.7	7.7	8.3	8.2	8.2
12	8.2	8.1	8.2	7.6	7.6	7.6	8.3	7.8	7.8	9.5	8.2	8.5
13	8.3	8.1	8.2	7.7	7.6	7.6	7.8	7.8	7.8	8.5	8.4	8.4
14	8.4	8.3	8.3	7.7	7.6	7.6	7.7	7.5	7.6	8.6	8.4	8.5
15	8.3	8.2	8.3	7.5	7.4	7.5	7.5	7.4	7.5	8.6	8.2	8.3
16	8.6	8.4	8.4	7.4	7.3	7.3	7.4	7.4	7.4	8.4	8.2	8.2
17	8.3	8.2	8.3	7.3	7.2	7.3	7.5	7.4	7.4	8.9	8.2	8.2
18	8.8	8.6	8.6	7.3	7.3	7.3	7.6	7.5	7.5	8.8	8.2	8.2
19	8.7	8.5	8.5	7.5	7.3	7.5	7.7	7.6	7.7	8.2	8.0	8.2
20	9.0	8.7	8.9	7.6	7.5	7.6	7.9	7.6	7.7	8.1	8.1	8.1
21	8.9	8.6	8.7	7.6	7.6	7.6	7.8	7.6	7.6	8.3	8.0	8.1
22	8.9	8.6	8.7	7.7	7.6	7.7	7.6	7.4	7.5	8.4	8.0	8.1
23	8.8	8.5	8.7	7.7	7.5	7.6	7.4	7.3	7.3	8.1	8.0	8.0
24	8.6	8.3	8.4	7.5	7.4	7.5	7.3	7.2	7.3	8.0	7.9	8.0
25	8.5	8.3	8.4	7.5	7.4	7.5	7.2	7.2	7.2	8.0	7.9	8.0
26	8.3	8.2	8.2	7.4	7.3	7.3	7.3	7.2	7.3	8.0	7.9	8.0
27	8.3	8.1	8.3	7.3	7.2	7.2	7.5	7.3	7.3	8.1	8.0	8.0
28	8.2	8.1	8.2	7.4	7.2	7.2	7.5	7.4	7.4	8.2	7.9	8.0
29	8.2	8.1	8.2	7.5	7.3	7.3	8.2	7.5	7.5	8.0	7.9	7.9
30	8.2	8.1	8.1	7.5	7.3	7.4	8.3	7.8	8.3	8.0	8.0	8.0
31	8.1	8.0	8.1	---	---	---	8.3	7.7	7.7	8.7	8.0	8.0
MONTH	---	---	---	8.2	7.2	7.6	8.5	7.2	7.6	9.5	7.9	8.3

DAY	FEBRUARY			MARCH			APRIL			MAY		
	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	8.6	8.5	8.5	7.9	7.7	7.8	7.7	7.4	7.6	8.8	8.7	8.8
2	8.8	8.5	8.5	7.7	7.6	7.6	7.8	7.5	7.6	8.8	8.6	8.7
3	8.9	8.7	8.8	7.7	7.6	7.7	7.8	7.6	7.7	8.8	8.7	8.7
4	8.9	8.6	8.7	8.1	7.6	8.1	8.0	7.6	7.8	8.8	8.7	8.7
5	8.9	8.6	8.6	8.1	8.0	8.1	8.2	7.7	7.9	8.5	8.3	8.4
6	8.8	8.6	8.7	8.2	8.0	8.2	8.1	7.8	8.0	8.3	8.3	8.3
7	8.7	8.5	8.6	8.3	8.0	8.1	7.8	7.6	7.6	8.3	8.3	8.3
8	8.6	8.4	8.7	8.0	8.0	8.0	7.9	7.6	7.7	8.4	8.3	8.3
9	8.7	8.4	8.5	8.0	7.9	8.0	8.1	7.8	8.0	8.4	8.3	8.3
10	8.7	8.5	8.6	8.1	7.8	8.0	8.1	8.0	8.0	8.3	8.3	8.3
11	8.7	8.6	8.7	8.0	7.7	7.8	8.0	7.9	7.9	8.3	8.3	8.3
12	8.7	8.7	8.7	8.0	7.7	7.8	7.9	7.8	7.8	8.9	8.8	8.8
13	8.6	8.5	8.6	8.2	7.7	7.9	8.0	7.9	8.0	8.9	8.8	8.8
14	8.6	8.4	8.5	8.0	7.8	7.9	8.1	8.0	8.0	8.9	8.7	8.8
15	8.6	8.0	8.4	8.0	7.9	8.0	8.1	8.0	8.1	8.8	8.8	8.8
16	8.0	7.9	8.0	8.1	8.0	8.0	8.1	8.0	8.1	8.9	8.8	8.8
17	8.6	8.5	8.6	8.1	7.9	8.0	8.2	8.1	8.1	8.4	8.3	8.4
18	8.6	8.5	8.5	8.1	7.9	8.0	8.2	8.1	8.1	---	---	---
19	8.6	8.5	8.5	8.0	7.9	7.9	8.1	8.1	8.1	---	---	---
20	8.6	8.4	8.4	7.8	7.5	7.7	8.2	8.0	8.1	---	---	---
21	8.6	8.4	8.5	7.6	7.5	7.5	8.6	8.1	8.2	---	---	---
22	8.6	8.4	8.5	7.6	7.5	7.5	8.8	8.8	8.8	---	---	---
23	---	---	---	7.6	7.4	7.5	8.8	8.7	8.8	---	---	---
24	8.6	8.4	8.4	7.6	7.5	7.5	8.7	8.7	8.7	---	---	---
25	8.6	8.4	8.4	7.6	7.4	7.5	8.8	8.7	8.7	---	---	---
26	8.3	8.2	8.3	7.6	7.4	7.5	8.8	8.6	8.7	---	---	---
27	8.4	8.1	8.2	7.5	7.4	7.4	8.7	8.6	8.6	---	---	---
28	8.4	8.1	8.2	7.6	7.3	7.4	8.8	8.7	8.8	---	---	---
29	---	---	---	7.7	7.5	7.6	8.8	8.7	8.8	---	---	---
30	---	---	---	7.7	7.4	7.6	8.8	8.8	8.8	---	---	---
31	---	---	---	7.6	7.5	7.5	---	---	---	---	---	---
MONTH	8.9	7.9	8.5	8.3	7.3	7.8	8.8	7.4	8.2	---	---	---

13087900 LAKE MILNER AT MILNER DAM, IDAHO--Continued

DISSOLVED OXYGEN (MG/L), WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

DAY	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	---	---	---	7.1	5.6	6.4	8.7	6.2	8.6	7.6	7.6	7.6
2	---	---	---	5.6	3.2	4.8	10.4	8.5	10.0	7.9	7.6	7.9
3	---	---	---	6.8	2.8	4.4	10.7	10.3	10.4	8.3	7.9	7.9
4	---	---	---	6.8	3.6	4.6	10.3	10.0	10.2	9.3	8.3	8.6
5	---	---	---	6.6	4.6	6.0	10.0	9.8	10.0	9.4	9.0	9.4
6	---	---	---	7.8	6.2	6.4	9.8	9.1	9.6	11.6	9.2	11.6
7	---	---	---	7.0	4.2	4.6	9.1	8.2	8.6	11.8	11.6	11.6
8	---	---	---	4.6	3.6	4.0	8.5	8.0	8.5	11.8	11.6	11.6
9	11.0	9.8	10.4	4.8	3.0	3.6	8.8	8.5	8.8	11.6	11.4	11.6
10	10.0	9.4	9.6	4.6	3.7	4.2	9.3	8.7	8.8	11.4	10.9	11.4
11	9.4	8.6	8.8	4.2	3.1	3.4	9.3	8.9	9.0	10.8	10.6	10.6
12	9.6	8.4	9.0	5.2	3.0	3.0	8.9	8.6	8.8	10.7	10.6	10.7
13	10.2	9.4	9.8	7.2	5.2	7.0	8.8	8.6	8.6	10.9	10.8	10.8
14	10.7	9.6	10.1	7.3	6.2	7.0	8.6	7.6	8.4	10.9	10.5	10.8
15	11.6	10.0	10.8	6.5	2.2	5.8	7.6	6.6	7.4	10.5	9.9	10.4
16	12.0	10.2	10.6	3.6	1.8	3.0	6.8	6.2	6.8	9.9	9.4	9.4
17	11.4	10.4	10.8	4.8	3.6	4.8	8.2	6.4	7.2	9.5	9.4	9.4
18	10.9	10.1	10.1	5.0	4.8	4.8	8.4	8.0	8.4	9.6	9.4	9.4
19	11.0	10.6	10.6	6.2	5.0	5.6	8.0	7.6	8.0	9.5	9.3	9.3
20	10.6	10.0	10.4	7.3	6.2	7.3	7.7	7.4	7.6	10.1	9.8	10.0
21	12.2	10.2	10.8	7.2	6.2	7.0	7.4	7.2	7.3	10.1	9.5	9.8
22	13.2	10.4	12.2	8.2	6.2	6.4	7.5	7.0	7.3	9.6	9.1	9.4
23	13.8	12.2	13.0	8.1	6.5	7.4	7.0	5.2	6.0	9.4	8.9	9.2
24	12.6	11.6	12.0	7.0	5.8	6.6	5.2	4.4	4.6	9.3	8.6	9.0
25	12.3	11.5	12.1	5.7	4.4	5.2	4.4	3.6	4.0	9.8	8.8	9.2
26	10.8	9.0	10.0	5.2	4.0	5.0	5.4	3.6	4.6	9.3	8.8	9.3
27	10.2	8.2	9.0	4.9	4.0	4.4	6.6	5.2	6.2	9.6	9.2	9.5
28	9.0	8.2	8.6	5.0	3.9	4.4	8.3	6.6	7.0	9.7	9.2	9.4
29	9.1	8.0	8.0	5.2	4.2	4.6	8.8	8.0	8.3	9.5	9.0	9.2
30	8.7	7.2	8.0	6.2	4.6	5.4	8.0	7.7	8.0	9.7	9.4	9.7
31	8.0	5.0	6.4	---	---	---	7.9	7.6	7.7	10.1	9.7	10.1
MONTH	---	---	---	8.2	1.8	5.2	10.7	3.6	7.9	11.8	7.6	9.8

DAY	FEBRUARY			MARCH			APRIL			MAY		
	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	10.4	10.2	10.2	5.5	3.9	5.0	8.7	7.5	8.2	9.2	8.7	9.0
2	10.4	10.2	10.3	---	---	---	9.5	7.5	8.5	9.2	8.8	9.0
3	10.9	10.6	10.9	5.2	4.3	4.8	9.7	8.2	9.0	8.9	8.5	8.7
4	10.9	10.6	10.9	7.6	4.5	7.2	10.2	8.7	9.6	8.8	8.7	8.7
5	10.9	10.6	10.7	7.9	6.6	7.6	10.5	7.6	9.6	9.6	8.5	8.9
6	11.0	10.7	10.7	8.8	7.6	7.6	9.6	7.1	8.4	8.6	7.9	8.3
7	11.0	10.7	10.7	8.6	6.2	7.0	7.0	4.3	6.4	7.9	7.6	7.7
8	11.0	10.7	11.0	7.3	6.5	7.1	7.8	6.8	7.0	8.6	7.6	8.0
9	11.4	10.0	11.3	7.5	6.7	7.2	7.9	7.0	7.4	8.6	8.2	8.4
10	11.6	11.1	11.3	7.4	6.1	7.0	8.5	7.8	8.3	9.0	8.6	8.8
11	11.5	11.1	11.2	6.5	4.6	5.6	8.6	8.1	8.3	9.2	8.9	9.0
12	11.1	10.7	11.0	5.7	4.5	5.0	8.5	8.2	8.3	9.2	8.5	9.1
13	10.9	10.5	10.7	6.2	5.0	5.6	9.2	8.1	8.8	9.4	9.0	9.2
14	10.8	10.4	10.7	6.8	5.6	6.2	9.7	9.1	9.4	9.6	9.1	9.3
15	10.8	10.2	10.7	8.2	6.9	7.4	9.7	9.3	9.5	9.9	9.5	9.6
16	10.6	10.4	10.4	8.8	8.0	8.4	9.9	9.5	9.7	9.7	9.4	9.6
17	10.8	8.1	10.8	9.2	8.4	8.8	10.1	9.7	9.9	9.4	8.9	9.0
18	10.5	10.3	10.3	9.5	8.5	9.0	10.0	9.8	9.9	---	---	---
19	10.5	10.3	10.3	9.4	8.4	9.0	10.3	9.8	10.0	---	---	---
20	10.2	10.0	10.0	9.0	7.2	8.0	10.3	9.7	9.9	---	---	---
21	10.0	9.8	9.8	7.7	6.6	7.2	10.3	10.0	10.0	---	---	---
22	9.5	9.1	9.5	7.2	6.6	7.0	10.4	10.0	10.2	---	---	---
23	---	---	---	7.6	6.6	7.0	10.0	9.8	9.8	---	---	---
24	8.7	8.2	8.4	8.3	6.9	7.6	9.6	9.4	9.6	---	---	---
25	8.6	8.3	8.4	8.6	7.0	7.8	9.4	9.0	9.2	---	---	---
26	8.2	7.5	7.9	8.3	6.4	7.3	8.8	8.4	8.6	---	---	---
27	7.9	6.5	7.1	7.4	6.3	7.0	9.4	8.8	9.0	---	---	---
28	6.6	5.6	6.0	7.0	5.8	6.4	9.2	9.0	9.0	---	---	---
29	---	---	---	7.6	6.4	7.0	9.4	9.0	9.0	---	---	---
30	---	---	---	9.1	6.9	7.8	9.2	9.0	9.0	---	---	---
31	---	---	---	8.6	7.8	8.0	---	---	---	---	---	---
MONTH	11.6	5.6	10.0	9.5	3.9	7.1	10.5	4.3	9.0	---	---	---

SNAKE RIVER MAIN STEM

13087900 LAKE MILNER AT MILNER DAM, IDAHO--Continued

SPECIFIC CONDUCTANCE (MICROMHOS AT 25° C), WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

DAY	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	---	---	---	510	500	500	500	495	495	530	530	530
2	---	---	---	500	500	500	490	485	490	535	530	535
3	---	---	---	500	500	500	485	480	480	540	530	535
4	---	---	---	500	500	500	485	480	485	530	500	515
5	---	---	---	500	500	500	485	485	485	490	490	490
6	---	---	---	510	500	500	500	485	490	495	490	490
7	---	---	---	530	520	520	510	500	505	500	495	495
8	---	---	---	520	500	510	510	505	505	505	500	500
9	435	425	435	500	480	490	505	505	505	505	500	500
10	435	435	435	490	480	480	505	500	500	500	485	500
11	440	435	435	495	495	495	515	500	500	480	475	480
12	435	435	435	500	500	500	515	505	505	485	470	480
13	430	425	430	500	500	500	505	505	505	470	465	465
14	435	425	430	515	510	510	515	505	510	465	460	460
15	430	430	430	520	515	520	520	515	520	465	460	465
16	430	430	430	520	515	520	525	520	525	475	465	465
17	445	430	435	510	510	510	520	510	520	485	480	480
18	455	445	450	510	510	510	520	510	520	490	485	485
19	470	460	470	510	500	510	525	520	525	500	485	490
20	485	475	480	500	500	500	530	525	530	490	485	490
21	485	480	485	505	500	500	525	525	525	490	485	490
22	480	470	475	510	500	510	530	525	525	495	490	490
23	470	470	470	500	500	500	530	525	530	490	485	490
24	470	470	470	500	500	500	530	530	530	490	490	490
25	480	480	480	510	510	510	530	530	530	485	480	485
26	490	490	490	510	510	510	530	520	530	485	480	480
27	490	490	490	510	510	510	520	520	520	480	470	475
28	490	490	490	510	505	505	515	505	515	475	460	470
29	490	490	490	515	510	510	510	500	510	460	460	460
30	500	490	500	510	500	510	510	500	500	465	455	460
31	520	500	510	---	---	---	525	500	510	460	455	455
MONTH	---	---	---	530	480	505	530	480	510	540	455	487

DAY	FEBRUARY			MARCH			APRIL			MAY		
	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	455	450	450	500	495	495	500	495	495	410	410	410
2	450	450	450	510	500	500	495	495	495	410	405	410
3	450	450	450	510	510	510	495	490	495	415	410	410
4	455	450	450	510	495	505	490	485	490	410	410	410
5	460	455	460	495	485	490	490	485	485	410	410	410
6	460	460	460	490	485	485	495	485	490	410	410	410
7	465	460	465	490	490	490	490	480	485	410	410	410
8	460	460	460	490	490	490	480	470	475	410	410	410
9	470	460	460	490	490	490	470	460	465	410	410	410
10	460	460	460	500	490	490	460	450	455	410	410	410
11	460	455	460	490	490	490	450	440	445	405	405	405
12	465	460	460	490	490	490	445	440	445	410	405	410
13	465	460	465	490	490	490	445	440	440	410	410	410
14	470	465	465	490	485	490	440	430	435	410	410	410
15	470	460	465	480	480	480	430	430	430	410	410	410
16	460	455	460	480	475	475	430	420	425	410	410	410
17	460	460	460	475	475	475	420	420	420	410	410	410
18	465	460	465	480	475	480	420	420	420	---	---	---
19	470	465	470	485	480	480	420	415	420	---	---	---
20	470	465	470	495	485	490	415	410	410	---	---	---
21	470	465	470	495	490	495	410	410	410	---	---	---
22	470	465	470	500	495	500	410	410	410	---	---	---
23	---	---	---	505	500	505	415	410	415	---	---	---
24	470	465	470	505	505	505	415	410	415	---	---	---
25	470	465	465	510	505	510	420	415	415	---	---	---
26	485	470	470	510	510	510	420	415	415	---	---	---
27	490	480	490	510	510	510	415	405	410	---	---	---
28	495	490	490	510	510	510	405	405	405	---	---	---
29	---	---	---	515	510	515	405	400	405	---	---	---
30	---	---	---	505	500	505	410	405	405	---	---	---
31	---	---	---	500	500	500	---	---	---	---	---	---
MONTH	495	450	464	515	475	495	500	400	441	---	---	---

13087900 LAKE MILNER AT MILNER DAM, IDAHO--Continued

TEMPERATURE (°C) OF WATER, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

DAY	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	---	---	---	7.0	6.5	7.0	1.0	1.0	1.0	1.5	1.0	1.0
2	---	---	---	8.0	6.5	6.5	0.5	0.5	0.5	1.0	0.5	0.5
3	---	---	---	8.5	6.5	6.5	0	0	0	0.5	0.5	0.5
4	---	---	---	8.0	7.0	7.0	0	0	0	0.5	0	0
5	---	---	---	8.0	7.0	8.0	0	0	0	0	0	0
6	---	---	---	8.0	8.0	8.0	0	0	0	0	0	0
7	---	---	---	8.0	7.0	7.0	0	0	0	0	0	0
8	---	---	---	7.0	7.0	7.0	0	0	0	0.5	0	0
9	11.0	10.5	10.5	6.5	6.5	6.5	0.5	0	0.5	0.5	0.5	0.5
10	10.5	10.0	10.5	6.5	6.0	6.0	1.0	1.0	1.0	0	0	0
11	10.5	9.5	10.0	6.0	6.0	6.0	1.5	1.0	1.5	0	0	0
12	9.5	8.5	9.0	6.0	6.0	6.0	1.5	1.0	1.0	0	0	0
13	8.0	7.0	8.0	6.5	6.0	6.0	1.5	1.0	1.5	0	0	0
14	7.0	6.5	6.5	6.5	6.0	6.0	2.0	1.5	1.5	0	0	0
15	6.5	6.0	6.0	6.5	6.0	6.0	3.0	2.0	2.0	0	0	0
16	6.5	6.0	6.0	5.5	5.5	6.0	3.0	3.0	3.0	1.5	0	1.0
17	6.0	6.0	6.0	5.5	5.0	5.5	3.0	2.0	3.0	3.0	1.5	3.0
18	6.0	6.0	6.0	5.0	4.5	5.0	2.0	1.5	2.0	3.0	3.0	3.0
19	6.0	6.0	6.0	4.5	3.5	4.5	1.5	1.5	1.5	3.5	3.0	3.0
20	6.0	6.0	6.0	3.5	2.0	3.0	2.0	1.5	1.5	3.5	3.5	3.5
21	6.0	5.5	6.0	2.0	1.5	1.5	3.0	2.0	2.0	4.0	3.5	4.0
22	8.0	6.0	6.0	1.5	0.5	1.5	3.0	3.0	3.0	4.0	4.0	4.0
23	9.0	8.5	8.5	1.5	1.0	1.0	3.5	3.0	3.5	4.5	4.0	4.5
24	9.5	8.5	8.5	2.0	1.5	1.5	4.0	3.5	3.5	4.5	4.5	4.5
25	9.5	9.5	9.5	2.0	1.5	2.0	3.5	3.0	3.5	4.0	4.0	4.0
26	9.5	9.5	9.5	2.0	1.5	1.5	3.0	2.0	3.0	3.5	3.0	3.5
27	9.5	9.5	9.5	1.5	1.5	1.5	2.0	1.5	2.0	3.0	3.0	3.0
28	9.5	9.0	9.5	1.5	1.0	1.5	1.5	1.0	1.5	3.0	1.5	2.0
29	9.0	8.5	9.0	1.5	1.0	1.5	1.0	0.5	1.0	1.5	0	1.5
30	8.5	8.0	8.5	1.5	1.0	1.0	1.0	0.5	0.5	0	0	0
31	8.0	8.0	8.0	---	---	---	1.0	0.5	0.5	0.5	0	0.5
MONTH	---	---	---	8.5	0.5	4.5	4.0	0	1.5	4.5	0	1.5

DAY	FEBRUARY			MARCH			APRIL			MAY		
	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	0.5	0.5	0.5	6.0	5.5	6.0	6.0	6.0	6.0	8.0	6.5	7.0
2	0.5	0.5	0.5	5.5	5.5	5.5	6.0	6.0	6.0	9.5	8.0	8.5
3	1.0	0.5	0.5	5.5	5.5	5.5	6.0	5.5	6.0	10.0	9.0	9.5
4	1.0	0.5	1.0	7.0	5.5	5.5	6.0	5.5	6.0	10.5	9.5	10.0
5	1.5	1.0	1.0	5.5	5.0	5.5	7.0	6.0	6.5	10.5	10.0	10.5
6	1.5	1.5	1.5	5.5	4.5	5.0	8.0	6.0	6.5	11.0	10.5	11.0
7	3.0	1.5	1.5	5.5	4.5	5.0	8.0	7.0	7.0	11.0	10.5	10.5
8	3.5	3.0	3.0	5.0	5.0	5.0	8.5	7.0	8.0	10.5	10.0	10.0
9	3.5	3.0	3.0	5.5	5.0	5.5	8.5	8.0	8.5	11.5	10.0	10.5
10	3.5	3.0	3.5	6.0	5.0	5.5	8.5	8.5	8.5	11.5	11.0	11.0
11	4.0	3.5	3.5	6.0	5.0	5.0	8.5	8.0	8.0	10.5	10.0	10.0
12	4.0	3.5	4.0	5.5	5.0	5.0	8.0	7.0	7.0	10.0	10.0	10.0
13	4.5	4.0	4.5	5.5	5.0	5.0	7.0	6.0	6.5	10.5	10.0	10.0
14	5.0	4.5	4.5	5.5	5.0	5.0	6.0	5.5	5.5	10.5	9.5	13.5
15	4.5	3.5	4.5	5.0	5.0	5.0	6.0	5.5	5.5	11.5	10.0	11.0
16	3.5	3.0	3.5	5.0	5.0	5.0	6.0	5.5	5.5	13.0	11.0	11.5
17	3.5	3.0	3.0	5.0	4.5	5.0	7.0	6.0	6.5	14.0	12.0	13.5
18	3.0	3.0	3.0	4.5	4.5	4.5	7.0	6.5	6.5	---	---	---
19	3.0	2.0	3.0	5.0	4.5	5.0	7.0	6.0	6.5	---	---	---
20	3.0	1.5	2.0	5.0	4.5	5.0	6.0	5.0	5.5	---	---	---
21	3.0	1.5	1.5	5.5	5.0	5.0	5.5	5.0	5.0	---	---	---
22	3.5	1.5	2.0	5.5	5.5	5.5	6.5	5.5	6.0	---	---	---
23	---	---	---	6.0	5.5	5.5	7.0	6.0	6.5	---	---	---
24	4.5	3.5	4.0	6.0	5.5	5.5	7.0	6.5	7.0	---	---	---
25	4.5	4.0	4.5	6.5	6.0	6.0	8.0	7.0	8.0	---	---	---
26	5.0	4.0	5.0	6.5	6.0	6.0	8.0	7.0	8.0	---	---	---
27	6.5	4.5	5.5	6.5	6.0	6.0	7.0	5.5	6.0	---	---	---
28	6.5	5.5	5.5	6.5	6.0	6.5	5.5	5.0	5.0	---	---	---
29	---	---	---	6.5	6.5	6.5	6.0	5.0	5.5	---	---	---
30	---	---	---	6.5	6.0	6.0	7.0	6.0	6.5	---	---	---
31	---	---	---	6.0	6.0	6.0	---	---	---	---	---	---
MONTH	6.5	0.5	3.0	7.0	4.5	5.5	8.5	5.0	6.5	---	---	---

SNAKE RIVER MAIN STEM

13154500 SNAKE RIVER AT KING HILL, IDAHO
(Irrigation network and pesticide station)

LOCATION.--Lat 43°00'10", long 115°12'28", in NE¼SE¼ sec.12, T.5 S., R.10 E., Elmore County, at county highway bridge, approximately 1,700 ft downstream from gaging station at King Hill, 20 miles downstream from Big Wood River, and at mile 545.3.

DRAINAGE AREA.--35,800 sq mi, approximately.

PERIOD OF RECORD.--Chemical analyses: March 1951 to September 1970.

Water temperatures: March 1951 to September 1970.

EXTREMES, 1969-70.--Specific conductance: Maximum daily, 578 micromhos Dec. 5; minimum daily, 357 micromhos June 15.

Water temperatures: Maximum, 21° C June 25, 26; minimum, 5.5° C Jan. 8.

EXTREMES, 1951-70.--Specific conductance: Maximum daily, 595 micromhos June 19, 1968; minimum daily, 298 micromhos Apr. 15, 1969.

Water temperatures: Maximum, 23° C Aug. 2, 1955; minimum, 4° C Dec. 16, 1967, Jan. 29, 1969.

REMARKS.--No appreciable inflow between gaging station and sampling point except during periods of heavy local runoff.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

DATE	DIS- CHARGE (CFS)	SILICA (SI02) (MG/L)	DIS- SOLVED CAL- CIUM (CA) (MG/L)	DIS- SOLVED MAG- NE- SIUM (MG)	SODIUM (NA) (MG/L)	PO- TAS- SIUM (K) (MG/L)	BICAR- BONATE (HCO3) (MG/L)	CAR- BONATE (CO3) (MG/L)	SULFATE (SO4) (MG/L)	CHLO- RIDE (CL) (MG/L)	DIS- SOLVED FLUO- RIDE (F) (MG/L)	NITRATE (NO3) (MG/L)
OCT.												
01...	8750	--	--	--	--	--	--	--	--	--	--	.2
NOV.												
01...	4570	--	--	--	--	--	--	--	--	--	--	.2
DEC.												
01...	9520	--	--	--	--	--	--	--	--	--	--	.1
JAN.												
01...	10100	--	--	--	--	--	--	--	--	--	--	.1
15...	9060	18	17	18	34	6.2	124	0	--	22	.6	--
FEB.												
01...	12500	--	--	--	--	--	--	--	--	--	--	.1
15...	12400	9.4	35	19	32	5.3	170	8	--	30	.5	--
MAR.												
01...	6540	--	--	--	--	--	--	--	--	--	--	5.4
15...	7210	15	41	19	31	4.9	188	10	--	30	.5	--
APR.												
01...	6000	--	--	--	--	--	--	--	--	--	--	6.1
15...	16100	21	40	18	29	5.1	176	8	--	30	.6	--
MAY												
01...	17500	--	--	--	--	--	--	--	--	--	--	.0
15...	18500	4.8	44	18	28	5.3	208	0	--	25	.8	--
JUNE												
01...	14600	--	--	--	--	--	--	--	--	--	--	.0
15...	18000	35	14	18	31	4.9	50	26	61	25	.6	.5
JULY												
01...	17300	--	--	--	--	--	--	--	--	--	--	.1
15...	7100	34	45	20	30	5.0	218	0	52	24	.6	.0
AUG.												
15...	7770	34	47	21	33	4.9	220	0	64	26	.6	.0
SEP.												
15...	11200	31	48	21	33	5.0	234	0	54	26	.6	.0

DATE	PHOS- PHATE (PO4) (MG/L)	DIS- SOLVED SOLIDS (RESI- DUE AT 180 C) (MG/L)	DIS- SOLVED SOLIDS (TONS PER AC-FT)	DIS- SOLVED SOLIDS (TONS PER DAY)	HARD- NESS (CA, MG) (MG/L)	NON- CAR- BONATE HARD- NESS (MG/L)	SODIUM AD- SORP- TION RATIO	PERCENT SODIUM	SPEC I- FIC COND- UCTANCE (MICRO- MHOS)	PH (UNITS)	TEMP- ERATURE (DEG C)
OCT.											
01...	.19	--	--	--	--	--	--	--	--	--	16.0
NOV.											
01...	.12	--	--	--	--	--	--	--	--	--	11.0
DEC.											
01...	.07	--	--	--	--	--	--	--	--	--	9.5
JAN.											
01...	.02	--	--	--	--	--	--	--	--	--	8.5
15...	--	218	.30	5330	--	--	1.4	37	396	7.9	8.5
FEB.											
01...	.41	--	--	--	--	--	--	--	--	--	8.0
15...	--	251	.34	8400	--	--	1.1	29	467	8.6	10.5
MAR.											
01...	.07	--	--	--	--	--	--	--	--	--	11.5
15...	--	271	.37	5280	--	--	1.0	27	482	8.6	12.0
APR.											
01...	.18	--	--	--	--	--	--	--	--	--	11.0
15...	--	254	.35	11000	--	--	1.0	26	465	8.5	10.5
MAY											
01...	.12	--	--	--	--	--	--	--	--	--	11.0
15...	--	249	.34	12400	--	--	.9	24	485	7.9	13.5
JUNE											
01...	.04	--	--	--	--	--	--	--	--	--	15.0
15...	--	237	.32	11500	109	24	1.3	37	357	9.2	16.0
JULY											
01...	.31	--	--	--	--	--	--	--	--	--	17.0
15...	--	313	.43	6000	195	16	.9	25	501	8.1	19.5
AUG.											
15...	--	333	.45	6990	204	24	1.0	25	528	8.1	18.5
SEP.											
15...	--	330	.45	9980	206	14	1.0	25	539	8.1	14.5

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

[illegible]

SNAKE RIVER MAIN STEM

13154500 SNAKE RIVER AT KING HILL, IDAHO--Continued

SPECIFIC CONDUCTANCE (MICROMHOS AT 25°C), WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

DAY	OCTOBER	NOVEMBER	DECEMBER	JANUARY	FEBRLARY	MARCH	APRIL	MAY	JUNE	JULY	AUGUST	SEPTEMBER
1.....	554	542	549	548	536	484	498	490	463	507	523	539
2.....	541	550	548	543	534	494	503	489	440	462	519	543
3.....	549	553	550	551	529	501	510	488	459	486	512	543
4.....	551	544	575	544	536	517	503	490	492	480	524	541
5.....	550	552	578	554	525	507	507	503	485	464	523	541
6.....	555	551	568	562	531	509	505	499	456	463	536	547
7.....	558	545	546	559	525	511	506	444	475	482	499	539
8.....	547	557	546	553	523	504	513	486	473	480	522	543
9.....	547	554	550	550	526	501	514	472	479	489	523	539
10.....	554	551	543	550	522	508	519	449	483	489	519	542
11.....	526	552	542	545	525	522	538	487	490	504	528	538
12.....	550	547	546	555	522	508	514	495	490	494	515	542
13.....	559	552	543	550	522	514	486	473	446	493	532	532
14.....	559	550	548	541	513	506	487	487	494	501	517	532
15.....	532	546	548	396	467	482	415	485	357	501	528	539
16.....	550	546	546	503	515	494	500	460	471	494	488	531
17.....	553	550	552	514	513	497	497	488	464	506	510	534
18.....	556	550	538	505	515	501	498	478	467	512	531	534
19.....	558	555	542	510	523	514	500	494	456	512	524	538
20.....	548	551	525	506	521	514	499	504	466	513	524	534
21.....	545	548	538	488	519	517	495	494	476	512	522	536
22.....	552	539	541	521	525	515	501	483	472	513	524	534
23.....	559	544	546	492	526	511	497	481	479	520	--	529
24.....	559	550	544	505	521	510	494	485	475	522	524	530
25.....	561	550	540	519	504	513	501	479	474	516	529	534
26.....	556	553	544	525	524	513	499	462	445	526	522	528
27.....	555	546	536	481	522	511	494	478	480	508	521	534
28.....	560	549	548	524	517	515	505	485	455	517	521	538
29.....	548	546	543	527	--	516	499	488	477	520	523	534
30.....	555	548	547	528	--	515	504	455	456	524	534	534
31.....	555	--	535	538	--	504	--	463	--	509	536	--
AVERAGE	551	549	546	525	520	507	500	481	466	500	521	536

TEMPERATURE (°C) OF WATER, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	16.0	11.0	9.5	8.5	8.0	11.5	11.0	11.5	15.0	17.5	19.5	19.5
2	16.0	12.0	9.0	8.0	8.5	11.5	12.0	11.5	16.0	18.0	19.0	19.0
3	14.5	13.0	9.0	7.5	8.0	11.0	12.5	12.5	16.5	18.5	19.0	18.5
4	14.0	12.0	8.5	7.0	8.0	11.0	12.0	13.0	17.5	19.5	19.0	17.0
5	13.5	12.5	8.0	6.5	8.0	11.0	13.0	14.0	18.0	19.0	19.0	16.5
6	13.5	12.0	8.0	7.0	9.0	12.0	14.0	14.5	18.5	19.5	20.0	16.0
7	14.0	11.5	8.5	6.0	9.5	12.0	13.0	13.5	19.0	20.5	19.5	16.5
8	14.5	11.5	9.0	5.5	10.0	11.5	13.5	14.0	18.5	20.5	19.0	17.0
9	14.0	11.0	8.5	6.0	10.0	11.0	13.5	13.5	18.0	20.5	18.5	17.0
10	13.5	11.5	8.5	7.0	10.5	11.0	13.0	13.0	17.0	20.0	19.0	16.5
11	13.0	12.0	9.0	8.0	10.0	11.5	12.0	12.5	16.5	19.5	19.0	15.5
12	11.5	11.5	9.5	8.5	10.5	12.0	11.5	12.5	16.0	19.5	19.0	15.0
13	12.0	11.0	10.0	9.0	10.0	12.5	11.0	12.0	16.0	20.0	18.0	14.5
14	11.0	12.0	10.5	9.0	10.5	12.0	10.5	13.0	15.5	19.5	19.0	14.0
15	10.5	11.5	10.5	8.5	10.5	12.0	10.5	13.5	16.0	19.5	18.5	14.5
16	11.5	11.0	10.0	8.5	10.0	12.0	10.5	14.0	16.5	19.5	19.5	14.5
17	11.5	10.5	9.5	9.0	9.5	11.0	11.0	14.5	17.5	19.5	18.5	15.0
18	11.5	10.0	9.5	9.0	10.5	11.5	10.0	15.5	18.0	19.5	19.0	15.5
19	11.5	9.5	10.0	9.5	10.5	11.5	9.5	15.5	18.5	20.5	18.5	15.0
20	12.0	9.5	9.5	9.5	10.0	12.0	10.0	16.0	19.0	20.5	19.0	15.5
21	13.0	10.0	10.0	9.5	9.5	11.5	10.5	16.5	20.0	20.0	18.0	15.0
22	13.0	10.5	10.0	9.5	10.5	13.0	10.5	16.0	20.5	19.5	18.5	14.5
23	13.0	9.5	10.5	9.5	10.0	12.5	11.0	16.0	19.5	19.0	18.5	14.5
24	13.5	10.0	9.5	9.5	10.5	12.0	11.0	15.5	20.5	19.0	19.0	14.0
25	13.0	10.0	9.5	10.0	11.0	12.5	11.0	16.5	21.0	19.5	19.0	13.5
26	13.5	10.0	10.0	9.5	11.5	12.0	10.5	17.0	21.0	19.5	18.0	14.0
27	13.5	9.5	9.5	9.0	11.0	12.5	11.0	16.5	20.5	19.5	19.0	13.0
28	12.0	10.0	8.5	8.5	10.5	11.5	10.5	16.0	20.0	19.5	19.5	13.0
29	11.5	10.0	8.5	8.0	--	11.5	11.0	16.0	18.0	19.5	19.0	13.5
30	11.5	10.0	9.0	8.5	--	12.0	11.0	15.5	16.5	19.0	19.5	14.5
31	11.5	--	8.5	8.5	--	11.5	--	16.0	--	18.5	18.5	--
AVG	12.9	10.9	9.3	8.3	9.9	11.7	11.4	14.4	18.0	19.5	18.9	15.4

13157100 SNAKE RIVER NEAR HAMMETT, IDAHO

LOCATION.--Lat 42°56'35", long 115°31'52", in SE¼NE¼SW¼ sec.32, T.5 S., R.8 E., Elmore-Owyhee County line, at county road bridge, and 4 miles west of Hammett.

