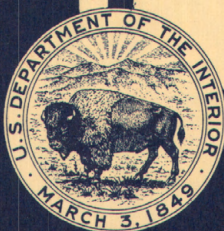
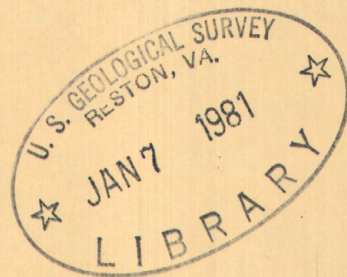


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Water Resources Data for Utah

Part 2. Water Quality Records



UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

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

CALENDAR FOR WATER YEAR 1971

OCTOBER 1970

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

NOVEMBER 1970

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

DECEMBER 1970

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

JANUARY 1971

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

FEBRUARY 1971

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

MARCH 1971

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

APRIL 1971

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

MAY 1971

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

JUNE 1971

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

JULY 1971

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

AUGUST 1971

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

SEPTEMBER 1971

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

1971

Water Resources Data for Utah

Part 2. Water Quality Records



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

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

Prepared in cooperation with

Utah Department of Natural Resources
Bureau of Reclamation, U.S. Department of
the Interior
Environmental Protection Agency

Streamflow records for most of the water quality
stations in this report are contained in:

Water Resources Data for Utah, 1971

Part 1. Surface Water Records

Copies of this report may be obtained from
District Chief, Water Resources Division
U.S. Geological Survey
8002 Federal Building
125 South State Street
Salt Lake City, Utah 84111

CONTENTS

	Page
List of water-quality stations, in downstream order, for which records are published.....	IV
Introduction.....	1
Cooperation.....	2
Definition of terms.....	2
Special networks and programs.....	8
Downstream order and station number.....	9
Well numbers.....	10
Collection and examination of samples.....	12
Solutes.....	14
Temperature.....	14
Sediment.....	15
Water-supply papers.....	16
Selected references.....	16
Water-quality records.....	19
Index.....	93

ILLUSTRATIONS

	Page
Figure 1. Map of Utah showing locations of sites where data were obtained on the quality of surface water.....	VI
2. Map of Utah showing areas where data were obtained on the chemical-quality of ground water.....	VII
3. Well numbering system.....	11

TABLES

	Page
Table 1. Factors for conversion of chemical constit- uents in milligrams per liter to milli- equivalents per liter.....	4
2. Factors for conversion of sediment concentra- tions in milligrams per liter to parts per million.....	5
3. Temperature conversion table, degrees Fahren- heit (°F) to degrees Celsius (°C).....	13
4. Water-supply paper numbers and parts, water years 1947-70.....	16

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

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

	Page
<u>COLORADO RIVER BASIN</u>	
<u>COLORADO RIVER:</u>	
<u>DOLORES RIVER BASIN</u>	
Dolores River near Cisco (ct).....	19
Colorado River near Cisco (cts).....	21
<u>GREEN RIVER BASIN</u>	
Green River:	
Henrys Fork at Linwood (ct).....	26
Green River near Greendale (ct).....	28
Green River near Jensen (cts).....	30
Duchesne River near Randlett (ct).....	35
White River near Watson (ct).....	37
Price River at Woodside (ct).....	39
Green River at Green River (cts).....	41
San Rafael River near Green River (ct).....	45
<u>DIRTY DEVIL RIVER BASIN</u>	
Fremont River (head of Dirty Devil River):	
Pleasant Creek near Caineville (s).....	47
Fremont River near Caineville (s).....	51
<u>SAN JUAN RIVER BASIN</u>	
San Juan River:	
Cottonwood Wash near Blanding (s).....	55
San Juan River near Bluff (cts).....	58
<u>VIRGIN RIVER BASIN</u>	
Virgin River at Virgin (ts).....	63
Virgin River near Hurricane (ts).....	67
Virgin River at Littlefield, Ariz. (ct).....	71
<u>THE GREAT BASIN</u>	
<u>GREAT SALT LAKE BASIN</u>	
<u>BEAR RIVER BASIN</u>	
Bear River at Border, Wyo. (ct).....	73
<u>WEBER RIVER BASIN</u>	
Weber River at Gateway (c).....	75
<u>JORDAN RIVER BASIN</u>	
Utah Lake (head of Jordan River):	
Red Butte Creek at Fort Douglas, near Salt Lake City (cts).....	76

WATER-QUALITY STATIONS IN DOWNSTREAM ORDER

V

Page

SEVIER LAKE BASIN

Sevier River below Piute Dam, near Marysvale (c).....	79
Mill Creek near Glenwood (s).....	80
Sevier River near Lynndyl (ct).....	82
Analyses of samples collected at water-quality partial- record stations (c).....	84
Chemical analyses of ground waters in Utah.....	88

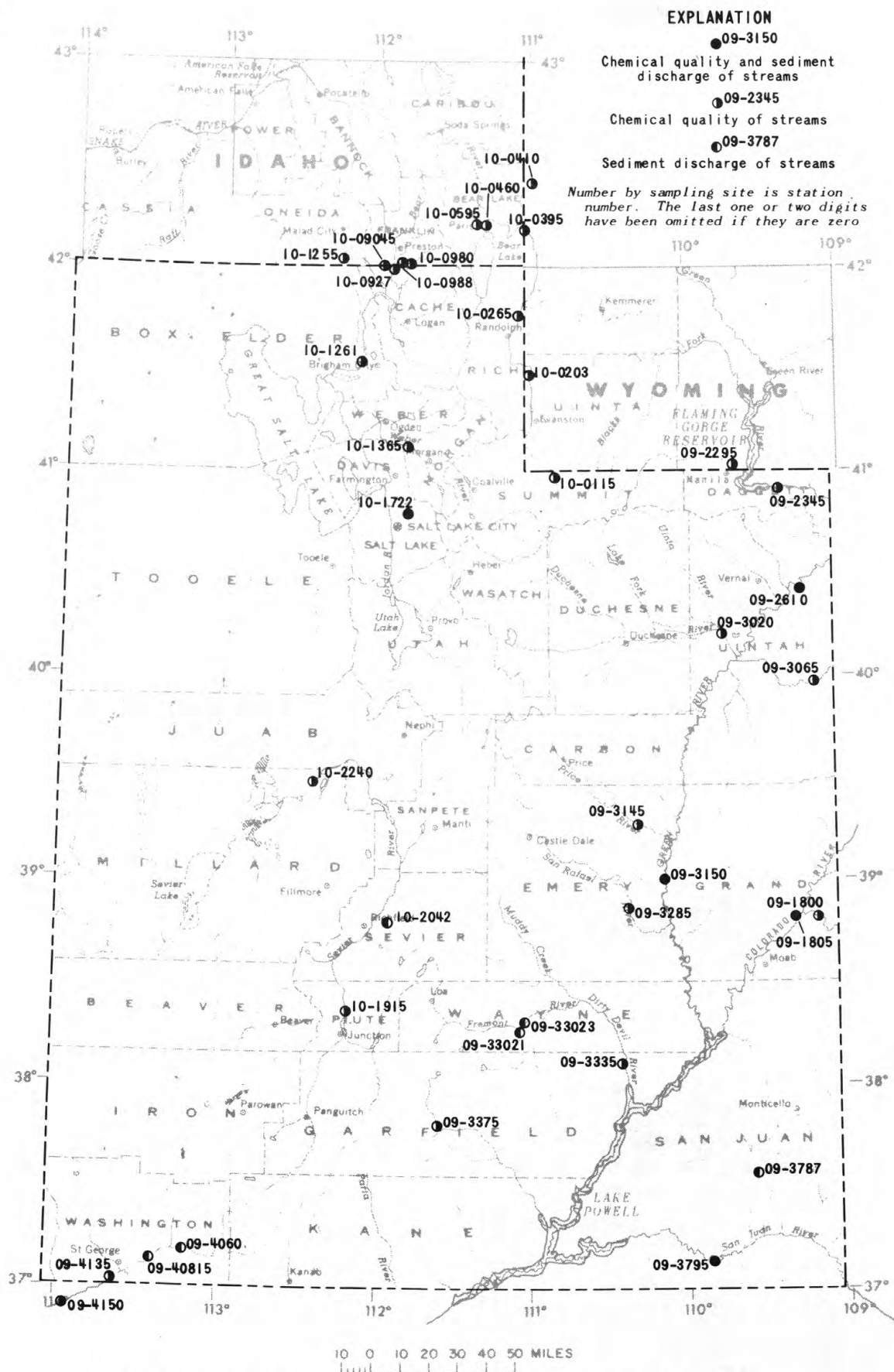


Figure 1.—Map of Utah showing locations of sites where data were obtained on the quality of surface water.

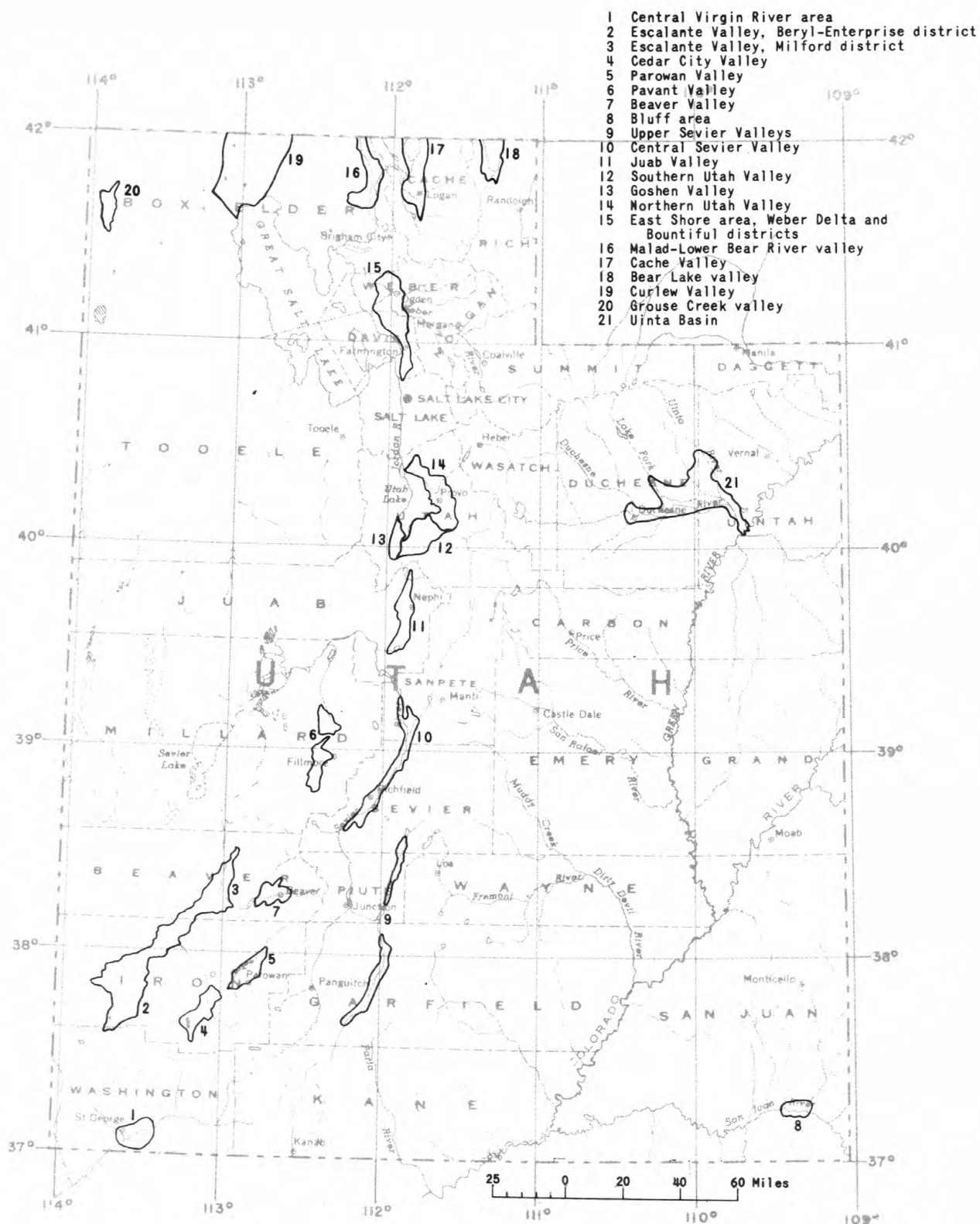


Figure 2.—Map of Utah showing areas where data were obtained on the chemical quality of ground water.

WATER RESOURCES DATA FOR UTAH, 1971

Part 2. Water Quality Records

By Michael D. ReMillard, Glenn E. Johnson, and J. C. Mundorff

INTRODUCTION

Water-resources data for the 1971 water year for Utah include records of data for the chemical and physical characteristics of surface and ground water. Records for a few pertinent water-quality stations in bordering States are also included. The records were collected by the Water Resources Division of the U.S. Geological Survey under the direction of Ted Arnow, district chief. These data represent that portion of the National Water Data System collected by the U.S. Geological Survey and cooperating State and Federal agencies in Utah.

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

COOPERATION

Most data in this report were obtained as part of the Federal Program of the U.S. Geological Survey or in cooperation with the Bureau of Reclamation, U.S. Department of the Interior, and the Environmental Protection Agency. Investigations of ground water and of some surface water were made under cooperative agreement between the U.S. Geological Survey and the Utah Department of Natural Resources, Gordon Harmston, Executive Director (Division of Water Rights, Hubert C. Lambert, State Engineer; Division of Water Resources, Daniel F. Lawrence, Director).

Records for Bear River at Border, Wyo., and for Henrys Fork near Linwood, Utah, were obtained by the Wyoming District, Water Resources Division, U.S. Geological Survey.

DEFINITION OF TERMS

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

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

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

Cfs-day is the volume of water represented by a flow of 1 cubic foot per second for 24 hours. It is equivalent to 86,400 cubic feet, approximately 1.9835 acre-feet, or about 646,000 gallons, and represents a runoff of approximately 0.0372 inches from 1 square mile.

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

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

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

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

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

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

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

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

Micrograms per liter ($\mu\text{g/l}$, UG/L) is a unit expressing the concentration of chemical constituents in solution as weight (micrograms) of solute per unit volume (liter) of water. One thousand micrograms per liter is equivalent to one milligram per liter.

Milliequivalents per liter is a unit for expressing the concentration of chemical constituents in terms of the interreacting values of the electrically charged particles, or ions, in solution. One milliequivalent (per liter) of a positively charged ion will react with one milliequivalent (per liter) of a negatively charged ion. Milligrams per liter is converted to milliequivalents per liter by multiplying by the reciprocal of the combining weight of the ion.

Milligrams per liter (mg/l, MG/L) is a unit for expressing the concentration of chemical constituents in solution. Milligrams per liter represents the weight of solute per unit volume of water. Milligrams or micrograms per liter may be converted to milliequivalents (one thousandth of a gram-equivalent weight of a constituent) per liter by multiplying by the factors in table 1. See below. Concentration of suspended sediment also is expressed in mg/l, and is based on the weight of sediment per liter of water-sediment mixture. Sediment concentrations may be converted to parts per million by using the factors in table 2, page 5.

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

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

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

WATER QUALITY RECORDS, 1971

5

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

Range of concentration (mg/l)	Divide by	Range of concentration (mg/l)	Divide by
0 - 8,000	1.00	411,000 - 424,000	1.26
8,050 - 24,000	1.01	427,000 - 440,000	1.27
24,200 - 40,000	1.02	443,000 - 457,000	1.28
40,500 - 56,000	1.03	460,000 - 473,000	1.29
56,500 - 72,000	1.04	476,000 - 489,000	1.30
72,500 - 88,000	1.05	492,000 - 506,000	1.31
88,500 - 104,000	1.06	508,000 - 522,000	1.32
105,000 - 120,000	1.07	524,000 - 538,000	1.33
121,000 - 136,000	1.08	540,000 - 554,000	1.34
137,000 - 152,000	1.09	556,000 - 570,000	1.35
153,000 - 169,000	1.10	572,000 - 585,000	1.36
170,000 - 185,000	1.11	587,000 - 602,000	1.37
186,000 - 200,000	1.12	604,000 - 617,000	1.38
201,000 - 217,000	1.13	619,000 - 634,000	1.39
218,000 - 232,000	1.14	636,000 - 650,000	1.40
234,000 - 248,000	1.15	652,000 - 666,000	1.41
250,000 - 264,000	1.16	668,000 - 682,000	1.42
266,000 - 280,000	1.17	684,000 - 698,000	1.43
282,000 - 297,000	1.18	700,000 - 715,000	1.44
299,000 - 313,000	1.19	717,000 - 730,000	1.45
315,000 - 329,000	1.20	732,000 - 747,000	1.46
331,000 - 345,000	1.21	749,000 - 762,000	1.47
347,000 - 361,000	1.22	765,000 - 780,000	1.48
363,000 - 378,000	1.23	782,000 - 796,000	1.49
380,000 - 393,000	1.24	798,000 - 810,000	1.50
395,000 - 409,000	1.25		

*Based on water density of 1.00 g/ml and a specific gravity of sediment of 2.65.

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

Particle size is the diameter, in millimeters (mm), of suspended sediment or bed material determined by either sieve or sedimentation methods. Sedimentation methods (pipet, bottom-withdrawal tube, visual-accumulation tube) determine fall diameters of particles in either distilled water (chemically dispersed) or in native water (the river water at the time and point of sampling) (Guy, 1969).

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

Classification	Size (mm)	Method of analysis
Clay.....	0.00024 - 0.004	Sedimentation.
Silt.....	.004 - .062	Sedimentation.
Sand.....	.062 - 2.0	Sedimentation or sieve.
Gravel.....	2.0 - 64.0	Sieve.

The particle-size distributions given in this report are not necessarily representative of the particle sizes of sediment in transport in the natural stream. Most of the organic matter is removed and the sample is subjected to mechanical and chemical dispersion before analysis of the silt and clay. Chemical dispersion is not used for native-water analysis (Guy, 1969).

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

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

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

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

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

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

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

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

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

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

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

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

Water year is the 12-month period, Oct. 1 to Sept. 30. The water year is designated by the calendar year in which it ends and which includes nine of the 12 months. Thus, the year ending Sept. 30, 1971, is called the "1971 water year."

SPECIAL NETWORKS AND PROGRAMS

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

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

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

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

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

DOWNSTREAM ORDER AND STATION NUMBER

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

As an added means of identification, each water-quality station, gaging station, and partial-record station has been assigned a station number. These are in the same downstream order used in this report. In assigning station numbers, no distinction is made between partial-record and continuous-record stations; therefore, the station number for a partial-record station indicates downstream order position in a list made up of both types of stations. Water-quality stations located at or near gaging stations or partial-record stations have the same number as the gaging or partial-record station. Gaps are left in the numbers to allow for new stations that may be established; hence the numbers are not consecutive. The complete 8-digit number for each station, such as 09337500 which appears just to the left of the station name includes the 2-digit part number "09" plus the 6-digit downstream order number "337500". In this report, the records are listed in downstream order by parts. The part number refers to an area whose boundaries coincide with certain natural drainage lines. Records in this report are in Part 9 (Colorado River basin) and Part 10 (The Great Basin). All records

for a drainage basin encompassing more than one State could be arranged in downstream order by assembling pages from the various State reports by station number to include all records in the basin.

WELL NUMBERS

The well numbers used in this report indicate their location. The numbering system, which is illustrated on page 11, is based on the U.S. Bureau of Land Management's system of land subdivision. The number shows the location of the well by quadrant, township, range, section, and position within the section. The capital letter at the beginning of the location number indicates the quadrant in which the well is located. Four quadrants are formed by the intersection of the base line and the principal meridian--A indicates the northeast quadrant, B the northwest, C the southwest, and D the southeast. The first numeral indicates the township, the second the range, and the third the section in which the well is located. Lowercase letters following the section number locate the well within the section. The first letter denotes the quarter section, the second the quarter-quarter section, and the third the quarter-quarter-quarter section. The letters are assigned within the section in a counterclockwise direction beginning with (a) in the northeast quarter of the section. Letters are assigned within each quarter section and quarter-quarter section in the same manner. Where two or more locations are within the smallest subdivision, consecutive numbers beginning with 1 are added to the letters in the order in which the wells are inventoried. For example, (C-16-9)15daa-2 indicates a well in the northeast quarter of the northeast quarter of the southeast quarter of sec.15, T.16 S., R.9 W., and shows that this is the second well inventoried in the quarter-quarter-quarter section. The capital letter C indicates that the township is south of the Salt Lake Base Line and that the range is west of the Salt Lake Meridian.

In addition to the Salt Lake Base Line and Salt Lake Meridian, which apply to most of Utah, the Uinta Base Line and Meridian are the basis for describing locations in a small, irregularly-shaped area of northeastern Utah. The quadrants, townships, ranges, sections, and parts of sections are designated in the same way as for the Salt Lake Base Line and Meridian. For any location in the Uinta area, however, the letter "U" precedes the parenthesis.

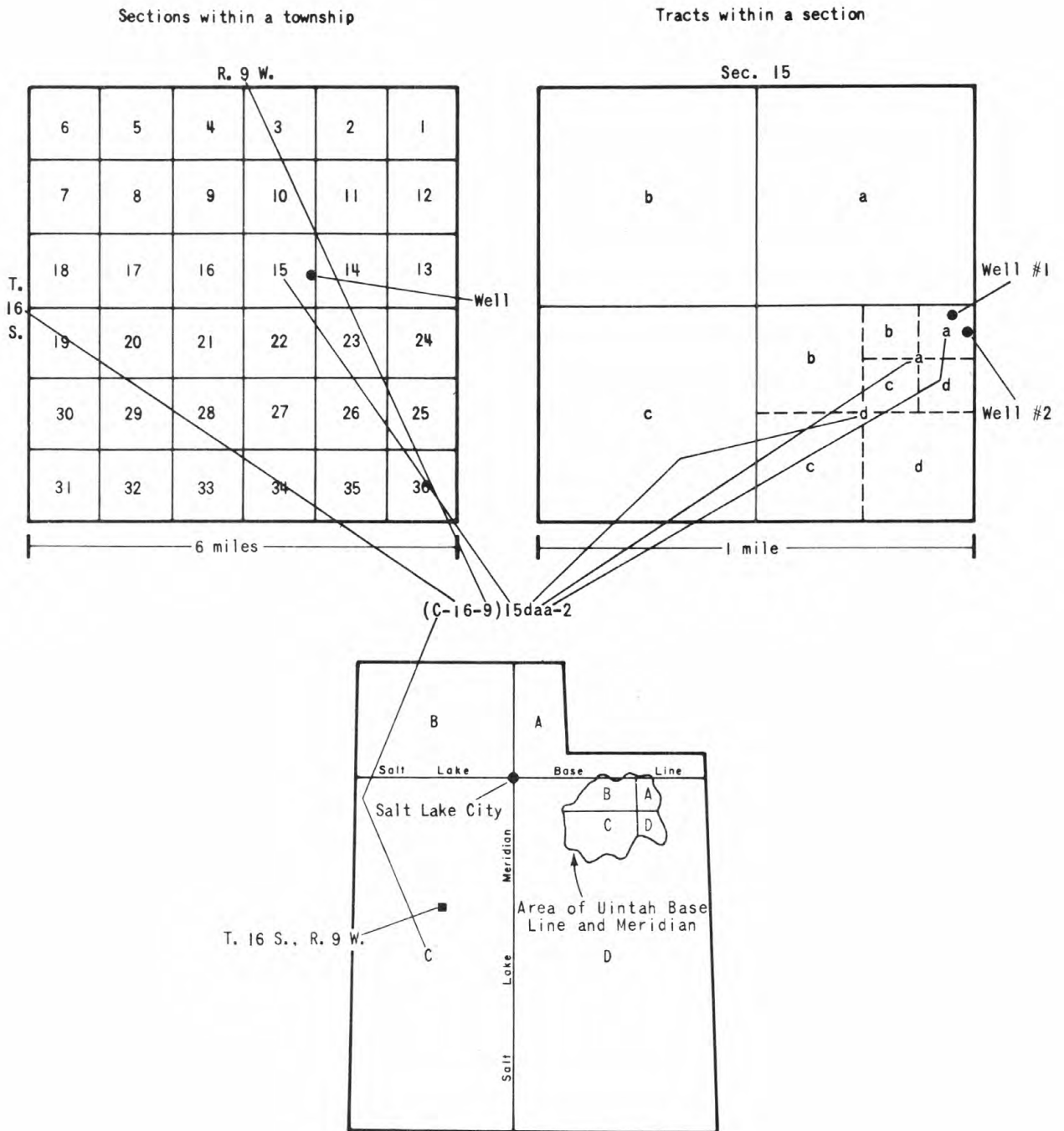


Figure 3.—Well-numbering system.

