UNITED STATES

DEPARTMENT OF THE INTERIOR

GEOLOGICAL SURVEY

HYDROLOGIC DATA FOR THE CACHE CREEK-BEAR THRUST ENVIRONMENTAL IMPACT STATEMENT NEAR JACKSON, WYOMING

By Gordon S. Craig, Jr., Bruce H. Ringen, and Edward R. Cox

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CONVERSION FACTORS

Metric equivalents of inch-pound units used in this report may be determined by the following conversion factors:

Multiply	By	To obtain
Inch	25.4	Millimeter (mm)
Foot (ft)	0.3048	Meter
Mile	1.609	Kilometer
Cubic foot per second (ft^3/s, cfs)	0.02832	Cubic meter per second
Acre-foot (acre-ft)	1,233	Cubic meter
Gallon per minute (gal/min)	3.785	Liter per minute

Water temperatures are measured by the U.S. Geological Survey in degrees Celsius (°C) and are rounded to the nearest 0.5°C. The following table can be used to convert water temperatures given in this report from °C to degrees Fahrenheit (°F).

°C	°F	°C	°F	°C	°F	°C	°F
0.0	32	10.0	50	20.0	68	30.0	86
.5	33	10.5	51	20.5	69	30.5	87
1.0	34	11.0	52	21.0	70	31.0	88
1.5	35	11.5	53	21.5	71	31.5	89
2.0	36	12.0	54	22.0	72	32.0	90
2.5	36	12.5	54	22.5	72	32.5	90
3.0	37	13.0	55	23.0	73	33.0	91
3.5	38	13.5	56	23.5	74	33.5	92
4.0	39	14.0	57	24.0	75	34.0	93
4.5	40	14.5	58	24.5	76	34.5	94
5.0	41	15.0	59	25.0	77	35.0	95
5.5	42	15.5	60	25.5	78	35.5	96
6.0	43	16.0	61	26.0	79	36.0	97
6.5	44	16.5	62	26.5	80	36.5	98
7.0	45	17.0	63	27.0	81	37.0	99
7.5	45	17.5	63	27.5	81	37.5	99
8.0	46	18.0	64	28.0	82	38.0	100
8.5	47	18.5	65	28.5	83	38.5	101
9.0	48	19.0	66	29.0	84	39.0	102
9.5	49	19.5	67	29.5	85	39.5	103

LOCATION-NUMBERING SYSTEMS

Wells and springs are numbered in this report according to their locations within the Federal system of land subdivision. Each number shows the location by township, range, section, and location within the section. The first numeral denotes the township; the second numeral, the range; and the third numeral, the section in which the well or spring is located. The lowercase letters after the section number indicate the location within the section. The first letter denotes the quarter section; the second letter, the quarter-quarter section; and the third letter, the quarter-quarter-quarter section (10-acre tract). The subdivisions of a section are lettered a, b, c, and d in a counterclockwise direction, beginning with "a" in the northeast quarter.

As a means of identification, the U.S. Geological Survey assigns an eight-digit station number (such as 13018300) to gaging stations and most other sites where surface-water data are collected. The station numbers increase in downstream order. Stations on tributaries are assigned numbers between upstream and downstream stations on main stems. Gaps are left in the numbering system to allow for new stations that may be established. The first two digits of the station number denote the drainage basin. Station numbers beginning with "13" are in Snake River drainage.

In this report consecutive numbers have been used to identify data-collection sites in each table and on corresponding maps.

GLOSSARY

Acre-foot (AC-FT, acre-ft) is the quantity of water required to cover 1 acre to a depth of 1 foot and is equivalent to 43,560 cubic feet or about 326,000 gallons or 1,233 cubic meters.

Bed material See Sediment

Cubic foot per second (FT^3/S, ft^3/s) is the rate of discharge representing a volume of 1 cubic foot passing a given point during 1 second.

Discharge is the volume of water (or more broadly, volume of fluid plus suspended sediment), that passes a given point within a given period of time.

Instantaneous discharge is the discharge at a particular instant of time.

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

Drainage area of a stream at a specific location is that area enclosed by a topographic divide from which direct surface runoff from precipitation normally drains into the stream 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 a body of impounded surface water together with all tributary surface streams and bodies of impounded surface water.

Fall diameter see Sediment

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

Gaging station is a particular site on a stream, canal, lake, or reservoir where systematic observations of hydrologic data are obtained.

Hydrologic bench-mark station is a surface-water station that provides hydrologic data for a basin in which the hydrologic regimen will likely be governed solely or principally by natural conditions. Streamflow data are collected continuously and water-quality data are collected at intervals as required to define the characteristics. These data will be collected indefinitely. (Cobb and Biesecker, 1971).

National Geodetic Vertical Datum of 1929 (NGVD) is a geodetic datum derived from a general adjustment of the first order level nets of both the United States and Canada, formerly called "Mean Sea Level".

Stage-discharge relation is the relation between gage height (stage) and volume of water per unit of time, flowing in a channel.

Sediment is solid material that originates mostly from disintegrated rocks. It may also include chemical and biochemical precipitates or decomposed organic material such as humus. Sediment eroded by, suspended in, transported by, or deposited from streams is known as fluvial sediment.

Fluvial sediment consists of bed material, the unconsolidated material of which a streambed is composed, and suspended sediment, the sediment, including colloids, that at any given time is maintained in suspension by the upward components of turbulent currents or that exists in suspension as a colloid.

The sizes of the sediment particles are usually reported in one of two categories, dependent on the method of analyses. Fall diameter of a sediment particle is the diameter of a sphere that has a specific gravity of 2.65 and has the average rate of fall that a particle would attain if falling alone in quiescent distilled water of infinite extent at 24°C. Sieve diameter is the length of the side of the smallest square opening through which the given sediment particle will pass. The U.S. Geological Survey commonly reports size values as percent of the material finer than the specified size.

The following classification is used by the the U.S. Geological Survey for defining particle size of sediment:

Classification	Diameter Limits (mm)
Clay	0.00024 - 0.004
Silt	.004 - .062
Sand	.062 - 2.0
Gravel	2.0 - 64.0

Sediment-transport curve is a curve of best fit that is drawn through a plot of known values of sediment load versus known values of discharge or stage, from which unknown values of sediment load can be estimated from a known discharge or stage.

Sieve diameter see Sediment

Suspended sediment see Sediment

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 stream course.

Water year (in Geological Survey reports dealing with surface-water supply) is the 12-month period, October 1 through September 30. The water year is designated by the calendar year in which it ends and which includes 9 of the 12 months. Thus, the year ending September 30, 1979, is called the "1979 water year."

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ABSTRACT

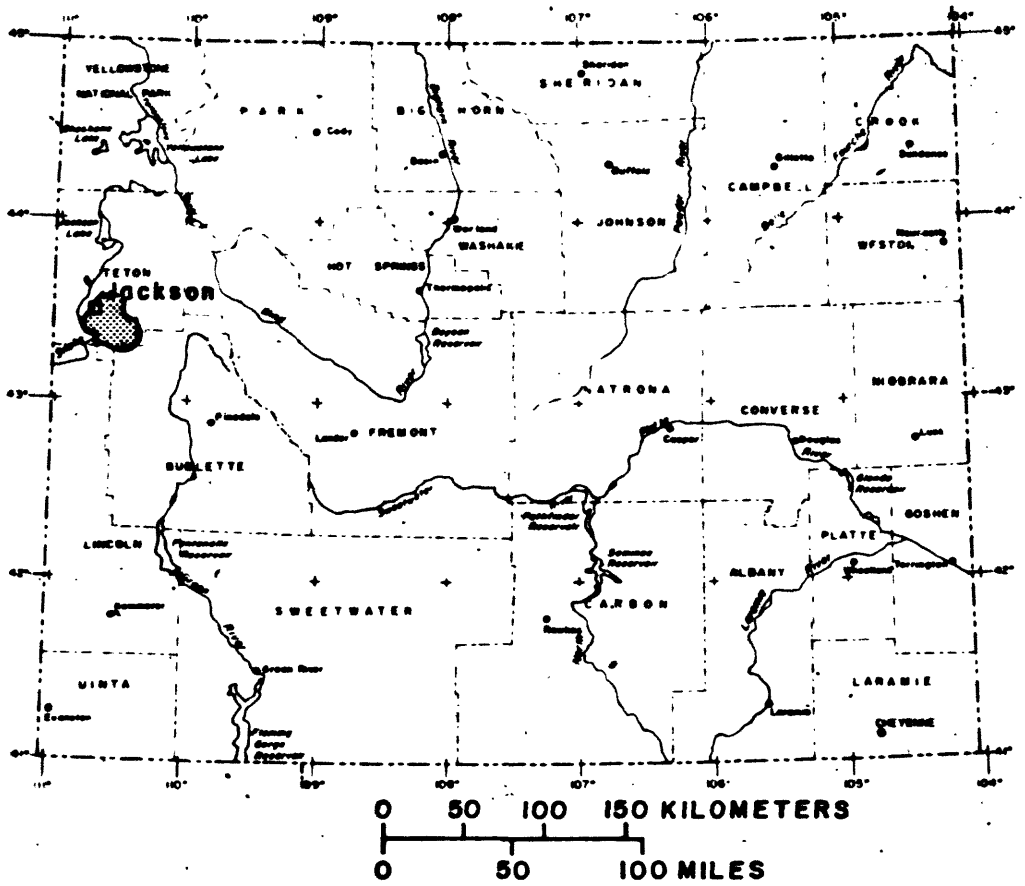
Information on the quantity and quality of surface and ground water in an area of concern for the Cache Creek-Bear Thrust Environmental Impact Statement in northwestern Wyoming is presented without interpretation. The environmental impact statement is being prepared jointly by the U.S. Geological Survey and the U.S. Forest Service and concerns proposed exploration and development of oil and gas on leased Federal land near Jackson, Wyoming. Information includes data from a gaging station on Cache Creek, from miscellaneous sites on streams, from wells, and from springs. Data include streamflow, chemical and suspended-sediment quality of streams, chemical quality of ground water, and the water-bearing properties of geologic units.

INTRODUCTION

The U.S. Geological Survey and the U.S. Forest Service are jointly preparing the Cache Creek-Bear Thrust Environmental Impact Statement concerning proposed exploration and development of oil and gas on leased Federal land in the Bridger-Teton National Forest near Jackson in northwestern Wyoming. The purpose of this report is to provide information on the quantity and quality of surface and ground water within an area of concern (fig. 1) as defined by planning documents for the environmental impact statement.

The area considered in this report includes the southwestern part of the proposed Gros Ventre Wilderness Area and adjoining land along Flat Creek, the Snake River, the Hoback River, and Granite Creek (fig. 2). The town of Jackson is included in the area considered.

Access, at present, to the proposed wilderness area is by hiking and pack trails in the summer and by ski and snowmobile trails in the winter. A few primitive roads extend from highways and developed roads in the stream valleys to the boundary of the proposed wilderness area.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PARK
BIG HORN
SHERIDAN
CROOK
CAMPBELL
JOHNSON
WESTON
WASHAKIE
HOT SPRINGS
TETON
Jackson
NATRONA
NIOBRARA
CONVERSE
FREMONT
SUBLETTE
GOSHEN
PLATTE
LINCOLN
ALBANY
CARBON
SWEETWATER
UINTA
LARAMIE
CHEYENNE
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0 50 100 MILES

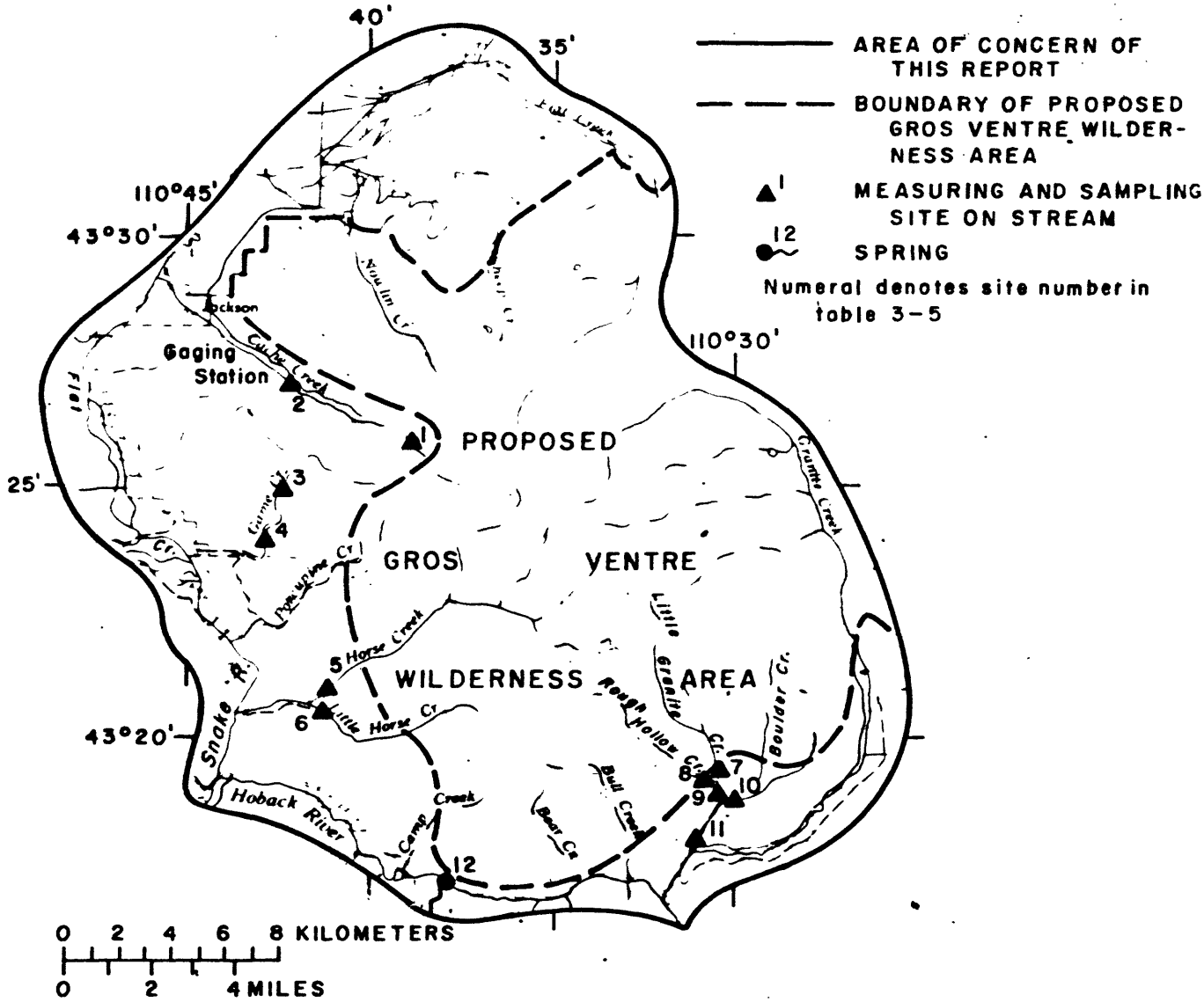

Figure 2.—Locations of measuring and sampling sites, August-September 1980.

Physiographic Description of the Area

The area of concern is within and adjacent to a part of the proposed Gros Ventre Wilderness Area. The terrain is mountainous with elevations ranging from 6,400 ft in the valleys to over 9,000 ft at the drainage divides, with some higher peaks exceeding 10,000 ft. Rock ledges and escarpments are common throughout the area. Many small drainage basins, such as Cache Creek, Horse Creek, Little Horse Creek, Game Creek, and Little Granite Creek have deep valleys and are heavily forested on steep southerly slopes, whereas the moderate northern slopes contain only scattered groves of trees separated by open grassy areas. Valley floors in general are narrow with fairly dense brush and trees. A few valleys, such as Game Creek, are wide and commonly contain beaver dams and tall grasses. The valleys of the large streams in or near the area, such as Flat Creek, the Snake River, the Hoback River, and Granite Creek, are generally wider and contain fewer trees.

Data Available

Data concerning the quantity and quality of surface and ground water are not available within the proposed Gros Ventre Wilderness Area. However, a stream-gaging station, installed in June 1962, on Cache Creek near Jackson is very close to the wilderness boundary line (fig. 2). The gaging station is classified as a hydrologic bench-mark station. Data obtained there include: stream discharge since 1962, chemical quality of water since 1965, and suspended-sediment information since 1968. These data are published annually in the U.S. Geological Survey Water Resources Data for Wyoming for each water year. (For example, see U.S. Geological Survey, 1980.)

Ground-water data are available from a few published hydrologic reports. Reconnaissance studies in the thrust belt of Wyoming (Lines and Glass, 1975) and in northwestern Wyoming (Cox, 1976) and a tabulation of data from northwestern Wyoming (Cox, 1975) include ground-water data collected in the area during 1971-73. Additional ground-water data were not collected during this investigation.

Low-water discharge measurements, water samples, and streambed and bank-soil samples were obtained in August and September 1980 at selected miscellaneous sites within the area (fig. 2). These data were collected to supplement information from the gaging station on Cache Creek for this report.

Hydrologic data are tabulated at the back of this report. Water-discharge records from the gaging station on Cache Creek are shown in table 1. Water-quality records from the gaging station are shown in table 2. Both of these tables are reproduced directly from U.S. Geological Survey water-resources data reports. Chemical-quality and suspended-sediment data from water samples collected in August and September 1980 at selected miscellaneous sites on streams within the area of concern (fig. 2) are shown in table 3, as well as data from samples collected at the gaging station on Cache Creek at the same time. Particle-size distributions of material from the surface of the streambeds are shown in table 4, and the particle-size distributions of material from the right and left streambanks (facing downstream) are shown in table 5. Chemical analyses of water from streams at sites within the area of this report (fig. 3) sampled during a previous investigation in 1971-73 are shown in table 6. Chemical analyses of water from wells and springs sampled in 1971-73 (fig. 4) are shown in table 7. A generalized section of geologic units and their water-bearing properties is shown in table 8.

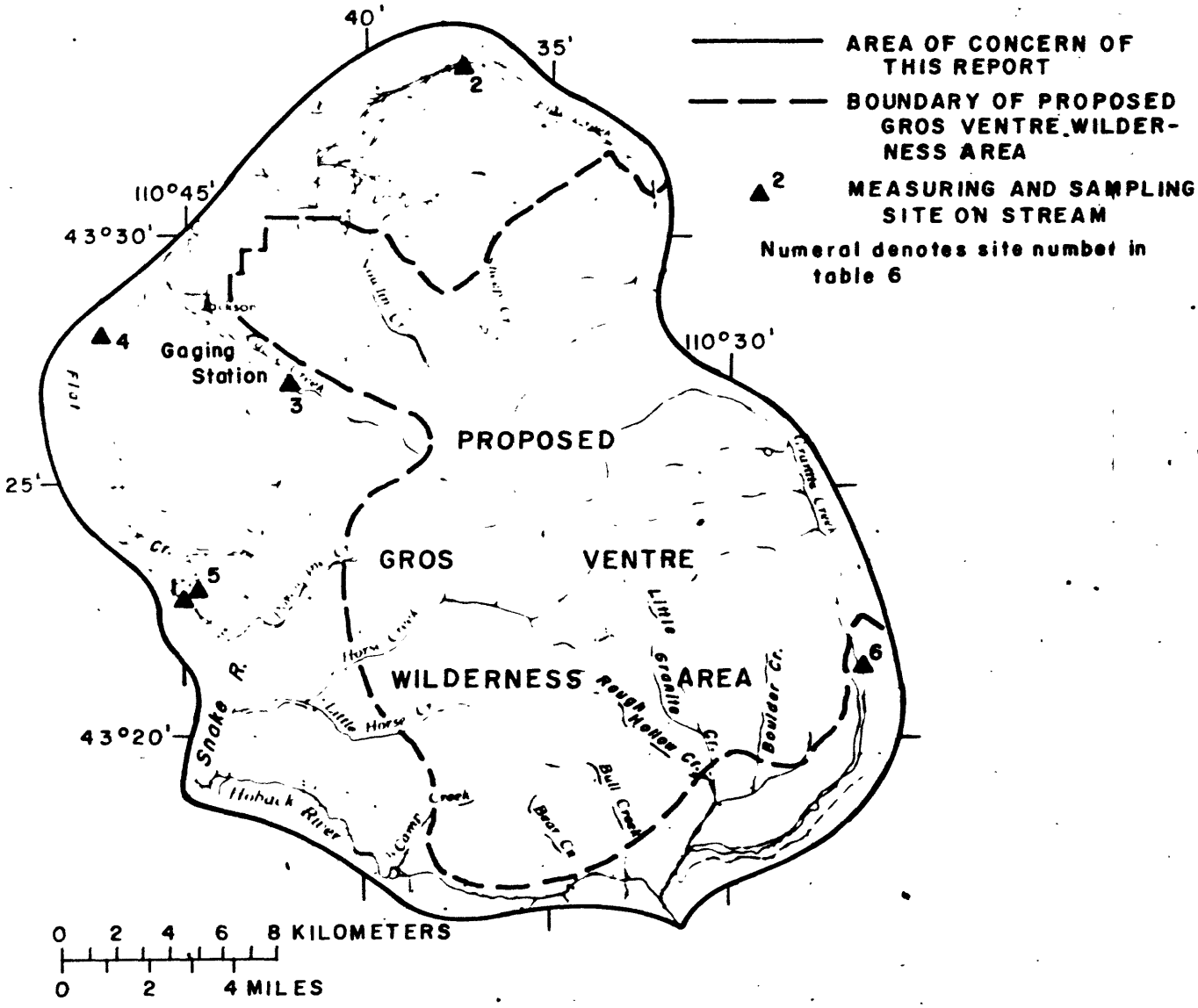

Figure 3.--Locations of measuring and sampling sites on streams, 1971-73.

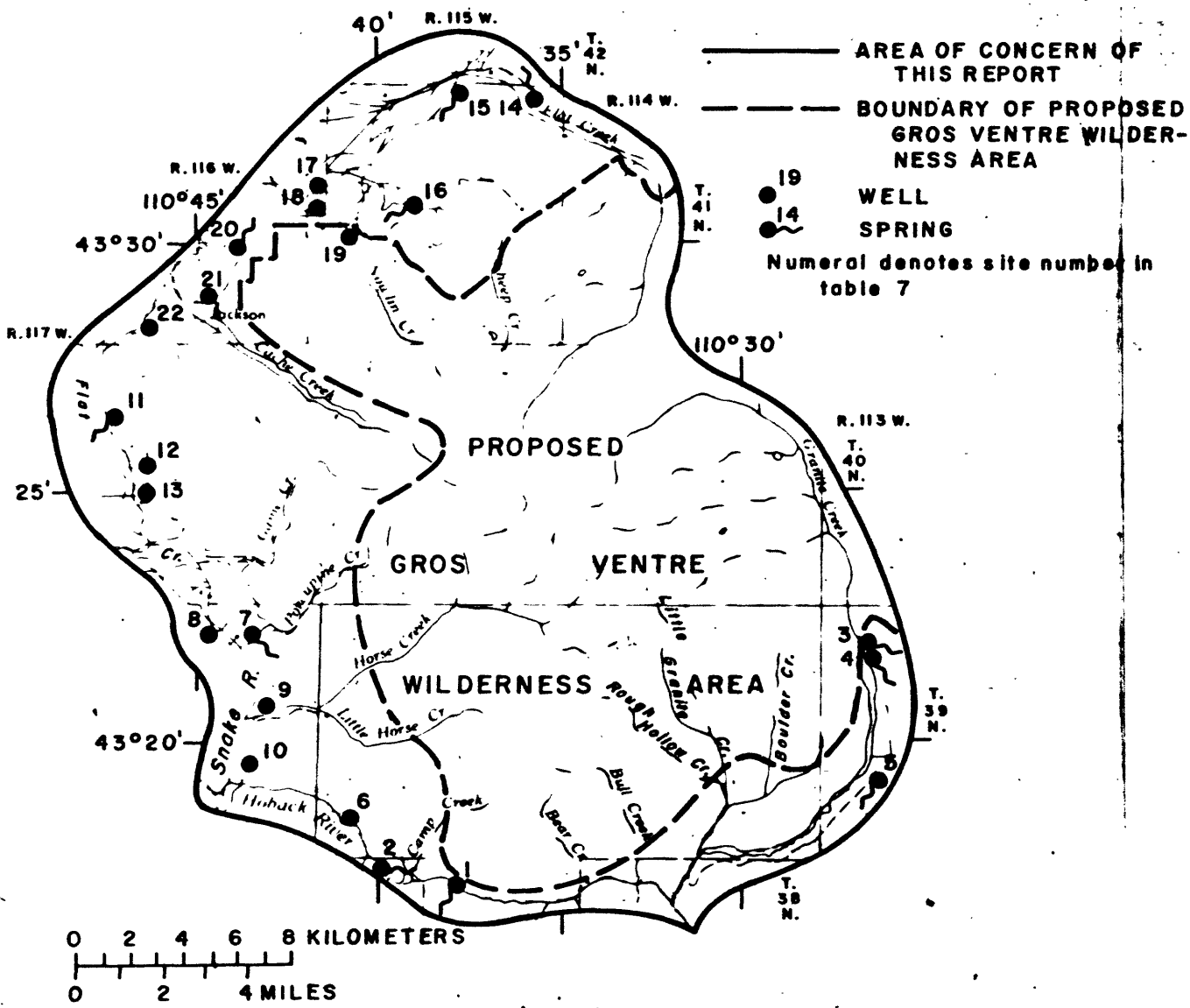

Figure 4.--Locations of wells and springs that were sampled [illegible]

Data Collection

Streamflow was measured according to standard techniques described by Buchanan and Somers (1969) except at the gaging station on Cache Creek, where the measured stage and a stage-discharge relation were used to determine the streamflow.

Samples for chemical analysis were collected, filtered, and treated according to standard methods described by Skougstad and others (1979). Analyses for chemical constituents in the water were made at a U.S. Geological Survey laboratory in Arvada, Colo.

Samples for suspended-sediment concentration analyses were collected according to standard techniques using a standard US-series DH-48 suspended-sediment sampler (Guy and Norman, 1970). Streambed material was sampled according to standard techniques using a US-series BMH-53 bed-material sampler or a random particle-selection method. Bank material was sampled using a shovel. Analyses for suspended-sediment concentration and particle-size distribution were made according to standard techniques (Guy, 1969) at a U.S. Geological Survey laboratory in Worland, Wyo.

HYDROLOGY

Surface Water

Streamflow data have been collected from the gaging station on Cache Creek (13018300) since June 1962. Instantaneous discharge measurements are made approximately monthly, and a stage-discharge relationship has been established using discharge measurements and records from a water-stage recorder. Daily mean discharges and other information and data from the gaging station are shown in table 1.

Annual peak flows at a gaging station can be used in determining a flood-frequency relationship for a stream. A listing of annual maximum instantaneous peak discharges on Cache Creek at the gaging station for the period of record is shown in the following table:

Water year	Date	Peak discharge (ft^3/s)
1963	6-1-63	55
1964	6-7-64	75
1965	6-13-65	157
1966	5-10-66	58
1967	6-1-67	77
1968	6-13-68	71
1969	5-27-69	83
1970	6-9-70	108
1971	6-24-71	225
1972	6-7-72	162
1973	5-20-73	46
1974	6-15-74	116
1975	6-15-75	61
1976	6-3-76	93
1977	6-8-77	22
1978	6-9-78	116
1979	5-28-79	72

A frequency curve developed from the annual peak discharges, listed in the previous table, is shown in figure 5. This is a log-Pearson Type III flood-frequency curve computed in accordance with the Water Resources Council criteria (U.S. Water Resources Council, 1977). The curve indicates that a flood with the recurrence interval of 50 years (a 50-year flood) would have a peak discharge of 230 ft^3/s. It can also be stated that there is a 2-percent chance (1 chance in 50) of a flood of this magnitude being equaled or exceeded in any given year.

Other gaging stations were operated in the area on Flat Creek 9 miles northeast of Jackson (station 13018000) during 1933-41 and on the Hoback River 13.5 miles southeast of Jackson (station 13019500) during 1917-18 and 1944-58. Data available from the gaging stations are monthly and yearly mean discharges, monthly and yearly total runoff, and annual peak discharges from compilation reports of surface-water records (U.S. Geological Survey, 1956; 1963). The following tables were reproduced directly from the compilation reports and show information about and data from the two gaging stations.

Quality of Water

Water-quality data for water samples collected at the Cache Creek gaging station since 1965 and suspended-sediment data for the site since 1968 are shown in table 2. Samples have been collected approximately monthly as well as on a flow-event basis.

Colby (1956) and Porterfield (1972) describe a method of using instantaneous values of suspended-sediment concentration and coincident water discharge to define a record of annual suspended-sediment discharge. This method establishes a relationship between suspended-sediment concentration and water discharge and provides a reasonable record of annual suspended-sediment discharge. Colby (1956, p. 167) in describing the accuracy of this method stated, "Suspended-sediment discharges computed from any sediment-rating curve, except curves for some streams that transport mostly sands, will be less accurate than sediment discharges that are computed from frequent samples." Annual suspended-sediment discharges computed for Cache Creek at the gaging station using the method described by Colby (1956) and Porterfield (1972) are shown below.

Water year	Total annual water discharge (ft^3/s)	Computed annual suspended-sediment discharge (tons)
1968	4,704.2	510
1969	4,740.3	540
1970	5,048.4	800
1971	7,387.8	2,200
1972	7,088.9	1,900
1973	3,660.9	210
1974	5,860.8	970
1975	4,653.2	490
1976	5,218.9	700
1977	2,078.3	50
1978	5,379.8	900
1979	4,134.7	370

Flat Creek near Jackson, Wyo.

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

Drainage area.--40.7 sq mi.

Gage.--Staff gage. Altitude of gage is 6,750 ft (from topographic map). Prior to June 14, 1938, staff gages at several nearby sites and datums.

Extremes.--1933-41: Maximum discharge observed, 438 cfs June 15, 1935 (gage height, 3.48 ft, site and datum then in use); minimum observed, 7 cfs Apr. 15-18, 1935 (gage height, 1.06 ft, site and datum then in use), but may have been less during winter periods of no record.

Remarks.--No diversion above station.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1933	-	-	-	-	-	-	-	-	-	87.2	37.3	25.6	-
1934	21.0	-	-	-	-	-	16.3	82.6	54.5	27.1	18.4	14.4	-
1935	15.2	13.2	-	-	-	-	$8.5	24.4	239	101	46.7	30	-
1936	20.4	-	-	-	-	-	$15.4	96.7	198	81.0	42.3	31.7	-
1937	27.0	22.0	-	-	-	13.0	12.2	48.0	133	84.8	34.9	24.0	-
1938	21.2	21.3	-	-	-	-	18.6	44.5	220	135	56.6	37.3	-
1939	30.5	-	-	-	-	-	$19.5	74.5	119	70.8	35.6	26.7	-
1940	22.2	19.1	15.0	-	-	-	$14.0	54.9	115	44.0	22.3	16.6	-
1941	17.9	-	-	-	-	-	16.3	62.4	175	94.7	47.8	35.8	-
1942	30.5	$26.7	-	-	-	-	-	-	-	-	-	-	-

$ Not previously published; partly estimated on the basis of records for nearby streams.