DRAINAGE AREA.--Not determined.

PERIOD OF RECORD.--Chemical analyses: July 1969 to June 1970.

CHEMICAL ANALYSES, JULY 1969 TO SEPTEMBER 1970

DATE	DIS- CHARGE (CFS)	SILICA (SiO ₂) (MG/L)	DIS- SOLVED CAL- CIUM (CA) (MG/L)	DIS- SOLVED MAG- NE- SIUM (MG) (MG/L)	SODIUM (NA) (MG/L)	PO- TAS- SIUM (K) (MG/L)	BICAR- BONATE (HCO ₃) (MG/L)	CAR- BONATE (CO ₃) (MG/L)	SULFATE (SO ₄) (MG/L)	CHLO- RIDE (CL) (MG/L)	DIS- SOLVED SOLIDS (RESI- DUE AT 180 C) (MG/L)	DIS- SOLVED SOLIDS (TONS PER DAY)
JULY 31...	6810	--	45	21	--	5.3	223	4	--	25	332	6100
AUG. 25...	6800	--	46	22	--	--	230	30	--	26	339	6220
SEPT. 16...	7500	--	47	21	--	--	206	11	--	26	341	6410
OCT. 27...	9720	--	--	--	--	4.7	235	0	--	24	328	8610
NOV. 26...	8600	--	--	--	--	5.2	232	0	--	26	311	7220
DEC. 30...	8950	32	48	21	31	4.6	228	4	50	26	322	7780
JAN. 21...	10000	--	--	--	--	--	203	6	--	25	321	8670
FEB. 16...	7130	--	--	--	--	--	201	9	--	25	326	6280
MAR. 17...	9440	--	--	--	--	--	208	1	--	24	288	7340
APR. 20...	16400	22	44	18	28	4.6	184	10	45	26	273	12100
MAY 11...	18400	--	--	--	--	--	201	2	--	24	294	14600
JUNE 08...	8440	--	--	--	--	--	202	4	--	21	294	6700

DATE	HARD- NESS (CA, MG) (MG/L)	NON- CAR- BONATE HARD- NESS (MG/L)	SODIUM AD- SORP- TION RATIO	SPECI- FIC COND- UCTANCE (MICRO- MHOS)	FIELD PH (UNITS)	COLOR (PLAT- INUM- COBALT UNITS)	TUR- BID- ITY (JTU)	TEMP- ERATURE (DEG C)	AIR TEMP- ERATURE (DEG C)	COLI- FORM (COL- ONIES PER 100 ML)	FECAL COLI- FORM (COL. PER 100 ML)
JULY 31...	203	13	--	541	8.4	0	1.0	19.5	--	--	--
AUG. 25...	208	16	--	515	8.4	5	2.0	17.5	27.0	142	13
SEPT. 16...	204	32	--	521	8.6	5	7.0	17.0	--	20	5
OCT. 27...	207	14	--	495	8.3	5	6.0	12.0	13.5	150	--
NOV. 26...	211	21	--	508	8.1	5	5.0	8.0	-2.0	150	--
DEC. 30...	198	4	.9	508	8.4	5	3.0	7.5	-2.5	360	--
JAN. 21...	189	12	--	465	8.5	0	4.0	9.0	8.0	2200	--
FEB. 16...	193	13	--	478	8.6	5	3.0	9.5	13.5	350	--
MAR. 17...	180	8	--	469	8.3	5	4.0	9.5	8.0	69	--
APR. 20...	189	21	.9	463	8.7	5	.0	9.0	9.0	6000	--
MAY 11...	186	18	--	458	8.4	5	8.0	12.5	10.0	7600	28
JUNE 08...	187	15	--	461	8.5	5	2.0	17.5	20.5	1900	99

SNAKE RIVER MAIN STEM

13157100 SNAKE RIVER NEAR HAMMETT, IDAHO--Continued

CHEMICAL ANALYSES, JULY 1969 TO SEPTEMBER 1970

DATE	NITRATE (N) (MG/L)	NITRITE (N) (MG/L)	AMMONIA NITRO- GEN (N) (MG/L)	ORGANIC NITRO- GEN (N) (MG/L)	TOTAL NITRO- GEN (N) (MG/L)	DIS- HYDRO- LYZABLE PHOS- PHORUS (P) (MG/L) ¹	TOTAL PHOS- PHORUS (P) (MG/L)	FIELD DIS- SOLVED OXYGEN (MG/L)	PER- CENT SATUR- ATION	BIO- CHEM- ICAL OXYGEN DEMAND (MG/L)	TOTAL ORGANIC CARBON (C) (MG/L)
JULY 31...	.86	.00	.01	.02	.89	.03	.05	8.7	103	22	.5
AUG. 25...	.77	.00	.01	.00	.80	.01	.05	8.0	91	5.0	1.5
SEPT. 16...	.72	.22	.67	.43	2.0	.01	.06	11.5	130	8.0	2.0
OCT. 27...	.9	.01	.02	.37	1.3	.02	.02	10.1	102	1.8	4.5
NOV. 26...	1.0	.00	.11	.02	1.1	.04	.04	10.6	97	.6	6.5
DEC. 30...	.9	.00	.00	.03	.96	.03	.04	10.1	91	.8	3.5
FEB. 16...	1.2	.00	.00	.07	1.3	.06	.03	10.7	103	2.2	1.0
MAR. 17...	1.2	.00	.00	.10	1.3	.02	.03	10.6	101	2.1	1.5
APR. 20...	.4	.00	.00	.02	.47	.03	.10	11.4	107	2.2	8.0
MAY 11...	.6	.00	.02	.10	.71	.01	.10	9.7	104	3.5	2.0
JUNE 08...	1.0	.00	.06	.12	1.2	.06	.06	8.7	100	2.1	.5

DATE	DIS- SOLVED ALUM- INUM (AL) (UG/L)	DIS- SOLVED IRON (FE) (UG/L)	DIS- SOLVED MAN- GANESE (MN) (UG/L)	DIS- SOLVED STRON- TIUM (SR) (UG/L)	DIS- SOLVED CHRO- MIUM (CR) (UG/L)	DIS- SOLVED NICKEL (NI) (UG/L)	DIS- SOLVED COPPER (CU) (UG/L)	DIS- SOLVED LEAD (PB) (UG/L)	DIS- SOLVED ZINC (ZN) (UG/L)	COBALT (CO) (UG/L)
JULY 31...	100	5	0	330	2	35	0	26	0	
OCT. 27...	50	0	10	290	4	10	15	12	50	2
DEC. 30...	30	0	10	310	1	6	3	8	10	1
APR. 20...	0	0	0	310	2	8	12	8	10	2

DATE	DIS- SOLVED ARSENIC (AS) (UG/L)	DIS- SOLVED CAD- MIUM (CD) (UG/L)	DIS- SOLVED BARIUM (BA) (UG/L)	DIS- SOLVED VANA- DIUM (V) (UG/L)	DIS- SOLVED SILVER (AG) (UG/L)	DIS- SOLVED BERYL- LIUM (BE) (UG/L)	DIS- SOLVED SELE- NIUM (SE) (UG/L)	DIS- SOLVED MOLY- BDENUM (MO) (UG/L)	DIS- SOLVED BORON (B) (UG/L)
JULY 31...	0	3	100	9	0	--	1	0	70
OCT. 27...	1	2	200	11	1	0	1	2	90
DEC. 30...	2	2	300	11	0	0	2	8	100
APR. 20...	2	1	100	6	0	0	1	2	90

1 The value reported for dissolved hydrolyzable phosphorus includes dissolved orthophosphorus as well as dissolved hydrolyzable phosphorus.

LOCATION.--Lat 42°47'06", long 115°59'00", in NW¼SE¼ sec.28, T.7 S., R.4 E., Owyhee County, at gaging station on left bank, 0.2 mile upstream from confluence with Little Jacks Creek, and 11.5 miles southwest of Bruneau.

DRAINAGE AREA.--253 sq mi.

PERIOD OF RECORD.--Chemical analyses: January 1967 to September 1970.

REMARKS.--This station was reported as a miscellaneous site for the period January 1967 to September 1968.

DATE	DIS-CHARGE (CFS)	SILICA (SiO2) (MG/L)	DIS-SOLVED CAL- CIUM (CA) (MG/L)	DIS-SOLVED MAG- NE- SIUM (MG) (MG/L)	SODIUM (NA) (MG/L)	PO-TAS- SIUM (K) (MG/L)	BICAR- BONATE (HCO3) (MG/L)	CAR- BONATE (CO3) (MG/L)	SULFATE (SO4) (MG/L)	CHLO- RIDE (CL) (MG/L)	DIS-SOLVED FLUO- RIDE (F) (MG/L)	NITRATE (NO3) (MG/L)
OCT. 02...	.50	35	13	3.3	13	4.8	78	0	6.8	5.0	.6	.1
NOV. 12...	.27	31	13	3.1	12	3.5	75	0	7.6	4.5	.6	.0
JAN. 27...	10	25	8.0	2.2	8.9	3.2	18	16	5.8	2.5	.7	.3
FEB. 12...	23	28	7.6	2.4	7.7	3.2	46	0	5.0	2.5	.6	1.6
JULY 22...	1.7	37	13	3.3	13	5.0	83	0	7.0	3.5	.6	.8

DATE	PHOS- PHATE (PO4) (MG/L)	DIS- SOLVED SOLIDS (RESI- DUE AT 180 C) (MG/L)	DIS- SOLVED SOLIDS (TONS PER DAY)	HARD- NESS (CA,MG) (MG/L)	NON- CAR- BONATE HARD- NESS (MG/L)	SODIUM AD- SORP- TION RATIO	PERCENT SODIUM	SPECI- FIC COND- UCTANCE (MICRO- MHOS)	FIELD PH	COLOR (PLAT- INUM- COBALT UNITS)	TEMP- ERATURE (DEG C)
OCT. 02...	.00	119	.16	46	0	.8	35	157	7.3	5	15.0
NOV. 12...	.00	119	.09	45	0	.8	34	149	7.9	0	6.5
JAN. 27...	.28	103	2.81	29	0	.7	37	107	9.5	25	4.0
FEB. 12...	.32	121	7.51	29	0	.6	34	96	7.4	10	8.0
JULY 22...	.06	116	.53	46	0	.8	35	159	7.8	--	26.0

DATE	FIELD DIS- SOLVED OXYGEN (MG/L)	PER- CENT SATUR- ATION	BIO- CHEM- ICAL OXYGEN DEMAND (MG/L)	COLI- FORM (COL- ONIES PER 100 ML)	FECAL COLI- FORM (COL- ONIES PER 100 ML)
JULY 22...	8.0	107	1.9	700	530

[illegible]

SNAKE RIVER MAIN STEM

13172850 SNAKE RIVER AT MARSING, IDAHO

LOCATION.--Lat 43°32'54", long 116°47'57", in NW¼SW¼SE¼ sec.34, T.3 N., R.4 W., at Elmore-Owyhee County line, and at State Highway 72 crossing.

DRAINAGE AREA.--Not determined.

PERIOD OF RECORD.--Chemical analyses: July 1969 to September 1970.

CHEMICAL ANALYSES, JULY 1969 TO SEPTEMBER 1970

DATE	DIS-CHARGE (CFS)	SILICA (SiO ₂) (MG/L)	DIS-SOLVED CALCIUM (CA) (MG/L)	DIS-SOLVED MAGNESIUM (MG/L)	SODIUM (NA) (MG/L)	PO-TAS-SIUM (K) (MG/L)	BICARBONATE (HCO ₃) (MG/L)	CARBONATE (CO ₃) (MG/L)	SULFATE (SO ₄) (MG/L)	CHLORIDE (CL) (MG/L)	DIS-SOLVED FLUORIDE (F) (MG/L)	DIS-SOLVED SOLIDS (RESIDUE AT 180 C) (MG/L)
JULY												
31...	7750	--	34	20	--	--	170	12	--	24	--	297
AUG.												
25...	6970	--	39	20	--	--	168	20	--	25	--	313
SEPT.												
17...	9250	--	46	22	--	--	219	8	--	28	--	354
OCT.												
27...	10700	--	--	--	--	5.3	228	10	--	27	--	346
NOV.												
26...	9650	--	--	--	--	5.3	230	4	--	30	--	349
DEC.												
30...	10700	31	49	22	36	4.9	207	17	62	26	--	353
JAN.												
22...	15000	--	--	--	--	--	209	6	--	26	--	309
FEB.												
16...	14500	--	--	--	--	--	209	6	--	24	--	256
MAR.												
17...	8560	--	--	--	--	--	179	21	--	25	--	319
APR.												
22...	14500	24	43	18	31	4.9	177	16	48	25	--	290
MAY												
14...	18200	--	--	--	--	--	187	6	--	24	--	276
JUNE												
10...	6980	--	--	--	--	--	188	2	--	23	--	289
JULY												
10...	8710	21	42	18	33	5.4	180	8	53	23	.7	287
AUG.												
19...	6840	--	--	--	--	--	214	9	--	--	--	345
SEPT.												
25...	10500	--	--	--	--	--	216	11	59	27	--	353

DATE	DIS-SOLVED SOLIDS (TONS PER DAY)	HARDNESS (CA, MG/L)	NON-CARBONATE HARDNESS (MG/L)	SODIUM ADSORPTION RATIO	SPECIFIC CONDUCTANCE (MICROMHOS)	FIELD PH (UNITS)	COLOR (PLATINUM-COBALT UNITS)	TURBIDITY (JTU)	TEMPERATURE (DEG C)	AIR TEMPERATURE (DEG C)	COLIFORM (COLONIES PER 100 ML)	FECAL COLIFORM (COL. PER 100 ML)
JULY												
31...	6210	170	10	--	479	8.8	5	4.0	24.0	--	--	--
AUG.												
25...	5890	186	14	--	490	8.9	5	2.0	22.0	26.5	10	0
SEPT.												
17...	8840	206	34	--	541	8.6	5	7.0	16.0	--	30	10
OCT.												
27...	10000	217	14	--	540	8.6	5	6.0	11.0	11.0	40	--
NOV.												
26...	9090	218	23	--	480	8.4	5	5.0	12.0	7.0	20	--
DEC.												
30...	10200	213	15	1.1	534	8.6	5	2.0	5.0	3.0	850	--
JAN.												
22...	12500	200	19	--	494	8.5	15	20	7.0	8.5	6600	--
FEB.												
16...	10000	200	19	--	489	8.5	5	5.0	7.5	8.5	2100	--
MAR.												
17...	7370	198	17	--	501	8.6	5	6.0	7.5	4.5	200	--
APR.												
22...	11400	177	5	1.0	469	9.0	5	1.0	9.5	11.0	46	--
MAY												
14...	13600	175	12	--	467	8.6	5	6.0	12.5	11.0	150	70
JUNE												
10...	5450	183	25	--	466	8.4	5	5.0	17.0	12.0	160	38
JULY												
10...	6750	163	2	1.1	466	8.7	5	3.0	21.8	23.0	600	34
AUG.												
19...	6370	--	--	--	550	8.6	--	1.0	20.0	19.5	330	110
SEPT.												
25...	10000	202	6	--	539	8.6	5	2.0	13.0	12.5	172	18

13172850 SNAKE RIVER AT MARSING, IDAHO--Continued

CHEMICAL ANALYSES, JULY 1969 TO SEPTEMBER 1970

DATE	NITRATE (N) (MG/L)	NITRITE (N) (MG/L)	AMMONIA NITRO- GEN (N) (MG/L)	ORGANIC NITRO- GEN (N) (MG/L)	TOTAL NITRO- GEN (N) (MG/L)	TOTAL ORTHO PHOS- PHOSUS (P) (MG/L)	DIS- HYDRO- LYZABLE PHOS- PHORUS (P) (MG/L) ¹	TOTAL PHOS- PHORUS (P) (MG/L)	FIELD DIS- SOLVED OXYGEN (MG/L)	PER- CENT SATUR- ATION	BIO- CHEM- ICAL OXYGEN DEMAND (MG/L)	TOTAL ORGANIC CARBON (C) (MG/L)
JULY 31...	.59	.00	.19	.17	.95	--	.01	.06	9.6	123	17	3.0
AUG. 25...	.54	.00	.05	.24	.83	--	.00	.08	9.5	116	4.0	2.5
SEPT. 17...	.56	.07	.04	.15	.82	--	.01	.04	8.3	90	1.8	2.0
OCT. 27...	.9	.00	.17	.18	1.3	--	.04	.04	13.1	128	1.3	4.0
NOV. 26...	.9	.00	.07	.01	1.1	--	.08	.08	11.9	119	.5	4.5
DEC. 30...	1.1	.00	.00	.06	1.2	--	.05	.09	12.0	102	2.0	3.0
JAN. 22...	1.1	.01	.06	.09	1.3	--	.09	.11	10.6	95	2.0	6.5
FEB. 16...	1.2	.01	.00	.02	1.2	--	.01	.01	10.8	97	2.9	12
MAR. 17...	1.2	.00	.10	.33	1.6	--	.01	.02	10.9	98	3.9	2.5
APR. 22...	.6	.01	.04	.07	.71	--	.00	.09	12.1	115	3.2	4.5
MAY 14...	.6	.01	.02	.08	.67	--	.00	.11	10.3	109	--	3.0
JUNE 10...	.4	.00	.05	.24	.65	--	.04	.05	10.7	120	2.7	1.5
JULY 10...	.4	.01	.06	.18	.63	.00	.01	.07	9.7	117	3.2	4.5
AUG. 19...	1.0	.00	.04	.21	1.2	.03	.04	.05	9.0	106	2.5	5.0
SEPT. 25...	.8	.01	.00	.08	.93	.01	.04	.04	11.4	116	4.1	2.5

¹ The value reported for dissolved hydrolyzable phosphorus includes dissolved orthophosphorus as well as dissolved hydrolyzable phosphorus.

BOISE RIVER BASIN

13200000 MORES CREEK ABOVE ROBIE CREEK, NEAR ARROWROCK DAM, IDAHO

LOCATION.--Lat 43°38'45", long 115°58'45", in SE¼ sec.28, T.4 N., R.4 E., Boise County, temperature recorder at gaging station on left bank, at State roadside park, 1.7 miles upstream from Robie Creek, 5 miles northwest of Arrowrock Dam, and at mile 5.8.

DRAINAGE AREA.--399 sq mi.

PERIOD OF RECORD.--Water temperatures: December 1964 to September 1970.

EXTREMES, 1969-70.--Water temperatures: Maximum, 25.5° C Aug. 6; minimum, freezing point on many days during December and January.

EXTREMES, 1964-70.--Water temperatures: Maximum (1964-65, 1967-70), 27° C on several days during July and August in 1969; minimum (1965-70), freezing point on several days during winter months each year.

TEMPERATURE (°C) OF WATER, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

DAY	OCT		NOV		DEC		JAN		FEB		MAR	
	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	--	--	6.0	4.5	0.5	0.5	0.0	0.0	1.5	0.5	4.5	3.5
2	--	--	5.5	4.0	0.5	0.5	0.0	0.0	1.5	0.5	4.0	2.0
3	--	--	5.5	3.5	0.5	0.5	0.0	0.0	2.0	1.5	2.5	1.5
4	--	--	6.0	4.0	0.5	0.5	0.0	0.0	2.0	0.5	4.0	2.0
5	--	--	6.5	6.0	0.5	0.5	0.0	0.0	1.0	0.5	4.0	1.5
6	--	--	6.5	6.0	0.5	0.5	0.0	0.0	2.5	1.0	4.5	1.5
7	--	--	6.0	5.5	0.5	0.5	0.0	0.0	3.5	2.0	5.0	3.5
8	--	--	5.5	4.5	0.5	0.5	0.0	0.0	2.5	1.0	5.0	4.0
9	--	--	5.0	4.0	0.5	0.5	0.0	0.0	2.0	0.5	4.0	1.0
10	--	--	5.0	4.0	0.5	0.0	0.0	0.0	2.0	0.5	4.0	1.0
11	--	--	6.0	4.5	0.0	0.0	0.0	0.0	2.5	1.0	4.0	1.0
12	--	--	5.5	4.0	0.0	0.0	0.0	0.0	4.0	2.5	4.5	2.0
13	--	--	5.0	3.5	0.0	0.0	0.0	0.0	4.5	3.5	6.5	4.0
14	--	--	4.5	2.5	0.5	0.0	0.0	0.0	4.5	2.5	5.5	4.0
15	--	--	4.0	2.0	0.5	0.5	0.0	0.0	4.0	2.0	5.5	3.5
16	--	--	4.0	2.5	0.5	0.5	0.0	0.0	3.5	3.5	5.0	2.5
17	--	--	2.5	1.0	0.5	0.5	0.0	0.0	3.5	3.5	3.5	1.5
18	--	--	1.0	1.0	0.5	0.5	0.5	0.0	3.5	2.0	4.5	1.0
19	--	--	1.5	1.0	0.5	0.5	1.0	0.5	2.5	0.5	4.5	1.0
20	--	--	1.5	1.0	0.5	0.5	2.0	1.0	2.0	0.5	5.5	1.5
21	--	--	1.0	1.0	1.0	0.5	1.5	1.5	2.5	0.5	6.0	2.5
22	--	--	1.0	0.5	1.0	0.5	1.5	0.5	2.5	0.5	5.5	2.5
23	--	--	0.5	0.5	0.5	0.5	2.0	1.5	2.5	1.0	6.0	2.0
24	--	--	0.5	0.5	0.5	0.5	2.0	2.0	3.5	1.0	6.0	5.0
25	9.0	6.5	0.5	0.5	0.5	0.0	2.0	2.0	3.5	1.0	5.5	2.0
26	7.5	5.0	0.5	0.5	0.0	0.0	2.0	1.5	3.5	1.0	6.0	4.0
27	6.5	5.5	0.5	0.5	0.0	0.0	2.0	1.5	3.5	1.0	6.0	2.5
28	7.0	6.5	0.5	0.5	0.0	0.0	2.0	1.5	3.5	2.0	6.0	4.0
29	6.5	4.5	0.5	0.5	0.0	0.0	2.0	0.5	--	--	5.5	2.5
30	5.5	4.0	0.5	0.5	0.0	0.0	1.0	0.5	--	--	5.5	2.0
31	6.0	4.0	--	--	0.0	0.0	1.0	0.5	--	--	5.0	2.0
AVG	--	--	3.5	2.5	0.5	0.5	0.5	0.5	3.0	1.5	5.0	2.5
DAY	APR		MAY		JUN		JUL		AUG		SEP	
	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	5.0	1.5	10.5	5.0	14.5	8.5	17.5	11.5	22.5	17.5	23.5	16.5
2	5.5	3.5	11.5	6.0	15.5	9.5	19.5	14.5	22.5	18.5	--	--
3	5.5	1.5	12.0	6.0	16.0	10.0	21.0	15.5	22.0	16.0	--	--
4	6.5	2.0	11.5	6.0	15.5	10.5	20.5	17.0	22.0	17.0	--	--
5	9.0	4.5	11.5	6.5	15.0	10.0	22.0	17.0	25.0	21.0	14.5	12.5
6	9.0	4.5	11.0	6.5	15.5	10.0	22.0	17.0	25.5	21.0	14.5	12.5
7	8.5	4.5	10.0	6.0	15.5	10.5	22.0	17.5	25.0	20.5	19.0	13.5
8	7.5	3.5	7.5	5.5	12.5	10.0	21.5	16.5	24.0	19.5	19.5	16.5
9	6.5	3.5	9.0	6.0	12.0	10.0	21.0	17.0	22.0	16.5	16.5	11.0
10	6.0	5.0	9.0	6.0	12.5	8.5	20.0	16.5	22.5	16.5	15.5	10.0
11	5.5	3.5	7.5	4.5	12.5	7.5	21.5	16.0	22.5	17.0	16.0	11.0
12	6.0	2.0	7.0	5.0	12.5	9.0	22.0	17.5	24.0	17.0	14.5	9.5
13	5.5	2.5	6.5	5.0	11.5	9.0	21.5	17.5	24.0	17.5	13.5	9.0
14	5.5	4.0	10.0	4.5	13.5	9.5	21.0	16.0	23.5	17.0	11.0	6.5
15	5.0	3.5	12.0	5.5	13.5	10.0	22.0	16.0	--	--	11.0	6.5
16	6.0	2.5	13.5	7.0	13.5	9.5	23.5	19.0	--	--	12.0	6.5
17	7.0	3.5	13.5	7.5	14.5	10.0	24.0	20.0	--	--	13.5	7.5
18	7.0	4.0	12.5	8.5	16.5	11.5	24.0	18.5	--	--	14.5	9.5
19	7.0	4.5	11.5	7.0	17.5	12.5	24.0	19.5	--	--	14.5	12.5
20	5.0	3.5	10.5	6.5	17.5	13.5	24.0	18.5	--	--	12.5	9.5
21	7.0	2.5	11.5	6.5	19.0	13.5	23.5	19.5	--	--	12.0	9.0
22	7.0	4.0	11.5	6.5	19.5	14.5	23.5	19.0	--	--	11.5	7.5
23	6.5	4.5	10.5	7.5	19.0	15.0	20.5	15.5	--	--	14.0	10.0
24	6.5	4.5	12.0	6.0	20.0	15.0	21.5	15.0	--	--	11.5	7.0
25	6.5	4.5	13.5	7.0	20.0	15.5	21.5	17.5	--	--	9.0	5.5
26	6.0	4.5	12.5	7.0	20.0	15.5	22.5	17.5	--	--	10.5	6.0
27	6.5	3.5	11.5	7.0	20.0	15.5	23.5	19.5	21.5	15.0	11.0	6.5
28	7.0	4.5	11.0	7.5	17.0	14.0	23.5	19.5	22.0	14.5	12.0	7.5
29	7.0	5.0	11.0	7.0	16.5	11.5	22.5	18.5	22.0	14.5	12.0	8.5
30	9.0	5.5	11.5	7.5	15.0	10.0	22.5	17.5	23.5	16.5	12.0	8.5
31	--	--	13.5	7.0	--	--	21.5	16.5	24.0	17.0	--	--
AVG	6.6	3.5	11.0	6.5	16.0	11.0	22.0	17.0	--	--	13.5	9.5

13210780 FIVE MILE CREEK NEAR NAMPA, IDAHO

LOCATION.--Lat 43°38'55", long 116°31'56", at SW¼ cor. sec.25, T.4 N., R.2 W., Canyon County, at county road crossing.

DRAINAGE AREA.--Not determined.

PERIOD OF RECORD.--Chemical analyses: December 1969 to September 1970.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

DATE	DIS- CHARGE (CFS)	SILICA (SiO ₂) (MG/L)	DIS- SOLVED CAL- CIUM (CA) (MG/L)	DIS- SOLVED MAG- NE- SIUM (MG)	SODIUM (NA) (MG/L)	PO- TAS- SIUM (K) (MG/L)	BICAR- BONATE (HCO ₃) (MG/L)	CAR- BONATE (CO ₃) (MG/L)	SULFATE (SO ₄) (MG/L)	CHLO- RIDE (CL) (MG/L)	DIS- SOLVED FLUO- RIDE (F) (MG/L)	NITRATE (NO ₃) (MG/L)
DEC. 28...	31	40	56	19	68	4.0	328	0	68	15	.6	9.8
FEB. 16...	35	--	--	--	--	--	--	--	--	--	--	--
JULY 31...	96	24	27	8.1	28	3.4	152	0	27	3.5	.4	7.2

DATE	PHOS- PHATE (PO ₄) (MG/L)	DIS- SOLVED SOLIDS (RESI- DUE AT 180 C) (MG/L)	DIS- SOLVED SOLIDS (TONS PER DAY)	HARD- NESS (CA, MG) (MG/L)	NON- CAR- BONATE HARD- NESS (MG/L)	SODIUM AD- SORP- TION RATIO	PERCENT SODIUM	SPECI- FIC COND- UCTANCE (MICRO- MHOS)	FIELD PH	TEMP- ERATURE (DEG C)	AIR TEMP- ERATURE (DEG C)
DEC. 28...	1.4	438	36.7	218	0	2.0	40	678	7.4	2.0	--
FEB. 16...	--	--	--	--	--	--	--	--	--	7.0	--
JULY 31...	.83	200	52.0	101	0	1.2	37	311	7.9	18.0	27.5

DATE	FECAL COLI- FORM (COL. PER 100 ML)	FIELD DIS- SOLVED OXYGEN (MG/L)	PER- CENT SATUR- ATION	BIO- CHEM- ICAL OXYGEN DEMAND (MG/L)	TOTAL ORGANIC CARBON (C) (MG/L)
FEB. 16...	--	9.6	86	--	--
JULY 31...	1300	9.9	114	1.6	5.0

BOISE RIVER BASIN

13210980 MASON CREEK AT CALDWELL, IDAHO

LOCATION.--Lat 43°40'49", long 116°39'44", in NE1/4SW1/4 sec.14, T.4 N., R.3 W., Canyon County, at county road crossing.

DRAINAGE AREA.--Not determined.

PERIOD OF RECORD.--Chemical analyses: February 1970 to September 1970.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

DATE	DIS- CHARGE (CFS)	SILICA (SiO2) (MG/L)	DIS- SOLVED CAL- CIUM (CA) (MG/L)	DIS- SOLVED MAG- NESIUM (MG) (MG/L)	SODIUM (NA) (MG/L)	PO- TAS- SIUM (K) (MG/L)	BICAR- BONATE (HCO3) (MG/L)	CAR- BONATE (CO3) (MG/L)	SULFATE (SO4) (MG/L)	CHLO- RIDE (CL) (MG/L)	DIS- SOLVED FLUO- RIDE (F) (MG/L)	NITRATE (NO3) (MG/L)
FEB. 16...	68	--	--	--	--	--	--	--	--	--	--	--
AUG. 03...	219	30	36	12	46	3.6	215	0	46	8.0	.5	8.9

DATE	PHOS- PHATE (PO4) (MG/L)	DIS- SOLVED SOLIDS (RESI- DUE AT 180 C) (MG/L)	DIS- SOLVED SOLIDS (TONS PER DAY)	HARD- NESS (CA, MG) (MG/L)	NON- CAR- BONATE HARD- NESS (MG/L)	SODIUM AD- SORP- TION RATIO	PERCENT SODIUM	SPECI- FIC COND- UCTANCE (MICRO- MHOS)	FIELD PH (UNITS)	TEMP- ERATURE (DEG C)	AIR TEMP- ERATURE (DEG C)
FEB. 16...	--	--	--	--	--	--	--	--	--	8.5	--
AUG. 03...	.86	301	178	140	0	1.7	41	454	7.8	16.0	19.5

DATE	FECAL COLI- FORM (COL. PER 100 ML)	FIELD DIS- SOLVED OXYGEN (MG/L)	PER- CENT SATUR- ATION	BIO- CHEM- ICAL OXYGEN DEMAND (MG/L)	TOTAL ORGANIC CARBON (C) (MG/L)
FEB. 16...	--	10.9	101	--	--
AUG. 03...	1600	8.5	92	.6	4.0

13211440 INDIAN CREEK AT CALDWELL, IDAHO

LOCATION.--Lat 43°40'07", long 116°41'28", in NW1/4SW1/4, sec.22, T.4 N., R.3 W., Canyon County, at Fourth Avenue crossing in Caldwell.

DRAINAGE AREA.--Not determined.