COLLECTION AND EXAMINATION OF DATA

Water samples for analyses usually are collected at or near gaging stations. The discharge records at these stations are used in conjunction with the computations of the chemical constituents and sediment loads. Discharge records for streams in Utah have been released in the report, "Water Resources Data for Utah, 1971, Part 1. Surface Water Records."

The data in this report include a description of the sampling station and tabulations of the samples analyzed. The description of the sampling station gives the location, drainage area, periods of record for the various water-quality data, extremes of the pertinent data, and general remarks, in a format similar to that used for streamflow-gaging stations. For ground-water sampling stations, no descriptive statements are given. However, the well number, depth of well, date of sampling, and other pertinent data are given in the table containing the chemical analyses of ground water.

Data on the quality of surface water were collected from designated sampling sites (map on page VI) at predetermined intervals such as once daily, weekly, monthly, or less frequently. Data on the quality of ground water were collected at 92 wells throughout the State; the areas where these wells are located are shown on the map on page VII.

Water-quality information is presented for chemical quality, water temperature, and fluvial sediment. Chemical quality includes concentrations of individual dissolved constituents and certain properties or characteristics such as hardness, sodium adsorption ratio, specific conductance, and pH.

Water-temperature data represent once-daily observations except for stations where a continuous temperature recorder furnishes information from which daily minimums and maximums are obtained. Fluvial-sediment information is given for suspended-sediment discharges and concentrations and for particle-size distribution of suspended sediment and bed material.

Prior to the 1968 water year, data for chemical constituents and concentrations of suspended sediment were reported in parts per million (ppm) and water temperatures were reported in degrees Fahrenheit (°F). In October 1967, the

U.S. Geological Survey began to use the metric system; data for chemical constituents and concentrations of suspended sediment are now reported in milligrams per liter (mg/l) and water temperatures are given in degrees Celsius (centigrade, °C). In waters with a density of 1.000 g/ml (grams per milliliter), parts per million and milligrams per liter can be considered equal. In waters with a density greater than 1.000 g/ml, values in parts per million should be multiplied by the density to convert to milligrams per liter. To convert temperature in degrees Celsius to degrees Fahrenheit, see table 3 below.

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

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

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

In October 1968, the Geological Survey began reporting many of the chemical constituents as well as the minor elements in micrograms per liter instead of milligrams per liter. (See "Definitions of Terms," p. 4.)

Solutes

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

The chemical-quality data in this report generally represent the major chemical characteristics of the stream water at a specific time about once each month. In addition, samples are generally obtained daily for determination of specific conductance of the water. If daily specific-conductance data indicate major changes in the chemical characteristics of the water or if runoff conditions are extremely unusual, selected daily samples are analyzed for certain constituents. Relationships usually can be established between specific conductance and dissolved-solids concentrations and, in some instances, between conductance and concentrations of individual constituents. Dissolved-solids concentrations shown under "sum of constituents" in the tables of chemical analyses include the sum of the constituents actually determined in any given analysis.

Ground water generally does not change significantly during short periods of time; infrequent sampling and analysis of ground water adequately defines ground-water quality at a given site. Water samples from wells are analyzed individually.

Temperature

Water temperatures are measured at most of the water-quality stations. For daily stations, the water temperatures are taken at about the same time each day when samples are collected. Large streams have a small diurnal temperature change; shallow streams may have a daily range of several degrees and may follow closely the changes in air temperature. Some streams may be affected by waste-heat discharges.

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

Sediment

Suspended-sediment concentrations are determined from samples collected by using depth-integrating samplers. Samples usually are obtained daily at several verticals in the cross-section.

The published sediment discharges for days of rapidly changing flow or concentration were computed by the sub-divided day method (time-discharge weighted average). Therefore, for those days when the published sediment discharge values differ from the values computed as the product of discharge times mean concentration times 0.0027, the sediment discharges were computed by the sub-divided day method. For periods when no samples were collected, daily loads of suspended sediment were estimated on the basis of water discharge, sediment concentrations observed immediately before and after the periods, and suspended-sediment loads for other periods of similar discharge.

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

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

WATER SUPPLY PAPERS

Table 4 below, shows the annual series of water-supply papers that give information on quality of surface waters in Utah. Data for the Colorado River basin and for the Great Basin are given in Parts 9 and 10 in the listed reports.

Table 4.--Water-supply paper numbers,
water years 1947-70

<u>Year</u>	<u>WSP number</u>	<u>Year</u>	<u>WSP number</u>
1947	1102	1959	1645
1948	1133	1960	1745
1949	1163	1961	1885
1950	1189	1962	1945
1951	1200	1963	1951
1952	1253	1964	1958
1953	1293	1965	1965
1954	1353	1966	1995
1955	1403	1967	2015
1956	1453	1968	A2098
1957	1523	1969	A2148
1958	1574	1970	A2158

A In preparation.

SELECTED REFERENCES

- American Public Health Association, and others, 1965, Standard methods for the examination of water and wastewater, 12th ed.: Am. Public Health Assoc., New York, 769 p.
- Brown, Eugene, Skougstad, M. W., and Fishman, M. J., 1970, Methods for collection and analysis of water samples for dissolved minerals and gases: U.S. Geol. Survey Techniques of Water-Resources Inv., book 5, chap. A1, 160 p.
- Colby, B. R., 1963, Fluvial sediments--a summary of source, transportation, deposition, and measurement of sediment discharge, U.S. Geol. Survey Bull. 1181-A, 47 p.

- Colby, B. R., and Hubbell, D. W., 1961, Simplified methods for computing total sediment discharge with the modified Einstein procedure: U.S. Geol. Survey Water-Supply Paper 1593, 17 p.
- Guy, H. P., 1969, Laboratory theory and methods for sediment analysis: U.S. Geol. Survey Techniques of Water-Resources Inv., book 5, chap. C1, 57 p.
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- Guy, H. P., and Norman, V. W., 1970, Field methods for measurement of fluvial sediment: U.S. Geol. Survey Techniques of Water-Resources Inv., book 3, chap. C2, 59 p.
- Hem, J. D., 1970, Study and interpretation of the chemical characteristics of natural water, 2d ed.: U.S. Geol. Survey Water-Supply Paper 1473, 363 p.
- Langbein, W. B., and Iseri, K. T., 1960, General introduction and hydrologic definitions: U.S. Geol. Survey Water-Supply Paper 1541-A, 29 p.
- Ritter, J. R., and Helley, E. J., 1969, Optical method for determining particle sizes of coarse sediment: U.S. Geol. Survey Techniques of Water-Resources Inv., book 5, chap. C3.
- U.S. Inter-Agency Committee on Water Resources, Subcommittee on Sedimentation, A study of methods used in measurement and analysis of sediment loads in streams. Published by the St. Anthony Falls Hydraulic Laboratory, Minneapolis, Minn.
- 1941, Methods of analyzing sediment samples: Rept. 4.
- 1957, The development and calibration of visual accumulation tube: Rept. 11.
- 1957, Some fundamentals of particle-size analyses: Rept. 12.
- 1959, Federal Inter-agency sedimentation instruments and reports: Rept. AA.

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

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

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

DOLORES RIVER BASIN

19

09180000 DOLORES RIVER NEAR CISCO, UTAH

LOCATION.--Lat 38°47'50", long 109°11'40", in SW $\frac{1}{4}$ SE $\frac{1}{4}$, sec.18, T.23 S., R.25 E, Grand County, at gaging station 9 miles upstream from mouth, 13.5 miles downstream from Colorado-Utah State line, and 14 miles southeast of Cisco.

DRAINAGE AREA.--4,580 sq mi, approximately.

PERIOD OF RECORD.--Chemical analyses: March 1951 to September 1971.

Water temperatures: March 1951 to September 1959, October 1964 to September 1971.

Sediment records: March 1951 to September 1964.

EXTREMES.--1970-71:

Specific conductance: Maximum daily, 15,500 micromhos Aug. 22; minimum daily, 39 micromhos June 22, 24.

Water temperatures: Maximum, 25.0°C Aug. 15; minimum, freezing point on many days during December and January.

Period of record:

Specific conductance: Maximum daily, 15,500 micromhos Aug. 22, 1971; minimum daily, 254 micromhos May 8, June 6, 1952.

Water temperatures (1951-59, 1968-71): Maximum, 29.0°C Aug. 14, 1958; minimum, freezing point on many days during winter period each year.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DATE	TIME	TEMP- ERATURE (DEG C)	DIS- CHARGE (CFS)	DIS- SOLVED SILICA (SI02) (MG/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)
OCT. 16...	1100	9.5	288	6.0	94	46	323	22	149	0	328	480
NOV. 19...	1130	3.0	214	8.0	120	60	670	33	165	0	440	1000
19...	1230	3.0	214	8.0	113	54	686	34	203	0	348	1100
DEC. 17...	1020	1.5	235	9.0	110	61	600	32	128	0	450	900
JAN. 15...	1150	.0	239	10	110	47	480	27	190	0	400	680
FEB. 17...	1200	5.0	285	6.6	85	41	420	19	183	0	260	610
MAR. 17...	1240	5.5	203	--	100	53	420	21	171	0	400	640
APR. 09...	1300	10.0	1330	--	53	16	52	4.6	137	0	110	67
MAY 17...	1040	14.0	2160	--	49	13	33	2.7	127	0	79	32
JUNE 16...	1100	18.0	1680	--	46	14	42	3.1	123	0	100	46
JULY 15...	1025	22.0	330	--	66	21	210	10	105	0	150	350
AUG. 17...	1245	23.5	44	--	160	71	680	32	140	0	610	1100
20-23	--	--	234	5.0	180	110	2200	99	166	0	650	3700
SEP. 20...	1045	11.0	107	8.0	160	82	600	31	111	0	600	890

DATE	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 CONSTITUENTS) (MG/L)	DIS- SOLVED SOLIDS (TONS PER DAY)	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
OCT.	16...	.7	--	1380	2.03	1160	424	302	6.8	2390	7.2
NOV.	19...	.5	--	2410	3.28	1390	550	415	13	4530	7.5
19...	.3	--	--	2440	3.32	1410	504	337	13	4370	8.0
DEC.	17...	.4	--	2200	2.99	1400	530	425	11	3840	7.1
JAN.	15...	.5	--	1850	2.52	1190	460	300	9.7	3100	7.4
FEB.	17...	--	--	1500	2.04	1150	380	230	9.4	2660	8.0
MAR.	17...	--	--	1720	2.34	943	470	330	8.5	3060	7.4
APR.	09...	--	--	374	.51	1340	200	86	1.6	653	7.5
MAY	17...	--	1.3	40	.37	1590	180	72	1.1	481	7.7
JUNE	16...	--	2.2	--	.42	1420	170	72	1.4	554	7.1
JULY	15...	--	2.1	--	1.17	765	250	170	5.8	1600	7.8
AUG.	17...	--	3.6	210	3.70	326	690	580	11	4240	7.0
20-23	.1	14	310	7090	9.64	4480	900	770	32	11800	7.6
SEP.	20...	.1	3.8	180	3.32	705	740	650	9.6	4320	6.6

DOLORES RIVER BASIN

09180000 DOLORES RIVER NEAR CISCO, UTAH--Continued

SPECIFIC CONDUCTANCE (MICROMHOS AT 25°C), WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2410	2850	2690	2980	3350	3250	419	---	470	610	1800	2150
2	2340	2760	---	---	3160	2900	437	767	500	730	1850	2100
3	---	2570	2840	2370	2860	3130	---	793	580	---	2000	2050
4	2090	2200	---	2490	2290	3640	504	814	485	975	2800	---
5	---	1680	2920	2940	2160	3500	532	773	---	---	5300	1950
6	1870	1750	3180	3020	---	---	613	620	565	1150	5000	---
7	1970	---	3170	3070	1960	3130	660	636	570	1250	---	---
8	2340	1770	3060	---	2190	3030	652	---	540	1300	3600	2400
9	2340	1970	---	2960	2600	2790	636	692	---	1350	3600	2600
10	---	2340	3200	2840	2780	2870	---	655	---	---	3500	---
11	2260	2890	---	2810	3030	3090	593	545	460	1450	3600	---
12	---	2880	---	3280	---	3030	581	469	---	1500	3800	2800
13	2530	---	3200	2810	2940	---	551	523	480	---	3800	2600
14	2990	2770	3140	2840	2900	2880	540	470	500	1600	---	2900
15	2850	3220	3230	2740	2940	2850	514	---	545	1650	4000	3000
16	2430	2960	3100	---	3080	2850	527	472	530	1650	---	3100
17	2510	2850	---	2320	---	---	616	465	495	---	4100	3300
18	---	---	---	2370	2660	2380	569	448	475	1700	4100	---
19	---	2960	---	2550	2530	2750	568	448	---	1650	4100	3900
20	2630	3320	2800	2500	---	---	577	455	430	1800	10500	3900
21	2700	3240	2560	2650	2290	3610	601	---	---	---	---	4100
22	2840	3180	2160	2600	---	3660	682	---	395	---	15500	4100
23	---	---	2420	---	2810	3760	719	603	---	---	10600	3500
24	2580	3410	2920	2580	3050	3120	---	605	395	1200	1300	---
25	2810	3440	---	---	3580	1350	844	603	405	1800	1300	3500
26	2810	3330	---	2520	---	1150	791	635	---	2050	1500	3700
27	2850	3170	---	2660	---	---	605	685	425	2350	1650	3700
28	---	---	3050	2960	2600	742	631	637	440	2250	---	3800
29	3110	---	3340	---	---	687	685	---	480	1500	2000	5000
30	---	2700	---	3160	---	487	710	509	485	---	---	5100
31	3050	---	---	3530	---	469	---	495	---	1600	2150	---
MONTH	---	2760	---	2780	---	3850	606	593	---	---	4140	---

TEMPERATURE (°C) OF WATER, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971
(ONCE-DAILY MEASUREMENT)

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	15.5	8.0	6.0	0.0	4.5	2.0	9.0	---	14.0	17.5	24.0	19.5
2	16.5	7.0	---	---	5.0	2.0	9.5	15.0	12.5	17.0	23.5	19.5
3	---	7.0	4.5	0.0	5.0	3.0	---	16.0	14.5	---	24.0	19.0
4	16.0	7.0	---	0.0	5.0	4.5	10.0	14.5	15.0	17.0	24.0	---
5	---	6.5	3.0	0.0	4.0	1.5	10.5	14.5	---	---	24.5	18.5
6	14.5	7.5	4.0	0.0	---	---	10.0	14.0	16.5	17.0	24.0	---
7	12.5	---	4.0	0.0	3.5	5.0	10.0	14.5	15.0	17.5	---	---
8	12.0	8.0	4.0	---	8.0	5.5	11.5	---	15.0	18.0	24.0	17.0
9	11.5	7.0	---	0.0	4.0	5.5	12.0	14.0	---	18.0	24.0	17.5
10	---	7.0	3.5	0.0	4.5	6.0	---	14.5	---	---	24.0	---
11	11.0	7.0	---	0.0	5.0	6.5	12.0	14.5	15.0	18.5	24.0	---
12	---	6.5	---	0.0	---	7.0	12.0	16.0	---	21.0	24.0	17.0
13	11.5	---	2.5	0.0	5.5	---	12.5	15.0	15.5	---	24.0	17.5
14	12.0	6.5	2.0	0.0	6.0	8.0	12.5	16.0	17.0	23.0	---	17.0
15	12.0	6.5	1.0	0.0	5.5	8.0	12.5	---	18.0	24.0	25.0	17.5
16	12.5	6.5	1.5	---	6.0	8.0	12.5	17.0	17.5	22.0	---	17.0
17	12.0	6.0	---	0.0	---	---	11.0	12.5	18.0	---	24.5	17.0
18	---	---	---	0.0	6.0	7.0	10.0	12.5	17.0	22.5	23.5	---
19	---	6.0	---	0.0	6.0	7.5	9.5	12.0	---	23.5	23.0	12.5
20	10.0	5.0	2.0	0.0	---	---	9.0	12.5	17.0	24.0	23.0	12.0
21	9.5	5.0	1.5	0.0	4.5	8.0	9.5	---	---	---	---	12.5
22	11.0	4.5	1.5	0.0	---	9.0	10.5	---	16.0	---	22.0	12.0
23	---	---	2.0	---	5.0	9.5	10.0	14.0	---	---	22.0	14.5
24	10.0	5.5	2.0	0.0	4.5	10.0	---	14.0	16.0	23.5	22.5	---
25	10.0	5.5	---	---	5.0	10.5	11.5	15.0	15.0	23.0	21.5	14.0
26	9.0	6.5	---	1.0	---	10.0	11.5	15.5	---	22.0	21.0	15.0
27	8.5	6.0	---	1.5	---	---	12.0	16.5	16.5	21.0	21.0	15.5
28	---	---	0.0	2.0	3.0	11.0	12.5	14.5	17.0	21.5	---	15.0
29	9.0	---	0.0	---	---	11.5	14.0	---	17.0	21.5	19.5	14.5
30	---	5.0	---	2.0	---	11.0	14.0	14.5	17.5	---	---	15.0
31	7.0	---	---	4.0	---	10.0	---	14.0	---	23.0	20.0	---
MONTH	---	6.5	---	0.5	---	7.0	11.0	14.5	---	---	23.0	---

COLORADO RIVER MAIN STEM

21

09180500 COLORADO RIVER NEAR CISCO, UTAH
(Irrigation network station)

LOCATION.--Lat 38°48'40", long 109°17'35", in NW $\frac{1}{4}$ NW $\frac{1}{4}$ sec.17, T.23 S., R.24 E., Grand County, at gaging station, 1 mile downstream from Dolores River, 11 miles south of Cisco, 36 miles downstream from Colorado-Utah State line, 97 miles upstream from Green River, and 235 miles upstream from San Juan River.

DRAINAGE AREA.--24,100 sq mi, approximately.

PERIOD OF RECORD.--Chemical analyses: August 1928 to September 1971.

Water temperatures: May 1949 to September 1959, October 1964 to September 1971.

Sediment records: May 1930 to September 1971.

EXTREMES.--1970-71:

Specific conductance: Maximum daily, 1,720 micromhos Aug. 22; minimum daily, 420 micromhos June 26, 27.

Water temperatures: Maximum, 22.0°C Aug. 15, 19; minimum, freezing point on many days during December and January.

Sediment concentrations: Maximum daily, 19,900 mg/l Aug. 25; minimum daily, 21 mg/l Dec. 15, 16.

Sediment loads: Maximum daily, 247,000 tons Aug. 29; minimum daily, 261 tons Dec. 15.

Period of record:

Specific conductance (1941-52, 1953-71): Maximum daily, 4,820 micromhos Dec. 13, 1957; minimum daily, 291 micromhos May 31, 1953.

Water temperatures (1949-52, 1953-59, 1964-71): Maximum, 29.0°C July 29, 1966; minimum, freezing point on many days during winter period each year.

Sediment concentrations: Maximum daily, 69,000 mg/l Oct. 27, 1951; minimum daily, 4 mg/l Aug. 22, 1960.

Sediment loads: Maximum daily, 2,790,000 tons Oct. 14, 1941; minimum daily, 14 tons Aug. 22, 1960.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DATE	TIME	TEMP- ERATURE (DEG C)	DIS- CHARGE (CFS)	DIS- SOLVED SILICA (SI02) (MG/L)	DIS- SOLVED CAL- CIUM (CA) (MG/L)	DIS- SOLVED MAG- NE- SIUM (MG)	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)
OCT.												
15...	1245	10.0	6420	12	81	37	126	7.1	186	0	317	110
NOV.												
19...	1400	4.0	5200	11	85	30	133	5.7	156	0	288	130
DEC.												
14...	1330	1.5	4560	12	83	31	130	5.7	163	0	250	145
JAN.												
19...	1400	.0	5460	12	76	24	110	2.7	156	0	220	110
FEB.												
16...	1200	3.5	6120	10	63	23	95	4.1	147	0	180	110
MAR.												
18...	1245	4.0	6410	--	59	21	91	4.1	143	0	160	99
APR.												
15...	1215	10.0	13300	--	48	13	36	4.3	135	0	92	39
MAY												
10...	1235	12.0	13000	--	67	24	67	5.2	238	0	160	53
JUNE												
10...	1330	16.0	18400	--	50	15	34	2.1	136	0	120	28
JULY												
09...	1320	21.0	9960	--	52	23	65	3.3	123	0	170	63
AUG.												
06...	1445	23.0	3940	--	120	38	120	5.5	169	0	350	130
SEP.												
13...	1345	22.0	5090	14	50	39	110	5.0	199	0	200	94

DATE	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 CONSTITUENTS) (MG/L)	DIS- SOLVED SOLIDS (TONS PER AC-FT)	DIS- SOLVED SOLIDS (TONS PER DAY)	HARD- NESS (CA+MG) (MG/L)	NON- CAR- BONATE HARD- NESS (MG/L)	SODIUM AD- SORP- TION RATIO	SPECI- FIC COND- UCTANCE (MICRO- MHOS)	PH (UNITS)
OCT.											
15...	.5	--	--	784	1.06	13600	354	50	2.9	1280	7.8
NOV.											
19...	.3	--	--	764	1.04	10700	336	208	3.2	1220	8.1
DEC.											
14...	.4	--	--	740	1.01	9110	330	196	3.1	1200	8.0
JAN.											
19...	.1	--	60	634	.86	9350	290	160	2.8	1040	7.3
FEB.											
16...	--	--	--	550	.75	9090	250	129	2.6	895	7.8
MAR.											
14...	--	--	--	510	.69	8830	230	110	2.6	818	7.7
APR.											
15...	--	1.4	--	305	.41	11000	170	63	1.2	--	--
MAY											
10...	--	.90	40	494	.67	17300	270	71	1.8	693	8.1
JUNE											
10...	--	.65	--	316	.43	15700	190	75	1.1	559	7.6
JULY											
09...	--	.55	--	437	.59	11800	220	120	1.9	738	6.7
AUG.											
06...	--	1.1	90	847	1.15	9010	460	320	2.4	1270	7.9
SEP.											
13...	.3	1.5	130	617	.84	8480	290	120	2.8	1340	8.0