Monthly and yearly runoff, in acre-feet

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1933	-	-	-	-	-	-	-	-	-	5,360	2,290	1,520	-
1934	1,290	-	-	-	-	-	970	5,080	3,240	1,670	1,130	857	-
1935	932	787	-	-	-	-	$506	1,500	14,240	6,230	2,870	1,790	-
1936	1,260	-	-	-	-	-	$916	5,950	11,190	4,980	2,600	1,890	-
1937	1,660	1,310	-	-	-	799	726	2,860	7,900	5,210	2,140	1,430	-
1938	1,300	1,270	-	-	-	-	1,110	2,740	13,080	8,300	3,480	2,220	-
1939	1,870	-	-	-	-	-	$1,160	4,580	7,070	4,350	2,190	1,590	-
1940	1,360	1,140	924	-	-	-	$835	3,380	6,840	2,700	1,370	986	-
1941	1,100	-	-	-	-	-	968	3,830	10,390	5,820	2,940	2,130	-
1942	1,880	$1,590	-	-	-	-	-	-	-	-	-	-	-

$ Not previously published; partly estimated on the basis of records for nearby streams.

Yearly discharge, in cubic feet per second

Year	W.S.P. no.	Water year ending Sept. 30					Calendar year	
		Maximum observed		Minimum day	Mean	Runoff in acre-feet	Mean	Runoff in acre-feet
		Discharge	Date					
1933	768	279	June 23, 1933	-	-	-	-	-
1934	769	128	May 22,25, 1934	-	-	-	-	-
1935	793	438	June 15, 1935	-	-	-	-	-
1936	813	268	June 2, 1936	-	-	-	-	-
1937	833	214	June23,24,1937	-	-	-	-	-
1938	863	271	June 23, 1938	-	-	-	-	-
1939	883	156	June2,3, 1939	-	-	-	-	-
1940	903	148	June 1, 1940	-	-	-	-	-
1941	933	222	June 19, 1941	-	-	-	-	-

Hoback River near Jackson, Wyo.

Location.--Lat 43°17'55", long 110°40'10", in sec.32, T.39 N., R.115 W., on right bank at Camp Creek Camp, a quarter of a mile downstream from Willow Creek, 4 miles upstream from mouth, and 15½ miles southeast of Jackson.

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

Records available.--July 1917 to September 1918 (published as "near Cheney"), October 1944 to September 1958. Monthly discharge only for some periods, published in WSP 1317.

Gage.--Staff gage. Altitude of gage is 6,040 ft (from topographic map). July 9, 1917, to Sept. 30, 1918, at site 3½ miles downstream at different datum. Nov. 6, 1944, to May 29, 1956, at site 300 ft upstream at datum 0.92 ft higher.

Average discharge.--14 years (1944-58), 706 cfs (511,100 acre-ft per year).

Extremes.--1917-18, 1944-58: Maximum discharge observed, 6,160 cfs June 16, 1918 (gage height, 13.46 ft, site and datum then in use); minimum observed, 90 cfs Dec. 18, 1946 (gage height, 1.70 ft, site and datum then in use).

Remarks.--Small diversions above station for irrigation.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1917	-	-	-	-	-	-	-	-	-	-	671	440	-
1918	-	-	-	-	-	-	-	-	-	1,490	524	339	-
1945	*211	*192	158	170	164	168	254	1,205	1,795	1,295	544	376	*516
1946	305	259	222	194	198	220	1,486	1,946	2,061	916	413	304	711
1947	274	229	205	176	190	225	604	2,401	1,842	1,039	535	296	682
1948	255	219	194	177	174	164	425	1,824	2,035	701	348	245	567
1949	230	194	164	175	170	182	643	2,248	2,012	674	393	280	651
1950	276	255	209	195	197	190	669	2,209	3,389	2,114	716	432	904

* Not previously published; estimated on the basis of records for Gros Ventre River.

Monthly and yearly runoff, in acre-feet, of Hoback River near Jackson, Wyo.

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1917	-	-	-	-	-	-	-	-	-	-	41,300	26,200	-
1918	-	-	-	-	-	-	-	-	91,600	-	32,200	20,200	-
1945	*12,970	*11,450	9,740	10,440	9,090	10,360	15,120	74,070	106,700	79,620	33,480	22,370	*395,400
1946	18,770	15,360	13,650	11,930	10,990	13,530	88,440	119,600	122,600	56,350	25,420	18,070	514,700
1947	16,820	13,640	12,590	10,830	10,550	13,740	35,900	147,600	109,600	63,870	32,880	17,040	479,000
1948	15,310	13,040	11,950	10,880	9,990	10,080	26,100	112,200	121,100	43,120	21,370	14,810	411,900
1949	14,170	11,550	11,300	10,780	9,910	11,220	50,190	138,200	119,700	53,740	24,160	16,680	471,600
1950	16,920	15,160	12,760	11,970	10,970	11,680	39,800	135,800	199,900	130,000	44,070	25,720	654,700

* Not previously published; estimated on the basis of records for Gros Ventre River.

Yearly discharge, in cubic feet per second

Year	W.S.P. no.	Water year ending Sept. 30							Calendar year		
		Maximum observed		Minimum day	Mean	Per square mile	Runoff		Mean	Runoff	
		Discharge	Date				Inches	Acre-feet		Inches	Acre-feet
1917	463	-	-	-	-	-	-	-	-	-	-
1918	483	[illegible]	-	-	-	-	-	-	-	-	-
1945	1043	2,390	June 22, 1945	*130	*546	*0.968	*13.13	*395,400	565	13.58	409,000
1946	1063	2,960	June 6, 1946	170	711	1.26	17.12	514,700	704	16.97	510,000
1947	1093	3,050	May 8,11,1947	90	662	1.17	15.92	479,000	659	15.85	477,300
1948	1123	3,180	May 29, 1948	130	567	1.01	13.70	411,900	561	13.56	407,600
1949	1153	3,280	May 17, 1949	142	651	1.15	15.67	471,600	662	15.92	479,500
1950	1183	4,290	June 7, 1950	158	904	1.60	21.75	654,700	-	-	-

* Not previously published.

Monthly and yearly mean discharge, in cubic feet per second

Water Year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	363	307	259	232	229	210	1,104	2,947	2,893	1,959	845	417	985
1952	344	254	236	231	205	200	845	2,632	2,393	985	464	314	760
1953	249	206	198	195	174	195	489	1,056	2,613	1,345	485	287	626
1954	255	228	201	195	190	190	605	2,567	1,983	1,443	465	300	724
1955	242	215	186	168	164	156	261	1,220	1,847	820	383	249	496
1956	240	213	240	217	189	208	1,347	3,396	3,312	1,367	550	328	968
1957	282	229	215	206	202	182	335	1,837	2,724	1,501	522	371	719
1958	289	227	213	210	193	165	302	2,510	1,724	468	281	210	569
1959													
1960													

Monthly and yearly discharge, in acre-feet

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	22,650	18,270	15,920	14,280	12,740	12,920	65,690	181,200	172,100	120,500	51,940	24,830	713,000
1952	21,160	15,120	14,640	14,250	11,820	12,320	50,260	161,800	142,400	60,560	28,510	18,660	551,500
1953	15,410	12,090	12,190	12,010	9,650	12,010	29,070	65,040	155,500	83,270	29,850	17,060	453,000
1954	15,540	13,540	12,380	11,960	10,900	11,660	35,930	159,100	116,800	88,720	29,790	17,860	524,200
1955	14,870	12,790	11,410	11,560	9,130	9,570	15,540	75,010	109,900	51,040	23,540	14,810	359,200
1956	14,760	12,690	14,750	13,360	10,900	12,810	80,140	208,800	197,100	84,070	33,840	19,500	702,700
1957	17,350	13,640	13,250	12,680	11,230	11,170	19,940	112,900	162,100	92,300	32,080	22,100	520,700
1958	17,790	13,530	13,100	12,920	10,700	10,150	17,960	154,300	102,600	28,750	17,270	12,510	411,600
1959													
1960													

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30							Calendar year		
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff		Mean	Runoff	
		Discharge	Date				Inches	Acre-feet		Inches	Acre-feet
1950	-	-	-	-	-	-	-	-	921	22.18	666,600
1951	1217	4,730	May 29, 1951	174	985	1.75	23.69	713,000	977	23.49	707,100
1952	1247	3,720	(a)	166	760	1.35	18.32	551,500	744	17.95	540,200
1953	1287	4,080	June 14,15,1953	138	626	1.11	15.07	453,000	626	15.13	454,900
1954	1347	5,900	May 22, 1954	160	724	1.28	17.43	524,200	721	17.35	521,800
1955	1397	2,450	June 16, 1955	137	496	.879	11.93	359,200	500	12.03	362,300
1956	1447	5,800	June 2, 1956	145	968	1.72	23.34	702,700	971	23.41	704,800
1957	1517	4,500	June 7, 1957	150	719	1.27	17.30	520,700	720	17.31	520,900
1958	1567	4,400	May 26, 1958	138	569	1.01	13.70	411,600	-	-	-
1959											
1960											

a May 4, June 7, 1952.

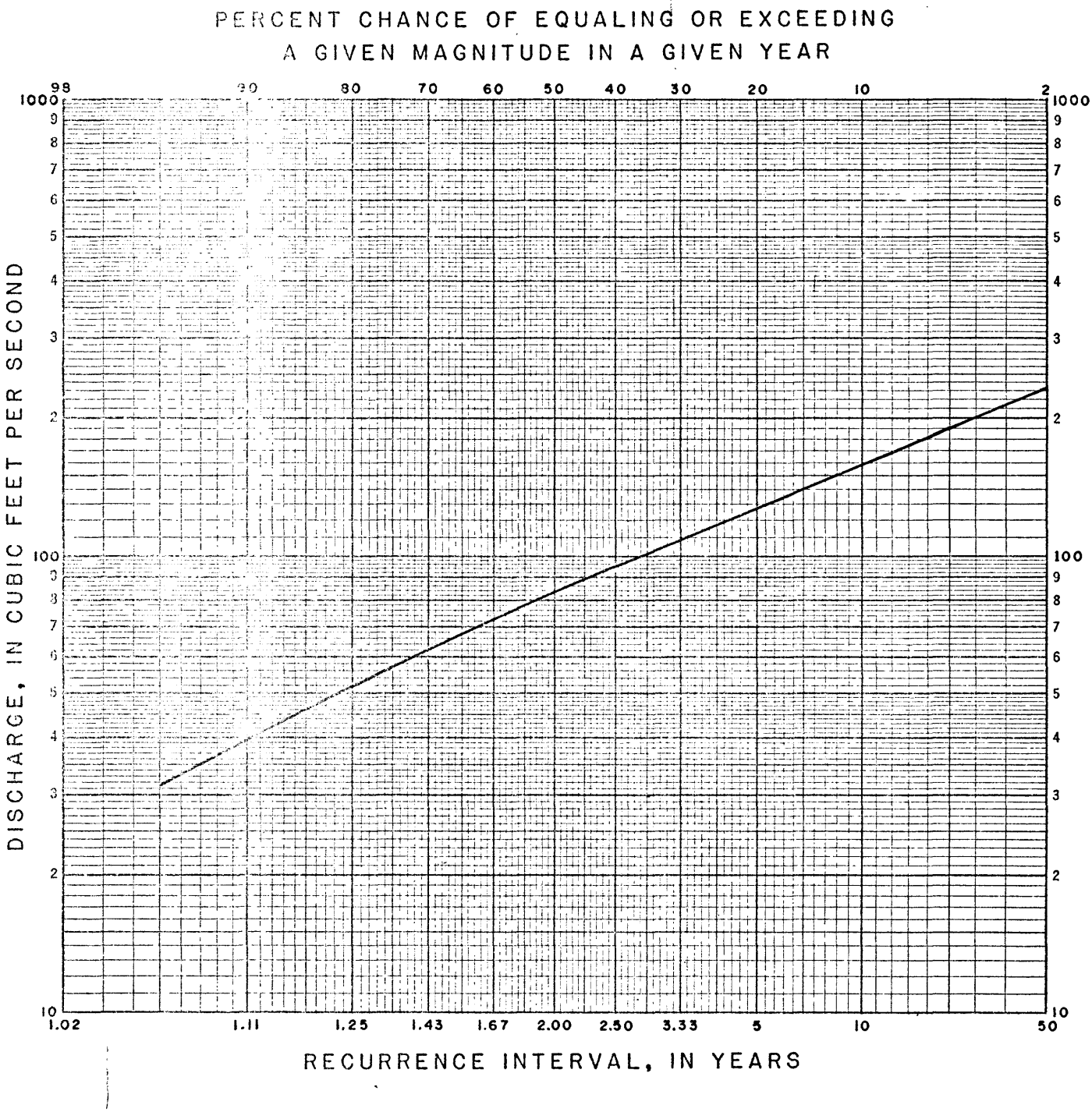

Figure 5.--Frequency curve for the gaging station on Cache Creek 1963-79.

Ground Water

The occurrence of ground water has not been studied in detail in the mountainous part of the area considered in this report. However, Lines and Glass (1975) and Cox (1976) have described in general the water-bearing properties of geologic units that are applicable to parts of the area. These water-bearing properties are summarized in table 8, which was modified from Lines and Glass (1975), Cox (1976), and Love and Love (1978). In addition, Lines and Glass (1975, sheet 2) stated, "Large quantities of water are available from limestone and dolomite aquifers in the Madison Limestone, Darby Formation, and Bighorn Dolomite in the vicinity of large springs where there is solution permeability and a concentration of flow. There also are large volumes of poorly permeable rock and drained rock, however, and the availability of water from these limestone and dolomite aquifers therefore is quite variable." They stated further that, "Sandstone aquifers in the Wells Formation and Tensleep Sandstone are sufficiently permeable that they should be capable of yielding moderate quantities of water to wells. However, topographic highs underlain by these rocks may be drained to depths of several hundred feet, especially if underlying limestones have extensive solution development."

Wells in the alluvium and glacial-outwash deposits yield from a few to 2,000 gallons per minute near Jackson, and these deposits yield as much as several cubic feet per second to individual springs (Cox, 1976). (One cubic foot equals about 450 gallons per minute.) Lines and Glass (1975, sheet 2) stated that, "Alluvium in the Snake River valley and along Flat Creek in Tps. 40 and 41 N. is capable of yielding large quantities of water to wells."

Most of the wells and springs that were sampled during previous investigations (Lines and Glass, 1975; Cox, 1976) are in stream valleys along Flat and Granite Creeks and the Snake and Hoback Rivers (fig. 4, table 7). No wells are known to exist in the mountainous part of the area of this report. Springs probably exist in the mountainous area, but none were sampled during the previous or present investigations.

REFERENCES CITED

Buchanan, T.J., and Somers, W.P., 1969, Discharge measurements at gaging stations: U.S. Geological Survey Techniques of Water-Resources Investigations, Book 3, Chapter A8, 65 p.

Cobb, E.D., and Biesecker, J.E., 1971, The national hydrologic bench-mark network: U.S. Geological Survey Circular 460-D, 38 p.

Colby, B.R., 1956, Relationship of sediment discharge to streamflow: U.S. Geological Survey open-file report, 170 p.

Cox, E.R., 1975, Discharge measurements and chemical analyses of water in northwestern Wyoming: Wyoming Water Planning Program Report 14, 20 p.

_____, 1976, Water Resources of northwestern Wyoming: U.S. Geological Survey Hydrologic Investigations Atlas HA-558, 3 sheets.

Guy, H.P., 1969, Laboratory theory and methods for sediment analysis: U.S. Geological Survey Techniques of Water-Resources Investigations, Book 5, Chapter C1, 58 p.

Guy, H.P., and Norman, V.W., 1970, Field methods for measurement of fluvial sediment: U.S. Geological Survey Techniques of Water-Resources Investigations, Book 3, Chapter C2, 59 p.

Lines, G.C., and Glass, W.R., 1975, Water resources of the thrust belt of western Wyoming: U.S. Geological Survey Hydrologic Investigations Atlas HA-539, 3 sheets.

Love, J.D., and Love, C.M., 1978, Geologic map of the Cache Creek quadrangle, Teton County, Wyoming: U.S. Geological Survey Open-File Report 78-480, 1 pl., scale 1:24,000.

Porterfield, George, 1972, Computation of fluvial-sediment discharge: U.S. Geological Survey Techniques of Water-Resources Investigations Book 3, Chapter C3, 66 p.

Skougstad, M.W., Fishman, M.J., Friedman, L.C., Erdman, D.E., and Duncan, S.S., 1979, Methods for determination of inorganic substances in water and fluvial sediments: U.S. Geological Survey Techniques of Water-Resources Investigations, Book 5, Chapter A1, 626 p.

U.S. Geological Survey, 1956, Compilation of records of surface waters of the United States through September 1950, Part 13. Snake River Basin: U.S. Geological Survey Water-Supply Paper 1317, 566 p.

_____, 1963, Compilation of records of surface waters of the United States, October 1950 to September 1960, Part 13. Snake River Basin: U.S. Geological Survey Water-Supply Paper 1737, 282 p.

_____, 1978, Water resources data for Wyoming, water year 1976, volume 2. Green River Basin, Bear River Basin, and Snake River Basin: U.S. Geological Survey Water-Data Report WY 76-2, 436 p.

_____, 1980, Water resources data for Wyoming, water year 1979, volume 2. Green River Basin, Bear River Basin, and Snake River Basin: U.S. Geological Survey Water-Data Report WY 79-2, 283 p.

U.S. Water Resources Council, 1977, Guidelines for determining flood flow frequency: Water Resources Council Bulletin 17A, 26p.

HYDROLOGIC DATA

Table 1.--Water-discharge records for the gaging station on Cache Creek, 1962-79.

FLAT CREEK BASIN

13018300 CACHE CREEK NEAR JACKSON, WY
(Hydrologic bench-mark station)

LOCATION.--Lat 43°27'08", long 110°42'12", in SW¼SW¼SE¼ sec.1, T.40 N., R.116 W., Teton County, Hydrologic Unit 17040103, Teton National Forest, on right bank 0.7 mi (1.1 km) upstream from Salt Lick Draw, 2.4 mi (3.9 km) southeast of Jackson, and 4.0 mi (6.4 km) upstream from mouth.

DRAINAGE AREA.--10.6 mi^2 (27.4 km^2).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--June 1962 to current year.

REVISED RECORDS.--WDR WY-76-2: Drainage area.

GAGE.--Water-stage recorder. Altitude of gage is 6,750 ft (2,057 m), from topographic map.

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

AVERAGE DISCHARGE.--17 years, 13.7 ft^3/s (0.388 m^3/s), 9,930 acre-ft/yr (12.2 hm^3/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 225 ft^3/s (6.37 m^3/s) June 24, 1971, gage height, 3.90 ft (1.189 m); maximum gage height, 3.97 ft (1.210 m) June 7, 1972; minimum daily discharge, 2.1 ft^3/s (0.059 m^3/s) Jan. 1, 1978.

Discharge, in cubic feet per second, water year October 1961 to September 1962

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1										40	17	10
2										39	17	10
3										37	17	9.8
4										35	16	9.8
5										33	17	9.8
6										31	16	9.5
7									*42	30	15	9.5
8									41	29	15	9.5
9									41	28	15	9.5
10									46	28	15	9.2
11									51	27	15	8.9
12									58	26	14	8.9
13									62	31	14	8.9
14									62	28	14	*8.9
15									*58	26	13	9.2
16									53	24	13	9.2
17									51	24	13	9.2
18									50	23	13	9.2
19									51	22	13	8.9
20									52	*22	13	9.2
21									52	21	12	9.5
22									50	20	12	9.2
23									48	20	12	8.9
24									48	20	*12	8.9
25									48	19	11	8.6
26									47	19	11	8.6
27									46	19	11	8.6
28									45	18	11	8.6
29									43	18	11	9.2
30					----------				41	17	11	8.3
31		----------			----------		----------		----------	17	10	----------
Total										791	419	275.5
Mean										25.5	13.5	9.18
Ac-ft										1,570	831	546

Calendar year 1961: Max - Min - Mean - Ac-ft -
Water year 1961-62: Max - Min - Mean - Ac-ft -

* Discharge measurement made on this day.

Discharge, in cubic feet per second, water year October 1962 to September 1963

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	8.3	5.8	b 6	a 5.5	b 4.4	3.9	4.1	6.4	50	24	9.8	8.0
2	8.3	6.6	a 6	a 5.5	4.6	3.9	4.1	6.2	50	24	9.5	8.0
3	8.3	6.6	a 6.5	a 5.4	b 4.6	3.8	4.1	7.0	50	*23	9.5	7.8
4	8.0	6.4	a 6.5	a 5.4	b 4.6	3.9	3.8	7.4	51	22	9.5	7.6
5	*8.3	6.4	a* 6.8	5.4	4.7	4.0	3.9	8.3	48	22	9.2	7.6
6	8.3	6.4	6.8	5.2	4.4	3.9	4.0	10	45	22	8.9	7.4
7	8.0	5.4	6.8	5.2	4.4	3.9	4.3	12	41	20	8.9	7.6
8	8.0	5.2	6.6	5.2	4.3	3.8	4.3	12	39	20	9.2	7.4
9	8.0	6.0	6.6	5.2	4.3	3.8	* 4.1	17	38	20	9.2	7.2
10	7.8	6.0	6.4	5.2	4.2	3.8	4.0	15	40	19	8.6	7.2
11	7.6	5.8	b 6.5	a 5	b 4.2	3.8	3.9	15	43	18	8.6	7.2
12	7.6	6.0	b 6.5	a 4.8	b 4.2	3.8	4.0	13	43	18	8.6	7.2
13	7.6	6.0	b 7	a 4.8	b 4.2	3.7	4.2	13	43	17	8.3	7.4
14	7.4	6.0	b 7	a 4.8	4.3	3.7	4.6	14	46	17	8.0	7.4
15	7.6	6.0	7.4	a 4.6	4.1	3.7	4.9	15	46	16	8.0	7.2
16	7.4	5.5	7.4	a 4.6	4.1	3.6	4.9	17	43	16	8.0	8.0
17	7.4	5.4	7.4	a 4.6	4.1	3.6	5.0	19	42	16	8.0	7.4
18	7.2	4.3	7.2	a 4.4	4.1	3.6	4.2	20	39	15	7.8	7.4
19	7.2	b 5.5	6.6	a 4.4	4.0	3.6	4.2	22	38	15	7.6	7.2
20	7.2	b 5.5	6.4	a 4.4	4.0	3.6	4.2	24	38	14	7.6	7.0
21	7.2	5.7	6.2	a 4.4	4.0	3.7	4.2	26	41	14	7.6	7.8
22	7.2	5.7	6.0	a* 4.4	3.9	3.7	4.1	26	38	13	7.6	7.2
23	7.2	5.8	b 6	4.3	3.9	3.8	4.1	28	34	13	7.6	7.2
24	7.2	b 6	b 6	4.3	a 4.0	3.7	4.1	31	33	13	7.6	7.0
25	7.0	6.0	b 6	4.3	a 4.0	3.6	4.2	33	31	12	7.6	7.0
26	7.0	5.5	b 6	4.2	a 4.0	3.7	4.9	36	28	12	7.6	6.8
27	7.0	5.5	a 6	4.3	a 4.0	3.8	5.7	*38	28	11	7.6	a 6.8
28	6.8	5.7	a 6	4.3	a* 4.0	4.2	5.2	38	27	10	7.6	a 6.8
29	6.8	5.7	a 5.5	4.2	-	4.0	5.2	43	26	10	*7.8	a 6.8
30	6.8	b 5.7	a 5.5	4.2	---------	3.9	5.8	46	25	10	7.8	a 6.8
31	6.8	---------	a 5.5	b 4.2	---------	4.1	---------	50	---------	*10	8.6	---------
Total	232.5	175.1	199.1	146.7	117.6	117.6	132.3	668.3	1,184	506	257.8	219.4
Mean	7.50	5.84	6.42	4.73	4.20	3.79	4.41	21.6	39.5	16.3	8.32	7.31
Ac-ft	461	347	395	291	233	233	262	1,330	2,350	1,000	511	435

Calendar year 1962: Max - Min - Mean - Ac-ft -
Water year 1962-63: Max 51 Min 3.6 Mean 10.8 Ac-ft 7,850

* Discharge measurement made on this day.
a No gage-height record.
b Stage-discharge relation affected by ice.

Discharge, in cubic feet per second, water year October 1963 to September 1964

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	6.8	5.8	4.6	4.4	4.2	3.8	3.6	5.5	43	50	18	10
2	6.8	5.6	4.6	4.4	4.2	3.8	3.6	5.5	46	49	17	10
3	6.6	5.6	4.6	4.2	4.0	3.6	3.6	5.2	54	47	17	10
4	6.6	5.8	4.7	4.2	4.0	3.8	3.6	5.0	56	46	17	9.8
5	6.6	5.8	4.9	4.2	4.2	3.8	3.4	5.2	63	44	16	9.5
6	6.4	* 5.7	4.8	4.2	4.2	3.6	3.4	5.0	68	41	16	9.5
7	6.4	5.4	4.9	4.4	4.2	3.6	3.4	5.4	71	40	16	9.2
8	6.4	5.5	4.8	4.2	4.2	3.6	* 3.4	5.4	64	38	16	9.2
9	*6.4	5.9	* 4.6	4.2	4.4	*3.8	3.3	5.5	60	* 37	15	8.9
10	6.6	5.7	4.6	4.4	4.6	3.8	3.3	6.0	61	35	15	8.9
11	6.4	5.5	4.4	4.4	4.6	3.8	3.3	6.8	58	34	14	* 8.9
12	6.4	5.5	4.4	4.2	4.4	3.8	3.3	7.6	53	33	14	8.9
13	6.4	5.4	4.4	4.2	4.2	3.6	3.3	9.8	52	33	14	8.9
14	6.2	5.5	4.4	4.0	4.0	3.6	3.3	12	51	33	*13	8.9
15	6.2	5.7	4.6	4.0	4.0	3.8	3.5	16	52	32	13	8.9
16	6.0	5.2	4.6	4.4	4.0	3.8	3.6	18	*57	30	13	8.9
17	6.0	5.2	4.6	*4.6	4.2	3.8	3.7	*20	59	28	13	8.6
18	6.0	5.0	4.6	4.6	4.2	4.0	3.5	21	58	28	13	8.6
19	6.0	5.2	4.4	4.6	4.2	3.8	3.5	22	54	26	13	8.6
20	6.0	5.4	4.4	4.4	4.0	3.8	3.6	25	50	25	13	8.6
21	6.2	5.2	4.4	4.4	4.0	3.8	3.7	28	48	24	12	8.6
22	7.4	5.0	4.3	4.4	4.0	3.8	3.6	30	46	24	12	8.3
23	6.6	5.0	4.3	4.4	4.0	3.6	3.7	29	44	22	11	8.3
24	6.4	5.2	4.3	4.4	4.0	3.6	3.7	28	45	22	11	8.3
25	6.2	5.0	4.3	4.4	3.8	3.4	3.6	30	43	22	11	8.3
26	6.0	5.0	4.3	4.4	3.8	3.6	3.6	36	50	21	11	8.0
27	5.8	5.2	4.4	4.2	3.6	3.6	3.6	54	51	20	11	8.0
28	5.8	5.2	4.4	4.2	3.6	3.6	3.7	54	51	20	11	8.0
29	6.0	5.0	4.2	4.2	3.6	3.4	4.4	46	52	20	11	8.0
30	6.0	4.8	4.2	4.0	---------	3.4	5.0	40	51	19	10	7.8
31	5.8	---------	4.2	4.2	---------	3.4	---------	42	---------	18	10	---------
Total	195.4	161.0	139.4	133.4	118.4	114.2	107.8	628.9	1,616	961	417	264.4
Mean	6.30	5.37	4.49	4.30	4.08	3.68	3.59	20.3	53.9	31.0	13.5	8.81
Ac-ft	388	319	276	265	235	227	214	1,250	3,210	1,910	827	524

Calendar year 1963: Max 51 Min 3.6 Mean 10.5 Ac-ft 7,630
Water year 1963-64: Max 71 Min 3.3 Mean 13.3 Ac-ft 9,630

* Discharge measurement made on this day.
Note.--Stage-discharge relation affected by ice Nov. 18, 19, 22, 23, Nov. 25 to Dec. 3, Dec. 6, 8, 9, 11-14. No gage-height record Oct. 1 to Nov. 5, Dec. 27 to Apr. 8.

Discharge, in cubic feet per second, water year October 1964 to September 1965

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	8.0	7.2	6.4	4.7	5.0	4.5	3.5	19	53	70	22	12
2	8.0	7.2	6.4	4.5	4.8	4.0	3.4	19	58	70	20	12
3	7.8	7.0	6.2	4.6	5.2	4.0	3.2	18	* 63	67	20	12
4	7.8	7.0	5.8	5.0	5.4	4.1	3.2	19	67	65	20	11
5	7.8	7.0	5.4	5.4	*5.3	4.2	3.2	19	68	64	19	11
6	* 7.8	7.0	5.4	*4.9	5.2	4.4	3.2	17	75	62	18	11
7	7.6	7.0	5.2	4.8	5.0	4.4	3.2	15	87	60	18	11
8	7.6	7.0	5.0	4.7	5.0	4.4	3.2	15	89	58	18	13
9	7.6	6.8	5.2	4.6	5.0	4.5	3.2	14	* 90	56	17	12
10	7.6	6.8	5.4	4.8	5.0	4.4	3.2	13	* 95	53	17	11
11	7.6	6.8	5.4	5.0	5.0	4.2	3.2	15	106	49	17	11
12	7.6	6.6	5.2	5.0	4.8	4.2	3.2	18	110	46	17	11
13	7.4	6.8	5.0	4.8	4.7	4.2	3.2	21	142	43	17	10
14	7.4	6.6	5.2	4.5	4.7	4.2	3.2	22	130	40	16	10
15	7.4	6.2	5.4	4.8	4.6	4.2	*3.2	24	109	38	15	11
16	7.8	6.2	5.6	5.2	4.8	4.2	3.5	26	106	34	15	12
17	7.4	6.6	5.0	5.0	4.8	4.1	3.8	28	112	36	15	11
18	7.4	6.2	4.0	4.7	4.6	*4.4	3.9	30	104	35	15	11
19	7.4	6.4	3.5	4.5	4.6	4.0	4.8	* 30	96	36	16	11
20	7.4	6.6	3.7	4.7	4.6	3.7	6.0	35	95	* 34	15	10
21	7.4	6.4	5.0	4.5	4.5	3.7	6.8	34	95	31	14	10
22	7.2	6.0	6.0	4.6	4.5	3.5	8.0	36	95	30	14	11
23	7.2	* 6.2	7.0	4.6	4.5	3.4	8.9	39	96	28	14	10
24	7.2	6.2	6.4	4.8	4.5	3.4	9.2	39	95	27	14	10
25	7.2	6.2	6.2	4.8	4.5	3.4	10	36	90	26	13	10
26	7.2	6.4	5.6	4.6	4.5	3.4	11	35	89	26	* 13	10
27	7.2	6.8	5.8	4.4	4.5	3.2	11	33	83	25	13	10
28	7.2	6.6	5.4	4.6	4.5	3.2	13	34	76	24	13	* 10
29	7.2	6.2	5.2	4.8	-	3.2	14	38	72	23	12	10
30	7.6	6.4	5.0	5.0	---------	3.2	16	46	71	23	12	9.8
31	7.2	----------	5.0	5.2	---------	3.2	----------	50	---------	22	12	----------
Total	232.2	198.4	167.0	148.1	134.1	121.1	178.4	837	2,717	1,301	491	324.8
Mean	7.49	6.61	5.39	4.78	4.79	3.91	5.95	27.0	90.6	42.0	15.8	10.8
Ac-ft	461	394	331	294	266	240	354	1,660	5,390	2,580	974	644

Calendar year 1964: Max 71 Min 3.3 Mean 13.5 Ac-ft 9,850
Water year 1964-65: Max 142 Min 3.2 Mean 18.8 Ac-ft 13,590

* Discharge measurement made on this day.