PERIOD OF RECORD.--Chemical analyses: December 1969 to September 1970.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

see Part 1
Misc

DATE	DIS- CHARGE (CFS)	SILICA (SI02) (MG/L)	DIS- SOLVED CAL- CIUM (CA) (MG/L)	DIS- SOLVED MAG- NE- SIUM (MG) (MG/L)	SODIUM (NA) (MG/L)	PO- TAS- SIUM (K) (MG/L)	BICAR- BONATE (HCO3) (MG/L)	CAR- BONATE (CO3) (MG/L)	SULFATE (SO4) (MG/L)	CHLO- RIDE (CL) (MG/L)	DIS- SOLVED FLUO- RIDE (F) (MG/L)	NITRATE (NO3) (MG/L)
DEC. 27...	218	42	66	19	79	7.2	331	0	108	22	.6	19
FEB. 19...	213	--	60	18	91	8.0	--	--	--	--	--	--
JULY 31...	241	40	47	15	64	5.0	262	0	70	20	.6	11

DATE	PHOS- PHATE (PO4) (MG/L)	DIS- SOLVED SOLIDS (RESI- DUE AT 180 C) (MG/L)	DIS- SOLVED SOLIDS (TONS PER DAY)	HARD- NESS (CA,MG) (MG/L)	NON- CAR- BONATE HARD- NESS (MG/L)	SODIUM AD- SORP- TION RATIO	PERCENT SODIUM	SPECI- FIC COND- UCTANCE (MICRO- MHOS)	FIELD PH (UNITS)	TEMP- ERATURE (DEG C)	AIR TEMP- ERATURE (DEG C)
DEC. 27...	1.1	528	311	192	0	2.2	41	787	7.8	3.0	--
FEB. 19...	--	--	--	224	--	2.6	46	--	--	10.0	4.5
JULY 31...	1.1	400	260	179	0	2.1	43	596	8.1	16.0	20.5

DATE	COLI- FORM (COL- ONIES PER 100 ML)	FECAL COLI- FORM (COL. PER 100 ML)	FIELD DIS- SOLVED OXYGEN (MG/L)	PER- CENT SATUR- ATION	BIO- CHEM- ICAL OXYGEN DEMAND (MG/L)	TOTAL ORGANIC CARBON (C) (MG/L)
FEB. 19...	5800000	--	7.4	71	12	8.0
JULY 31...	--	3000	8.9	97	.9	3.5

BOISE RIVER BASIN

13212500 BOISE RIVER AT NOTUS, IDAHO
(Irrigation network station)

LOCATION.--Lat 43°43'21", long 116°47'34", in S½SE¼ sec.34, T.5 N., R.4 W., Canyon County, at highway bridge 1,100 ft downstream from gaging station, 0.3 mile southeast of Notus, 7 miles northwest of Caldwell, and at mile 14.0.

DRAINAGE AREA.--3,820 sq mi, approximately.

PERIOD OF RECORD.--Chemical analyses: January 1939 to January 1940, November 1950 to September 1970.

Water temperatures: November 1950 to September 1970.

Sediment records: January 1939 to June 1940.

EXTREMES, 1969-70.--Specific conductance: Maximum daily, 650 micromhos Nov. 29; minimum daily, 153 micromhos July 1.

Water temperatures: Maximum, 22° C Aug. 6, 7; minimum, 2.5° C Jan. 6-8.

EXTREMES, 1939-40, 1950-70.--Specific conductance: Maximum daily, 1,470 micromhos July 30, Aug. 26, 1939; minimum daily, 82 micromhos Apr. 27, 1952.

Water temperatures: Maximum, 29° C on several days during summer months in 1951, 1952, and 1954; minimum (1939-40, 1950-64, 1966-70), freezing point Jan. 31, 1956, Jan. 11-14, 1963.

REMARKS.--No appreciable inflow between gaging station and sampling point except during periods of heavy local runoff.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

DATE	DIS- CHARGE (CFS)	SILICA (SiO ₂) (MG/L)	DIS- SOLVED CAL- CIUM (CA) (MG/L)	DIS- SOLVED MAG- NE- SIUM (MG)	SODIUM (NA) (MG/L)	PO- TAS- SIUM (K) (MG/L)	BICAR- BONATE (HCO ₃) (MG/L)	CAR- BONATE (CO ₃) (MG/L)	SULFATE (SO ₄) (MG/L)	CHLO- RIDE (CL) (MG/L)	DIS- SOLVED FLUO- RIDE (F) (MG/L)
JAN. 15...	866	.7	22	12	66	12	180	12	--	25	.5
FEB. 15...	3750	9.3	15	3.3	19	1.8	70	6	--	5.0	.4
MAR. 15...	2700	6.0	20	4.4	20	1.8	86	6	--	5.0	.4
APR. 15...	1240	.8	21	4.9	24	4.3	88	14	--	8.0	.4
MAY 15...	4590	8.5	15	2.9	12	1.5	75	0	--	2.5	.2
JUNE 15...	2660	7.3	15	3.5	17	1.7	25	31	13	6.0	.4
JULY 15...	612	5.9	29	9.1	43	3.6	120	30	40	13	.5
AUG. 15...	380	36	41	12	58	5.2	238	0	64	18	.6
SEP. 15...	944	29	34	10	47	5.7	206	0	44	14	.6

DATE	NITRATE (NO ₃) (MG/L)	DIS- SOLVED SOLIDS (RESI- DUE AT 180 C) (MG/L)	DIS- SOLVED SOLIDS (TONS PER AC-FT)	DIS- SOLVED SOLIDS (TONS PER DAY)	HARD- NESS (CA, MG) (MG/L)	NON- CAR- BONATE HARD- NESS (MG/L)	SODIUM AD- SORP- TION RATIO	PERCENT SODIUM	SPECI- FIC COND- UCTANCE (MICRO- MHOS)	PH (UNITS)	TEMP- ERATURE (DEG C)
JAN. 15...	--	305	.41	713	104	0	2.8	55	507	8.8	9.0
FEB. 15...	--	126	.17	1280	51	0	1.2	44	187	8.7	5.0
MAR. 15...	--	146	.20	1060	68	0	1.1	38	227	8.4	7.0
APR. 15...	--	169	.23	566	72	0	1.2	40	264	9.0	8.5
MAY 15...	--	109	.15	1350	50	0	.7	34	163	7.2	11.0
JUNE 15...	.1	112	.15	804	52	0	1.0	41	189	9.9	15.0
JULY 15...	.1	188	.26	311	110	0	1.8	45	393	9.3	21.0
AUG. 15...	.1	362	.49	371	152	0	2.0	44	546	7.6	20.0
SEP. 15...	2.7	294	.40	749	126	0	1.8	43	464	7.4	13.0

13212500 BOISE RIVER AT NOTUS, IDAHO--Continued

SPECIFIC CONDUCTANCE (MICROMHOS AT 25°C), WATER YEAR OCTOBER 1969 to SEPTEMBER 1970

DAY	OCTOBER	NOVEMBER	DECEMBER	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE	JULY	AUGUST	SEPTEMBER
1.....	521	631	613	590	418	235	217	161	234	153	460	497
2.....	506	590	633	585	419	232	214	166	211	202	483	499
3.....	485	592	607	591	426	236	213	175	217	269	473	499
4.....	471	586	608	590	453	236	274	177	226	300	465	501
5.....	462	612	604	644	432	239	302	199	219	297	465	435
6.....	479	617	602	595	426	233	327	179	220	305	484	447
7.....	481	591	600	623	379	235	390	178	222	330	491	445
8.....	466	597	595	612	363	230	428	184	220	378	511	446
9.....	465	599	633	597	336	230	391	184	247	409	514	430
10.....	485	591	554	628	262	233	336	166	240	417	514	436
11.....	503	609	600	592	214	232	339	166	225	417	525	443
12.....	503	609	602	588	211	229	315	169	215	412	535	453
13.....	485	603	594	590	209	233	315	161	212	411	534	456
14.....	503	606	598	626	209	--	312	165	207	409	541	456
15.....	491	603	615	507	187	227	264	163	189	393	546	464
16.....	492	613	592	570	205	226	221	167	208	419	512	472
17.....	523	617	594	524	205	227	220	161	263	409	513	504
18.....	550	603	634	514	204	--	296	170	259	420	515	511
19.....	543	611	597	471	209	227	225	174	239	426	516	508
20.....	544	604	589	465	202	230	231	196	285	425	511	475
21.....	567	606	593	472	203	241	247	190	303	420	514	445
22.....	565	603	627	497	214	219	184	188	303	432	496	448
23.....	584	629	584	497	199	--	183	189	303	447	520	448
24.....	586	623	589	482	202	223	180	180	188	460	493	439
25.....	569	602	590	472	209	224	186	185	185	459	501	464
26.....	571	602	590	472	201	227	188	187	188	471	524	446
27.....	576	518	583	472	235	295	176	226	190	467	525	474
28.....	582	606	593	438	235	202	198	212	225	476	517	477
29.....	593	650	633	414	--	200	176	216	209	461	542	499
30.....	599	635	586	420	--	200	159	216	159	482	521	510
31.....	587	--	588	437	--	214	--	211	--	478	501	--
AVERAGE	527	605	601	534	273	229	256	182	227	395	508	467

TEMPERATURE (°C) OF WATER, WATER YEAR OCTOBER 1969 to SEPTEMBER 1970

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	14.5	11.0	5.5	4.5	5.0	5.5	7.5	9.5	15.0	14.5	20.5	20.5
2	13.5	11.0	5.0	4.0	6.0	4.5	8.5	11.0	16.0	16.5	21.0	19.0
3	11.0	11.0	5.5	4.5	6.0	5.5	7.5	11.0	16.5	20.0	20.5	18.5
4	11.5	10.5	6.0	4.5	5.5	5.0	9.0	12.0	19.5	20.0	20.5	16.0
5	11.5	11.5	5.0	5.5	6.0	6.0	12.0	11.5	18.5	20.0	21.5	14.5
6	11.0	11.0	5.5	2.5	6.0	5.5	14.0	11.5	17.5	20.0	22.0	16.5
7	11.5	10.5	6.0	2.5	6.5	7.0	12.0	9.5	15.5	20.0	22.0	17.0
8	12.0	10.0	6.0	2.5	5.5	7.0	12.5	10.0	15.5	20.5	19.0	17.0
9	12.5	10.5	6.5	3.5	5.5	6.5	12.0	10.0	14.0	20.5	20.0	15.0
10	12.0	10.0	6.5	4.5	5.0	6.0	11.5	9.0	14.0	19.0	20.0	15.0
11	11.0	10.5	6.0	6.5	4.5	5.5	11.5	9.0	13.5	19.5	19.5	16.5
12	10.0	10.0	7.0	7.0	5.0	5.5	10.0	9.5	12.5	20.5	20.5	14.5
13	9.5	10.0	9.0	7.5	5.0	7.5	9.0	9.5	13.5	20.0	21.0	12.5
14	9.5	11.0	8.5	8.5	5.0	7.5	9.0	10.0	14.0	19.5	20.0	12.5
15	9.0	10.5	9.0	9.0	5.0	7.0	8.5	11.0	15.0	20.5	20.0	12.5
16	10.5	10.0	7.0	8.5	5.5	5.0	10.0	12.0	14.5	21.0	21.0	14.5
17	10.5	7.5	9.0	8.5	5.0	4.5	11.5	12.0	17.5	21.0	20.5	15.0
18	10.0	7.0	8.5	9.5	5.0	5.5	9.5	14.0	19.5	21.0	19.5	15.5
19	10.5	7.5	8.5	9.5	4.0	7.0	7.5	12.5	20.0	22.0	19.5	15.5
20	10.0	7.5	7.5	9.5	4.0	7.0	8.5	12.0	20.0	21.5	19.5	14.5
21	11.5	6.5	9.5	9.5	4.5	7.5	9.0	13.5	20.0	21.5	20.5	14.5
22	11.5	7.5	7.5	9.5	5.0	7.5	9.0	14.5	20.0	20.0	20.5	14.5
23	11.5	7.5	7.5	9.5	5.0	7.5	9.0	12.5	20.0	19.5	19.5	14.5
24	11.0	7.5	7.0	9.0	5.0	7.0	9.0	13.5	18.5	20.0	20.5	13.5
25	11.0	7.5	6.5	9.0	4.5	7.0	9.0	15.5	17.0	20.0	20.0	12.0
26	10.5	7.0	7.0	9.5	5.0	7.5	9.0	14.5	17.0	20.0	20.0	14.0
27	10.5	7.0	6.0	9.5	5.5	7.5	7.0	14.5	16.0	21.0	19.5	14.0
28	10.5	5.5	5.0	6.0	6.0	7.5	7.0	14.5	15.0	20.0	19.0	14.0
29	11.0	5.5	4.5	5.0	--	6.5	8.5	14.0	12.5	20.0	19.0	14.0
30	10.5	5.5	4.5	6.0	--	7.0	8.5	13.5	12.5	20.0	20.5	14.5
31	11.0	--	5.5	5.0	--	7.0	--	13.5	--	20.0	21.0	--
AVG	11.0	9.0	6.5	6.5	5.0	6.5	9.5	12.0	16.5	20.0	20.0	15.0

BOISE RIVER BASIN

13212880 DIXIE SLOUGH NEAR WILDER, IDAHO

LOCATION.--Lat 43°42'45", long 116°52'15", in NW¼NW¼SW¼ sec.6, T.4 N., R.4 W., Canyon County, at county road crossing.

DRAINAGE AREA.--Not determined.

PERIOD OF RECORD.--Chemical analyses: Feb. 1970 to September 1970.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

DATE	DIS- CHARGE (CFS)	SILICA (SiO2) (MG/L)	DIS- SOLVED CAL- CIUM (CA) (MG/L)	DIS- SOLVED MAG- NE- SIUM (MG) (MG/L)	SODIUM (NA) (MG/L)	PO- TAS- SIUM (K) (MG/L)	BICAR- BONATE (HCO3) (MG/L)	CAR- BONATE (CO3) (MG/L)	SULFATE (SO4) (MG/L)	CHLO- RIDE (CL) (MG/L)	DIS- SOLVED FLUO- RIDE (F) (MG/L)	NITRATE (NO3) (MG/L)
FEB. 16...	77	--	--	--	--	--	--	--	--	--	--	--
JULY 30...	112	36	46	13	74	5.6	282	0	66	20	.7	6.7

DATE	PHOS- PHATE (PO4) (MG/L)	DIS- SOLVED SOLIDS (RESI- DUE AT 180 C) (MG/L)	DIS- SOLVED SOLIDS (TONS PER DAY)	HARD- NESS (CA, MG) (MG/L)	NON- CAR- BONATE HARD- NESS (MG/L)	SODIUM AD- SORP- TION RATIO	PERCENT SODIUM	SPECI- FIC COND- UCTANCE (MICRO- MHOS)	FIELD PH (UNITS)	TEMP- ERATURE (DEG C)	AIR TEMP- ERATURE (DEG C)
FEB. 16...	--	--	--	--	--	--	--	--	--	9.5	--
JULY 30...	.99	417	126	168	0	2.5	48	614	8.1	22.0	27.0

DATE	FECAL COLI- FORM (COL. PER 100 ML)	FIELD DIS- SOLVED OXYGEN (MG/L)	PER- CENT SATUR- ATION	BIO- CHEM- ICAL OXYGEN DEMAND (MG/L)	TOTAL ORGANIC CARBON (C) (MG/L)
FEB. 16...	--	11.9	113	--	--
JULY 30...	16000	10.0	113	2.8	2.5

13213000 BOISE RIVER NEAR PARMA, IDAHO

LOCATION.--Lat 43°46'54", long 116°58'17", in SE¼NE¼SE¼ sec.7, T.5 N., R.5 W., Canyon County, at county road crossing, 1.25 miles west of Parma, and 3.6 miles upstream from mouth.
DRAINAGE AREA.--3,970 sq mi, approximately.
PERIOD OF RECORD.--Chemical analyses: July 1969 to September 1970.

CHEMICAL ANALYSES, JULY 1969 TO SEPTEMBER 1970

DATE	DIS- CHARGE (CFS)	SILICA (SiO ₂) (MG/L)	DIS- SOLVED CAL- CIUM (CA) (MG/L)	DIS- SOLVED MAG- NE- SIUM (MG) (MG/L)	SODIUM (NA) (MG/L)	PO- TAS- SIUM (K) (MG/L)	BICAR- BONATE (HCO ₃) (MG/L)	CAR- BONATE (CO ₃) (MG/L)	SULFATE (SO ₄) (MG/L)	CHLO- RIDE (CL) (MG/L)	DIS- SOLVED FLUO- RIDE (F) (MG/L)	DIS- SOLVED SOLIDS (RESIDUE AT 180 C) (MG/L)
JULY 1969												
31...	604	--	41	12	--	4.8	240	0	--	18	--	360
AUG.												
26...	588	--	42	12	--	--	264	0	--	20	--	383
SEPT.												
17...	849	--	42	13	--	--	248	0	--	18	--	376
OCT.												
28...	1130	--	--	--	--	5.2	287	0	--	20	--	399
NOV.												
28...	915	--	--	--	--	5.1	289	0	--	24	--	402
DEC.												
29...	852	35	50	15	69	6.6	284	6	60	22	--	417
JAN. 1970												
22...	1680	--	--	--	--	--	240	0	--	24	--	370
FEB.												
19...	3860	--	--	--	--	--	98	0	--	6.0	--	162
MAR.												
16...	2820	--	--	--	--	--	114	0	--	7.0	--	147
APR.												
22...	2380	18	18	4.0	19	2.4	95	0	18	7.0	--	229
MAY												
14...	3960	--	--	--	--	--	84	0	--	5.0	--	103
JUNE												
10...	2790	--	--	--	--	--	117	0	--	8.5	--	172
JULY												
10...	858	29	35	9.6	54	5.6	205	0	47	17	.5	304
AUG.												
19...	659	--	--	--	--	--	246	0	--	--	--	366
SEPT.												
23...	1440	--	--	--	--	--	217	0	50	16	--	315

DATE	DIS- SOLVED SOLIDS (TONS PER DAY)	HARD- NESS (CA, MG) (MG/L)	NON- CAR- BONATE HARD- NESS (MG/L)	SODIUM AD- SORP- TION RATIO	SPECI- FIC COND- UCTANCE (MICRO- MHOS)	FIELD PH (UNITS)	COLOR (PLAT- INUM- COBALT UNITS)	TUR- BID- ITY (JTU)	TEMP- ERATURE (DEG C)	AIR TEMP- ERATURE (DEG C)	COLI- FORM (COL- ONIES PER 100 ML)	FECAL COLI- FORM (COL. PER 100 ML)
JULY												
31...	587	152	0	--	558	8.3	5	7.0	25.0	--	--	--
AUG.												
26...	608	154	0	--	574	8.1	10	7.0	17.5	24.0	1400	360
SEPT.												
17...	862	164	0	--	541	8.1	10	8.0	15.0	15.0	2500	860
OCT.												
28...	1220	172	0	--	510	8.1	10	5.0	11.0	10.5	> 50000	--
NOV.												
28...	993	193	0	--	625	7.6	5	8.0	4.0	.5	24000	--
DEC.												
29...	959	184	0	2.2	628	8.4	10	25	4.0	.0	82000	--
JAN.												
22...	1680	156	0	--	545	8.0	5	15	9.0	8.5	130000	--
FEB.												
19...	1690	69	0	--	217	8.0	10	10	5.0	8.5	140000	--
MAR.												
16...	1120	74	0	--	250	8.1	5	3.0	7.5	12.0	3300	--
APR.												
22...	1470	59	0	1.1	213	7.8	10	.0	9.0	11.0	5600	--
MAY												
14...	1100	56	0	--	177	8.0	10	8.0	10.5	14.0	34000	2200
JUNE												
10...	1300	79	0	--	278	7.4	10	7.0	15.5	19.0	9300	1400
JULY												
10...	704	130	0	2.1	473	7.8	15	10	21.0	26.5	28000	58
AUG.												
19...	651	--	--	--	550	8.2	--	2.0	20.0	30.0	15000	600
SEPT.												
23...	1230	126	0	--	472	8.1	10	2.0	14.5	16.0	6000	400

13213000 BOISE RIVER NEAR PARMA, IDAHO--Continued

CHEMICAL ANALYSES, JULY 1969 TO SEPTEMBER 1970

DATE	NITRATE (N) (MG/L)	NITRITE (N) (MG/L)	AMMONIA NITRO- GEN (MG/L)	ORGANIC NITRO- GEN (MG/L)	TOTAL NITRO- GEN (MG/L)	TOTAL ORTHO PHOS- PHOSUS (P) (MG/L)	DIS- HYDRO- LYZABLE PHOS- PHORUS (P) (MG/L) ¹	TOTAL PHOS- PHORUS (P) (MG/L)	FIELD DIS- SOLVED OXYGEN (MG/L)	PER- CENT SATUR- ATION	BIO- CHEM- ICAL OXYGEN DEMAND (MG/L)	TOTAL ORGANIC CARBON (C) (MG/L)
JULY 31...	1.0	.01	.05	.07	1.1	--	.24	.36	8.1	104	19	2.5
AUG. 26...	1.1	.01	.13	.14	1.4	--	.30	.47	6.9	78	5.0	3.0
SEPT. 17...	.81	.01	.05	.12	.99	--	.21	.46	7.9	84	3.0	2.5
OCT. 28...	1.9	.00	.06	.10	2.1	--	.32	.33	8.0	78	4.6	6.0
NOV. 28...	2.5	.00	.10	.33	2.9	--	.42	.46	10.4	86	1.7	5.0
DEC. 29...	3.6	.01	1.6	.27	5.5	--	.35	.50	8.5	69	9.0	8.0
JAN. 22...	2.9	.01	1.4	.56	4.9	--	.69	.72	6.6	62	8.8	12
FEB. 19...	1.0	.00	.00	.08	1.1	--	.07	.07	11.5	97	2.1	2.5
MAR. 16...	1.1	.00	.07	.08	1.2	--	.09	.10	10.3	92	2.0	2.5
APR. 22...	.7	.00	.02	.04	.72	--	.09	.27	9.7	89	3.3	4.5
MAY 14...	.4	.01	.03	.09	.54	--	.06	.18	10.1	98	5.6	1.5
JUNE 10...	1.2	.00	.04	.31	1.6	--	.24	.27	8.5	91	2.8	2.0
JULY 10...	1.3	.01	.17	.16	1.6	.23	.24	.34	6.6	78	4.5	5.0
AUG. 19...	1.2	.01	.08	.20	1.5	.31	.33	.34	8.7	102	1.9	4.5
SEPT. 23...	1.3	.01	.16	.19	1.7	.24	.25	.27	8.6	91	1.9	3.5

DATE	DIS- SOLVED ALUM- INUM (AL) (UG/L)	DIS- SOLVED IRON (FE) (UG/L)	DIS- SOLVED MAN- GANESE (MN) (UG/L)	DIS- SOLVED STRON- TIUM (SR) (UG/L)	DIS- SOLVED CHRO- MIUM (CR) (UG/L)	DIS- SOLVED NICKEL (NI) (UG/L)	DIS- SOLVED COPPER (CU) (UG/L)	DIS- SOLVED LEAD (PB) (UG/L)	DIS- SOLVED ZINC (ZN) (UG/L)	DIS- SOLVED COBALT (CO) (UG/L)
JULY 31...	--	--	--	310	3	22	22	34	1	2
OCT. 28...	60	30	50	330	2	9	10	18	30	2
DEC. 29...	60	10	50	380	0	7	2	10	10	1
APR. 22...	0	0	20	150	2	0	8	6	0	1
JULY 10...	100	20	0	300	0	7	7	8	0	2

DATE	DIS- SOLVED ARSENIC (AS) (UG/L)	DIS- SOLVED CAD- MIUM (CD) (UG/L)	DIS- SOLVED BARIUM (BA) (UG/L)	DIS- SOLVED VANA- DIUM (V) (UG/L)	DIS- SOLVED SILVER (AG) (UG/L)	DIS- SOLVED BERYL- LIUM (BE) (UG/L)	DIS- SOLVED SELE- NIUM (SE) (UG/L)	DIS- SOLVED MOLY- BDENUM (MO) (UG/L)	DIS- SOLVED BORON (B) (UG/L)
JULY 31...	0	3	450	13	2	--	0	1	150
OCT. 28...	4	2	400	18	1	0	1	3	130
DEC. 29...	6	3	200	20	1	0	2	3	180
APR. 22...	4	2	200	5	0	0	1	2	40
JULY 10...	1	1	0	8	1	0	5	0	10

¹ The value reported for dissolved hydrolyzable phosphorus includes dissolved orthophosphorus as well as dissolved hydrolyzable phosphorus.

13251300 WEST BRANCH WEISER RIVER NEAR TAMARACK, IDAHO

LOCATION.--Lat 45°01'14", long 116°26'06", in SE $\frac{1}{4}$ SE $\frac{1}{4}$ sec.34, T.20 N., R.1 W., Adams County, temperature recorder at gaging station on left bank, at Price Valley guard station, 0.1 mile upstream from East Branch Weiser River, and 5.2 miles northwest of Tamarack.

DRAINAGE AREA.--3.96 sq mi.

PERIOD OF RECORD.--Water temperatures: August 1959 to September 1970.

EXTREMES, 1969-70.--Water temperatures: Maximum, 14.5° C on several days during July and August; minimum, freezing point on many days during winter months.

EXTREMES, 1959-70.--Water temperatures: Maximum (1959-63, 1964-70), 17° C July 20, 1960, Aug. 12, 1963, July 31, 1966; minimum, freezing point on many days during winter months.

TEMPERATURE (°C) OF WATER, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

DAY	OCT		NOV		DEC		JAN		FEB		MAR	
	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	8.5	6.0	4.0	3.5	0.5	0.0	1.0	0.0	1.0	1.0	2.0	1.5
2	7.0	6.0	3.5	1.5	0.5	0.0	1.0	0.0	1.5	1.0	1.5	1.5
3	6.0	4.5	2.5	1.5	0.5	0.0	1.0	0.0	1.5	1.5	2.0	1.5
4	5.0	2.5	3.5	2.0	0.5	0.0	0.5	0.5	--	--	2.0	2.0
5	5.0	2.0	4.0	3.5	0.5	0.0	1.0	0.5	--	--	2.0	1.0
6	5.5	2.0	3.5	3.5	0.5	0.5	--	--	--	--	2.0	1.5
7	5.0	2.5	3.5	2.5	0.5	0.0	--	--	--	--	2.0	2.0
8	5.5	5.0	3.5	2.0	0.5	0.0	1.0	0.5	--	--	2.0	2.0
9	5.5	5.0	2.5	1.5	0.5	0.5	1.0	0.5	--	--	2.0	2.0
10	5.5	4.0	3.5	2.0	0.5	0.5	0.5	0.0	--	--	1.5	1.0
11	5.0	3.5	3.5	2.5	0.5	0.5	1.0	0.5	--	--	1.5	1.0
12	4.0	2.0	3.5	2.5	0.5	0.5	0.5	0.5	2.5	2.5	2.0	1.5
13	2.0	0.5	3.5	1.5	0.5	0.5	0.5	0.5	2.5	2.0	2.5	2.0
14	1.0	0.5	2.0	1.0	1.0	0.5	0.5	0.5	2.5	2.0	2.5	2.5
15	1.5	0.5	2.0	1.0	1.5	1.0	0.5	0.0	2.5	2.5	3.5	2.5
16	1.5	0.5	2.0	1.5	1.5	1.0	0.0	0.0	2.5	2.5	2.5	2.0
17	2.5	1.5	1.5	0.5	1.0	1.0	0.0	0.0	2.5	2.5	2.0	2.0
18	2.5	1.0	0.5	0.5	1.0	1.0	0.0	0.0	2.5	2.0	2.0	1.0
19	2.5	1.0	0.5	0.5	1.0	1.0	0.0	0.0	2.0	1.0	2.0	1.0
20	4.0	2.0	0.5	0.0	1.0	0.5	1.0	0.0	1.5	1.0	2.0	1.0
21	4.5	2.0	0.5	0.0	0.5	0.5	1.0	0.5	1.5	1.0	3.5	2.0
22	4.5	2.5	1.0	0.0	1.0	0.5	1.5	0.5	1.5	1.0	3.5	2.0
23	5.0	2.5	0.5	0.0	1.0	0.5	1.0	0.5	2.0	1.0	2.5	1.5
24	5.5	5.0	0.5	0.0	1.0	0.5	1.0	0.5	2.0	1.0	3.5	2.5
25	5.0	2.5	0.5	0.0	1.0	1.0	1.5	1.0	2.0	1.0	2.5	1.5
26	3.5	1.5	0.5	0.0	1.0	1.0	1.5	0.5	2.0	1.0	4.0	3.5
27	3.5	2.0	0.5	0.0	1.0	0.5	1.0	0.5	2.0	1.0	4.0	3.5
28	3.5	2.5	0.5	0.0	0.5	0.0	1.0	1.0	2.0	2.0	4.0	3.5
29	3.5	2.5	0.5	0.0	1.0	0.5	1.0	0.5	--	--	4.0	3.5
30	3.5	1.5	0.5	0.0	1.0	0.0	1.0	0.5	--	--	4.5	2.5
31	4.0	2.5	--	--	--	--	1.0	0.5	--	--	2.5	1.5
AVG	4.0	2.5	2.0	1.0	1.0	0.5	1.0	0.5	--	--	2.5	2.0
DAY	APR		MAY		JUN		JUL		AUG		SEP	
	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	2.5	1.5	6.5	3.5	10.0	5.5	11.5	7.5	12.5	10.0	13.5	11.0
2	3.5	2.5	7.0	4.0	10.5	5.5	11.5	9.5	12.5	10.5	12.5	9.5
3	3.5	1.5	6.5	4.0	11.0	6.5	13.5	9.5	12.0	9.5	12.0	9.5
4	3.5	2.0	4.0	7.0	10.0	6.5	12.5	10.5	12.5	9.5	11.5	10.0
5	4.5	2.5	6.0	4.5	11.0	6.5	14.0	11.0	13.5	12.0	10.0	9.0
6	4.5	3.5	7.0	4.5	11.0	7.0	14.0	11.0	14.5	11.5	10.5	9.5
7	3.5	2.5	6.5	5.0	9.5	7.0	14.0	10.0	14.5	11.0	10.5	10.0
8	4.5	2.5	6.5	4.0	9.0	6.5	13.5	10.0	14.0	11.0	10.5	10.0
9	3.5	3.5	5.0	5.0	9.0	7.0	14.0	10.5	12.5	9.0	10.0	6.5
10	4.0	3.5	5.0	4.0	7.5	6.5	14.0	11.5	12.0	9.0	9.0	6.0
11	3.5	3.5	6.0	4.0	7.0	5.5	13.5	11.0	12.5	9.5	9.0	6.5
12	4.0	2.5	4.5	3.5	7.0	6.0	13.5	11.0	13.5	10.5	9.0	5.5
13	4.0	3.5	5.0	3.5	7.5	6.0	14.0	11.0	13.5	10.5	7.0	5.5
14	4.5	3.5	6.5	3.5	7.5	7.0	14.0	11.0	13.5	9.5	6.0	4.0
15	4.0	3.5	7.5	4.0	7.0	6.5	13.5	10.0	12.0	9.0	6.5	4.0
16	3.5	2.5	8.5	4.5	8.5	6.5	14.0	11.5	12.5	9.5	7.0	4.5
17	4.0	2.5	7.5	4.5	9.5	6.0	14.5	11.5	12.5	10.0	7.5	5.5
18	4.0	2.5	6.5	4.5	9.5	6.5	14.0	10.5	12.0	9.0	9.0	6.0
19	3.5	2.5	6.5	4.5	11.0	7.0	14.5	11.0	11.5	9.0	9.0	8.5
20	3.5	3.5	7.0	4.5	11.5	7.5	14.5	11.0	12.0	9.5	9.0	6.5
21	4.5	2.5	7.5	4.5	12.0	8.5	14.5	12.5	12.0	9.5	7.0	6.0
22	3.5	2.0	6.0	5.0	12.0	9.5	14.0	11.0	12.0	9.5	7.0	5.5
23	4.5	2.5	7.5	5.0	12.5	9.5	12.5	9.5	12.0	9.5	8.5	7.0
24	3.5	3.5	9.0	4.5	10.0	14.0	12.0	9.0	12.5	10.0	7.5	5.0
25	4.0	3.5	9.5	5.0	13.5	10.0	12.0	10.0	12.5	9.5	5.0	3.5
26	4.0	3.5	9.0	5.5	14.0	11.0	13.5	10.5	12.0	9.5	7.5	4.0
27	5.0	4.5	7.5	5.0	13.5	11.0	13.5	11.5	12.0	9.0	7.5	5.0
28	4.5	3.5	7.0	5.0	11.0	10.0	12.5	11.0	12.0	9.0	8.5	5.5
29	5.0	3.5	6.0	5.0	10.5	9.0	12.5	10.5	12.0	9.0	8.5	5.5
30	5.0	4.0	6.5	5.0	10.0	8.5	12.0	9.5	12.0	9.5	7.5	6.0
31	--	--	9.0	4.5	--	--	12.0	9.0	13.5	11.0	--	--
AVG	4.0	3.0	7.0	4.5	10.0	7.5	13.5	10.5	12.5	9.5	9.0	6.5

SNAKE RIVER MAIN STEM

13269000 SNAKE RIVER AT WEISER, IDAHO

LOCATION (revised).--Lat 44°14'44", long 116°58'48", in NW¼SE¼ sec.31, T.11 N., R.5 W., Washington County, at gaging station on right bank at upstream side of U.S. Highway 30N bridge at Weiser, 0.7 mile downstream from Weiser River, and at mile 351.3.

DRAINAGE AREA.--69,200 sq mi, approximately.

PERIOD OF RECORD.--Chemical analyses: August 1969 to September 1970.

Water temperatures: June 1967 to September 1970.

EXTREMES, 1969-70.--Water temperatures: Maximum, 26.5° C July 19; minimum, 1° C Jan. 7-9.

EXTREMES, 1967-70.--Water temperatures: Maximum, 27° C July 7-10, 1968; minimum, freezing point Dec. 14-17, 21, 1967.

REMARKS.--Temperature observations are made at approximately 0800 and 1700 each day, on left bank 1,200 ft upstream from U.S. Highway 30N bridge.