COLORADO RIVER MAIN STEM

09180500 COLORADO RIVER NEAR CISCO, UTAH--Continued

SPECIFIC CONDUCTANCE (MICROMHOS AT 25°C), WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1160	1040	956	876	784	1080	611	---	485	460	1000	1250
2	1130	1020	---	---	763	720	652	642	520	520	1000	1250
3	---	1000	973	873	781	748	---	754	540	570	1050	1200
4	1120	1030	932	850	856	756	641	806	520	515	1100	---
5	---	1020	---	895	780	706	612	673	---	---	1150	1250
6	1170	1010	985	905	---	---	661	594	495	600	---	---
7	1160	1030	967	912	763	752	---	591	520	625	---	1200
8	1180	1030	994	---	784	694	683	---	520	650	1150	1200
9	1130	991	---	947	736	670	699	629	500	---	1100	1200
10	1140	1000	991	897	759	732	---	665	---	680	1100	---
11	1090	1000	---	955	759	751	624	691	500	680	1100	---
12	---	1040	---	911	861	711	575	681	---	720	1100	1150
13	1090	988	982	889	755	---	600	657	510	---	---	1200
14	1050	985	970	832	736	743	510	646	505	750	1200	1250
15	1080	973	979	836	---	711	477	---	505	760	1200	---
16	1020	966	982	838	745	718	455	587	495	780	---	1250
17	1040	961	---	832	---	---	---	562	435	---	1200	1250
18	---	---	---	826	772	672	448	533	450	860	1300	---
19	---	1000	974	863	793	649	482	512	435	920	1400	1300
20	1040	1000	991	856	---	---	487	530	435	880	1400	1300
21	1050	963	922	876	763	674	516	---	---	925	---	1300
22	1070	966	928	873	---	757	560	---	440	900	1720	1250
23	---	961	948	---	744	761	566	626	---	---	1500	1250
24	1050	956	906	893	747	835	---	598	425	1050	1400	---
25	1070	953	883	---	744	768	539	606	430	975	1700	1200
26	1050	961	---	862	784	748	623	622	420	950	1500	1250
27	1050	955	---	853	---	---	621	635	420	940	1400	1300
28	---	---	892	849	825	750	624	596	425	950	---	1250
29	1060	971	899	---	---	685	626	---	435	950	1400	1300
30	1050	946	889	814	---	589	632	463	455	---	---	1300
31	1050	---	---	845	---	612	---	474	---	1000	1300	---
MONTH	---	990	---	871	774	730	580	617	473	784	---	---

TEMPERATURE (°C) OF WATER, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971
(ONCE-DAILY MEASUREMENT)

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	15.0	7.5	6.0	0.0	4.0	1.0	8.5	---	12.0	15.0	20.0	19.5
2	16.0	7.0	---	---	5.0	1.0	8.5	14.0	12.5	14.5	20.0	19.5
3	---	7.5	4.0	0.0	5.0	2.5	---	15.0	14.0	15.0	21.5	18.0
4	15.5	7.5	3.0	0.0	4.5	4.0	9.0	14.0	14.0	15.0	21.0	---
5	---	7.0	---	0.0	4.0	4.0	9.5	14.0	---	---	21.5	18.0
6	14.0	7.0	4.0	0.0	---	---	9.5	14.0	16.0	15.0	---	---
7	14.0	6.5	3.5	0.0	3.0	4.5	---	14.0	14.5	15.0	---	16.0
8	12.5	7.5	4.0	---	3.0	5.0	10.5	---	14.0	16.5	21.5	17.0
9	12.0	7.5	---	0.0	3.5	5.0	11.5	14.0	14.5	---	21.0	17.0
10	10.0	7.5	3.5	0.0	3.5	5.0	---	12.5	---	17.5	21.0	---
11	10.5	7.0	---	0.0	4.0	6.0	11.0	14.0	14.5	17.5	20.5	---
12	---	6.5	---	0.0	5.0	6.0	11.0	14.5	---	18.5	21.0	17.0
13	10.0	6.0	3.0	0.0	5.0	---	11.5	15.5	14.5	---	---	17.0
14	11.5	7.0	3.0	0.0	5.0	7.0	11.5	17.0	15.0	20.0	20.5	17.0
15	11.5	6.0	2.0	0.0	---	7.0	12.0	---	15.5	21.0	22.0	---
16	12.0	6.0	1.5	0.0	5.5	7.0	11.5	16.5	17.0	21.0	---	17.0
17	11.5	6.0	---	0.0	---	---	---	12.5	16.0	---	21.0	17.0
18	---	---	---	0.0	5.5	6.0	10.0	12.5	17.0	21.0	21.5	---
19	---	6.0	1.5	0.0	6.0	6.0	8.0	11.0	15.0	21.0	22.0	12.0
20	10.0	5.0	2.0	0.0	---	---	8.0	11.5	15.0	20.5	20.0	11.0
21	9.0	5.0	2.0	2.0	4.5	6.5	8.5	---	---	20.0	---	11.5
22	10.0	4.0	1.5	2.0	---	8.0	9.5	---	14.0	19.0	21.0	11.5
23	---	5.0	2.5	---	4.0	8.5	9.0	12.5	---	---	21.5	14.0
24	10.0	5.5	2.0	2.0	4.5	9.5	---	12.5	14.0	20.0	21.0	---
25	9.5	5.5	1.0	---	4.5	9.5	10.0	14.0	14.0	19.0	21.0	12.0
26	9.0	6.5	---	2.0	3.0	9.0	10.0	14.5	15.0	20.0	21.5	14.0
27	8.0	6.5	---	3.0	---	---	11.0	15.0	15.0	19.0	21.0	14.5
28	---	---	1.0	3.0	3.0	9.0	11.0	14.5	15.5	19.5	---	14.0
29	8.5	5.0	0.0	---	---	10.0	12.0	---	15.0	19.5	21.0	14.0
30	7.0	5.0	0.0	2.0	---	10.0	12.0	15.0	---	---	---	12.5
31	6.0	---	---	4.0	---	9.5	---	12.0	---	18.5	19.5	---
MONTH	---	6.5	---	1.0	4.5	6.5	10.0	14.0	14.5	18.5	---	---

COLORADO RIVER MAIN STEM

23

09180500 COLORADO RIVER NEAR CISCO, UTAH--Continued

SUSPENDED-SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCTOBER			NOVEMBER			DECEMBER		
	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
1	5160	106	1480	6040	36	587	5690	74	1140
2	5030	84	1140	6010	29	471	5560	70	1050
3	5030	80	1090	6150	43	714	5400	59	860
4	4970	80	1070	5710	60	925	5210	45	633
5	4800	80	1040	5600	69	1040	5180	32	448
6	4720	74	943	5470	40	591	5070	32	438
7	4920	68	903	5830	58	913	5180	24	336
8	5740	153	2370	6060	133	2180	5070	25	342
9	6220	581	9760	6060	119	1950	5120	35	484
10	6150	443	7360	5670	90	1380	5380	40	581
11	6840	563	10400	5600	52	786	5490	36	534
12	6740	560	10200	5670	44	674	5250	32	454
13	6500	561	9850	5760	46	715	5120	27	373
14	6450	223	3880	5670	46	704	4820	24	312
15	6450	156	2720	5580	30	452	4610	21	261
16	6310	132	2250	5490	30	445	4840	21	274
17	6220	107	1800	5320	29	417	4990	36	485
18	6100	94	1550	5360	30	434	4990	35	472
19	6060	81	1330	5380	24	349	5320	34	488
20	5830	68	1070	5600	29	438	5210	33	464
21	5760	73	1140	5540	35	524	5030	28	380
22	5830	58	913	5470	37	546	5120	27	373
23	6010	100	1620	5510	29	431	5400	39	569
24	6150	191	3170	5490	28	415	5360	43	622
25	5990	107	1730	5510	29	431	5070	58	794
26	5940	74	1190	5670	45	689	4780	55	710
27	5970	62	999	5940	149	2390	4820	52	677
28	5870	50	792	5970	500	8060	5030	49	665
29	5760	41	638	5760	352	5470	5340	69	995
30	5690	38	584	5650	150	2290	5120	70	968
31	6200	66	1100	--	--	--	5230	70	988
TOTAL	181410	--	86082	170540	--	37411	159800	--	18170
DAY	JANUARY			FEBRUARY			MARCH		
	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
1	5290	69	986	6150	204	3390	5600	119	1800
2	5250	50	709	6260	199	3360	5670	90	1380
3	5360	50	724	5830	133	2090	5670	92	1410
4	5300	50	716	6040	233	3800	5760	95	1480
5	5000	50	675	5920	153	2450	5780	96	1500
6	4500	50	608	6080	114	1870	6010	96	1560
7	4000	50	540	5600	75	1130	5650	97	1480
8	3800	50	513	5620	79	1200	5780	73	1140
9	4500	50	608	5830	82	1290	5920	87	1390
10	5270	100	1420	5850	84	1330	5690	153	2350
11	5690	100	1540	5620	56	850	5900	119	1900
12	6040	200	3260	5210	82	1150	5470	86	1270
13	6520	200	3520	5900	109	1740	5670	90	1380
14	6220	200	3360	5850	105	1660	5560	95	1430
15	5920	200	3200	6040	84	1370	6100	268	4410
16	5540	200	2990	5990	82	1330	6060	265	4340
17	5360	250	3620	6100	96	1580	6740	200	3640
18	5510	326	4850	5920	119	1900	6550	189	3340
19	5490	278	4120	6080	135	2220	6430	152	2640
20	5740	274	4250	6170	138	2300	6290	100	1700
21	5870	217	3440	6220	140	2350	5380	59	857
22	5800	232	3630	6060	106	1730	5620	80	1210
23	5760	196	3050	5830	71	1120	5140	190	2640
24	5270	161	2290	5430	59	865	5740	220	3410
25	5320	143	2050	5510	217	3230	7220	1350	26300
26	5340	125	1800	6430	192	3330	8420	2040	46400
27	5400	115	1680	4340	167	1960	8340	2200	49500
28	5580	152	2290	3760	142	1440	11100	3200	95900
29	5710	149	2300	--	--	--	12100	3580	117000
30	5360	147	2130	--	--	--	10600	2170	62100
31	5670	184	2820	--	--	--	10100	2000	54500
TOTAL	167380	--	69689	161640	--	54035	208060	--	501357

09180500 COLORADO RIVER NEAR CISCO, UTAH--Continued

SUSPENDED-SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

APRIL				MAY			JUNE		
DAY	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
1	9780	1100	29000	8350	250	5640	18000	883	42900
2	9450	1070	27300	6950	218	4090	16000	661	28600
3	8540	900	20800	6720	259	4700	15600	694	29200
4	7320	593	11700	8160	500	11000	16100	661	28700
5	7900	401	8550	10200	756	20800	16900	668	30500
6	7420	450	9020	11100	866	26000	16800	674	30600
7	7320	450	8890	10800	744	21700	16400	566	25100
8	7590	450	9220	10200	650	17900	17000	650	29800
9	7640	450	9280	10600	620	17700	18300	637	31500
10	7830	450	9510	12700	2000	68600	18600	744	37400
11	8460	450	10300	12800	1340	46300	18800	537	27300
12	9740	676	17800	11900	1050	33700	18000	500	24300
13	8850	590	14100	12000	769	24900	17400	420	19700
14	11900	2260	72600	12100	762	24900	17300	525	24500
15	12600	1340	45600	12900	750	26100	17600	484	23000
16	12400	3460	116000	14000	800	30200	19100	718	37000
17	12500	2460	83000	15100	1300	53000	20300	833	45700
18	12900	1460	50900	16900	2200	100000	21300	834	48000
19	12300	1040	34500	16700	1500	67600	22800	1070	65900
20	12000	621	20100	14800	1000	40000	22700	764	46800
21	11200	527	15900	12700	600	20600	22500	721	43800
22	10300	725	20200	11300	500	15300	22300	678	40800
23	10500	573	16200	11500	538	16700	22200	600	36000
24	8870	500	12000	12300	567	18800	22000	597	35500
25	9420	500	12700	12000	429	13900	21400	448	25900
26	9840	472	12500	11300	387	11800	21900	560	33100
27	10200	494	13600	11500	437	13600	21200	483	27600
28	9830	364	9660	13200	868	30900	20500	439	24300
29	9180	495	12300	18100	1000	48900	19000	526	27000
30	8370	270	6100	18900	1300	66300	17300	722	33700
31	--	--	--	19400	1240	65000	--	--	--
TOTAL	292150	--	739330	387180	--	966630	575300	--	1004200
JULY				AUGUST			SEPTEMBER		
DAY	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
1	15700	459	19500	4790	175	2260	5080	5200	71300
2	14400	416	16200	4420	149	1780	4820	3300	42900
3	14200	361	13800	4350	121	1420	4570	888	11000
4	12900	297	10300	4230	121	1380	4620	1070	13300
5	12200	250	8240	3940	156	1660	5180	1250	17500
6	11500	250	7760	3870	110	1150	5290	900	12900
7	11000	272	8080	3900	150	1580	5120	581	8030
8	10700	272	7860	4210	177	2010	5100	1160	16000
9	10100	130	3550	4210	146	1660	5290	664	9480
10	9290	240	6020	4120	103	1150	5900	850	13500
11	9090	214	5250	4020	95	1030	5510	1030	15300
12	8650	226	5280	3560	91	875	5180	1220	17100
13	8320	220	4940	3320	85	762	4820	467	6080
14	7910	205	4380	3500	84	794	4590	304	3770
15	7480	199	4020	3800	115	1180	4440	250	3000
16	6850	180	3330	3210	110	953	4360	214	2520
17	6470	160	2800	2540	103	706	4240	183	2090
18	6130	150	2480	2630	85	604	4260	180	2070
19	6460	170	2970	2990	82	662	4570	162	2000
20	6800	760	14000	3180	1720	14800	4840	180	2350
21	7150	680	13100	3620	5280	51600	5070	192	2630
22	7610	960	19700	3870	7500	78400	4970	180	2420
23	7970	1300	28000	3670	4500	44600	4990	166	2240
24	7770	1000	21000	3710	7200	72100	4610	160	1990
25	7840	980	20700	3890	19900	209000	4400	152	1810
26	7230	476	9290	3960	10500	112000	4280	124	1430
27	6490	388	6800	4190	7400	83700	4160	134	1510
28	6020	270	4390	4740	9000	115000	4020	92	999
29	5460	260	3830	6390	14300	247000	4020	100	1090
30	5240	240	3400	5680	11800	181000	4080	103	1130
31	5020	206	2790	5480	11000	163000	--	--	--
TOTAL	269950	--	283760	123990	--	1395816	142380	--	289439
TOTAL DISCHARGE FOR YEAR (CFS-DAYS)				2839780					
TOTAL SUSPENDED-SEDIMENT DISCHARGE FOR YEAR (TONS)				5445919					

COLORADO RIVER MAIN STEM

25

09180500 COLORADO RIVER NEAR CISCO, UTAH--Continued

PARTICLE-SIZE DISTRIBUTION OF SUSPENDED SEDIMENT, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DATE	TIME	TEMP- ERATURE (DEG C)	DIS- CHARGE (CFS)	SUS- PEN- DED SEDI- MENT (MG/L)	SUS- PEN- DED SEDI- MENT DIS- CHARGE (T/DAY)	SUS. SED. FALL DIAM. % FINER THAN .002 MM	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	SUS. SED. FALL DIAM. % FINER THAN .500 MM
OCT. 15...	1240	10.0	6380	119	2050	41	53	--	100	--	--	--
JAN. 19...	1450	.0	5460	185	2730	18	22	34	84	95	100	--
MAR. 28...	0835	9.0	12000	3170	103000	29	34	47	84	96	100	--
APR. 15...	1130	10.0	13290	1040	37300	28	28	48	88	99	100	--
JUNE 10...	1245	16.0	18380	846	42000	23	25	38	61	79	97	100
AUG. 29...	1800	21.0	6620	14300	256000	--	53	83	99	100	--	--
SEP. 13...	1310	19.5	5090	424	5830	41	46	70	92	95	100	--

GREEN RIVER BASIN

09229500 HENRYS FORK AT LINWOOD, UTAH

LOCATION.--Lat 41°00'45", long 109°40'20", in NW¼NW¼ sec.23, T.12 N., R.109 W., Sweetwater County, Wyoming, at gaging station, 0.8 mile north of Wyoming-Utah State line, 1.3 miles upstream from normal high-water line of Flaming Gorge Reservoir, 1.5 miles northwest of former townsite of Linwood, and 3 miles northeast of Manila, Utah.

DRAINAGE AREA.--520 sq mi.

PERIOD OF RECORD.--Chemical analyses: March 1951 to September 1971.

Water temperatures: March 1951 to September 1971.

EXTREMES.--1970-71:

Specific conductance: Maximum daily, 1,810 micromhos Sept. 6; minimum daily, 387 micromhos June 23.

Water temperatures: Maximum, 25.5°C July 14, 16, Aug. 21; minimum, freezing point on several days during winter period.

Period of record:

Specific conductance: Maximum daily, 3,750 micromhos Oct. 15, 1961; minimum daily, 385 micromhos

June 16, 1968.

Water temperatures: Maximum, 29.0°C July 29, 1968; minimum, freezing point on many days during winter period each year.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DATE	TIME	TEMP- ERATURE (DEG C)	DIS- CHARGE (CFS)	DIS- SOLVED SILICA (SiO ₂) (MG/L)	DIS- SOLVED CAL- CIUM (CA) (MG/L)	DIS- SOLVED MAG- NE- SIUM (MG)	DIS- SOLVED SODIUM (NA) (MG/L)	DIS- SOLVED PO- TAS- SIUM (K) (MG/L)	BICAR- BONATE (HCO ₃) (MG/L)	CAR- BONATE (CO ₃) (MG/L)	DIS- SOLVED SULFATE (SO ₄) (MG/L)	DIS- SOLVED CHLO- RIDE (CL) (MG/L)
OCT.												
08...	1745	7.0	64	24	160	82	60	11	286	0	610	21
NOV.												
05...	1030	2.0	78	20	160	80	52	8.1	285	0	580	22
DEC.												
02...	1215	.5	74	19	140	70	50	7.4	276	0	500	19
JAN.												
11...	1645	.0	32	16	130	57	40	6.1	264	0	410	16
FEB.												
03...	1130	.0	58	16	120	49	41	7.0	253	0	360	15
MAR.												
06...	1030	.5	32	18	69	100	44	6.7	259	0	440	29
APR.												
07...	1120	6.5	70	17	110	52	44	6.9	247	0	320	18
MAY												
07...	1400	10.5	143	16	95	40	35	6.3	226	0	270	16
JUNE												
03...	1115	13.0	257	17	75	29	22	5.6	189	0	180	7.8
JULY												
09...	1330	10.5	120	22	110	43	31	7.0	270	0	290	10
AUG.												
07...	1600	25.0	30	23	120	61	48	8.9	260	0	420	16
SEP.												
02...	1215	19.0	4.3	27	190	89	74	11	332	0	690	26

DATE	DIS- SOLVED FLUO- RIDE (F) (MG/L)	DIS- SOLVED NITRATE PLUS NITRITE (N) (MG/L)	DIS- SOLVED BORON (B) (UG/L)	DIS- SOLVED SOLIDS (SUM OF CONSTITUENTS) (MG/L)	DIS- SOLVED SOLIDS (TONS PER AC-FT)	DIS- SOLVED SOLIDS (TONS PER DAY)	HARD- NESS (CA+MG) (MG/L)	NON- CAR- BONATE HARD- NESS (MG/L)	SODIUM AD- SORP- TION RATIO	SPECI- FIC COND- UCTANCE (MICRO- MHOS)	PH (UNITS)
OCT.											
04...	.5	--	260	1100	1.66	211	740	505	1.0	1500	8.2
NOV.											
05...	.5	--	140	1060	1.52	236	730	496	.8	1420	7.9
DEC.											
02...	.4	--	160	948	1.29	189	640	414	.9	1290	8.1
JAN.											
11...	.4	--	160	808	1.15	73.1	560	343	.7	1130	8.0
FEB.											
03...	.4	--	150	729	1.00	115	490	282	.8	1010	8.2
MAR.											
06...	.6	--	140	836	1.18	74.8	590	378	.8	1100	8.0
APR.											
07...	.5	--	130	691	.94	131	480	277	.9	946	8.0
MAY											
07...	.5	--	130	592	.81	229	400	215	.8	790	8.3
JUNE											
03...	.4	--	90	434	.62	315	300	145	.5	627	8.2
JULY											
09...	.0	.02	150	646	.88	209	450	230	.6	941	8.0
AUG.											
07...	.3	.06	230	826	1.12	66.9	550	340	.9	1110	7.5
SEP.											
02...	1.0	.19	340	1270	1.73	14.7	840	570	1.1	1670	7.9

GREEN RIVER BASIN

27

09229500 HENRYS FORK AT LINWOOD, UTAH--Continued

SPECIFIC CONDUCTANCE (MICROMHOS AT 25°C), WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1560	1200	766	1160	909	1280	814	931	638	698	1150	1610
2	1540	1180	1150	1180	913	1260	919	875	---	730	1200	1610
3	1550	1340	1100	1140	1040	1180	947	875	674	742	1210	1690
4	1590	1340	1130	1120	1150	1150	906	806	675	752	1210	1700
5	1530	1310	1180	1150	1270	1090	994	822	704	756	1180	1720
6	1540	1200	965	1150	1180	1080	1070	817	690	758	1170	1810
7	1580	1190	960	1150	1350	1120	968	890	670	873	1210	1330
8	1510	1230	878	1160	1240	1120	980	903	606	818	1220	1340
9	1500	1170	1110	1130	1240	1100	877	905	531	918	1180	1450
10	1460	1180	1080	1130	1080	1100	955	985	497	978	1180	1430
11	1520	1160	1200	1130	1170	1100	832	898	510	978	---	1400
12	1380	1360	1270	1120	937	1110	890	841	504	1050	1140	1400
13	1300	1220	1300	1110	1000	979	869	842	524	1050	1280	1440
14	1300	1300	1300	1100	907	924	892	843	505	1090	1250	1440
15	1460	1290	1370	1110	929	919	868	768	506	1100	1290	1470
16	1650	1340	1370	1120	931	906	852	729	518	1130	1320	1510
17	1350	1340	1300	1380	1080	1060	855	715	471	1120	1340	1510
18	1430	1200	1300	1060	1090	965	815	764	449	1060	1340	1490
19	1350	1200	1310	759	1130	1020	715	809	414	821	1540	1490
20	1360	1250	1370	832	1100	979	941	868	410	840	1540	1380
21	1320	1310	1380	844	1140	---	1060	898	471	712	1580	1380
22	1360	1310	1370	1150	1210	1020	1130	922	402	900	1570	1380
23	1370	1210	1270	1160	1210	1040	1010	872	387	897	1570	1380
24	1350	1200	1220	1170	1210	826	1020	905	390	905	1580	1480
25	1350	1030	1230	1370	1120	618	889	905	521	904	1570	1470
26	1360	1030	---	1030	1110	713	956	800	467	968	1600	1470
27	1220	1260	---	1000	1280	792	954	665	514	1020	1610	1530
28	1210	1270	1240	1000	1280	631	986	516	600	1060	1620	1530
29	1210	1310	1230	898	---	759	994	642	600	1340	1590	1530
30	1210	1310	1190	898	---	827	975	645	661	1140	1610	1530
31	1230	---	1230	899	---	806	---	580	---	1140	1620	---
MONTH	1410	1240	1200	1080	1110	982	931	814	535	943	1380	1500

TEMPERATURE (°C) OF WATER, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971
(ONCE-DAILY MEASUREMENT)

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	14.0	5.0	2.0	3.0	5.5	2.0	5.5	16.0	12.5	19.0	22.5	19.0
2	12.0	4.0	2.0	3.0	2.0	3.0	8.5	17.0	---	19.5	22.0	19.0
3	14.0	4.0	1.0	3.5	0.0	3.5	8.0	18.5	15.0	19.5	22.0	14.0
4	14.0	3.5	0.0	2.0	2.0	1.0	10.0	14.0	13.0	19.5	22.0	16.5
5	13.0	6.0	1.0	2.0	0.0	1.0	11.0	9.0	15.0	19.5	22.0	19.5
6	7.0	6.0	1.0	2.0	0.0	1.0	11.0	14.0	15.5	21.0	22.5	14.5
7	6.0	4.0	1.0	2.0	0.0	2.5	11.0	13.0	18.5	18.0	22.0	15.0
8	7.5	5.0	1.5	2.0	0.0	3.0	11.5	9.0	14.0	18.0	21.0	18.5
9	7.0	5.0	2.0	2.5	2.5	3.0	11.5	12.0	17.0	20.0	22.0	19.0
10	4.5	5.0	0.0	2.5	3.5	3.0	11.0	12.5	14.5	20.0	23.5	21.0
11	4.5	3.0	1.0	3.0	3.5	3.5	8.0	19.0	13.0	20.0	---	21.0
12	8.0	3.0	---	3.5	3.0	3.5	8.0	7.0	15.0	22.5	20.0	24.0
13	7.0	2.5	2.5	3.0	3.0	1.0	12.0	13.0	16.5	23.0	24.0	18.0
14	6.5	2.5	2.0	2.0	3.0	1.5	12.5	18.5	15.0	25.5	24.0	20.0
15	7.0	3.0	2.0	3.0	3.0	1.0	13.5	18.0	14.0	25.0	25.0	13.0
16	8.0	2.5	2.0	3.5	3.5	1.0	12.0	10.0	17.0	25.5	24.0	8.0
17	7.0	3.0	2.0	3.0	3.5	0.0	10.5	9.0	17.5	22.5	25.0	8.5
18	7.0	3.0	2.0	8.0	2.0	0.0	11.5	9.5	16.0	20.5	25.0	9.5
19	7.5	2.0	2.0	3.0	2.0	2.0	3.5	10.5	18.0	19.5	25.0	10.0
20	7.0	2.0	1.0	3.0	2.0	4.5	6.0	11.0	17.0	20.0	25.0	12.0
21	7.0	2.0	1.0	3.0	2.0	---	11.5	11.0	16.0	21.0	25.5	12.0
22	6.0	2.0	1.0	2.5	2.5	5.5	10.5	14.5	18.0	21.0	25.0	12.0
23	6.0	2.0	0.0	3.5	2.0	4.0	11.0	14.0	19.0	21.0	25.0	14.0
24	5.0	2.0	0.0	3.0	3.0	6.0	11.0	15.0	19.5	22.0	25.0	14.0
25	5.0	6.0	3.0	3.0	2.5	7.0	11.0	17.0	19.0	22.0	19.0	14.0
26	3.0	2.0	3.0	4.0	2.0	7.5	10.5	19.5	19.0	23.0	20.0	14.0
27	5.0	2.0	4.0	4.0	2.0	10.0	10.0	18.5	18.0	22.0	22.0	14.5
28	6.0	2.0	4.0	3.0	2.0	7.5	7.0	16.0	18.0	22.0	19.0	15.0
29	6.0	2.0	3.5	5.0	---	6.0	12.5	15.5	17.5	22.0	22.0	14.0
30	6.0	2.0	2.5	5.0	---	10.0	13.5	12.0	15.5	22.5	24.0	13.0
31	6.0	---	3.0	5.5	---	12.5	---	13.5	---	22.5	24.5	---
MONTH	7.5	3.5	2.0	3.5	2.0	4.0	10.0	14.0	16.5	21.5	23.0	15.0

GREEN RIVER BASIN

09234500 GREEN RIVER NEAR GREENDALE, UTAH
(Irrigation network station)

LOCATION.--Lat 40°54'30", long 109°25'20", NW¼SE¼ sec.15, T.2 N., R.22 E., Daggett County, at gaging station, 0.5 mile downstream from Flaming Gorge Dam, 2 miles south of Dutch John, and 4 miles northeast of Greendale.