Note.--Stage-discharge relation affected by ice Nov. 12-18, Nov. 24 to Jan. 1, Feb. 11-14, Mar. 1-8, 18, 19. No gage-height record Nov. 19-23, Jan. 2 to Feb. 10 (stage-discharge relation affected by ice part of periods).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1965 TO SEPTEMBER 1966

DAY	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.
1	9.8	7.6	6.6	5.2	5.2	4.6	6.0	10	47	19	10	7.4
2	9.5	7.6	7.5	5.0	5.0	4.4	6.2	11	43	19	9.9	7.3
3	9.5	7.6	8.5	5.2	4.9	4.0	6.0	15	40	18	11	6.9
4	9.5	7.6	8.3	5.2	4.9	3.8	5.8	17	38	18	10	6.7
5	9.5	7.4	7.8	5.2	4.9	3.8	5.9	20	35	17	10	6.5
6	9.5	7.4	7.6	5.2	4.7	4.0	5.8	22	33	17	9.6	6.6
7	9.2	7.4	7.0	5.2	4.7	4.2	6.2	29	34	16	9.3	6.5
8	9.2	7.4	6.6	5.2	4.7	4.5	6.4	34	31	16	9.1	6.3
9	9.2	7.2	7.7	5.2	4.8	4.8	7.0	36	30	16	9.1	6.3
10	9.2	7.2	7.6	5.2	4.5	5.2	7.0	54	31	15	8.8	6.4
11	9.2	7.4	7.4	5.2	4.3	5.0	6.8	43	33	15	8.3	6.4
12	8.9	7.2	7.4	5.2	4.5	5.0	6.8	34	30	15	8.2	6.3
13	8.9	7.2	7.4	5.2	4.6	4.8	6.7	29	28	14	8.0	6.7
14	8.9	7.2	7.2	5.2	4.4	4.6	6.8	28	26	14	7.9	7.8
15	8.9	7.4	6.6	5.0	4.3	4.7	7.0	25	26	14	7.8	7.4
16	8.6	7.2	6.8	4.6	4.5	5.2	7.8	24	26	13	7.7	6.8
17	8.6	7.2	7.0	4.6	4.7	5.0	8.2	24	26	13	7.6	6.6
18	8.3	7.4	6.6	4.8	5.0	4.7	8.2	24	26	13	7.5	6.3
19	8.3	7.6	6.8	5.2	5.0	4.6	8.2	25	26	12	7.8	6.2
20	8.3	7.2	6.6	5.3	4.6	4.5	8.0	28	26	12	7.7	6.1
21	8.0	7.2	6.4	5.0	4.7	4.6	7.8	33	26	12	7.5	6.0
22	8.0	7.0	6.4	5.4	4.6	4.8	7.5	37	27	11	7.3	6.0
23	8.0	7.0	5.8	5.6	4.6	4.7	7.2	33	25	11	7.3	6.0
24	8.0	7.2	5.2	5.4	4.2	4.5	7.0	31	24	11	7.2	6.1
25	7.8	7.0	5.2	5.0	4.1	4.7	7.2	32	22	11	7.1	6.1
26	7.8	7.0	5.2	5.2	4.6	4.9	7.3	37	22	11	7.1	6.0
27	7.8	6.8	5.2	5.2	4.7	5.0	7.6	44	21	10	7.1	6.0
28	7.8	6.4	5.2	5.2	4.7	5.2	7.8	49	20	10	6.9	5.9
29	7.6	6.0	5.2	5.2	------	5.2	8.0	51	20	10	6.7	5.8
30	7.6	5.8	5.2	5.2	------	5.4	8.2	52	20	9.9	6.6	5.8
31	7.6	------	5.2	5.5	------	5.6	------	52	------	11	6.6	------
TOTAL	267.0	214.8	205.2	160.0	130.4	146.0	212.4	983	862	423.9	252.7	193.0
MEAN	8.61	7.16	6.62	5.16	4.66	4.71	7.08	31.7	28.7	13.7	8.15	6.43
AC-FT	530	426	407	317	259	290	421	1,950	1,710	841	501	383

CALENDAR YEAR 1965 MAX 142 MIN 3.2 MEAN 19.0 AC-FT 13,770
WATER YEAR 1965-66 MAX 54 MIN 3.8 MEAN 11.1 AC-FT 8,040

Note.--No gage-height record Feb. 8 to Apr. 5.

DISCHARGE, IN CFS, WATER YEAR OCTOBER 1966 TO SEPTEMBER 1967

DAY	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.
1	5.8	4.7	5.2	4.7	4.2	4.0	3.8	3.7	70	52	19	11
2	6.6	4.7	5.1	4.4	4.2	4.0	3.8	3.8	71	50	19	11
3	6.0	4.6	5.1	4.6	4.2	4.0	3.8	3.8	69	50	18	11
4	5.8	4.8	5.0	4.4	4.2	4.0	4.0	3.9	65	51	18	11
5	5.8	5.0	5.2	4.5	4.2	3.8	4.1	3.8	65	48	18	11
6	5.8	5.4	5.0	4.4	4.0	3.7	3.9	3.9	67	46	17	10
7	5.7	5.5	4.7	4.4	3.9	4.0	3.9	4.4	65	44	17	10
8	5.7	5.3	4.6	4.4	3.8	4.1	4.0	5.7	63	42	17	10
9	5.7	5.0	4.3	4.4	4.1	4.0	3.9	7.1	62	41	16	12
10	5.5	5.2	4.8	4.3	4.3	4.0	4.0	7.8	61	39	16	11
11	5.5	5.4	4.9	4.3	4.2	4.0	4.0	6.9	59	37	15	10
12	5.7	5.4	4.7	4.3	4.1	4.0	4.0	6.1	58	35	15	11
13	5.7	5.4	4.9	4.3	4.1	4.0	4.0	5.9	63	34	15	10
14	5.6	5.4	4.8	4.3	4.2	4.0	4.1	6.1	69	33	15	10
15	5.4	5.4	4.6	4.3	3.9	4.0	4.1	6.5	65	32	15	9.8
16	5.6	5.3	4.5	4.3	4.0	4.0	4.0	8.3	64	30	14	9.8
17	5.5	5.2	4.1	4.3	4.2	4.1	3.9	12	62	31	14	9.5
18	5.5	5.2	4.4	4.3	4.1	4.1	4.0	16	61	29	14	9.5
19	5.5	5.2	4.2	4.3	4.1	4.0	4.2	18	62	28	13	9.2
20	5.5	5.4	4.0	4.3	4.1	4.0	4.0	19	64	27	13	9.1
21	5.5	5.4	4.3	4.3	4.0	4.0	4.0	23	66	26	13	8.8
22	5.4	5.2	4.4	4.3	4.2	4.0	3.8	30	65	25	13	8.6
23	5.2	5.0	4.3	4.3	4.2	4.0	4.0	38	64	24	13	8.6
24	5.2	4.6	4.0	4.2	4.1	4.0	3.9	44	58	24	13	8.5
25	5.2	4.7	4.3	4.3	4.1	3.8	4.1	47	55	23	13	8.0
26	5.2	4.8	4.4	4.3	4.1	4.0	3.9	44	53	23	13	8.0
27	5.2	4.6	4.3	4.3	4.0	4.0	3.8	42	55	22	12	8.0
28	5.2	5.0	4.2	4.3	4.1	3.9	3.9	47	57	21	12	7.8
29	5.0	5.4	4.5	4.3	------	3.9	3.9	60	55	20	12	7.8
30	5.0	5.2	4.4	4.2	------	3.8	3.8	57	54	20	12	8.2
31	5.0	------	4.5	4.2	------	3.7	------	58	------	20	12	------
TOTAL	171.0	153.4	141.7	134.5	114.9	122.9	118.6	642.7	1,867	1,027	456	288.2
MEAN	5.52	5.11	4.57	4.34	4.10	3.96	3.95	20.7	62.2	33.1	14.7	9.61
MAX	6.6	5.5	5.2	4.7	4.3	4.1	4.2	60	71	52	19	12
MIN	5.0	4.6	4.0	4.2	3.8	3.7	3.8	3.7	53	20	12	7.8
AC-FT	339	304	281	267	228	244	235	1,270	3,700	2,040	904	572

CAL YR 1966: TOTAL 3,829.5 MEAN 10.5 MAX 54 MIN 3.8 AC-FT 7,600
WAT YR 1967: TOTAL 5,237.9 MEAN 14.4 MAX 71 MIN 3.7 AC-FT 10,390

Peak discharge (base, 52 cfs).--June 1 (1900) 77 cfs (2.95 ft).

DISCHARGE, IN CFS, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	8.1	6.7	4.7	5.8	5.1	4.6	5.1	9.0	33	36	15	11
2	7.8	6.5	5.0	5.5	5.0	4.8	5.4	10	40	34	15	12
3	8.3	6.3	5.5	5.4	5.0	4.7	5.1	11	52	33	14	11
4	7.8	6.2	6.0	5.4	5.0	4.6	5.0	12	58	32	14	11
5	8.1	6.0	5.9	5.4	5.0	4.7	4.8	14	57	32	14	11
6	7.8	6.4	5.9	5.2	4.8	4.7	4.8	12	65	31	14	11
7	7.6	6.7	5.9	4.8	4.7	4.7	4.6	11	65	30	13	10
8	7.4	6.7	5.7	5.1	4.4	4.7	4.5	10	60	30	13	10
9	7.4	6.3	5.8	5.4	4.2	4.7	4.4	11	56	30	13	10
10	7.2	6.3	5.7	5.4	4.0	4.7	4.5	12	56	29	13	10
11	7.2	6.3	5.7	5.4	4.3	4.4	4.6	14	58	27	13	9.8
12	7.2	6.3	5.6	5.4	4.9	4.3	4.4	15	65	27	13	9.8
13	7.0	6.3	5.4	5.2	4.8	4.7	4.3	15	68	26	13	9.5
14	6.8	6.3	5.5	4.9	4.8	4.7	4.4	14	62	25	13	9.8
15	7.0	6.1	5.0	5.1	4.8	4.5	4.6	13	57	24	13	9.8
16	7.0	6.1	5.3	5.3	4.8	4.5	4.8	12	56	24	13	9.8
17	6.8	5.8	5.5	5.3	4.8	4.7	5.0	12	57	23	13	9.5
18	6.8	5.4	5.7	5.4	5.0	4.5	5.0	12	62	21	13	9.5
19	6.8	5.4	5.7	5.4	4.8	4.5	5.2	13	64	20	13	9.3
20	6.7	5.5	5.6	5.4	5.1	4.4	5.0	14	64	20	14	9.5
21	6.7	5.6	5.6	5.1	4.8	4.3	4.9	15	61	19	13	9.5
22	6.7	5.4	5.6	5.1	4.8	4.5	4.8	15	58	18	14	9.5
23	6.6	5.6	5.6	5.1	4.8	4.7	5.0	15	57	18	14	9.3
24	6.7	6.1	5.6	5.1	4.8	4.5	5.0	15	53	17	13	9.3
25	6.7	6.2	5.6	5.1	4.7	4.5	5.0	15	50	17	12	9.3
26	6.7	5.8	5.6	5.1	4.6	4.5	5.0	15	47	16	12	9.0
27	6.5	5.4	5.6	5.1	4.6	4.7	5.0	15	46	16	12	9.0
28	6.3	5.6	5.6	5.1	4.7	4.5	5.3	16	45	16	12	9.0
29	6.2	5.6	5.5	5.2	4.7	4.8	6.1	20	43	15	12	9.0
30	6.5	5.3	5.7	5.0	------	5.0	7.4	31	40	15	12	9.0
31	6.5	------	5.9	5.0	------	4.8	------	30	------	15	11	------
TOTAL	218.9	180.2	173.0	162.2	137.8	142.9	149.0	448.0	1,655	736	406	295.2
MEAN	7.06	6.01	5.58	5.23	4.75	4.61	4.97	14.5	55.2	23.7	13.1	9.84
MAX	8.3	6.7	6.0	5.8	5.1	5.0	7.4	31	68	36	15	12
MIN	6.2	5.3	4.7	4.8	4.0	4.3	4.3	9.0	33	15	11	9.0
AC-FT	434	357	343	322	273	283	296	889	3,280	1,460	805	586

CAL YR 1967 TOTAL 5,343.9 MEAN 14.6 MAX 71 MIN 3.7 AC-FT 10,600
WTR YR 1968 TOTAL 4,704.2 MEAN 12.9 MAX 68 MIN 4.0 AC-FT 9,330

PEAK DISCHARGE (BASE, 52 CFS)

DATE	TIME	G.HT.	DISCHARGE	DATE	TIME	G.HT.	DISCHARGE
6-13	0530	2.90	71				

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	8.6	7.2	6.0	3.8	5.0	4.4	5.0	13	52	18	12	8.1
2	8.6	7.3	5.7	3.7	5.0	4.3	5.1	13	48	18	12	7.8
3	8.6	7.3	5.7	3.7	5.0	4.2	5.1	14	46	18	12	7.6
4	8.3	7.5	5.6	3.8	4.8	4.2	5.4	16	49	18	12	7.6
5	8.3	7.2	5.4	4.1	4.6	4.3	5.7	18	52	16	12	7.4
6	8.3	7.1	5.4	3.8	4.5	4.2	6.3	23	54	18	12	7.4
7	8.3	6.8	5.4	3.6	4.5	4.1	6.3	29	53	17	12	7.2
8	8.5	7.0	5.4	3.5	4.5	4.0	5.9	32	51	17	11	7.2
9	8.0	6.6	5.4	3.3	4.5	3.9	5.7	35	46	16	11	7.0
10	7.8	6.5	5.4	3.6	4.4	3.9	6.1	38	44	16	11	7.0
11	7.8	6.5	5.4	3.8	4.6	3.8	6.1	41	43	16	11	7.0
12	7.8	6.4	5.4	4.1	4.7	3.9	6.1	42	38	15	14	7.2
13	7.8	6.3	4.7	4.3	4.6	4.0	6.8	45	38	15	12	7.0
14	7.8	6.1	4.7	4.2	4.5	4.0	7.2	46	33	16	11	6.8
15	8.3	6.3	4.8	4.0	4.5	4.2	7.4	48	32	16	10	6.8
16	8.1	6.2	4.8	4.0	4.7	4.3	7.0	46	32	16	10	6.8
17	8.6	5.9	4.7	4.0	4.6	4.4	7.4	46	30	15	10	6.6
18	8.0	6.1	4.6	4.2	4.5	4.5	7.8	50	26	15	9.8	6.6
19	7.9	6.3	4.5	4.3	4.4	4.6	7.8	57	27	14	9.5	6.6
20	7.8	6.2	4.4	4.5	4.5	4.5	8.3	62	27	14	9.5	7.0
21	7.7	6.3	4.4	4.4	4.7	4.6	9.5	64	28	14	9.5	8.1
22	7.7	6.3	4.4	4.2	4.6	4.5	12	64	26	14	9.5	7.0
23	7.7	6.3	4.5	4.0	4.4	4.8	15	63	25	13	9.3	6.8
24	7.6	6.3	4.3	4.3	4.2	4.5	18	67	24	13	9.3	6.8
25	7.6	6.3	4.2	4.5	4.3	4.4	14	71	24	13	8.8	6.6
26	7.5	6.1	4.0	4.6	4.3	4.2	12	75	23	13	8.8	6.8
27	7.4	6.1	4.1	4.6	4.3	4.4	12	77	22	13	8.8	6.6
28	7.4	6.1	3.9	4.6	4.3	4.4	12	73	20	12	8.3	6.5
29	7.3	6.1	3.5	4.5	------	4.5	12	67	19	12	8.3	6.5
30	7.4	6.1	3.2	4.7	------	4.8	13	64	18	12	8.1	6.5
31	7.4	------	3.4	4.8	------	5.0	------	60	------	12	8.1	------
TOTAL	245.9	194.8	147.3	127.5	127.5	133.8	258.0	1,459	1,050	465	320.6	210.9
MEAN	7.93	6.49	4.75	4.11	4.55	4.32	8.60	47.1	35.0	15.0	10.3	7.03
MAX	8.6	7.5	6.0	4.8	5.0	5.0	18	77	54	18	14	8.1
MIN	7.3	5.9	3.2	3.3	4.2	3.8	5.0	13	18	12	8.1	6.5
AC-FT	488	386	292	253	253	265	512	2,890	2,080	922	636	418

CAL YR 1968 TOTAL 4,720.1 MEAN 12.9 MAX 68 MIN 3.2 AC-FT 9,360
WTR YR 1969 TOTAL 4,740.3 MEAN 13.0 MAX 77 MIN 3.2 AC-FT 9,400

PEAK DISCHARGE (BASE, 52 CFS)

DATE	TIME	G.HT.	DISCHARGE	DATE	TIME	G.HT.	DISCHARGE
5-27	2245	3.02	83				

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6.7	5.4	4.9	4.0	4.3	3.8	3.5	3.8	36	49	17	11
2	7.0	5.2	4.7	4.0	4.4	3.8	3.6	4.4	43	44	17	11
3	6.8	5.3	4.7	4.2	4.5	3.7	3.4	5.1	55	42	17	10
4	6.8	5.4	4.8	4.3	4.2	3.7	3.6	5.9	70	40	16	10
5	6.8	5.4	4.9	4.0	4.2	3.7	3.5	7.2	75	38	16	11
6	6.8	5.4	4.5	3.8	4.1	3.9	3.7	9.0	79	38	16	12
7	6.7	5.3	4.3	4.0	4.1	4.0	3.8	9.0	79	34	15	10
8	6.8	5.3	4.1	4.1	4.1	3.8	3.6	8.1	77	32	15	9.8
9	6.5	5.3	4.1	4.2	4.1	3.8	3.7	7.5	98	31	15	9.6
10	6.5	5.3	4.1	4.5	4.0	3.7	3.8	7.1	92	31	15	9.5
11	5.9	5.3	4.2	4.5	4.0	3.6	4.0	6.7	78	29	15	9.2
12	5.8	5.3	4.2	4.4	4.1	3.7	3.6	6.5	71	28	14	9.2
13	5.6	5.1	4.2	4.2	4.1	3.7	3.6	5.9	65	27	14	9.2
14	5.9	5.1	4.2	4.3	4.1	3.7	3.6	6.2	63	25	14	9.0
15	6.0	5.1	4.2	4.5	4.1	3.7	3.5	6.9	62	24	14	9.0
16	5.7	5.3	4.2	4.5	4.1	3.7	3.6	9.5	62	23	13	8.7
17	5.6	5.1	4.2	4.5	4.1	3.7	3.6	14	61	23	13	8.6
18	5.6	5.0	4.2	4.4	4.1	3.7	3.7	17	62	22	13	8.5
19	5.4	5.2	4.2	4.5	4.1	3.6	3.7	18	67	21	12	8.4
20	5.6	5.2	4.2	4.6	4.0	3.6	3.6	22	70	21	12	8.4
21	5.6	5.0	4.4	4.4	3.9	3.6	3.6	21	71	20	12	8.3
22	5.6	4.7	4.6	4.8	3.8	3.6	3.7	21	73	21	12	8.1
23	5.4	4.8	4.6	4.8	3.7	3.6	3.7	23	71	19	12	8.1
24	5.4	4.9	4.5	4.6	3.8	3.5	3.7	24	69	18	12	7.9
25	5.4	5.1	4.3	4.6	3.8	3.6	3.7	30	67	18	12	7.8
26	5.4	5.0	4.5	4.6	3.8	3.5	3.8	38	63	18	12	7.6
27	5.4	4.8	4.3	4.4	3.8	3.6	3.7	51	61	18	12	7.6
28	5.4	4.8	4.1	4.3	3.8	3.6	3.7	56	60	19	12	7.2
29	5.4	4.9	4.0	4.3	------	3.6	3.7	48	58	19	11	7.2
30	5.4	5.0	4.0	4.2	------	3.7	3.7	43	56	19	11	7.1
31	5.4	------	4.2	4.2	------	3.6	------	35	------	18	11	------
TOTAL	184.3	154.0	134.6	134.7	113.2	114.1	109.7	569.8	2,014	829	422	269.0
MEAN	5.95	5.13	4.34	4.35	4.04	3.68	3.66	18.4	67.1	26.7	13.6	8.97
MAX	7.0	5.4	4.9	4.8	4.5	4.0	4.0	56	98	49	17	12
MIN	5.4	4.7	4.0	3.8	3.7	3.5	3.4	3.8	36	18	11	7.1
AC-FT	366	305	267	267	225	226	218	1,130	3,990	1,640	837	534

CAL YR 1969 TOTAL 4,625.2 MEAN 12.7 MAX 77 MIN 3.3 AC-FT 9,170
WTR YR 1970 TOTAL 5,048.4 MEAN 13.8 MAX 98 MIN 3.4 AC-FT 10,010

PEAK DISCHARGE (BASE, 52 CFS)

DATE	TIME	G.HT.	DISCHARGE	DATE	TIME	G.HT.	DISCHARGE
5-27	1930	2.88	70	6- 9	1800	3.21	108

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	7.0	5.9	5.0	4.4	4.7	4.6	4.7	9.5	73	63	24	14
2	7.0	5.9	4.9	4.0	4.7	4.6	4.8	12	66	61	24	14
3	6.9	5.8	5.0	3.5	4.6	4.8	5.0	15	66	58	24	15
4	6.7	5.8	5.1	3.0	4.4	4.6	5.1	18	64	60	24	14
5	7.2	5.8	5.1	2.7	4.1	4.6	5.1	18	61	54	23	14
6	7.2	5.9	5.0	2.8	4.3	4.6	5.2	17	66	53	22	13
7	6.9	5.7	5.0	3.2	4.6	4.6	5.6	20	75	51	22	13
8	6.8	5.6	5.0	3.6	4.8	4.6	5.6	22	90	49	22	13
9	6.7	5.6	5.0	4.1	4.8	4.6	5.9	22	97	48	21	13
10	6.7	5.6	4.7	4.5	4.8	4.5	6.3	22	104	46	20	13
11	6.6	5.6	4.6	4.4	4.8	4.6	6.3	25	105	45	20	12
12	6.7	5.6	4.5	4.5	4.6	4.6	5.7	30	97	43	20	12
13	6.7	5.4	4.4	4.5	4.6	4.6	6.0	33	97	42	19	12
14	6.6	5.3	4.7	4.5	4.6	4.6	6.1	34	99	41	18	12
15	6.7	5.1	5.0	4.6	4.6	4.6	6.5	36	113	38	18	12
16	6.5	5.3	5.2	4.7	4.6	4.8	6.5	40	126	38	18	12
17	6.4	5.3	5.0	5.0	4.5	4.8	6.6	37	136	36	18	12
18	6.4	5.3	4.8	5.0	4.6	4.6	6.6	31	136	36	17	12
19	6.3	5.3	4.5	5.0	4.5	4.5	6.5	26	130	36	16	12
20	6.3	5.3	4.6	4.9	4.5	4.7	6.5	24	118	35	16	12
21	6.3	5.3	4.6	4.8	4.4	4.8	6.6	24	118	32	16	12
22	6.3	5.2	4.6	4.6	4.3	4.6	6.6	26	118	32	16	12
23	6.2	5.1	4.6	4.7	4.4	4.8	6.8	25	122	30	16	12
24	6.3	5.3	4.6	4.8	4.6	4.8	7.4	27	161	29	15	12
25	6.1	5.4	4.6	4.8	4.7	4.8	7.2	31	148	29	15	11
26	5.9	5.4	4.5	4.8	4.8	5.1	7.0	40	122	28	14	11
27	5.7	5.3	4.5	4.8	4.6	5.0	6.8	52	120	28	14	11
28	5.6	5.1	4.5	4.7	4.6	4.8	6.8	65	103	26	14	11
29	5.7	5.1	4.5	4.7	------	4.8	7.2	75	84	26	16	11
30	5.9	5.1	4.4	4.7	------	5.0	7.6	81	69	25	16	11
31	5.9	------	4.5	4.7	------	5.0	------	75	------	25	14	------
TOTAL	200.2	163.4	147.0	135.0	128.1	146.0	186.6	1,012.5	3,084	1,243	572	370
MEAN	6.46	5.45	4.74	4.35	4.58	4.71	6.22	32.7	103	40.1	18.5	12.3
MAX	7.2	5.9	5.2	5.0	4.8	5.1	7.6	81	161	63	24	15
MIN	5.6	5.1	4.4	2.7	4.1	4.5	4.7	9.5	61	25	14	11
AC-FT	397	324	292	268	254	290	370	2,010	6,120	2,470	1,130	734

CAL YR 1970 TOTAL 5,086.1 MEAN 13.9 MAX 98 MIN 3.4 AC-FT 10,090
WTR YR 1971 TOTAL 7,387.8 MEAN 20.2 MAX 161 MIN 2.7 AC-FT 14,650

PEAK DISCHARGE (BASE, 52 CFS)

DATE	TIME	G.HT.	DISCHARGE	DATE	TIME	G.HT.	DISCHARGE
5-30	0100	2.97	85	6-24	1530	3.90	225

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1971 TO SEPTEMBER 1972

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	11	8.2	6.2	5.3	4.7	4.5	4.3	12	96	48	22	12
2	11	7.9	6.0	5.5	4.3	4.5	4.1	12	111	47	22	12
3	11	7.5	5.8	5.4	4.0	4.5	4.1	13	148	44	20	11
4	11	7.5	6.0	5.3	4.3	4.3	4.3	16	138	42	20	11
5	11	7.5	5.8	5.2	4.5	4.3	4.3	17	134	42	20	12
6	11	7.3	5.5	5.4	4.7	4.3	5.3	22	138	41	19	13
7	10	7.5	5.3	5.3	4.7	4.3	5.3	27	144	40	19	12
8	10	7.6	5.1	5.3	4.7	4.3	5.3	26	138	40	19	12
9	9.6	7.2	5.2	5.3	4.7	4.5	5.0	24	124	38	18	12
10	9.6	7.2	5.4	5.3	4.6	4.7	5.3	23	120	38	17	13
11	9.2	6.9	5.5	4.7	4.5	5.0	5.5	22	118	38	17	12
12	8.9	6.9	5.5	5.3	4.5	5.0	5.5	23	109	37	17	12
13	8.6	6.9	5.5	5.6	4.5	5.0	5.5	24	96	36	17	12
14	9.2	6.7	5.3	6.0	4.5	5.0	5.5	30	90	35	16	11
15	9.2	6.4	5.3	6.1	4.5	5.0	5.8	37	88	33	16	11
16	9.2	6.4	5.3	5.8	4.5	4.7	6.1	43	88	32	16	11
17	10	6.0	5.5	5.5	4.5	5.0	6.1	47	92	31	16	10
18	10	5.8	5.5	5.5	4.5	5.0	5.8	47	88	30	16	10
19	9.2	6.0	5.5	5.5	4.5	5.5	5.8	49	75	30	16	11
20	9.2	6.5	5.5	5.5	4.5	5.3	5.8	53	66	32	16	10
21	9.2	6.7	5.5	5.8	4.5	5.3	5.8	53	63	31	15	10
22	8.9	6.4	5.5	5.8	4.5	5.3	6.1	53	61	29	14	10
23	9.2	6.1	5.5	5.8	4.5	5.5	6.4	45	62	28	16	9.2
24	9.2	6.4	5.5	5.8	4.3	5.3	7.2	42	64	26	15	9.2
25	8.9	6.4	5.5	5.5	4.3	5.3	7.2	45	60	25	14	9.2
26	8.9	6.4	5.5	5.5	4.3	5.3	8.2	47	54	25	14	9.2
27	8.9	6.4	5.3	5.5	4.3	5.1	8.9	51	52	25	14	10
28	9.2	6.1	5.0	5.5	4.7	4.8	11	53	49	24	13	10
29	7.8	6.1	4.7	5.4	4.7	4.6	12	56	49	24	13	8.9
30	7.4	6.1	4.9	5.3	------	4.4	12	66	48	22	13	8.6
31	7.9	------	5.2	5.0	------	4.3	------	72	------	22	13	------
TOTAL	292.4	203.0	168.8	169.7	130.3	149.9	189.5	1,150	2,763	1,035	513	324.3
MEAN	9.43	6.77	5.45	5.47	4.49	4.84	6.32	37.1	92.1	33.4	16.5	10.8
MAX	11	8.2	6.2	6.1	4.7	5.5	12	72	148	48	22	13
MIN	7.4	5.8	4.7	4.7	4.0	4.3	4.1	12	48	22	13	8.6
AC-FT	580	403	335	337	258	297	376	2,280	5,480	2,050	1,020	643

CAL YR 1971 TOTAL 7,541.4 MEAN 20.7 MAX 161 MIN 2.7 AC-FT 14,960
WTR YR 1972 TOTAL 7,088.9 MEAN 19.4 MAX 148 MIN 4.0 AC-FT 14,060

PEAK DISCHARGE (BASE, 52 CFS)

DATE	TIME	G.HT.	DISCHARGE
6- 7	0030	3.97	162

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1972 TO SEPTEMBER 1973

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	8.4	7.0	5.4	5.5	4.7	5.0	4.0	5.2	37	22	10	7.4
2	8.4	7.2	5.4	5.4	4.7	4.9	4.1	5.2	37	21	9.9	7.4
3	8.4	7.4	5.4	5.2	4.6	4.9	4.1	5.8	34	20	9.9	7.1
4	8.4	7.4	5.1	5.1	4.4	5.0	4.3	5.9	30	19	10	7.1
5	11	7.4	4.9	4.9	4.3	5.3	4.3	6.8	29	19	9.9	6.8
6	8.8	7.4	5.1	5.1	4.3	5.2	4.3	8.4	29	18	9.9	6.8
7	8.4	7.1	5.3	5.3	4.1	4.8	4.1	9.5	31	17	9.9	6.8
8	8.4	7.1	5.1	5.5	4.0	4.8	4.0	9.9	33	17	9.9	7.4
9	8.4	7.1	4.9	5.4	4.0	4.9	4.0	9.9	35	16	9.5	7.1
10	12	7.1	5.0	5.4	4.1	5.0	4.1	11	35	15	9.5	7.1
11	9.5	6.8	5.2	5.4	4.1	5.1	4.3	12	34	15	9.5	7.1
12	9.1	6.8	5.7	5.4	4.1	5.1	4.5	14	31	14	9.1	6.8
13	8.8	6.8	6.0	5.2	4.1	5.0	4.7	16	30	14	8.8	6.5
14	8.8	6.8	6.3	5.2	3.9	5.0	4.7	17	31	13	8.8	6.2
15	8.8	6.8	6.6	5.2	3.8	4.9	4.9	19	30	12	8.4	6.2
16	8.8	6.5	6.8	4.9	3.9	4.8	4.5	22	30	12	8.4	6.2
17	8.4	6.5	7.1	4.9	4.0	4.7	4.5	26	30	12	8.4	5.9
18	8.4	6.5	6.8	4.9	3.9	4.6	4.5	29	28	12	8.4	5.9
19	8.1	6.5	6.5	4.9	3.9	4.5	4.5	33	27	13	8.1	5.9
20	8.4	6.5	6.5	4.8	3.9	4.4	4.5	41	26	14	8.1	5.9
21	8.4	6.2	6.2	4.7	3.9	4.5	4.3	40	25	13	7.7	5.9
22	8.1	5.9	6.2	4.6	4.0	4.6	4.3	37	26	13	8.1	5.9
23	8.1	5.6	6.2	4.5	4.1	4.5	4.5	37	26	12	8.1	6.5
24	8.1	5.2	6.2	4.7	4.3	4.4	4.7	37	26	12	7.4	6.8
25	7.7	5.5	6.2	4.8	4.6	4.3	4.5	42	25	12	7.4	6.2
26	7.7	5.3	5.9	5.0	4.8	4.2	4.7	38	25	12	7.1	5.7
27	7.7	4.9	5.9	4.9	5.2	4.3	5.2	33	25	11	7.1	5.7
28	7.1	4.6	5.9	4.8	5.1	4.5	5.7	30	24	12	7.1	5.7
29	6.8	4.8	5.9	4.7	------	4.3	5.7	30	24	12	6.8	5.4
30	6.5	5.2	6.0	4.7	------	4.2	5.4	30	23	11	6.8	5.4
31	6.7	------	5.7	4.7	------	4.1	------	31	------	11	6.8	------
TOTAL	260.6	191.9	181.4	155.7	118.8	145.8	135.9	691.2	876	446	264.8	192.8
MEAN	8.41	6.40	5.85	5.02	4.24	4.70	4.53	22.3	29.2	14.4	8.54	6.43
MAX	12	7.4	7.1	5.5	5.2	5.3	5.7	42	37	22	10	7.4
MIN	6.5	4.6	4.9	4.5	3.8	4.1	4.0	5.2	23	11	6.8	5.4
AC-FT	517	381	360	309	236	289	270	1,370	1,740	885	525	382

CAL YR 1972 TOTAL 7,058.6 MEAN 19.3 MAX 148 MIN 4.0 AC-FT 14,000
WTR YR 1973 TOTAL 3,660.9 MEAN 10.0 MAX 42 MIN 3.8 AC-FT 7,260

PEAK DISCHARGE (BASE, 52 FT^3/S)--No peak above base.