CHEMICAL ANALYSES, AUGUST 1969 TO SEPTEMBER 1970

DATE	DIS- CHARGE (CFS)	SILICA (SiO2) (MG/L)	DIS- SOLVED CAL- CIUM (CA) (MG/L)	DIS- SOLVED MAG- NE- SIUM (MG) (MG/L)	SODIUM (NA) (MG/L)	PO- TAS- SIUM (K) (MG/L)	BICAR- BONATE (HCO3) (MG/L)	CAR- BONATE (CO3) (MG/L)	SULFATE (SO4) (MG/L)	CHLO- RIDE (CL) (MG/L)	DIS- SOLVED SOLIDS (RESI- DUE AT 180 C) (MG/L)	DIS- SOLVED SOLIDS (TONS PER DAY)
AUG.												
01...	10600	--	66	18	--	5.2	175	11	--	23	306	8760
26...	10600	--	36	17	--	--	178	13	--	24	323	9240
SEPT.												
24...	15700	--	42	18	--	--	206	11	--	24	343	14500
OCT.												
29...	15400	--	--	--	--	4.9	195	14	--	24	335	13900
NOV.												
28...	12900	--	--	--	--	5.2	201	12	--	22	334	11600
DEC.												
29...	12800	31	43	18	39	4.4	219	0	58	23	331	11400
JAN.												
22...	31000	--	--	--	--	--	127	3	--	13	191	16000
FEB.												
19...	20500	--	--	--	--	--	160	2	--	17	247	13700
MAR.												
16...	19200	--	--	--	--	--	155	1	--	16	217	11200
APR.												
30...	19300	19	35	14	32	4.3	149	14	48	21	246	12800
MAY												
14...	34000	--	--	--	--	--	163	6	--	19	257	23600
JUNE												
18...	40200	--	--	--	--	--	130	10	--	15	204	22100
JULY												
08...	16800	19	26	12	32	4.3	125	6	46	16	220	9980
AUG.												
21...	10400	--	--	--	--	--	179	6	--	--	310	8710
SEPT.												
23...	16100	--	--	--	--	--	193	10	63	24	327	14200

DATE	HARD- NESS (CA, MG) (MG/L)	NON- CAR- BONATE HARD- NESS (MG/L)	SODIUM AD- SORP- TION RATIO	SPECI- FIC COND- UCTANCE (MICRO- MHOS)	FIELD PH	COLOR (PLAT- INUM- COBALT UNITS)	TUR- BID- ITY (JTU)	TEMP- ERATURE (DEG C)	AIR TEMP- ERATURE (DEG C)	COLI- FORM (COL- ONIES PER 100 ML)	FECAL COLI- FORM (COL. PER 100 ML)
AUG.											
01...	240	78	--	496	8.8	5	10	23.5	--	--	--
26...	165	0	--	459	8.8	5	1	22.0	31.0	1060	116
SEPT.											
24...	179	0	--	507	8.5	10	7	16.5	18.5	3200	280
OCT.											
29...	175	0	--	526	8.7	5	4	9.5	16.5	28000	--
NOV.											
28...	193	8	--	523	8.5	5	3	4.0	2.5	1500	--
DEC.											
29...	177	0	1.3	503	8.2	5	5	3.0	-1.0	2100	--
JAN.											
22...	110	1	--	300	8.4	30	40	6.0	8.0	4200	--
FEB.											
19...	139	4	--	376	8.4	10	10	6.5	10.5	11000	--
MAR.											
16...	128	0	--	361	8.4	5	5	8.0	--	1300	--
APR.											
30...	148	3	1.2	414	9.0	10	8	10.5	13.0	830	--
MAY											
14...	152	8	--	407	8.6	10	7	13.0	19.5	1100	240
JUNE											
18...	118	0	--	346	9.0	5	1	19.5	34.0	4500	460
JULY											
08...	109	0	1.3	365	8.8	10	4	24.0	36.5	135000	400
AUG.											
21...	--	--	--	480	8.4	--	2	22.0	24.5	60000	820
SEP.											
23...	172	0	--	510	8.7	5	3	15.0	16.5	330000	160

13269000 SNAKE RIVER AT WEISER, IDAHO--Continued

CHEMICAL ANALYSES, AUGUST 1969 TO SEPTEMBER 1970

DATE	NITRATE (N) (MG/L)	NITRITE (N) (MG/L)	AMMONIA NITRO- GEN (N) (MG/L)	ORGANIC NITRO- GEN (N) (MG/L)	TOTAL NITRO- GEN (N) (MG/L)	TOTAL ORTHO PHOS- PHOSUS (P) (MG/L)	DIS- HYDRO- LYZABLE PHOS- PHORUS (P) (MG/L) ¹	TOTAL PHOS- PHORUS (P) (MG/L)	FIELD DIS- SOLVED OXYGEN (MG/L)	PER- CENT SATUR- ATION	BIO- CHEM- ICAL OXYGEN DEMAND (MG/L)	TOTAL ORGANIC CARBON (C) (MG/L)
AUG. 01...	.63	.00	.10	.12	.85	--	.01	.11	8.4	105	--	2.0
26...	.54	.00	.06	.12	.72	--	.01	.11	8.9	109	2.0	1.5
SEPT. 24...	.54	.02	.10	.18	.84	--	.01	.12	8.5	94	5.2	1.5
OCT. 29...	.8	.01	.08	.10	1.0	--	.01	.04	11.2	97	1.0	5.5
NOV. 28...	1.0	.00	.20	.02	1.2	--	.05	.06	12.7	105	1.3	5.0
DEC. 29...	1.0	.00	.00	.00	.97	--	.03	.10	12.2	98	.8	4.5
JAN. 22...	.7	.01	.08	.12	.93	--	.13	.14	11.0	95	2.4	3.5
FEB. 19...	1.0	.01	.00	.07	1.1	--	.02	.03	11.9	104	1.6	2.5
MAR. 16...	.9	.00	.00	.05	.95	--	.02	.03	11.2	103	2.9	3.0
APR. 30...	.4	.00	.05	.11	.51	--	.00	.09	10.4	100	--	4.5
MAY 14...	.5	.00	.01	.10	.63	--	.02	.15	10.0	104	3.2	2.5
JUNE 18...	.2	.01	.05	.16	.47	--	.05	.07	11.5	133	3.6	4.0
JULY 08...	.2	.01	.13	.18	.50	.00	.01	.10	11.3	143	4.7	4.5
AUG. 21...	.4	.00	.02	.18	.56	.06	.04	.10	9.1	112	3.4	5.5
SEPT. 23...	.8	.00	.02	.18	.99	.04	.05	.07	11.2	118	3.5	4.0

DATE	DIS- SOLVED ALUM- INUM (AL) (UG/L)	DIS- SOLVED IRON (FE) (UG/L)	DIS- SOLVED MAN- GANESE (MN) (UG/L)	DIS- SOLVED STRON- TIUM (SR) (UG/L)	DIS- SOLVED NICKEL (NI) (UG/L)	DIS- SOLVED COPPER (CU) (UG/L)	DIS- SOLVED LEAD (PB) (UG/L)	DIS- SOLVED ZINC (ZN) (UG/L)	DIS- SOLVED COBALT (CO) (UG/L)	DIS- SOLVED CHRO- MIUM (CR) (UG/L)
AUG. 01...	100	26	0	240	24	3	20	4	0	5
OCT. 29...	60	10	0	250	8	7	24	0	2	3
DEC. 29...	60	0	0	290	7	3	15	20	2	1
APR. 30...	0	10	0	250	10	5	8	0	2	0
JULY 08...	100	10	0	240	6	3	7	0	2	0

DATE	DIS- SOLVED ARSENIC (AS) (UG/L)	DIS- SOLVED CAD- MIUM (CD) (UG/L)	DIS- SOLVED BARIUM (BA) (UG/L)	DIS- SOLVED VANA- DIUM (V) (UG/L)	DIS- SOLVED SILVER (AG) (UG/L)	DIS- SOLVED BERYL- LIUM (BE) (UG/L)	DIS- SOLVED SELE- NIUM (SE) (UG/L)	DIS- SOLVED MOLY- BDENUM (MO) (UG/L)	DIS- SOLVED BORON (B) (UG/L)	DIS- SOLVED MERCURY (HG) (UG/L)
AUG. 01...	0	1	0	10	1	--	1	0	300	--
OCT. 29...	6	1	300	11	1	0	1	2	100	--
DEC. 29...	2	2	200	10	2	0	1	6	110	--
APR. 30...	0	2	400	7	0	0	1	1	70	--
JULY 08...	1	1	0	4	0	0	2	3	60	--
AUG. 21...	--	--	--	--	--	--	--	--	--	.10

¹ The value reported for dissolved hydrolyzable phosphorus includes dissolved orthophosphorus as well as dissolved hydrolyzable phosphorus.

SNAKE RIVER MAIN STEM

13269000 SNAKE RIVER AT WEISER, IDAHO--Continued

TEMPERATURE (°C) OF WATER, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

DAY	OCT		NOV		DEC		JAN		FEB		MAR	
	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM
1	15.0	16.0	9.5	10.5	3.0	4.0	3.0	3.5	4.0	5.0	7.0	7.0
2	15.0	15.0	9.0	10.5	3.0	4.0	2.5	3.0	4.5	5.5	6.5	7.0
3	13.0	13.5	9.5	10.5	2.5	3.5	2.0	3.0	5.0	6.0	6.0	7.0
4	12.0	13.0	9.0	10.0	3.0	4.0	2.0	2.5	5.0	5.0	6.5	7.0
5	11.5	13.0	9.5	9.5	3.5	4.5	2.0	3.0	5.0	5.0	6.5	7.5
6	11.5	13.0	9.0	10.0	4.0	4.5	2.0	2.0	5.0	6.0	7.0	8.0
7	12.0	13.5	9.0	10.0	4.0	4.5	1.0	1.0	5.0	6.0	8.0	8.0
8	13.0	13.5	9.0	9.5	4.0	4.5	1.0	1.5	5.5	6.5	7.5	8.0
9	12.0	13.0	8.5	9.0	4.0	4.0	1.0	1.5	5.5	6.5	7.0	8.0
10	12.0	12.0	8.5	9.0	4.0	4.0	2.0	3.0	5.5	6.5	7.0	8.0
11	11.0	11.5	8.5	10.0	4.0	4.0	2.5	3.0	6.0	6.5	7.0	7.5
12	10.0	10.5	9.0	10.0	4.0	4.5	3.5	4.0	6.0	6.5	6.5	7.0
13	9.0	10.0	9.0	10.0	5.0	5.5	4.0	4.0	6.5	7.0	6.5	8.0
14	8.0	10.0	8.5	9.5	5.0	6.0	4.0	4.5	6.5	7.5	8.5	9.0
15	9.0	10.0	8.0	9.0	5.5	6.0	4.0	4.5	6.5	7.0	9.0	9.5
16	9.5	10.5	8.0	8.5	5.0	5.0	4.5	5.0	7.0	7.0	8.5	8.5
17	10.0	11.0	7.0	8.0	5.0	5.0	4.5	5.0	7.0	7.5	7.0	7.0
18	9.5	10.5	6.5	7.0	5.0	5.0	5.0	5.5	6.5	7.0	6.5	7.0
19	9.0	10.0	6.0	6.5	5.0	5.0	5.5	6.0	6.0	6.5	6.0	7.0
20	9.5	11.0	6.0	6.5	5.0	5.5	6.0	6.0	5.5	6.5	6.5	8.0
21	10.0	11.5	5.5	6.0	5.5	6.0	6.0	6.5	6.0	7.0	7.5	8.5
22	10.0	12.0	5.0	6.0	6.0	6.0	7.0	7.0	6.0	7.0	8.0	9.0
23	10.5	12.0	5.0	6.0	6.0	6.0	7.0	7.0	6.0	7.0	8.0	9.5
24	11.0	11.5	5.0	6.5	5.5	6.0	7.0	7.0	6.5	7.5	8.5	9.5
25	10.0	11.0	5.5	6.0	5.0	5.0	6.5	6.5	6.5	7.5	8.5	9.5
26	10.0	10.5	5.0	6.0	5.0	5.0	6.5	7.0	6.5	8.0	8.0	9.0
27	10.0	10.0	5.0	6.0	4.0	4.5	6.0	6.0	7.0	8.0	8.0	9.5
28	9.5	10.0	4.5	5.0	3.5	4.0	5.0	5.0	7.0	7.5	8.5	9.5
29	9.0	10.0	4.0	4.0	3.0	3.0	4.0	5.0	--	--	8.0	8.5
30	9.0	10.0	3.0	4.0	2.5	3.0	4.5	5.0	--	--	7.0	8.0
31	9.0	10.5	--	--	3.0	4.0	4.5	5.0	--	--	7.0	8.0
AVG	10.6	11.5	7.1	7.9	4.2	4.6	4.0	4.4	5.8	6.6	7.3	8.1
DAY	APR		MAY		JUN		JUL		AUG		SEP	
	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM
1	7.0	8.5	10.0	12.0	16.0	18.0	16.5	19.0	22.0	24.0	22.0	23.0
2	8.0	9.5	11.0	13.0	17.0	19.0	18.5	21.0	22.0	23.5	21.5	23.0
3	8.0	10.0	12.5	14.5	18.0	20.0	21.0	22.5	21.5	24.0	20.5	22.5
4	8.5	10.0	13.5	15.0	19.0	20.0	21.5	23.0	21.5	24.0	19.5	19.0
5	9.5	12.0	14.0	15.0	19.0	20.5	21.5	23.0	23.0	25.0	17.0	18.0
6	11.0	13.0	14.0	13.0	20.0	21.0	21.5	22.5	23.0	25.0	17.0	18.0
7	11.0	12.0	12.0	13.5	19.5	19.5	22.0	23.5	23.5	25.0	17.0	18.0
8	10.0	11.5	12.5	13.0	18.0	17.0	22.5	24.5	21.0	23.0	17.0	18.0
9	10.5	11.0	12.0	13.0	16.0	16.5	23.0	24.5	21.0	23.0	17.0	18.0
10	10.0	11.0	12.0	12.0	15.0	16.0	22.5	24.0	21.0	23.5	17.0	18.0
11	9.0	9.5	11.0	12.0	14.5	15.5	22.0	24.0	22.0	24.0	17.0	17.5
12	8.0	9.5	11.0	12.0	15.0	15.0	22.5	24.5	22.0	24.5	15.5	16.5
13	9.0	9.0	11.0	12.5	15.0	15.5	22.5	23.5	22.0	23.5	14.0	15.0
14	8.5	8.5	11.0	13.0	15.0	15.0	21.0	23.5	21.5	23.5	13.0	14.0
15	8.0	9.0	12.5	14.5	15.0	16.0	22.0	24.0	21.0	23.0	13.0	14.5
16	8.0	10.0	14.0	16.0	16.0	18.0	23.0	25.0	21.0	23.5	13.0	15.0
17	9.0	11.0	15.0	17.0	18.0	19.5	23.5	25.5	21.5	23.5	14.0	16.0
18	10.0	11.0	15.5	17.0	18.0	19.5	23.5	25.5	21.5	23.5	14.5	16.5
19	10.0	10.5	15.5	16.0	18.0	20.0	24.5	26.5	21.0	23.5	16.0	16.5
20	9.0	9.0	15.0	15.0	19.0	21.5	24.0	25.5	21.0	23.5	15.0	16.0
21	8.0	10.0	14.0	15.5	19.5	21.5	24.0	25.5	21.5	24.0	14.5	15.5
22	8.5	10.0	15.0	16.0	20.0	21.0	22.0	23.0	21.5	24.0	14.0	15.0
23	9.0	10.5	15.0	15.5	20.5	22.0	21.0	23.5	21.5	24.0	14.0	15.0
24	10.0	10.0	14.5	16.5	21.0	22.5	21.5	23.5	22.0	24.0	13.5	14.0
25	9.0	10.0	15.5	17.5	21.5	22.5	22.0	23.5	22.0	24.0	12.5	14.0
26	9.0	10.5	16.5	18.0	22.0	23.0	22.0	24.5	21.0	23.0	12.0	14.0
27	9.0	10.0	16.0	17.0	21.0	21.0	23.0	25.0	21.0	23.0	12.5	14.5
28	9.0	9.0	15.5	17.0	19.0	20.0	23.0	25.0	21.0	23.0	13.0	15.0
29	8.0	9.5	15.0	16.0	16.5	17.0	22.5	23.5	21.0	23.0	14.0	15.5
30	9.0	11.0	15.0	16.5	16.0	17.0	21.0	23.0	21.0	23.5	14.0	16.0
31	--	--	15.0	17.0	--	--	21.5	23.5	22.0	23.5	--	--
AVG	9.0	10.2	13.6	14.8	17.9	19.0	22.0	23.8	21.5	23.7	15.4	16.7

13290200 SNAKE RIVER BELOW PINE CREEK, AT OXBOW, OREG.

LOCATION.--Lat 44°58'40", long 116°51'25", in NW¼NW¼ sec.9, T.7 S., R.48 E., Adams County, Idaho, temperature recorder on right bank, at Oxbow, 0.1 mile upstream from Hansaker Creek, 0.1 mile north of Oxbow school, 0.3 mile downstream from Pine Creek, 3.2 miles south of Homestead, and at mile 269.65.

DRAINAGE AREA.--73,150 sq mi, approximately.

PERIOD OF RECORD.--Water temperatures: May 1956 to September 1970.

EXTREMES, 1969-70.--Water temperatures: Maximum, 21.5° C on many days during August; minimum, 3.5° C on several days during January and February.

EXTREMES, 1956-70.--Water temperatures: Maximum (1956-62, 1963-70), 27° C July 25, 1956; minimum, freezing point on several days during January 1957.

TEMPERATURE (°C) OF WATER, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

DAY	OCT		NOV		DEC		JAN		FEB		MAR	
	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	19.0	19.0	12.5	12.5	9.5	9.0	5.5	5.5	4.0	3.5	5.0	5.0
2	19.0	19.0	12.5	12.0	9.0	9.0	5.5	5.5	4.0	4.0	5.0	5.0
3	19.0	18.5	12.0	12.0	9.0	9.0	5.5	5.0	4.0	4.0	5.0	5.0
4	18.5	18.5	12.5	12.0	9.0	9.0	5.5	5.5	4.5	4.0	5.0	5.0
5	18.5	18.5	12.0	12.0	9.0	9.0	5.5	5.0	4.0	4.0	5.0	5.0
6	18.5	17.5	12.0	12.0	9.0	9.0	5.5	5.5	4.0	4.0	5.0	5.0
7	17.5	17.5	12.0	12.0	9.0	9.0	5.5	5.0	4.0	4.0	5.0	5.0
8	17.5	17.5	12.0	12.0	9.0	8.5	5.0	5.0	4.5	4.0	5.0	5.0
9	17.5	17.5	12.0	12.0	8.5	8.5	5.0	5.0	4.5	4.0	5.0	5.0
10	17.5	17.5	12.0	12.0	8.5	8.5	5.0	4.5	4.5	4.0	5.0	5.0
11	17.5	16.5	12.0	11.5	8.5	7.5	5.5	5.0	4.0	4.0	6.0	5.0
12	16.5	16.5	12.0	11.5	7.5	7.5	5.0	5.0	4.0	4.0	6.0	5.5
13	16.5	15.5	12.0	11.5	7.5	7.5	5.0	4.5	4.0	4.0	6.0	5.5
14	15.5	15.0	11.5	11.5	7.5	7.5	4.5	4.5	4.0	4.0	6.0	6.0
15	15.5	15.5	11.5	11.5	7.5	7.5	4.5	4.5	4.0	4.0	6.0	6.0
16	15.5	15.0	11.5	11.0	7.5	7.5	4.5	4.5	4.0	3.5	6.0	6.0
17	15.0	15.0	11.5	11.0	7.5	7.5	4.5	4.5	4.0	3.5	6.0	6.0
18	15.0	14.5	11.0	11.0	7.5	7.0	4.5	4.5	4.0	4.0	6.0	6.0
19	15.0	14.5	11.0	11.0	7.0	6.5	4.5	4.5	4.0	3.5	6.0	6.0
20	14.5	14.0	11.0	10.5	6.5	6.5	4.5	4.5	4.0	3.5	6.0	6.0
21	14.0	14.0	10.5	10.5	6.5	6.5	4.5	4.5	4.0	3.5	6.0	6.0
22	14.0	14.0	10.5	10.5	6.5	6.5	4.5	4.5	4.0	3.5	6.5	6.0
23	14.0	14.0	10.5	10.0	6.5	6.0	5.0	4.5	4.0	4.0	6.5	6.5
24	14.0	14.0	10.0	10.0	6.5	6.0	4.5	4.0	4.0	4.0	6.5	6.5
25	14.0	14.0	10.0	10.0	6.5	6.5	4.5	3.5	4.5	4.0	7.0	6.5
26	14.0	14.0	10.0	10.0	6.5	6.0	3.5	3.5	4.5	4.5	6.5	6.5
27	14.0	12.5	10.0	9.5	6.5	6.0	3.5	3.5	5.0	4.5	6.5	6.5
28	12.5	12.5	9.5	9.5	6.0	6.0	4.0	3.5	5.0	4.5	6.5	6.5
29	12.5	12.5	9.5	9.5	6.0	6.0	4.0	3.5	--	--	7.0	6.5
30	12.5	12.5	9.5	9.5	6.0	6.0	3.5	3.5	--	--	7.0	7.0
31	12.5	12.5	--	--	6.0	5.5	4.0	3.5	--	--	7.0	7.0
AVG	15.5	15.5	11.5	11.0	7.5	7.5	4.5	4.5	4.0	3.5	6.0	6.0
DAY	APR		MAY		JUN		JUL		AUG		SEP	
	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	7.0	6.5	7.0	7.0	15.0	14.5	18.5	17.5	20.5	20.5	21.0	20.5
2	7.5	6.5	7.0	7.0	15.0	14.5	18.5	18.5	20.5	20.5	21.0	20.5
3	7.5	7.5	7.0	7.0	15.0	15.0	18.5	18.5	21.0	21.0	21.0	21.0
4	7.5	7.5	7.5	7.0	15.0	15.0	18.5	17.5	21.0	21.0	21.0	20.5
5	7.5	7.5	8.5	7.5	15.5	15.0	18.5	17.5	21.0	21.0	20.5	20.0
6	8.5	7.5	9.0	8.5	15.5	15.5	18.5	18.5	21.5	21.0	20.0	19.5
7	8.5	8.5	9.5	9.0	15.5	15.0	19.0	18.5	21.5	21.5	19.5	19.5
8	8.5	8.5	9.5	8.5	15.5	15.0	19.5	19.0	21.5	21.5	19.5	19.5
9	8.5	8.5	9.0	9.0	16.0	15.5	19.5	19.0	21.5	21.0	19.5	19.5
10	8.5	8.5	10.0	9.0	16.0	16.0	19.5	19.5	21.0	21.0	19.5	19.5
11	8.5	7.5	10.0	10.0	16.0	15.5	19.5	19.0	21.0	21.0	19.5	18.5
12	7.5	7.0	10.0	10.0	15.5	15.0	19.5	19.5	21.0	21.0	18.5	17.5
13	7.0	7.0	10.0	9.5	15.0	15.0	19.5	19.0	21.5	21.0	18.5	17.5
14	7.0	7.0	10.5	10.0	15.0	15.0	19.5	19.0	21.5	21.0	17.5	17.0
15	7.0	7.0	10.5	10.0	15.0	15.0	19.5	19.0	21.5	21.0	17.0	17.0
16	7.0	7.0	11.5	10.5	15.5	15.0	20.0	19.0	21.5	21.0	17.0	17.0
17	7.5	7.0	11.5	11.0	15.5	15.5	20.0	20.0	21.5	21.0	17.0	17.0
18	7.0	7.0	11.5	11.5	15.5	15.0	20.0	20.0	21.5	21.5	17.0	17.0
19	7.5	7.0	11.5	11.5	15.5	15.0	20.0	20.0	21.5	21.5	17.0	17.0
20	7.5	7.5	11.5	11.5	15.0	15.0	20.0	19.5	21.5	21.5	17.0	16.5
21	7.5	7.5	12.0	11.5	15.5	15.0	20.0	20.0	21.5	21.5	16.5	16.0
22	7.5	7.5	12.0	11.5	15.5	15.5	20.0	20.0	21.5	21.5	16.0	16.0
23	7.5	7.0	13.5	12.0	16.0	15.5	20.0	19.5	21.5	21.5	16.0	16.0
24	7.0	7.0	13.5	12.5	16.5	16.0	19.5	19.5	21.5	21.0	16.0	16.0
25	7.5	7.0	13.5	12.5	17.5	16.5	19.5	19.5	21.0	21.0	16.0	15.5
26	7.0	7.0	14.0	13.5	17.5	17.5	20.0	19.5	21.0	21.0	15.5	15.5
27	7.0	7.0	14.5	14.0	18.5	17.5	20.0	19.5	21.5	21.0	15.5	15.5
28	7.0	6.5	15.0	14.5	18.5	18.5	20.0	19.5	21.5	21.5	15.5	15.5
29	6.5	6.5	15.0	15.0	18.5	17.5	20.0	20.0	21.5	21.0	15.5	15.5
30	7.0	6.5	15.0	14.5	17.5	17.5	20.0	20.0	21.5	21.0	15.5	15.5
31	--	--	15.0	14.5	--	--	20.5	20.0	21.0	21.0	15.5	--
AVG	7.5	7.5	11.0	10.5	16.0	15.5	19.5	19.0	21.5	21.0	18.0	17.5

13290450 SNAKE RIVER AT HELLS CANYON DAM, IDAHO-OREGON STATE LINE

LOCATION.--Lat 45°15'05", long 116°41'50", in SE¼SE¼ sec.33, T.3 S., R.49 E. (Willamette meridian, unsurveyed), Wallowa County, Wallowa National Forest, on left bank 0.2 mile upstream from Hells Canyon Creek, 0.4 mile downstream from Deep Creek, 0.6 mile downstream from Hells Canyon Dam, 15.5 miles northeast of Homestead, Oreg., and at mile 247.0.

DRAINAGE AREA.--73,300 sq mi, approximately.

PERIOD OF RECORD.--Chemical analyses: August 1969 to September 1970.

CHEMICAL ANALYSES, AUGUST 1969 TO SEPTEMBER 1970

DATE	DIS- CHARGE (CFS)	SILICA (SiO ₂) (MG/L)	DIS- SOLVED CAL- CIUM (CA) (MG/L)	DIS- SOLVED MAG- NE- SIUM (MG)	SODIUM (NA) (MG/L)	PO- TAS- SIUM (K) (MG/L)	BICAR- BONATE (HCO ₃) (MG/L)	CAR- BONATE (CO ₃) (MG/L)	SULFATE (SO ₄) (MG/L)	CHLO- RIDE (CL) (MG/L)	DIS- SOLVED SOLIDS (RESI- DUE AT 180 C) (MG/L)	DIS- SOLVED SOLIDS (TONS PER DAY)
AUG.												
01...	11300	--	25	10	--	--	133	0	--	10	188	5740
27...	10100	--	27	13	--	--	158	0	--	16	233	6350
SEPT.												
25...	16200	--	33	16	--	--	182	0	--	21	308	13500
OCT.												
30...	13800	--	--	--	--	4.7	189	0	--	22	295	11000
NOV.												
21...	16400	--	--	--	--	4.9	210	2	--	21	331	14700
DEC.												
19...	15900	26	43	19	44	4.4	216	6	66	23	334	14300
JAN.												
23...	30700	--	--	--	--	--	182	7	--	20	308	25500
FEB.												
20...	38000	--	--	--	--	--	151	0	--	15	247	25300
MAR.												
26...	17400	--	--	--	--	--	164	0	--	16	232	10900
APR.												
29...	28400	24	30	12	29	3.7	149	5	39	16	232	17800
MAY												
20...	38000	--	--	--	--	--	149	3	--	18	208	21300
JUNE												
18...	40900	--	--	--	--	--	127	3	--	13	177	19500
JULY												
08...	19100	15	24	9.2	20	3.4	124	0	29	12	178	9180
AUG.												
20...	11400	--	--	--	--	--	128	0	--	--	214	6590
SEP.												
24...	21400	--	--	--	--	--	178	0	55	20	271	15700

DATE	HARD- NESS (CA, MG) (MG/L)	NON- CAR- BONATE HARD- NESS (MG/L)	SODIUM AD- SORP- TION RATIO	SPECI- FIC COND- UCTANCE (MICRO- MHOS)	FIELD PH	COLOR (PLAT- INUM- COBALT UNITS)	TUR- BID- ITY (JTU)	TEMP- ERATURE (DEG C)	AIR TEMP- ERATURE (DEG C)	COLI- FORM (COL- ONIES PER 100 ML)	FECAL COLI- FORM (COL- PER 100 ML)
AUG.											
01...	105	0	--	323	8.0	0	1	21.0	--	--	--
27...	132	0	--	393	7.9	5	1	21.5	20.5	60	0
SEPT.											
25...	146	0	--	375	7.9	10	4	19.5	20.5	6	0
OCT.											
30...	158	3	--	465	8.1	5	1	13.5	15.0	5	--
NOV.											
21...	172	0	--	490	8.4	5	1	12.0	9.0	6	--
DEC.											
19...	184	0	1.4	520	8.4	5	0	8.0	--	17	--
JAN.											
23...	166	9	--	453	8.6	0	5	5.0	8.0	88	--
FEB.											
20...	123	0	--	351	8.2	20	11	5.0	6.5	84	--
MAR.											
26...	136	1	--	384	8.0	5	6	7.0	11.0	2	--
APR.											
29...	130	0	1.1	367	8.8	5	2	9.5	13.0	7	--
MAY											
20...	130	3	--	360	8.5	5	2	13.5	15.5	6	--
JUNE											
18...	102	0	--	303	8.5	5	2	16.5	17.5	380	0
JULY											
08...	98	0	.9	285	8.2	5	1	19.5	30.0	2800	--
AUG.											
20...	--	--	--	333	7.2	--	0	22.0	32.5	41	0
SEP.											
24...	142	0	--	431	7.9	10	1	18.5	10.5	14	0

13290450 SNAKE RIVER AT HELLS CANYON DAM, IDAHO-OREGON STATE LINE--Continued

CHEMICAL ANALYSES, AUGUST 1969 TO SEPTEMBER 1970

DATE	NITRATE (N) (MG/L)	NITRITE (N) (MG/L)	AMMONIA NITRO- GEN (N) (MG/L)	ORGANIC NITRO- GEN (N) (MG/L)	TOTAL NITRO- GEN (N) (MG/L)	TOTAL ORTHO PHOS- PHOSUS (P) (MG/L)	DIS- HYDRO- LYZABLE PHOS- PHORUS (P) (MG/L) ¹	TOTAL PHOS- PHORUS (P) (MG/L)	FIELD DIS- SOLVED OXYGEN (MG/L)	PER- CENT SATUR- ATION	BIO- CHEM- ICAL OXYGEN DEMAND (MG/L)	TOTAL ORGANIC CARBON (C) (MG/L)
AUG.												
01...	.09	.00	.08	.08	.25	--	.03	.04	6.1	71	--	1.5
27...	.34	.00	.01	.11	.46	--	.04	.06	5.1	61	4.0	.5
SEPT.												
25...	.32	.00	.00	.09	.41	--	.05	.07	4.6	52	2.8	5.0
OCT.												
30...	.4	.00	.06	.10	.57	--	.07	.07	6.9	70	3.0	6.0
NOV.												
21...	.6	.00	.07	.20	.86	--	.08	.09	8.2	78	1.7	9.0
DEC.												
19...	.8	.00	.08	.05	.92	--	.00	.00	8.8	77	1.4	3.5
JAN.												
23...	.9	.00	.07	.09	1.1	--	.06	.07	11.1	91	.7	2.0
FEB.												
20...	1.1	.01	.02	.05	1.2	--	.08	.09	14.9	123	1.2	2.5
MAR.												
26...	1.0	.01	.01	.19	1.2	--	.04	.04	11.2	98	--	2.0
APR.												
29...	.5	.00	.09	.11	.70	--	.04	.05	10.0	92	1.8	3.5
MAY												
20...	.2	.00	.09	.13	.47	--	.01	.04	11.6	116	2.5	2.0
JUNE												
18...	.3	.01	.11	.10	.56	--	.04	.06	11.8	127	3.5	2.5
JULY												
08...	.2	.00	.16	.09	.45	.00	.01	.05	9.6	109	5.2	3.5
AUG.												
20...	.4	.00	.01	.09	.53	.04	.03	.04	6.0	72	1.3	3.0
SEPT.												
24...	.7	.00	.12	.22	1.0	.07	.08	.10	5.2	58	1.1	2.5

1 The value reported for dissolved hydrolyzable phosphorus includes dissolved orthophosphorus as well as dissolved hydrolyzable phosphorus.

SALMON RIVER BASIN

13297440 LITTLE BOULDER CREEK ABOVE BAKER LAKE, NEAR CLAYTON, IDAHO

LOCATION.--Lat 44°03'30", long 114°34'27", in SE¼SE¼ sec.33, T.9 N., R.16 E. (unsurveyed), Custer County, at narrow constriction between two meadows, 0.4 mile downstream from unnamed lake, 0.5 mile upstream from mouth of Castle Creek, 0.6 mile west of Baker Lake, 8.5 miles upstream from mouth, and 16.5 miles southwest of Clayton.

DRAINAGE AREA.--3.3 sq mi.