DRAINAGE AREA.--15,100 sq mi, approximately.

PERIOD OF RECORD.--Chemical analyses: October 1956 to September 1971.

Water temperatures: October 1956 to September 1959, October 1963 to September 1971.

Sediment records: October 1956 to September 1959.

EXTREMES.--1970-71:

Specific conductance: Maximum daily, 782 micromhos Oct. 1; minimum daily, 667 micromhos Dec. 7, 17, Jan. 6.
Water temperatures: Maximum, 9.0°C on many days during October to December, and September; minimum, 3.5°C on several days during February and March.

Period of record (See REMARKS below):

Specific conductance (1956-58, 1959-62): Maximum daily, 1,340 micromhos Aug. 30, 1961; minimum daily, 325 micromhos June 2, 1961.

Specific conductance (1964-71): Maximum daily, 962 micromhos Aug. 30, 1965; minimum daily, 606 micromhos Nov. 14, 22, 1963, Feb. 10-19, 1964.

Water temperatures (1956-59): Maximum, 24.0°C Jan. 24, 25, 1959; minimum, freezing point on many days during winter period each year.

Water temperatures (1964-71): Maximum, 14.0°C Nov. 11, 1963; minimum, 2.0°C on several days in 1964.

REMARKS.--Storage in Flaming Gorge Reservoir began on Nov. 1, 1962. Extremes are given above for two separate periods--1956-62, and 1964-71. Extremes for the 1963 water year (October 1962 to September 1963) are not included.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DATE	TIME	TEMP- ERATURE (DEG C)	DIS- CHARGE (CFS)	DIS- SOLVED SILICA (SI02) (MG/L)	DIS- SOLVED CAL- CIUM (CA) (MG/L)	DIS- SOLVED MAG- NESIUM (MG)	DIS- SOLVED SODIUM (NA) (MG/L)	DIS- SOLVED P04- PHOSPHORUS (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)
OCT.												
06...	1100	8.5	782	19	61	28	66	2.8	181	0	231	20
NOV.												
03...	1205	8.5	814	6.0	62	24	70	3.1	181	0	210	20
DEC.												
11...	0920	6.0	2500	6.0	60	23	60	2.5	173	0	190	18
JAN.												
11...	1100	4.0	1110	5.8	57	23	57	2.7	168	0	180	18
FEB.												
17...	1300	4.0	846	4.9	61	23	61	2.6	172	0	190	20
MAR.												
19...	1100	3.0	3970	--	59	24	61	3.0	179	0	220	18
APR.												
27...	1100	4.0	879	--	59	28	66	4.5	178	0	220	21
MAY												
21...	1000	5.0	1210	--	65	26	65	2.8	185	0	240	19
JUNE												
14...	0800	5.0	1170	--	62	25	61	2.5	181	0	230	17
JULY												
12...	0930	5.0	2110	--	62	25	63	2.7	188	0	210	19
AUG.												
09...	0930	6.0	2200	--	66	26	64	2.8	192	0	210	21
SEP.												
07...	1030	7.0	2000	6.1	65	23	66	3.1	200	0	220	20

DATE	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 CONSTITUENTS) (MG/L)	DIS- SOLVED SOLIDS (TONS PER AC-FT)	DIS- SOLVED SOLIDS (TONS PER DAY)	HAPO- LESS (CA+MG) (MG/L)	NON- CAR- BONATE HARD- NESS (MG/L)	SODIUM AD- SORP- TION RATIO	SPECI- FIC COND- UCTANCE (MICRO- MHOS)	PH (UNITS)
OCT.											
06...	.5	--	--	521	.71	1100	268	120	1.7	760	8.0
NOV.											
03...	.3	--	--	486	.66	1070	253	105	1.9	785	8.1
DEC.											
11...	.3	--	--	450	.61	3040	240	98	1.7	702	8.2
JAN.											
11...	.4	--	--	430	.58	1290	240	102	1.6	692	8.0
FEB.											
17...	--	.20	--	450	.61	1030	250	109	1.7	706	8.0
MAR.											
19...	--	.50	--	476	.65	5100	250	99	1.7	711	7.7
APR.											
27...	--	.50	--	488	.66	1160	260	120	1.8	767	8.1
MAY											
21...	--	.47	70	510	.69	1670	270	120	1.7	735	8.0
JUNE											
14...	--	.55	--	487	.66	1540	260	110	1.7	777	8.0
JULY											
12...	--	.49	--	475	.65	2710	260	100	1.7	730	7.8
AUG.											
09...	--	.54	100	485	.66	2880	270	110	1.7	799	7.7
SEP.											
07...	.2	.51	140	504	.69	2720	260	93	1.8	779	7.8

SPECIFIC CONDUCTANCE (MICROMHOS AT 25°C), WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

[illegible][illegible]

GREEN RIVER BASIN

09261000 GREEN RIVER NEAR JENSEN, UTAH

LOCATION.--Lat 40°24'34", long 109°14'05" in SW $\frac{1}{4}$ SE $\frac{1}{4}$ sec.5, T.5 S., R.24 E., Uintah County, at gaging station 300 ft upstream from highway bridge, 1 mile downstream from Cub Creek and Chew Ranch, 4 miles southeast of Dinosaur National Monument headquarters, 6.5 miles northeast of Jensen, 12 miles upstream from Brush Creek, and 313.9 miles from mouth.

DRAINAGE AREA.--25,400 sq mi, approximately.

PERIOD OF RECORD.--Chemical analyses: June 1947 to September 1952, April 1962 to September 1971.

Water temperatures: March 1949 to September 1959, October 1961 to September 1971.

Sediment records: May 1948 to September 1971.

EXTREMES.--1970-71:

Specific conductance: Maximum daily, 740 micromhos Sept. 13, 14; minimum daily, 200 micromhos June 22, 24.

Water temperatures: Maximum, 21.0°C July 28; minimum, freezing point Dec. 23, 28, Mar. 1, 3.

Sediment concentrations: Maximum daily, 8,300 mg/l Mar. 28; minimum daily, 17 mg/l Aug. 2, 27.

Sediment loads: Maximum daily, 172,000 tons Mar. 28; minimum daily, 101 tons Dec. 16.

Period of record:

Specific conductance (1947-52, 1962-71): Maximum daily, 2,330 micromhos Sept. 10, 1963; minimum daily, 176 micromhos May 24, 1963.

Water temperatures: Maximum, 30.0°C July 11, 1958; minimum (1949-59, 1961-64, 1965-71), freezing point on many days during winter period each year.

Sediment concentrations: Maximum daily, 40,600 mg/l Aug. 23, 1960; minimum daily, 9 mg/l Oct. 7-11, 1953, Nov. 22, 1962.

Sediment loads: Maximum daily, 2,500,000 tons Mar. 29, 1962; minimum daily, 10 tons on many days in 1962-63.

REMARKS.--Chemical-quality samples and temperature data collected at site 8 miles downstream from gaging station.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DATE	TIME	TEMP- ERATURE (DEG C)	DIS- CHARGE (CFS)	DIS- SOLVED SILICA (SI02) (MG/L)	DIS- SOLVED CAL- CIUM (CA) (MG/L)	DIS- SOLVED MAG- NESIUM (MG)	DIS- SOLVED SODIUM (NA) (MG/L)	DIS- SOLVED POT- ASS- 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)
OCT.												
09...	1130	6.0	1570	4.5	58	23	63	3.8	182	0	172	26
NOV.												
18...	1155	3.0	2040	7.0	59	24	62	2.5	159	12	173	22
DEC.												
09...	1150	3.0	1740	7.0	63	24	61	2.8	193	15	170	25
JAN.												
14...	1045	.0	2300	9.0	58	22	55	2.6	188	0	180	26
FEB.												
22...	1330	.5	1430	8.4	53	21	65	3.1	182	0	160	30
MAR.												
30...	1200	8.5	5640	--	38	13	43	3.7	146	0	120	10
APR.												
20...	1200	6.0	9770	--	33	11	21	4.0	116	0	56	9.0
MAY												
11...	1230	10.0	10700	--	31	9.9	19	3.3	104	0	54	11
JUNE												
03...	1230	13.0	14000	--	25	7.2	27	1.5	107	0	58	6.6
JULY												
01...	1300	18.5	8460	--	22	7.7	16	1.2	93	0	48	5.8
AUG.												
06...	1300	6.0	2270	--	61	23	62	2.8	169	0	190	23
SEP.												
01...	1130	18.0	2060	5.2	63	25	64	3.0	180	0	210	26

DATE	DIS- SOLVED FLUO- RIDE (F) (MG/L)	DIS- SOLVED NITRIF- PLUS NITRATE (N) (MG/L)	DIS- SOLVED BORON (B) (UG/L)	DIS- SOLVED SOLIDS (SUM OF CONSTIT- 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)
OCT.											
09...	.2	--	--	440	.62	1870	239	90	1.8	707	7.7
NOV.											
18...	.3	--	--	440	.60	2420	246	96	1.7	682	8.3
DEC.											
09...	.6	--	--	463	.63	2180	260	77	1.7	700	8.3
JAN.											
14...	.5	.70	80	440	.60	2730	230	76	1.6	676	7.6
FEB.											
22...	--	.10	--	430	.58	1660	220	71	1.9	663	8.0
MAR.											
30...	--	.40	--	301	.41	4580	150	29	1.5	487	7.5
APR.											
20...	--	.50	--	194	.26	5120	130	33	.8	321	7.5
MAY											
11...	--	.30	--	181	.25	5230	120	30	.8	325	7.6
JUNE											
03...	--	.25	30	179	.24	6770	92	4	1.2	301	8.1
JULY											
01...	--	.06	--	147	.20	3360	87	10	.7	242	8.0
AUG.											
06...	--	--	--	445	.61	2730	250	110	1.7	649	8.1
SEP.											
01...	.8	.32	150	487	.66	2710	260	110	1.7	769	7.9

GREEN RIVER BASIN

31

09261000 GREEN RIVER NEAR JENSEN, UTAH--Continued

SPECIFIC CONDUCTANCE (MICROMHOS AT 25°C), WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	721	---	656	---	---	695	574	363	410	250	---	710
2	725	654	670	---	586	724	553	---	310	260	625	730
3	733	659	694	---	613	731	571	---	300	260	650	720
4	---	657	648	---	616	726	---	295	270	---	660	720
5	682	664	649	---	613	698	567	293	270	---	675	---
6	691	662	---	---	613	700	569	278	---	320	660	---
7	685	667	689	---	---	---	614	255	255	325	675	720
8	687	---	699	---	667	696	625	260	255	350	---	720
9	713	675	---	---	697	---	625	---	240	355	670	720
10	690	676	688	---	665	---	626	287	240	380	690	720
11	---	---	---	---	670	---	---	311	235	---	680	720
12	665	657	673	---	---	---	478	396	240	390	700	---
13	702	653	---	---	---	---	440	353	---	420	690	740
14	656	665	674	---	---	---	405	---	230	440	700	740
15	649	---	682	---	667	625	389	---	230	480	---	730
16	704	655	698	---	662	644	363	---	225	---	---	730
17	---	645	694	---	653	640	375	247	225	---	---	720
18	---	672	---	---	674	654	---	243	---	---	---	730
19	---	682	---	---	638	640	303	246	---	520	---	---
20	---	---	---	---	650	648	321	263	---	560	---	730
21	---	---	702	---	---	---	309	286	210	580	---	720
22	638	---	686	---	664	670	326	285	200	590	---	720
23	667	656	684	---	707	633	349	---	205	580	710	720
24	653	677	711	---	710	640	---	309	200	595	725	---
25	---	670	---	---	715	661	---	331	---	---	725	---
26	639	693	---	---	---	576	387	359	---	560	725	---
27	638	---	---	---	---	577	387	382	---	580	720	720
28	647	---	702	---	---	---	379	308	215	570	720	720
29	642	---	700	---	---	513	381	317	240	615	---	720
30	642	650	---	---	---	498	364	---	240	610	720	710
31	644	---	689	---	---	523	---	---	---	625	725	---
MONTH	---	---	---	---	---	---	451	---	---	---	---	---

TEMPERATURE (°C) OF WATER, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971
(ONCE-DAILY MEASUREMENT)

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	14.0	---	5.0	---	---	0.0	6.5	12.0	13.0	18.5	---	15.5
2	12.0	4.5	3.5	---	1.0	1.0	5.0	---	12.0	18.5	18.0	14.5
3	14.0	5.0	4.0	---	1.0	0.0	6.0	---	13.5	19.0	18.5	13.0
4	---	4.0	2.0	---	1.0	3.5	---	11.5	14.5	---	17.0	14.5
5	13.5	5.0	3.0	---	1.5	1.0	7.5	11.5	14.5	---	19.5	---
6	13.5	5.0	---	---	1.5	2.5	9.0	12.0	---	18.5	18.0	---
7	8.5	5.5	3.0	---	---	---	8.5	11.5	15.0	19.0	19.0	12.5
8	10.0	---	4.0	---	1.5	2.0	10.5	12.0	15.5	19.0	---	11.5
9	8.0	5.0	---	---	1.0	---	10.5	---	15.5	20.0	18.0	12.5
10	8.5	6.5	4.0	---	1.5	---	11.0	10.5	16.0	20.0	19.0	12.0
11	---	---	---	---	1.5	---	---	11.5	15.0	---	17.0	14.0
12	8.0	5.0	4.0	---	---	---	11.0	12.5	15.5	20.5	17.5	---
13	9.0	5.0	---	---	---	---	11.0	15.0	---	20.0	16.0	14.5
14	8.5	5.0	1.0	---	---	---	9.5	---	16.5	20.0	17.0	15.5
15	9.5	---	2.0	---	4.0	3.0	11.0	---	18.0	20.5	---	13.5
16	8.5	3.5	1.0	---	4.0	4.0	11.0	---	17.0	---	---	13.5
17	---	4.0	2.5	---	3.0	2.0	11.5	10.0	18.0	---	---	9.0
18	---	3.5	---	---	3.0	3.5	---	10.0	---	---	---	9.0
19	---	4.5	---	---	2.5	2.0	7.0	10.0	---	18.0	---	---
20	---	---	---	---	3.0	4.0	8.0	10.5	---	18.5	---	9.0
21	---	---	1.0	---	---	---	7.5	11.5	18.0	17.0	---	9.5
22	8.5	---	1.0	---	1.0	5.5	9.0	12.0	20.0	18.0	---	9.0
23	8.0	5.0	0.0	---	2.0	6.0	9.0	---	19.5	18.0	17.0	9.5
24	9.0	6.5	1.0	---	2.0	5.0	---	13.0	20.0	18.5	14.0	---
25	---	6.5	---	---	1.5	6.0	---	14.0	---	---	13.0	---
26	6.0	6.5	---	---	---	7.0	10.5	14.0	---	19.5	16.5	---
27	6.5	---	---	---	---	7.5	10.5	14.5	---	20.5	15.5	10.0
28	4.5	---	0.0	---	---	---	10.0	15.5	20.0	21.0	17.0	9.0
29	5.5	---	1.0	---	---	8.0	10.5	16.0	19.0	20.5	---	9.0
30	5.0	4.5	---	---	---	8.0	11.5	---	18.5	19.0	13.0	10.0
31	---	---	1.0	---	---	5.5	---	---	---	19.5	16.0	---
MONTH	---	---	---	---	---	---	9.5	---	---	---	---	---

GREEN RIVER BASIN

09261000 GREEN RIVER NEAR JENSEN, UTAH--Continued

SUSPENDED-SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCTOBER			NOVEMBER			DECEMBER		
	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
1	3160	25	213	1630	65	286	2010	70	380
2	2360	23	147	1610	64	278	2180	75	441
3	2330	25	157	1610	56	243	2150	60	348
4	1980	25	134	1610	47	204	1900	46	236
5	1550	26	109	1600	44	190	1750	39	184
6	1470	85	337	1560	40	168	1660	32	143
7	1540	143	595	1560	40	168	1670	26	117
8	1580	500	2130	1580	40	171	1730	30	140
9	1580	651	2780	1570	38	161	1800	34	165
10	1870	537	2710	1810	37	181	2010	38	206
11	2370	423	2710	1850	36	180	1950	42	221
12	2030	309	1690	1890	35	179	2050	46	255
13	1940	280	1470	1910	34	175	1890	50	255
14	2450	252	1670	1910	35	180	1610	50	217
15	2360	232	1480	1860	35	176	1490	40	161
16	2140	212	1220	1890	35	179	1630	23	101
17	1980	190	1020	1890	38	194	2060	24	133
18	2060	170	946	1910	42	217	2490	24	161
19	1960	150	794	1880	40	203	1970	25	133
20	1800	130	632	2330	40	252	1970	25	133
21	1870	110	555	2430	35	230	1850	25	125
22	1710	90	416	2030	30	164	1850	26	130
23	1810	73	357	1800	31	151	2280	26	160
24	1700	71	326	1970	33	176	2280	30	185
25	1760	68	323	2240	35	212	2320	40	251
26	1770	65	311	2130	42	242	2050	42	232
27	1770	60	287	2000	49	265	1640	42	186
28	1890	55	281	2030	56	307	1720	44	204
29	1910	67	346	2150	63	366	1740	45	211
30	1730	79	369	2100	69	391	2620	45	318
31	1680	65	295	--	--	--	2230	45	271
TOTAL	60110	--	26810	56340	--	6489	60550	--	6403

DAY	JANUARY			FEBRUARY			MARCH		
	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
1	2390	45	290	2050	300	1660	1520	51	209
2	2060	45	250	1840	300	1490	1430	66	255
3	1650	45	200	2030	323	1770	1650	82	365
4	3000	45	365	2040	330	1820	1650	78	347
5	2700	45	328	1980	339	1810	1550	73	306
6	2600	45	316	1870	279	1410	1330	67	241
7	2550	45	310	1720	219	1020	1390	61	229
8	2600	45	316	1570	160	678	1540	56	233
9	2700	45	328	1780	130	625	1430	100	386
10	2500	45	304	2370	99	634	1420	200	767
11	2400	45	292	1720	112	520	1470	200	794
12	2350	45	286	1670	125	564	1570	250	1060
13	2600	45	316	1710	138	637	1700	500	2300
14	2300	45	279	1700	151	693	1890	500	2550
15	2300	45	279	1730	167	780	1720	657	3050
16	2500	45	304	1800	180	875	1690	500	2280
17	2200	45	267	1810	193	943	1880	425	2160
18	2500	45	304	1900	278	1430	1870	400	2020
19	2700	45	328	2010	362	1960	1530	513	2120
20	2600	45	316	1940	327	1710	2000	2600	14000
21	2710	45	329	1760	292	1390	1920	2100	10900
22	2780	45	338	1480	256	1020	1830	680	3360
23	2720	50	367	1650	170	757	2540	3300	22600
24	2400	75	486	1620	84	367	3480	3230	30300
25	2910	250	1960	1600	79	341	3130	2900	24500
26	2430	200	1310	1420	75	288	4480	4750	57500
27	2750	220	1630	1160	70	219	5080	5700	78200
28	2500	240	1620	2180	65	383	7680	8300	172000
29	2420	260	1700	--	--	--	7410	5500	110000
30	2130	280	1610	--	--	--	5430	4300	63000
31	2200	300	1780	--	--	--	5230	3850	54400
TOTAL	77150	--	19108	50110	--	27794	80440	--	662432