NOTE.--No gage-height record Feb. 23 to Apr. 2.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1973 TO SEPTEMBER 1974

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5.4	4.6	4.5	4.4	4.3	3.7	3.7	16	46	52	20	11
2	5.4	4.5	4.5	4.2	4.3	3.9	3.7	18	51	49	20	11
3	5.2	4.7	4.5	4.3	4.3	3.7	3.6	20	58	47	22	11
4	5.2	5.0	4.4	4.4	4.3	3.7	3.7	20	58	45	21	11
5	5.2	5.3	4.3	4.4	4.3	3.6	3.7	24	68	43	20	11
6	5.2	5.5	4.4	4.4	4.2	3.5	3.7	27	56	42	20	10
7	5.2	5.1	4.5	4.4	4.2	3.5	3.7	30	45	41	21	10
8	6.3	5.4	4.5	4.4	4.3	3.5	3.7	32	36	40	20	10
9	5.7	5.3	4.5	4.4	4.3	3.5	3.7	33	32	38	20	10
10	5.4	5.0	4.4	4.5	4.4	3.4	3.9	35	33	37	18	10
11	5.4	5.1	4.3	4.5	4.4	3.5	3.9	31	37	36	18	10
12	5.4	5.1	4.3	4.5	4.4	3.5	3.9	29	46	35	17	10
13	5.3	4.9	4.3	4.5	4.3	3.5	4.1	29	63	33	17	10
14	5.2	4.8	4.3	4.5	4.1	3.5	4.1	27	82	32	17	9.6
15	5.2	4.9	4.3	4.5	4.1	3.5	4.5	26	100	32	16	9.2
16	5.2	4.9	4.3	4.7	4.1	3.7	4.5	24	107	31	16	9.2
17	5.1	5.0	4.5	4.7	4.1	4.1	5.2	26	102	30	15	9.2
18	5.0	4.9	4.5	4.5	3.9	4.1	5.7	29	109	29	15	8.9
19	5.0	4.9	4.3	4.5	3.9	4.0	6.5	31	105	28	14	8.6
20	5.0	4.8	4.4	4.5	3.9	3.8	7.1	31	98	28	14	8.6
21	5.0	4.7	4.5	4.5	3.9	3.7	7.1	29	88	27	14	8.6
22	5.0	4.7	4.5	4.4	3.8	3.8	8.4	27	82	26	13	8.6
23	4.9	4.8	4.3	4.5	3.7	3.9	8.8	28	76	25	13	8.6
24	5.0	4.8	4.3	4.5	3.6	3.9	12	30	72	25	13	8.6
25	4.9	4.9	4.5	4.5	3.6	3.9	15	34	71	24	12	8.6
26	4.8	5.1	4.3	4.5	3.6	3.9	18	44	66	23	12	8.2
27	4.7	5.3	4.4	4.5	3.7	3.9	18	60	61	22	12	8.9
28	4.7	5.3	4.5	4.3	3.7	3.9	15	72	57	22	12	8.6
29	4.9	4.6	4.5	4.5	------	3.7	13	74	56	22	12	8.6
30	4.7	4.5	4.5	4.3	------	3.9	14	51	54	22	11	8.6
31	4.6	------	4.5	4.3	------	3.9	------	44	------	21	11	------
TOTAL	159.2	148.4	136.8	138.0	113.7	115.6	215.9	1,031	2,015	1,007	496	284.2
MEAN	5.14	4.95	4.41	4.45	4.06	3.73	7.20	33.3	67.2	32.5	16.0	9.47
MAX	6.3	5.5	4.5	4.7	4.4	4.1	18	74	109	52	22	11
MIN	4.6	4.5	4.3	4.2	3.6	3.4	3.6	16	32	21	11	8.2
AC-FT	316	294	271	274	226	229	428	2,040	4,000	2,000	984	564

CAL YR 1973 TOTAL 3,471.4 MEAN 9.51 MAX 42 MIN 3.8 AC-FT 6,890
WTR YR 1974 TOTAL 5,860.8 MEAN 16.1 MAX 109 MIN 3.4 AC-FT 11,620

PEAK DISCHARGE (BASE, 52 FT^3/S)

DATE	TIME	G.HT.	DISCHARGE
5-28	2000	3.63	87
6- 5	2000	3.58	79
6-15	2000	3.80	116

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1974 TO SEPTEMBER 1975
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	8.6	6.7	5.7	5.9	4.1	3.8	3.6	3.6	22	57	22	11
2	8.6	6.7	6.1	5.1	3.9	3.8	3.6	3.6	25	56	21	11
3	8.6	6.4	6.6	5.3	3.8	3.8	3.6	4.1	30	56	20	11
4	8.9	6.4	7.2	5.4	3.8	3.8	3.6	4.5	29	56	20	11
5	8.7	6.4	7.2	5.3	3.8	3.8	3.6	4.3	30	56	18	11
6	8.2	6.1	6.9	5.0	3.8	3.8	3.4	4.1	39	56	18	10
7	7.8	6.1	6.9	4.7	3.8	3.8	3.4	3.9	46	54	17	10
8	7.8	6.1	6.7	4.7	3.8	3.8	3.4	4.5	43	52	17	10
9	7.8	6.1	6.4	4.7	3.8	3.8	3.4	3.8	36	51	17	10
10	7.8	5.8	6.2	4.5	3.8	3.8	3.2	4.3	31	48	16	10
11	7.8	5.8	6.3	4.5	3.6	3.8	3.4	6.1	32	47	16	10
12	7.8	6.1	6.6	4.4	3.6	3.8	3.4	6.7	34	45	16	9.6
13	7.5	5.8	6.6	4.6	3.6	3.8	3.6	8.2	41	42	16	9.6
14	7.5	5.5	6.4	4.4	3.6	3.8	3.6	11	48	41	16	9.2
15	7.5	5.8	6.4	4.3	3.6	3.8	3.6	14	55	40	15	9.2
16	7.2	5.6	6.1	4.3	3.5	3.8	3.6	16	57	40	15	8.9
17	7.2	5.6	6.1	4.3	3.4	3.6	3.6	18	53	38	15	8.9
18	7.2	5.7	6.1	4.3	3.4	3.6	3.6	20	55	36	14	8.9
19	7.2	5.8	6.1	4.1	3.5	3.6	3.6	18	50	34	14	8.9
20	7.2	5.5	5.8	4.1	3.7	3.6	3.6	14	45	32	14	8.9
21	7.8	5.8	6.1	3.9	3.5	3.6	3.6	12	45	31	14	8.6
22	7.2	5.8	5.5	4.0	3.4	3.6	3.9	11	47	31	14	8.5
23	7.2	5.7	5.4	4.2	3.4	3.6	3.9	10	50	28	14	8.2
24	7.2	5.5	5.1	4.1	3.6	3.6	3.8	10	55	26	13	8.2
25	7.2	5.5	5.1	3.9	3.8	3.6	3.9	9.6	57	25	13	8.2
26	6.9	5.5	5.3	3.9	3.9	3.6	3.9	9.2	52	24	12	7.8
27	6.9	5.4	5.6	3.8	3.9	3.5	3.8	9.6	49	24	12	7.8
28	6.7	5.3	5.5	3.7	3.8	3.4	3.8	12	51	22	12	7.8
29	6.7	5.2	5.3	3.8	---	3.7	3.8	14	54	22	12	7.5
30	6.7	5.2	5.2	3.9	---	3.8	3.7	17	55	25	12	7.5
31	6.7	---	5.1	4.0	---	3.7	---	20	---	23	11	---
TOTAL	233.6	174.9	187.5	136.2	103.2	114.9	108.5	307.1	1316	1218	476	277.3
MEAN	7.54	5.83	6.05	4.39	3.69	3.71	3.62	9.91	43.9	39.3	15.4	9.24
MAX	8.9	6.7	7.2	5.4	4.1	3.8	3.9	20	57	57	22	11
MIN	6.7	5.2	5.1	3.7	3.4	3.4	3.2	3.6	22	22	11	7.5
AC-FT	463	347	372	270	205	228	215	609	2610	2420	944	550

CAL YR 1974 TOTAL 6012.4 MEAN 16.5 MAX 109 MIN 3.4 AC-FT 11930
WTR YR 1975 TOTAL 4653.2 MEAN 12.7 MAX 57 MIN 3.2 AC-FT 9230

PEAK DISCHARGE (BASE, 52 FT^3/S)

DATE	TIME	G.HT.	DISCHARGE
6-15	2230	3.13	61

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	7.5	6.4	5.2	5.2	3.9	3.2	3.0	6.7	68	36	20	9.6
2	7.2	6.4	5.2	5.0	3.9	3.0	3.0	8.2	75	36	18	9.2
3	7.2	6.4	5.3	5.2	3.9	2.9	3.0	9.6	82	34	18	9.2
4	7.2	6.1	5.0	5.2	3.9	2.8	3.2	11	79	33	17	9.6
5	7.2	6.4	5.0	5.3	3.8	2.7	3.8	11	72	32	16	8.9
6	7.2	6.1	5.5	5.0	3.6	2.8	4.1	12	71	31	16	9.6
7	7.2	6.4	5.3	5.0	3.4	3.0	3.9	13	68	30	15	9.6
8	7.8	6.1	5.3	5.0	3.3	3.2	4.1	17	64	30	15	9.6
9	7.5	5.8	5.3	5.0	3.5	3.4	4.3	20	61	29	14	10
10	7.5	5.8	5.0	4.7	3.8	3.5	4.1	23	60	28	14	9.6
11	7.5	5.8	5.0	4.7	3.8	3.5	5.0	27	57	28	13	10
12	7.5	5.6	5.0	4.7	3.9	3.4	6.1	24	50	27	13	10
13	7.8	5.4	5.0	4.7	3.9	3.4	6.1	26	49	26	13	10
14	7.8	5.8	4.8	4.7	3.8	3.4	5.5	32	42	25	13	9.6
15	7.5	6.0	5.0	4.7	3.8	3.2	5.8	35	39	24	13	9.2
16	7.5	6.2	4.8	4.7	3.8	3.0	5.5	35	40	24	13	9.2
17	7.2	6.1	4.5	4.5	3.6	3.2	5.3	38	42	23	12	9.2
18	7.2	5.8	4.3	4.5	3.6	3.2	5.0	45	45	24	13	9.6
19	7.2	5.6	4.5	4.0	3.6	3.2	5.0	49	42	23	12	9.2
20	6.9	5.4	4.5	3.9	3.4	3.0	4.7	52	44	22	12	8.9
21	6.9	5.4	4.5	3.7	3.2	3.0	5.0	56	50	21	11	8.6
22	6.9	5.4	4.5	3.6	3.0	3.0	5.3	56	48	20	11	9.6
23	6.9	5.6	4.5	3.5	3.0	2.8	5.3	58	44	20	13	8.9
24	6.8	5.8	4.8	3.7	3.1	2.8	5.3	61	41	19	12	8.6
25	6.8	5.8	5.0	4.0	3.2	3.0	6.1	62	38	19	11	8.2
26	7.2	5.4	5.2	4.0	3.2	2.8	6.4	60	35	19	11	7.8
27	6.9	5.5	5.2	4.0	3.2	3.0	5.8	62	33	18	11	7.8
28	6.7	5.5	5.4	4.1	3.2	2.8	5.5	67	32	18	11	7.8
29	6.6	5.5	5.4	4.1	3.2	3.0	5.8	72	32	18	10	7.8
30	6.7	5.2	5.4	4.1	---	3.0	6.1	74	34	18	10	7.5
31	6.7	---	5.4	3.9	---	3.0	---	68	---	18	9.6	---
TOTAL	222.7	174.7	154.8	138.4	102.5	95.2	147.1	1190.5	1537	773	410.6	272.4
MEAN	7.18	5.82	4.99	4.46	3.53	3.07	4.90	38.4	51.2	24.9	13.2	9.08
MAX	7.8	6.4	5.5	5.3	3.9	3.5	6.4	74	82	36	20	10
MIN	6.6	5.2	4.3	3.5	3.0	2.7	3.0	6.7	32	18	9.6	7.5
AC-FT	442	347	307	275	203	189	292	2360	3050	1530	814	540

CAL YR 1975 TOTAL 4609.4 MEAN 12.6 MAX 57 MIN 3.2 AC-FT 9140
WTR YR 1976 TOTAL 5218.9 MEAN 14.3 MAX 82 MIN 2.7 AC-FT 10350

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	7.5	6.4	7.5	5.0	3.6	3.8	3.2	4.7	6.0	7.8	5.5	5.5
2	7.8	6.4	7.0	5.0	3.8	3.8	3.2	4.5	6.5	8.2	5.5	5.0
3	8.2	6.3	6.9	5.3	3.5	3.7	3.2	4.5	7.0	8.2	5.3	5.5
4	7.8	6.4	6.9	5.3	3.2	3.5	3.4	4.5	8.0	8.2	5.3	5.3
5	7.8	6.7	6.7	5.0	2.9	3.8	3.4	3.8	9.0	9.2	5.8	5.0
6	7.5	6.4	6.1	4.8	2.6	3.8	3.8	4.5	10	7.2	5.5	5.0
7	7.8	6.4	6.1	4.8	2.7	3.6	3.8	5.1	13	6.9	5.3	5.0
8	7.5	6.1	6.1	5.0	2.8	3.4	4.5	6.0	14	6.7	4.7	4.7
9	7.5	6.1	6.1	4.8	2.9	3.4	4.5	6.8	18	6.7	4.5	4.5
10	7.5	6.1	5.9	4.6	3.0	3.4	4.5	7.2	18	6.4	4.5	4.7
11	7.5	5.6	6.5	4.3	3.1	3.3	4.5	6.9	17	6.1	4.3	4.7
12	7.2	5.2	7.0	4.3	3.2	3.1	4.3	6.7	16	6.4	4.1	4.7
13	7.2	5.0	7.5	4.1	3.3	3.6	4.1	6.4	15	5.8	3.9	4.7
14	7.2	4.8	7.0	4.1	3.4	3.3	3.9	6.4	14	6.1	3.9	4.5
15	6.9	4.6	6.8	4.1	3.5	3.2	4.1	6.8	14	5.5	3.9	5.3
16	6.9	5.5	6.6	4.1	3.7	3.2	4.1	6.8	13	5.8	4.3	5.0
17	6.9	6.0	6.4	4.1	3.8	2.8	3.9	6.4	13	5.8	4.1	5.3
18	6.5	6.4	6.2	4.1	3.8	3.0	3.4	6.0	12	5.8	4.1	5.0
19	6.5	6.4	6.0	3.9	3.6	3.0	3.1	5.8	12	5.5	4.1	4.7
20	6.7	6.1	5.8	3.8	3.6	3.0	3.1	5.6	13	5.5	4.3	4.7
21	6.9	5.8	6.0	3.6	3.6	3.0	3.2	5.4	12	5.5	4.3	4.7
22	6.9	5.6	6.2	3.8	3.5	3.0	3.6	5.2	11	5.5	5.5	5.0
23	6.9	6.0	6.4	3.6	3.6	3.0	3.9	5.0	10	5.5	5.3	4.7
24	6.4	6.2	6.0	3.5	3.2	3.0	4.1	5.0	10	5.2	5.3	5.0
25	6.7	6.4	5.8	3.3	3.0	3.0	4.5	5.5	9.6	7.5	7.2	4.5
26	6.4	6.0	5.5	3.2	3.0	3.0	5.0	6.5	9.2	6.4	11	4.3
27	6.2	7.0	5.5	3.0	3.3	3.0	5.5	7.0	8.9	5.8	7.5	4.3
28	6.4	8.0	5.5	3.2	3.6	3.0	5.3	7.2	8.6	6.1	6.7	4.1
29	6.7	9.0	5.5	3.0	---	3.0	5.0	7.0	8.6	5.8	6.4	4.1
30	6.7	8.0	5.5	3.2	---	3.0	5.0	6.5	8.2	5.8	5.8	5.0
31	6.7	---	5.4	3.4	---	2.9	---	6.0	---	5.8	5.5	---
TOTAL	219.3	186.9	194.4	126.3	92.8	100.6	121.1	181.7	344.6	201.7	163.4	144.5
MEAN	7.07	6.23	6.27	4.11	3.31	3.25	4.04	5.86	11.5	6.51	5.27	4.82
MAX	8.2	9.0	7.5	5.3	3.8	3.8	5.5	7.2	18	9.2	11	5.5
MIN	6.2	4.6	5.4	3.0	2.6	2.8	3.1	3.8	6.0	5.5	3.9	4.1
AC-FT	435	371	386	252	184	200	240	360	684	400	324	287

CAL YR 1976 TOTAL 5267.3 MEAN 14.4 MAX 82 MIN 2.7 AC-FT 10450
WTR YR 1977 TOTAL 2078.3 MEAN 5.69 MAX 18 MIN 2.6 AC-FT 4120

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.5	3.1	2.9	2.1	3.0	2.7	9.6	12	35	58	20	11
2	4.5	3.2	3.0	2.2	3.2	2.5	8.2	13	36	57	19	11
3	4.5	3.2	3.2	2.2	3.3	2.6	6.7	14	42	54	19	10
4	4.3	3.8	3.0	2.2	3.2	2.7	5.8	12	46	53	18	10
5	4.1	3.8	3.0	2.3	3.2	2.8	5.3	11	53	48	18	10
6	4.7	3.8	2.8	2.3	3.2	2.8	4.7	10	61	47	17	10
7	4.7	3.8	2.8	2.3	3.2	2.7	5.3	9.6	72	44	17	10
8	4.7	3.5	2.6	2.3	3.2	2.7	6.4	8.9	84	44	16	9.9
9	4.5	3.2	2.7	2.3	3.2	2.7	6.9	9.6	100	42	15	9.7
10	4.5	3.3	2.7	2.3	3.2	2.7	7.2	13	98	41	15	9.7
11	4.3	3.4	2.7	2.3	3.1	2.7	8.6	14	79	40	15	9.7
12	3.9	3.4	2.7	2.4	3.2	2.7	8.6	13	67	38	14	9.7
13	4.3	3.2	2.7	2.4	3.1	2.7	8.2	14	72	37	16	9.7
14	4.3	3.0	2.9	2.3	2.9	2.7	7.8	20	82	36	15	9.7
15	4.1	3.2	3.2	2.4	3.0	2.6	7.5	29	87	35	14	9.4
16	3.9	3.0	2.9	2.4	3.2	2.7	7.5	33	80	34	14	9.2
17	3.9	2.9	2.7	2.6	3.4	2.9	7.2	27	72	33	14	9.0
18	3.9	2.8	2.6	2.4	3.4	3.0	6.9	25	69	31	14	9.4
19	3.9	2.7	2.5	2.4	3.4	3.0	6.4	23	67	30	13	9.8
20	3.9	2.6	2.4	2.4	3.4	3.2	6.7	24	66	29	13	9.4
21	3.9	2.5	2.4	2.4	3.2	3.2	6.4	26	69	28	13	9.0
22	3.9	2.5	2.6	2.4	3.2	3.2	6.1	32	71	26	13	8.8
23	3.8	2.7	2.8	2.6	3.2	3.2	5.8	39	72	26	13	8.6
24	3.8	2.9	2.8	2.4	3.4	3.2	5.5	43	71	25	12	8.4
25	3.8	3.2	2.7	2.5	3.5	3.0	6.7	40	67	24	12	8.4
26	3.6	3.3	2.6	2.7	3.2	3.2	11	38	62	23	12	8.2
27	3.6	3.2	2.6	2.6	3.1	3.4	12	37	60	23	12	8.0
28	3.4	3.1	2.6	2.7	2.9	3.9	11	36	58	24	12	8.0
29	3.9	3.0	2.4	2.8	---	4.5	11	41	59	23	11	7.8
30	3.9	2.9	2.4	2.8	---	5.5	11	41	59	22	11	7.8
31	3.8	---	2.4	2.7	---	6.9	---	37	---	20	11	---
TOTAL	126.8	94.2	84.3	75.1	89.7	98.3	228.0	745.1	2016	1095	448	279.3
MEAN	4.09	3.14	2.72	2.42	3.20	3.17	7.60	24.0	67.2	35.3	14.5	9.31
MAX	4.7	3.8	3.2	2.8	3.5	6.9	12	43	100	58	20	11
MIN	3.4	2.5	2.4	2.1	2.9	2.5	4.7	8.9	35	20	11	7.8
AC-FT	252	187	167	149	178	195	452	1480	4000	2170	889	554

CAL YR 1977 TOTAL 1783.0 MEAN 4.88 MAX 18 MIN 2.4 AC-FT 3540
WTR YR 1978 TOTAL 5379.8 MEAN 14.7 MAX 100 MIN 2.1 AC-FT 10670

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	7.8	6.6	4.9	3.0	3.4	3.3	3.9	10	41	28	12	7.8
2	7.8	6.6	4.8	3.2	3.5	3.3	4.0	10	37	26	12	7.6
3	7.6	6.6	4.7	3.4	3.5	3.6	4.0	11	38	26	12	7.6
4	7.6	6.4	4.8	3.5	3.5	3.8	4.0	12	44	24	11	7.4
5	7.6	6.4	4.8	3.5	3.5	3.8	4.0	13	52	24	11	7.4
6	7.6	6.2	4.8	3.3	3.5	3.9	4.3	15	54	23	11	7.4
7	7.6	6.2	4.5	3.5	3.5	3.9	4.3	13	51	22	11	7.2
8	7.6	6.4	4.2	3.7	3.5	3.8	4.3	12	45	21	12	7.2
9	7.4	6.4	4.4	3.9	3.5	4.0	4.3	11	41	21	11	7.0
10	7.4	6.2	4.6	4.1	3.5	4.2	4.2	10	39	20	11	7.0
11	7.4	6.0	4.6	4.2	3.5	4.4	4.2	9.9	40	19	11	7.0
12	7.4	5.8	4.6	4.2	3.6	4.2	4.3	9.9	43	19	11	7.0
13	7.2	5.6	4.6	4.1	3.6	4.2	4.3	11	47	18	11	7.0
14	7.2	5.2	4.6	4.0	3.6	4.1	4.3	13	48	18	11	7.0
15	7.2	4.8	4.6	4.0	3.6	4.2	4.6	18	46	17	10	7.0
16	7.2	4.6	4.4	3.8	3.5	4.3	5.0	20	43	17	9.7	6.8
17	7.0	4.4	4.4	3.8	3.6	4.0	5.8	21	41	16	9.7	6.6
18	7.0	4.6	4.4	3.8	3.6	4.0	5.8	23	41	16	9.7	6.6
19	7.0	4.8	4.2	4.0	3.6	4.0	5.4	24	38	15	9.7	6.4
20	7.0	5.0	4.4	4.2	3.6	3.9	5.4	28	35	15	9.7	6.4
21	7.0	5.0	4.4	4.2	3.6	3.9	5.5	33	34	15	9.4	6.2
22	6.8	5.0	4.4	4.1	3.6	3.9	6.2	39	33	15	9.2	6.2
23	6.8	5.0	4.4	4.0	3.6	3.9	6.8	45	32	15	8.7	6.2
24	6.8	5.0	4.4	4.0	3.6	3.9	6.6	52	31	14	8.7	6.2
25	6.6	5.2	4.2	4.0	3.4	3.9	6.2	55	31	14	8.5	6.2
26	6.6	5.2	4.3	3.8	3.4	3.9	6.6	59	31	13	8.5	6.6
27	6.6	5.0	4.4	3.8	3.4	3.9	8.2	64	31	13	8.2	6.4
28	6.6	4.9	4.5	3.8	3.3	3.9	8.7	66	30	13	8.5	6.2
29	6.6	4.9	4.1	3.8	---	3.9	9.2	62	29	13	8.2	6.2
30	7.2	4.9	3.7	3.5	---	3.9	9.7	52	28	12	8.0	6.2
31	7.0	---	3.2	3.2	---	3.9	---	44	---	12	8.2	---
TOTAL	222.2	164.9	137.3	117.4	98.6	121.8	164.1	865.8	1174	554	310.6	204.0
MEAN	7.17	5.50	4.43	3.79	3.52	3.93	5.47	27.9	39.1	17.9	10.0	6.80
MAX	7.8	6.6	4.9	4.2	3.6	4.4	9.7	66	54	28	12	7.8
MIN	6.6	4.8	3.2	3.0	3.3	3.3	3.9	9.9	28	12	8.0	6.2
AC-FT	441	327	272	233	196	242	325	1720	2330	1100	616	405

CAL YR 1978 TOTAL 5598.9 MEAN 15.3 MAX 100 MIN 2.1 AC-FT 11110
WTR YR 1979 TOTAL 4134.7 MEAN 11.3 MAX 66 MIN 3.0 AC-FT 8200

Table 2.--Water-quality records for the gaging station on Cache Creek, 1965-79.

PERIOD OF RECORD--Water years 1965 to current year

Chemical analyses, in parts per million, July to September 1965

Date of collection	Discharge (cfs)	Silica (SiO_2)	Iron (Fe)	Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Bicarbonate (HCO_3)	Carbonate (CO_3)	Sulfate (SO_4)	Chloride (Cl)	Fluoride (F)	Nitrate (NO_3)	Boron (B)	Dissolved solids (residue at 180°C)			Hardness as $CaCO_3$		Sodium adsorption ratio	Specific conductance (micromhos at 25°C)	pH
															Parts per million	Tons per acre-foot	Tons per day	Calcium, Magnesium	Noncarbonate			
July 20, 1965.....	25.0	3.7	0.00	34	12	2.0	0.5	160	5	0.0	1.4	0.0	0.0	0.01	136	0.18	9.18	134	0	0.1	266	8.4
Aug. 26.....	13.0	4.3	.00	28	17	1.3	.5	164	0	5.8	1.8	.2	.3	.01	142	.19	4.98	138	3	.0	290	8.2
Sept. 28.....	10.0	5.2	.00	34	21	3.0	.4	211	0	8.2	1.8	.1	.0	.01	170	.23	4.59	171	0	.1	310	7.9

Chemical analyses, in parts per million, water year October 1965 to September 1966

Date of collection	Discharge (cfs)	Silica (SiO_2)	Iron (Fe)	Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Bicarbonate (HCO_3)	Carbonate (CO_3)	Sulfate (SO_4)	Chloride (Cl)	Fluoride (F)	Nitrate (NO_3)	Boron (B)	Dissolved solids (residue at 180°C)			Hardness as $CaCO_3$		Sodium adsorption ratio	Specific conductance (micromhos at 25°C)	pH
															Parts per million	Tons per acre-foot	Tons per day	Calcium, Magnesium	Noncarbonate			
Nov. 1, 1965.....	7.5	5.7	0.05	45	15	2.0	0.8	212	0	0.0	0.0	0.2	0.4	0.00	214	0.29	4.32	174	0	--	325	8.1
Dec. 9.....	7.7	5.9	.04	46	14	2.0	.9	202	4	3.3	.0	.2	.1	.00	232	.32	4.81	174	1	--	324	8.4
Jan. 4, 1966.....	5.0	5.4	.85	44	15	2.0	.5	204	0	4.9	.7	.1	.4	.02	162	.22	2.17	170	2	--	311	8.2
Feb. 2.....	4.7	5.0	.04	46	15	2.0	.5	203	4	4.9	1.4	.2	.5	.00	194	.26	2.45	176	2	--	321	8.4
Mar. 11.....	5.2	5.4	.00	45	16	3.0	.8	212	0	6.2	.0	.1	.0	.02	204	.28	2.85	180	6	--	331	8.0
Apr. 5.....	5.9	5.5	.02	46	14	4.4	1.5	212	0	5.4	.4	.1	.0	.03	206	.28	3.27	175	1	0.1	359	7.9
May 3.....	12	6.1	.03	46	16	6.0	1.0	207	0	24	5.0	.1	.0	.14	198	.27	6.40	182	12	.2	338	8.1
June 7.....	33	4.4	.00	29	20	2.3	.7	192	2	3.7	.0	.2	.0	.02	178	.24	15.8	156	0	--	308	8.2
July 5.....	16	4.4	.06	32	17	2.0	.6	167	10	.0	.0	.2	.0	.00	166	.23	7.16	150	0	--	289	8.4
Aug. 1.....	10	4.6	.02	43	13	3.1	1.1	195	0	5.0	.0	.2	.0	.00	174	.24	4.68	162	2	.1	306	7.8
Sept. 6.....	6.6	5.1	.04	44	14	1.7	.3	189	0	5.8	2.8	.2	.0	.00	180	.24	3.19	166	11	--	313	8.1

Chemical analyses, in parts per million, water year October 1966 to September 1967

Date of collection	Discharge (cfs)	Silica (SiO_2)	Iron (Fe)	Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Bicarbonate (HCO_3)	Carbonate (CO_3)	Sulfate (SO_4)	Chloride (Cl)	Fluoride (F)	Nitrate (NO_3)	Boron (B)	Dissolved solids (residue at 180°C)			Hardness as $CaCO_3$		Sodium adsorption ratio	Specific conductance (micromhos at 25°C)	pH
															Parts per million	Tons per acre-foot	Tons per day	Calcium, Magnesium	Noncarbonate			
Oct. 3, 1966.....	6.0	5.4	0.23	46	15	2.6	0.5	214	0	4.3	7.1	0.1	0.1	0.02	198	0.27	3.19	178	2	0.1	332	8.2
Oct. 31.....	5.0	5.1	.00	55	7.7	2.9	.3	188	7	.0	4.8	.1	.3	.03	194	.26	2.60	169	3	.1	319	8.3
May 2, 1967.....	3.8	5.7	.00	47	18	4.0	.2	221	0	6.7	2.8	.2	.4	.01	202	.27	2.06	182	0	.1	353	8.2
June 10.....	60	4.8	.01	43	12	2.2	3.7	181	7	4.8	.0	.1	.5	.04	180	.24	29.1	158	0	.1	297	8.4
July 14.....	34	5.0	.05	46	10	1.9	.2	190	0	7.8	.0	.1	.0	.01	162	.22	14.8	156	0	.1	295	8.0
Aug. 7.....	17	4.9	.13	42	14	2.0	.4	198	0	5.8	.7	.1	.1	.02	160	.22	7.33	164	1	.1	314	7.8
Sept. 12.....	11	4.8	.02	44	14	1.9	.4	204	0	4.4	.5	.0	.0	.01	176	.24	5.21	166	0	.1	308	8.1