PERIOD OF RECORD.--Chemical analyses: June 1970 to September 1970.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

DATE	DIS- CHARGE (CFS)	SILICA (SiO2) (MG/L)	DIS- SOLVED CAL- CIUM (CA) (MG/L)	DIS- SOLVED MAG- NE- SIUM (MG)	SODIUM (NA) (MG/L)	PO- TAS- SIUM (K) (MG/L)	BICAR- BONATE (HCO3) (MG/L)	CAR- BONATE (CO3) (MG/L)	SULFATE (SO4) (MG/L)	CHLO- RIDE (CL) (MG/L)	DIS- SOLVED FLUO- RIDE (F) (MG/L)
JUNE 23...	73	3.6	2.2	.2	.7	.2	11	0	.0	.0	.1
AUG. 27...	3.2	1.3	2.9	.2	1.1	.6	14	0	1.5	.0	.1

DATE	NITRATE (NO3) (MG/L)	DIS- SOLVED SOLIDS (SUM OF CONSTI- TUENTS) (MG/L)	DIS- SOLVED SOLIDS (TONS PER DAY)	HARD- NESS (CA, MG) (MG/L)	NON- CAR- BONATE HARD- NESS (MG/L)	SODIUM AD- SORP- TION RATIO	PERCENT SODIUM	SPECI- FIC COND- UCTANCE (MICRO- MHOS)	FIELD PH (UNITS)	TEMP- ERATURE (DEG C)
JUNE 23...	.0	12	2.96	6	0	.1	19	19	7.1	1.5
AUG. 27...	--	15	.09	8	0	.2	21	21	6.4	11.0

DATE	COLI- FORM (COL- ONIES PER 100 ML)	FECAL COLI- FORM (COL. PER 100 ML)	FIELD DIS- SOLVED OXYGEN (MG/L)	PER- CENT SATUR- ATION
JUNE 23...	11	0	10.6	105
AUG. 27...	40	1	7.8	98

DATE	DIS- SOLVED ALUM- INUM (AL) (UG/L)	DIS- SOLVED IRON (FE) (UG/L)	DIS- SOLVED MAN- GANESE (MN) (UG/L)	DIS- SOLVED STRON- TIUM (SR) (UG/L)	DIS- SOLVED NICKEL (NI) (UG/L)	DIS- SOLVED COPPER (CU) (UG/L)	DIS- SOLVED LEAD (PB) (UG/L)	DIS- SOLVED ZINC (ZN) (UG/L)	DIS- SOLVED COBALT (CO) (UG/L)	DIS- SOLVED CHRO- MIUM (CR) (UG/L)
JUNE 23...	0	10	0	120	2	3	7	0	3	0
AUG. 27...	0	50	0	160	16	0	1	0	0	0

DATE	DIS- SOLVED ARSENIC (AS) (UG/L)	DIS- SOLVED CAD- MIUM (CD) (UG/L)	DIS- SOLVED BARIUM (BA) (UG/L)	DIS- SOLVED VANA- DIUM (V) (UG/L)	DIS- SOLVED SILVER (AG) (UG/L)	DIS- SOLVED BERYL- LIUM (BE) (UG/L)	DIS- SOLVED SELE- NIUM (SE) (UG/L)	DIS- SOLVED MOLY- BDENUM (MO) (UG/L)	DIS- SOLVED BORON (B) (UG/L)
JUNE 23...	0	1	0	--	1	0	3	0	--
AUG. 27...	0	0	500	0	0	10	2	0	.00

INSTANTANEOUS SUSPENDED SEDIMENT, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

DATE	TIME	WATER TEM- PERA- TURE (°C)	DISCHARGE (CFS)	CONCEN- TRATION (MG/L)	SUSPENDED SEDIMENT DISCHARGE (TONS/DAY)
JUNE 23, 1970	0830	1.5	73	4	.79
AUG. 27.....	0840	11.0	3.2	5	.04

13297445 LITTLE BOULDER CREEK BELOW BOULDER CHAIN LAKE OUTLET, NEAR CLAYTON, IDAHO

LOCATION.--Lat 44°03'56", long 114°32'31", in NW¼SE¼ sec.35, T.9 N., R.16 E. (unsurveyed), Custer County, just below Boulder Chain Lakes outlet, 6 miles upstream from mouth, and 15.6 miles southwest of Clayton.

DRAINAGE AREA.--12.2 sq mi.

PERIOD OF RECORD.--Chemical analyses: June 1970 to September 1970.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

DATE	DIS- CHARGE (CFS)	SILICA (SiO ₂) (MG/L)	DIS- SOLVED CAL- CIUM (CA) (MG/L)	DIS- SOLVED MAG- NE- SIUM (MG) (MG/L)	SODIUM (NA) (MG/L)	PO- TAS- SIUM (K) (MG/L)	BICAR- BONATE (HCO ₃) (MG/L)	CAR- BONATE (CO ₃) (MG/L)	SULFATE (SO ₄) (MG/L)	CHLO- RIDE (CL) (MG/L)	DIS- SOLVED FLUO- RIDE (F) (MG/L)
JUNE 23...	172	6.1	4.2	.5	1.0	.2	18	0	.0	.0	.0
AUG. 27...	13.5	10	12	.8	1.6	.9	42	0	4.2	.0	.1

DATE	NITRATE (NO ₃) (MG/L)	DIS- SOLVED SOLIDS (SUM OF CONSTI- TUENTS) (MG/L)	DIS- SOLVED SOLIDS (TONS PER DAY)	HARD- NESS (CA, MG) (MG/L)	NON- CAR- BONATE HARD- NESS (MG/L)	SODIUM AD- SORP- TION RATIO	PERCENT SODIUM	SPECI- FIC COND- UCTANCE (MICRO- MHOS)	FIELD PH (UNITS)	TEMP- ERATURE (DEG C)
JUNE 23...	.2	21	10.2	12	0	.1	15	32	7.4	3.5
AUG. 27...	--	51	1.86	34	0	.1	9	72	7.6	9.5

DATE	COLI- FORM (COL- ONIES PER 100 ML)	FECAL COLI- FORM (COL. PER 100 ML)	FIELD DIS- SOLVED OXYGEN (MG/L)	PER- CENT SATUR- ATION
JUNE 23...	152	0	10.4	107
AUG. 27...	22	3	8.6	101

DATE	DIS- SOLVED ALUM- INUM (AL) (UG/L)	DIS- SOLVED IRON (FE) (UG/L)	DIS- SOLVED MAN- GANESE (MN) (UG/L)	DIS- SOLVED STRON- TIUM (SR) (UG/L)	DIS- SOLVED NICKEL (NI) (UG/L)	DIS- SOLVED COPPER (CU) (UG/L)	DIS- SOLVED LEAD (PB) (UG/L)	DIS- SOLVED ZINC (ZN) (UG/L)	DIS- SOLVED COBALT (CO) (UG/L)	DIS- SOLVED CHRO- MIUM (CR) (UG/L)
JUNE 23...	0	20	0	90	5	1	7	0	3	0
AUG. 27...	0	40	10	170	5	0	1	0	0	0

DATE	DIS- SOLVED ARSENIC (AS) (UG/L)	DIS- SOLVED CAD- MIUM (CD) (UG/L)	DIS- SOLVED BARIUM (BA) (UG/L)	DIS- SOLVED VANA- DIUM (Y) (UG/L)	DIS- SOLVED SILVER (AG) (UG/L)	DIS- SOLVED BERYL- LIUM (BE) (UG/L)	DIS- SOLVED SELE- NIUM (SE) (UG/L)	DIS- SOLVED MOLY- BDENUM (MO) (UG/L)	DIS- SOLVED BORON (B) (UG/L)
JUNE 23...	1	1	0	--	1	0	3	2	--
AUG. 27...	0	0	0	1	0	30	13	5	.00

INSTANTANEOUS SUSPENDED SEDIMENT, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

DATE	TIME	WATER TEM- PERA- TURE (°C)	DISCHARGE (CFS)	CONCEN- TRATION (MG/L)	SUSPENDED SEDIMENT DISCHARGE (TONS/DAY)
JUNE 23, 1970	0935	3.5	172	33	15
AUG. 27.....	0945	9.5	14	4	.15

SALMON RIVER BASIN

13297450 LITTLE BOULDER CREEK NEAR CLAYTON, IDAHO

LOCATION.--Lat 44°05'57", long 114°26'56", in SW¼NE¼NW¼ sec.22, T.9 N., R.17 E., Custer County, temperature recorder at gaging station on right bank 950 ft upstream from mouth and 11 miles south of Clayton.
 DRAINAGE AREA.--18.4 sq mi.
 PERIOD OF RECORD.--Chemical analyses: June 1970 to September 1970.
 Water temperatures: June 1970 to September 1970.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

DATE	DIS- CHARGE (CFS)	SILICA (SiO ₂) (MG/L)	CAL- CIUM (CA) (MG/L)	MAG- NE- SIUM (MG)	SCDIUM (NA) (MG/L)	PO- TAS- SIUM (K) (MG/L)	BICAR- BONATE (HCO ₃) (MG/L)	CAR- BONATE (CO ₃) (MG/L)	SULFATE (SO ₄) (MG/L)	CHLO- RIDE (CL) (MG/L)	FLUO- RIDE (F) (MG/L)
JUNE 24...	198	7.0	5.1	.6	1.3	.2	22	0	1.0	.0	.1
AUG. 10...	21	12	12	1.0	2.4	.2	42	0	4.4	.0	.2
28...	14	13	14	1.0	3.0	.5	53	0	5.2	2.0	.1

DATE	NITRATE (NO ₃) (MG/L)	ORTHO PHOS- PHATE (PO ₄) (MG/L)	BORON (B) (UG/L)	DIS- SOLVED SOLIDS (RESI- DUE AT 180 C) (MG/L)	DIS- SOLVED SOLIDS (TONS PER DAY)	HARD- NESS (CA,MG) (MG/L)	NON- CAR- BONATE HARD- NESS (MG/L)	SODIUM AD- SORP- TION RATIO	SPECI- FIC CON- DUCTANCE (MICRO- MHOS)	PH (UNITS)	TEMP- ERATURE (DEG C)
JUNE 24...	.8	--	--	28	15.0	15	0	.1	38	a7.5	7.0
AUG. 10...	.0	--	--	57	3.36	34	0	.2	76	7.4	12.0
28...	.1	.00	0	52	2.02	39	0	.2	88	a7.3	10.5

a Field analysis.

DATE	COLI- FORM (COL. PER 100 ML)	FECAL COLI- FORM (COL. PER 100 ML)	DIS- SOLVED OXYGEN (MG/L)	PER- CENT SATUR- ATION
JUNE 24...	--	36	a10.2	101
AUG. 10...	--	--	--	--
28...	37	37	a9.3	104

a Field analysis.

DATE	DIS- SOLVED ALUM- INUM (AL) (UG/L)	DIS- SOLVED IRON (FE) (UG/L)	DIS- SOLVED MAN- GANESE (MN) (UG/L)	DIS- SOLVED STRON- TIUM (SR) (UG/L)	DIS- SOLVED NICKEL (NI) (UG/L)	DIS- SOLVED COPPER (CU) (UG/L)	DIS- SOLVED LEAD (PB) (UG/L)	DIS- SOLVED ZINC (ZN) (UG/L)	DIS- SOLVED COBALT (CO) (UG/L)	DIS- SOLVED CHRO- MIUM (CR) (UG/L)
JUNE 24...	0	20	0	110	4	1	6	0	2	0
AUG. 28...	0	30	0	200	0	1	1	0	0	0

DATE	DIS- SOLVED ARSENIC (AS) (UG/L)	DIS- SOLVED CAD- MIUM (CD) (UG/L)	DIS- SOLVED BARIUM (BA) (UG/L)	DIS- SOLVED VANA- DIUM (V) (UG/L)	DIS- SOLVED SILVER (AG) (UG/L)	DIS- SOLVED BERYL- LIUM (BE) (UG/L)	DIS- SOLVED SELE- NIUM (SE) (UG/L)	DIS- SOLVED MOLY- BDENUM (MO) (UG/L)	DIS- SOLVED BORON (B) (UG/L)
JUNE 24...	0	1	0	--	1	0	1	3	--
AUG. 28...	0	1	200	1	0	0	6	6	.00

INSTANTANEOUS SUSPENDED SEDIMENT, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

DATE	TIME	WATER TEM- PERA- TURE (°C)	DISCHARGE (CFS)	CONCEN- TRATION (MG/L)	SUSPENDED SEDIMENT DISCHARGE (TONS/DAY)
JUNE 24, 1970	1110	7.0	198	137	73
AUG. 10.....	1610	12.0	22	3	.18

13297450 LITTLE BOULDER CREEK NEAR CLAYTON, IDAHO--Continued

TEMPERATURE (°C) OF WATER, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

DAY	OCT		NOV		DEC		JAN		FEB		MAR	
	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	--	--	--	--	--	--	--	--	--	--	--	--
2	--	--	--	--	--	--	--	--	--	--	--	--
3	--	--	--	--	--	--	--	--	--	--	--	--
4	--	--	--	--	--	--	--	--	--	--	--	--
5	--	--	--	--	--	--	--	--	--	--	--	--
6	--	--	--	--	--	--	--	--	--	--	--	--
7	--	--	--	--	--	--	--	--	--	--	--	--
8	--	--	--	--	--	--	--	--	--	--	--	--
9	--	--	--	--	--	--	--	--	--	--	--	--
10	--	--	--	--	--	--	--	--	--	--	--	--
11	--	--	--	--	--	--	--	--	--	--	--	--
12	--	--	--	--	--	--	--	--	--	--	--	--
13	--	--	--	--	--	--	--	--	--	--	--	--
14	--	--	--	--	--	--	--	--	--	--	--	--
15	--	--	--	--	--	--	--	--	--	--	--	--
16	--	--	--	--	--	--	--	--	--	--	--	--
17	--	--	--	--	--	--	--	--	--	--	--	--
18	--	--	--	--	--	--	--	--	--	--	--	--
19	--	--	--	--	--	--	--	--	--	--	--	--
20	--	--	--	--	--	--	--	--	--	--	--	--
21	--	--	--	--	--	--	--	--	--	--	--	--
22	--	--	--	--	--	--	--	--	--	--	--	--
23	--	--	--	--	--	--	--	--	--	--	--	--
24	--	--	--	--	--	--	--	--	--	--	--	--
25	--	--	--	--	--	--	--	--	--	--	--	--
26	--	--	--	--	--	--	--	--	--	--	--	--
27	--	--	--	--	--	--	--	--	--	--	--	--
28	--	--	--	--	--	--	--	--	--	--	--	--
29	--	--	--	--	--	--	--	--	--	--	--	--
30	--	--	--	--	--	--	--	--	--	--	--	--
31	--	--	--	--	--	--	--	--	--	--	--	--
AVG	--	--	--	--	--	--	--	--	--	--	--	--
DAY	APR		MAY		JUN		JUL		AUG		SEP	
	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	--	--	--	--	--	--	9.5	5.5	13.5	10.0	12.0	10.5
2	--	--	--	--	--	--	11.0	6.0	13.5	10.5	11.5	9.5
3	--	--	--	--	--	--	11.5	7.0	13.5	9.0	10.5	8.5
4	--	--	--	--	--	--	10.5	7.5	14.0	10.0	10.5	8.5
5	--	--	--	--	--	--	12.0	8.0	14.0	13.0	8.5	7.5
6	--	--	--	--	--	--	12.0	8.5	14.5	11.5	9.5	7.5
7	--	--	--	--	--	--	12.0	8.5	15.0	11.5	10.0	9.0
8	--	--	--	--	--	--	12.5	8.5	13.5	11.0	10.0	7.5
9	--	--	--	--	--	--	12.0	9.0	13.0	9.0	7.5	5.0
10	--	--	--	--	--	--	10.5	9.5	13.0	10.0	8.5	5.5
11	--	--	--	--	--	--	10.5	8.5	13.0	10.0	8.0	6.0
12	--	--	--	--	--	--	12.0	8.5	13.5	10.0	7.0	4.5
13	--	--	--	--	4.0	3.0	12.0	9.5	13.5	10.0	5.5	4.5
14	--	--	--	--	6.5	3.0	13.0	8.0	12.5	9.0	5.5	4.0
15	--	--	--	--	6.5	3.5	13.5	9.0	13.0	9.0	5.5	4.0
16	--	--	--	--	9.0	4.5	13.5	10.5	13.0	9.5	6.0	4.0
17	--	--	--	--	7.5	4.5	14.5	10.5	13.5	10.0	7.5	5.0
18	--	--	--	--	10.5	5.5	14.5	10.0	12.5	9.0	8.0	6.0
19	--	--	--	--	10.5	5.5	15.0	11.0	12.0	8.5	8.0	6.5
20	--	--	--	--	10.0	5.5	15.0	10.5	13.0	10.0	6.5	5.0
21	--	--	--	--	9.0	6.0	14.0	11.5	13.0	9.0	5.0	4.5
22	--	--	--	--	10.5	6.0	13.5	11.0	13.0	9.5	6.0	3.5
23	--	--	--	--	10.5	6.0	13.5	9.0	13.0	9.5	6.0	5.0
24	--	--	--	--	10.5	6.0	14.0	9.5	13.0	10.0	5.0	3.0
25	--	--	--	--	10.5	6.0	14.0	10.5	14.0	8.5	3.5	1.5
26	--	--	--	--	11.0	6.5	14.0	10.5	14.0	9.5	5.0	3.0
27	--	--	--	--	9.0	7.0	13.5	11.0	13.0	10.5	6.5	4.0
28	--	--	--	--	8.5	6.5	13.5	10.5	12.5	10.5	6.5	5.0
29	--	--	--	--	7.5	5.5	13.0	10.0	12.0	10.0	7.0	5.5
30	--	--	--	--	8.0	4.5	13.0	9.5	13.0	11.0	7.0	5.5
31	--	--	--	--	--	--	13.0	9.0	13.0	11.5	--	--
AVG	--	--	--	--	--	--	12.7	9.2	13.2	10.0	7.4	5.6

SALMON RIVER BASIN

13297480 BIG BOULDER CREEK AT LIVINGSTON MILL, NEAR CLAYTON, IDAHO

LOCATION.--Lat 44°07'47", long 114°31'33", in NW¼NE¼ sec.12, T.9 N., R.16 E. (unsurveyed), Custer County, 0.4 mile upstream from mouth of Jim Creek, 5.25 miles upstream from mouth, and 10 miles southwest of Clayton.

DRAINAGE AREA.--9.3 sq mi. *Revised to 12.7 in 1977*

PERIOD OF RECORD.--Chemical analyses: June 1970 to September 1970.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

DATE	DIS-CHARGE (CFS)	SILICA (SiO ₂) (MG/L)	CALCIUM (CA) (MG/L)	MAGNESIUM (MG)	SODIUM (NA) (MG/L)	POTASSIUM (K) (MG/L)	BICARBONATE (HCO ₃) (MG/L)	CARBONATE (CO ₃) (MG/L)	SULFATE (SO ₄) (MG/L)	CHLORIDE (CL) (MG/L)	FLUORIDE (F) (MG/L)
JUNE 22...	16 ⁵	5.9	4.8	.4	1.0	.2	18	0	2.4	.0	.1
AUG. 26...	13.4	9.3	13	.8	1.7	.6	41	0	9.0	1.0	.1

DATE	NITRATE (NO ₃) (MG/L)	ORTHO PHOSPHATE (PO ₄) (MG/L)	BORON (B) (UG/L)	DIS-SOLVED SOLIDS (RESIDUE AT 180 C) (MG/L)	DIS-SOLVED SOLIDS (TONS PER DAY)	HARDNESS (CA,MG) (MG/L)	NON-CARBONATE HARDNESS (MG/L)	SODIUM ADSORPTION RATIO	SPECIFIC CONDUCTANCE (MICROMHOS)	FIELD PH (UNITS)	TEMPERATURE (DEG C)
JUNE 22...	.2	--	--	22	9.74	14	0	.1	35	7.4	7.0
AUG. 26...	.1	.00	0	50	1.80	36	2	.1	80	7.4	11.5

DATE	COLIFORMS (COLONIES PER 100 ML)	FECAL COLIFORMS (COL. PER 100 ML)	FIELD DIS-SOLVED OXYGEN (MG/L)	PERCENT SATURATION
JUNE 22...	--	1	9.5	103
AUG. 26...	--	154	8.5	102

DATE	DIS-SOLVED ALUMINUM (AL) (UG/L)	DIS-SOLVED IRON (FE) (UG/L)	DIS-SOLVED MANGANESE (MN) (UG/L)	DIS-SOLVED STRONTIUM (SR) (UG/L)	DIS-SOLVED NICKEL (NI) (UG/L)	DIS-SOLVED COPPER (CU) (UG/L)	DIS-SOLVED LEAD (PB) (UG/L)	DIS-SOLVED ZINC (ZN) (UG/L)	DIS-SOLVED COBALT (CO) (UG/L)	DIS-SOLVED CHROMIUM (CR) (UG/L)
JUNE 22...	0	20	0	40	7	2	7	0	3	0
AUG. 26...	0	10	0	44	3	2	0	20	0	0

DATE	DIS-SOLVED ARSENIC (AS) (UG/L)	DIS-SOLVED CADMIUM (CD) (UG/L)	DIS-SOLVED BARIUM (BA) (UG/L)	DIS-SOLVED VANADIUM (V) (UG/L)	DIS-SOLVED SILVER (AG) (UG/L)	DIS-SOLVED BERYLLIUM (BE) (UG/L)	DIS-SOLVED SELENIUM (SE) (UG/L)	DIS-SOLVED MOLYBDENUM (MO) (UG/L)	DIS-SOLVED BORON (B) (UG/L)
JUNE 22...	0	1	0	--	0	0	2	1	--
AUG. 26...	0	0	--	1	0	0	36	2	.00

INSTANTANEOUS SUSPENDED SEDIMENT, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

DATE	TIME	WATER TEMPERATURE (°C)	DISCHARGE (CFS)	CONCENTRATION (MG/L)	SUSPENDED SEDIMENT DISCHARGE (TONS/DAY)
JUNE 22, 1970	1820	7.0	164	325	144
AUG. 26.....	1815	11.5	13	3	.11

13297485 JIM CREEK AT LIVINGSTON MILL, NEAR CLAYTON, IDAHO

LOCATION.--Lat 44°07'54", long 114°31'43", in SW¹/₄SW¹/₄ sec.1, T.9 N., R.16 E. (unsurveyed), Custer County, 0.25 mile upstream from crossing at Livingston Mill, 0.6 mile upstream from mouth, and 10 miles southwest of Clayton.

DRAINAGE AREA.--5.5 sq mi. *Revised to 53.4 in 1971*

PERIOD OF RECORD.--Chemical analyses: June 1970 to September 1970.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

DATE	DIS- CHARGE (CFS)	SILICA (SiO ₂) (MG/L)	DIS- SOLVED CAL- CIUM (CA) (MG/L)	DIS- SOLVED MAG- NE- SIUM (MG) (MG/L)	SODIUM (NA) (MG/L)	PO- TAS- SIUM (K) (MG/L)	BICAR- BONATE (HCO ₃) (MG/L)	CAR- BONATE (CO ₃) (MG/L)	SULFATE (SO ₄) (MG/L)	CHLO- RIDE (CL) (MG/L)	DIS- SOLVED FLUO- RIDE (F) (MG/L)
JUNE 22...	25.8	11	16	1.8	1.2	.6	45	0	14	.0	.1
AUG. 26...	3.1	16	25	3.1	1.9	1.5	81	0	16	1.0	.1

DATE	NITRATE (NO ₃) (MG/L)	DIS- SOLVED SOLIDS (SUM OF CONSTI- TUENTS) (MG/L)	DIS- SOLVED SOLIDS (TONS PER DAY)	HARD- NESS (CA, MG) (MG/L)	NON- CAR- BONATE HARD- NESS (MG/L)	SODIUM AD- SORP- TION RATIO	PERCENT SODIUM	SPECI- FIC COND- UCTANCE (MICRO- MHOS)	FIELD PH (UNITS)	TEMP- ERATURE (DEG C)
JUNE 22...	.5	67	4.91	48	0	.1	5	105	7.9	8.5
AUG. 26...	--	105	81	76	10	.1	5	160	7.4	10.0

DATE	AIR TEMP- ERATURE (DEG C)	COLI- FORM (COL- ONIES PER 100 ML)	FECAL COLI- FORM (COL- PER 100 ML)	FIELD DIS- SOLVED OXYGEN (MG/L)	PER- CENT SATUR- ATION
JUNE 22...	--	--	2	9.2	104
AUG. 26...	27.5	545	111	8.6	100

DATE	DIS- SOLVED ALUM- INUM (AL) (UG/L)	DIS- SOLVED IRON (FE) (UG/L)	DIS- SOLVED MAN- GANESE (MN) (UG/L)	DIS- SOLVED STRON- TIUM (SR) (UG/L)	DIS- SOLVED NICKEL (NI) (UG/L)	DIS- SOLVED COPPER (CU) (UG/L)	DIS- SOLVED LEAD (PB) (UG/L)	DIS- SOLVED ZINC (ZN) (UG/L)	DIS- SOLVED COBALT (CO) (UG/L)	DIS- SOLVED CHRO- MIUM (CR) (UG/L)
JUNE 22...	0	20	10	50	9	4	9	150	3	0
AUG. 26...	0	10	10	78	5	2	1	10	0	0

DATE	DIS- SOLVED ARSENIC (AS) (UG/L)	DIS- SOLVED CAD- MIUM (CD) (UG/L)	DIS- SOLVED BARIUM (BA) (UG/L)	DIS- SOLVED VANA- DIUM (V) (UG/L)	DIS- SOLVED SILVER (AG) (UG/L)	DIS- SOLVED BERYL- LIUM (BE) (UG/L)	DIS- SOLVED SELE- NIUM (SE) (UG/L)	DIS- SOLVED MOLY- BDENUM (MO) (UG/L)	DIS- SOLVED BORON (B) (UG/L)
JUNE 22...	0	4	0	--	1	0	4	2	--
AUG. 26...	0	2	0	3	0	10	9	0	0

INSTANTANEOUS SUSPENDED SEDIMENT, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

DATE	TIME	WATER TEM- PERA- TURE (°C)	DISCHARGE (CFS)	CONCEN- TRATION (MG/L)	SUSPENDED SEDIMENT DISCHARGE (TONS/DAY)
JUNE 22, 1970	1600	8.5	26	1050	75
AUG. 26.....	1550	10.0	3.1	8	.07

SALMON RIVER BASIN

13317000 SALMON RIVER AT WHITE BIRD, IDAHO

LOCATION.--Lat 45°45'01', long 116°19'23", in NE¼NW¼ sec.22, T.28 N., R.1 E., Idaho County, at gaging station, on left bank 0.1 mile upstream from White Bird Creek, 0.6 mile downstream from Canfield-Joseph highway bridge, 1 mile southwest of White Bird, and at mile 53.7.

DRAINAGE AREA.--13,550 sq mi, approximately, including White Bird Creek basin.

PERIOD OF RECORD.--Chemical analyses: November 1958 to September 1959, October 1965 to September 1970.

Water temperatures: October 1966 to September 1970.

EXTREMES, 1969-70.--Water temperatures: Maximum, 25° C Aug. 24; minimum, freezing point Jan. 7.

EXTREMES, 1969-70.--Water temperatures: Maximum, 25° C Aug. 24; minimum, freezing point Jan. 7.
EXTREMES, 1966-70.--Water temperatures: Maximum, 25° C Aug. 23, 1969, and Aug. 24, 1970; minimum, freezing point Jan. 2, 18, 24, 1969, and Jan. 7, 1970.

REMARKS.--Temperature observations made at approximately 0800 and 1700 on alternate days.

TEMPERATURE (°C) OF WATER, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

DAY	OCT		NOV		DEC		JAN		FEB		MAR	
	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM
1	16.0	--	--	10.0	--	4.0	2.0	--	--	4.0	--	4.0
2	--	14.0	8.0	--	2.0	--	--	3.0	5.0	--	4.0	--
3	13.0	--	--	10.0	--	2.0	2.0	--	--	6.0	--	6.0
4	--	13.0	8.0	--	4.0	--	--	3.0	5.0	--	6.0	--
5	11.0	--	--	10.0	--	5.0	2.0	--	--	5.0	--	8.0
6	--	13.0	8.0	--	3.0	--	--	2.0	4.0	--	6.0	--
7	10.0	--	--	10.0	--	3.0	0.0	--	--	5.0	--	9.0
8	--	13.0	8.0	--	3.0	--	--	1.0	4.0	--	6.0	--
9	10.0	--	--	8.0	--	5.0	2.0	--	--	6.0	--	9.0
10	--	12.0	8.0	--	3.0	--	--	2.0	4.0	--	7.0	--
11	9.0	--	--	8.0	--	5.0	1.0	--	--	6.0	--	8.0
12	--	10.0	8.0	--	6.0	--	--	4.0	5.0	--	6.0	--
13	7.0	--	--	8.0	--	5.0	5.0	--	--	6.0	--	9.0
14	--	10.0	6.0	--	4.0	--	--	6.0	7.0	--	7.0	--
15	6.0	--	--	8.0	--	2.0	5.0	--	--	8.0	--	9.0
16	--	9.0	7.0	--	3.0	--	--	3.0	8.0	--	8.0	--
17	6.0	--	--	7.0	--	3.0	2.0	--	--	7.0	--	7.0
18	--	8.0	5.0	--	5.0	--	--	6.0	8.0	--	6.0	--
19	6.0	--	--	7.0	--	--	4.0	--	--	8.0	--	7.0
20	--	10.0	6.0	--	3.0	--	--	7.0	6.0	--	7.0	--
21	7.0	--	--	6.0	--	7.0	5.0	--	--	8.0	--	9.0
22	--	10.0	2.0	--	5.0	--	--	5.0	5.0	--	8.0	--
23	8.0	--	--	6.0	--	6.0	4.0	--	--	9.0	--	8.0
24	--	10.0	2.0	--	4.0	--	--	6.0	7.0	--	8.0	--
25	7.0	--	--	2.0	--	5.0	4.0	--	--	7.0	--	7.0
26	--	8.0	2.0	--	3.0	--	--	4.0	5.0	--	8.0	--
27	7.0	--	--	3.0	--	5.0	4.0	--	--	8.0	--	9.0
28	--	8.0	2.0	--	2.0	--	--	5.0	6.0	--	7.0	--
29	10.0	--	--	3.0	--	2.0	5.0	--	--	--	--	8.0
30	--	12.0	2.0	--	2.0	--	--	5.0	--	--	8.0	--
31	9.0	--	--	--	--	3.0	3.0	--	--	--	--	7.0
AVG	--	--	--	--	--	--	--	--	--	--	--	--
DAY	APR		MAY		JUN		JUL		AUG		SEP	
	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM
1	8.0	--	9.0	--	--	12.0	--	13.0	19.0	--	--	22.0
2	--	8.0	--	15.0	10.0	--	15.0	--	--	20.0	19.0	--
3	9.0	--	12.0	--	--	13.0	--	19.0	20.0	--	--	19.0
4	--	9.0	--	15.0	11.0	--	18.0	--	--	22.0	19.0	--
5	10.0	--	13.0	--	--	13.0	--	19.0	20.0	--	--	18.0
6	--	12.0	--	12.0	11.0	--	16.0	--	--	24.0	17.0	--
7	9.0	--	10.0	--	--	9.0	--	19.0	21.0	--	--	17.0
8	--	10.0	--	10.0	10.0	--	16.0	--	--	23.0	15.0	--
9	9.0	--	9.0	--	--	11.0	--	18.0	21.0	--	--	15.0
10	--	9.0	--	8.0	10.0	--	16.0	--	--	23.0	13.0	--
11	9.0	--	10.0	--	--	11.0	--	19.0	20.0	--	--	15.0
12	--	9.0	--	9.0	11.0	--	18.0	--	--	24.0	13.0	--
13	8.0	--	9.0	--	--	10.0	--	18.0	20.0	--	--	13.0
14	--	8.0	--	10.0	10.0	--	16.0	--	--	22.0	11.0	--
15	9.0	--	10.0	--	--	10.0	--	19.0	19.0	--	--	14.0
16	--	9.0	--	14.0	9.0	--	19.0	--	--	22.0	10.0	--
17	8.0	--	10.0	--	--	13.0	--	22.0	19.0	--	--	15.0
18	--	9.0	--	12.0	10.0	--	18.0	--	--	23.0	12.0	--
19	8.0	--	11.0	--	--	16.0	--	22.0	22.0	--	--	15.0
20	--	9.0	--	11.0	12.0	--	20.0	--	--	23.0	13.0	--
21	10.0	--	9.0	--	--	16.0	--	20.0	20.0	--	--	14.0
22	--	10.0	--	11.0	14.0	--	19.0	--	--	23.0	13.0	--
23	11.0	--	9.0	--	--	15.0	--	20.0	20.0	--	--	13.0
24	--	12.0	--	10.0	14.0	--	19.0	--	--	25.0	13.0	--
25	8.0	--	10.0	--	--	16.0	--	19.0	20.0	--	--	15.0
26	--	10.0	--	12.0	15.0	--	18.0	--	--	22.0	12.0	--
27	10.0	--	10.0	--	--	13.0	--	21.0	21.0	--	--	14.0
28	--	8.0	--	9.0	14.0	--	19.0	--	--	21.0	10.0	--
29	9.0	--	8.0	--	--	13.0	--	20.0	19.0	--	--	15.0
30	--	10.0	--	10.0	11.0	--	19.0	--	--	21.0	13.0	--
31	--	--	8.0	--	--	--	--	21.0	20.0	--	--	--
AVG	--	--	--	--	--	--	--	--	--	--	--	--

13334300 SNAKE RIVER NEAR ANATONE, WASH.

LOCATION.--Lat 46°05'50", long 116°58'36", in SE&NE& sec.12, T.7 N., R.46 E., Asotin County, temperature recorder at gaging station on left bank, 1.2 miles downstream from Grande Ronde River, 7.8 miles east of Anatone, 22 miles south of Clarkston, and at mile 167.2.

DRAINAGE AREA.--92,960 sq mi, approximately.

PERIOD OF RECORD.--Water temperatures: October 1959 to September 1970.

EXTREMES, 1969-70.--Water temperatures: Maximum, 23.5° C July 20, 21.

EXTREMES, 1959-70.--Water temperatures: Maximum (1959-68, 1970), 25° C Aug. 11, 1960, Aug. 13, 1963; minimum freezing point Jan. 25, 26, 1962, Dec. 22, 1964.

REMARKS.--No record Oct. 1 to Mar. 9.