09261000 GREEN RIVER NEAR JENSEN, UTAH--Continued

SUSPENDED-SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	APRIL			MAY			JUNE		
	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
1	5930	2800	44800	6340	400	6850	19900	2100	113000
2	5570	1850	27800	5940	400	6420	17200	1600	74300
3	4830	1450	18900	6740	500	9100	14300	1980	76400
4	4400	1050	12500	8530	1000	23000	12600	922	31400
5	3900	646	6800	10700	1380	39900	12100	790	25800
6	3870	554	5790	11800	1200	38200	12300	658	21900
7	4090	461	5090	10500	1090	30900	11600	526	16500
8	4670	470	5930	9570	1000	25800	11300	496	15100
9	4870	478	6290	9810	800	21200	11200	467	14100
10	5560	750	11300	10500	700	19800	11700	633	20000
11	5950	1000	16100	10900	1420	41800	12100	799	26100
12	7160	1550	30000	10100	1450	39500	12700	666	22800
13	8780	1700	40300	9250	1000	25000	12500	533	18000
14	9220	1600	39800	10200	1100	30300	12200	400	13200
15	9430	1700	43300	11900	1200	38600	12600	480	16300
16	8900	1430	34400	13100	1300	46000	13200	561	20000
17	10300	1900	52800	14200	1340	51400	14000	560	21200
18	11000	1900	56400	14800	1300	51900	14400	560	21800
19	10400	1550	43500	14400	947	36800	14700	560	22200
20	9740	900	23700	12500	900	30400	15000	560	22700
21	9110	777	19100	10500	604	17100	14600	569	22400
22	8120	1290	28300	9140	600	14800	14300	484	18700
23	7630	697	14400	8260	500	11200	14200	398	15300
24	7960	662	14200	8760	500	11800	13500	392	14300
25	7180	627	12200	10000	479	12900	13300	386	13900
26	6840	591	10900	9420	336	8550	12700	380	13000
27	7220	544	10600	9260	340	8500	12100	374	12200
28	8180	498	11000	9720	354	9290	11300	367	11200
29	7000	414	7820	11400	450	13900	11100	322	9650
30	6040	330	5380	13300	650	23300	10000	278	7510
31	--	--	--	16000	1000	43200	--	--	--
TOTAL	213850	--	659400	327540	--	787410	394700	--	750960

DAY	JULY			AUGUST			SEPTEMBER		
	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
1	9000	422	10300	2640	20	143	2650	42	301
2	8050	626	13600	2560	17	118	2670	40	288
3	7420	528	10600	2570	20	139	2710	31	227
4	7000	431	8150	2950	21	167	2750	35	260
5	6670	334	6020	3100	30	251	2730	35	258
6	6330	236	4030	2990	45	363	2400	35	227
7	5900	139	2210	2970	30	241	2470	35	233
8	5470	129	1910	2970	30	241	2780	40	300
9	5190	119	1670	2950	29	231	2930	80	633
10	5070	110	1510	2900	25	196	2890	129	1010
11	4820	100	1300	2870	25	194	2940	100	794
12	4690	90	1140	2840	25	192	2960	80	639
13	4640	95	1190	2770	22	165	3030	63	515
14	4420	99	1180	2820	25	190	2920	250	1970
15	4490	80	970	2830	25	191	2630	355	2520
16	4420	70	835	2720	25	184	2690	250	1820
17	4190	60	679	2780	25	188	2720	61	448
18	3830	50	517	2790	25	188	2700	50	365
19	3670	40	396	2760	25	186	2400	40	259
20	3460	43	402	2610	25	176	2340	25	158
21	3520	46	437	2610	25	176	2240	20	121
22	3620	44	430	2690	25	182	2130	19	109
23	3530	42	400	2580	28	195	2200	20	119
24	3390	40	366	2740	30	222	2260	20	122
25	3180	40	343	2730	31	229	2250	20	122
26	2970	37	297	2800	25	189	2250	20	122
27	3000	36	292	2650	17	122	2170	22	129
28	2860	36	278	2590	30	210	2320	20	125
29	3050	32	264	2570	40	278	2270	22	135
30	2910	28	220	2530	57	389	2110	20	114
31	2750	25	186	2740	45	333	--	--	--
TOTAL	143510	--	72122	85620	--	6469	76510	--	14443

TOTAL DISCHARGE FOR YEAR (CFS-DAYS)

TOTAL SUSPENDED-SEDIMENT DISCHARGE FOR YEAR (TONS)

1626430

3039840

GREEN RIVER BASIN

09261000 GREEN RIVER NEAR JENSEN, UTAH--Continued

PARTICLE-SIZE DISTRIBUTION OF SUSPENDED SEDIMENT,
WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DATE	TIME	TEMP- ERATURE (DEG C)	DIS- CHARGE (CFS)	SUS- PENDE SEDIM- MENT (MG/L)	SUS- PENDE SEDIM- MENT DIS- CHARGE (T/DAY)	SUS. SED. FALL DIAM. % FINER THAN .002 MM	SUS. SED. FALL DIAM. % FINER THAN .004 MM
OCT. 09...	1130	6.0	1570	675	2860	60	72
FEB. 22...	1250	.5	1460	212	836	75	88
MAR. 30...	1100	8.5	5630	4320	65700	56	62
MAY 11...	1130	10.0	10720	1220	35300	26	32
JUNE 03...	1140	13.0	14560	1960	77100	39	44
JULY 01...	1205	18.5	8460	406	9270	16	18

DATE	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	SUS. SED. FALL DIAM. % FINER THAN .500 MM	SUS. SED. FALL DIAM. % FINER THAN 1.00 MM
OCT. 09...	82	88	96	100	--	--
FEB. 22...	--	100	--	--	--	--
MAR. 30...	79	88	94	100	--	--
MAY 11...	43	60	75	91	99	100
JUNE 03...	55	74	86	95	100	--
JULY 01...	--	54	78	96	100	--

GREEN RIVER BASIN

35

09302000 DUCHESNE RIVER NEAR RANDLETT, UTAH

LOCATION.--Lat 40°12'57", long 109°47'05", SE $\frac{1}{4}$ SE $\frac{1}{4}$ sec.17, T.3 S., R.2 E., Uintah meridian, Uintah County, at gaging station 0.2 mile downstream from Uinta River, 1.2 miles southeast of Randlett, and 6.5 miles southeast of Fort Duchesne.

DRAINAGE AREA.--3,920 sq mi, approximately.

PERIOD OF RECORD.--Chemical analyses: December 1950 to September 1951, November 1956 to September 1971.
Water temperatures: December 1950 to September 1951, November 1956 to September 1971.

EXTREMES.--1970-71:

Specific conductance: Maximum daily, 2,690 micromhos Dec. 5; minimum daily, 360 micromhos June 19.
Water temperatures: Maximum, 23.5°C Aug. 3; minimum, freezing point on many days during winter period.

Period of record:

Specific conductance (1950-51, 1956-60, 1961-71): Maximum daily, 4,490 micromhos Aug. 24, 1960; minimum daily, 291 micromhos May 29, 1951.
Water temperatures: Maximum, 27.0°C July 15, 1968; minimum, freezing point on many days during winter period each year.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DATE	TIME	TEMP- ERATURE (DEG C)	DIS- CHARGE (CFS)	DIS- SOLVED SILICA (SiO ₂) (MG/L)	DIS- SOLVED CAL- CIUM (CA) (MG/L)	DIS- SOLVED MAG- NE- SIUM (MG)	DIS- SOLVED SODIUM (NA) (MG/L)	DIS- SOLVED PO- TAS- SIUM (K) (MG/L)	BICAR- BONATE (HCO ₃) (MG/L)	CAR- BONATE (CO ₃) (MG/L)	DIS- SOLVED SULFATE (SO ₄) (MG/L)	DIS- SOLVED CHLO- RIDE (CL) (MG/L)
OCT.												
13...	1610	13.0	165	10	131	90	258	6.5	342	0	759	100
NOV.												
17...	1105	.0	230	13	136	72	212	3.0	338	0	688	60
DEC.												
08...	1550	1.0	125	18	170	100	330	3.9	382	0	970	120
JAN.												
14...	1500	.0	444	13	88	47	100	2.6	255	0	370	38
FEB.												
19...	1500	1.0	473	12	89	49	120	2.4	280	0	340	54
MAR.												
26...	1300	12.0	289	--	99	50	97	2.7	279	0	390	62
APR.												
19...	1130	8.5	123	--	130	72	290	4.9	301	0	740	130
MAY												
14...	1015	16.0	157	--	120	76	230	4.2	322	0	670	120
JUNE												
04...	1000	13.0	1030	--	76	39	100	2.6	226	0	330	51
JULY												
09...	1230	18.0	428	--	120	64	160	4.5	304	0	530	110
AUG.												
18...	1200	24.0	47	--	140	79	320	4.6	336	0	850	180
SEP.												
03...	1005	16.0	123	13	150	64	290	4.6	361	0	780	150

DATE	DIS- SOLVED FLUO- RIDE (F) (MG/L)	DIS- SOLVED NITRITE PLUS NITRATE (N) (MG/L)	DIS- SOLVED BORON (B) (UG/L)	DIS- SOLVED (SUM OF CONSTITUENTS) (MG/L)	DIS- SOLVED SOLIDS (TONS PER AC-FT)	DIS- SOLVED SOLIDS (TONS PER DAY)	HARD- NESS (CA+MG) (MG/L)	NON- CAR- BONATE HARD- NESS (MG/L)	SODIUM AD- SORP- TION RATIO	SPECI- FIC COND- UCTANCE (MICRO- MHOS)	PH (UNITS)
OCT.											
13...	.9	--	--	1520	2.33	677	697	416	4.3	2180	7.9
NOV.											
17...	.7	--	--	1350	1.88	838	636	359	3.7	1850	7.8
DEC.											
08...	1.0	--	--	1900	2.58	641	830	517	5.0	2600	7.9
JAN.											
14...	.7	.80	410	780	1.06	935	410	201	2.1	1110	7.7
FEB.											
19...	--	.00	--	803	1.09	1030	420	190	2.5	1190	8.0
MAR.											
26...	--	.20	--	839	1.14	655	450	220	2.0	1190	7.9
APR.											
19...	--	.10	--	1520	2.07	505	620	370	5.1	2040	7.9
MAY											
14...	--	.30	--	1380	1.88	585	610	350	4.0	2000	8.2
JUNE											
04...	--	.18	340	711	.97	1980	350	160	2.3	1070	7.9
JULY											
09...	--	.14	--	1140	1.55	1320	560	310	2.4	1690	7.9
AUG.											
18...	--	.11	--	1740	2.37	221	670	400	5.4	2300	8.0
SEP.											
03...	.6	.24	810	1630	2.22	541	640	340	5.0	2290	7.9

GREEN RIVER BASIN

09302000 DUCHESNE RIVER NEAR RANDLETT, UTAH--Continued

SPECIFIC CONDUCTANCE (MICROMHOS AT 25°C), WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2270	1990	2390	1330	927	1010	1670	1700	900	950	2050	2000
2	2280	1850	2360	1250	1110	1100	1570	---	980	1020	2150	2050
3	2240	1950	2230	1180	1310	1040	1220	2180	950	1080	2250	---
4	2090	1920	2510	1160	---	1030	1180	2460	1100	1080	2550	---
5	2140	2020	2690	1290	---	960	1200	2170	1100	1180	2400	1900
6	2210	2050	2620	1440	1500	975	1250	1830	1100	1120	2300	1950
7	2250	2080	2600	1500	1240	1100	1150	1890	1050	1250	2400	1900
8	2310	1820	2630	1460	1170	966	1180	1950	1050	1300	2600	1850
9	2260	1690	2450	1330	1090	984	1440	3430	1050	1520	2500	1900
10	2330	1500	2450	1260	1120	1080	1270	2210	870	1400	2350	1800
11	2270	1510	2270	1170	990	1000	1260	2130	725	1380	2250	1900
12	2180	1520	2360	1130	1010	1120	1320	1960	460	1800	2400	2000
13	2180	1550	2500	1100	1080	1010	1270	1970	---	1200	2400	1950
14	2070	1560	2650	1120	1250	1030	1350	1920	---	1580	2500	2050
15	2140	1550	2640	1060	1130	1050	1880	1710	500	1580	2500	2200
16	2180	1630	2410	1040	1030	1050	2150	1270	515	1750	2400	2200
17	2210	1630	2130	1040	1130	1080	2050	1120	455	1800	2400	2300
18	2200	1620	2040	1010	1130	1070	1920	1160	375	1980	2350	2100
19	2150	18	2100	957	1190	1190	1870	1250	360	2180	2500	1950
20	2160	2080	2200	826	1150	1210	2410	1320	440	1700	2300	1950
21	2180	2250	2200	872	1110	1230	2470	1480	380	1750	2200	1900
22	2260	2400	1790	1090	1140	1260	2450	1500	405	1700	2100	1800
23	2190	2360	1580	1240	1160	1200	2150	1570	460	1850	2300	1750
24	2180	2330	1650	1210	1250	1340	2040	1550	505	1800	2300	1700
25	2200	2320	---	1090	1120	1310	2200	1710	415	1850	2300	1800
26	2180	2280	1640	1130	1160	1310	2120	1540	450	1800	2200	1800
27	2240	2360	1590	1050	1280	1260	1750	1140	495	1900	2200	1800
28	2130	2450	1480	1050	1130	1210	1690	1110	545	2050	2100	1800
29	2130	2460	1320	1090	---	1170	1430	738	405	2150	1950	1900
30	1950	2390	1390	1100	---	1150	1450	---	845	2200	2150	1850
31	1850	---	1350	1100	---	1480	---	612	---	2200	2100	---
MONTH	2180	1970	2140	1150	1150	1130	1680	1680	674	1620	2300	1930

TEMPERATURE (°C) OF WATER, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971
(ONCE-DAILY MEASUREMENT)

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	10.5	3.5	1.5	0.0	0.0	0.0	7.5	11.5	13.0	18.0	19.0	18.5
2	11.0	4.0	1.0	0.0	0.0	0.0	5.0	---	12.0	18.0	21.5	18.0
3	12.0	3.0	0.0	0.0	0.0	0.0	5.0	13.0	12.5	18.0	23.5	---
4	10.5	2.0	0.0	0.0	0.0	0.0	5.0	13.0	13.0	17.5	20.5	---
5	10.5	4.5	0.0	0.0	0.0	0.0	5.0	10.5	14.0	18.5	20.0	13.0
6	13.0	5.0	0.0	0.0	0.0	0.0	5.5	11.0	13.0	19.0	22.0	15.5
7	10.0	5.0	0.0	0.0	0.0	0.0	7.5	12.0	15.0	20.5	21.0	21.0
8	6.0	3.5	0.0	0.0	0.0	0.0	7.0	12.0	16.5	20.5	18.0	14.0
9	6.5	3.0	0.0	0.0	0.0	0.0	8.0	10.0	17.0	20.5	20.0	16.0
10	7.0	4.0	1.0	0.0	0.0	0.0	9.5	15.0	15.0	20.0	20.0	16.0
11	6.5	2.0	0.0	0.0	0.0	0.0	10.0	14.0	15.0	18.0	20.5	16.5
12	8.0	2.0	0.0	0.0	0.0	0.0	9.0	14.0	16.0	20.0	19.5	17.0
13	8.0	1.5	0.0	0.0	0.0	0.0	7.0	15.0	---	19.0	20.0	17.0
14	8.0	2.0	0.0	0.0	0.0	0.0	8.0	15.5	---	21.0	18.5	15.0
15	5.5	0.5	0.0	0.0	0.0	1.0	10.0	12.0	16.5	20.5	18.5	13.0
16	5.0	0.5	0.0	0.0	0.0	0.0	9.5	11.0	14.0	22.0	20.0	13.5
17	6.0	0.0	0.5	0.0	0.0	2.5	9.5	11.5	15.0	23.0	20.5	11.0
18	5.0	0.0	0.0	0.0	0.0	1.0	10.0	8.0	14.0	21.5	20.5	9.0
19	5.5	0.0	0.0	0.0	0.0	2.0	9.5	9.5	18.0	20.5	19.5	3.0
20	6.0	0.0	0.0	0.0	0.0	2.0	7.0	11.0	15.0	20.0	19.5	10.0
21	7.0	0.0	0.0	0.0	0.0	3.5	8.5	11.5	15.5	21.0	18.5	9.5
22	7.0	0.5	0.0	0.0	0.0	0.0	10.5	12.0	16.5	20.0	19.5	10.0
23	7.0	1.0	0.0	0.0	0.0	2.0	11.0	11.0	16.5	20.5	20.0	9.5
24	7.5	3.0	0.0	0.0	0.0	6.0	10.0	12.0	16.5	19.0	18.5	10.5
25	5.0	4.5	---	0.0	0.0	6.0	10.5	15.0	16.5	19.5	20.5	10.5
26	4.0	5.0	0.0	0.0	0.0	6.5	10.0	15.0	17.0	23.0	21.0	11.0
27	4.0	4.5	0.0	0.0	0.0	8.0	8.0	16.5	16.5	19.5	20.0	11.5
28	1.0	4.5	0.0	0.0	0.0	8.0	10.0	15.0	17.0	19.5	19.5	8.0
29	2.0	3.0	0.0	0.0	---	6.5	13.0	13.5	17.0	20.0	20.0	9.5
30	2.0	3.0	0.0	0.0	---	6.5	9.5	---	16.5	19.0	18.0	10.5
31	4.5	---	0.0	0.0	---	6.5	---	11.0	---	21.0	18.0	---
MONTH	7.0	2.5	0.0	0.0	0.0	2.5	8.5	12.5	15.5	20.0	20.0	13.0

GREEN RIVER BASIN

37

09306500 WHITE RIVER NEAR WATSON, UTAH

LOCATION.--Lat 39°59', long 109°11', in sec.2, T.10 S., R.24 E., Uintah County, at bridge on State Highway 45, 350 ft upstream from gaging station, about 1 mile downstream from Evacuation Creek, and 7 miles north of Watson.

DRAINAGE AREA.--4,020 sq mi, approximately.

PERIOD OF RECORD.--Chemical analyses: December 1950 to September 1971.

Water temperatures: December 1950 to September 1971.

EXTREMES.--1970-71:

Specific conductance: Maximum daily, 1,790 micromhos Oct. 7; minimum daily, 295 micromhos June 26.

Water temperatures: Maximum, 22.0°C July 18, 22, Aug. 9; minimum, freezing point on many days during December and January.

Period of record:

Specific conductance: Maximum daily, 4,450 micromhos Aug. 4, 1955; minimum daily, 295 micromhos June 26, 1971.

Water temperatures: Maximum, 31.0°C Aug. 8, 1954; minimum, freezing point on many days during winter period each year.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DATE	TIME	TEMP- ERATURE (DEG C)	DIS- CHARGE (CFS)	DIS- SOLVED SILICA (SI02) (MG/L)	DIS- SOLVED CAL- CIUM (CA) (MG/L)	DIS- SOLVED MAG- NESIUM (MG)	DIS- SOLVED SODIUM (NA) (MG/L)	DIS- SOLVED PO- TAS- SIUM (K) (MG/L)	BICAR- BONATE (HC03) (MG/L)	CAR- BONATE (C03) (MG/L)	DIS- SOLVED SULFATE (S04) (MG/L)	DIS- SOLVED CHLO- RIDE (CL) (MG/L)
OCT. 13...	1130	7.0	585	16	70	26	49	3.0	235	0	158	21
NOV. 16...	1115	1.0	449	13	60	21	48	1.6	216	0	137	24
DEC. 08...	1130	1.5	436	15	71	24	51	1.4	219	3	150	26
JAN. 13...	1230	.0	460	19	82	26	63	2.9	258	0	200	31
FEB. 23...	0945	.0	370	13	72	24	60	1.5	233	0	150	35
MAR. 29...	1100	8.5	831	--	61	23	56	4.5	198	0	190	20
APR. 13...	1300	12.5	714	--	58	22	44	3.1	191	0	130	25
MAY 13...	1130	16.0	1110	--	48	14	22	1.3	158	0	78	15
JUNE 07...	1145	14.5	1760	--	45	13	18	1.1	159	0	61	8.3
JULY 07...	1110	18.0	1030	--	52	15	19	1.6	171	0	79	12
AUG. 16...	1115	21.0	309	--	62	24	55	2.1	214	0	150	33
SEP. 02...	1230	24.0	414	16	69	25	68	3.3	270	0	170	29

DATE	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 CONSTITUENTS) (MG/L)	DIS- SOLVED SOLIDS (TONS PER AC-FT)	DIS- SOLVED SOLIDS (TONS PER DAY)	HARD- NESS (CA,MG) (MG/L)	NON- CAR- BONATE HARD- NESS (MG/L)	SODIUM AD- SORP- TION RATIO	SPECI- FIC COND- UCTANCE (MICRO- MHOS)	PH (UNITS)
OCT. 13...	.4	--	--	460	.65	753	282	89	1.3	715	7.9
NOV. 16...	.2	--	--	411	.60	498	236	59	1.4	676	8.2
DEC. 08...	.4	--	--	450	.61	530	280	95	1.3	681	8.3
JAN. 13...	.5	.50	40	550	.75	683	310	98	1.6	817	7.7
FEB. 23...	--	.00	--	470	.64	469	280	89	1.6	765	8.0
MAR. 29...	--	.70	--	455	.62	1020	250	85	1.6	696	7.9
APR. 13...	--	.00	--	376	.51	725	240	79	1.2	627	7.7
MAY 13...	--	.10	--	256	.35	767	180	48	.7	453	8.0
JUNE 07...	--	.16	20	224	.30	1064	170	35	.6	384	8.0
JULY 07...	--	.04	--	264	.36	734	190	51	.6	444	8.1
AUG. 16...	--	.05	--	342	.47	285	250	78	1.5	678	8.0
SEP. 02...	.2	.52	100	516	.70	577	280	54	1.8	807	7.8

GREEN RIVER BASIN

09306500 WHITE RIVER NEAR WATSON, UTAH--Continued

SPECIFIC CONDUCTANCE (MICROMHOS AT 25°C), WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	642	672	706	712	725	823	794	540	340	320	625	750
2	654	666	694	---	711	786	717	539	370	350	625	800
3	632	659	681	---	714	778	731	534	390	400	620	720
4	636	653	667	697	754	822	740	491	385	400	620	700
5	997	623	698	---	728	764	756	428	365	400	630	710
6	678	663	680	667	771	774	738	370	355	400	650	710
7	1790	668	669	732	749	740	735	366	375	420	---	690
8	1050	654	658	758	764	713	712	384	370	435	650	660
9	779	676	687	714	789	692	728	389	365	445	650	710
10	681	676	674	783	784	788	706	397	350	480	650	670
11	707	686	696	848	763	879	692	417	355	495	---	660
12	705	686	634	866	736	664	661	436	360	500	650	640
13	696	667	---	832	---	719	608	438	355	500	625	620
14	657	633	669	682	---	734	555	420	350	510	---	620
15	656	602	760	635	697	690	509	---	345	495	675	620
16	636	664	717	---	695	687	491	---	340	505	680	600
17	829	673	802	---	691	693	457	373	330	525	680	610
18	847	677	692	656	780	726	434	361	330	540	660	740
19	642	735	---	662	725	803	418	330	325	575	675	720
20	638	649	---	684	743	751	488	358	315	580	690	620
21	647	627	738	669	760	711	491	381	310	575	710	600
22	645	654	---	624	762	807	541	399	315	580	680	600
23	644	696	---	674	786	743	581	411	305	595	730	600
24	639	676	747	664	767	787	587	373	305	625	750	600
25	655	673	---	699	795	822	587	391	305	650	760	600
26	681	798	---	726	816	716	565	410	295	625	760	610
27	659	710	---	727	---	738	548	414	305	620	800	610
28	652	657	792	713	---	812	520	410	305	625	760	610
29	650	697	804	712	---	684	531	375	305	625	790	620
30	697	686	742	696	---	751	530	334	315	620	790	630
31	732	---	739	694	---	761	---	332	---	640	775	---
MONTH	737	672	---	713	750	753	605	407	338	518	691	655

TEMPERATURE (°C) OF WATER, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971
(ONCE-DAILY MEASUREMENT)

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	9.5	9.0	1.5	0.5	1.0	0.5	4.5	8.0	11.0	16.0	21.0	18.0
2	9.5	7.5	1.0	---	1.0	0.5	4.5	8.0	11.0	16.0	21.0	18.0
3	9.0	7.0	0.0	---	1.0	0.0	2.5	8.0	10.0	16.0	20.5	16.5
4	9.0	7.0	0.0	0.0	0.5	1.0	2.5	12.0	13.5	16.0	21.0	20.0
5	10.0	7.0	0.0	---	0.5	1.0	3.5	8.0	12.5	18.0	21.0	14.5
6	10.0	7.0	0.0	0.0	0.5	1.0	4.5	8.0	14.0	18.0	21.0	14.5
7	9.5	7.5	0.0	0.0	0.5	1.0	4.5	8.0	13.5	16.5	---	16.5
8	9.0	6.5	0.5	0.0	0.5	1.0	4.5	8.0	14.5	19.0	21.0	20.0
9	10.0	6.5	1.0	0.0	0.5	1.0	5.5	7.0	13.5	18.0	22.0	15.5
10	6.5	7.0	0.5	0.0	0.5	1.0	5.5	8.0	13.5	18.5	21.0	15.5
11	5.5	6.5	0.5	0.0	0.5	1.0	9.0	7.0	13.5	18.0	---	16.5
12	9.5	7.0	0.5	0.0	0.5	1.0	5.5	11.0	20.0	18.0	21.0	17.5
13	8.5	7.0	---	0.0	---	0.0	5.0	11.5	13.5	19.0	20.0	18.0
14	8.5	6.0	0.0	0.0	---	0.5	7.0	9.0	14.5	19.0	---	18.0
15	7.0	5.5	0.0	0.5	1.0	0.5	8.5	---	15.5	20.0	20.0	14.5
16	8.5	6.5	1.0	---	1.0	1.0	7.0	---	14.5	20.0	18.5	15.5
17	7.0	4.5	1.0	---	1.0	1.0	6.5	10.0	15.5	21.5	21.0	15.5
18	7.0	4.5	1.0	0.5	1.0	1.0	7.0	8.0	15.5	22.0	21.0	11.0
19	7.0	5.5	---	0.5	1.0	1.0	6.5	8.0	15.5	21.0	21.0	10.0
20	7.0	0.0	---	0.5	1.0	1.0	5.5	8.0	17.0	21.0	21.0	15.5
21	8.5	1.0	1.0	0.5	0.5	1.0	5.5	7.0	16.5	21.0	21.0	9.0
22	7.0	1.0	---	0.5	0.5	1.0	7.5	12.0	16.5	22.0	21.0	9.0
23	7.0	2.0	---	0.5	0.5	4.5	7.0	7.0	16.5	21.0	21.0	9.0
24	7.0	1.0	0.0	0.5	0.5	4.0	10.0	7.0	---	20.0	21.0	9.0
25	5.5	1.0	---	0.5	1.0	4.0	10.0	9.0	16.5	21.0	21.0	7.0
26	5.5	1.0	---	0.5	1.0	5.5	9.0	13.5	16.5	20.5	21.0	8.5
27	4.5	1.0	---	0.0	---	4.5	9.0	13.5	16.0	21.0	20.0	9.0
28	4.5	2.5	0.0	0.0	---	4.0	9.0	14.5	16.5	21.0	20.5	9.0
29	4.0	1.0	0.0	0.0	---	3.5	8.0	15.5	16.5	20.0	20.0	8.5
30	3.5	1.0	0.0	0.0	---	3.5	9.5	14.5	16.5	20.0	20.0	11.0
31	3.5	---	0.5	0.0	---	3.5	---	11.0	---	20.5	18.0	---
MONTH	7.5	4.5	---	0.0	0.5	2.0	6.5	9.5	15.0	19.5	20.5	13.5

GREEN RIVER BASIN

39

09314500 PRICE RIVER AT WOODSIDE, UTAH

LOCATION.--Lat 39°15'50", long 110°20'45", in SE¼ sec.9, T.18 S., R.14 E., Emery County, at gaging station on left bank wing wall of old highway bridge, 200 ft downstream from railroad bridge at Woodside, and about 22 miles upstream from mouth.