INSTANTANEOUS SUSPENDED SEDIMENT AND PARTICLE SIZE, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968
(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 TEMPERATURE (C)	DISCHARGE (CFS)	SUSPENDED SEDIMENT CONCENTRATION (MG/L)	SUSPENDED SEDIMENT DISCHARGE (TONS/DAY)	PARTICLE SIZE: PERCENT FINER THAN THE SIZE (IN MILLIMETERS) INDICATED .002	.004	.008	.016	.031	.062	.125	.250	.500	1.00	2.00	METHOD OF ANALYSIS
JUN 04, 1968	0945	3	99	150	24						85	91	99	100	--	--	V
SEP 17.....	1100	3	9.5	31	.8						--	--	--	--	--	--	

ADDITIONAL CHEMICAL ANALYSES, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DATE	TIME	DIS-CHARGE (CFS)	BIO-CHEMICAL OXYGEN DEMAND (BOD) (MG/L)	PHOS-PHATE (PO4) (MG/L)
OCT. 15...	0740	7.0	--	0.00
NOV. 20...	1230	5.4	0.17	.00
JAN. 2...	1420	5.6	.08	.00
FEB. 12...	1400	5.4	--	.00
APR. 11...	1550	4.3	.9	.00
MAY 6...	1620	12	.6	.00
JUNE 4...	1100	53	.3	.01
JULY 8...	1700	30	.3	.01
AUG. 13...	0935	12	.6	--
SEPT. 17...	1130	9.2	--	--

ON SIZE DETERMINATIONS, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DATE	TIME	DIS-CHARGE (CFS)	TURBIDITY (JTU)	SPECIFIC CONDUCTANCE (MICROMHOS)	DIS-SOLVED OXYGEN (MG/L)	COLI-FORM (COLONIZES PER 100 ML)	PH
OCT. 15...	0740	7.0	--	--	--	--	--
NOV. 20...	1230	5.4	333	10.4	16	8.3	
JAN. 2...	1420	5.6	295	9.4	6	8.4	
FEB. 12...	1400	5.4	320	9.8	--	8.4	
APR. 11...	1550	4.3	360	10.4	5	8.4	
MAY 6...	1620	12	360	9.6	2	8.4	
JUNE 4...	1100	53	300	7.6	13	--	
JULY 8...	1700	30	290	7.7	26	8.4	
AUG. 13...	0935	12	270	10.3	16	8.3	
SEPT. 17...	1130	9.2	300	11.5	15	8.4	

CHEMICAL ANALYSES IN MILLIGRAMS PER LITER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DATE	TIME	DIS-CHARGE (CFS)	SILICA (SIO2)	TOTAL IRON (FE)	CAL-CIUM (CA)	MAG-NE-SIUM (MG)	SODIUM (NA)	PO-TAS-SIUM (K)	BICAR-BONATE (HCO3)	CARBO-NATE (CO3)	CHLO-RIDE (CL)	FLUO-RIDE (F)	SULFATE (SO4)	NITRATE (NO3)	BORON (B)	SOLIDS, DIS-SOLVED (SUM OF CONSTI-TUENTS)	SOLIDS, DIS-SOLVED (TONS PER AC-FT)	SOLIDS, DIS-SOLVED (TONS PER DAY)	HARD-NESS (CA,MG)	NON-CAR-BONATE HARD-NESS	AM-MONIA TION (NH3)	SOMP-TION RATIO	SPECI-FIC CONDUC-TANCE (MICRO-MHOS)	PH	TEMP-ERATURE (DEG C)
OCT. 15...	0740	7.0	4.4	.06	45	14	2.1	.4	211	0	5.2	.7	.0	.0	.00	176	.25	3.52	172	0	.1	320	0.1	1	
NOV. 20...	1230	5.4	5.0	.04	46	16	2.5	.4	216	0	11	.8	.1	.0	.00	168	.27	2.66	181	4	.1	340	0.1	2	
JAN. 02...	1420	5.6	5.3	.02	48	15	2.6	.8	216	0	11	.6	.1	.0	.00	189	.26	2.90	182	5	.1	350	0.1	0	
FEB. 12...	1400	5.4	5.4	.05	56	10	2.6	1.0	216	0	12	.6	.1	.0	.00	196	.26	2.62	182	5	.1	350	0.1	0	
APR. 11...	1550	4.3	5.6	.07	52	15	3.4	.7	222	0	16	1.0	.1	.1	.03	203	.26	2.23	192	10	.1	356	0.2	2	
MAY 06...	1620	12	6.5	.12	62	9.6	4.4	.7	222	0	13	1.0	.1	.1	.00	212	.29	7.00	194	2	.1	362	0.4	2	
JUNE 04...	1100	53	4.9	.04	53	10	3.0	.8	216	0	5.4	.7	.2	.4	.01	184	.24	25.4	176	0	.1	329	0.2	3	
JULY 06...	1700	30	4.3	.06	43	13	4.3	.3	195	0	5.4	.4	.2	.1	.CC	167	.23	13.4	160	0	.1	299	0.2	10	
AUG. 13...	0935	12	4.8	.05	45	14	2.2	2.9	207	0	6.9	.2	.1	.1	.01	176	.25	5.96	172	2	.1	320	7.6	7	
SEPT. 17...	1130	9.2	4.7	.05	45	16	2.3	.4	204	4	7.9	.5	.1	.6	.00	181	.27	4.97	177	3	.1	324	8.3	2	

PESTICIDE ANALYSES IN MICROGRAMS PER LITER, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DATE	TIME	DIS-CHARGE (CFS)	DI-ELDRIN	ENDRIN	BHC-TA-CHLOR	LINDANE	2,4-D	SILVEX	2,4,5-T
JUNE 04...	1100	54	.00	.00	.00	.00	.00	.00	.00

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DATE	TIME	DIS-CHARGE (CFS)	SILICA (SIO2) (MG/L)	TOTAL IRON (FE) (UG/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)	BORON (B) (UG/L)	DIS-SOLVED SOLIDS (SUM OF CONSTI-TUENTS) (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 CONDUCTANCE (MICRO-MHOS)	PH (UNITS)	TEMP-ERATURE (DEG C)
OCT.																								
08...	1200	7.8	4.8	30	44	16	2.4	.3	201	6	5.0	.2	.1	.1	0	178	.24	4.00	177	2	.1	318	8.3	0
NOV.																								
18...	1640	6.2	5.2	50	55	13	2.7	.6	222	C	10	.6	.1	.1	0	196	.24	2.98	189	7	.1	350	8.1	0
DEC.																								
17...	1000	4.7	4.6	20	46	15	2.4	2.6	214	0	5.6	.3	.1	.1	0	181	.25	2.36	176	C	.1	318	7.8	0
JAN.																								
28...	0920	3.4	5.0	40	51	15	2.9	.6	219	0	12	.6	.1	.1	0	195	.27	1.84	190	10	.1	342	7.7	0
FEB.																								
14...	1315	4.4	5.2	10	51	15	2.8	1.0	220	0	11	.8	.1	.0	0	195	.24	2.14	187	7	.1	351	7.8	0
MAR.																								
24...	1030	4.2	5.4	190	51	15	3.2	.3	219	0	13	.6	.2	.3	0	197	.25	2.11	189	9	.1	348	8.2	0
MAY																								
06...	1045	21	5.5	10	58	12	4.6	1.1	228	0	11	.4	.1	.0	0	205	.28	11.6	194	7	.1	370	8.2	6
JUNE																								
02...	1820	48	4.6	50	47	13	3.4	1.0	206	C	10	.3	.1	.1	20	191	.24	22.8	171	2	.1	311	8.1	7
JULY																								
22...	1900	14	5.0	60	43	14	1.9	.6	197	0	5.4	.3	.1	.1	0	167	.25	6.88	165	3	.1	308	8.1	12
AUG.																								
04...	1630	12	4.6	20	42	15	2.2	.8	193	4	8.8	.4	.1	.1	0	173	.23	5.57	168	3	.1	314	8.5	12
28...	1530	7.4	4.6	--	44	13	1.9	.8	184	6	5.8	.6	.1	.1	0	167	.23	3.40	164	3	.1	300	8.6	10
SEPT.																								
24...	1340	7.0	7.1	10	46	13	2.2	.8	188	8	7.0	.5	.1	.1	0	177	.23	3.21	168	0	.1	297	8.6	.7

CHEMICAL ANALYSES IN MICROGRAMS PER LITER, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DATE	TIME	DIS-CHARGE (CFS)	ALUM-INUM (AL)	AR-SENIC (AS)	BARIUM (BA)	BERYL-LIUM (BE)	BIS-MUTH (BI)	CAD-MIUM (CD)	CHRO-MIUM (CR)	COBALT (CO)	COPPER (CU)	GALLI-UM (GA)	GERMA-NIUM (GE)	LEAD (PB)	LITH-IUM (LI)	MAN-GANESE (MN)	MOLYB-DENUM (MO)	NICKEL (NI)	RUBID-IUM (RB)	SILVER (AG)	STRON-TIUM (SR)	TIN (SN)	TITAN-IUM (TI)	VANA-DIUM (V)	ZINC (ZN)	ZIRCON-IUM (ZR)
JUNE																										
02...	1820	48	20	--	60	<2	<10	<10	<5	<3	.9	--	--	<5	3	4	<2	<6	<2	<.6	75	<10	4	<6	--	--

PESTICIDE ANALYSES IN MICROGRAMS PER LITER, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DATE	TIME	DIS-CHARGE (CFS)	ORTHO PHOS-PHATE (PO4) (MG/L)	DIS-SOL-VED PHOS-PHORUS (P) (MG/L)	BIO-CHEM-ICAL OXYGEN DEMAND (MG/L)
OCT.					
08...	1200	7.8	--	--	--
NOV.					
18...	1640	6.2	--	--	.4
DEC.					
17...	1000	4.7	--	--	.3
JAN.					
28...	0920	3.4	--	--	1.4
FEB.					
14...	1315	4.4	--	--	.3
MAR.					
24...	1030	4.2	--	--	1.1
MAY					
06...	1045	21	--	--	.3
JUNE					
02...	1820	48	--	--	.1
JULY					
22...	1900	14	--	--	--
AUG.					
04...	1630	12	.00	.00	.0
28...	1530	7.4	--	.02	.2
SEPT.					
24...	1340	7.0	--	.00	.7

DATE	TIME	DIS-CHARGE (CFS)	ALDRIN	DDD	DDE	DDT	DI-ELDRIN	ENDRIN	HEPTA-CHLOR	LIN-DANE	2,4-D	SIL-VEX	2,4,5-T
OCT.													
08...	1200	7.8	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
JUNE													
02...	1820	48	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00

RADIOCHEMICAL ANALYSES WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

			DISSOLVED				SUSPENDED			
DATE	TIME	DIS-CHARGE (CFS)	URANIUM (ug/l)	RADIUM (pc/l)	GROSS ALPHA (ug U/l)	GROSS BETA (pc/l)	URANIUM (ug/l)	RADIUM (pc/l)	GROSS ALPHA (ug U/l)	GROSS BETA (pc/l)
OCT.										
08...	1200	7.8	.4	.03	.5	.6	--	--	<.4	<.4
JUNE										
02...	1820	48	.4	.06	1.9	1.2	--	--	3.1	2.2

INSTANTANEOUS SUSPENDED SEDIMENT AND PARTICLE SIZE, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969
(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-ERATURE (C)	DISCHARGE (CFS)	CONCEN-TRATION (MG/L)	SUSPENDED SEDIMENT DISCHARGE (TONS/DAY)	PARTICLE SIZE: PERCENT FINER THAN THE SIZE (IN MILLIMETERS) INDICATED .002	.004	.008	.016	.031	.062	.125	.250	.500	1.00	2.00	METHOD OF ANALY-SIS
OCT 8, 1968	0845	00.0	8.1	50	1.1	--	--	--	--	--	--	--	--	--	--	--	
DEC 17.....	1000	00.0	4.7	3	.04	--	--	--	--	--	--	--	--	--	--	--	
FEB 14, 1969	1200	00.0	4.4	33	.39	--	--	--	--	--	--	--	--	--	--	--	
MAR 24.....	0915	00.0	4.4	19	.23	--	--	--	--	--	--	--	--	--	--	--	
MAY 6.....	1045	06.0	21	37	2.1	--	--	--	--	--	--	--	--	--	--	--	
JUN 2.....	1820	07.0	48	47	6.1	--	--	--	--	--	--	--	--	--	--	--	
JUL 8.....	0910	08.0	17	56	2.6	--	--	--	--	--	--	--	--	--	--	--	
AUG 5.....	1600	12.0	12	8	.26	--	--	--	--	--	--	--	--	--	--	--	
SEP 24.....	1400	07.0	7.0	2	.04	--	--	--	--	--	--	--	--	--	--	--	

DATE	TIME	DIS-CHARGE (CFS)	SPECI-FIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	DISSOLVED OXYGEN (MG/L)	COLIFORM (COLONIES PER 100 ML)
OCT.						
08...	1200	7.8	307	8.4	10.6	14
NOV.						
18...	1640	6.2	340	8.4	10.6	2
DEC.						
17...	1000	4.7	265	8.4	12.1	2
JAN.						
28...	0920	3.4	235	8.1	10.5	47
FEB.						
14...	1315	4.4	310	8.4	11.5	13
MAR.						
24...	1030	4.2	330	8.3	12.0	13
MAY						
06...	1045	21	490	8.0	9.0	16
JUNE						
02...	1820	48	250	7.2	9.2	10
JULY						
22...	1900	14	224	8.2	9.7	10
AUG.						
04...	1630	12	319	8.3	11.2	15
28...	--	7.4	315	8.6	9.0	44
SEPT.						
24...	1340	7.0	315	8.6	9.6	24

FIELD DETERMINATIONS, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

DATE	TIME	DIS-CHARGE (CFS)	SPECIFIC CONDUCTANCE (MICROMHOS)	DISSOLVED OXYGEN (MG/L)	PH (UNITS)	TEMPERATURE (DEG C)	IMMEDIATE COLIFORM (COL. PER 100 ML)
OCT.							
11...	1205	5.2	253	11.3	8.0	1.0	14
NOV.							
17...	1330	a5.1	290	10.6	8.1	.5	8
DEC.							
03...	1430	a4.7	310	10.7	8.4	.0	12
JAN.							
19...	1200	4.4	--	9.9	7.2	2.0	190
FEB.							
03...	1530	4.2	322	10.5	8.5	.5	250
MAR.							
09...	1815	3.7	353	10.3	8.4	1.0	3
APR.							
06...	1745	4.5	309	10.2	8.3	3.5	4
MAY							
08...	1615	7.6	360	9.0	8.4	3.0	2
JUNE							
01...	1740	38	320	11.1	8.0	6.5	12
JULY							
07...	1730	33 --	295	10.9	8.0	10.0	12
AUG.							
04...	1130	17	300	11.1	8.4	7.0	113
SEP.							
01...	0815	11	305	--	8.4	8.0	70

a Daily mean discharge.

ANALYSES OF ADDITIONAL SAMPLES

DATE	TIME	DIS-CHARGE (CFS)	BIOCHEMICAL OXYGEN DEMAND (MG/L)	DISSOLVED PHOSPHORUS (P) (MG/L)	TEMPERATURE (DEG C)
OCT.					
11...	1205	5.2	.3	.000	1.0
NOV.					
17...	1330	a5.1	.1	.020	.5
DEC.					
03...	1430	a4.7	.6	.010	.0
JAN.					
19...	1200	4.4	--	.020	2.0
FEB.					
03...	1530	4.2	.2	.000	.5
MAR.					
09...	1815	3.7	1.1	--	1.0
APR.					
06...	1745	4.5	1.3	.010	3.5
MAY					
08...	1615	7.6	1.4	.040	3.0
JUNE					
01...	1740	38	.4	.020	6.0
JULY					
07...	1730	33	.4	.020	10.0
AUG.					
04...	1130	17	.4	--	7.0
SEP.					
01...	0815	11	.6	--	8.0

a Daily mean discharge.

INSTANTANEOUS SUSPENDED SEDIMENT, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

DATE	TIME	TEMPERATURE (DEG C)	DISCHARGE (CFS)	SUSPENDED SEDIMENT (MG/L)	SUSPENDED SEDIMENT DISCHARGE (T/DAY)
NOV., 1969					
17...	1330	.5	a5.1	18	.25
DEC.					
03...	1430	.0	4.7	9	.11
JAN., 1970					
19...	1200	2.0	4.4	7	.08
FEB.					
03...	1530	.5	4.2	4	.05
MAR.					
09...	1815	1.0	3.7	5	.05
APR.					
06...	1745	3.5	4.5	16	.19
MAY					
08...	1615	3.0	7.6	10	.21
JUNE					
01...	1740	6.0	38	74	7.6
JULY					
07...	1730	10.0	33	120	11
AUG.					
04...	1130	7.0	17	19	.87
SEP.					
01...	0815	8.0	11	10	.30

a Daily mean discharge.

WATER QUALITY DATA, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

DATE	TIME	DIS-CHARGE (CFS)	SILICA (SIO2) (MG/L)	TOTAL IRON (FE) (UG/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)	DIS-SOLVED BORON (B) (UG/L)	DIS-SOLVED SOLIDS (SUM OF CONSTI-TUENTS) (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 CONDUCTANCE (MICRO-MHOS)	PH (UNITS)	TEMP-ERATURE (DEG C)
OCT.																								
11...	1205	5.2	7.7	—	43	17	2.8	.4	205	2	6.8	.6	.1	.0	0	180	.24	2.53	178	6	.1	293	8.3	1.0
NOV.																								
17...	1330	a5.1	4.6	0	45	14	2.3	.6	213	0	6.4	.6	.1	.2	0	179	.24	2.45	172	0	.1	323	8.2	.5
DEC.																								
03...	1430	a4.7	4.6	0	45	15	2.3	.5	208	0	7.0	.6	.0	.4	10	177	.24	2.26	173	2	.1	324	8.2	.0
JAN.																								
19...	1200	4.4	5.2	50	44	15	2.3	.5	211	0	7.6	.5	.1	.3	0	180	.23	2.02	172	0	.1	312	8.2	2.0
FEB.																								
03...	1530	4.2	5.2	0	46	15	2.3	1.3	212	0	6.8	.5	.0	.0	10	181	.24	2.02	176	2	.1	324	7.9	.5
MAR.																								
09...	1015	3.7	5.7	50	46	15	2.3	1.0	214	0	5.8	.7	.2	.0	0	182	.23	1.70	176	0	.1	330	8.1	1.0
APR.																								
06...	1745	4.5	5.0	40	44	15	2.3	.4	201	0	6.4	1.0	.1	.1	10	173	.23	2.07	172	7	.1	320	8.1	3.5
MAY																								
08...	1615	7.6	5.5	30	52	15	4.0	.7	224	0	10	1.9	.1	.0	0	207	.27	4.02	191	7	.1	361	8.1	3.0
JUNE																								
01...	1740	38	4.5	120	48	12	2.8	.6	209	0	4.8	.6	.1	.1	10	177	.25	18.9	170	0	.1	320	8.1	6.0
JULY																								
07...	1730	33	4.5	30	40	13	1.5	.6	177	7	3.4	.3	.1	.1	10	158	.23	15.0	154	0	.1	294	8.4	10.0
AUG.																								
04...	1130	17	4.4	10	44	13	1.6	.5	187	5	4.0	.3	.1	.2	20	165	.25	8.35	164	2	.1	308	8.5	7.0
SEP.																								
01...	0815	11	5.7	50	45	14	1.8	.4	205	0	5.0	.4	.1	.1	0	174	.21	4.57	170	2	.1	312	8.2	8.0

a Daily mean discharge.

CHEMICAL ANALYSES IN MICROGRAMS PER LITER, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

DATE	TIME	DIS-CHARGE (CFS)	ALUM-INUM (AL)	AR-SENIC (AS)	BARIUM (BA)	BERYL-LIUM (BE)	BIS-MUTH (BI)	CAD-MIUM (CD)	CHRO-MIUM (CR)	COBALT (CO)	COPPER (CU)	GALLI-UM (GA)	GERMA-NIUM (GE)	LEAD (PB)	LITH-IUM (LI)	MAN-GANESE (MN)	MOLYB-DENUM (MO)	NICKEL (NI)	RUBID-IUM (RB)	SILVER (AG)	STRON-TIUM (SR)	TIN (SN)	TITAN-IUM (TI)	VANA-DIUM (V)	ZINC (ZN)	ZIRCON-IUM (ZR)
NOV.																										
17...	1330	a5.1	13	--	31	<.9	<5	<65	<5	<5	2	--	<5	<3	2	4	<2	<7	<3	<.5	50	<7	<5	<3	<200	--
SEPT.																										
01...	0815	11	13	--	38	<.5	<3	<45	<4	<3	1	ND[b]	<3	<2	2	2	<.9	<2	<.6	<.3	55	<5	2	<2	<180	ND[b]

a Daily mean discharge.
b Specifically sought, not detected.

DATE	TIME	DIS-CHARGE (CFS)	ALDRIN (UG/L)	DDD (UG/L)	DDE (UG/L)	DDT (UG/L)	DI-ELDRIN (UG/L)	ENDRIN (UG/L)	HEPTA-CHLOR (UG/L)	HEPTA-CHLOR EPOXIDE (UG/L)	LINDANE (UG/L)	CHLOR-DANE (UG/L)	PARA-THION (UG/L)	METHYL PARA-THION (UG/L)	MALA-THION (UG/L)	DI-AZINON (UG/L)	2,4-D (UG/L)	SILVEX (UG/L)	2,4,5-T (UG/L)	TEMP-ERATURE (DEG C)
SEP.																				
01...	0815	11	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	8.0

DATE	TIME	DIS-CHARGE (CFS)	ALDRIN IN BOTTOM DE-POSITS (UG/KG)	DDD IN BOTTOM DE-POSITS (UG/KG)	DDE IN BOTTOM DE-POSITS (UG/KG)	DDT IN BOTTOM DE-POSITS (UG/KG)	DI-ELDRIN IN BOTTOM DE-POSITS (UG/KG)	ENDRIN IN BOTTOM DE-POSITS (UG/KG)	HEPTA-CHLOR IN BOTTOM DE-POSITS (UG/KG)	HEPTA-CHLOR EPOXIDE IN BOT-TOM DE-POSITS (UG/KG)	LINDANE IN BOTTOM DE-POSITS (UG/KG)	CHLOR-DANE IN BOTTOM DE-POSITS (UG/KG)	PARA-THION IN BOTTOM DE-POSITS (UG/KG)	METHYL PARA-THION IN BOTTOM DE-POSITS (UG/KG)	MALA-THION IN BOTTOM DE-POSITS (UG/KG)	DI-AZINON IN BOTTOM DE-POSITS (UG/KG)
SEP.																
01...	0815	11	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00

RADIOCHEMICAL ANALYSES WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

					DISSOLVED			SUSPENDED		
DATE	TIME	DIS-CHARGE (CFS)	URANIUM (µg/l)	RADIUM (pCi/l)	GROSS ALPHA (µg/l as U nat)	GROSS BETA (pCi/l as Sr-90/Y-90)	SOLIDS (mg/l)	GROSS ALPHA (µg/l as U nat)	GROSS BETA (pCi/l as Sr-90/Y-90)	SOLIDS (mg/l)
NOV., 1969										
17...	1330	a5.1	0.3	0.06	<3.6	0.7	310	<0.4	<0.4	<1
AUG., 1970										
04...	1130	17	.38	.08	<1.8	1.3	170	<0.4	<0.4	3

a Daily mean discharge.

WATER QUALITY DATA, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DATE	DIS-CHARGE (CFS)	DIS-SOLVED SILICA (SIO2) (MG/L)	TOTAL IRON (FE) (UG/L)	DIS-SOLVED CAL-CIUM (CA) (MG/L)	DIS-SOLVED MAG-NE-SIUM (MG) (MG/L)	DIS-SOLVED SODIUM (NA) (MG/L)	DIS-SOLVED PO-TAS-SIUM (K) (MG/L)	BICAR-BONATE (HCO3) (MG/L)	CAR-BONATE (CO3) (MG/L)	DIS-SOLVED SULFATE (SO4) (MG/L)	DIS-SOLVED CHLO-RIDE (CL) (MG/L)	DIS-SOLVED FLUO-RIDE (F) (MG/L)	DIS-SOLVED BORON (B) (UG/L)	DIS-SOLVED SOLIDS (SUM OF CONSTI-TUENTS) (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...	6.5	4.7	40	46	14	1.7	.4	210	0	5.2	.7	.1	0	176	.24	3.09	170	0	.1	316	8.0	2.0
NOV.																						
04...	45.8	4.2	60	45	15	2.0	.4	213	0	4.9	.6	.1	10	178	.24	2.79	170	0	.1	321	8.1	.0
30...	5.4	4.9	300	45	14	1.9	.4	202	0	4.5	.5	.1	0	173	.24	2.52	170	4	.1	313	8.1	.0
JAN.																						
05...	a2.7	4.7	20	46	14	2.1	.5	212	0	5.3	.6	.1	10	178	.24	1.30	170	0	.1	324	8.1	.0
FEB.																						
01...	4.2	5.0	10	48	15	2.2	.6	214	0	7.4	.6	.1	10	184	.25	2.09	180	4	.1	327	8.3	.0
APR.																						
09...	5.4	5.2	30	55	11	2.7	.9	195	0	15	3.8	.2	20	190	.26	2.77	180	20	.1	330	8.3	2.5
MAY																						
18...	32	7.0	40	54	12	3.8	1.1	226	0	5.8	2.2	.2	10	197	.27	17.0	180	0	.1	330	8.3	2.5
JUNE																						
07...	69	5.0	30	50	13	2.7	.7	214	0	1.6	3.3	.1	20	182	.25	33.9	180	4	.1	311	8.3	5.0
JULY																						
12...	46	4.4	20	45	14	1.6	.3	194	0	3.3	.7	.3	20	168	.23	20.9	170	11	.1	296	8.1	5.0
AUG.																						
03...	24	4.3	20	42	13	1.5	.5	206	0	4.5	1.2	.0	10	170	.23	11.0	160	0	.1	294	8.0	10.0
SEP.																						
03...	15	5.1	20	44	14	1.9	.8	207	0	5.3	.5	.0	10	174	.24	7.05	170	0	.1	312	8.0	6.0

a Daily mean discharge.

DATE	TIME	DIS-CHARGE (CFS)	DIS-SOLVED ARSENIC (AS) (UG/L)	DIS-SOLVED CAD-MIUM (CD) (UG/L)	DIS-SOLVED COBALT (CO) (UG/L)	DIS-SOLVED COPPER (CU) (UG/L)	DIS-SOLVED LEAD (PB) (UG/L)	DIS-SOLVED ZINC (ZN) (UG/L)	TOTAL MERCURY (HG) (UG/L)
OCT.									
11...	0900	6.5	0	1	0	--	0	18	.0
JUNE									
07...	1100	69	0	0	—	1	2	20	.1

FIELD DETERMINATIONS

DATE	TIME	DIS-CHARGE (CFS)	SPECI-FIC COND-UCTANCE (MICRO-MHOS)	DIS-SOLVED OXYGEN (MG/L)	PH (UNITS)	IMME-DIATE COLI-FORM (COL. PER 100 ML)
OCT.						
11...	0900	6.5	300	11.3	7.8	22
NOV.						
04...	0900	a5.8	--	9.9	8.1	14
30...	1515	5.4	300	10.8	8.4	16
JAN.						
05...	1540	a2.7	--	11.5	8.2	50
FEB.						
01...	1410	4.2	--	12.1	8.3	320
APR.						
09...	1550	5.4	330	13.6	8.4	58
MAY						
18...	1025	32	339	10.4	8.0	--
JUNE						
07...	1020	69	320	12.9	8.4	27
JULY						
12...	0800	46	290	—	8.3	14
AUG.						
03...	1410	24	300	9.1	8.4	30
SEP.						
03...	1330	15	--	10.7	8.4	360

WATER QUALITY DATA, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DATE	TIME	DIS-CHARGE (CFS)	BIO-CHEM-ICAL OXYGEN DEMAND (MG/L)	TOTAL PHOS-PHORUS (P) (MG/L)	DIS-SOL-VED PHOS-PHORUS (P) (MG/L)	DIS-SOLVED NITRITE PLUS NITRATE (N) (MG/L)
OCT.						
11...	0900	6.5	.6	--	.000	.00
NOV.						
04...	0900	a5.8	1.6	--	.000	.09
30...	1515	5.4	--	.000	--	.07
JAN.						
05...	1540	a2.7	1.4	--	.000	.07
FEB.						
01...	1410	4.2	.7	--	.010	.07
APR.						
09...	1610	5.4	.6	--	.090	.05
MAY						
18...	1025	32	1.4	--	.040	.07
JUNE						
07...	1100	69	.9	--	.050	.05
JULY						
12...	0830	46	.8	.020	--	.73
AUG.						
03...	1415	24	.6	.020	--	.29
SEP.						
03...	1420	15	.7	.070	--	.06

INSTANTANEOUS SUSPENDED SEDIMENT, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DATE	TIME	TEMP-ERATURE (DEG C)	DIS-CHARGE (CFS)	SUS-PENDED SEDI-MENT (MG/L)	SUS-PENDED SEDI-MENT DIS-CHARGE (T/DAY)
NOV.					
04...	0900	.0	a5.8	8	.13
30...	1515	.0	5.4	4	.06
JAN.					
05...	1540	.0	a2.7	6	.04
FEB.					
01...	1410	.0	4.2	3	.03
APR.					
09...	1550	2.5	5.4	8	.12
MAY					
18...	1025	2.5	32	28	2.4
JUNE					
07...	1100	5.0	69	90	17
JULY					
12...	0830	5.0	46	40	5.0
AUG.					
03...	1415	10.0	24	31	2.0
SEP.					
03...	1420	6.0	15	13	.53

a Daily mean discharge.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1971 TO SEPTEMBER 1972