TEMPERATURE (°C) OF WATER, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

DAY	OCT		NOV		DEC		JAN		FEB		MAR	
	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	--	--	--	--	--	--	--	--	--	--	--	--
2	--	--	--	--	--	--	--	--	--	--	--	--
3	--	--	--	--	--	--	--	--	--	--	--	--
4	--	--	--	--	--	--	--	--	--	--	--	--
5	--	--	--	--	--	--	--	--	--	--	--	--
6	--	--	--	--	--	--	--	--	--	--	--	--
7	--	--	--	--	--	--	--	--	--	--	--	--
8	--	--	--	--	--	--	--	--	--	--	--	--
9	--	--	--	--	--	--	--	--	--	--	--	--
10	--	--	--	--	--	--	--	--	--	--	7.5	7.0
11	--	--	--	--	--	--	--	--	--	--	7.0	7.0
12	--	--	--	--	--	--	--	--	--	--	7.0	7.0
13	--	--	--	--	--	--	--	--	--	--	7.5	7.0
14	--	--	--	--	--	--	--	--	--	--	8.5	7.5
15	--	--	--	--	--	--	--	--	--	--	8.5	8.5
16	--	--	--	--	--	--	--	--	--	--	8.5	8.5
17	--	--	--	--	--	--	--	--	--	--	8.5	7.5
18	--	--	--	--	--	--	--	--	--	--	7.5	7.5
19	--	--	--	--	--	--	--	--	--	--	7.5	7.0
20	--	--	--	--	--	--	--	--	--	--	7.5	7.5
21	--	--	--	--	--	--	--	--	--	--	8.5	7.5
22	--	--	--	--	--	--	--	--	--	--	8.5	8.5
23	--	--	--	--	--	--	--	--	--	--	9.0	8.5
24	--	--	--	--	--	--	--	--	--	--	9.0	9.0
25	--	--	--	--	--	--	--	--	--	--	9.0	9.0
26	--	--	--	--	--	--	--	--	--	--	9.5	9.0
27	--	--	--	--	--	--	--	--	--	--	9.5	9.5
28	--	--	--	--	--	--	--	--	--	--	10.0	9.5
29	--	--	--	--	--	--	--	--	--	--	10.0	10.0
30	--	--	--	--	--	--	--	--	--	--	10.0	10.0
31	--	--	--	--	--	--	--	--	--	--	10.0	9.5
AVG	--	--	--	--	--	--	--	--	--	--	--	--
DAY	APR		MAY		JUN		JUL		AUG		SEP	
	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	9.5	9.5	11.5	10.5	14.0	12.5	16.0	15.5	22.0	21.5	22.0	21.5
2	9.5	9.5	12.5	11.5	14.5	14.0	17.0	16.0	22.0	21.5	22.0	21.5
3	9.5	9.5	12.5	12.0	14.5	14.5	18.5	17.0	22.5	21.5	22.0	21.5
4	9.5	9.5	12.5	12.5	14.5	14.5	19.0	18.5	23.5	22.0	21.5	21.0
5	10.0	10.0	13.5	12.5	14.5	14.5	19.5	18.5	23.5	22.5	21.0	20.0
6	11.0	10.0	13.5	11.5	14.5	14.5	20.0	19.5	23.5	22.5	20.0	20.0
7	11.0	10.5	11.5	10.0	14.5	14.0	20.0	19.5	23.5	22.5	20.0	20.0
8	10.5	9.5	10.0	10.0	14.0	13.5	20.0	19.5	23.5	22.0	20.0	19.5
9	9.5	9.5	10.5	10.0	13.5	13.5	20.0	19.5	22.5	22.0	19.5	18.5
10	10.0	9.5	10.5	10.5	13.5	12.5	20.5	20.0	22.5	22.0	19.0	19.0
11	10.0	10.0	10.5	10.0	12.5	12.5	20.5	20.0	22.0	22.0	19.0	19.0
12	10.0	9.5	10.5	10.0	12.5	12.5	20.5	20.0	22.5	22.0	19.0	17.5
13	9.5	9.0	10.5	10.5	12.5	12.5	20.5	20.0	22.5	22.0	17.5	17.0
14	9.5	9.5	11.0	10.5	13.5	12.5	20.0	19.5	22.5	22.0	17.0	16.5
15	10.0	9.5	12.5	11.0	13.5	12.5	21.0	20.0	22.0	21.5	17.0	16.5
16	10.0	10.0	14.0	12.5	12.5	12.5	21.5	21.0	22.0	22.0	16.5	16.5
17	10.0	10.0	14.5	14.0	14.5	12.5	22.0	21.0	22.0	22.0	17.0	16.5
18	10.0	10.0	14.5	14.0	15.5	14.5	22.0	21.0	22.0	21.5	16.5	16.5
19	10.5	10.0	14.0	13.5	16.0	15.5	22.5	22.0	22.0	21.5	16.5	16.5
20	9.5	9.5	13.5	12.5	16.5	16.0	23.5	22.0	22.0	21.5	16.5	16.5
21	9.5	9.5	12.5	12.0	16.5	16.0	23.5	22.5	22.0	21.5	16.5	16.0
22	9.5	9.5	12.5	12.5	17.0	16.0	22.5	21.5	22.0	22.0	16.5	16.0
23	10.0	9.5	12.5	12.5	17.0	16.5	22.0	21.0	22.5	22.0	16.5	16.5
24	10.5	10.0	12.5	12.5	17.0	16.5	22.0	21.0	23.5	22.0	16.5	16.0
25	10.5	10.5	12.5	12.5	17.0	16.5	22.0	21.0	22.5	22.0	16.0	15.0
26	10.5	10.5	13.5	13.5	17.5	17.0	22.0	21.0	22.5	22.0	15.0	15.0
27	10.0	10.0	13.5	12.5	17.5	17.0	22.5	22.0	22.0	22.0	15.0	15.0
28	10.0	10.0	12.5	12.5	17.0	15.5	22.5	21.5	22.0	22.0	15.0	15.0
29	10.0	10.0	12.5	12.0	16.0	15.5	21.5	21.0	22.0	22.0	15.0	15.0
30	10.5	10.0	12.0	12.0	15.5	15.0	21.5	21.0	22.0	21.5	15.5	15.5
31	--	--	12.5	12.0	--	--	22.0	21.0	22.0	21.5	--	--
AVG	10.0	9.5	12.5	12.0	15.0	14.5	21.0	20.0	22.5	22.0	18.0	17.5

CLEARWATER RIVER BASIN

13336100 MEADOW CREEK NEAR LOWELL, IDAHO

LOCATION.--Lat 46°01'51", long 115°17'23", in NE¼ sec.14, T.31 N., R.9 E. (unsurveyed), Idaho County, temperature recorder at gaging station on right bank, 16.5 miles southeast of Lowell, and at mile 1.1.

DRAINAGE AREA.--241 sq mi.

PERIOD OF RECORD.--Water temperatures: August 1964 to September 1970.

EXTREMES, 1969-70.--Water temperatures: Maximum, 19° C Aug. 4-8; minimum, freezing point Jan. 18, 19.

EXTREMES, 1964-70.--Water temperatures: Maximum, 21° C Aug. 1, 2, 1965, and sometime during period July 17 to Aug. 29, 1966; minimum (1964-70), freezing point on several days during winter months.

TEMPERATURE (°C) OF WATER, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

DAY	OCT		NOV		DEC		JAN		FEB		MAR	
	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	11.0	9.5	5.5	5.5	0.5	0.5	0.5	0.5	0.5	0.5	2.5	2.0
2	10.5	9.0	5.5	4.0	0.5	0.5	0.5	0.5	1.0	0.5	2.0	1.0
3	9.0	7.0	4.0	3.5	0.5	0.5	0.5	0.5	1.5	1.0	1.5	1.0
4	8.0	7.0	3.5	3.5	0.5	0.5	0.5	0.5	1.5	1.5	1.5	1.0
5	7.0	6.0	4.5	3.5	0.5	0.5	0.5	0.5	1.5	1.5	2.0	1.5
6	6.5	5.5	4.5	4.5	0.5	0.5	0.5	0.5	1.5	1.5	2.0	2.0
7	6.5	6.0	5.0	4.5	0.5	0.5	0.5	0.5	2.5	1.5	2.5	2.0
8	8.0	6.5	5.0	3.5	0.5	0.5	0.5	0.5	2.5	2.5	3.0	2.5
9	8.0	7.0	3.5	2.5	0.5	0.5	0.5	0.5	2.5	1.5	3.0	3.0
10	8.0	6.5	3.5	2.5	0.5	0.5	0.5	0.5	1.5	1.5	3.0	2.0
11	6.5	5.0	4.5	3.5	0.5	0.5	0.5	0.5	1.5	1.5	2.0	1.0
12	5.0	3.0	5.0	4.5	0.5	0.5	0.5	0.5	2.5	1.5	3.0	2.0
13	3.0	1.5	5.0	5.0	0.5	0.5	0.5	0.5	3.0	2.5	4.0	3.0
14	1.5	1.5	5.0	4.0	1.0	0.5	0.5	0.5	3.0	3.0	4.5	4.0
15	1.5	1.0	4.0	3.0	1.0	1.0	0.5	0.5	3.0	3.0	4.5	4.5
16	2.0	1.5	3.5	3.0	1.0	0.5	0.5	0.5	4.0	3.0	4.5	3.5
17	2.5	2.0	3.0	2.0	1.0	0.5	0.5	0.5	4.0	4.0	3.5	3.0
18	3.5	2.5	2.0	1.0	1.0	1.0	0.5	0.0	4.0	3.5	3.5	2.5
19	3.5	3.5	1.0	1.0	1.5	1.0	0.5	0.0	3.5	3.0	3.0	2.5
20	4.0	3.5	1.0	1.0	1.5	1.5	1.0	0.5	3.0	2.5	3.5	2.5
21	4.0	4.0	1.0	1.0	2.0	1.5	1.0	1.0	2.5	2.0	4.0	3.5
22	4.0	4.0	2.0	1.0	2.0	2.0	1.5	1.0	2.0	2.0	4.5	4.0
23	4.0	4.0	2.0	1.5	2.0	2.0	2.0	1.5	2.0	2.0	4.5	4.5
24	5.0	4.0	1.5	1.5	2.0	2.0	2.5	2.0	2.0	2.0	4.5	4.5
25	5.0	4.5	1.5	1.0	2.0	1.0	2.5	2.5	2.0	2.0	4.5	3.5
26	4.5	3.5	1.0	1.0	1.0	0.5	2.5	2.5	2.0	1.5	4.5	4.0
27	3.5	3.5	1.0	0.5	1.0	0.5	2.5	2.5	2.0	1.5	4.5	3.5
28	4.0	3.5	0.5	0.5	1.0	1.0	2.5	2.0	2.0	2.0	4.5	3.5
29	4.5	4.0	0.5	0.5	1.0	0.5	2.0	1.5	--	--	4.0	3.5
30	4.5	4.5	0.5	0.5	0.5	0.5	1.5	0.5	--	--	4.5	3.5
31	5.5	4.5	--	--	0.5	0.5	0.5	0.5	--	--	4.5	2.5
AVG	5.2	4.4	3.0	2.4	0.9	0.7	1.0	0.8	2.3	2.0	3.4	2.8
DAY	APR		MAY		JUN		JUL		AUG		SEP	
	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	3.5	3.0	6.5	5.0	10.0	6.0	12.0	9.5	17.5	14.5	17.0	15.5
2	3.5	3.0	8.0	5.0	10.0	7.0	14.5	11.5	17.5	16.0	16.5	15.0
3	4.5	3.0	8.0	6.0	10.0	6.5	16.0	12.5	18.0	15.5	15.5	14.0
4	4.5	3.0	8.0	5.0	10.0	7.0	16.0	14.5	19.0	16.0	15.5	12.5
5	5.5	4.0	8.0	5.5	9.5	7.0	17.0	14.0	19.0	17.5	12.5	12.0
6	5.5	5.0	7.0	5.0	9.5	7.0	17.0	15.0	19.0	16.5	12.5	12.0
7	5.5	4.0	6.0	5.0	9.0	7.5	17.0	14.0	19.0	17.0	12.5	12.5
8	4.5	3.0	7.0	5.0	9.0	7.5	17.0	14.0	19.0	17.0	12.5	12.0
9	4.5	3.5	7.0	6.0	9.0	7.5	17.5	15.0	17.0	15.0	12.0	10.5
10	4.5	4.0	6.5	5.0	8.5	7.5	17.5	16.0	17.0	15.0	11.5	10.0
11	4.5	3.5	6.5	5.0	8.5	7.0	16.5	14.0	18.0	15.0	11.5	10.5
12	4.0	3.0	6.0	5.0	8.5	7.5	17.0	15.0	18.5	16.0	10.5	9.0
13	4.0	3.0	6.0	4.5	9.5	7.5	17.0	14.5	18.0	16.5	9.0	8.0
14	4.0	4.0	7.5	4.0	9.5	8.0	15.0	12.0	18.0	16.0	8.0	7.0
15	4.0	3.0	8.5	5.0	8.5	8.0	16.5	13.5	17.0	15.0	8.0	7.0
16	4.5	3.0	9.0	5.5	8.0	7.5	17.5	15.0	17.5	15.5	8.0	7.5
17	5.0	3.0	9.0	5.5	10.5	7.5	18.5	16.0	17.5	16.0	9.0	8.0
18	5.0	4.0	8.0	6.0	11.5	8.5	18.5	15.5	16.5	14.5	9.5	9.0
19	5.0	4.5	7.0	6.0	12.5	9.0	18.5	15.5	16.0	14.0	9.5	9.5
20	5.0	4.0	6.0	6.0	13.0	9.5	19.0	16.0	17.0	15.0	9.5	9.0
21	5.0	4.0	7.5	5.5	13.5	9.5	19.0	17.5	16.5	15.0	9.0	9.0
22	5.0	5.0	7.0	5.5	13.0	10.5	18.0	15.5	16.5	14.5	9.0	8.0
23	6.0	5.0	7.0	6.0	13.5	10.5	16.5	13.5	17.0	15.0	8.5	8.0
24	6.0	5.5	8.0	5.5	14.5	11.5	16.5	14.5	17.0	15.5	8.5	7.5
25	5.5	5.0	9.0	5.5	14.5	11.5	16.5	14.5	17.0	15.0	7.5	5.5
26	5.0	4.0	8.0	6.0	15.5	12.5	18.0	15.0	17.0	15.0	6.5	5.5
27	5.0	4.0	7.0	5.5	15.5	12.5	18.5	17.0	16.5	14.5	7.0	6.0
28	5.0	4.5	7.5	6.0	13.0	12.0	18.5	17.0	16.5	14.5	8.0	7.0
29	5.0	4.5	7.0	6.0	12.0	8.5	17.0	15.5	16.0	14.5	8.5	8.0
30	5.5	4.5	7.0	6.0	10.0	8.0	16.5	14.5	16.0	14.5	8.5	8.0
31	--	--	9.0	5.5	--	--	16.5	13.5	16.5	15.0	--	--
AVG	4.8	3.8	7.4	5.4	10.9	8.5	17.0	14.5	17.3	15.3	10.3	9.4

13341000 NORTH FORK CLEARWATER RIVER AT AHSAHKA, IDAHO

LOCATION (revised).--Lat 46°30'16", long 116°19'10", in NE¼SW¼ sec.34, T.37 N., R.1 E., Clearwater County, temperature recorder on right bank at cableway at Ahsahka, and at mile 0.4.

DRAINAGE AREA.--2,440 sq mi, approximately.

PERIOD OF RECORD.--Chemical analyses: August 1959 to August 1960.

Water temperatures: October 1957 to September 1970.

Sediment records: January 1966 to June 1968.

EXTREMES, 1969-70.--Water temperatures: Maximum, 23.5° C Aug. 23-26; minimum, 0.5° C Jan. 10-23.

EXTREMES, 1957-70.--Water temperatures: Maximum, 29° C Aug. 11-13, 1963; minimum, freezing point on many days during winter months most years.

TEMPERATURE (°C) OF WATER, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

DAY	OCT		NOV		DEC		JAN		FEB		MAR	
	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	14.5	13.5	8.5	7.0	1.0	1.0	1.0	1.0	1.0	1.0	3.0	2.0
2	13.5	12.0	8.5	7.0	1.0	1.0	1.5	1.0	1.5	1.0	2.0	1.5
3	12.0	11.0	8.0	6.5	1.0	1.0	1.5	1.0	2.0	1.5	1.5	1.0
4	11.0	10.5	7.0	6.5	1.0	1.0	1.0	1.0	2.0	2.0	2.0	1.0
5	11.0	10.0	6.5	6.5	1.0	1.0	1.0	1.0	2.0	2.0	3.0	2.0
6	11.0	10.0	6.5	6.0	1.0	1.0	1.0	1.0	2.0	2.0	3.5	3.0
7	10.5	9.0	6.0	6.0	1.0	1.0	1.0	1.0	3.0	2.0	3.5	3.5
8	11.0	10.0	6.5	5.5	1.0	1.0	1.0	1.0	3.5	3.0	3.5	3.5
9	10.0	9.5	6.0	5.5	1.0	1.0	1.0	1.0	3.5	3.5	4.5	3.5
10	9.5	9.0	6.0	5.5	1.0	1.0	1.0	0.5	3.5	3.5	4.5	3.5
11	9.0	8.5	6.0	5.5	1.0	1.0	0.5	0.5	3.5	3.0	3.5	3.5
12	8.5	7.0	6.0	6.0	1.0	1.0	0.5	0.5	3.5	3.0	4.0	3.5
13	7.0	5.5	6.5	6.0	1.0	1.0	0.5	0.5	3.5	3.0	5.0	4.0
14	5.5	4.5	7.0	6.5	1.0	1.0	0.5	0.5	3.5	3.5	5.0	5.0
15	6.0	3.5	6.5	6.0	1.0	1.0	0.5	0.5	3.5	3.5	5.0	4.5
16	5.0	4.0	6.0	5.5	1.0	1.0	0.5	0.5	3.5	3.5	4.5	4.5
17	6.0	4.0	5.5	4.5	1.5	1.0	0.5	0.5	3.5	3.5	4.5	4.5
18	6.0	4.5	4.5	3.5	2.0	1.5	0.5	0.5	3.5	3.5	4.5	4.5
19	6.0	5.0	3.5	3.5	2.0	2.0	0.5	0.5	3.5	3.5	4.5	4.0
20	7.0	6.0	3.5	3.5	2.0	2.0	0.5	0.5	3.5	3.5	4.5	4.0
21	8.0	6.0	3.5	3.5	2.0	2.0	0.5	0.5	3.5	3.5	4.5	4.0
22	8.5	6.5	3.5	3.5	2.0	2.0	0.5	0.5	3.5	3.5	5.5	4.5
23	9.0	7.0	3.5	3.5	2.0	2.0	1.0	0.5	3.5	3.0	5.5	5.0
24	9.0	8.5	4.0	3.5	2.0	2.0	2.0	1.0	3.5	3.0	5.5	5.0
25	8.5	8.0	4.0	3.5	2.0	1.5	2.0	2.0	3.5	3.0	5.5	5.0
26	8.0	7.0	3.5	3.5	1.5	1.0	3.0	2.0	3.5	2.0	5.5	4.5
27	8.0	7.0	3.5	3.0	1.0	1.0	3.0	2.0	3.0	3.0	5.5	5.0
28	7.0	6.5	3.0	1.5	1.0	1.0	2.0	2.0	3.0	3.0	5.5	5.0
29	7.0	6.5	1.5	1.0	1.0	1.0	2.0	2.0	--	--	5.0	5.0
30	7.0	6.5	1.0	1.0	1.0	1.0	2.0	1.5	--	--	5.5	5.0
31	7.0	7.0	--	--	1.0	1.0	1.5	1.0	--	--	5.0	4.5
AVG DAY	8.6	7.5	5.1	4.6	1.2	1.2	1.1	0.9	3.0	2.8	4.3	3.8
	APR		MAY		JUN		JUL		AUG		SEP	
	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	5.0	4.0	8.0	5.5	10.0	9.0	13.0	12.0	21.0	19.0	21.0	18.0
2	4.0	3.5	8.5	7.0	10.5	9.5	15.0	13.0	20.5	19.5	21.0	18.5
3	4.5	3.5	8.5	8.5	10.5	9.5	17.0	15.0	21.5	19.0	20.0	18.0
4	5.0	4.5	8.5	8.0	10.5	10.0	19.0	17.0	22.0	20.0	19.0	17.0
5	5.5	5.0	8.5	8.0	10.5	10.0	20.0	18.5	22.0	21.0	17.0	16.0
6	6.5	5.5	8.0	6.5	10.5	10.0	20.5	19.5	23.0	21.0	16.0	15.5
7	6.5	5.5	6.5	5.5	10.5	9.5	20.5	19.0	23.0	21.5	16.5	15.5
8	5.5	5.5	6.0	5.0	9.5	9.5	20.5	19.0	23.0	21.5	15.5	14.5
9	5.5	5.0	6.5	6.0	10.0	9.5	21.5	19.5	22.0	20.5	15.5	14.5
10	5.5	5.0	6.5	6.0	9.5	9.0	21.5	20.0	21.5	20.0	15.5	14.5
11	5.5	5.0	6.0	5.5	9.5	8.5	22.0	19.5	21.5	20.0	15.5	14.0
12	5.0	5.0	6.0	6.0	9.5	9.0	22.0	20.0	22.0	20.5	14.5	13.0
13	5.0	5.0	6.5	5.5	10.0	9.0	20.5	19.0	21.5	21.0	13.0	11.5
14	5.0	5.0	8.0	6.5	10.0	10.0	19.0	18.0	21.5	20.5	12.0	10.0
15	5.0	5.0	9.5	8.0	10.0	9.0	20.0	18.0	22.0	19.5	12.0	9.5
16	5.0	5.0	10.0	9.5	9.0	9.0	21.5	19.0	22.0	20.0	11.0	9.5
17	5.5	5.0	10.0	9.5	10.5	9.0	22.0	19.5	21.5	20.0	11.0	9.0
18	5.5	5.0	9.5	8.5	12.0	10.5	23.0	20.0	21.5	19.5	10.5	9.5
19	5.5	5.0	8.5	8.0	13.5	12.0	23.5	20.0	21.5	19.0	11.0	10.0
20	5.5	5.0	8.5	8.5	13.5	12.0	23.5	20.5	22.0	19.0	11.5	10.5
21	5.5	5.0	8.5	7.0	14.5	13.5	23.5	21.0	22.0	19.0	11.5	11.5
22	6.5	5.5	8.5	8.0	15.0	14.0	22.0	20.0	23.0	19.5	11.5	11.0
23	6.5	5.5	8.5	7.0	15.0	14.5	21.0	19.0	23.5	19.5	11.0	10.5
24	6.5	6.0	9.5	8.5	15.5	15.0	21.0	19.0	23.5	19.5	11.0	10.0
25	6.0	5.5	9.5	9.0	17.0	16.0	20.5	19.0	23.5	19.5	10.5	9.5
26	5.5	5.5	9.5	9.0	17.0	16.5	20.0	18.0	23.5	19.0	11.0	10.0
27	5.5	5.5	9.5	8.0	17.0	16.0	21.0	19.0	22.0	18.5	11.5	10.0
28	5.5	5.0	8.0	7.0	16.0	15.0	20.5	19.5	21.5	18.0	12.0	10.0
29	5.5	5.5	8.0	8.0	15.0	13.0	20.0	19.0	21.0	18.0	13.0	10.5
30	5.5	5.5	8.0	7.0	13.0	12.0	21.0	18.5	20.5	17.0	13.5	11.0
31	--	--	9.0	7.0	--	--	20.5	18.5	20.5	17.0	--	--
AVG	5.4	5.0	8.2	7.3	12.1	11.3	20.5	18.5	21.9	19.5	13.8	12.4

13341050 CLEARWATER RIVER NEAR PECK, IDAHO

LOCATION.--Lat 46°30'00", long 116°23'30", in NE¼ sec.1, T.36 N., R.1 W., Nez Perce County, temperature recorder at gaging station on left bank, 2 miles upstream from Big Canyon Creek, 2.2 miles northeast of Peck, 3 miles downstream from North Fork Clearwater River, and at mile 37.4.

DRAINAGE AREA.--8,040 sq mi, approximately.

PERIOD OF RECORD.--Water temperatures: October 1964 to September 1970.

EXTREMES, 1969-70.--Water temperatures: Maximum, 23.5° C Aug. 6, 7; minimum, 0.5° C Jan. 18-20.

EXTREMES, 1964-70.--Water temperatures: Maximum, 25° C Aug. 1, 2, 1965, July 28, 1968; minimum, freezing point on many days during January and February 1966.

TEMPERATURE (°C) OF WATER, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

DAY	OCT		NOV		DEC		JAN		FEB		MAR	
	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	15.5	15.0	9.0	8.5	1.5	1.5	1.5	1.5	1.5	1.5	3.5	3.5
2	15.0	14.0	9.0	8.5	1.5	1.5	1.5	1.5	2.0	1.5	3.5	2.5
3	14.0	12.5	8.5	7.0	1.5	1.5	1.5	1.0	2.5	2.0	3.5	2.5
4	12.5	12.0	7.5	7.0	1.5	1.5	1.0	1.0	2.5	2.0	3.5	2.5
5	12.0	11.0	7.0	7.0	1.5	1.5	1.0	1.0	2.5	2.5	4.0	3.5
6	11.5	11.0	7.0	7.0	1.5	1.5	1.0	1.0	2.5	2.5	4.5	3.5
7	11.5	10.0	7.0	7.0	1.5	1.5	1.0	1.0	4.0	2.5	4.5	4.5
8	11.0	11.0	7.0	6.5	1.5	1.5	1.0	1.0	4.5	3.5	4.5	4.5
9	11.0	10.5	6.5	6.5	1.5	1.5	1.0	1.0	4.0	4.0	5.0	4.5
10	10.5	10.0	6.5	6.5	1.5	1.5	1.0	1.0	4.0	3.5	5.0	4.5
11	10.5	9.5	6.5	6.5	1.5	1.5	1.0	1.0	4.0	3.5	4.5	4.0
12	9.5	8.5	6.5	6.5	1.5	1.5	1.0	1.0	3.5	3.5	4.5	4.5
13	8.5	7.0	7.0	6.5	1.5	1.5	1.0	1.0	4.0	3.5	6.0	4.5
14	7.5	6.5	7.0	7.0	1.5	1.5	1.0	1.0	4.0	4.0	6.0	6.0
15	6.5	6.0	7.0	7.0	1.5	1.5	1.0	1.0	4.0	4.0	6.0	6.0
16	6.0	5.5	7.0	6.5	1.5	1.5	1.0	1.0	4.0	4.0	6.0	5.5
17	6.5	6.0	6.5	5.5	2.0	1.5	1.0	1.0	4.0	4.0	5.5	5.0
18	6.5	6.0	5.5	5.0	2.0	2.0	1.0	0.5	4.0	4.0	5.0	4.5
19	7.0	6.0	5.0	4.5	2.0	2.0	0.5	0.5	4.0	4.0	5.0	4.5
20	7.5	7.0	4.5	4.5	2.5	2.0	1.0	0.5	4.0	4.0	4.5	4.5
21	8.5	7.0	4.5	4.0	2.5	2.5	1.5	1.0	4.0	3.5	5.0	4.5
22	8.5	7.5	4.0	4.0	2.5	2.5	1.5	1.5	4.0	3.5	5.5	5.0
23	9.5	8.5	4.0	3.5	2.5	2.5	2.0	1.5	3.5	3.5	5.5	5.5
24	9.5	9.5	4.0	3.5	2.5	2.0	2.0	2.0	4.0	2.5	5.5	5.5
25	9.5	8.5	4.0	4.0	2.0	2.0	2.5	2.0	4.0	3.5	5.5	5.5
26	8.5	7.5	4.0	3.5	2.0	1.5	2.5	2.5	4.5	3.5	5.5	5.5
27	7.5	7.5	4.0	2.5	1.5	1.5	2.5	2.5	4.0	3.5	6.0	5.5
28	7.5	7.5	2.5	2.5	1.5	1.5	2.5	2.5	3.5	3.5	6.0	5.5
29	7.5	7.0	2.5	1.5	1.5	1.5	2.5	2.0	--	--	5.5	5.5
30	7.5	7.5	1.5	1.5	1.5	1.5	2.0	1.5	--	--	6.0	5.5
31	8.5	7.5	--	--	1.5	1.5	1.5	1.5	--	--	5.5	5.5
AVG	9.5	9.0	6.0	5.5	2.0	2.0	1.5	1.5	3.5	3.0	5.0	4.5
DAY	APR		MAY		JUN		JUL		AUG		SEP	
	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	5.5	5.0	9.0	6.5	10.0	9.0	12.5	12.0	--	--	20.5	19.5
2	5.5	4.5	9.5	9.0	10.0	10.0	15.0	12.5	21.5	20.0	20.0	19.5
3	5.0	4.5	9.5	9.5	10.0	10.0	16.5	15.0	22.0	20.0	20.0	17.5
4	5.5	5.0	9.5	9.5	10.0	10.0	17.5	16.5	22.5	20.5	19.0	17.5
5	6.5	5.5	9.5	9.5	10.0	10.0	19.0	17.5	22.5	22.0	17.5	17.0
6	7.0	6.5	9.5	8.5	10.0	10.0	19.0	19.0	23.5	21.5	17.0	16.0
7	7.0	6.5	8.5	7.0	10.0	9.0	19.5	19.0	23.5	21.5	16.5	16.0
8	6.5	6.5	7.0	6.0	9.0	9.0	19.5	19.5	22.5	21.5	16.0	15.0
9	6.5	6.0	7.5	7.0	9.5	9.0	20.5	19.5	22.0	20.0	15.0	14.5
10	6.0	6.0	7.5	7.0	9.5	9.0	20.5	20.5	22.0	20.0	15.5	14.5
11	6.0	6.0	7.0	6.0	9.0	8.5	21.0	20.0	22.0	20.0	15.5	14.5
12	6.0	5.5	7.0	6.5	9.0	9.0	20.5	20.0	22.0	20.5	15.5	14.0
13	5.5	5.5	7.0	6.5	10.0	9.0	20.0	19.0	22.0	21.0	14.5	12.5
14	5.5	5.5	7.5	7.0	10.5	10.0	19.0	17.5	22.5	20.5	12.5	11.5
15	5.5	5.5	9.5	7.5	10.5	10.0	19.5	17.5	22.5	20.5	12.0	10.5
16	5.5	5.5	10.0	9.5	10.0	9.5	20.5	19.0	22.5	20.5	12.0	11.0
17	6.0	5.5	10.0	9.5	10.5	9.5	21.0	20.0	22.5	20.5	11.0	10.5
18	6.5	6.0	9.5	7.0	12.0	10.5	22.0	20.5	22.0	20.0	11.0	10.5
19	6.0	6.0	7.5	7.0	12.5	12.0	22.5	20.5	21.5	19.5	11.5	10.5
20	6.0	6.0	7.5	7.0	13.5	12.0	22.5	21.5	22.0	20.0	12.0	11.0
21	6.5	6.0	7.0	7.0	14.0	12.5	22.5	22.0	22.0	20.0	12.0	12.0
22	6.5	6.5	7.5	7.0	14.0	13.5	22.0	21.0	22.5	20.5	12.0	12.0
23	6.5	6.5	7.5	7.0	14.0	14.0	21.0	20.0	22.5	20.5	12.0	11.5
24	6.5	6.5	8.5	7.5	15.0	14.0	21.0	20.0	22.5	20.5	11.5	11.0
25	6.5	6.0	8.5	7.5	16.0	14.5	20.5	19.5	22.5	21.0	11.0	10.5
26	6.0	6.0	9.5	8.5	16.0	15.5	20.0	18.5	22.5	20.5	11.0	9.5
27	6.0	6.0	9.0	7.5	16.0	15.5	21.0	20.0	22.0	20.0	11.0	9.5
28	6.0	6.0	8.5	7.5	15.5	14.5	20.0	21.0	21.5	20.0	11.5	10.0
29	6.5	6.0	8.5	8.5	14.5	12.5	20.5	20.0	21.0	19.5	12.0	10.5
30	6.5	6.5	8.5	8.5	12.5	12.0	20.5	19.5	20.5	19.0	12.0	11.0
31	--	--	9.0	7.5	--	--	20.5	19.5	20.0	19.0	--	--
AVG	6.0	6.0	8.5	7.5	11.5	11.0	20.0	19.0	22.0	20.5	14.0	13.0

CLEARWATER RIVER BASIN

13342500 CLEARWATER RIVER AT SPALDING, IDAHO

LOCATION.--Lat 46°26'55", long 116°49'35", in Indian allotment 198, NE¼SW¼ sec.22, T.36 N., R.4 W., Nez Perce County, temperature recorder at gaging station on left bank, 0.4 mile downstream from Lapwai Creek, 0.5 mile west of Spalding Post Office, 3,100 ft downstream from bridge on U.S. Highway 12, and at mile 11.6.

DRAINAGE AREA.--9,570 sq mi, approximately.

PERIOD OF RECORD.--Chemical analyses: August 1959 to August 1960, October 1967 to September 1970.
Water temperatures: October 1959 to September 1970.

EXTREMES, 1969-70.--Water temperatures: Maximum, 24.5° C Aug. 6, 7; minimum, 1° C Jan. 2, 3.

EXTREMES, 1959-70.--Water temperatures: Maximum, 28° C Aug. 13, 1963; minimum, freezing point on several days during winter months of most years.