DRAINAGE AREA.--1,500 sq mi, approximately.

PERIOD OF RECORD.--Chemical analyses: December 1946 to September 1949, February 1951 to September 1971.
Water temperatures: February 1951 to September 1959, November 1961 to September 1963, October 1964 to September 1971.

EXTREMES.--1970-71:

Specific conductance: Maximum daily, 5,490 micromhos Mar. 2; minimum daily, 1,430 micromhos May 23.
Water temperatures: Maximum, 28.5°C Aug. 7; minimum, freezing point on many days during winter period.

Period of record:

Specific conductance (1951-70): Maximum daily, 8,540 micromhos Dec. 11, 1951; minimum daily, 814 micromhos June 1, 1952.

Water temperatures: Maximum, 32.0°C July 10, 11, 1954; minimum, freezing point on many days during winter period each year.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DATE	TIME	TEMP- ERATURE (DEG C)	DIS- CHARGE (CFS)	DIS- SOLVED SILICA (SI02) (MG/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 (HC03) (MG/L)	CAR- BONATE (C03) (MG/L)	DIS- SOLVED SULFATE (S04) (MG/L)	DIS- SOLVED CHLO- RIDE (CL) (MG/L)
OCT. 01...	1120	11.0	62	.6	204	191	540	8.9	299	0	2170	51
DEC. 02...	1045	.5	67	5.0	210	220	660	9.5	355	0	2300	70
JAN. 06...	1230	.0	25	11	280	220	620	13	477	0	2300	78
MAY 05...	1330	13.0	84	--	140	150	490	8.7	324	0	1700	--
JULY 02...	1100	17.5	73	--	150	130	360	6.7	256	0	1300	--

DATE	DIS- SOLVED FLUO- RIDE (F) (MG/L)	DIS- SOLVED NITRITE PLUS NITRATE (N) (MG/L)	DIS- SOLVED BORON (R) (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)
OCT. 01...	.4	--	--	3320	4.52	556	1300	1050	6.5	3740	8.2
DEC. 02...	.6	--	--	3700	5.03	669	1400	1110	7.6	4660	8.0
JAN. 06...	.7	--	--	3800	5.17	256	1600	1210	6.7	4450	7.9
MAY 05...	--	.80	--	2710	3.69	620	970	700	6.9	3533	7.6
JULY 02...	--	.21	270	2120	2.88	418	910	700	5.2	2800	7.9

GREEN RIVER BASIN

09314500 PRICE RIVER AT WOODSIDE, UTAH--Continued

SPECIFIC CONDUCTANCE (MICROMHGS AT 25°C), WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3760	4410	4110	4020	3820	4540	2010	3150	2500	2700	3400	4000
2	3750	4120	4350	3960	3670	5490	1790	3300	2100	2750	3400	3800
3	3620	3860	4480	3960	3980	4660	1920	3620	2200	2900	3500	4000
4	3680	3890	4930	4100	4180	4360	2210	3580	2400	2650	3100	4500
5	3520	4100	5030	4090	4020	3680	2200	3280	2500	2900	2900	4900
6	3560	4260	4440	4150	4420	3480	2520	3030	2500	2700	2900	4900
7	3440	4010	3770	4120	4680	3360	3120	2790	2400	2800	3000	4200
8	3580	3770	3960	3770	4690	3230	2860	3080	2350	3500	3000	4000
9	3720	3840	3970	4370	4340	3380	2730	2800	2450	3300	---	3900
10	4180	4020	4110	4380	4210	3770	2610	3020	2500	3100	3300	4000
11	3820	4250	4140	4320	3910	4070	2610	3430	2500	2900	3100	3800
12	3800	4080	3910	4380	3270	4350	2610	3260	2550	2900	3100	3800
13	3810	3920	4300	4160	3850	4240	2630	3030	2600	2900	3000	4000
14	3810	4050	4140	4150	3800	3180	2500	3380	2450	2800	3300	4000
15	3930	4080	4720	4150	3590	3160	2580	2970	2850	3000	3300	4100
16	4320	4050	4810	4250	3410	3010	2580	2990	2650	3100	3400	4200
17	4370	3910	5040	4250	3340	3850	2750	2910	2550	3200	1680	4000
18	4490	3830	4750	4230	3590	4020	2830	2520	2850	3100	3400	4000
19	4670	4050	4710	3950	3760	3970	2990	2290	2700	2800	3400	4000
20	4750	4020	4590	4260	3860	3750	3150	2400	2600	3100	3200	4000
21	4910	4110	4360	3640	4580	4120	3200	2590	2550	3200	3400	4000
22	4820	3530	4300	3750	4710	3880	3290	2770	2850	3100	3000	3600
23	4710	4150	4640	3130	4540	3910	3300	1430	2700	3000	3000	3500
24	4760	3550	4750	2880	4180	2240	3470	2110	2550	3300	3100	3500
25	4580	3630	4680	3050	4160	1850	3540	2960	2700	3200	3000	3600
26	4740	3710	4530	3840	4180	2000	3820	3310	2800	2800	2800	3700
27	4540	3920	4720	3700	4040	2110	3550	3590	2800	2800	3500	3800
28	4390	4130	4830	3760	4430	1510	2820	3270	2800	3000	2800	3800
29	4610	4210	4790	3480	---	1850	3050	2070	2700	3000	3750	3800
30	4410	4200	4870	3680	---	1930	3010	2540	2600	2850	3000	3500
31	4620	---	4160	3760	---	2160	---	2590	---	3200	4200	---
MONTH	4180	3990	4480	3930	4040	3390	2810	2910	2580	2990	3160	3960

TEMPERATURE (°C) OF WATER, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971
(ONCE-DAILY MEASUREMENT)

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	12.0	9.0	3.0	0.0	2.0	0.0	4.0	10.0	13.0	26.5	22.5	18.5
2	10.0	8.0	2.0	0.0	0.0	0.0	5.0	10.0	13.0	23.0	18.5	24.0
3	9.0	8.5	2.0	0.0	1.0	0.0	6.0	12.0	13.0	26.5	22.0	14.0
4	11.0	4.0	0.0	0.0	0.0	0.0	6.0	9.0	14.0	27.0	21.5	13.5
5	10.0	4.0	0.5	0.0	0.0	0.0	6.0	9.0	14.0	20.5	23.5	14.0
6	11.0	5.0	2.0	0.0	0.5	0.0	6.0	10.0	14.0	21.0	21.0	15.0
7	8.0	5.0	1.0	0.0	0.0	0.0	7.0	10.0	15.0	21.0	28.5	18.5
8	5.0	4.0	2.0	0.0	0.0	0.0	8.0	---	16.0	24.5	24.0	13.5
9	6.0	3.0	1.0	0.0	0.0	0.0	11.0	10.0	15.0	20.5	---	14.5
10	7.0	5.0	3.0	0.0	0.0	2.0	15.0	10.0	14.5	18.5	21.5	15.5
11	4.0	3.0	0.0	0.0	0.0	2.0	9.0	14.0	12.0	20.0	21.0	18.5
12	5.0	1.0	0.0	0.0	1.0	5.0	10.0	14.0	15.0	26.5	21.5	21.0
13	6.0	4.0	0.0	0.0	0.5	6.0	12.0	14.0	14.0	25.5	21.0	26.5
14	5.0	1.0	0.0	0.0	2.0	2.0	10.0	14.0	17.0	21.5	22.0	16.0
15	5.0	2.0	0.0	0.0	0.5	3.0	11.0	15.0	16.0	21.0	22.0	11.5
16	5.0	4.0	0.0	0.0	1.0	3.0	11.0	17.0	17.0	25.5	21.5	11.0
17	4.0	1.0	2.0	0.0	1.5	7.0	10.0	8.0	18.0	20.5	20.5	11.0
18	4.0	5.0	0.0	0.0	2.0	0.0	8.0	8.0	16.0	26.0	21.5	7.0
19	5.0	1.0	0.0	0.0	1.0	0.0	8.0	8.0	17.0	26.0	24.0	10.0
20	5.0	1.0	0.0	0.0	2.0	0.0	10.0	10.5	20.0	23.0	24.0	7.0
21	6.0	0.0	0.0	1.0	0.0	4.0	11.0	11.0	20.0	21.5	21.5	10.5
22	7.0	1.0	0.0	1.5	0.0	9.0	10.0	12.0	10.0	20.0	20.0	8.5
23	4.0	4.0	0.0	0.0	0.0	6.0	11.0	10.0	18.0	20.0	20.0	9.5
24	6.0	5.0	0.0	1.5	0.0	6.0	9.0	11.5	18.0	20.0	19.5	9.0
25	4.0	4.0	2.0	0.0	0.0	6.0	10.0	14.5	20.0	20.0	21.0	11.5
26	3.0	5.0	0.0	0.0	0.0	8.0	10.0	13.0	19.0	20.0	20.5	13.5
27	3.0	5.0	1.0	0.0	2.0	8.0	7.0	12.0	22.0	20.0	21.0	9.5
28	1.0	2.0	0.0	0.0	0.0	10.0	8.0	13.0	20.0	23.0	17.0	8.5
29	1.0	3.0	0.0	0.0	---	6.0	15.0	13.0	19.0	21.5	20.0	8.0
30	2.0	5.0	0.0	0.0	---	7.0	9.0	12.0	17.0	23.0	19.5	10.5
31	8.0	---	0.0	0.0	---	9.0	---	15.0	---	22.0	16.5	---
MONTH	6.0	4.0	0.5	0.0	0.5	3.5	9.0	11.5	16.0	22.5	21.5	13.5

09315000 GREEN RIVER AT GREEN RIVER, UTAH
(Irrigation network, pesticide, and radiochemical station)

LOCATION.--Lat 38°59'37", long 110°08'35", in NW¼NE¼ sec.15, T.21 S., R.16 E., Emery County, at bridge on U.S. Highways 50 and 6, in town of Green River, 0.7 mile upstream from gaging station, and at mile 118.1 upstream from mouth.

DRAINAGE AREA.--40,600 sq mi, approximately (at gaging station).

PERIOD OF RECORD.--Chemical analyses: August 1928 to September 1971.

Water temperatures: May 1949 to September 1959, October 1964 to September 1971.

Sediment records: May 1930 to September 1971.

EXTREMES.--1970-71:

Specific conductance: Maximum daily, 2,760 micromhos Nov. 16; minimum daily, 325 micromhos June 12, 19, 21.

Water temperatures: Maximum, 24.0°C on several days during August; minimum, freezing point on several days during December to February.

Sediment concentrations: Maximum daily, 14,400 mg/l Mar. 31; minimum daily, 39 mg/l Aug. 15, Sept. 29.

Sediment loads: Maximum daily, 331,000 tons Mar. 31; minimum daily, 327 tons Aug. 15.

Period of record:

Specific conductance (1941-71): Maximum daily, 3,250 micromhos Dec. 1, 1967; minimum daily, 272 micromhos May 13, 1956.

Water temperatures (1949-59, 1965-71): Maximum, 30.0°C Aug. 13, 1958; minimum, freezing point on many days during winter period each year.

Sediment concentrations: Maximum daily, 66,000 mg/l July 11, 1936; minimum daily, 20 mg/l Sept. 27, 1956.

Sediment loads: Maximum daily, 2,230,000 tons July 11, 1936; minimum daily, 54 tons Sept. 27, 1956.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DATE	TIME	TEMP- ERATURE (DEG C)	DIS- CHARGE (CFS)	DIS- SOLVED SILICA (SIO2) (MG/L)	DIS- SOLVED CAL- CIUM (CA) (MG/L)	DIS- SOLVED MAG- NE- SIUM (NA) (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)
OCT.												
06...	1215	13.0	2900	5.0	69	32	93	4.6	190	0	265	28
NOV.												
11...	1415	6.0	2560	10	71	33	110	3.0	226	3	300	33
DEC.												
08...	--	--	2480	9.0	70	30	92	2.9	211	2	270	29
JAN.												
26...	1235	--	3070	8.9	76	28	74	3.1	203	0	240	29
FEB.												
09...	1130	.0	2900	--	65	33	85	3.0	203	0	250	28
MAR.												
09...	1030	.0	2570	9.2	74	34	92	3.4	219	0	280	33
APR.												
12...	1230	12.0	5780	--	62	28	67	4.6	191	0	220	25
MAY												
11...	1300	11.0	11360	--	35	15	35	1.9	110	0	100	12
JUNE												
04...	1300	14.5	14830	--	31	11	27	1.6	123	0	77	7.8
JULY												
06...	1200	20.0	9060	--	36	16	35	2.0	116	0	100	15
AUG.												
10...	1330	23.0	3240	--	68	26	75	3.7	179	0	230	28
22-25	--	--	3120	--	72	30	81	3.6	188	0	290	28
26-27	--	--	3020	--	190	46	120	6.4	176	0	700	29
28...	1800	22.0	3660	--	78	--	--	--	--	--	300	--
29-31	--	--	3510	--	88	36	110	4.3	200	0	380	31
SEP.												
09...	1300	21.5	3610	7.1	78	31	89	3.7	206	0	270	30

DATE	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 CONSTITU- 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)
OCT.											
06...	.5	--	--	579	.79	4530	254	0	2.3	897	7.7
NOV.											
11...	.4	--	--	680	.92	4700	310	120	2.7	1060	8.3
DEC.											
09...	.4	--	--	610	.83	4080	300	124	2.3	933	8.3
JAN.											
26...	.4	.70	150	560	.76	4640	310	140	1.8	826	8.3
FEB.											
09...	.4	.00	170	565	.77	4420	300	133	2.1	883	8.2
MAR.											
09...	--	--	--	630	.86	4370	320	140	2.2	967	8.2
APR.											
12...	--	1.4	--	507	.69	7910	270	110	1.8	--	--
MAY											
11...	--	.30	--	253	.34	7760	150	59	1.2	418	8.0
JUNE											
09...	--	.23	20	217	.30	8690	120	22	1.1	370	8.1
JULY											
06...	--	.13	--	261	.35	6390	160	61	1.2	394	7.7
AUG.											
10...	--	.04	--	519	.71	4540	280	130	2.0	764	7.8
22-25	--	--	--	598	.81	5040	300	150	2.0	919	8.3
26-27	--	--	--	1180	1.60	9620	660	520	2.0	1590	8.0
28...	--	--	--	--	--	--	--	--	--	--	--
29-31	--	--	--	748	1.02	7090	370	200	2.5	1110	8.3
SEP.											
09...	.4	.35	210	612	.83	5970	320	150	2.2	942	8.0

GREEN RIVER BASIN

09315000 GREEN RIVER AT GREEN RIVER, UTAH--Continued

SPECIFIC CONDUCTANCE (MICROMHOS AT 25°C), WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	922	994	958	---	832	886	685	---	385	400	730	---
2	915	1000	942	---	842	1010	---	---	380	400	780	1120
3	---	981	952	---	864	1030	---	---	460	---	770	1080
4	908	1030	934	---	812	1070	---	---	450	410	770	975
5	916	1030	961	---	814	1070	693	---	440	480	---	1000
6	---	1030	958	---	---	945	698	495	---	---	780	880
7	---	1020	958	---	---	954	749	390	385	480	780	920
8	919	1020	945	---	882	912	751	370	395	---	800	935
9	920	1020	951	---	865	914	781	375	385	---	---	935
10	1080	1050	1000	---	870	---	776	455	395	480	---	935
11	1090	1020	997	962	883	948	776	455	400	500	---	930
12	1080	1020	1010	968	863	888	779	455	325	510	---	875
13	1070	1020	955	953	870	---	711	505	---	510	---	935
14	924	---	---	929	872	---	706	505	335	510	800	935
15	1010	---	---	899	873	904	705	555	---	510	800	925
16	1000	2760	---	886	856	---	515	550	330	520	800	930
17	1000	1070	---	886	876	904	507	500	330	500	825	930
18	1000	1070	---	878	872	904	511	395	330	525	825	---
19	913	1010	---	884	874	894	499	390	325	560	---	---
20	911	972	---	857	853	876	498	390	335	570	---	980
21	1010	969	---	842	873	884	516	410	325	1050	---	980
22	1000	978	---	837	839	886	515	---	345	700	870	980
23	952	981	---	832	866	884	512	---	335	700	870	975
24	949	963	1020	839	---	884	---	455	345	700	870	995
25	974	981	1010	819	903	889	---	455	340	---	870	---
26	973	1000	1070	815	884	851	621	455	340	---	1500	1010
27	970	1000	1050	815	926	865	623	470	345	760	1550	1010
28	990	1010	1030	813	903	849	620	495	340	760	880	1010
29	985	938	1040	831	---	683	552	490	385	710	1020	990
30	987	963	1010	833	---	685	543	440	375	710	1010	990
31	977	---	1020	828	---	631	---	440	---	700	1110	---
MONTH	977	1070	---	---	867	895	634	---	365	---	---	968

TEMPERATURE (°C) OF WATER, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971
(ONCE-DAILY MEASUREMENT)

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	11.0	7.5	4.0	---	1.0	1.0	8.5	---	18.0	19.0	22.0	---
2	10.0	7.5	3.0	---	1.0	1.0	---	---	18.0	19.0	24.0	18.0
3	---	7.5	3.0	---	1.0	1.0	---	---	18.0	---	24.0	18.0
4	10.0	7.5	3.0	---	1.0	1.0	---	---	18.0	19.0	24.0	18.0
5	10.0	7.5	3.0	---	1.0	1.0	8.5	---	18.0	20.0	---	18.0
6	---	7.5	3.0	---	---	1.0	8.5	15.0	---	---	24.0	18.0
7	---	7.0	3.0	---	---	1.0	8.5	15.0	18.0	20.0	23.0	18.0
8	10.0	7.0	1.5	---	0.0	1.0	8.5	15.0	18.0	---	---	18.0
9	9.5	7.0	1.5	---	1.0	1.0	9.5	14.0	18.0	---	---	18.0
10	9.5	7.0	1.5	---	1.0	---	12.0	16.0	18.0	20.0	---	18.0
11	9.5	7.0	1.5	0.0	1.0	3.0	12.0	16.0	17.5	20.0	---	18.0
12	9.5	5.0	1.5	0.0	1.0	3.5	12.0	16.0	17.0	20.0	---	18.0
13	9.5	5.0	0.0	1.0	1.0	---	12.0	17.0	---	21.0	---	18.0
14	9.5	---	---	1.0	1.0	---	12.5	17.0	18.0	21.0	23.0	18.0
15	9.5	---	---	1.0	1.0	3.5	13.0	17.0	---	21.0	24.0	18.0
16	9.5	5.0	---	1.0	1.0	---	13.0	17.0	18.0	21.0	24.0	14.0
17	9.0	5.0	---	1.0	1.5	3.5	13.0	17.0	18.0	21.0	23.0	13.0
18	9.0	5.0	---	1.0	1.5	3.5	13.0	17.0	18.0	21.0	23.0	---
19	9.0	5.0	---	1.0	1.5	3.5	13.0	17.0	17.0	21.0	---	---
20	9.0	3.5	---	1.0	1.5	3.5	13.0	17.0	18.0	22.0	---	12.0
21	9.0	3.5	---	1.0	1.5	3.5	13.0	18.0	18.0	22.0	---	12.0
22	9.0	4.0	---	1.0	1.0	3.5	13.0	---	18.0	22.0	22.0	11.0
23	9.0	4.0	---	1.0	1.0	3.5	13.0	---	18.0	22.0	23.0	11.0
24	9.0	4.0	0.0	1.0	---	8.0	---	16.0	18.0	22.0	23.0	11.0
25	8.0	4.0	0.0	1.0	1.0	8.5	---	17.0	18.0	---	22.0	---
26	8.0	4.0	0.0	1.0	1.0	8.5	13.0	17.0	18.0	---	22.0	11.0
27	8.0	4.0	0.0	1.0	1.0	8.5	13.0	17.0	18.0	22.0	23.0	11.0
28	8.0	4.0	0.0	1.0	1.0	8.5	12.0	18.0	19.0	22.0	22.0	12.0
29	8.0	4.0	0.0	1.0	---	9.0	13.0	17.0	19.0	22.0	22.0	12.0
30	8.0	4.0	0.0	0.0	---	9.0	13.0	18.0	19.0	22.0	22.0	11.0
31	8.0	---	0.0	1.0	---	9.0	---	18.0	---	22.0	22.0	---
MONTH	9.0	5.5	---	---	1.0	4.0	11.5	---	18.0	21.0	---	15.0