DATE	TIME	DIS-CHARGE (CFS)	DIS-SOLVED SILICA (SIO2) (MG/L)	DIS-SOLVED IRON (FE) (UG/L)	DIS-SOLVED CAL-CIUM (CA) (MG/L)	DIS-SOLVED MAG-NE-SIUM (MG) (MG/L)	DIS-SOLVED SODIUM (NA) (MG/L)	DIS-SOLVED PO-TAS-SIUM (K) (MG/L)	BICAR-BONATE (HCO3) (MG/L)	CAR-BONATE (CO3) (MG/L)	DIS-SOLVED SULFATE (SO4) (MG/L)	DIS-SOLVED CHLO-RIDE (CL) (MG/L)	DIS-SOLVED FLUO-RIDE (F) (MG/L)	NITRITE PLUS NITRATE (N) (MG/L)	DIS-SOLVED BORON (B) (UG/L)	DIS-SOLVED SOLIDS (SUM OF CONSTI-TUENTS (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	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	PH (UNITS)	TEMPER-ATURE (DEG C)
OCT.																								
04...	1615	11	5.1	20	46	14	2.5	.5	216	0	7.8	1.2	.3	.10	10	184	.25	5.07	170	0	.1	329	8.2	4.5
NOV.																								
08...	1530	7.2	5.2	--	45	14	2.0	.5	213	0	4.5	1.2	.1	.24	10	178	.24	3.48	170	0	.1	324	8.2	1.0
DEC.																								
01...	1300	6.2	5.8	60	50	16	2.6	.7	237	0	13	.8	.3	.11	10	206	.28	3.79	190	0	.1	367	8.0	.0
JAN.																								
17...	1515	5.3	5.3	60	47	15	2.2	.7	228	0	5.3	.8	.0	.05	20	189	.26	2.60	180	0	.1	321	8.1	1.0
MAR.																								
08...	1100	4.3	5.6	10	48	15	2.6	.6	224	0	5.6	1.4	.0	.03	0	189	.26	2.14	180	0	.1	329	8.2	1.0
APR.																								
09...	0900	5.0	5.6	10	50	17	3.0	.8	229	0	8.1	1.9	.1	.07	20	200	.27	2.86	190	7	.1	363	8.1	1.5
MAY																								
15...	1620	36	5.7	50	54	13	2.9	1.4	220	0	7.0	.9	.5	.07	20	194	.26	18.5	190	8	.1	345	8.1	6.0
JUNE																								
12...	1300	109	4.3	30	45	12	1.5	.5	198	0	6.1	2.0	.0	.00	10	169	.23	49.7	160	0	.1	298	7.8	6.0
JULY																								
10...	1555	38	6.3	40	43	13	1.6	.6	209	0	5.9	1.2	.0	.06	20	175	.24	17.5	160	0	.1	300	8.3	10.0
AUG.																								
07...	1500	19	.0	40	44	14	1.6	.6	202	0	5.7	1.0	.0	.00	20	166	.23	8.52	170	2	.1	308	8.2	10.0
SEP.																								
05...	1845	12	4.8	50	45	14	1.8	.5	205	0	6.7	1.3	.1	.01	10	175	.24	5.67	170	2	.1	314	8.1	7.0

DATE	TIME	DIS-CHARGE (CFS)	DIS-SOLVED ARSENIC (AS) (UG/L)	DIS-SOLVED CAD-MIUM (CD) (UG/L)	DIS-SOLVED CHRO-MIUM (CR) (UG/L)	DIS-SOLVED COPPER (CU) (UG/L)	DIS-SOLVED LEAD (PB) (UG/L)	DIS-SOLVED ZINC (ZN) (UG/L)	TOTAL MERCURY (HG) (UG/L)
APR.									
09...	0900	5.0	6	0	0	2	3	30	--
JUNE									
12...	1300	109	0	0	0	1	3	8	.0

DATE	TIME	DIS-CHARGE (CFS)	ALDRIN (UG/L)	CHLOR-DANE (UG/L)	DDD (UG/L)	DDE (UG/L)	DDT (UG/L)	DI-AZINON (UG/L)	DI-ELDRIN (UG/L)	ENDRIN (UG/L)	HEPTA-CHLOR (UG/L)	HEPTA-CHLOR EPOXIDE (UG/L)	LINDANE (UG/L)	MALA-THION (UG/L)	METHYL PARA-THION (UG/L)	PARA-THION (UG/L)	2,4-D (UG/L)	2,4,5-T (UG/L)	SILVEX (UG/L)
OCT.																			
04...	1615	11	.00	.0	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
SEP.																			
05...	1845	12	.00	.0	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00

DATE	TIME	DIS-CHARGE (CFS)	ALDRIN IN BOTTOM DE-POSITS (UG/KG)	LINDANE IN BOTTOM DE-POSITS (UG/KG)	CHLOR-DANE IN BOTTOM DE-POSITS (UG/KG)	DDD IN BOTTOM DE-POSITS (UG/KG)	DDE IN BOTTOM DE-POSITS (UG/KG)	DDT IN BOTTOM DE-POSITS (UG/KG)	DI-ELDRIN IN BOTTOM DE-POSITS (UG/KG)	ENDRIN IN BOTTOM DE-POSITS (UG/KG)	HEPTA-CHLOR IN BOTTOM DE-POSITS (UG/KG)	HEPTA-CHLOR EPOXIDE IN BOTTOM DE-POSITS (UG/KG)
OCT.												
04...	1615	11	<.2	<.2	<1.0	<.2	<.2	<.2	<.2	<.2	<.2	<.2
SEP.												
05...	1845	12	<.2	<.2	<1.0	<.2	<.2	<.2	<.2	<.2	<.2	<.2

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1971 TO SEPTEMBER 1972

DATE	TIME	DIS-CHARGE (CFS)	BIO-CHEMICAL OXYGEN DEMAND (MG/L)	TOTAL PHOS-PHORUS (P) (MG/L)	DIS-SOL-VED-PHOS-PHORUS (P) (MG/L)	TOTAL ORGANIC CARBON (C) (MG/L)
OCT.						
04...	1615	11	1.4	.030	--	--
NOV.						
08...	1530	7.2	2.5	.050	--	--
DEC.						
01...	1300	6.2	2.2	--	--	--
JAN.						
17...	1515	5.3	2.2	.020	--	--
MAR.						
08...	1100	4.3	1.0	--	.010	--
APR.						
09...	0900	5.0	1.0	--	.020	--
MAY						
15...	1620	36	.9	--	.020	--
JUNE						
12...	1300	109	.8	--	.010	--
JULY						
10...	1555	38	.9	--	.020	--
AUG.						
07...	1500	19	1.0	--	.010	--
SEP.						
05...	1845	12	1.0	--	.030	2.9

FIELD DETERMINATIONS

DATE	TIME	DIS-SOLVED OXYGEN (MG/L)	PH (UNITS)	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	IMME-DIATE COLI-FORM (COL. PER 100 ML)
OCT.					
04...	1615	12.1	8.4	325	9
NOV.					
08...	1430	11.5	8.4	315	44
DEC.					
01...	1300	11.8	8.4	340	1
JAN.					
17...	1515	10.7	8.6	289	190
MAR.					
08...	1100	10.9	8.5	393	0
APR.					
09...	0900	10.4	8.6	362	4
MAY					
15...	1620	9.7	8.5	300	14
JUNE					
12...	1300	10.4	8.4	310	2
JULY					
10...	1555	10.0	8.6	316	11
AUG.					
07...	1500	11.5	8.6	--	3
SEP.					
05...	1845	9.6	8.9	311	8

PARTICLE-SIZE DISTRIBUTION OF SUSPENDED SEDIMENT, WATER YEAR OCTOBER 1971 TO SEPTEMBER 1972

DATE	TIME	TEMPER-ATURE (DEG C)	DIS-CHARGE (CFS)	SUS-PENDED SEDI-MENT (MG/L)	SUS-PENDED SEDI-MENT DIS-CHARGE (T/DAY)	SUS. SED. FALL DIAM. % FINER THAN .004 MM	SUS. SED. FALL DIAM. % FINER THAN .016 MM	SUS. SED. FALL DIAM. % FINER THAN .062 MM	SUS. SED. FALL DIAM. % FINER THAN .125 MM	SUS. SED. FALL DIAM. % FINER THAN .250 MM
OCT.										
04...	1615	4.5	11	4	.12	--	--	--	--	--
NOV.										
08...	1430	1.0	7.2	4	.08	--	--	--	--	--
DEC.										
01...	1300	.0	a6.2	18	.30	--	--	--	--	--
JAN.										
17...	1515	1.0	5.3	42	.60	--	--	--	--	--
MAR.										
08...	1100	1.0	4.3	12	.14	--	--	--	--	--
APR.										
09...	0900	1.5	5.0	4	.05	--	--	--	--	--
MAY										
15...	1620	6.0	36	132	13	28	39	78	89	100
JUNE										
12...	1300	6.0	109	134	39	--	--	--	--	--
JULY										
10...	1555	10.0	38	40	4.1	--	--	--	--	--
AUG.										
07...	1500	10.0	19	12	.62	--	--	--	--	--
SEP.										
05...	1845	7.0	12	16	.52	--	--	--	--	--

a Daily mean discharge.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1972 TO SEPTEMBER 1973

DATE	TIME	DIS-CHARGE (CFS)	DIS-SOLVED SILICA (SIO2) (MG/L)	DIS-SOLVED IRON (FE) (UG/L)	DIS-SOLVED CAL-CIUM (CA) (MG/L)	DIS-SOLVED MAG-NE-SIUM (MG) (MG/L)	DIS-SOLVED SODIUM (NA) (MG/L)	DIS-SOLVED PO-TAS-SIUM (K) (MG/L)	BICAR-BONATE (HCO3) (MG/L)	CAR-BONATE (CO3) (MG/L)	DIS-SOLVED SULFATE (SO4) (MG/L)	DIS-SOLVED CHLO-RIDE (CL) (MG/L)	DIS-SOLVED FLUO-RIDE (F) (MG/L)	DIS-SOLVED NITRITE PLUS NITRATE (N) (MG/L)	DIS-SOLVED BORON (B) (UG/L)	DIS-SOLVED SOLIDS (SUM OF CONSTI-TUENTS) (MG/L)	DIS-SOLVED SOLIDS (TONS PER DAY)	DIS-SOLVED SOLIDS (TONS PER AC-FT)	HARD-NESS (CA,MG) (MG/L)	NON-CAR-BONATE HARD-NESS (MG/L)	SODIUM AD-SORP-TION RATIO	BIO-CHEM-ICAL OXYGEN DEMAND (MG/L)	DIS-SOL-VED PHOS-PHORUS (P) (MG/L)
OCT.																							
02...	1600	8.4	5.1	40	45	14	1.8	.5	210	0	7.7	1.4	.1	.04	30	179	4.06	.24	170	0	.1	1.2	.02
NOV.																							
06...	1400	7.4	5.1	80	49	15	2.2	.5	214	0	9.5	1.3	.1	.05	0	188	3.76	.26	180	9	.1	1.8	.01
DEC.																							
06...	1600	5.1	5.5	50	51	16	3.1	.6	230	0	12	1.4	.1	.12	20	203	2.80	.28	190	5	.1	2.8	.03
JAN.																							
09...	0930	5.7	5.4	20	49	15	2.6	.6	215	6	12	1.2	.2	.10	20	198	3.05	.27	180	0	.1	2.4	.03
FEB.																							
05...	1330	4.5	5.3	30	49	15	2.6	.6	221	0	14	1.1	.2	.13	20	197	2.39	.27	180	3	.1	1.7	.02
MAR.																							
05...	1030	5.2	5.2	50	50	15	3.2	.7	229	0	15	1.6	.1	.09	10	206	2.86	.28	190	0	.1	2.0	.02
APR.																							
02...	1500	4.1	5.1	20	51	15	2.5	.5	227	0	13	1.1	.1	.06	0	200	2.21	.27	190	3	.1	1.8	.03
MAY																							
08...	0915	9.5	5.5	40	50	15	4.5	.7	236	0	14	.8	.0	.00	20	207	5.31	.28	190	0	.1	1.4	.01
JUNE																							
04...	1600	30	4.6	30	50	13	2.3	.6	214	0	7.2	.5	.1	.00	0	184	14.9	.25	180	3	.1	.9	.01
JULY																							
09...	1645	16	4.4	9	44	13	1.9	.6	193	0	6.1	1.3	.1	.00	0	165	7.13	.22	160	5	.1	.6	.00
AUG.																							
06...	1530	9.5	3.9	38	46	14	2.1	.5	207	0	6.3	.8	.0	.01	10	176	8.51	.24	170	3	.1	.6	.00
SEP.																							
04...	1830	7.1	4.8	0	46	14	2.3	.5	212	0	5.0	1.4	.1	.04	20	180	3.45	.24	170	0	.1	1.9	.02

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1972 TO SEPTEMBER 1973

DATE	TIME	DIS-CHARGE (CFS)	DIS-SOLVED ARSENIC (AS) (UG/L)	DIS-SOLVED CAD-MIUM (CD) (UG/L)	DIS-SOLVED CHRO-MIUM (CR) (UG/L)	DIS-SOLVED COPPER (CU) (UG/L)	DIS-SOLVED LEAD (PB) (UG/L)	DIS-SOLVED ZINC (ZN) (UG/L)
OCT.								
02...	1600	8.4	1	0	0	2	1	10
DEC.								
06...	1600	5.1	0	0	0	12	0	20
JUNE								
04...	1600	30	--	1	0	4	1	10

DATE	TOTAL MERCURY (HG) (UG/L)	DIS-SOLVED GROSS BETA AS CS-137 (PC/L)	SUS-PENDED GROSS BETA AS CS-137 (PC/L)	DIS-SOLVED RA-226 (PLAN-CHET COUNT) (PC/L)	DIS-SOLVED GROSS ALPHA AS U-NAT, (UG/L)	SUS-PENDED GROSS ALPHA AS U-NAT, (UG/L)	DIS-SOLVED GROSS BETA AS SR90 /Y90 (PC/L)	SUS-PENDED GROSS BETA AS SR90 /Y90 (PC/L)
OCT.								
02...	.2	2.1	<.4	<.1	2.8	<.4	1.7	<.8
DEC.								
06...	--	--	--	--	--	--	--	--
JUNE								
04...	.2	--	--	--	--	--	--	--

FIELD DETERMINATIONS

DATE	TIME	DIS-CHARGE (CFS)	TEMPER-ATURE (DEG C)	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	DIS-SOLVED OXYGEN (MG/L)	PH (UNITS)	IMME-DIATE COLI-FORM (COL. PER 100 ML)
OCT.							
02...	1600	8.4	6.0	360	13.5	7.6	16
NOV.							
06...	1400	7.4	2.0	320	11.5	7.9	7
DEC.							
06...	1600	5.1	.0	315	10.9	8.7	8
JAN.							
09...	0930	5.7	.0	260	11.3	6.5	2
FEB.							
05...	1330	4.5	.0	300	11.6	8.3	1
MAR.							
05...	1030	5.2	.0	300	11.9	8.2	3
APR.							
02...	1500	4.1	.0	370	11.8	8.3	13
MAY							
08...	0915	9.5	3.0	300	10.5	8.3	3
JUNE							
04...	1600	30	7.0	330	10.0	7.8	6
JULY							
09...	1645	16	12.0	350	9.8	7.9	5
AUG.							
06...	1530	9.5	13.0	285	9.1	--	12
SEP.							
04...	1030	7.1	5.0	320	10.7	--	35

SUSPENDED SEDIMENT DISCHARGE MEASUREMENTS, WATER YEAR OCTOBER 1972 TO SEPTEMBER 1973

DATE	TIME	TEMPER-ATURE (DEG C)	DIS-CHARGE (CFS)	SUS-PENDED SEDI-MENT (MG/L)	SUS-PENDED SEDI-MENT DIS-CHARGE (T/DAY)
OCT.					
02...	1600	6.0	8.4	6	.09
NOV.					
06...	1400	2.0	7.4	7	.14
DEC.					
06...	1600	.0	a5.1	14	.19
JAN.					
09...	0930	.0	5.7	8	.12
FEB.					
05...	1330	.0	4.5	6	.07
MAR.					
05...	1030	.0	5.2	9	.13
APR.					
02...	1500	.0	4.1	18	.20
MAY					
08...	0915	3.0	9.5	17	.44
JUNE					
04...	1600	7.0	30	27	2.2
JULY					
09...	1645	12.0	16	12	.52
AUG.					
06...	1530	13.0	9.5	12	.31
SEP.					
04...	1030	5.0	7.1	17	.33

a Daily mean discharge.

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CHEMICAL ANALYSES, WATER YEAR OCTOBER 1973 TO SEPTEMBER 1974

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	DISSOLVED SILICA (SIO2) (MG/L)	DISSOLVED CALCIUM (CA) (MG/L)	DISSOLVED MAGNESIUM (MG) (MG/L)	DISSOLVED SODIUM (NA) (MG/L)	DISSOLVED POTASSIUM (K) (MG/L)	BICARBONATE (HCO3) (MG/L)	CARBONATE (CO3) (MG/L)	DISSOLVED SULFATE (SO4) (MG/L)	DISSOLVED CHLORIDE (CL) (MG/L)	DISSOLVED FLUORIDE (F) (MG/L)	DISSOLVED SOLIDS (SUM OF CONSTITUENTS) (MG/L)	DISSOLVED SOLIDS (TONS PER DAY)	DISSOLVED SOLIDS (TONS PER AC-FT)	HARDNESS (CA,MG) (MG/L)	NONCARBONATE HARDNESS (MG/L)	SODIUM ADSORPTION RATIO	TOTAL NITRITE (N) (MG/L)	TOTAL NITRATE (N) (MG/L)	TOTAL PHOSPHORUS (P) (MG/L)
OCT.																					
01...	1530	5.4	5.0	48	14	2.2	.0	205	1	0.2	1.1	.1	177	2.58	.24	170	3	.1	--	--	--
NOV.																					
05...	1540	A5.3	5.7	47	10	3.0	.7	220	0	12	1.5	.0	194	2.78	.26	160	2	.1	.01	.03	.00
26...	1500	A5.1	5.5	53	10	2.8	.0	224	0	12	1.0	.1	201	2.77	.27	200	14	.1	.00	.06	.01
JAN.																					
07...	1530	A4.4	5.0	47	15	3.7	.0	218	0	9.5	1.3	.2	190	2.26	.24	180	0	.1	.00	.11	.02
FEB.																					
04...	1530	4.3	5.3	47	15	2.0	.7	214	0	0.2	.0	.1	183	2.12	.25	180	4	.1	.00	.12	.04
MAR.																					
04...	1500	A3.7	5.3	47	15	2.3	.0	217	0	5.0	.0	.0	183	1.03	.25	180	1	.1	.00	.09	.03
APR.																					
01...	1400	3.7	.1	47	15	2.8	.0	219	0	6.5	1.0	.1	181	1.81	.25	180	0	.1	.00	.06	.00
29...	1515	13	5.9	56	15	4.4	.8	230	0	8.1	1.4	.5	208	7.30	.28	200	3	.1	.01	.06	.05
MAY																					
28...	1615	72	4.7	47	11	2.7	.7	200	0	5.9	1.3	.1	175	34.0	.24	160	0	.1	.00	.08	--
JULY																					
08...	1730	39	4.1	42	13	1.2	.5	193	1	4.8	.8	.1	163	17.2	.22	160	0	.0	--	--	--
AUG.																					
05...	1700	20	4.5	45	14	1.6	.0	202	0	3.5	.5	.1	169	9.13	.23	170	4	.1	--	--	.02
SEP.																					
03...	1800	11	4.7	44	14	1.7	.5	199	3	4.4	.9	.1	171	5.08	.23	170	0	.1	.00	.01	.01

A Daily mean discharge.

FIELD DETERMINATIONS

DATE	TIME	TEMPERATURE (DEG C)	SPECIFIC CONDUCTANCE (MICROMHOS)	DISSOLVED OXYGEN (MG/L)	PH (UNITS)	IMMEDIATE COLIFORM (COL. PER 100 ML)	FECAL COLIFORM (COL. PER 100 ML)	STREPTOCOCCI (COLONIES PER 100 ML)
OCT.								
01...	1530	4.0	350	10.4	8.4	37	--	--
NOV.								
05...	1540	.0	378	11.3	8.4	83	85	--
26...	1500	.0	395	10.8	8.4	87	815	85
JAN.								
07...	1530	.5	380	10.4	8.2	82	82	83
FEB.								
04...	1530	.0	330	9.8	8.2	57	819	81
MAR.								
04...	1500	.0	400	9.8	8.3	83	76	82
APR.								
01...	1400	1.0	450	11.0	8.3	819	819	84
29...	1515	6.0	405	9.1	8.3	814	84	84
MAY								
28...	1615	6.0	350	9.0	8.3	814	24	25
JULY								
08...	1730	10.0	312	8.6	8.3	20	86	59
AUG.								
05...	1700	10.0	320	8.4	8.2	150	84	180
SEP.								
03...	1800	8.0	300	9.2	8.2	58	44	130

B Non-ideal counting conditions.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1973 TO SEPTEMBER 1974

DATE	TIME	TOTAL FILTRABLE RESIDUE (MG/L)	DISSOLVED IRON (FE) (UG/L)	DISSOLVED MANGANESE (MN) (UG/L)	DISSOLVED GROSS BETA AS CS-137 (PC/L)	SUSPENDED GROSS BETA AS CS-137 (PC/L)	DISSOLVED RA-226 (RADON METHOD) (PC/L)	DISSOLVED URANIUM (U) (UG/L)	DISSOLVED GROSS ALPHA AS U-NAT. (UG/L)	SUSPENDED GROSS ALPHA AS U-NAT. (UG/L)	DISSOLVED GROSS BETA AS SR90 /Y90 (PC/L)	SUSPENDED GROSS BETA AS SR90 /Y90 (PC/L)
NOV.												
05...	1540	180	80	8	1.3	<.4	.06	.46	2.5	<.4	1.0	<.4
SEP.												
03...	1800	180	--	--	3.0	<.4	.04	.32	2.4	ND	2.4	<.4

DATE	TIME	MCH (UG/L)	PCB IN BOTTOM DEPOSITS (UG/KG)	MALATHION (UG/L)	PARATHION (UG/L)	DIAZINON (UG/L)	METHYL PARATHION (UG/L)	2,4-D (UG/L)	2,4,5-T (UG/L)	SILVEX (UG/L)
NOV.										
05...	1540	.0	0	.00	.00	.00	.00	.00	.00	.00

DATE	TIME	ALDRIN (UG/L)	ALDRIN IN BOTTOM DEPOSITS (UG/KG)	LINDANE (UG/L)	LINDANE IN BOTTOM DEPOSITS (UG/KG)	CHLORDANE (UG/L)	CHLORDANE IN BOTTOM DEPOSITS (UG/KG)	DDD (UG/L)	DDD IN BOTTOM DEPOSITS (UG/KG)	DDE (UG/L)	DDE IN BOTTOM DEPOSITS (UG/KG)	DDT (UG/L)	DDT IN BOTTOM DEPOSITS (UG/KG)	DIELDRIN (UG/L)	DIELDRIN IN BOTTOM DEPOSITS (UG/KG)	ENDRIN (UG/L)	ENDRIN IN BOTTOM DEPOSITS (UG/KG)	HEPTACHLOR (UG/L)	HEPTACHLOR IN BOTTOM DEPOSITS (UG/KG)	HEPTACHLOR EPOXIDE (UG/L)	HEPTACHLOR EPOXIDE IN BOTTOM DEPOSITS (UG/KG)
NOV.																					
05...	1540	.00	.0	.00	.0	.0	0	.00	.0	.00	.0	.00	.0	.00	.0	.00	.0	.00	.0	.00	.0

PARTICLE-SIZE DISTRIBUTION OF SUSPENDED SEDIMENT, WATER YEAR OCTOBER 1973 TO SEPTEMBER 1974

DATE	TIME	TEMPERATURE (DEG C)	INSTANTANEOUS DISCHARGE (CFS)	SUSPENDED SEDIMENT (MG/L)	SUSPENDED SEDIMENT DISCHARGE (T/DAY)	SUS. SED. FALL DIAM. % FINER THAN .004 MM	SUS. SED. FALL DIAM. % FINER THAN .015 MM	SUS. SED. FALL DIAM. % FINER THAN .062 MM	SUS. SED. FALL DIAM. % FINER THAN .125 MM	SUS. SED. FALL DIAM. % FINER THAN .250 MM	SUS. SED. FALL DIAM. % FINER THAN .500 MM
OCT.											
01...	1530	6.0	5.4	14	.20	--	--	--	--	--	--
NOV.											
05...	1540	.0	5.3	26	.37	--	--	--	--	--	--
26...	1500	.0	A3.1	0	.11	--	--	--	--	--	--
JAN.											
07...	1530	.0	A4.4	2	.02	--	--	--	--	--	--
FEB.											
04...	1350	.0	6.3	5	.06	--	--	--	--	--	--
MAR.											
04...	1500	.0	A3.7	0	.00	--	--	--	--	--	--
APR.											
01...	1400	1.0	3.7	21	.21	--	--	--	--	--	--
29...	1515	6.0	13	33	1.2	--	--	--	--	--	--
MAY											
28...	1615	6.0	72	377	73	23	65	77	91	98	100
JULY											
08...	1730	10.0	39	10	1.0	--	--	--	--	--	--
AUG.											
05...	1700	10.0	20	10	.54	--	--	--	--	--	--
SEP.											
03...	1800	8.0	11	4	.12	--	--	--	--	--	--

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1974 TO SEPTEMBER 1975

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	DISSOLVED CHLORIDE (CL) (MG/L)	DISSOLVED CALCIUM (CA) (MG/L)	DISSOLVED MAGNESIUM (MG) (MG/L)	DISSOLVED SODIUM (NA) (MG/L)	DISSOLVED POTASSIUM (K) (MG/L)	BICARBONATE (HCO3) (MG/L)	CARBONATE (CO3) (MG/L)	DISSOLVED SULFATE (SO4) (MG/L)	DISSOLVED CHLORIDE (CL) (MG/L)	DISSOLVED FLUORIDE (F) (MG/L)	SILICA, DISSOLVED (SIO2) (MG/L)	DISSOLVED SOLIDS (SUM OF CONSTITUENTS) (MG/L)	DISSOLVED SOLIDS (TONS PER AC-FT)	HARDNESS (CA, MG) (MG/L)	NONCARBONATE HARDNESS (MG/L)	SODIUM ADSORPTION RATIO	TOTAL NITRITE (N) (MG/L)	TOTAL NITRATE (N) (MG/L)	TOTAL NITRITE PLUS NITRATE (N) (MG/L)	TOTAL PHOSPHORUS (P) (MG/L)
OCT.																						
01...	1730	30	4.0	41	15	1.0	.3	200	.1	5.5	1.0	.1	17	134	.09	140	0	.1	.00	.00	.00	.01
29...	1730	45	5.1	49	15	1.9	.9	210	--	9.3	1.1	.1	17	178	1.22	.24	170	2	.1	.00	.01	.01	.03
NOV.																						
06...	1420	A4.0	4.4	44	15	2.1	.8	210	--	8.3	1.4	.1	14	144	1.00	.25	160	4	.1	.00	.06	.06	.04
DEC.																						
04...	1400	4.7	4.7	48	14	2.2	.9	212	--	5.3	.3	.1	17	135	.22	.24	170	4	.1	.02	.06	.08	.02
JAN.																						
08...	1430	5.0	5.2	49	14	1.8	.8	213	--	5.8	1.7	.1	14	143	1.48	.25	160	5	.1	.00	.09	.09	.03
FEB.																						
04...	1130	3.0	4.4	48	10	2.3	.9	214	--	6.5	.8	.1	14	145	1.98	.25	160	1	.1	.00	.06	.06	.01
MAR.																						
04...	1115	3.2	4.7	48	15	2.5	.9	214	--	5.8	.8	.2	14	146	1.59	.25	160	0	.1	.01	.03	.04	.00
APR.																						
08...	1130	6.5	4.4	44	15	1.2	.8	214	--	4.7	.1	.1	16	2.17	.23	150	5	.1	.00	.08	.08	.01
MAY																						
05...	1100	10	4.4	42	12	3.8	.9	190	--	4.4	1.9	.1	16	11.5	.23	150	0	.1	.00	.02	.02	.01
JUNE																						
03...	1455	41	3.7	43	11	1.5	.8	173	--	2.8	.6	.1	14	20.5	.20	130	11	.1	.00	.08	.08	.02
JULY																						
07...	1345	16	4.4	45	14	1.6	.9	195	--	5.0	.3	.1	18	7.26	.23	170	13	.1	.01	.01	.02	.00
AUG.																						
04...	1045	11	4.4	43	13	1.4	.5	203	--	3.6	1.0	.1	17	5.85	.23	170	0	.1	--	--	.06	.01

A Daily mean discharge.

DATE	TIME	TOTAL IRON (FE) (UG/L)	TOTAL MANGANESE (MN) (UG/L)	CYANIDE (CN) (MG/L)	TOTAL ARSENIC (AS) (UG/L)	TOTAL BARIUM (BA) (UG/L)	TOTAL CADMIUM (CD) (UG/L)	TOTAL CHROMIUM (CR) (UG/L)	TOTAL COPPER (CU) (UG/L)	TOTAL LEAD (PB) (UG/L)	TOTAL MERCURY (HG) (UG/L)	TOTAL SELENIUM (SE) (UG/L)	TOTAL SILVER (AG) (UG/L)	TOTAL ZINC (ZN) (UG/L)
OCT.														
01...	1430	30	0	--	0	0	0	0	0	0	.0	1	0	30
NOV.														
04...	1100	1700	50	.00	0	0	<10	0	10	<100	.9	0	<10	20

DATE	TIME	TOTAL ALDRIN (UG/L)	ALDRIN IN BOTTOM MATERIAL (UG/KG)	TOTAL CHLORDANE (UG/L)	CHLORDANE IN BOTTOM MATERIAL (UG/KG)	TOTAL DDD (UG/L)	DDD IN BOTTOM MATERIAL (UG/KG)	TOTAL DDE (UG/L)	DDE IN BOTTOM MATERIAL (UG/KG)	TOTAL DDT (UG/L)	DDT IN BOTTOM MATERIAL (UG/KG)
OCT.											
01...	1530	.00	.6	.0	0	.00	.0	.00	.2	.00	.0

DATE	TOTAL DIAZINON (UG/L)	TOTAL DIELDRIN (UG/L)	DIELDRIN IN BOTTOM MATERIAL (UG/KG)	TOTAL ENDRIN (UG/L)	ENDRIN IN BOTTOM MATERIAL (UG/KG)	TOTAL HEPTACHLOR (UG/L)	HEPTACHLOR IN BOTTOM MATERIAL (UG/KG)	TOTAL HEPTACHLOR EPOXIDE (UG/L)	HEPTACHLOR EPOXIDE IN BOTTOM MATERIAL (UG/KG)	TOTAL LINDANE (UG/L)	LINDANE IN BOTTOM MATERIAL (UG/KG)
OCT.											
01...	.00	.00	.0	.00	.0	.00	.0	.00	.0	.00	.0

DATE	TOTAL MALATHION (UG/L)	TOTAL METHYL PARATHION (UG/L)	TOTAL PARATHION (UG/L)	TOTAL PCB (UG/L)	PCB IN BOTTOM MATERIAL (UG/KG)	TOTAL TOXAPHENE (UG/L)	TOXAPHENE IN BOTTOM MATERIAL (UG/KG)	TOTAL 2,4-D (UG/L)	TOTAL 2,4,5-T (UG/L)	TOTAL SILVEX (UG/L)
OCT.										
01...	.00	.00	.00	.0	0	0	0	.00	.00	.00

PARTICLE-SIZE DISTRIBUTION OF SURFACE BED MATERIAL, WATER YEAR OCTOBER 1974 TO SEPTEMBER 1975

DATE	TIME	TEMPERATURE (DEG C)	INSTANTANEOUS DISCHARGE (CFS)	NUMBER OF SAMPLING POINTS	BED MAT. FALL DIAM. % FINER THAN .062 MM	BED MAT. FALL DIAM. % FINER THAN .125 MM	BED MAT. FALL DIAM. % FINER THAN .250 MM	BED MAT. FALL DIAM. % FINER THAN .500 MM
JAN.								
03...	1100	3.0	30	22	14	24	44	69

BED MAT. FALL DIAM. % FINER THAN 1.00 MM	BED MAT. SIEVE DIAM. % FINER THAN 2.00 MM	BED MAT. SIEVE DIAM. % FINER THAN 4.00 MM	BED MAT. SIEVE DIAM. % FINER THAN 8.00 MM	BED MAT. SIEVE DIAM. % FINER THAN 16.0 MM	BED MAT. SIEVE DIAM. % FINER THAN 32.0 MM	BED MAT. SIEVE DIAM. % FINER THAN 64.0 MM
50	53	58	68	76	78	100

FIELD DETERMINATIONS

DATE	TIME	TEMPERATURE (DEG C)	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	TURBIDITY (JTU)	DISSOLVED OXYGEN (MG/L)	IMMEDIATE COLIFORM (COL. PER 100 ML)	FECAL COLIFORM (COL. PER 100 ML)	STREPTOCOCCI (COLONIES PER 100 ML)
OCT.									
01...	1530	5.0	320	8.3	--	9.9	45	88	73
29...	1730	4.0	345	8.3	--	9.5	82	81	84
DEC.									
02...	1520	.0	310	8.3	--	12.3	<1	<1	42
JAN.									
06...	1500	.0	320	7.8	1	6.5	42	82	83
FEB.									
03...	1530	.0	330	8.1	1	13.3	87	810	<1
APR.									
14...	1130	.5	340	8.0	0	11.2	817	150	82
APR.									
10...	1115	.5	300	7.3	1	10.6	45	86	<1
MAY									
05...	1130	1.0	355	7.5	1	11.5	814	87	<1
JUNE									
03...	1100	3.0	310	7.8	20	10.2	49	88	83
JULY									
07...	1055	5.0	300	7.9	--	10.1	42	81	720
AUG.									
12...	1545	4.5	300	8.2	--	9.0	59	84	100
SEP.									
03...	1045	3.0	310	8.2	--	9.9	65	82	44

B Non-ideal counting conditions.