TEMPERATURE (°C) OF WATER, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

DAY	OCT		NOV		DEC		JAN		FEB		MAR	
	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	14.5	14.0	9.0	9.0	3.5	3.5	1.5	1.5	3.5	2.5	5.5	5.0
2	14.0	12.5	9.0	7.5	3.5	3.5	1.5	1.0	2.5	2.5	5.5	5.5
3	12.5	11.5	9.0	7.5	3.5	3.5	1.5	1.0	2.5	2.5	5.5	5.5
4	12.0	11.0	8.5	7.0	3.5	3.5	1.5	1.5	2.5	2.5	5.5	5.5
5	11.5	10.0	7.5	7.0	3.5	3.5	1.5	1.5	3.5	2.5	5.5	5.5
6	11.0	9.5	7.5	6.5	3.5	3.5	1.5	1.5	4.0	3.5	5.5	5.5
7	11.0	9.5	7.0	6.5	3.5	3.5	2.0	2.0	4.0	4.0	6.0	5.5
8	11.0	10.5	6.5	6.0	3.5	3.5	3.5	2.5	4.5	4.5	6.0	5.5
9	11.0	10.0	6.0	6.0	3.5	3.5	2.5	2.0	4.5	4.5	7.0	6.0
10	10.0	9.5	6.5	6.0	3.5	3.5	2.0	1.5	4.5	4.5	7.0	6.0
11	9.5	9.0	6.5	5.5	3.5	3.5	1.5	1.5	4.5	4.5	6.5	6.0
12	9.0	8.5	6.5	6.0	3.5	3.5	2.0	1.5	5.0	4.5	6.0	6.0
13	9.0	7.0	6.5	6.0	3.5	3.5	2.0	2.0	5.0	5.0	7.0	6.0
14	9.0	7.0	6.0	6.0	3.5	2.5	2.0	1.5	5.5	5.0	7.0	7.0
15	7.5	6.0	6.0	5.5	2.5	2.5	1.5	1.5	5.5	5.5	7.0	6.5
16	7.0	6.0	5.5	5.5	2.5	2.5	2.0	1.5	5.5	5.5	6.5	6.0
17	7.5	6.5	6.0	4.5	3.5	2.5	2.0	2.0	5.5	5.0	6.0	6.0
18	8.5	7.0	4.5	4.0	3.5	3.5	2.5	2.0	5.0	5.0	6.0	5.5
19	7.5	6.5	4.0	4.0	3.5	3.5	2.5	2.5	5.0	5.0	6.0	5.5
20	8.5	7.5	4.0	3.5	4.0	3.5	2.5	2.5	5.0	5.0	6.0	5.5
21	9.0	7.5	3.5	3.5	4.0	3.5	2.5	2.5	5.0	4.5	6.0	5.5
22	9.0	8.5	3.5	3.5	3.5	2.0	2.5	2.0	5.0	4.5	6.5	6.0
23	9.5	9.0	3.5	3.5	2.0	2.0	3.5	2.5	5.0	4.5	6.5	6.0
24	9.5	9.0	3.5	2.5	2.0	2.0	3.5	3.5	5.0	4.5	6.5	6.0
25	9.5	8.5	2.5	2.0	2.0	1.5	3.5	3.5	5.0	4.5	6.0	6.0
26	9.0	7.5	2.5	2.0	1.5	1.5	3.5	3.5	5.5	4.5	7.0	6.0
27	9.0	8.5	2.5	2.0	1.5	1.5	3.5	2.5	5.5	5.0	7.0	6.5
28	8.5	8.5	2.0	2.0	2.0	1.5	2.5	2.5	5.0	5.0	7.0	7.0
29	9.0	7.5	2.5	1.5	2.0	1.5	3.5	2.5	--	--	7.0	7.0
30	9.0	8.5	3.5	2.5	1.5	1.5	4.0	3.5	--	--	8.5	7.0
31	9.0	9.0	--	--	1.5	1.5	4.0	3.5	--	--	7.0	6.5
AVG DAY	9.5	8.5	5.5	5.0	3.0	2.5	2.5	2.0	4.5	4.0	6.5	6.0
	APR		MAY		JUN		JUL		AUG		SEP	
	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	7.0	7.0	11.0	9.0	12.0	11.5	13.5	13.5	22.0	20.0	22.0	20.0
2	7.0	6.5	12.0	10.0	12.0	12.0	15.5	13.5	22.0	20.5	21.5	20.0
3	7.0	6.0	12.0	10.0	12.0	12.0	18.5	15.5	22.0	20.5	21.0	20.5
4	7.0	6.5	11.5	10.0	12.0	11.5	19.5	17.5	22.5	21.0	20.0	19.0
5	7.5	6.5	11.0	10.5	12.0	11.5	20.0	19.5	23.5	22.0	19.5	18.5
6	9.0	7.5	10.5	10.5	12.0	11.5	20.5	19.5	24.5	22.0	18.5	17.5
7	9.0	7.5	10.5	9.5	11.5	11.0	20.5	19.5	24.5	22.0	18.5	17.5
8	9.0	7.0	9.5	8.5	11.0	11.0	21.0	19.5	24.0	22.0	17.5	16.0
9	7.5	7.0	9.0	8.5	12.0	11.0	21.0	20.0	24.0	21.5	16.0	15.5
10	7.5	7.0	9.0	9.0	12.0	11.5	21.0	20.0	24.0	21.0	16.5	14.5
11	7.0	6.5	9.0	8.5	11.5	11.5	21.5	20.5	23.5	21.0	17.0	15.0
12	8.5	6.5	9.0	8.5	11.5	11.5	21.5	21.0	23.5	21.0	16.5	14.5
13	8.5	7.0	10.0	9.0	11.5	11.5	21.5	20.5	23.5	21.0	15.0	13.5
14	7.5	7.0	10.0	9.5	12.0	11.5	20.5	19.5	23.5	21.0	14.5	12.5
15	8.5	7.0	11.0	10.0	12.0	12.0	20.5	19.5	23.5	20.5	14.0	12.0
16	9.0	7.0	12.0	11.0	12.0	12.0	21.0	20.0	22.5	20.5	13.5	11.5
17	9.5	7.5	12.0	12.0	12.0	12.0	22.0	21.0	22.5	20.0	13.5	11.5
18	9.5	8.5	12.0	11.0	12.5	12.0	23.5	21.5	22.0	20.0	13.5	12.5
19	9.0	8.5	11.0	10.0	13.5	12.5	24.0	22.0	22.0	19.5	13.5	12.5
20	9.0	8.5	10.5	10.0	14.0	13.5	24.5	22.5	22.0	20.0	13.5	12.0
21	9.0	8.5	10.0	9.5	14.5	14.0	24.5	23.5	22.5	20.0	14.0	12.5
22	9.0	8.5	10.5	10.0	15.0	14.5	23.5	22.0	22.5	20.0	14.0	13.5
23	9.0	8.5	10.5	10.5	15.0	15.0	22.0	20.5	22.5	20.5	13.5	12.5
24	9.0	9.0	11.0	10.5	15.5	15.0	22.0	21.0	22.5	20.5	12.5	12.0
25	9.0	8.5	11.0	11.0	16.5	15.5	21.0	20.0	23.5	21.0	12.5	11.5
26	8.5	8.5	11.5	11.0	16.5	16.5	21.0	19.5	22.5	20.5	12.0	11.0
27	9.0	7.5	11.0	11.0	17.0	16.5	21.5	20.0	22.0	20.0	13.5	11.0
28	9.0	8.5	11.0	10.5	16.5	15.5	21.5	20.0	22.0	20.0	13.5	12.0
29	9.0	8.5	11.5	10.5	15.5	14.0	21.5	20.0	22.0	20.0	14.0	12.0
30	10.0	9.0	11.5	11.5	14.0	13.5	21.5	20.0	21.5	20.0	14.5	12.5
31	--	--	11.5	11.0	--	--	22.0	20.0	21.0	20.0	--	--
AVG	8.5	7.5	11.0	10.0	13.5	13.0	21.0	19.5	23.0	20.5	15.5	14.5

13343500 SNAKE RIVER NEAR CLARKSTON, WASH.
(International hydrologic decade station)

LOCATION.--Lat 46°25'30", long 117°10'30", in SE $\frac{1}{4}$ SE $\frac{1}{4}$ sec.21, T.11 N., R.45 E., Asotin County, at gaging station 7 miles downstream from Clarkston, and at mile 132.9.
DRAINAGE AREA.--103,200 sq mi, approximately.
PERIOD OF RECORD.--Chemical analyses: November 1951 to February 1956, October 1966 to September 1970.
REMARKS.--Each analysis presented below represents a composite of four samples taken at cableway cross section.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

DATE	DIS- CHARGE (CFS)	SILICA (SiO ₂) (MG/L)	DIS- SOLVED CAL- CIUM (CA) (MG/L)	DIS- SOLVED MAG- NE- SIUM (MG)	SODIUM (NA) (MG/L)	PO- TAS- SIUM (K) (MG/L)	BICAR- BONATE (HCO ₃) (MG/L)	CAR- BONATE (CO ₃) (MG/L)	SULFATE (SO ₄) (MG/L)	CHLO- RIDE (CL) (MG/L)	DIS- SOLVED FLUO- RIDE (F) (MG/L)	NITRATE (NO ₃) (MG/L)
OCT.												
14...	27800	19	31	13	27	4.0	155	0	44	15	.4	1.5
NOV.												
24...	22200	20	31	12	31	3.8	160	0	45	15	.4	1.9
JAN.												
06...	29600	23	37	15	37	4.2	189	0	53	18	.5	2.6
MAR.												
17...	52600	22	19	6.6	15	3.0	91	0	21	7.9	.3	1.9
APR.												
29...	46700	19	1.8	6.2	1.5	2.6	88	0	21	7.4	.3	1.0
JUNE												
15...	135000	12	9.4	2.7	6.5	1.4	46	0	7.2	2.7	.2	.5
JULY												
21...	33100	13	15	4.3	10	1.8	68	0	14	4.9	.3	.5
SEPT.												
01...	18300	15	23	7.5	20	2.6	113	0	25	9.9	.4	.8

DATE	PHOS- PHATE (PO ₄) (MG/L)	DIS- SOLVED SOLIDS (RESI- DUE AT 180 C) (MG/L)	HARD- NESS (CA,MG) (MG/L)	NON- CAR- BONATE HARD- NESS (MG/L)	SPECI- FIC COND- UCTANCE (MICRO- MHOS)	PH (UNITS)	TEMP- ERATURE (DEG C)	COLOR (PLAT- INUM- COBALT UNITS)	TOTAL CHRO- MIUM (CR) (UG/L)	DIS- SOLVED COPPER (CU) (UG/L)	DIS- SOLVED ZINC (ZN) (UG/L)
OCT.											
14...	.12	239	131	4	391	7.8	--	0	0	0	0
NOV.											
24...	.14	240	127	0	395	8.0	--	0	--	--	--
JAN.											
06...	.14	288	154	0	469	7.5	--	0	0	0	0
MAR.											
17...	.33	148	75	0	221	7.5	6.5	10	--	--	--
APR.											
29...	.11	135	71	0	211	7.4	9.0	10	--	--	--
JUNE											
15...	.36	73	35	0	104	7.6	--	20	--	--	--
JULY											
21...	.20	97	55	0	159	7.5	--	10	--	--	--
SEPT.											
01...	.10	165	89	0	275	7.8	23.0	10	--	--	--

RADIO CHEMICAL DATA, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

DATE	URANIUM (U) (UG/L)	RADIUM (RA) (PC/L)	DISSOLVED		SOLIDS (MG/L)	SUSPENDED		SOLIDS (MG/L)
			GROSS ALPHA AS U-NAT. (UG/L)	GROSS BETA AS SR90 /Y90 (PC/L)		GROSS ALPHA AS U-NAT. (UG/L)	GROSS BETA AS SR90 /Y90 (PC/L)	
OCT.								
14...	3.4	0.05	7.2	4.6	240	<0.4	0.5	3
NOV.								
24...	3.1	.03	6.2	6.0	250	<.4	<.4	2
JAN.								
06...	3.9	.05	14	5.7	290	<.4	.6	3
MAR.								
17...	1.3	.02	6.3	3.3	130	1.1	1.8	22
APR.								
29...	1.6	.05	7.5	4.5	150	.8	1.0	8
JUNE								
15...	.24	.03	1.7	2.4	72	2.0	2.1	31
JULY								
21...	.9	.04	2.9	1.7	95	.6	1.2	17
SEPT.								
01...	2.0	.05	8.9	4.4	170	<.4	.4	2

ANALYSES OF SAMPLES COLLECTED AT PARTIAL-RECORD STATIONS

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

DATE	DIS- CHARGE (CFS)	SILICA (SiO ₂) (MG/L)	CAL- CIUM (CA) (MG/L)	MAG- NE- SIUM (MG)	SODIUM (NA) (MG/L)	PO- TAS- SIUM (K) (MG/L)	BICAR- BONATE (HCO ₃) (MG/L)	CAR- BONATE (CO ₃) (MG/L)	SULFATE (SO ₄) (MG/L)	CHLO- RIDE (CL) (MG/L)	FLUC- RIDE (F) (MG/L)	NITRATE (NO ₃) (MG/L)
HENRYS FORK BASIN												
13055000 - TETON RIVER NEAR ST. ANTHONY, IDAHO (LAT 43 56 02 LONG 111 36 31)												
JAN., 1970												
07...	284	19	49	15	4.2	1.4	218	0	11	2.0	.3	3.5
MAY												
27...	3300	12	22	4.7	2.0	1.2	89	0	4.8	.5	.1	1.5
AUG.												
12...	897	17	39	12	4.9	1.2	182	0	5.4	1.0	.5	1.6
13055450 - TEXAS SLOUGH NEAR REXBURG, IDAHO (LAT 43 47 17 LONG 111 53 43) <i>changed in Part I of this Report</i>												
FEB., 1970												
06...	34	6.2	70	19	15	2.9	281	0	44	10	.4	3.6
JUNE												
11...	310	15	52	13	10	2.3	195	0	34	6.0	.3	4.8
13056500 - HENRYS FORK NEAR REXBURG, IDAHO (LAT 43 49 35 LONG 111 54 12)												
JAN., 1970												
07...	940	30	22	6.0	17	2.9	116	2	5.8	6.0	2.2	.6
MAY												
27...	9980	18	12	3.3	5.9	1.7	60	0	3.0	2.0	.8	.7
SEP.												
17...	2130	19	20	6.0	11	2.2	114	0	.4	4.0	1.6	.6
WILLOW CREEK BASIN												
13057500 - GRAYS LAKE OUTLET NEAR HERMAN IDAHO (LAT 43 08 05 LONG 111 29 40)												
FEB., 1970												
18...	.22	30	36	11	7.6	1.8	172	0	5.6	3.5	.2	1.0
MAY												
18...	34	17	29	7.6	6.5	1.9	138	0	3.6	3.0	.1	.5
BLACKFOOT RIVER BASIN												
13063000 - BLACKFOOT RIVER AB RES NR HENRY IDAHO (LAT 42 49 40 LONG 111 33 20)												
MAY, 1970												
18...	1430	11	32	5.2	3.0	1.9	128	0	4.2	.0	.1	.8
AUG.												
17...	75	4.6	44	13	4.0	.7	198	3	4.6	1.5	.1	.1
13068500 - BLACKFOOT R NR BLACKFOOT, IDAHO (LAT 43 07 50 LONG 112 28 35)												
DEC., 1969												
18...	75	19	60	23	19	4.6	252	0	62	15	.3	1.9
JAN., 1970												
13...	42	12	58	13	4.6	1.0	238	0	9.8	1.0	.2	.6
MAY												
11...	399	18	48	13	10	2.6	200	0	20	8.0	.3	4.2
AUG.												
20...	146	14	37	14	10	2.3	167	0	24	9.0	.4	1.3
SNAKE RIVER BASIN												
13069540 - DANIELSON CR NR SPRINGFIELD IDAHO (LAT 43 03 32 LONG 112 41 23)												
APR., 1970												
02...	51.4	31	67	24	40	5.6	258	0	74	49	.6	6.9
SEP.												
05...	66.4	11	59	23	38	6.4	272	0	55	35	.7	3.5
PORTNEUF RIVER BASIN												
13073000 - PORTNEUF RIVER AT TOPAZ, IDAHO (LAT 42 37 00 LONG 112 05 00)												
JAN., 1970												
14...	152	7.6	84	41	35	12	448	0	48	34	.2	5.9
MAY												
19...	310	18	66	23	19	5.4	309	0	26	16	.2	3.0
AUG.												
18...	186	7.1	67	30	27	8.3	359	0	23	28	.2	1.6
13075000 - MARSH CREEK NEAR MCCAMMON IDAHO (LAT 42 37 50 LONG 112 13 30)												
JAN., 1970												
15...	116	1.2	52	32	52	9.7	298	0	48	64	.3	2.5
JUNE												
19...	63	36	73	35	51	9.8	400	0	46	50	.3	2.1

ANALYSES OF SAMPLES COLLECTED AT PARTIAL-RECORD STATIONS
CHEMICAL ANALYSES, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

93

DATE	PHOS- PHATE (MG/L)	DIS- SOLVED SOLIDS (RESI- DUE AT 180 C) (MG/L)	DIS- SOLVED SOLIDS (TONS AC-FT)	DIS- SOLVED SOLIDS (TONS PER DAY)	HARD- NESS (CA,MG) (MG/L)	NON- CAR- BONATE HARD- NESS (MG/L)	SODIUM AD- SORP- TION RATIO	PERCENT SODIUM	SPECI- FIC COND- UCTANCE (MICRO- MHOS)	PH (UNITS)	COLOR (PLAT- INUM- COBALT UNITS)	TEMP- ERATURE (DEG C)
HENRYS FORK BASIN												
13055000 - TETON RIVER NEAR ST. ANTHONY, IDAHO (LAT 43 56 02 LONG 111 36 31)												
JAN., 1970												
C7...	.00	210	.29	161	--	--	.1	5	360	8.2	--	.0
MAY												
27...	.71	112	.15	998	--	--	.1	5	153	7.9	--	9.0
AUG.												
12...	.06	171	.23	414	--	--	.2	7	288	8.1	--	18.0
13055450 - TEXAS SLOUGH NEAR REXBURG, IDAHO (LAT 43 47 17 LONG 111 53 43)												
FEB., 1970												
06...	--	--	.42	28.8	252	44	.4	11	543	8.0	--	5.0
JUNE												
11...	--	235	.32	197	183	23	.3	10	394	7.6	--	11.0
13056500 - HENRYS FORK NEAR REXBURG, IDAHO (LAT 43 49 35 LONG 111 54 12)												
JAN., 1970												
C7...	.01	156	.21	396	80	0	.8	31	224	8.4	--	.0
MAY												
27...	.21	81	.11	2180	44	0	.4	22	112	7.4	--	12.0
SEP.												
17...	.00	115	.16	661	74	0	.6	24	195	7.9	--	9.5
WILLOW CREEK BASIN												
13057500 - GRAYS LAKE OUTLET NEAR HERMAN IDAHO (LAT 43 08 05 LONG 111 29 40)												
FEB., 1970												
18...	.25	178	.24	.11	135	0	.3	11	284	7.6	--	.5
MAY												
18...	.29	133	.18	12.4	104	0	.3	12	231	7.0	--	12.5
BLACKFOOT RIVER BASIN												
13063000 - BLACKFOOT RIVER AB RES NR HENRY IDAHO (LAT 42 49 40 LONG 111 33 20)												
MAY, 1970												
18...	.58	117	.16	452	102	0	.1	6	209	7.5	--	15.0
AUG.												
17...	.00	174	.24	35.5	164	0	.1	5	311	8.3	--	19.5
13068500 - BLACKFOOT R NR BLACKFOOT, IDAHO (LAT 43 07 50 LONG 112 28 35)												
DEC., 1969												
18...	.00	324	.44	65.6	244	38	.5	14	515	8.2	--	2.0
JAN., 1970												
13...	.01	212	.29	24.3	198	3	.1	5	384	8.2	--	.0
MAY												
11...	.96	213	.29	229	174	10	.3	11	383	7.7	--	9.0
AUG.												
20...	.27	194	.26	76.5	150	12	.4	12	319	7.8	--	21.0
SNAKE RIVER BASIN												
13069540 - CANIELSON CR NR SPRINGFIELD IDAHO (LAT 43 03 32 LONG 112 41 23)												
APR., 1970												
C2...	--	424	.58	58.4	266	54	1.1	24	696	7.9	0	8.5
SEP.												
05...	--	355	.48	63.6	242	18	1.1	25	631	7.8	--	12.5
PORTNEUF RIVER BASIN												
13073000 - PORTNEUF RIVER AT TOPAZ, IDAHO (LAT 42 37 00 LONG 112 05 00)												
JAN., 1970												
14...	--	482	.66	198	378	11	.8	16	842	8.0	--	7.0
MAY												
19...	--	319	.43	267	259	6	.5	13	564	8.1	--	16.0
AUG.												
18...	--	382	.52	192	290	0	.7	16	655	8.1	--	20.5
13075000 - MARSH CREEK NEAR MCCAMMON IDAHO (LAT 42 37 50 LONG 112 13 30)												
JAN., 1970												
15...	--	418	.57	131	261	17	1.4	29	736	7.9	--	4.0
JUNE												
19...	--	498	.68	85.5	326	0	1.2	25	807	7.8	--	15.5

ANALYSES OF SAMPLES COLLECTED AT PARTIAL-RECORD STATIONS
CHEMICAL ANALYSES, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

DATE	DIS- CHARGE (CFS)	SILICA (SiO ₂) (MG/L)	CAL- CIUM (CA) (MG/L)	MAG- NE- SIUM (MG)	SODIUM (NA) (MG/L)	PO- TAS- SIUM (K) (MG/L)	BICAR- BONATE (HCO ₃) (MG/L)	CAR- BONATE (CO ₃) (MG/L)	SULFATE (SO ₄) (MG/L)	CHLO- RIDE (CL) (MG/L)	FLUO- RIDE (F) (MG/L)	NITRATE (NO ₃) (MG/L)
PORTNEUF RIVER BASIN												
13075500 - PORTNEUF RIVER AT POCATELLO, IDAHO (LAT 42 51 40 LONG 112 27 25)												
DEC., 1969												
19...	270	32	64	35	37	8.8	362	0	42	38	.2	4.9
JUNE, 1970												
12...	379	22	51	19	19	4.6	241	0	23	20	.2	2.7
AUG.												
19...	107	15	44	31	44	19	307	0	42	45	.3	1.3
13075810 - BATISE SPRINGS NEAR POCATELLO IDAHO (LAT 42 54 55 LONG 112 31 18)												
JUNE, 1970	45.9											
10...	46	42	98	34	61	12	302	0	172	60	.5	15
13075920 - WIDE CREEK NEAR POCATELLO, IDAHO (LAT 42 57 28 LONG 112 34 11)												
APR., 1970												
02...	7.82	27	50	17	25	4.2	186	6	51	27	.7	2.9
SEP.												
05...	54.7	16	56	16	19	3.6	231	0	31	18	.8	4.0
13075970 - KINNEY CREEK NEAR FORT HALL, IDAHO (LAT 43 00 16 LONG 112 34 50)												
APR., 1970												
14...	20	26	59	18	23	3.6	238	0	45	23	.8	4.3
SEP.												
05...	28.5	13	59	17	22	3.9	236	0	38	24	.8	4.6
13075980 - SPRING C SOUTH OF FERRY BUTTE NR BLACKFOOT IDAHO (LAT 43 05 44 LONG 112 30 16)												
DEC., 1969												
18...	320	25	59	16	20	3.4	239	0	38	18	.8	4.0
MAR., 1970												
20...	310	25	58	16	21	3.9	238	0	38	18	.7	4.2
13076200 - BANNOCK CREEK NR POCATELLO, IDAHO (LAT 42 53 05 LONG 112 38 29)												
DEC., 1969												
15...	28	27	72	26	31	4.9	307	0	28	57	.3	1.6
JUNE, 1970												
10...	52	23	54	19	25	5.9	245	0	30	30	.4	5.1
AUG.												
11...	18	27	73	29	45	9.3	307	0	62	59	.8	17
SNAKE RIVER BASIN												
13076300 - ABERDEEN WASTEWAY NR ABERDEEN IDAHO (LAT 42 55 27 LONG 112 48 38)												
MAR., 1970												
03...	4.8	36	57	40	247	97	1040	0	1.8	6.0	.7	.0
SEP.												
05...	64	2.5	64	28	50	6.5	264	0	136	23	.6	4.4
13076600 - REUGER SPRINGS NR AMERICAN FALLS IDAHO (LAT 42 46 05 LONG 112 52 54)												
APR., 1970												
01...	20	36	74	25	43	5.9	238	0	85	67	.4	4.6
SEP.												
04...	20.1	9.7	70	25	42	6.6	241	0	78	66	.4	8.8
13077000 - SNAKE RIVER AT NEELEY, IDAHO (LAT 42 46 20 LONG 112 52 45)												
MAR., 1970												
C3...	1070	22	53	17	24	4.3	222	0	43	22	1.0	3.3
JUNE												
10...	12200	15	48	16	19	3.6	193	0	41	18	.7	2.0
AUG.												
11...	11400	14	47	13	16	3.0	183	0	34	14	.6	1.6
13077650 - ROCK CREEK NEAR AMERICAN FALLS, IDAHO (LAT 42 39 09 LONG 113 00 48)												
DEC., 1969												
15...	39.7	30	71	28	27	8.0	334	0	18	46	.3	4.5
JUNE, 1970												
10...	3.0	30	62	46	59	22	415	0	34	82	.2	3.6
AUG.												
11...	4.0	32	45	69	78	23	459	0	46	112	.0	2.9

ANALYSES OF SAMPLES COLLECTED AT PARTIAL-RECORD STATIONS
CHEMICAL ANALYSES, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

95

DATE	PHOS- PHATE (PC4) (MG/L)	DIS- SOLVED SOLIDS (RESI- DUE AT 180 C) (MG/L)	DIS- SOLVED SOLIDS (TONS PER AC-FT)	DIS- SOLVED SOLIDS (TONS PER DAY)	HARD- NESS (CA, MG) (MG/L)	NON- CAR- BONATE HARD- NESS (MG/L)	SODIUM AD- SORP- TION RATIO	PERCENT SODIUM	SPECI- FIC COND- UCTANCE (MICRO- MHOS)	PH (UNITS)	COLOR (PLAT- INUM- COBALT UNITS)	TEMP- ERATURE (DEG C)
PORTNEUF RIVER BASIN												
13075500 - PORTNEUF RIVER AT POCATELLO, IDAHO (LAT 42 51 40 LONG 112 27 25)												
DEC., 1969												
19...	.08	439	.60	320	304	7	.9	20	705	8.1	--	4.5
JUNE, 1970												
12...	.83	284	.39	291	205	8	.6	16	463	7.8	--	13.5
AUG.												
19...	.01	398	.54	115	238	0	1.2	27	672	7.9	--	22.0
13075810 - BATISE SPRINGS NEAR POCATELLO IDAHO (LAT 42 54 55 LONG 112 31 18)												
JUNE, 1970												
10...	2.6	653	.89	81.1	384	137	1.4	25	969	7.2	--	14.5
13075920 - WIDE CREEK NEAR POCATELLO, IDAHO (LAT 42 57 28 LONG 112 34 11)												
APR., 1970												
02...	.03	301	.41	6.36	195	32	.8	21	493	--	0	10.5
SEP.												
05...	.01	280	.38	41.4	206	16	.6	16	477	8.0	--	11.0
13075970 - KINNEY CREEK NEAR FORT HALL, IDAHO (LAT 43 00 16 LONG 112 34 50)												
APR., 1970												
14...	--	340	.46	18.4	221	26	.7	18	534	8.1	--	10.0
SEP.												
05...	--	284	.39	21.9	217	24	.6	18	512	8.0	--	10.0
13075980 - SPRING C SOUTH OF FERRY BUTTE NR BLACKFOOT IDAHO (LAT 43 05 44 LONG 112 30 16)												
DEC., 1969												
18...	.04	304	.41	263	213	17	.6	17	477	7.9	--	10.0
MAR., 1970												
20...	--	298	.41	249	210	16	.6	17	493	7.9	--	11.0
13076200 - BANNOCK CREEK NR POCATELLO, IDAHO (LAT 42 53 05 LONG 112 38 29)												
DEC., 1969												
15...	.06	396	.54	30.8	286	35	.8	19	654	8.0	--	2.0
JUNE, 1970												
10...	1.6	309	.42	44.1	212	12	.7	20	526	7.5	--	14.0
AUG.												
11...	--	474	.64	23.0	302	50	1.1	24	772	7.4	--	--
SNAKE RIVER BASIN												
13076300 - ABERDEEN WASTEWAY NR ABERDEEN IDAHO (LAT 42 55 27 LONG 112 48 38)												
MAR., 1970												
03...	31	1480	2.01	19.3	306	0	6.1	55	1970	6.7	--	8.5
SEP.												
05...	1.0	449	.61	77.6	274	56	1.3	28	728	7.7	--	--
13076600 - REUGER SPRINGS NR AMERICAN FALLS IDAHO (LAT 42 46 05 LONG 112 52 54)												
APR., 1970												
01...	--	476	.65	25.7	288	92	1.1	24	747	7.8	0	12.5
SEP.												
04...	--	436	.59	24.1	278	80	1.1	24	735	7.4	--	14.0
13077000 - SNAKE RIVER AT NEELEY, IDAHO (LAT 42 46 20 LONG 112 52 45)												
MAR., 1970												
03...	.31	290	.39	838	202	20	.7	20	497	8.1	--	2.5
JUNE												
10...	.22	253	.34	8330	186	28	.6	18	437	7.7	--	12.0
ALG.												
11...	.41	223	.30	6860	171	21	.5	17	393	7.9	--	--
13077650 - ROCK CREEK NEAR AMERICAN FALLS, IDAHO (LAT 42 39 09 LONG 113 00 48)												
DEC., 1969												
15...	.23	395	.54	42.3	292	18	.7	16	672	7.9	--	3.5
JUNE, 1970												
10...	.61	535	.73	4.33	344	4	1.4	26	908	7.7	--	15.5
AUG.												
11...	.35	622	.85	6.72	396	20	1.7	29	1060	8.0	--	--

ANALYSES OF SAMPLES COLLECTED AT PARTIAL-RECORD STATIONS
CHEMICAL ANALYSES, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

DATE	DIS- CHARGE (CFS)	SILICA (SiO ₂) (MG/L)	CAL- CIUM (CA) (MG/L)	MAG- NE- SIUM (MG)	SODIUM (NA) (MG/L)	PO- TAS- SIUM (K) (MG/L)	BICAR- BONATE (HCO ₃) (MG/L)	CAR- BONATE (CO ₃) (MG/L)	SULFATE (SO ₄) (MG/L)	CHLO- RIDE (CL) (MG/L)	FLUO- RIDE (F) (MG/L)	NITRATE (NO ₃) (MG/L)
RAFT RIVER BASIN												
13078000 - RAFT RIVER AT PETERSON RANCH NR BRIDGE, IDAHO (LAT 42 04 00 LONG 113 27 00)												
APR., 1970												
07...	14	35	113	24	98	7.4	264	0	80	208	.6	.3
MAY												
04...	26	32	84	18	61	6.2	266	0	47	111	.4	.8
SEP.												
08...	8.1	24	111	26	108	8.9	279	0	86	222	.9	.3
13079900 - RAFT RIVER AT YALE, IDAHO (LAT 42 34 11 LONG 113 13 42)												
FEB., 1970												
03...	.66	55	88	45	154	23	468	0	90	201	.6	
SEP.												
10...	.88	32	86	47	148	24	449	0	102	198	.6	
GOOSE CREEK BASIN												
13082500 - GOOSE CR AB TRAPPER CR NR OAKLEY IDAHO (LAT 42 07 10 LONG 113 56 20)												
APR., 1970												
08...	45	36	41	8.1	14	6.2	166	0	19	14	.3	.5
13083000 - TRAPPER CR NR OAKLEY IDAHO (LAT 42 10 00 LONG 113 59 00)												
APR., 1970												
08...	14	31	31	3.7	6.3	3.2	119	0	6.0	4.5	.1	1.1
SEP.												
10...	4.8	17	37	4.3	6.0	3.2	149	1	.6	2.5	.2	.2
13084000 - GOOSE CREEK NEAR OAKLEY IDAHO (LAT 42 12 15 LONG 113 54 35)												
SEP., 1970												
10...	13	24	47	8.4	16	7.4	194	0	15	16	.3	.3
TRIBUTARIES TO SNAKE RIVER												
13089500 - DEVILS WASHBOWL SPRING NEAR KIMBERLY IDAHO (LAT 42 35 22 LONG 114 20 46)												
MAR., 1970												
28...	16	43	56	24	48	7.3	262	0	69	44	.3	9.1
SEP.												
22...	17.5	26	58	24	50	7.5	282	0	63	42	.4	12
SNAKE RIVER BASIN												
13090000 - SNAKE RIVER NEAR KIMBERLY, IDAHO (LAT 42 35 28 LONG 114 21 34)												
JULY, 1970												
10...	485	30	52	20	40	5.4	235	0	61	30	.5	8.0
BLUE LAKES SPRING BASIN												
13091000 - BLUE LAKES SPRING NEAR TWIN FALLS, IDAHO (LAT 42 36 53 LONG 114 28 06)												
MAY, 1970												
06...	204	38	56	20	38	6.3	234	0	56	42	.4	7.5
SEP.												
16...	217	27	57	21	36	7.0	238	0	53	44	.4	7.7
ROCK CREEK BASIN												
13092730 - ROCK C AT TWIN FALLS IDAHO (LAT 42 32 57 LONG 114 28 27)												
MAR., 1970												
07...	47	40	69	21	41	6.0	245	0	104	30	.7	8.8
SEP.												
16...	153	27	79	27	48	6.2	313	0	111	32	.9	8.5
TRIBUTARIES TO SNAKE RIVER												
13093398 - CRYSTAL SPRINGS TRIBUTARY NO. 8 NEAR BUHL, IDAHO (LAT 42 39 42 LONG 114 38 59)												
MAR., 1970												
27...	17.3	36	51	24	34	4.8	236	0	55	37	.5	6.7
SEP.												
21...	25.3	26	55	25	34	5.2	253	0	47	39	.6	7.0
13093500 - CEDAR DRAW NEAR FILER, IDAHO (LAT 42 37 25 LONG 114 39 05)												
MAR., 1970												
07...	26	49	58	40	92	4.9	322	1	159	54	.9	18
SEP.												
15...	89	20	67	29	60	5.5	323	0	96	35	.9	12

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

DATE	PHOS- PHATE (PO4) (MG/L)	DIS- SOLVED SOLIDS (RESI- DUE AT 180 C) (MG/L)	DIS- SOLVED SOLIDS (TCNS PER AC-FT)	DIS- SOLVED SOLIDS (TCNS PER DAY)	HARD- NESS (CA,MG) (MG/L)	NON- CAR- BONATE HARD- NESS (MG/L)	SODIUM AD- SORP- TION RATIO	PERCENT SODIUM	SPECI- FIC COND- UCTANCE (MICRO- MHOS)	PH (UNITS)	COLOR (PLAT- INUM- COBALT UNITS)	TEMP- ERATURE (DEG C)
RAFT RIVER BASIN												
13078000 - RAFT RIVER AT PETERSON RANCH NR BRIDGE, IDAHO (LAT 42 04 00 LONG 113 27 00)												
APR., 1970												
07...	--	718	.98	27.1	380	164	2.2	35	1210	8.0	5	8.0
MAY												
04...	--	516	.70	37.2	284	66	1.6	31	838	8.0	--	15.0
SEP.												
08...	--	734	1.00	16.1	384	156	2.4	37	1250	8.1	--	17.5
RAFT RIVER AT YALE, IDAHO (LAT 42 34 11 LONG 113 13 42)												
FEB., 1970												
03...	8.9	905	1.23	1.61	404	21	3.3	44	1470	7.9	--	
SEP.												
10...	5.6	876	1.19	2.08	408	40	3.2	42	1440	7.8	11.0	
GOOSE CREEK BASIN												
13082500 - GOOSE CR AB TRAPPER CR NR OAKLEY IDAHO (LAT 42 07 10 LONG 113 56 20)												
APR., 1970												
08...	--	229	.31	27.8	136	0	.5	18	351	7.9	10	6.5
TRAPPER CR NR OAKLEY IDAHO (LAT 42 10 00 LONG 113 59 00)												
APR., 1970												
08...	--	144	.20	5.44	92	0	.3	12	214	8.0	5	7.5
SEP.												
10...	--	147	.20	1.91	110	0	.2	10	243	8.3	--	16.0
GOOSE CREEK NEAR OAKLEY IDAHO (LAT 42 12 15 LONG 113 54 35)												
SEP., 1970												
10...	--	227	.31	8.34	152	0	.6	18	376	8.1	--	17.5
TRIBUTARIES TO SNAKE RIVER												
13089500 - DEVILS WASHBOWL SPRING NEAR KIMBERLY IDAHO (LAT 42 35 22 LONG 114 20 46)												
MAR., 1970												
28...	--	425	.58	18.0	238	24	1.4	30	682	8.1	0	14.0
SEP.												
22...	.01	420	.57	19.8	243	12	1.4	30	678	8.2	--	14.0
SNAKE RIVER BASIN												
13090000 - SNAKE RIVER NEAR KIMBERLY, IDAHO (LAT 42 35 28 LONG 114 21 34)												
JULY, 1970												
10...	--	357	.49	4.82	212	20	1.2	28	571	7.7	--	--
BLUE LAKES SPRING BASIN												
13091000 - BLUE LAKES SPRING NEAR TWIN FALLS, IDAHO (LAT 42 36 53 LONG 114 28 06)												
MAY, 1970												
06...	--	374	.51	206	222	30	1.1	26	612	8.0	--	15.5
SEP.												
16...	--	370	.50	217	228	34	1.0	25	604	7.9	--	14.5
ROCK CREEK BASIN												
13092730 - ROCK C AT TWIN FALLS IDAHO (LAT 42 32 57 LONG 114 28 27)												
MAR., 1970												
07...	.25	441	.60	56.0	258	57	1.1	25	665	8.2	--	10.0
SEP.												
16...	.01	499	.68	206	308	52	1.2	25	768	8.1	--	12.0
TRIBUTARIES TO SNAKE RIVER												
13093398 - CRYSTAL SPRINGS TRIBUTARY NO. 8 NEAR BUHL, IDAHO (LAT 42 39 42 LONG 114 38 59)												
MAR., 1970												
27...	--	364	.50	17.0	226	32	1.0	24	594	8.2	0	14.5
SEP.												
21...	.01	376	.51	25.8	240	32	1.0	23	609	8.1	--	13.5
CEDAR DRAW NEAR FILER, IDAHO (LAT 42 37 25 LONG 114 39 05)												
MAR., 1970												
07...	.09	630	.86	43.7	309	44	2.3	39	950	8.3	--	10.0
SEP.												
15...	.00	483	.66	116	286	22	1.5	31	778	8.0	--	15.0