09315000 GREEN RIVER AT GREEN RIVER, UTAH--Continued

SUSPENDED-SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCTOBER			NOVEMBER			DECEMBER		
	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
1	2940	78	619	2800	158	1190	2770	304	2270
2	2650	86	615	2720	164	1200	2830	168	1290
3	3190	94	810	2600	148	1040	2830	113	863
4	3530	100	953	2500	424	2860	2770	504	3770
5	3410	108	994	2450	434	2870	2690	448	3250
6	2890	116	905	2430	430	2820	2850	284	2190
7	2870	147	1140	2510	136	922	2640	200	1430
8	2340	178	1120	2470	132	880	2510	136	922
9	2570	209	1450	2430	140	919	2420	122	797
10	2880	240	1870	2500	145	979	2430	184	1210
11	2670	271	1950	2530	121	827	2420	155	1010
12	2530	302	2060	2520	109	742	2480	151	1010
13	2570	333	2310	2590	126	881	2500	112	756
14	3010	366	2970	2650	281	2010	2510	108	732
15	3040	360	2950	2770	436	3260	2360	105	669
16	2840	364	2790	2770	592	4430	2570	101	701
17	2880	364	2830	2780	109	818	2430	97	636
18	3210	364	3150	2740	110	814	2240	94	569
19	3080	364	3030	2700	106	773	2400	90	583
20	2860	364	2810	2750	93	691	2290	86	532
21	2850	364	2800	2690	98	712	2570	82	569
22	2850	364	2800	2640	170	1210	2590	79	552
23	2750	364	2700	2720	258	1890	2100	75	425
24	2720	364	2670	3130	201	1700	1800	71	345
25	2690	364	2640	2910	209	1640	1800	70	340
26	2720	364	2670	2710	103	754	1800	82	399
27	2700	364	2610	2610	113	796	1810	81	396
28	2650	136	973	2900	104	814	1830	92	455
29	2670	132	952	2900	199	1560	1870	88	444
30	2670	129	930	2830	483	3690	1900	100	513
31	2700	144	1050	--	--	--	1970	106	564
TOTAL	87930	--	60161	80250	--	45692	72980	--	30182
DAY	JANUARY			FEBRUARY			MARCH		
	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
1	1860	126	633	3200	297	2570	2280	205	1260
2	1800	146	710	3240	309	2700	2170	176	1030
3	1800	165	807	3230	347	3030	1820	159	781
4	1800	186	904	3250	303	2660	2430	231	1520
5	1800	206	1000	3300	299	2660	2240	176	1060
6	1800	226	1100	3300	248	2210	2580	222	1550
7	1800	246	1200	3250	238	2090	2850	322	2480
8	1800	266	1290	3100	228	1910	2880	198	1540
9	1770	286	1370	2900	218	1710	2620	230	1630
10	1790	306	1480	2740	250	1850	2510	232	1570
11	2430	326	2140	2650	253	1810	2730	234	1720
12	2500	188	1270	2570	277	1920	2750	432	3210
13	2500	510	3440	2820	298	2270	2610	585	4120
14	2500	320	2160	3210	284	2460	2760	738	5500
15	2500	204	1380	3170	252	2160	2920	891	7020
16	2730	191	1410	3090	412	3440	2960	886	7080
17	2730	199	1470	3090	304	2540	3020	880	7180
18	2700	194	1410	3200	318	2750	2910	953	7490
19	2630	208	1480	3260	324	2850	2740	935	6920
20	2540	155	1060	3370	278	2530	2740	830	6140
21	2840	264	2020	3150	281	2390	2790	630	4750
22	3140	274	2320	3000	265	2150	2670	624	4500
23	3100	584	4890	2900	272	2130	2540	634	4350
24	3100	336	2810	2700	364	2650	3270	4190	37000
25	3100	299	2500	2570	393	2730	3500	4240	40100
26	3100	317	2650	2400	252	1630	3750	3770	38200
27	3100	334	2800	2300	222	1380	4710	3710	47200
28	3100	312	2610	2170	171	1000	4810	3330	43200
29	3100	287	2400	--	--	--	5450	3700	54400
30	3200	213	1840	--	--	--	7140	7300	141000
31	3200	205	1770	--	--	--	8520	14400	331000
TOTAL	77860	--	56324	83130	--	64180	101670	--	816501

09315000 GREEN RIVER AT GREEN RIVER, UTAH--Continued

SUSPENDED-SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	APRIL			MAY			JUNE		
	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
1	7370	6900	137000	9080	700	17200	17300	1250	58400
2	6200	2200	36800	7560	400	8160	19500	1470	77400
3	6050	800	13100	6740	400	7280	21000	2800	159000
4	6590	1550	27600	6910	400	7460	18500	2050	102000
5	6320	1280	21800	6730	350	6360	15900	1560	67000
6	5560	960	14400	8310	530	11900	14700	1150	45600
7	5300	1280	18300	11600	2160	67700	14800	680	27200
8	4810	1550	20100	13400	3100	112000	14700	534	21200
9	4680	1630	20600	12600	2250	76500	13800	732	27300
10	4980	1370	18400	11600	1760	55100	13800	690	25700
11	5300	1000	14300	11600	1530	47900	14300	679	26200
12	5830	1000	15700	12100	1500	49000	15500	1400	58600
13	6420	620	10700	12200	1300	42800	16000	1370	59200
14	7160	700	13500	11800	900	28700	16000	1340	57900
15	8970	1300	31500	10900	500	14700	15900	1270	54500
16	9790	1260	33300	11300	600	18300	16600	1200	53800
17	10300	1550	43100	13900	1300	48800	18800	1320	67000
18	10200	1400	38600	16000	2200	95000	20000	1440	77800
19	10900	1630	48000	17100	2500	115000	21200	1330	76100
20	12200	1550	51100	17400	1450	68100	21700	782	45800
21	12300	1490	49500	16100	1000	43500	21900	736	43500
22	11400	1170	36000	13500	800	29200	21900	737	43600
23	10700	820	23700	11800	700	22300	21100	554	31600
24	9870	630	16800	10500	603	17100	20700	550	30700
25	8990	760	18400	9720	529	13900	20300	550	30100
26	9390	1480	37500	10100	545	14900	19500	555	29200
27	8940	1370	33100	11000	589	17500	18900	571	29100
28	8200	1150	25500	11000	500	14900	18100	563	27500
29	8090	750	16400	10700	505	14600	16900	394	18000
30	8770	550	13000	12100	830	27100	15300	417	17200
31	--	--	--	14800	1010	40400	--	--	--
TOTAL	241580	--	897800	360150	--	1153360	534600	--	1488200

DAY	JULY			AUGUST			SEPTEMBER		
	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
1	14400	338	13100	3380	75	684	3360	1400	12700
2	13000	398	14000	3370	71	646	3370	1310	11900
3	11700	279	8810	3200	77	665	3370	1190	10800
4	10700	355	10300	3080	72	599	3440	385	3580
5	9720	287	7530	3020	161	1150	3380	1080	9860
6	8950	1030	24900	2940	210	1670	3360	2220	20100
7	8500	842	19300	3150	215	1830	3520	311	2960
8	7990	653	14100	3300	244	2170	3700	321	3210
9	7590	464	9510	3300	272	2420	3530	1190	11300
10	6980	276	5200	3240	301	2630	3440	387	3590
11	6580	173	3070	3250	239	2100	3650	1210	11900
12	6320	225	3840	3230	177	1540	3880	392	4110
13	6110	265	4370	3200	115	994	3950	119	1270
14	5830	117	1840	3130	53	448	3840	98	1020
15	5510	178	2650	3110	39	327	3870	92	961
16	5430	213	3120	3050	103	848	3840	85	881
17	5140	287	3980	3050	148	1220	3690	84	837
18	5140	336	4660	3090	194	1620	3580	84	812
19	5100	1320	18200	3040	239	1960	3400	126	1160
20	4770	1130	14600	3080	420	3490	3530	168	1600
21	4660	1450	18200	3350	2300	20800	3570	125	1200
22	4460	1200	14500	3260	2040	18000	3480	134	1260
23	4240	750	8590	3090	1950	16300	3420	91	840
24	4250	720	8260	3020	970	7910	3360	60	544
25	4270	579	6680	3120	550	4630	3270	54	477
26	4220	438	4990	3040	800	6570	3290	49	435
27	4090	296	3270	3000	7000	56700	3330	50	450
28	3930	154	1630	3680	10300	102000	3370	42	382
29	3640	91	894	3370	4600	41900	3430	39	361
30	3510	81	768	3670	4600	45600	3410	104	958
31	3410	83	764	3500	2900	27400	--	--	--
TOTAL	200140	--	255626	99310	--	376821	105630	--	121458

TOTAL DISCHARGE FOR YEAR (CFS-DAYS)
TOTAL SUSPENDED-SEDIMENT DISCHARGE FOR YEAR (TONS)

2045230
5366305

GREEN RIVER BASIN

45

09315000 GREEN RIVER AT GREEN RIVER, UTAH--Continued

PARTICLE-SIZE DISTRIBUTION OF SUSPENDED SEDIMENT, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DATE	TIME	TEMP- ERATURE (DEG C)	DIS- CHARGE (CFS)	SUS- PEN- DED SED- IMENT (MG/L)	SUS- PEN- DED SED- IMENT CHARGE (T/DAY)	SUS. SED. FALL DIAM. % FINER THAN .002 MM	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	SUS. SED. FALL DIAM. % FINER THAN .500 MM
OCT. 01...	1635	10.0	2920	3020	23800	79	80	99	100	--	--	--
MAR. 09...	1130	.0	2600	231	1620	42	55	--	94	97	100	--
APR. 12...	1250	10.0	5810	805	12600	35	52	68	82	90	100	--
AUG. 28...	1855	22.0	3430	3640	33700	19	36	79	100	--	--	--

09328500 SAN RAFAEL RIVER NEAR GREEN RIVER, UTAH

LOCATION.--Lat 38°52'20", long 110°22'20", in NE $\frac{1}{4}$ SW $\frac{1}{4}$ sec.27, T.22 S., R.14 E., Emery County, at gaging station at bridge on State Highway 24, 15 miles southwest of Green River, and 35 miles upstream from mouth.

DRAINAGE AREA.--1,670 sq mi, approximately.

PERIOD OF RECORD.--Chemical analyses: November 1946 to September 1949, November 1950 to September 1971.

Water temperatures: July to September 1949, October 1950 to September 1962, October 1964 to September 1971.

Sediment records: March 1948 to September 1949, October 1950 to September 1959.

EXTREMES.--1970-71:

Specific conductance: Minimum daily, 1,200 micromhos June 14, 23.

Water temperatures: Maximum, 29.0°C July 17; minimum, freezing point Dec. 15, Jan. 21, and probably on many days during period of missing record.

Period of record:

Specific conductance: Maximum daily (1948-49, 1950-70), 7,230 micromhos July 15, 1954; minimum daily (1948-49, 1950-71), 689 micromhos June 29, 1957.

Water temperatures: Maximum (1949, 1950-61, 1965-71), 35.0°C July 11, 1954; minimum (1949, 1950-61, 1964-71), freezing point on many days during winter period each year.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DATE	TIME	TEMP- ERATURE (DEG C)	DIS- CHARGE (CFS)	DIS- SOLVED SILICA (SiO2) (MG/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)
OCT. 07...	1400	9.5	49	2.3	232	187	466	9.0	303	0	2070	47
NOV. 11...	0900	3.0	49	6.0	250	200	560	12	309	0	2200	51
FEB. 10...	1500	.0	32	9.0	330	80	480	9.3	369	0	1700	50
MAY 11...	1500	18.0	80	--	210	170	590	16	288	0	2000	51
JULY 06...	1440	22.0	63	--	170	120	310	7.0	256	0	1400	33

DATE	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 CONSTITUENTS) (MG/L)	DIS- SOLVED SOLIDS (TONS PER AC-FT)	DIS- SOLVED SOLIDS (TONS PER DAY)	HARD- NESS (CA+MG) (MG/L)	NON- CAR- BONATE HARD- NESS (MG/L)	SODIUM AD- SORP- TION RATIO	SPECI- FIC COND- UCTANCE (MICRO- MHOS)	PH (UNITS)
OCT. 07...	.5	--	--	3160	4.30	418	1350	1100	5.5	3500	8.1
NOV. 11...	.4	--	--	3400	4.62	450	1400	1150	6.4	4010	7.7
FEB. 10...	.4	--	--	2900	3.94	251	1200	897	6.2	3780	8.0
MAY 11...	--	.60	--	3180	4.32	687	1200	990	7.3	4013	7.6
JULY 06...	--	.00	270	2170	2.95	369	920	710	4.5	2720	7.9

09328500 SAN RAFAEL RIVER NEAR GREEN RIVER, UTAH--Continued

SPECIFIC CONDUCTANCE (MICROMHOS AT 25°C), WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

[illegible]

TEMPERATURE (°C) OF WATER, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971
(ONCE-DAILY MEASUREMENT)

[illegible]

DIRTY DEVIL RIVER BASIN

47

09330210 PLEASANT CREEK NEAR CAINEVILLE, UTAH

LOCATION.--Lat 38°16'20", long 111°05'30", in SW $\frac{1}{4}$ NE $\frac{1}{4}$ sec.19, T.29 S., R.7 E., Wayne County, at gaging station 0.2 mile upstream from mouth, at confluence with Fremont River, and 6.5 miles west of Caineville.

DRAINAGE AREA.--115 sq mi, approximately.

PERIOD OF RECORD.--Sediment records: April 1969 to September 1971.

EXTREMES.--1970-71:

Sediment concentrations: Maximum daily, 6,000 mg/l Aug. 29; minimum daily, no flow for many days during July and August.

Sediment loads: Maximum daily, 1,340 tons Aug. 29; minimum daily, 0 tons on many days during July and August.

Period of record:

Sediment concentrations: Maximum daily, 55,600 mg/l Aug. 12, 1969; minimum daily, no flow for many days in 1971.

Sediment loads: Maximum daily, 40,900 tons Aug. 29, 1969; minimum daily, 0 tons on many days in 1971.

SUSPENDED-SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCTOBER			NOVEMBER			DECEMBER		
	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
1	2.1	46	.26	7.7	375	7.8	1.7	63	.29
2	2.1	46	.26	10	593	16	1.6	56	.24
3	2.1	46	.26	12	772	25	1.6	56	.24
4	2.4	59	.38	12	772	25	1.6	56	.24
5	2.9	79	.62	9.3	518	13	1.6	56	.24
6	5.4	206	3.0	7.2	340	6.6	1.6	56	.24
7	6.0	1130	18	8.6	474	11	1.5	49	.20
8	4.9	181	2.4	9.0	494	12	1.3	37	.13
9	4.8	170	2.2	9.7	535	14	2.0	104	.56
10	4.4	152	1.8	7.6	246	5.0	2.6	438	3.1
11	6.8	316	5.8	4.6	161	2.0	2.3	122	.76
12	7.7	375	7.8	3.2	93	.80	1.9	82	.42
13	6.5	285	5.0	2.7	69	.50	1.8	72	.35
14	7.0	536	10	2.4	59	.38	1.7	63	.29
15	8.5	436	10	2.1	46	.26	2.5	141	.95
16	9.9	561	15	2.0	43	.23	2.3	122	.76
17	7.6	380	7.8	1.9	41	.21	2.7	165	1.2
18	7.1	334	6.4	1.9	41	.21	2.2	111	.66
19	7.1	334	6.4	1.8	39	.19	1.8	72	.35
20	6.7	304	5.5	1.7	37	.17	1.6	56	.24
21	6.8	316	5.8	1.5	35	.14	2.3	122	.76
22	6.6	297	5.3	1.5	35	.14	2.4	131	.85
23	6.2	263	4.4	1.6	35	.15	1.6	56	.24
24	6.1	255	4.2	1.6	35	.15	1.9	82	.42
25	7.5	360	7.3	1.5	35	.14	1.5	49	.20
26	8.4	580	13	1.7	37	.17	3.5	265	2.5
27	8.3	428	9.6	1.8	39	.19	5.0	496	6.7
28	7.3	345	6.8	1.6	35	.15	6.1	668	11
29	8.0	407	8.8	1.6	35	.15	5.8	639	10
30	6.7	304	5.5	1.7	37	.17	6.0	679	11
31	6.8	316	5.8	--	--	--	6.6	786	14
TOTAL	190.7	--	185.38	133.5	--	141.90	80.6	--	69.13

DIRTY DEVIL RIVER BASIN

09330210 PLEASANT CREEK NEAR CAINEVILLE, UTAH--Continued

SUSPENDED-SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	JANUARY			FEBRUARY			MARCH		
	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
1	8.4	1100	25	3.4	784	7.2	.52	100	.14
2	3.9	323	3.4	2.6	513	3.6	.58	100	.16
3	2.9	192	1.5	2.1	353	2.0	.68	100	.18
4	1.7	63	.29	1.4	159	.60	.75	100	.20
5	1.2	34	.11	1.7	240	1.1	1.2	284	.92
6	1.7	63	.29	1.9	292	1.5	1.1	236	.70
7	2.1	102	.58	1.6	208	.90	1.6	509	2.2
8	2.6	157	1.1	1.5	183	.74	1.5	444	1.8
9	3.3	224	2.0	1.1	88	.26	1.4	397	1.5
10	4.0	343	3.7	1.4	159	.60	2.0	759	4.1
11	4.0	343	3.7	2.1	353	2.0	2.3	966	6.0
12	3.7	290	2.9	1.9	292	1.5	1.9	702	3.6
13	3.3	247	2.2	1.8	267	1.3	2.3	966	6.0
14	3.0	198	1.6	1.8	267	1.3	1.7	566	2.6
15	3.4	251	2.3	1.8	267	1.3	1.7	566	2.6
16	3.8	302	3.1	1.7	447	2.1	1.5	636	2.6
17	4.1	343	3.8	1.7	350	1.6	1.2	284	.92
18	4.6	419	5.2	1.7	348	1.6	1.0	192	.52
19	5.5	572	8.5	1.9	292	1.5	1.1	236	.70
20	6.0	679	11	1.8	267	1.3	1.3	342	1.2
21	6.0	1010	16	1.7	240	1.1	1.5	444	1.8
22	5.8	639	10	1.7	240	1.1	1.5	444	1.8
23	5.6	595	9.0	2.3	435	2.7	1.6	509	2.2
24	6.1	668	11	1.9	292	1.5	1.9	1130	5.8
25	4.4	396	4.7	1.9	292	1.5	2.1	811	4.6
26	3.2	257	2.2	.63	100	.17	1.8	638	3.1
27	2.7	165	1.2	.42	100	.11	2.0	759	4.1
28	1.9	82	.42	.49	100	.13	1.7	566	2.6
29	2.3	122	.76	--	--	--	1.4	397	1.5
30	2.7	165	1.2	--	--	--	1.5	444	1.8
31	3.4	251	2.3	--	--	--	1.1	236	.70
TOTAL	117.3	--	141.05	47.94	--	42.31	45.43	--	68.64

DAY	APRIL			MAY			JUNE		
	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
1	.76	236	.48	2.7	465	3.4	2.8	582	4.4
2	.62	190	.32	3.0	654	5.3	2.2	370	2.2
3	3.4	2300	21	2.7	3360	24	2.0	800	4.3
4	3.2	391	3.4	2.4	2180	14	2.0	1020	5.5
5	3.2	1600	14	2.3	940	5.8	2.1	1020	5.8
6	3.4	1710	16	3.6	3480	34	2.1	407	2.3
7	2.0	1470	7.9	4.4	4400	52	1.9	290	1.5
8	.92	191	.47	5.0	764	10	1.7	217	1.0
9	1.1	467	1.4	3.4	1340	12	1.6	400	1.7
10	.63	250	.43	2.8	694	5.2	1.6	206	.89
11	.31	21	.02	2.8	582	4.4	1.7	316	1.5
12	.38	47	.05	2.9	886	6.9	1.9	248	1.3
13	.72	73	.14	2.5	810	5.5	1.8	230	1.1
14	.77	32	.07	3.0	642	5.2	1.8	216	1.0
15	.73	54	.11	2.1	165	.94	1.3	200	.70
16	.77	53	.11	2.0	315	1.7	1.0	178	.48
17	.84	201	.46	2.1	670	3.8	1.1	550	1.6
18	1.0	400	1.1	2.4	965	6.3	1.2	378	1.2
19	1.1	565	1.7	2.5	529	3.6	1.2	342	1.1
20	1.4	382	1.4	2.5	662	4.5	1.2	356	1.2
21	1.5	231	.94	3.0	1980	16	1.1	668	2.0
22	1.6	152	.66	3.7	1690	17	1.0	233	.63
23	1.5	432	1.7	4.1	468	5.2	.95	318	.82
24	2.0	757	4.1	4.3	1290	15	.85	250	.57
25	1.9	1200	6.2	3.2	1230	11	.76	237	.49
26	1.7	1520	7.0	3.2	1560	13	.68	43	.08
27	2.3	2120	13	4.2	1650	19	.60	50	.08
28	5.0	2730	37	4.5	730	8.9	.52	50	.07
29	5.8	1720	27	3.8	1780	18	.52	48	.07
30	4.4	1090	13	2.7	535	3.9	.52	40	.06
31	--	--	--	2.8	876	6.6	--	--	--
TOTAL	54.95	--	181.16	96.6	--	342.14	41.70	--	45.64

DIRTY DEVIL RIVER BASIN

49

09330210 PLEASANT CREEK NEAR CAINEVILLE, UTAH--Continued

SUSPENDED-SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	JULY			AUGUST			SEPTEMBER		
	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
1	.52	13	.02	.93	50	.13	1.3	1400	4.9
2	.58	25	.04	.58	44	.07	.65	200	.35
3	.50	20	.03	0	0	0	33	2200	196
4	.18	10	0	0	0	0	5.9	1400	22
5	.09	10	0	.35	40	.04	1.5	200	.81
6	.04	10	0	.89	80	.19	.60	150	.24
7	.02	10	0	.77	60	.12	1.4	159	.60
8	0	0	0	0	0	0	1.0	70	.19
9	0	0	0	0	0	0	1.2	108	.35
10	0	0	0	0	0	0	1.4	159	.60
11	0	0	0	0	0	0	1.6	282	1.2
12	0	0	0	0	0	0	1.6	208	.90
13	0	0	0	0	0	0	1.4	159	.60
14	0	0	0	0	0	0	1.7	240	1.1
15	0	0	0	0	0	0	1.3	131	.46
16	0	0	0	0	0	0	1.3	131	.46
17	0	0	0	0	0	0	1.5	183	.74
18	0	0	0	.06	100	.02	1.5	183	.74
19	0	0	0	1.2	400	1.3	1.3	131	.46
20	0	0	0	2.4	448	2.9	1.5	183	.74
21	0	0	0	2.1	353	2.0	1.4	107	.40
22	0	0	0	1.6	208	.90	1.6	208	.90
23	.36	100	.10	1.7	240	1.1	1.6	208	.90
24	.32	50	.04	1.5	95	.38	1.2	108	.35
25	.14	25	.01	7.0	200	3.8	.95	100	.26
26	.28	20	.02	.57	437	.67	.89	100	.24
27	0	0	0	53	4100	587	1.1	91	.27
28	0	0	0	84	5500	1250	1.3	131	.46
29	0	0	0	83	6000	1340	1.3	131	.46
30	0	0	0	49	5300	701	1.6	208	.90
31	0	0	0	2.5	2340	16	--	--	--
TOTAL	3.03	--	.26	293.15	--	3907.62	75.59	--	238.58

TOTAL DISCHARGE FOR YEAR (CFS-DAYS)

1180.49

TOTAL SUSPENDED-SEDIMENT DISCHARGE FOR YEAR (TONS)

5363.81

PARTICLE-SIZE DISTRIBUTION OF SUSPENDED SEDIMENT, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DATE	TIME	TEMP- ERATURE (DEG C)	DIS- CHARGE (CFS)	SUS- PEN- DED SED- IMENT DIS- CHARGE (T/DAY)	SUS- PEN- DED SED- IMENT DIS- CHARGE (T/DAY)	SUS. SED. FALL DIAM. % FINER THAN .002 MM	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	SUS. SED. FALL DIAM. % FINER THAN .500 MM
OCT.												
07...	1150	5.0	6.3	1070	18	31	37	63	81	95	--	--
NOV.												
10...	1240	8.0	5.9	227	3.6	11	19	--	54	83	100	--
JAN.												
21...	1540	.0	6.3	627	11	21	25	50	74	93	100	--
MAR.												
16...	1355	14.0	1.7	577	2.6	37	50	--	68	83	100	--
APR.												
03...	1930	7.5	3.6	2300	22	15	19	--	46	74	96	100
22...	1440	21.0	1.6	321	1.4	9	12	--	44	87	100	--
MAY												
06...	2035	11.5	11	21800	647	13	15	28	57	95	100	--
24...	1415	23.0	4.4	1190	14	3	4	--	20	77	100	--
AUG.												
30...	1330	18.0	2.6	4340	30	27	30	51	68	90	100	--

DIRTY DEVIL RIVER BASIN

09330210 PLEASANT CREEK NEAR CAINVILLE, UTAH--Continued

PARTICLE-SIZE DISTRIBUTION OF SURFACE BED MATERIAL,
WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DATE	TIME	TEMP- ERATURE (DEG C)	DIS- CHARGE (CFS)	BED MAT. FALL DIAM.	BED MAT. FALL DIAM.	BED MAT. FALL DIAM.	BED MAT. FALL DIAM.
				% FINER THAN .062 MM	% FINER THAN .125 MM	% FINER THAN .250 MM	% FINER THAN .500 MM
OCT. 07...	1150	5.0	6.3	1	13	46	76
NOV. 10...	1240	8.0	5.9	1	11	46	77
JAN. 21...	1540	.0	6.3	1	10	48	76
APR. 22...	1440	21.0	1.6	1	22	58	77
MAY 24...	1415	23.0	4.4	0	15	55	77

DATE	BED MAT. SIEVE DIAM.	BED MAT. SIEVE DIAM.	BED MAT. SIEVE DIAM.	BED MAT. SIEVE DIAM.	BED MAT. SIEVE DIAM.	BED MAT. SIEVE DIAM.
	% FINER THAN 1.00 MM	% FINER THAN 2.00 MM	% FINER THAN 4.00 MM	% FINER THAN 8.00 MM	% FINER THAN 16.0 MM	% FINER THAN 32.0 MM
OCT. 07...	82	87	92	97	99	100
NOV. 10...	82	85	89	96	100	--
JAN. 21...	79	82	89	95	98	100
APR. 22...	85	89	95	99	100	--
MAY 24...	87	91	95	98	100	--

DIRTY DEVIL RIVER BASIN

51

09330230 FREMONT RIVER NEAR CAINEVILLE, UTAH

LOCATION.--Lat 38°16'40", long 111°04'00", in NE $\frac{1}{4}$ NE $\frac{1}{4}$ sec.20, T.29 S., R.8 E., Wayne County, at gaging station 4.5 miles southwest of Caineville, 9.8 miles east of Fruita, and 2.0 miles downstream from Pleasant Creek.