PARTICLE-SIZE DISTRIBUTION OF SUSPENDED SEDIMENT, WATER YEAR OCTOBER 1974 TO SEPTEMBER 1975

DATE	TIME	TEMPERATURE (DEG C)	INSTANTANEOUS DISCHARGE (CFS)	SUSPENDED SEDIMENT (MG/L)	SUSPENDED SEDIMENT DISCHARGE (T/DAY)	SUS. SED. FALL DIAM. % FINER THAN .062 MM	SUS. SED. FALL DIAM. % FINER THAN .125 MM	SUS. SED. FALL DIAM. % FINER THAN .250 MM
OCT.								
01...	1530	5.0	30	6	.09	--	--	--
29...	1730	4.0	6.7	5	.09	--	--	--
DEC.								
02...	1520	.0	A6.0	3	.05	--	--	--
JAN.								
06...	1500	.0	4.7	25	.32	--	--	--
FEB.								
03...	1530	.0	A3.0	4	.04	--	--	--
APR.								
14...	1130	.5	3.0	4	.04	--	--	--
APR.								
10...	1115	.5	3.2	2	.02	--	--	--
MAY								
05...	1130	1.0	4.3	6	.07	--	--	--
JUNE								
03...	1100	3.0	30	74	6.0	85	95	100
JULY								
07...	1055	5.0	51	40	6.3	--	--	--
AUG.								
12...	1545	4.5	16	14	.60	--	--	--
SEP.								
03...	1045	3.0	11	10	.30	--	--	--

A Daily mean discharge.

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	TEMPERATURE (DEG C)	DISSOLVED OXYGEN (MG/L)	INME-DIATE COLIFORM (COL. PER 100 ML)	FECAL COLIFORM (COL. PER 100 ML)	STREPTOCOCCI (COLONIES PER 100 ML)	HARDNESS (CA,MG) (MG/L)	NON-CARBONATE HARDNESS (MG/L)	DISSOLVED CALCIUM (CA) (MG/L)	DISSOLVED MAGNESIUM (MG) (MG/L)	DISSOLVED SODIUM (NA) (MG/L)	SODIUM ADSORPTION RATIO	DISSOLVED POTASSIUM (K) (MG/L)	BICARBONATE (HCO3) (MG/L)	CARBONATE (CO3) (MG/L)	ALKALINITY AS CaCO3 (MG/L)	DISSOLVED SULFATE (SO4) (MG/L)	DISSOLVED CHLORIDE (CL) (MG/L)	DISSOLVED FLUORIDE (F) (MG/L)
OCT																						
08...	1530	7.4	300	8.2	2.5	10.7	13	4	77	180	6	47	14	1.8	.1	.6	206	--	169	5.0	.5	.1
NOV																						
03...	1530	6.4	280	8.3	2.5	11.1	5	8	7	170	8	45	16	2.3	.1	.6	210	--	172	3.7	.9	.1
DEC																						
09...	1400	5.3	300	8.3	1.5	10.4	62	85	6	150	8	40	12	3.0	.1	2.2	208	--	171	3.9	.7	.2
JAN																						
08...	1420	5.0	360	8.1	.5	12.0	38	<1	9	180	5	47	14	2.6	.1	.7	207	--	170	5.5	.6	.1
FEB																						
03...	1440	3.9	310	8.2	.5	10.4	4	<1	1	100	2	48	15	2.5	.1	.8	219	--	180	11	.9	.1
MAR																						
15...	1530	3.2	300	8.0	.5	11.0	<1	<1	<1	170	8	45	15	2.5	.1	.7	216	--	177	4.0	.5	.1
APR																						
14...	1450	5.5	300	8.0	3.5	10.1	15	11	2	180	8	47	15	3.0	.1	.7	228	--	187	6.2	1.4	.1
MAY																						
04...	1500	11	260	8.1	3.0	10.8	94	4	<1	180	8	47	14	4.2	.1	1.0	224	0	184	5.4	1.2	.1
JUN																						
03...	1640	79	250	8.0	6.0	12.0	13	10	73	160	8	44	11	1.8	.1	.6	197	0	162	2.9	.8	.1
JUL																						
06...	1800	30	280	8.0	11.0	11.4	34	21	21	160	2	43	13	1.5	.1	.6	194	0	159	7.5	.8	.1
26...	1615	18	290	8.1	11.5	10.4	33	17	<1	170	8	44	13	1.3	.0	.6	195	0	160	5.7	.6	.1
SEP																						
08...	1530	10	290	8.2	6.5	9.8	22	15	--	170	8	46	14	1.6	.1	.6	207	--	170	6.2	4.5	.1

DATE	TIME	TOTAL ARSENIC (AS) (UG/L)	TOTAL BARIUM (BA) (UG/L)	TOTAL CADMIUM (CD) (UG/L)	TOTAL CHROMIUM (CR) (UG/L)	TOTAL COPPER (CU) (UG/L)	TOTAL IRON (FE) (UG/L)	TOTAL LEAD (PB) (UG/L)	TOTAL MANGANESE (MN) (UG/L)	TOTAL MERCURY (HG) (UG/L)	TOTAL SELENIUM (SE) (UG/L)	TOTAL SILVER (AG) (UG/L)	TOTAL ZINC (ZN) (UG/L)
FEB													
03...	1440	0	0	<10	0	<10	60	<100	30	.0	0	<10	0
JUN													
03...	1640	4	100	100	0	10	1000	<100	80	.0	0	<10	20

DATE	DISSOLVED SILICA (SIO2) (MG/L)	DISSOLVED SOLIDS (RESIDUE AT 180 C) (MG/L)	DISSOLVED SOLIDS (SUM OF CONSTITUENTS) (MG/L)	DISSOLVED SOLIDS (TONS PER AC-FT)	DISSOLVED SOLIDS (TONS PER DAY)	TOTAL NITRATE (N) (MG/L)	TOTAL NITRITE (N) (MG/L)	TOTAL NITRITE PLUS NITRATE (N) (MG/L)	TOTAL PHOSPHORUS (P) (MG/L)	CYANIDE (CN) (MG/L)
OCT										
08...	4.3	170	175	.24	3.50	--	--	.02	.02	--
NOV										
03...	4.4	173	175	.24	3.02	--	--	.02	.01	--
DEC										
09...	4.6	172	169	.23	2.42	--	--	.07	.02	--
JAN										
08...	4.3	173	177	.24	2.39	.24	.00	.24	.01	--
FEB										
03...	4.6	206	191	.26	2.81	--	--	.00	.00	.00
MAR										
15...	4.7	176	179	.24	1.55	.07	--	.07	.01	--
APR										
14...	4.7	198	191	.26	2.84	--	--	.02	.02	--
MAY										
04...	7.9	176	191	.26	5.67	--	--	.10	.03	--
JUN										
03...	3.9	164	162	.22	34.6	--	--	.00	.02	.00
JUL										
06...	3.6	161	166	.23	13.4	--	--	.00	.03	--
26...	3.9	162	167	.23	8.21	--	--	.02	.01	--
SEP										
08...	4.5	182	179	.24	4.83	--	--	.02	.01	--

DATE	TIME	TEMPERATURE (DEG C)	INSTANTANEOUS DISCHARGE (CFS)	SUSPENDED SEDIMENT (MG/L)	SUSPENDED SEDIMENT DISCHARGE (T/DAY)	SUS. SED. FALL DIAM. % FINER THAN .004 MM	SUS. SED. FALL DIAM. % FINER THAN .016 MM	SUS. SED. FALL DIAM. % FINER THAN .062 MM	SUS. SED. FALL DIAM. % FINER THAN .125 MM	SUS. SED. FALL DIAM. % FINER THAN .250 MM
OCT										
08...	1530	2.5	7.4	2	.04	--	--	--	--	--
NOV										
03...	1530	2.5	6.4	2	.03	--	--	--	--	--
DEC										
09...	1400	1.5	5.2	7	.10	--	--	--	--	--
JAN										
08...	1420	.5	5.1	2	.03	--	--	--	--	--
FEB										
03...	1440	.5	3.9	6	.06	--	--	--	--	--
MAR										
15...	1530	.5	3.4	2	.02	--	--	--	--	--
APR										
14...	1450	2.5	5.3	16	.23	--	--	--	--	--
MAY										
04...	1500	3.0	11	22	.65	--	--	--	--	--
JUN										
03...	1640	6.0	80	140	30	26	48	88	97	100
JUL										
06...	1800	11.0	30	35	2.8	--	--	--	--	--
26...	1615	11.5	10	12	.59	--	--	--	--	--
SEP										
08...	1530	6.5	9.8	13	.34	--	--	--	--	--

DATE	TIME	TOTAL PCB (UG/L)	PCB IN BOTTOM MATERIAL (UG/KG)	POLYCHLORINATED NAPHTHALENES (UG/L)	TOTAL ALDRIN (UG/L)	ALDRIN IN BOTTOM MATERIAL (UG/KG)	TOTAL CHLORDANE (UG/L)	CHLORDANE IN BOTTOM MATERIAL (UG/KG)	TOTAL DDD (UG/L)	DDD IN BOTTOM MATERIAL (UG/KG)	TOTAL DDE (UG/L)	DDE IN BOTTOM MATERIAL (UG/KG)
OCT												
08...	1530	.0	0	.00	.00	.0	.0	0	.00	.0	.00	.0

DATE	TOTAL DDT (UG/L)	DDT IN BOTTOM MATERIAL (UG/KG)	TOTAL DIAZINON (UG/L)	TOTAL DIELDRIN (UG/L)	DIELDRIN IN BOTTOM MATERIAL (UG/KG)	TOTAL ENDRIN (UG/L)	ENDRIN IN BOTTOM MATERIAL (UG/KG)	TOTAL ETHION (UG/L)	TOTAL HEPTACHLOR (UG/L)	HEPTACHLOR IN BOTTOM MATERIAL (UG/KG)	TOTAL HEPTACHLOR EPOXIDE (UG/L)	HEPTACHLOR EPOXIDE IN BOTTOM MATERIAL (UG/KG)
OCT												
08...	.00	.0	.00	.00	.0	.00	.0	.00	.00	.0	.00	.0

DATE	TOTAL LINDANE (UG/L)	LINDANE IN BOTTOM MATERIAL (UG/KG)	TOTAL MALATHION (UG/L)	TOTAL METHYL PARATHION (UG/L)	TOTAL METHYL TRITHION (UG/L)	TOTAL PARATHION (UG/L)	TOXAPHENE (UG/L)	TOXAPHENE IN BOTTOM MATERIAL (UG/KG)	TOTAL TRITHION (UG/L)	TOTAL 2,4-D (UG/L)	TOTAL 2,4,5-T (UG/L)	TOTAL SILVER (UG/L)
OCT												
08...	.00	.0	.00	.00	.00	.00	0	0	.00	.00	.00	.00

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	TEMPERATURE (DEG C)	BED MAT. FALL DIAM. % FINER THAN .004 MM	BED MAT. FALL DIAM. % FINER THAN .062 MM	BED MAT. FALL DIAM. % FINER THAN .165 MM	BED MAT. FALL DIAM. % FINER THAN .250 MM	BED MAT. FALL DIAM. % FINER THAN .500 MM	BED MAT. FALL DIAM. % FINER THAN 1.00 MM	BED MAT. SIEVE DIAM. % FINER THAN 2.00 MM	BED MAT. SIEVE DIAM. % FINER THAN 4.00 MM	BED MAT. SIEVE DIAM. % FINER THAN 8.00 MM	BED MAT. SIEVE DIAM. % FINER THAN 16.0 MM	BED MAT. SIEVE DIAM. % FINER THAN 64.0 MM	BED MAT. SIEVE DIAM. % FINER THAN 128 MM
JUN															
03...	1640	80	6.0	1	8	12	15	17	18	18	20	25	39	73	100

WATER-QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	TEMPERATURE (DEG C)	TURBIDITY (JTU)	DISSOLVED OXYGEN (MG/L)	IMMEDIATE COLIFORM (COL. PER 100 ML)	FECAL COLIFORM .7UM-MF (COL./ 100 ML)	STREPTOCOCCI (COLONIES PER 100 ML)	ALKALINITY AS CACO3 (MG/L)	DISSOLVED SULFATE (SO4) (MG/L)	DISSOLVED CHLORIDE (CL) (MG/L)	DISSOLVED FLUORIDE (F) (MG/L)	DISSOLVED SILICA (SIO2) (MG/L)	DISSOLVED SOLIDS (RESIDUE AT 180 C) (MG/L)	TOTAL FILTRABLE RESIDUE (MG/L)	DISSOLVED SOLIDS (SUM OF CONSTITUENTS) (MG/L)	DISSOLVED SOLIDS (TONS PER AC-FT)
OCT																			
05...	1130	7.8	300	8.4	3.0	--	10.1	0	3	54	173	6.2	.6	.1	4.7	166	180	177	.24
NOV																			
08...	1420	6.1	308	8.8	2.0	--	10.8	13	<1	<1	167	3.4	.7	.1	4.5	177	--	170	.23
29...	1525	A4.0	270	8.2	.0	--	11.2	7	3	2	164	5.4	.8	.1	4.8	171	--	171	.23
JAN																			
12...	1400	4.3	308	8.4	.0	--	11.6	3	<1	<1	157	6.0	.8	.2	4.5	183	--	167	.23
FEB																			
07...	1530	A2.7	300	8.8	.8	--	10.4	11	<1	14	173	7.7	.8	.1	4.5	176	--	181	.25
MAR																			
15...	0A50	3.2	--	8.4	.8	--	9.4	29	1	3	162	13	.9	.1	5.0	190	--	199	.27
APR																			
12...	1430	4.3	298	8.8	3.5	--	11.5	13	<1	6	172	15	.9	.2	5.8	189	--	196	.27
MAY																			
09...	1420	6.7	270	8.8	6.0	--	10.5	17	<1	<1	164	4.9	.8	.2	23	176	--	189	.26
JUN																			
07...	1450	13	290	8.1	8.0	--	11.0	110	49	<1	160	6.4	.6	.1	3.7	153	--	160	.22
JUL																			
11...	1515	4.1	300	--	10.0	9	8.1	42	<1	40	160	5.1	1.2	.1	4.4	173	--	173	.24
AUG																			
02...	1225	5.5	308	8.8	9.0	--	10.2	528	96	400	170	3.2	.6	.1	4.8	165	--	173	.24
SEP																			
07...	1410	4.7	310	8.8	8.0	--	10.5	40	2	58	178	5.7	.5	.1	5.1	167	--	179	.24

A Daily mean discharge.

DATE	HARDNESS (CA,MG) (MG/L)	NONCARBONATE HARDNESS (MG/L)	DISSOLVED CALCIUM (CA) (MG/L)	DISSOLVED MAGNESIUM (MG) (MG/L)	DISSOLVED SODIUM (NA) (MG/L)	SODIUM ADSORPTION RATIO	DISSOLVED POTASSIUM (K) (MG/L)	BICARBONATE (HCO3) (MG/L)	CARBONATE (CO3) (MG/L)	DISSOLVED SOLIDS (TONS PER DAY)	TOTAL NONFILTRABLE RESIDUE (MG/L)	TOTAL NITRATE (N) (MG/L)	TOTAL NITRITE (N) (MG/L)	TOTAL NITRITE PLUS NITRATE (N) (MG/L)	TOTAL PHOSPHORUS (P) (MG/L)	CYANIDE (CN) (MG/L)	SUSPENDED SEDIMENT (MG/L)	SUSPENDED SEDIMENT DISCHARGE (T/DAY)
OCT																		
05...	170	0	45	14	1.7	.1	.5	211	--	3.73	4	--	--	.00	.02	.00	5	.11
NOV																		
08...	170	4	45	14	1.9	.1	.7	203	0	2.80	--	--	---	--	.01	--	6	.10
29...	170	10	45	15	1.7	.1	.6	200	--	4.16	---	--	--	--	.01	--	6	.15
JAN																		
12...	170	10	44	14	1.9	.1	.5	192	0	1.94	--	--	--	.09	.55	--	7	.08
FEB																		
07...	180	4	46	15	2.0	.1	.6	211	0	1.32	--	.13	.00	.13	.02	--	--	--
MAR																		
15...	200	14	52	16	2.4	.1	.5	222	0	1.72	--	.06	.00	.06	--	--	12	.10
APR																		
12...	190	22	53	15	2.8	.1	.8	210	0	2.28	--	.06	.00	.06	.03	--	12	.14
MAY																		
09...	170	2	45	13	3.0	.1	.8	200	0	3.42	--	.07	.01	.08	.01	--	6	.11
JUN																		
07...	160	1	43	12	2.1	.1	.8	190	0	5.66	--	.02	.01	.03	.03	.00	26	.92
JUL																		
11...	170	9	48	13	2.0	.1	.6	200	---	2.85	--	.02	.01	.03	.02	--	8	.13
AUG																		
02...	170	0	44	14	2.1	.1	.5	210	0	2.57	--	.03	.00	.03	.00	--	12	.10
SEP																		
07...	180	3	47	14	1.9	.1	.7	210	0	2.27	--	.01	.01	.02	.00	--	4	.05

DATE	TIME	TOTAL ARSENIC (AS) (UG/L)	TOTAL BARIUM (BA) (UG/L)	TOTAL CADMIUM (CD) (UG/L)	TOTAL CHROMIUM (CR) (UG/L)	TOTAL COPPER (CU) (UG/L)	TOTAL IRON (FE) (UG/L)	TOTAL LEAD (PB) (UG/L)	TOTAL MANGANESE (MN) (UG/L)	TOTAL MERCURY (HG) (UG/L)	TOTAL SELENIUM (SE) (UG/L)	TOTAL SILVER (AG) (UG/L)	TOTAL ZINC (ZN) (UG/L)
OCT													
05...	1130	1	0	<10	0	<10	90	<100	0	.2	0	<10	0
JUN													
07...	1450	1	100	<10	0	<10	580	<100	30	.0	0	<10	0

DATE	TIME	DISSOLVED GROSS ALPHA AS U-NAT. (UG/L)	SUSPENDED GROSS ALPHA AS U-NAT. (UG/L)	DISSOLVED GROSS BETA AS CS-137 (PC/L)	SUSPENDED GROSS BETA AS CS-137 (PC/L)	DISSOLVED GROSS BETA AS SR90 /Y90 (PC/L)	SUSPENDED GROSS BETA AS SR90 /Y90 (PC/L)	DISSOLVED RA-226 (RADON METHOD) (PC/L)	DISSOLVED URANIUM (DIRECT FLUOROMETRIC) (PC/L)
OCT									
05...	1130	<2.7	<.4	1.1	<.4	1.0	<.4	.12	.5

DATE	TIME	TOTAL PCB (UG/L)	PCB IN BOTTOM MATERIAL (UG/KG)	POLYCHLORINATED NAPHTHALENES (UG/L)	TOTAL ALDRIN (UG/L)	ALDRIN IN BOTTOM MATERIAL (UG/KG)	TOTAL CHLORDANE (UG/L)	CHLORDANE IN BOTTOM MATERIAL (UG/KG)	TOTAL DDD (UG/L)	DDD IN BOTTOM MATERIAL (UG/KG)	TOTAL DDE (UG/L)	DDE IN BOTTOM MATERIAL (UG/KG)	TOTAL DOT (UG/L)	DOT IN BOTTOM MATERIAL (UG/KG)	TOTAL DIAZINON (UG/L)	TOTAL DIELDRIN (UG/L)	DIELDRIN IN BOTTOM MATERIAL (UG/KG)	TOTAL ENDRIN (UG/L)	ENDRIN IN BOTTOM MATERIAL (UG/KG)	TOTAL ETHION (UG/L)	TOTAL HEPTACHLOR (UG/L)	HEPTACHLOR IN BOTTOM MATERIAL (UG/KG)	TOTAL HEPTACHLOR EPOXIDE (UG/L)	HEPTACHLOR EPOXIDE IN BOTTOM MATERIAL (UG/KG)
OCT																									
05...	1130	.0	0	.00	.00	.0	.0	0	.00	.0	.00	.1	.00	.0	.00	.00	.0	.00	.0	.00	.00	.0	.00	.0

DATE	TOTAL LINDANE (UG/L)	LINDANE IN BOTTOM MATERIAL (UG/KG)	TOTAL MALATHION (UG/L)	TOTAL METHYL PARATHION (UG/L)	TOTAL METHYL TRITHION (UG/L)	TOTAL PARATHION (UG/L)	TOTAL TOXAPHENE (UG/L)	TOXAPHENE IN BOTTOM MATERIAL (UG/KG)	TOTAL TRITHION (UG/L)	TOTAL 2,4-D (UG/L)	TOTAL 2,4,5-T (UG/L)	TOTAL SILVER (UG/L)
OCT												
05...	.00	.0	.00	.00	.00	.00	0	0	.00	.00	.00	.00

WATER-QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	PH (UNITS)	TEMPER-ATURE (DEG C)	TUR-BID-ITY (JTU)	OXYGEN, DIS-SOLVED (MG/L)	COLI-FORM, TOTAL, IMMED. (COLS. PER 100 ML)	COLI-FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	STREP-TOCOCCI FECAL, (COLS. PER 100 ML)	HARD-NESS (MG/L AS CACO3)	HARD-NESS, NONCAR-BONATE (MG/L CACO3)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L)	SOLIDS, RESIDUE AT 105 DEG. C, DIS-SOLVED (MG/L)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	SOLIDS, DIS-SOLVED (TONS PER AC-FT)	SOLIDS, DIS-SOLVED (TONS PER DAY)	SOLIDS, RESIDUE AT 105 DEG. C, SUS-PENDED (MG/L)	NITRO-GEN, NITRATE TOTAL (MG/L AS N)	NITRO-GEN, NITRITE TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	PHOS-PHORUS, TOTAL (MG/L AS P)	CYANIDE TOTAL (MG/L AS CN)
OCT																							
11...	1505	4.5	320	8.7	1.0	1	10.6	94	4	40	180	9	158	--	179	.24	2.17	--	--	--	.04	.01	.00
NOV																							
01...	0940	A3.1	110	8.3	.5	5	10.1	64	0	--	180	3	175	190	187	.25	1.57	4	--	--	.13	.02	--
30...	1430	A2.9	300	8.3	.0	1	8.4	1	1	3	190	14	195	--	184	.25	1.44	--	.12	.01	.13	.00	--
JAN																							
03...	1440	A2.2	340	8.0	.0	1	11.4	6	19	2	190	23	176	--	187	.25	1.11	--	.16	.00	.16	.02	--
31...	1630	A2.7	270	8.1	.0	1	12.6	46	43	0	180	11	185	--	193	.26	1.41	--	.09	.00	.09	.02	--
MAR																							
06...	1640	A2.8	350	7.9	1.5	2	10.6	20	22	3	180	4	172	--	181	.25	1.37	--	--	--	.08	.04	--
28...	0915	3.8	335	8.0	1.5	1	10.9	8	0	0	190	8	192	--	202	.27	2.07	--	.14	.01	.15	.02	--
MAY																							
03...	1015	14	310	8.7	2.0	3	10.6	--	0	0	180	0	192	--	199	.27	7.52	--	--	--	.05	.03	--
31...	1700	36	330	8.7	5.5	4	9.5	<1	<1	<1	190	3	186	--	208	.27	19.4	--	--	--	.02	.02	.00
JUN																							
13...	1400	67	310	--	6.5	10	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
JUL																							
11...	1645	39	350	8.5	10.0	1	8.7	26	1	26	150	3	156	--	155	.21	16.3	--	--	--	.08	.03	--
AUG																							
09...	1115	15	300	--	7.0	2	--	43	--	391	160	0	158	--	165	.22	6.66	--	--	--	.07	.00	--
31...	1715	11	290	8.7	9.0	1	9.0	14	--	211	160	13	161	--	219	.30	7.10	--	--	--	.04	.02	--

A-Daily mean discharge.

DATE	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	BICAR-BONATE (MG/L AS HCO3)	CAR-BONATE (MG/L AS CO3)	ALKA-LINITY (MG/L AS CACO3)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SIO2)
OCT												
11...	46	16	2.2	.1	.5	210	--	170	4.9	.8	.1	5.0
NOV												
01...	47	16	2.0	.1	.7	220	0	180	7.4	.5	.1	5.1
30...	50	15	2.1	.1	.6	210	0	170	6.7	.8	.1	5.2
JAN												
03...	50	15	2.1	.1	.6	200	0	160	14	1.3	.3	5.3
31...	47	16	2.4	.1	.6	210	0	170	11	6.8	.1	5.3
MAR												
06...	46	15	2.2	.1	1.1	210	0	170	6.0	.7	.1	6.0
28...	49	16	3.1	.1	.9	220	0	180	16	1.7	.1	4.9
MAY												
03...	49	15	4.2	.1	.8	230	0	190	10	.9	.1	6.0
31...	54	14	3.1	.1	.7	--	--	190	8.9	.6	.1	4.4
JUN												
13...	--	--	--	--	--	--	--	--	--	--	--	--
JUL												
11...	40	13	1.4	.1	.6	--	--	150	5.2	.5	.0	4.4
AUG												
09...	42	13	1.4	.0	.6	--	--	160	7.2	.5	.1	4.4
31...	42	14	2.8	.1	.5	--	--	150	6.4	.6	.1	5.2

DATE	TIME	TEMPER-ATURE (DEG C)	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT DIS-CHARGE, SUS-PENDED (T/DAY)	SED. SUSP. FALL DIAM. % FINER THAN .062 MM	SED. SUSP. FALL DIAM. % FINER THAN .125 MM	SED. SUSP. FALL DIAM. % FINER THAN .250 MM
OCT								
11...	1505	1.0	4.5	8	.10	--	--	--
NOV								
01...	0940	.5	A3.1	5	.04	--	--	--
30...	1430	.0	A2.9	10	.08	--	--	--
JAN								
03...	1440	.0	A2.2	4	.02	--	--	--
31...	1630	.0	A2.7	3	.02	--	--	--
MAR								
06...	1640	1.5	A2.8	4	.03	--	--	--
28...	0915	1.5	3.8	13	.13	--	--	--
MAY								
03...	1015	2.0	14	22	.83	--	--	--
31...	1700	5.5	36	48	4.7	--	--	--
JUN								
13...	1400	6.5	67	84	15	84	95	100
JUL								
11...	1645	10.0	39	28	2.9	--	--	--
AUG								
09...	1115	7.0	15	17	.69	--	--	--
31...	1715	9.0	11	12	.36	--	--	--

A-Daily mean discharge.

DATE	TIME	ARSENIC TOTAL (UG/L AS AS)	BARIUM, TOTAL RECOV-ERABLE (UG/L AS BA)	CADMIUM TOTAL RECOV-ERABLE (UG/L AS CD)	CHRO-MIUM, TOTAL RECOV-ERABLE (UG/L AS CR)	COPPER, TOTAL RECOV-ERABLE (UG/L AS CU)	IRON, TOTAL RECOV-ERABLE (UG/L AS FE)	LEAD, TOTAL RECOV-ERABLE (UG/L AS PB)	MANGA-NESE, TOTAL RECOV-ERABLE (UG/L AS MN)	MERCURY TOTAL RECOV-ERABLE (UG/L AS HG)	SELE-NIUM, TOTAL (UG/L AS SE)	SILVER, TOTAL RECOV-ERABLE (UG/L AS AG)	ZINC, TOTAL RECOV-ERABLE (UG/L AS ZN)
OCT													
11...	1505	0	200	10	10	<10	130	<100	6	.0	0	<10	10
MAY													
31...	1700	1	200	0	10	16	710	2	20	.0	0	0	60

DATE	TIME	TEMPER-ATURE (DEG C)	STREAM-FLOW, INSTAN-TANEOUS (CFS)	NUMBER OF SAM-PLING POINTS	BED MAT. SIEVE DIAM. % FINER THAN 8.00 MM	BED MAT. SIEVE DIAM. % FINER THAN 16.0 MM	BED MAT. SIEVE DIAM. % FINER THAN 32.0 MM	BED MAT. SIEVE DIAM. % FINER THAN 64.0 MM	BED MAT. SIEVE DIAM. % FINER THAN 128 MM
AUG									
31...	1715	9.0	11	100	3	25	50	77	99

WATER-QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	PCB, TOTAL IN BOT-TOM MA-TERIAL (UG/KG)	ALDRIN, TOTAL IN BOT-TOM MA-TERIAL (UG/KG)	CHLOR-DANE, TOTAL IN BOT-TOM MA-TERIAL (UG/KG)	DDD, TOTAL IN BOT-TOM MA-TERIAL (UG/KG)	DDE, TOTAL IN BOT-TOM MA-TERIAL (UG/KG)	DDT, TOTAL IN BOT-TOM MA-TERIAL (UG/KG)	DI-ELDRIN, TOTAL IN BOT-TOM MA-TERIAL (UG/KG)	ENDRIN, TOTAL IN BOT-TOM MA-TERIAL (UG/KG)	HEPTA-CHLOR, TOTAL IN BOT-TOM MA-TERIAL (UG/KG)	HEPTA-CHLOR EPOXIDE TOT, IN BOTTOM MATL, (UG/KG)	LINDANE TOTAL IN BOT-TOM MA-TERIAL (UG/KG)	TOXA-PHENE, TOTAL IN BOT-TOM MA-TERIAL (UG/KG)	2,4-D, TOTAL (UG/L)	2,4,5-T TOTAL (UG/L)	SILVEX, TOTAL (UG/L)
OCT																
11...	1505	0	.0	0	.0	.1	.0	.0	.0	.0	.0	.0	0	.00	.00	.00

DATE	TIME	GROSS ALPHA, DIS-SOLVED (UG/L AS U-NAT)	GROSS ALPHA, SUSP. TOTAL (UG/L AS U-NAT)	GROSS BETA, DIS-SOLVED (PCI/L AS CS-137)	GROSS BETA, SUSP. TOTAL (PCI/L AS CS-137)	GROSS BETA, DIS-SOLVED (PCI/L AS SR/YT-90)	GROSS BETA, SUSP. TOTAL (PCI/L AS SR/YT-90)	RADIUM 226, DIS-SOLVED, RADON METHOD (PCI/L)	URANIUM NATURAL DIS-SOLVED (UG/L AS U)
NOV									
01...	0940	2.9	<.4	.6	<.4	.5	<.4	.08	.9

DATE	TIME	STREAM-FLOW (CFS)	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	PH (UNITS)	TEMPER-ATURE (DEG C)	TUR-BID-ITY (JTU)	OXYGEN, DIS-SOLVED (MG/L)	COLI-FORM, TOTAL, IMMED. (COLS. PER 100 ML)	COLI-FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	STREP-TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)	HARD-NESS (MG/L AS CACO3)	HARD-NESS, NONCAR-BONATE (MG/L CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	SODIUM AD-SORP-TION RATIO	SODIUM+ POTAS-SIUM DIS-SOLVED (MG/L AS NA)	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY (MG/L AS CACO3)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SIO2)
OCT																								
04...	1000	--	7.6	285	8.6	2.0	1	10.8	12	4	18	160	5	47	14	1.9	.1	--	.5	170	4.0	.7	.1	5.2
30...	1430	--	8.2	290	8.3	.5	2	9.8	3	2	18	170	7	42	15	2.1	.1	--	.5	160	6.7	.7	.1	4.7
NOV																								
28...	1700	4.9	--	310	8.4	1.0	1	10.8	1	2	5	170	3	46	14	2.3	.1	--	.6	170	5.1	.7	.1	4.9
DEC																								
27...	1340	4.4	--	308	8.6	.0	1	--	31	21	3	170	5	43	14	2.1	.1	--	.6	160	5.8	.8	.1	4.9
FEB																								
13...	1455	--	3.6	310	8.3	2.0	1	10.5	11	14	9	160	0	42	14	2.1	.1	--	.5	170	2.8	.8	.1	5.5
MAR																								
08...	0920	--	3.8	220	8.7	1.0	1	10.8	1	8	2	160	0	42	14	2.3	.1	--	.5	170	6.3	.7	.1	5.3
APR																								
03...	1530	4.0	--	310	9.1	.0	1	11.4	0	3	9	170	4	45	15	2.4	.1	--	.6	170	6.1	.8	.1	5.1
30...	1525	--	9.4	340	8.8	5.0	2	11.1	0	2	8	200	19	55	15	3.7	.1	--	.8	180	16	1.2	.1	5.5
JUN																								
05...	1730	--	54	260	8.3	7.5	19	9.7	0	<1	8	160	14	46	12	2.1	.1	2.9	.8	150	12	.7	.1	4.1
JUL																								
02...	1300	--	26	320	8.3	8.5	--	9.9	50	46	K17	140	0	36	11	1.7	.1	2.5	.8	150	7.2	.7	.1	4.0
31...	1400	--	12	310	8.7	9.0	1	9.1	47	2	130	150	0	38	14	1.8	.1	2.5	.7	160	2.5	.7	.1	4.7
SEP																								
05...	0905	--	7.6	310	8.4	5.5	--	9.7	--	5	53	170	12	44	15	2.1	.1	2.6	.5	160	9.3	.7	.1	4.6

K-Results based on colony count outside the acceptable range (non-ideal colony count).