ANALYSES OF SAMPLES COLLECTED AT PARTIAL-RECORD STATIONS
 CHEMICAL ANALYSES, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

DATE	DIS- CHARGE (CFS)	SILICA (SiO ₂) (MG/L)	DIS- SOLVED CAL- CIUM (CA) (MG/L)	DIS- SOLVED MAG- NE- SIUM (MG) (MG/L)	SODIUM (NA) (MG/L)	PO- TAS- SIUM (K) (MG/L)	BICAR- BONATE (HCO ₃) (MG/L)	CAR- BONATE (CO ₃) (MG/L)	SULFATE (SO ₄) (MG/L)	CHLO- RIDE (CL) (MG/L)	DIS- SOLVED FLUO- RIDE (F) (MG/L)	NITRATE (NO ₃) (MG/L)
DEEP CREEK BASIN												
13095000 - DEEP CREEK NEAR BUHL, IDAHO (LAT 42 37 05 LONG 114 50 40)												
MAR., 1970												
07...	7.5	52	89	38	75	6.2	378	0	152	50	1.0	18
SEP.												
21...	266.8	13	58	23	38	5.4	265	0	53	37	.9	5.4
BOX CANYON SPRINGS BASIN												
13095500 - BCX CANYON SPRINGS NEAR WENDELL, IDAHO (LAT 42 42 30 LONG 114 48 45)												
APR., 1970												
15...	431	33	35	16	22	3.7	172	0	36	18	.6	3.3
SEP.												
17...	416	23	36	17	22	4.0	187	0	32	18	.6	3.7
SALMON FALLS CREEK BASIN												
13108150 - SALMON FALLS C NR BANBURY HOT SPRINGS IDAHO (LAT 42 41 47 LONG 114 51 15)												
APR., 1970												
02...	140	51	80	30	76	9.2	275	0	177	60	.8	9.0
SEP.												
21...	229	27	71	25	58	8.8	267	0	128	43	.8	9.7
MUD LAKE-LOST RIVER BASINS												
13112000 - CAMAS C AT CAMAS IDAHO (LAT 44 00 10 LONG 112 13 12)												
DEC., 1969												
24...	12	32	18	4.4	4.2	2.3	85	0	3.4	1.5	.2	1.2
JUNE, 1970												
04...	227	21	19	4.5	3.6	2.0	87	0	3.0	1.0	.2	.4
AUG.												
10...	19	22	20	4.5	4.0	1.9	89	0	2.2	.0	.6	.7
13114000 - BEAVER CREEK AT CAMAS IDAHO (LAT 44 00 27 LONG 112 13 25)												
APR., 1970												
10...	16	14	44	11	6.6	1.8	196	0	9.0	2.5	.2	.6
MAY												
07...	189	13	40	9.0	10	3.3	182	0	9.0	4.0	.2	2.1
13115000 - MUD LAKE NEAR TERRETON, IDAHO (LAT 43 53 30 LONG 112 21 30)												
DEC., 1969												
24...	--	30	34	9.2	10	2.4	159	0	7.4	6.0	.5	2.6
APR., 1970												
13...	--	26	30	8.4	11	2.4	150	0	7.2	4.5	.4	1.6
SEP.												
18...	--	20	29	8.6	11	2.6	144	0	9.6	2.0	.5	1.6
13117030 - BIRCH C AT EIGHT-MILE CANYON RD NR RENO, IDAHO (LAT 44 05 00 LONG 112 53 00)												
DEC., 1969												
24...	60	13	41	15	5.2	1.1	176	0	25	3.0	.3	2.0
MAY, 1970												
05...	61	11	42	16	5.7	1.2	186	1	26	3.5	.2	1.1
13119000 - LITTLE LOST RIVER NEAR HOWE, IDAHO (LAT 43 53 00 LONG 113 06 00)												
DEC., 1969												
14...	47	14	49	19	14	1.7	224	0	25	19	.2	1.2
MAY, 1970												
14...	118	16	39	16	9.9	1.6	187	1	16	12	.1	1.2
JUNE												
04...	227	14	30	1.1	5.4	1.3	95	0	11	5.0	.1	1.1
AUG.												
13...	107	13	40	15	6.5	1.0	184	0	15	8.0	.1	.7

ANALYSES OF SAMPLES COLLECTED AT PARTIAL-RECORD STATIONS
CHEMICAL ANALYSES, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

99

DATE	PHCS- PHATE (PO4) (MG/L)	CIS- SOLVED SOLIDS (RESI- DUE AT 180 C) (MG/L)	DIS- SOLVED SOLIDS (TONS PER AC-FT)	DIS- SOLVED SOLIDS (TONS PER DAY)	HARD- NESS (CA,MG) (MG/L)	NON- CAR- BONATE HARD- NESS (MG/L)	SODIUM AD- SORP- TION RATIO	PERCENT SODIUM	SPECI- FIC COND- UCTANCE (MICRO- MHOS)	PH (UNITS)	COLOR (PLAT- INUM- COBALT UNITS)	TEMP- ERATURE (DEG C)
DEEP CREEK BASIN												
13095000 - DEEP CREEK NEAR BUHL, IDAHO (LAT 42 37 05 LONG 114 50 40)												
MAR., 1970												
07...	.04	676	.92	13.7	378	68	1.7	30	995	8.0	--	11.0
SEP.												
21...	.01	361	.49	259	239	22	1.1	25	608	7.9	--	14.0
BOX CANYON SPRINGS BASIN												
13095500 - BOX CANYON SPRINGS NEAR WENDELL, IDAHO (LAT 42 42 30 LONG 114 48 45)												
APR., 1970												
15...	.04	259	.35	301	154	12	.8	23	405	8.0	--	16.0
SEP.												
17...	.01	241	.33	271	160	7	.8	22	408	8.1	--	14.0
SALMON FALLS CREEK BASIN												
13108150 - SALMON FALLS C NR BANBURY HOT SPRINGS IDAHO (LAT 42 41 47 LONG 114 51 15)												
APR., 1970												
02...	--	642	.87	243	323	98	1.8	33	950	8.1	0	9.5
SEP.												
21...	.00	508	.69	31.4	280	122	1.5	30	780	8.1	--	14.0
MUD LAKE-LOST RIVER BASINS												
13112000 - CAMAS C AT CAMAS IDAHO (LAT 44 00 10 LONG 112 13 12)												
DEC., 1969												
24...	--	114	.16	3.79	63	0	.2	12	145	7.7	--	.0
JUNE, 1970												
04...	--	115	.16	70.5	66	0	.2	10	144	7.9	--	21.0
AUG.												
10...	.16	98	.13	4.92	68	0	.2	11	146	8.1	--	19.0
13114000 - BEAVER CREEK AT CAMAS IDAHO (LAT 44 00 27 LONG 112 13 25)												
APR., 1970												
10...	--	200	.27	8.53	155	0	.2	8	323	7.9	--	9.5
MAY												
07...	--	189	.26	96.4	137	0	.4	13	308	7.6	--	5.5
13115000 - MUD LAKE NEAR TERRETON, IDAHO (LAT 43 53 30 LONG 112 21 30)												
DEC., 1969												
24...	--	194	.26	--	123	0	.4	15	278	8.1	--	4.5
APR., 1970												
13...	--	183	.25	--	110	0	.5	18	266	7.9	--	7.5
SEP.												
18...	--	151	.21	--	108	0	.5	18	245	8.0	--	14.5
13117030 - BIRCH C AT EIGHT-MILE CANYON RD NR RENO, IDAHO (LAT 44 05 00 LONG 112 53 00)												
DEC., 1969												
24...	--	183	.25	29.6	164	20	.2	6	323	8.1	--	.0
MAY, 1970												
05...	--	204	.28	33.4	171	17	.2	7	348	8.3	--	9.0
13119000 - LITTLE LCST RIVER NEAR HOWE, IDAHO (LAT 43 53 00 LONG 113 06 00)												
DEC., 1969												
14...	--	242	.33	30.3	200	17	.4	13	447	8.1	5	2.0
MAY, 1970												
14...	--	188	.26	59.9	164	9	.3	12	346	8.3	--	8.5
JUNE												
04...	--	154	.21	94.4	80	2	.3	13	242	8.0	--	12.5
AUG.												
13...	--	187	.25	54.0	162	10	.2	8	318	8.2	--	15.0

ANALYSES OF SAMPLES COLLECTED AT PARTIAL-RECORD STATIONS
 CHEMICAL ANALYSES, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

DATE	DIS- CHARGE (CFS)	SILICA (SiO ₂) (MG/L)	CAL- CIUM (CA) (MG/L)	MAG- NE- SIUM (MG)	SODIUM (NA) (MG/L)	PO- TAS- SIUM (K) (MG/L)	BICAR- BONATE (HCO ₃) (MG/L)	CAR- BONATE (CO ₃) (MG/L)	SULFATE (SO ₄) (MG/L)	CHLO- RIDE (CL) (MG/L)	FLUO- RIDE (F) (MG/L)	NITRATE (NO ₃) (MG/L)
MUD LAKE-LOST RIVER BASINS												
13127000 - BIG LCST RIVER BL MACKAY RES NEAR MACKAY, IDAHO (LAT 43 56 20 LONG 113 38 50)												
DEC., 1969												
18...	93	12	42	15	8.7	1.6	191	0	18	6.0	.2	1.4
MAY, 1970												
14...	332	13	38	9.6	5.4	1.2	156	0	16	1.5	.2	.4
JUNE												
C5...	1040	10	32	7.6	4.8	1.4	131	0	14	3.0	.2	.3
AUG.												
12...	689	13	32	8.1	4.3	1.1	137	0	12	.5	.2	.4
SEP.												
16...	187	8.4	37	9.6	5.3	1.4	161	1	10	2.0	.3	.0
13132500 - BIG LCST RIVER NEAR ARCO, IDAHO (LAT 43 35 16 LONG 113 16 13)												
MAY, 1970												
13...	40	12	57	15	8.7	1.5	240	0	21	5.5	.3	1.2
JUNE												
C5...	24	12	63	16	9.6	1.8	268	0	22	4.5	.3	.7
AUG.												
12...	50	18	66	16	10	2.0	269	0	22	5.0	.3	1.7
BICKEL SPRINGS BASIN												
13132790 - BICKEL SPRINGS NEAR HAGERMAN, IDAHO (LAT 42 45 29 LONG 114 51 19)												
MAR., 1970												
30...	20	33	29	15	17	3.6	162	0	24	12	.4	2.9
SEP.												
21...	18	24	32	16	18	3.9	177	0	23	10	.4	3.1
BIG WOOD RIVER BASIN												
13141000 - BIG WOOD RIVER NEAR BELLEVUE, IDAHO (LAT 43 19 40 LONG 114 20 25)												
MAY, 1970												
11...	830	15	35	6.9	4.0	.9	134	0	15	.0	.3	1.5
26...	1380	12	29	5.4	2.9	.9	111	0	11	.0	.2	.9
SEP.												
14...	102	10	57	10	5.0	1.6	222	0	12	.5	.3	.0
13141500 - CAMAS CREEK NEAR BLAINE IDAHO (LAT 43 19 57 LONG 114 32 27)												
MAY, 1970												
11...	584	14	15	3.4	6.5	1.1	73	0	3.6	1.0	.2	1.5
AUG.												
10...	8.6	24	21	6.1	16	2.4	120	0	5.2	3.0	.4	7.6
SEP.												
14...	7.3	18	26	5.7	14	2.1	128	0	8.0	.5	.4	9.4
13152500 - BIG WOOD RIVER NEAR GOODING, IDAHO (LAT 42 53 10 LONG 114 48 10)												
MAY, 1970												
C9...	1150	13	38	12	15	3.2	166	0	25	11	.6	2.4
AUG.												
14...	96	5.9	47	14	17	4.3	197	0	30	16	.6	1.9
SEP.												
17...	460	6.7	44	15	20	4.5	195	0	33	18	.7	1.6
13152900 - CCVE CREEK NR HAGERMAN IDAHO (LAT 42 52 01 LONG 114 52 06)												
APR., 1970												
10...	60 ^{62.6}	33	40	18	24	3.6	209	0	34	14	.4	6.8
SEP.												
21...	72 ^{71.5}	23	41	18	22	4.1	215	0	31	14	.4	4.9
BRUNEAU RIVER BASIN												
13168500 - BRUNEAU RIVER NEAR HOT SPRING, IDAHO (LAT 42 46 17 LONG 115 43 10)												
DEC., 1969												
11...	96	37	16	2.2	22	3.1	92	0	15	3.0	2.2	.2
MAY, 1970												
25...	2410	23	10	1.9	5.1	2.5	47	0	4.8	.0	.3	1.7
JULY												
21...	311	31	28	3.2	10	3.7	117	0	7.6	.0	1.0	1.8
SEP.												
03...	83	25	14	2.0	23	4.4	84	4	8.6	5.0	2.7	.3

DEC., 1969													
11....	--	138	.19	35.9	49	0	1.4	47	201	8.0	0	7.5	
MAY , 1970													
25....	.56	88	.12	573	33	0	.4	24	91	7.7	--	16.0	
JULY													
21....	1.4	154	.21	129	83	0	.5	20	204	7.7	--	24.0	
SEP.													
03....	.00	133	.18	29.8	43	0	1.5	51	192	8.5	--	28.5	

ANALYSES OF SAMPLES COLLECTED AT PARTIAL-RECORD STATIONS
 CHEMICAL ANALYSES, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

DATE	DIS- CHARGE (CFS)	SILICA (SiO ₂) (MG/L)	CAL- CIUM (CA) (MG/L)	MAG- NE- SIUM (MG)	SODIUM (NA) (MG/L)	PO- TAS- SIUM (K) (MG/L)	BICAR- BONATE (HCO ₃) (MG/L)	CAR- BONATE (CO ₃) (MG/L)	SULFATE (SO ₄) (MG/L)	CHLO- RIDE (CL) (MG/L)	FLUO- RIDE (F) (MG/L)	NITRATE (NO ₃) (MG/L)
BOISE RIVER BASIN												
13202000 - BOISE RIVER NEAR BOISE, IDAHO (LAT 43 31 33 LONG 116 04 02)												
DEC., 1969												
04... 96		12	11	1.3	4.1	.7	46	0	3.6	.0	.4	.6
MAY, 1970												
25... 7340		14	9.2	1.3	3.8	.7	42	0	2.4	.0	.4	.8
AUG.												
31... 4C20		5.5	8.3	1.0	3.2	.7	38	0	.4	.0	.4	.6
PAYETTE RIVER BASIN												
13251000 - PAYETTE RIVER NR. PAYETTE, IDAHO (LAT 44 02 30 LONG 116 55 30)												
MAY, 1970												
19... 6870		17	8.7	1.7	7.0	1.1	50	0	3.6	.5	.3	.9
JULY												
23... 1550		18	15	3.3	18	1.7	93	0	10	2.5	.4	1.7
WEISER RIVER BASIN												
13266000 - WEISER RIVER NEAR WEISER, IDAHO (LAT 44 16 25 LONG 116 46 25)												
JAN., 1970												
21... 6400		23	7.3	3.2	4.1	2.2	30	8	3.4	.0	.2	1.3
MAY												
13... 1930		27	7.9	3.3	3.8	1.2	49	0	1.2	.0	.1	.7
SALMON RIVER BASIN												
13302000 - PAHSIMEROI RIVER NEAR MAY IDAHO (LAT 44 41 31 LONG 114 02 52)												
DEC., 1969												
17... 324		13	40	11	5.4	1.2	167	0	16	3.0	.3	.1
APR., 1970												
14... 157		15	40	14	8.0	1.4	178	3	17	5.5	.1	1.4
23... 247		12	31	15	9.3	2.1	129	14	16	7.0	.2	.2
AUG.												
11... 109		21	49	16	11	1.9	223	0	19	6.5	.2	1.5
13302500 - SALMON RIVER AT SALMON IDAHO (LAT 45 11 00 LONG 113 53 40)												
MAY, 1970												
13... 1780		16	22	4.4	7.6	1.3	95	0	11	1.5	.4	.6
JUNE												
02... 6000		15	16	2.9	4.7	1.0	66	0	5.0	.0	.3	2.1
13305300 - LEMHI RIVER NEAR SALMON IDAHO (LAT 45 07 47 LONG 113 47 47)												
MAY, 1970												
12... 1667		21	42	16	23	3.2	208	0	42	10	.2	1.0
JUNE												
03... 6737		19	26	8.3	11	2.3	109	0	25	5.5	.2	.8
AUG.												
11... 109		27	53	18	32	4.2	260	0	53	12	.1	1.1
13317000 - SALMON RIVER AT WHITE BIRD, IDAHO (LAT 45 45 01 LONG 116 19 23)												
JUNE												
03... 53400		12	6.6	1.3	2.7	.7	32	0	3.0	.5	.2	.2
JULY												
18... 14000		14	13	2.5	4.6	.9	56	0	6.2	.0	.2	.2
SEP.												
26... 6290		10	19	4.1	7.5	1.4	86	0	8.8	1.5	.4	0
CLEARWATER RIVER BASIN												
13342500 - CLEARWATER RIVER AT SPALDING, IDAHO (LAT 46 26 55 LONG 116 49 35)												
JUNE, 1970												
01... 51600		10	2.1	.6	1.4	.5	12	0	.0	.0	.1	.3
JULY												
05... 19600		10	2.2	.5	1.5	.5	15	0	.0	.0	.0	.1

ANALYSES OF SAMPLES COLLECTED AT PARTIAL-RECORD STATIONS
 CHEMICAL ANALYSES, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

103

DATE	PHOS- PHATE (PO4) (MG/L)	DIS- SOLVED SOLIDS (RESI- DUE AT 180 C) (MG/L)	DIS- SOLVED SOLIDS (TONS PER AC-FT)	DIS- SOLVED SOLIDS (TONS PER CAY)	HARD- NESS (CA,MG) (MG/L)	NON- CAR- BONATE HARD- NESS (MG/L)	SODIUM AD- SORP- TION RATIO	PERCENT SODIUM	SPECI- FIC COND- UCTANCE (MICRO- MHOS)	PH (UNITS)	COLOR (PLAT- INUM- COBALT UNITS)	TEMP- ERATURE (DEG C)
BOISE RIVER BASIN												
13202000 - BOISE RIVER NEAR BOISE, IDAHO (LAT 43 31 33 LONG 116 04 02)												
DEC., 1969												
C4...	--	62	.08	16.1	33	0	.3	21	83	7.4	0	6.0
MAY, 1970												
25...	--	54	.07	1070	28	0	.3	22	74	7.5	--	11.0
AUG.												
31...	--	38	.05	412	24	0	.3	21	65	7.5	--	16.5
PAYETTE RIVER BASIN												
13251000 - PAYETTE RIVER NR. PAYETTE, IDAHO (LAT 44 02 30 LONG 116 55 30)												
MAY, 1970												
19...	.36	64	.09	1190	28	0	.6	34	90	7.4	--	14.5
JULY												
23...	.32	114	.16	477	51	0	1.1	42	177	7.4	--	19.0
WEISER RIVER BASIN												
13266000 - WEISER RIVER NEAR WEISER, IDAHO (LAT 44 16 25 LONG 116 46 25)												
JAN., 1970												
21...	.21	64	.09	1110	31	0	.3	21	82	9.2	--	5.0
MAY												
13...	.25	63	.09	329	33	0	.3	19	84	7.4	--	7.5
SALMON RIVER BASIN												
13302000 - PAHSIMEROI RIVER NEAR MAY IDAHO (LAT 44 41 31 LONG 114 02 52)												
DEC., 1969												
17...	--	165	.22	144	145	8	.2	7	292	8.2	--	2.0
APR., 1970												
14...	--	189	.26	80.1	158	6	.3	10	329	8.3	--	6.0
23...	.00	158	.21	105	139	10	.3	12	295	8.3	--	12.0
AUG.												
11...	--	225	.31	66.2	188	6	.3	11	391	7.8	--	11.0
13302500 - SALMON RIVER AT SALMON IDAHO (LAT 45 11 00 LONG 113 53 40)												
MAY, 1970												
13...	--	102	.14	490	73	0	.4	18	180	8.0	--	9.0
JUNE												
02...	--	83	.11	1350	52	0	.3	16	121	7.9	--	12.5
13305300 - LEMHI RIVER NEAR SALMON IDAHO (LAT 45 07 47 LONG 113 47 47)												
MAY, 1970												
12...	--	252	.34	113	171	1	.8	22	431	8.1	--	8.0
JUNE												
03...	--	166	.23	302	99	10	.5	19	264	7.8	--	15.5
AUG.												
11...	--	329	.45	96.8	206	0	1.0	25	516	8.0	--	18.0
13317000 - SALMON RIVER AT WHITE BIRD, IDAHO (LAT 45 45 01 LONG 116 19 23)												
JUNE												
03...	--	48	.07	6920	22	0	.3	21	57	7.6	--	12.0
JULY												
18...	--	70	.10	2650	43	0	.3	19	105	7.5	--	22.0
SEP.												
26...	--	100	.14	1700	64	0	.4	20	159	8.0	--	10.5
CLEARWATER RIVER BASIN												
13342500 - CLEARWATER RIVER AT SPALDING, IDAHO (LAT 46 26 55 LONG 116 49 35)												
JUNE, 1970												
01...	.04	22	.03	3070	8	0	.2	27	22	7.1	--	12.0
JULY												
05...	.02	19	.03	1010	8	0	.2	29	26	6.8	--	19.0

13095175 BRIGGS CREEK AT HEAD, NEAR FILER, IDAHO (LAT 42°40'26", LONG 114°48'30")

DATE	PHOS- PHATE (PO ₄) (MG/L)	DIS- SOLVED SOLIDS (RESI- DUE AT 180 C) (MG/L)	DIS- SOLVED SOLIDS (TONS PER AC-FT)	DIS- SOLVED SOLIDS (TONS PER DAY)	HARD- NESS (CA,MG) (MG/L)	NON- CAR- BONATE HARD- NESS (MG/L)	SODIUM AD- SORP- TION RATIO	PERCENT SODIUM	SPECI- FIC COND- UCTANCE (MICRO- MHOS)	PH (UNITS)	COLOR (PLAT- INUM- COBALT UNITS)	TEMP- ERATURE (DEG C)
MAR., 1970												
26...	--	261	.35	76.1	169	20	.7	22	429	7.8	0	14.0
SEP.												
21...	--	295	.40	110	192	16	.8	21	473	8.0	--	14.0

13132700 THOUSAND SPRINGS AT NORTH TUNNEL NEAR HAGERMAN, IDAHO (LAT 42°44'44", LONG 114°50'25")

[illegible]

ANALYSES OF SAMPLES COLLECTED AT MISCELLANEOUS SITES
CHEMICAL ANALYSES, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

SNAKE RIVER BASIN

13153713 SHORT CREEK NEAR BLISS, IDAHO (LAT 42°52'46", LONG 114°54'26")

DATE	DIS- CHARGE (CFS)	SILICA (SiO2) (MG/L)	CAL- CIUM (CA) (MG/L)	MAG- NE- SIUM (MG) (MG/L)	SODIUM (NA) (MG/L)	PO- TAS- SIUM (K) (MG/L)	BICAR- BONATE (HCO3) (MG/L)	CAR- BONATE (CO3) (MG/L)	SULFATE (SO4) (MG/L)	CHLO- RIDE (CL) (MG/L)	FLUC- RIDE (F) (MG/L)	NITRATE (NO3) (MG/L)
------	-------------------------	----------------------------	--------------------------------	---------------------------------------	--------------------------	--------------------------------------	--------------------------------------	-----------------------------------	----------------------------	---------------------------------	--------------------------------	----------------------------

MAR., 1970												
18...	12	36	70	26	44	4.7	320	0	69	30	.2	9.8
SEP.												
21...	13	26	70	25	44	5.0	323	0	65	29	.4	10

DATE	PHOS- PHATE (PC4) (MG/L)	DIS- SOLVED SOLIDS (RESI- DUE AT 180 C) (MG/L)	DIS- SOLVED SOLIDS (TONS PER AC-FT)	DIS- SOLVED SOLIDS (TONS PER DAY)	HARD- NESS (CA, MG) (MG/L)	NON- CAR- BONATE HARD- NESS (MG/L)	SODIUM AD- SORP- TION RATIO	PERCENT SODIUM	SPECI- FIC COND- UCTANCE (MICRO- MHOS)	PH (UNITS)	COLOR (PLAT- INUM- COBALT UNITS)	TEMP- ERATURE (DEG C)
------	-----------------------------------	--	--	--	-------------------------------------	---	---	-------------------	---	---------------	--	-----------------------------

MAR., 1970												
18...	--	443	.60	14.4	282	20	1.1	25	718	7.8	0	13.9
SEP.												
21...	--	427	.58	15.3	278	13	1.1	25	692	8.0	--	14.0

DATE	SPECI- FIC COND- UCTANCE (MICRO- MHOS)	IMME- DIATE COLI- FORM (COL. PER 100 ML)	ALDRIN (UG/L)	DDD (UG/L)	DDE (UG/L)	DDT (UG/L)	DI- ELDRIN (UG/L)	ENDRIN (UG/L)	HEPTA- CHLOR (UG/L)
------	---	--	------------------	---------------	---------------	---------------	-------------------------	------------------	---------------------------

APR.									
21...	698	26	.00	.00	.00	.00	.00	.00	.00

DATE	HEPTA- CHLOR EPOXINE (UG/L)	LINDANE (UG/L)	2,4-D (UG/L)	SILVEX (UG/L)	2,4,5-T (UG/L)	PARA- THION (UG/L)	METHYL PARA- THION (UG/L)	DI- AZINON (UG/L)	TEMP- ERATURE (DEG C)
------	--------------------------------------	-------------------	-----------------	------------------	-------------------	--------------------------	------------------------------------	-------------------------	-----------------------------

APR.									
21...	.00	.00	.00	.00	.00	.00	.00	.00	14.0

PAYETTE RIVER BASIN

13237920 - MIDDLE FORK PAYETTE RIVER AT CROUCH IDAHO (LAT 44 06 50 LONG 115 58 08)

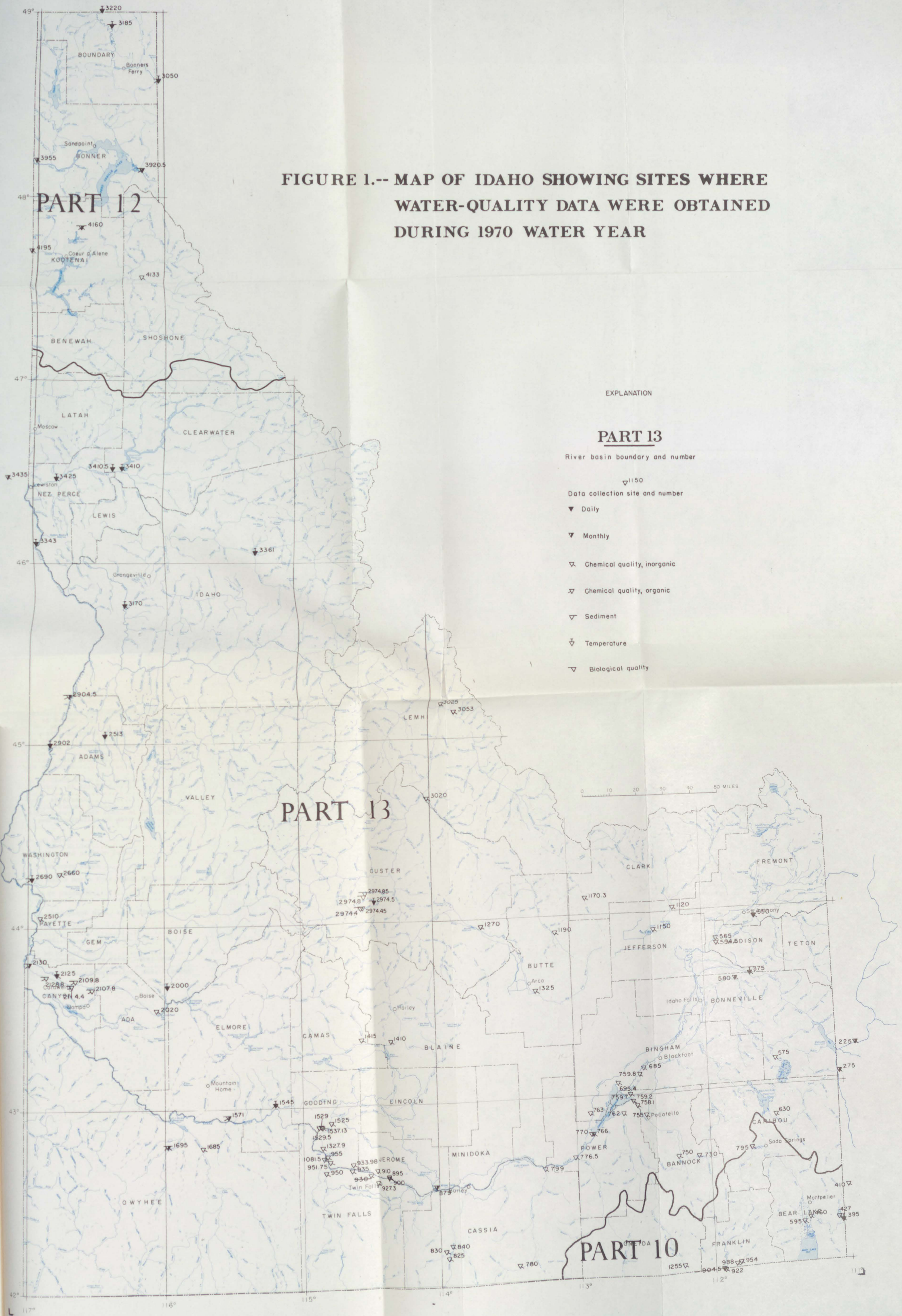
DATE	TIME	DISCHARGE	DIS- SOLVED MERCURY (MG) (UG/L)	TEMP- ERATURE (DEG C)
JULY 06...	1230	751 739	0.1	16.5

SALMON RIVER BASIN

13312000 - EAST FORK SOUTH FORK SALMON RIVER NR YELLOW PINE IDAHO (LAT 44 57 46 LONG 115 27 35)

DATE	TIME	DISCHARGE	DIS- SOLVED MERCURY (MG) (UG/L)	TEMP- ERATURE (DEG C)
JULY 07...	1310	438	0.2	11.0

**FIGURE 1.-- MAP OF IDAHO SHOWING SITES WHERE
WATER-QUALITY DATA WERE OBTAINED
DURING 1970 WATER YEAR**



MAP OF BRITISH COLUMBIA
WITH QUALITY DATA WATER QUALITY
DURING 1976 WATER YEAR

PART 13

PART 13

PART 13

INDEX

	Page		Page
Bear Lake outlet canal near Paris.....	16	Map of Idaho showing water-quality sampling sites	107
Bear River, at Border, Wyo.....	12	Mason Creek at Caldwell.....	64
at Cornish, Utah.....	17	Meadow Creek near Lowell.....	86
Bear River basin, analyses at partial-record sites in.....	18	Mores Creek above Robie Creek, near Arrowrock Dam	62
Big Boulder Creek at Livingston Mill, near Clayton.....	82	Rainbow inlet canal near Dingle.....	15
Big Jacks Creek near Bruneau.....	59	Salmon River at White Bird.....	84
Boise River at Nqtus.....	66	Salt River above reservoir, near Etna, Wyo.....	37
Clark Fork at Clark Fork.....	29	Sediment.....	9
Clearwater River, at Spalding.....	90	Selected references.....	10
near Peck.....	89	Snake River, above reservoir, near Alpine, Wyo..	36
North Fork, at Ahsahka.....	88	at Hells Canyon Dam, Idaho-Oregon State line..	76
near Canyon ranger station.....	87	at King Hill.....	54
Coeur d'Alane River, South Fork, at Smelterville	31	at Marsing.....	60
Collection and examination of data.....	7	at Weiser.....	72
Cooperation.....	1	below Pine Creek, at Oxbow, Oreg.....	75
Definition of terms.....	2	near Anatone, Wash.....	85
Dixie Slough near Wilder.....	68	near Clarkston, Wash.....	91
Downstream order and station numbers.....	6	near Hammett.....	57
Five Mile Creek near Nampa.....	63	near Heise.....	38
Hayden Creek below North Fork, near Hayden Lake.	32	Snake River basin, analyses at miscellaneous sites in.....	104
Indian Creek at Caldwell.....	65	analyses at partial-record sites in.....	92
Introduction.....	1	Solutes.....	8
Jim Creek at Livingston Mill, near Clayton.....	83	Special networks and programs.....	6
Kootenai River, at Leonia.....	20	Spokane River above Liberty Bridge, near Otis	35
at Porthill.....	28	Orchards, Wash.....	35
near Copeland.....	23	Temperature.....	8
Lake Milner at Milner Dam.....	42	Teton River near St. Anthony.....	40
Little Boulder Creek, above Baker Lake, near Clayton.....	78	Water-supply papers.....	9
below Boulder Chain Lakes outlet, near Clayton	79	West Branch Weiser River near Tamarack.....	71
near Clayton.....	80	Willow Creek near Ririe.....	41