DATE	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	SOLIDS, DIS-SOLVED (TONS PER AC-FT)	SOLIDS, DIS-SOLVED (TONS PER DAY)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	PHOS-PHORUS, TOTAL (MG/L AS P)	PHOS-PHATE, TOTAL (MG/L AS PO4)	PHOS-PHORUS TOTAL (MG/L AS PO4)	CYANIDE TOTAL (MG/L AS CN)	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT DIS-CHARGE, SUS-PENDED (T/DAY)
OCT											
04...	165	176	.24	3.61	.05	.01	--	--	.00	8	.16
30...	173	168	.23	3.72	.05	.00	--	--	--	14	.31
NOV											
28...	185	176	.24	2.33	.12	.01	--	--	--	26	.34
DEC											
27...	177	168	.23	2.00	.09	.02	--	--	--	60	.71
FEB											
13...	176	170	.23	1.65	.08	.02	--	--	--	4	.04
MAR											
08...	153	173	.24	1.78	.08	.04	--	--	--	14	.14
APR											
03...	184	177	.24	1.91	.05	.01	--	--	--	6	.06
30...	198	206	.28	5.23	.03	.03	.09	.09	--	14	.36
JUN											
05...	168	168	.23	24.5	.06	.02	.06	.06	.00	99	14
JUL											
02...	159	154	.21	10.8	.04	.01	.03	.03	--	19	--
31...	167	159	.22	5.28	.07	.03	--	.09	--	13	.43
SEP											
05...	170	172	.23	3.53	.03	.01	--	.03	.00	17	.35

DATE	TIME	GROSS ALPHA, DIS-SOLVED (UG/L AS U-NAT)	GROSS ALPHA, SUSP. TOTAL (UG/L AS U-NAT)	GROSS BETA, DIS-SOLVED (PCI/L AS CS-137)	GROSS BETA, SUSP. TOTAL (PCI/L AS CS-137)	GROSS BETA, DIS-SOLVED (PCI/L AS SR/YT-90)	GROSS BETA, SUSP. TOTAL (PCI/L AS SR/YT-90)	RADIUM 226, DIS-SOLVED, RADON METHOD (PCI/L)	URANIUM DIS-SOLVED, EXTRAC-TION (UG/L)	GROSS ALPHA, DIS-SOLVED (PCI/L AS U-NAT)	GROSS ALPHA, SUSP. TOTAL (PCI/L AS U-NAT)
NOV											
28...	1709	2.6	<.6	<1.1	<.6	<1.1	<.6	.07	.50	--	--
SEP											
05...	0903	<2.2	<.6	<1.0	<.6	<1.0	<.6	.08	.44	<1.5	<.3

DATE	TIME	ARSENIC TOTAL (UG/L AS AS)	BARIUM, TOTAL RECOV-ERABLE (UG/L AS BA)	CADMIUM TOTAL RECOV-ERABLE (UG/L AS CD)	CHRO-MIUM, TOTAL RECOV-ERABLE (UG/L AS CR)	COPPER, TOTAL RECOV-ERABLE (UG/L AS CU)	IRON, TOTAL RECOV-ERABLE (UG/L AS FE)	LEAD, TOTAL RECOV-ERABLE (UG/L AS PB)	MANGA-NESE, TOTAL RECOV-ERABLE (UG/L AS MN)	MERCURY TOTAL RECOV-ERABLE (UG/L AS HG)	SELE-NIUM, TOTAL (UG/L AS SE)	SILVER, TOTAL RECOV-ERABLE (UG/L AS AG)	ZINC, TOTAL RECOV-ERABLE (UG/L AS ZN)
OCT													
04...	1000	0	0	8	0	10	80	120	40	.0	0	0	20
JUN													
05...	1730	1	0	1	20	5	1200	24	50	.2	1	0	46
SEP													
05...	0905	0	0	0	10	3	170	7	20	--	0	0	10

DATE	TIME	PCB, TOTAL (UG/L)	PCB, TOTAL IN BOT-TOM MA-TERIAL (UG/KG)	NAPH-THA-LENES, POLY-CHLOR, TOTAL (UG/L)	ALDRIN, TOTAL (UG/L)	ALDRIN, TOTAL IN BOT-TOM MA-TERIAL (UG/KG)	CHLOR-DANE, TOTAL (UG/L)	CHLOR-DANE, TOTAL IN BOT-TOM MA-TERIAL (UG/KG)	DDD, TOTAL (UG/L)	DDD, TOTAL IN BOT-TOM MA-TERIAL (UG/KG)	DDE, TOTAL (UG/L)	DDE, TOTAL IN BOT-TOM MA-TERIAL (UG/KG)	DDT, TOTAL (UG/L)	DDT, TOTAL IN BOT-TOM MA-TERIAL (UG/KG)	DI-AZINON, TOTAL (UG/L)	DI-ELDRIN TOTAL (UG/L)	DI-ELDRIN, TOTAL IN BOT-TOM MA-TERIAL (UG/KG)	ENDO-SULFAN, TOTAL (UG/L)	ENDRIN, TOTAL (UG/L)	ENDRIN, TOTAL IN BOT-TOM MA-TERIAL (UG/KG)
NOV																				
28...	1700	.0	0	.00	.00	.0	.0	0	.00	.0	.00	.0	.00	.0	.00	.00	.0	.00	.00	.0

DATE	TIME	ETHION, TOTAL (UG/L)	MEPTA-CHLOR, TOTAL (UG/L)	MEPTA-CHLOR, TOTAL IN BOT-TOM MA-TERIAL (UG/KG)	MEPTA-CHLOR EPOXIDE TOTAL (UG/L)	MEPTA-CHLOR EPOXIDE TOT. IN BOTTOM MATL. (UG/KG)	LINDANE TOTAL (UG/L)	LINDANE TOTAL IN BOT-TOM MA-TERIAL (UG/KG)	MALA-THION, TOTAL (UG/L)	METHYL PARA-THION, TOTAL (UG/L)	METHYL TRI-THION, TOTAL (UG/L)	MIREX, TOTAL (UG/L)	PARA-THION, TOTAL (UG/L)	PER-THANE TOTAL (UG/L)	TOX-APHENE, TOTAL (UG/L)	TOXA-PHENE, TOTAL IN BOT-TOM MA-TERIAL (UG/KG)	TOTAL TRI-THION (UG/L)	2,4-D, TOTAL (UG/L)	2,4,5-T TOTAL (UG/L)	SILVEX, TOTAL (UG/L)
NOV																				
28...	1700	.00	.00	.0	.00	.0	.00	.0	.00	.00	.00	.00	.00	.00	0	0	.00	.00	.00	.00

Table 3.--Discharge measurements, chemica analyses, and suspended-sediment analyses of water-sediment mixture from selected streams, 1980

[Analytical results in milligrams per liter (mg/L) or micrograms per liter (µg/L), except as indicated. Analyses by U.S. Geological Survey.] No data collected at site 9.

Site number in figure 2	Site name	Date	Streamflow, instantaneous (ft^3/s)	Specific conductance (micromhos)	pH (units)	Temperature (°C)	Turbidity (JTU)	Oxygen, dissolved (mg/L)	Coliform, total, immed. (cols. per 100 mL)	Coliform, fecal, 0.7 µm-mf (cols. per 100 mL)	Streptococci, fecal, KF agar (cols. per 100 mL)	Hardness (mg/L as $CaCO_3$)	Hardness, noncarbonate (mg/L $CaCO_3$)	Calcium, dissolved (mg/L as Ca)	Magnesium, dissolved (mg/L as Mg)	Sodium, dissolved (mg/L as Na)	Sodium adsorption ratio	Potassium, dissolved (mg/L as K)	Alkalinity (mg/L as $CaCO_3$)	Sulfate, dissolved (mg/L as SO_4)	Chloride, dissolved (mg/L as Cl)	Fluoride, dissolved (mg/L as F)	Silica, dissolved (mg/L as SiO_2)	Solids, residue at 180°C dissolved (mg/L)	Solids, sum of constituents, dissolved (mg/L)	Solids, dissolved (tons per acre-ft)	Solids, dissolved (tons per day)	Nitrogen, NO_2+NO_3, total (mg/L as N)	Phosphorus, total (mg/L as P)	Phosphate, total (mg/L as PO_4)	Phosphorus, total (mg/L) as PO_4	Arsenic, total (µg/L as As)	Barium, total recoverable (µg/L as Ba)	Cadmium, total recoverable (µg/L as Cd)	Chromium, total recoverable (µg/L as Cr)	Copper, total recoverable (µg/L as Cu)	Iron, total recoverable (µg/L as Fe)	Lead, total recoverable (µg/L as Pb)	Manganese, total recoverable (µg/L as Mn)	Mercury, total recoverable (µg/L as Hg)	Selenium, total (µg/L as Se)	Silver, total recoverable (µg/L as Ag)	Zinc, recoverable (µg/L as Zn)	Sediment, suspended (mg/L)	Sediment discharge, suspended (tons per day)
1	Cache Creek at Game Creek Trail	8-20-80	7.0	--	--	16.5	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	18	0.34
		9-23-80	4.5	303	8.3	4.0	1	9.8	--	--	--	160	11	43	13	2.3	0.1	0.6	150	3.1	2.6	0.1	4.3	171	159	0.23	2.08	0.01	0.03	.00	.09	--	--	--	--	--	--	--	--	--	--	--	26	.31
2	Cache Creek at gaging station	9-23-80	10.2	322	8.1	4.0	2	10.3	K5	>1	K20	170	8	44	14	2.2	.1	.8	160	3.9	.9	.1	4.6	179	167	.24	4.60	.03	.03	.00	.09	--	--	--	--	--	--	--	--	--	--	--	34	.94
3	Game Creek at end of road	8-20-80	1.6	--	--	7.0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	22	.10
		9-23-80	1.3	622	8.2	6.5	1	10.5	--	--	--	330	140	85	29	3.5	.1	.5	90	130	1.0	.1	9.4	404	373	.55	1.31	.00	.05	.05	.15	2	0	0	0	4	260	2	20	0	1	0	40	23	.08
4	Game Creek near mouth	8-20-80	9.2	--	--	11.0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	62	1.5
		9-23-80	0.26	739	8.4	7.0	3	9.7	<1	K2	44	400	200	107	32	3.7	.1	1.0	200	190	1.5	.1	9.1	541	466	.74	.33	.00	.05	.03	.15	2	0	0	0	8	100	3	10	0	1	0	20	26	.02
5	Horse Creek above Little Horse Creek	8-21-80	8.8	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	35	.83
		9-24-80	7.8	382	8.1	4.5	1	10.3	K4	<1	40	190	79	54	13	2.0	.1	.8	110	84	.8	.2	5.7	226	227	.31	4.78	.00	.03	.00	.09	--	--	--	--	--	--	--	--	--	--	--	6	.13
6	Little Horse Creek near mouth	8-22-80	1.1	--	--	9.0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	6	.02
		9-24-80	.65	532	8.1	6.5	2	9.2	--	--	--	280	53	7.2	25	3.5	.1	1.2	230	51	2.2	.2	12	305	305	.41	.54	.00	.07	.06	.21	--	--	--	--	--	--	--	--	--	--	--	51	.09
7	Little Granite Creek above Rough Hollow Creek	8-19-80	8.1	--	--	8.0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	25	.55
		9-25-80	4.3	356	8.1	2.0	1	11.0	--	--	--	180	0	54	11	3.0	.1	1.0	180	11	.5	.1	4.5	207	193	.28	2.24	.00	.01	.00	.03	--	--	--	--	--	--	--	--	--	--	--	12	.14
8	Rough Hollow Creek at mouth	8-19-80	2.0	--	--	8.0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	42	.23
		9-25-80	1.2	783	8.0	2.0	2	10.8	--	--	--	420	230	130	23	4.8	.1	1.0	190	250	.6	.1	6.2	535	530	.73	1.72	.00	.02	.00	.06	--	--	--	--	--	--	--	--	--	--	--	24	.08
10	Boulder Creek at mouth	8-19-80	3.4	--	--	10.0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	30	.28
		9-25-80	1.6	391	8.0	4.0	1	11.4	--	--	--	200	0	56	14	3.5	.1	.7	200	5.2	.8	.1	4.0	218	205	.30	.89	.00	.01	.00	.03	--	--	--	--	--	--	--	--	--	--	--	14	.06
11	Little Granite Creek at mouth	8-19-80	11.6	--	--	11.5	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	25	.78
		9-25-80	7.9	423	8.1	6.5	1	10.1	<1	<1	38	220	45	63	14	3.6	.1	.9	180	45	.6	.1	4.4	222	340	.30	5.12	.19	.01	.00	.03	2	100	0	0	11	90	4	0	0	0	0	20	24	.51
12	Stinking Springs near Hoback Junction	9-24-80	1.5	1,426	7.4	8.0	--	1.8	--	--	--	870	710	250	60	3.0	.0	1.0	160	710	.7	1.1	6.3	1,230	1,130	1.67	4.98	.05	.02	.00	.06	--	--	--	--	--	--	--	--	--	--	--	--	--

K - Results based on colony count outside the acceptable range (non-ideal colony count).

Table 4.--Particle-size distribution of material on the surface of the streambed, 1980.

Site number in figure 2	Site name	Date	Bed material fall diameter, percent finer than					Bed material sieve diameter, percent finer than					
			.062 mm	.125 mm	.250 mm	.500 mm	1.00 mm	2.00 mm	4.00 mm	8.00 mm	16.0 mm	32.0 mm	64.0 mm
1	Cache Creek at Game Creek trail	8-20-80	3	7	15	20	24	29	34	44	56	68	100
2	Cache Creek at gaging station	8-20-88	0	0	0	0	0	0	0	1	3	22	100
3	Game Creek at end of road	8-20-80	1	2	4	7	9	12	16	27	39	72	100
4	Game Creek near mouth	8-20-80	0	0	1	4	10	17	26	40	50	70	100
5	Horse Creek above Little Horse Creek	8-21-80	0	0	0	0	0	0	0	0	0	37	100
6	Little Horse Creek near mouth	8-21-80	24	47	66	82	95	100	100	100	100	100	100
7	Little Granite Creek above Rough Hollow Creek	8-19-80	0	0	0	1	1	2	3	5	7	26	68
8	Rough Hollow Creek at mouth	8-19-80	0	0	0	1	1	2	5	11	21	52	100
9	Little Granite Creek above Boulder Creek	8-19-80	1	5	8	8	9	9	11	14	16	56	100
10	Boulder Creek at mouth	8-19-80	1	3	4	5	6	6	8	10	14	35	100
11	Little Granite Creek at mouth	8-19-80	0	0	1	1	2	4	6	9	12	17	63

Table 5.--Particle-size distribution of material on the streambanks, 1980.

Site number in figure 2	Site name	Date	Side of stream (facing downstream)	Bank material fall diameter, percent finer than					Bank material sieve diameter, percent finer than					
				.062 mm	.125 mm	.250 mm	.500 mm	1.00 mm	2.00 mm	4.00 mm	8.00 mm	16.0 mm	32.0 mm	64.0 mm
1	Cache Creek at Game Creek trail	8-20-80	right	13	17	19	20	21	24	31	54	76	87	100
			left	8	23	52	79	89	94	99	100	--	--	--
2	Cache Creek at gaging station	8-20-80	right	7	18	36	50	58	66	76	88	95	100	--
			left	14	30	54	72	89	96	99	100	--	--	--
3	Game Creek at end of road	8-20-80	right	28	48	67	72	76	81	86	91	96	100	--
			left	26	40	49	57	66	72	86	93	97	100	--
4	Game Creek near mouth	8-20-80	right	19	31	46	65	88	97	98	99	100	--	--
			left	23	40	58	77	94	99	100	--	--	--	--
5	Horse Creek above Little Horse Creek	8-21-80	right	4	14	31	55	78	89	92	95	100	--	--
			left	13	28	42	50	56	62	68	78	90	100	--
6	Little Horse Creek near mouth	8-21-80	right	25	50	75	90	98	99	99	100	--	--	--
			left	11	41	66	87	99	100	--	--	--	--	--
7	Little Granite Creek above Rough Hollow Creek	8-19-80	right	14	35	50	67	80	86	89	96	100	--	--
			left	13	39	70	86	93	99	100	--	--	--	--
8	Rough Hollow Creek at mouth	8-19-80	right	26	58	77	88	94	96	98	100	--	--	--
			left	13	37	60	81	92	96	97	100	--	--	--
9	Little Granite Creek above Boulder Creek	8-19-80	right	11	31	58	77	86	90	95	100	--	--	--
			left	16	44	71	88	97	98	100	--	--	--	--
10	Boulder Creek at mouth	8-19-80	right	13	34	61	76	81	85	90	96	100	--	--
			left	26	53	78	91	98	100	--	--	--	--	--
11	Little Granite Creek at mouth	8-19-80	right	8	19	33	56	86	99	100	--	--	--	--
			left	22	47	69	86	93	95	96	96	96	100	--

Table 6.--Discharge measurements and chemical analyses of water from selected streams, 1971-73.

[Analytical results in milligrams per liter (mg/L) or micrograms per liter (µg/L), except as indicated. Analyses by U.S. Geological Survey.]

Site number in figure 3	Stream	Date of Collection	Discharge (ft^3/s)	Specific conductance (µmho/cm) at 25°C)	pH (units)	Temperature (°C)	Hardness (Ca, Mg) (mg/L)	Calcium, dissolved (Ca) (mg/L)	Magnesium, dissolved (Mg) (mg/L)	Sodium, dissolved (Na) (mg/L)	Potassium, dissolved (K) (mg/L)	Bicarbonate (HCO_3) (mg/L)	Carbonate (CO_3) (mg/L)	Sulfate, dissolved (SO_4) (mg/L)	Chloride, dissolved (Cl) (mg/L)	Fluoride, dissolved (F) (mg/L)	Silica, dissolved (SiO_2) (mg/L)	Solids, dissolved (sum of constituents) (mg/L)	Nitrate, dissolved (NO_3) (mg/L)	Boron, dissolved (B) (µg/L)	Iron, dissolved (Fe) (µg/L)
1	Snake River above Flat Creek	10-26-73	1,520	245	8.4	7.5	110	34	6.3	8.0	1.9	129	1	16	3.7	0.4	14	148	0.0	--	--
2	Flat Creek at National Forest boundary	10-2-73	18	230	8.4	7.0	130	31	12	1.1	.0	143	3	3.3	5.3	.1	4.4	131	.5	40	0
3	Cache Creek at gaging station	6-7-71	69	311	8.3	5.0	180	50	13	2.7	.7	214	0	1.6	3.3	.1	5.0	182	.0	20	30
		9-3-71	15	312	8.0	6.0	170	44	14	1.9	.8	207	0	5.3	.5	.0	5.1	174	.1	10	20
4	Flat Creek below Cache Creek	10-2-73	76	325	8.2	11.5	170	36	18	3.7	.7	183	0	16	1.8	.2	8.5	175	.3	10	0
5	Flat Creek near mouth	10-2-73	116	420	8.3	11.5	220	55	20	4.8	.7	223	0	40	1.8	.3	9.2	241	.3	30	0
6	Granite Creek at campground	9-28-73	58	235	8.5	10.5	110	32	8.3	3.7	.5	131	2	7.4	3.1	.2	4.3	127	.2	30	0

Table 7.--Chemical analyses of water from selected wells and springs that were sampled 1971-73.

[Analytical results in milligrams per liter (mg/L) or micrograms per liter (µg/L), except as indicated. Analyses by U.S. Geological Survey.]

Geologic source (listed alphabetically): Cg, Galltin Limestone; Db, Darby Formation; Ka, Aspen Shale; Kb, Bear River Formation; Kg, Gannett Group, Mm, Madison Limestone; Pt, Tensleep Sandstone; Qal, alluvium and glacial-outwash deposits; Ql, Lacustrine deposits; Qls, landslide deposits; Tcd, Camp Davis Formation

Site number in figure 4	Well or spring location	Date of Collection	Depth of well (ft)	Discharge (ft^3/s)	Geologic source	Specific conductance (µmho/cm) at 25°C)	pH (units)	Temperature (°C)	Hardness (Ca, Mg) (mg/L)	Calcium, dissolved (Ca) (mg/L)	Magnesium, dissolved (Mg) (mg/L)	Sodium, dissolved (Na) (mg/L)	Potassium, dissolved (K) (mg/L)	Bicarbonate (HCO_3) (mg/L)	Carbonate (CO_3) (mg/L)	Sulfate, dissolved (SO_4) (mg/L)	Chloride, dissolved (Cl) (mg/L)	Fluoride, dissolved (F) (mg/L)	Silica, dissolved (SiO_2) (mg/L)	Solids, dissolved (sum of constituents) (mg/L)	Nitrate, dissolved (NO_3) (mg/L)	Boron, dissolved (B) (µg/L)	Iron, total (Fe) (µg/L)	Iron, dissolved (Fe) (µg/L)
1	38-115-3bcb	8-5-71	Spring	--	Dd	1,580	7.5	7.0	1,100	310	68	2.8	1.3	222	0	830	1.5	0.8	6.2	1,330	[1] 0.88	30	30	--
2	38-115-5baa	8-5-71	Spring	--	Kg	417	7.7	11.0	230	70	14	5.8	1.6	263	0	16	3.4	.0	10	256	[1] 1.2	60	10	--
3	39-113-6dac	7-27-73	Spring	0.002	Cg	1,050	8.0	39.0	100	32	5.8	160	8.6	182	0	120	130	5.3	48	597	.2	530	--	10
4	39-113-7aaa	7-27-73	Spring	15	Qls	165	8.2	6.0	74	23	4.0	4.3	.5	82	0	12	4.9	.2	3.6	93	.5	50	--	0
5	39-113-20cdb	10-1-73	Spring	.002	Qal	520	7.8	6.0	270	77	20	3.2	1.2	334	0	4.1	.9	.1	6.9	278	.2	30	--	10
6	39-115-31aab	8-5-71	70	--	Qal	476	7.6	12.5	270	83	15	4.2	.9	246	0	75	1.3	.0	6.6	311	.98	10	60	--
7	39-116-2 dcc	9-9-71	Spring	--	Tcd	412	8.0	9.0	200	53	16	9.0	3.3	241	0	4.9	3.8	.3	32	250	8.8	30	30	--
8	39-116-3 cab	8-5-71	93	--	Qal	413	7.6	8.5	220	65	13	10	2.2	269	0	12	2.1	.2	17	267	[1] 2.9	30	40	--
9	39-116-14dbc	9-9-71	111	--	Ka	460	8.3	12.0	25	6.0	2.4	96	.9	192	0	63	3.1	.2	8.3	275	.3	20	20	--
10	39-116-23c	8-4-71	80	--	Kb	687	7.6	13.5	350	100	25	8.1	1.8	392	0	24	12	.0	17	416	[1] 8.0	120	10	--
11	40-116-8cdb	10-31-73	Spring	--	Mm	850	7.8	11.0	480	120	44	3.2	1.6	209	0	300	2.4	1.3	9.8	588	.3	--	--	--
12	40-116-17ddb	9-27-73	86	--	Qal	215	8.2	7.5	110	39	2.5	1.1	1.4	135	0	.0	1.8	.1	17	130	.2	10	--	0
13	40-116-20acd	7-24-73	281	--	Ql	775	7.7	9.0	420	110	34	4.8	2.3	283	0	190	2.8	.8	15	498	1.3	20	--	10
14	41-115-1 bba	9-5-73	Spring	.05	Pt	510	8.1	6.0	280	70	25	5.4	1.9	338	0	6.6	3.5	.2	23	303	1.1	10	--	40
15	41-115-3 baa	9-5-73	Spring	3.0	Mm	235	8.2	6.0	120	36	6.4	1.1	.5	135	0	3.3	.7	.1	7.2	122	.2	0	--	20
16	41-115-16cda	9-5-73	Spring	.30	Qal	185	8.3	8.0	93	26	6.7	2.1	.7	110	0	1.6	3.9	.1	9.9	105	.3	30	--	30
17	41-115-18bdd	7-3-73	40	--	Qal	365	7.9	12.0	190	59	11	2.1	.9	236	0	4.9	2.1	.1	10	206	.3	30	--	0
18	41-115-18ccc	7-3-73	30	--	Qal	450	8.0	7.5	220	65	14	2.7	1.6	181	0	79	1.8	.2	12	266	.6	10	--	30
19	41-115-20bcc	7-3-73	112	--	Mm	555	7.9	9.0	300	74	27	2.7	1.6	182	0	150	1.4	.4	11	355	.6	30	--	10
20	41-116-23cdd	7-3-73	Spring	3.0	Mm	480	7.9	9.0	240	62	21	4.3	1.6	179	0	98	1.8	.4	12	290	.7	20	--	10
21	41-116-27ddc	10-30-73	200	--	Qal	415	7.9	11.0	220	54	21	3.2	1.2	206	0	55	.0	.3	9.1	247	2.4	--	--	--
22	41-116-33cba	10-24-73	56	--	Qal	490	8.0	11.5	260	73	20	4.3	1.6	284	0	30	2.4	.1	11	283	1.4	--	--	--

[1] Nitrate plus nitrate (NO_2+NO_3) as (N)

Table 8.--Generalized section of geologic units and their water-bearing properties

System	Geologic unit		Approximate maximum thickness (feet)	Lithology	Water-bearing properties
	South	North			
Tertiary	Camp Davis Formation		5,000	Conglomerate and claystone.	May yield a few tens of gallons per minute per well from conglomerate.
	Hoback Formation		15,000	Sandstone, siltstone, and shale.	May yield a few tens of gallons per minute per well from sandstone.
Cretaceous	Bacon Ridge Sandstone and unnamed lenticular sandstone, shale and coal		2,000	Sandstone, shale, and coal.	May yield a few tens of gallons per minute per well from sandstone.
	Cody Shale		2,000	Shale and thin beds of sandstone and bentonite.	Probably would not yield more than a few gallons per minute per well.
	Frontier Formation		1,000	Sandstone, shale, and bentonite.	May yield a few tens of gallons per minute per well from sandstone. Yields a few gallons per minute to individual springs.
	Aspen Shale Gannett Group Bear River Fm	Mowry and Thermopolis Shales, undivided	900	Shale, sandstone, and bentonite.	May yield a few tens of gallons per minute per well from sandstone beds.
Jurassic and Cretaceous	Cloverly and Morrison Formations, undivided		650	Sandstone and claystone.	Probably would not yield more than a few gallons per minute per well.

Table 8.--Generalized section of geologic units and their water-bearing properties--Continued

System	Geologic unit		Approximate maximum thickness (feet)	Lithology	Water-bearing properties
	South	North			
Jurassic	Stump Fm, Pruess Ss, Twin Creek Ls, undivided	Sundance and Gypsum Spring Fms, undivided	700	Sandstone, shale, and limestone.	May yield a few gallons per minute per well from sandstone and from fractures and solution channels in limestone.
Jurassic(?) and Triassic(?)	Nugget Sandstone		350	Sandstone.	May yield a few tens of gallons per minute per well.
Triassic	Chugwater and Dinwoody Formations, undivided		2,000	Siltstone and shale.	Probably would not yield more than a few gallons per minute per well.
Permian	Phosphoria Formation		250	Sandstone, dolomite, and shale.	May yield as much as 10 gal/min per well from sandstone and from fractures and solution channels in dolomite.
Pennsylvanian and Mississippian	Wells Fm and associated Upper Mississippian rocks, undivided	Tensleep Ss and Amsden Fm, undivided	700	Sandstone and shale.	May yield a few tens of gallons per minute per well from sandstone. Yields as much as 100 gal/min to individual springs.
Mississippian	Madison Limestone		1,000	Limestone and thin beds of shale.	May yield several hundred gallons per minute per well from solution channels in limestone. Yields as much as 10 ft^3/s to individual springs.

Table 8.--Generalized section of geologic units and their water-bearing properties--Continued

System	Geologic unit		Approximate maximum thickness (feet)	Lithology	Water-bearing properties
	South	North			
Devonian	Darby Formation		350	Shale and dolomite.	Probably would not yield more than a few gallons per minute per well.
Ordovician	Bighorn Dolomite		450	Dolomite.	May yield as much as 100 gal/min per well from fractures and solution channels.
Cambrian	Gallatin Limestone		200	Limestone and shale.	May yield as much as 100 gal/min per well from solution channels in limestone. Yields as much as 1 ft^3/s to individual springs.
	Gros Ventre Formation		600	Shale, siltstone, and limestone.	Probably would not yield more than a few gallons per minute per well.
	Flathead Sandstone		200	Sandstone.	May yield a few tens of gallons per minute per well.
Precambrian	Metamorphic and igneous rocks			Mostly gneiss, schist, and granite.	May yield a few tens of gallons per minute per well from fractures.