DRAINAGE AREA.--1,190 sq mi, approximately.

PERIOD OF RECORD.--Water temperatures: March 1967 to September 1969.
Sediment records: March 1967 to September 1971.

EXTREMES.--1970-71:

Sediment concentrations: Maximum daily, 24,000 mg/l Aug. 27; minimum daily, 38 mg/l Apr. 22, 23.
Sediment loads: Maximum daily, 64,000 tons Aug. 27; minimum daily, 2.9 tons July 1.

Period of record:

Sediment concentrations: Maximum daily, 129,000 mg/l July 20, 1969; minimum daily, 11 mg/l July 23, 1968.
Sediment loads: Maximum daily, 105,000 tons Sept. 10, 1969; minimum daily, 1 ton on several days in 1967 and 1968.

SUSPENDED-SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCTOBER			NOVEMBER			DECEMBER		
	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
1	50	148	20	62	430	72	84	353	80
2	50	148	20	60	400	65	84	353	80
3	51	153	21	60	300	49	81	302	66
4	53	189	27	62	300	50	81	302	66
5	53	189	27	65	300	53	84	353	80
6	51	153	21	65	300	53	84	353	80
7	62	430	72	65	300	53	80	287	62
8	62	430	72	66	300	53	83	430	96
9	62	430	72	65	300	53	87	426	100
10	54	206	30	66	300	53	84	344	78
11	53	189	27	65	300	53	77	241	50
12	48	123	16	65	300	53	80	287	62
13	50	148	20	66	310	55	75	212	43
14	50	317	43	63	250	43	75	212	43
15	48	123	16	77	241	50	78	256	54
16	50	148	20	77	241	50	78	256	54
17	51	153	21	80	287	62	80	287	62
18	51	153	21	81	302	66	80	287	62
19	54	206	30	80	287	62	75	212	43
20	56	258	39	81	302	66	68	142	26
21	57	279	43	84	353	80	75	212	43
22	56	258	39	86	388	90	80	287	62
23	57	279	43	86	388	90	78	256	54
24	59	339	54	83	339	76	72	180	35
25	62	430	72	84	353	80	71	167	32
26	62	418	70	89	458	110	78	256	54
27	62	430	72	90	494	120	78	256	54
28	57	279	43	87	426	100	81	302	66
29	63	470	80	86	388	90	80	287	62
30	65	541	95	89	458	110	80	287	62
31	62	430	72	--	--	--	81	302	66
TOTAL	1721	--	1318	2235	--	2060	2452	--	1877

DIRTY DEVIL RIVER BASIN

09330230 FREMONT RIVER NEAR CAINVILLE, UTAH--Continued

SUSPENDED-SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	JANUARY			FEBRUARY			MARCH		
	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
1	80	287	62	108	686	200	89	300	72
2	83	339	76	106	629	180	86	259	60
3	74	200	40	104	605	170	90	321	78
4	65	114	20	86	259	60	96	405	105
5	60	86	14	92	350	87	101	550	150
6	62	96	16	93	370	93	90	321	78
7	68	142	26	86	259	60	95	390	100
8	78	256	54	92	350	87	96	405	105
9	86	388	90	90	351	85	98	454	120
10	100	519	140	93	370	93	103	575	160
11	100	519	140	96	405	105	103	575	160
12	100	519	140	93	370	93	101	550	150
13	100	519	140	93	370	93	103	575	160
14	92	354	88	93	370	93	96	405	105
15	100	519	140	93	370	93	95	390	100
16	120	1110	360	92	350	87	95	376	96
17	130	1480	519	92	350	87	96	405	105
18	140	2120	801	93	344	86	90	321	78
19	130	1480	519	90	321	78	93	370	93
20	108	686	200	89	300	72	93	370	93
21	115	1060	329	90	321	78	95	390	100
22	115	902	280	89	300	72	95	390	100
23	108	686	200	92	350	87	93	370	93
24	104	500	140	93	370	93	93	367	92
25	104	400	112	93	370	93	92	350	87
26	106	381	109	84	2380	540	90	321	78
27	106	500	143	80	1940	419	89	300	72
28	104	605	170	92	350	87	103	575	160
29	104	605	170	--	--	--	104	605	170
30	104	605	170	--	--	--	95	390	100
31	110	741	220	--	--	--	90	321	78
TOTAL	3056	--	5628	2587	--	3471	2948	--	3298

DAY	APRIL			MAY			JUNE		
	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
1	86	231	54	39	189	20	32	200	17
2	83	252	56	39	87	9.2	32	339	29
3	84	247	56	36	92	8.9	26	251	18
4	81	198	43	38	160	16	26	163	11
5	80	185	40	33	91	8.1	26	170	12
6	78	220	46	38	190	19	26	115	8.1
7	75	244	49	51	454	63	26	119	8.4
8	74	168	34	47	718	91.	24	141	9.1
9	80	234	51	41	502	56	23	81	5.0
10	77	190	40	39	280	29	23	79	4.9
11	74	145	29	36	204	20	23	71	4.4
12	75	216	44	36	132	13	32	311	27
13	72	286	56	35	138	13	32	388	34
14	72	158	31	33	119	11	30	466	38
15	72	91	18	29	100	7.8	24	250	16
16	71	166	32	29	105	8.2	24	75	4.9
17	69	138	26	27	110	8.0	26	178	12
18	60	100	16	26	74	5.2	30	168	14
19	48	63	8.2	30	127	10	32	186	16
20	47	52	6.6	30	114	9.2	35	183	17
21	44	45	5.3	30	104	8.4	32	150	13
22	39	38	4.0	26	99	6.9	33	130	12
23	41	38	4.2	33	139	12	33	184	16
24	42	42	4.8	35	175	17	30	160	13
25	42	44	5.0	30	169	14	29	137	11
26	42	45	5.1	29	87	6.8	27	89	6.5
27	41	60	6.6	32	277	24	26	85	6.0
28	39	120	13	29	137	11	26	81	5.7
29	39	130	14	32	166	14	24	78	5.1
30	39	150	16	33	145	13	24	50	3.2
31	--	--	--	29	124	9.7	--	--	--
TOTAL	1866	--	813.8	1050	--	562.4	836	--	397.3

09330230 FREMONT RIVER NEAR CAINVILLE, UTAH--Continued

SUSPENDED-SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	JULY			AUGUST			SEPTEMBER		
	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
1	24	44	2.9	48	115	15	62	4000	670
2	32	50	4.3	47	71	9.0	58	2500	392
3	33	100	8.9	45	99	12	190	7800	4000
4	27	100	7.3	44	84	10	105	5000	1420
5	27	100	7.3	36	232	23	75	3000	608
6	27	104	7.6	56	195	29	66	3000	535
7	29	110	8.6	136	600	220	215	13000	7550
8	27	115	8.4	114	460	142	130	6000	2110
9	27	107	7.8	103	456	127	100	1000	270
10	26	98	6.9	99	407	109	110	500	149
11	27	90	6.6	97	358	94	120	260	84
12	30	81	6.6	95	309	79	85	238	55
13	29	73	5.7	92	260	65	64	216	37
14	27	65	4.7	90	211	51	45	194	24
15	26	57	4.0	90	200	49	41	187	21
16	26	70	4.9	88	200	48	35	179	17
17	26	80	5.6	86	200	46	34	172	16
18	26	400	28	86	200	46	36	164	16
19	81	3300	722	85	200	46	36	157	15
20	87	2600	611	83	200	45	41	150	17
21	101	4000	1090	82	200	44	43	142	16
22	138	10000	3730	101	900	245	42	140	16
23	95	2500	641	137	1000	370	44	139	17
24	81	200	44	110	1320	392	45	138	17
25	74	200	40	204	7900	4350	42	136	15
26	68	200	37	398	6500	6980	42	134	15
27	63	150	26	988	24000	64000	41	133	15
28	60	83	13	920	17000	42200	41	132	15
29	57	100	15	310	6000	5020	41	130	14
30	54	200	29	84	3600	816	45	130	16
31	53	357	51	72	5070	986	--	--	--
TOTAL	1508	--	7185.1	5026	--	126668.0	2074	--	18162

TOTAL DISCHARGE FOR YEAR (CFS-DAYS)

TOTAL SUSPENDED-SEDIMENT DISCHARGE FOR YEAR (TONS)

27359
171440.6

PARTICLE-SIZE DISTRIBUTION OF SUSPENDED SEDIMENT, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DATE	TIME	TEMP- ERATURE (DEG C)	DIS- CHARGE (CFS)	SUS- PENDED SEDIM- ENT (MG/L)	SUS- PENDED SEDIM- ENT DIS- CHARGE (T/DAY)	SUS. SED. FALL DIAM. % FINER THAN .002 MM	SUS. SED. FALL DIAM. % FINER THAN .004 MM
OCT.							
07...	1000	6.0	68	1100	202	4	7
NOV.							
10...	1450	6.0	65	417	73	6	9
DEC.							
08...	1535	3.0	85	362	83	10	14
JAN.							
21...	1250	6.0	121	1070	350	12	17
MAR.							
16...	1115	4.0	92	330	82	14	22
JULY							
20...	2025	21.0	80	1300	281	33	46
22...	0920	16.0	146	10300	4060	46	62
AUG.							
05...	0850	16.5	41	228	25	16	27
26...	1620	24.5	358	2740	2650	42	55

DATE	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	SUS. SED. FALL DIAM. % FINER THAN .500 MM	SUS. SED. FALL DIAM. % FINER THAN 1.00 MM
OCT.						
07...	14	32	71	96	100	--
NOV.						
10...	--	37	66	90	98	100
DEC.						
08...	--	45	79	98	100	--
JAN.						
21...	31	54	80	97	100	--
MAR.						
16...	--	56	82	99	100	--
JULY						
20...	70	96	100	--	--	--
22...	85	95	99	100	--	--
AUG.						
05...	--	64	82	100	--	--
26...	71	84	97	100	--	--

DIRTY DEVIL RIVER BASIN

09330230 FREMONT RIVER NEAR CAINVILLE, UTAH--Continued

PARTICLE-SIZE DISTRIBUTION OF SURFACE BED MATERIAL

WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DATE	TIME	TEMP- ERATURE (DEG C)	DIS- CHARGE (CFS)	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
OCT. 07...	1000	6.0	68	0	3	10	19
NOV. 10...	1450	6.0	65	0	2	6	8
DEC. 08...	1535	3.0	85	0	2	6	9
JAN. 21...	1250	6.0	121	1	3	17	42
AUG. 05...	0850	16.5	41	1	5	19	38

DATE	BED MAT. SIEVE 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
OCT. 07...	24	28	34	45	64	78
NOV. 10...	10	12	16	25	49	80
DEC. 08...	10	12	16	24	41	68
JAN. 21...	54	61	72	85	95	300
AUG. 05...	49	54	62	75	95	10

SAN JUAN RIVER BASIN

55

09378700 COTTONWOOD WASH NEAR BLANDING, UTAH

LOCATION.--Lat 37°33'40", long 109°34'40", in NE $\frac{1}{4}$ NW $\frac{1}{4}$ sec.23, T.37 S., R.21 E., San Juan County, at gaging station about 2 miles downstream from Brush Basin Canyon, and 7 miles southwest of Blanding.

DRAINAGE AREA.--205 sq mi.

PERIOD OF RECORD.--Water temperatures: March 1968 to September 1970.

Sediment records: March 1968 to September 1971.

EXTREMES.--1970-71:

Sediment concentrations: Maximum daily, 190,000 mg/l Aug. 23; minimum daily, no flow for many days.

Sediment loads: Maximum daily, 36,600 tons Aug. 2; minimum daily, 0 tons on many days.

Period of record:

Sediment concentrations: Maximum daily, 190,000 mg/l Aug. 23, 1971; minimum daily, no flow for many days each year.

Sediment loads: Maximum daily, 1,800,000 tons Aug. 1, 1968; minimum daily, 0 tons on many days each year.

SUSPENDED-SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCTOBER			NOVEMBER			DECEMBER		
	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
1	0	0	0	.20	100	.05	2.0	1280	6.9
2	0	0	0	.20	100	.05	1.4	476	1.8
3	0	0	0	.20	100	.05	1.2	300	.97
4	0	0	0	.20	100	.05	.84	200	.45
5	0	0	0	.58	150	.23	.84	200	.45
6	0	0	0	.58	150	.23	1.6	740	3.2
7	0	0	0	2.3	1770	11	1.4	476	1.8
8	0	0	0	2.7	2330	17	1.4	476	1.8
9	0	0	0	.84	500	1.1	2.5	2070	14
10	0	0	0	.47	200	.25	2.3	1770	11
11	0	0	0	.47	150	.19	2.5	2070	14
12	0	0	0	.47	150	.19	2.0	1280	6.9
13	0	0	0	.47	150	.19	1.2	300	.97
14	0	0	0	.28	150	.11	1.5	617	2.5
15	0	0	0	.09	150	.04	1.5	500	2.0
16	0	0	0	.09	150	.04	1.5	500	2.0
17	0	0	0	.47	150	.19	1.5	500	2.0
18	0	0	0	.84	200	.45	1.5	500	2.0
19	0	0	0	.84	200	.45	1.4	500	1.9
20	0	0	0	1.2	300	.97	1.5	500	2.0
21	0	0	0	1.2	300	.97	1.5	500	2.0
22	0	0	0	1.4	476	1.8	1.5	500	2.0
23	0	0	0	2.3	1770	11	1.5	500	2.0
24	0	0	0	1.8	1030	5.0	1.5	500	2.0
25	.20	100	.05	1.8	1030	5.0	1.0	300	.81
26	.20	100	.05	4.7	5990	76	.70	150	.28
27	.20	100	.05	3.4	3590	33	.40	100	.11
28	.20	100	.05	2.5	2070	14	.30	100	.08
29	.20	100	.05	2.3	1770	11	.20	100	.05
30	.20	100	.05	2.9	2680	21	.20	100	.05
31	.20	100	.05	--	--	--	0	0	0
TOTAL	1.40	--	.35	37.79	--	211.60	40.38	--	88.02

SAN JUAN RIVER BASIN

09378700 COTTONWOOD WASH NEAR BLANDING, UTAH--Continued

SUSPENDED-SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	JANUARY			FEBRUARY			MARCH		
	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
1	0	0	0	1.5	552	2.2	2.0	500	2.7
2	0	0	0	1.5	587	2.4	2.0	500	2.7
3	0	0	0	1.5	619	2.5	2.0	750	4.1
4	0	0	0	1.4	476	1.8	2.0	1000	5.4
5	0	0	0	1.5	617	2.5	2.0	1000	5.4
6	0	0	0	1.5	617	2.5	1.2	1000	3.2
7	0	0	0	1.5	617	2.5	1.6	1000	4.3
8	0	0	0	1.5	617	2.5	2.3	1500	9.3
9	0	0	0	2.5	2070	14	2.0	1400	7.6
10	0	0	0	2.5	2070	14	1.4	1400	5.3
11	0	0	0	2.7	2330	17	1.6	1400	6.0
12	0	0	0	2.7	1670	12	1.6	1400	6.0
13	0	0	0	2.7	1010	7.4	1.8	1480	7.2
14	0	0	0	2.7	356	2.6	1.4	476	1.8
15	0	0	0	2.7	400	2.9	1.4	476	1.8
16	0	0	0	2.3	400	2.5	1.2	300	.97
17	0	0	0	2.5	500	3.4	1.6	740	3.2
18	.50	100	.14	2.5	500	3.4	.58	200	.31
19	.50	100	.14	2.0	500	2.7	.70	200	.38
20	.50	100	.14	2.0	500	2.7	1.0	250	.68
21	1.5	167	.68	2.0	500	2.7	.84	200	.45
22	1.5	202	.82	2.0	500	2.7	.70	200	.38
23	1.5	237	.96	2.0	500	2.7	1.4	516	2.0
24	1.5	272	1.1	2.0	500	2.7	1.4	476	1.8
25	1.5	307	1.2	2.0	500	2.7	1.2	300	.97
26	1.5	342	1.4	2.0	500	2.7	.58	356	.56
27	1.5	377	1.5	1.8	500	2.4	1.2	300	.97
28	1.5	412	1.7	2.0	500	2.7	.58	200	.31
29	1.5	447	1.8	--	--	--	1.4	476	1.8
30	1.5	482	2.0	--	--	--	1.6	740	3.2
31	1.5	517	2.1	--	--	--	1.2	460	1.5
TOTAL	18.00	--	15.68	57.5	--	124.8	43.48	--	92.28
DAY	APRIL			MAY			JUNE		
	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
1	.58	200	.31	.47	200	.25			
2	.84	250	.57	.47	200	.25			
3	1.4	476	1.8	.20	100	.05			
4	1.0	300	.81	.13	100	.04			
5	.70	250	.47	.58	150	.23			
6	1.2	300	.97	2.9	648	5.1			
7	1.4	351	1.3	2.7	880	6.4			
8	1.6	740	3.2	17	4130	190			
9	1.2	300	.97	2.0	2300	12			
10	1.4	476	1.8	1.0	1200	3.2			
11	1.0	250	.68	.84	595	1.3			
12	.84	250	.57	.84	450	1.0			
13	.70	250	.47	1.4	476	1.8			
14	.58	179	.28	2.3	750	4.7			
15	.84	250	.57	1.8	600	2.9			
16	.84	250	.57	.84	400	.91			
17	.58	200	.31	.13	100	.04			
18	.84	250	.57	.06	100	.02			
19	1.0	300	.81	.06	100	.02			
20	1.2	300	.97	.13	100	.04			
21	1.0	167	.45	.01	50	0			
22	1.2	300	.97	0	0	0			
23	1.2	300	.97	0	0	0			
24	.84	250	.57	0	0	0			
25	.20	100	.05	.02	50	0			
26	.20	100	.05	0	0	0			
27	.28	100	.08	0	0	0			
28	.58	200	.31	0	0	0			
29	.58	200	.31	0	0	0			
30	.47	200	.25	0	0	0			
31	--	--	--	0	0	0			
TOTAL	26.29	--	22.01	35.88	--	230.25	0	--	0

SAN JUAN RIVER BASIN

57

09378700 COTTONWOOD WASH NEAR BLANDING, UTAH--Continued

SUSPENDED-SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	JULY			AUGUST			SEPTEMBER		
	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
1	0	0	0	0	0	0	0	0	0
2	0	0	0	0	0	0	0	0	0
3	0	0	0	0	0	0	0	0	0
4	0	0	0	0	0	0	0	0	0
5	0	0	0	0	0	0	0	0	0
6	0	0	0	0	0	0	0	0	0
7	0	0	0	0	0	0	0	0	0
8	0	0	0	0	0	0	0	0	0
9	0	0	0	0	0	0	0	0	0
10	0	0	0	0	0	0	0	0	0
11	0	0	0	0	0	0	0	0	0
12	0	0	0	0	0	0	0	0	0
13	0	0	0	0	0	0	0	0	0
14	0	0	0	0	0	0	0	0	0
15	0	0	0	0	0	0	0	0	0
16	0	0	0	0	0	0	0	0	0
17	0	0	0	0	0	0	0	0	0
18	0	0	0	0	0	0	0	0	0
19	0	0	0	0	0	0	0	0	0
20	0	0	0	18	33000	1600	0	0	0
21	14	11000	416	20	52000	2810	0	0	0
22	8.8	24000	570	114	119000	36600	0	0	0
23	0	0	0	10	190000	5130	0	0	0
24	0	0	0	1.0	500	1.4	0	0	0
25	0	0	0	0	0	0	0	0	0
26	0	0	0	39	32000	3370	0	0	0
27	0	0	0	10	15000	405	0	0	0
28	0	0	0	118	55200	17600	0	0	0
29	0	0	0	20	17000	918	0	0	0
30	0	0	0	9.1	18000	442	42	16000	1810
31	0	0	0	10	35000	945	--	--	--
TOTAL	22.8	--	986	369.1	--	69821.4	42	--	1810
TOTAL DISCHARGE FOR YEAR (CFS-DAYS)									694.62
TOTAL SUSPENDED-SEDIMENT DISCHARGE FOR YEAR (TONS)									73402.39

PARTICLE-SIZE DISTRIBUTION OF SUSPENDED SEDIMENT, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DATE	TIME	TEMP- ERATURE (DEG C)	DIS- CHARGE (CFS)	SUS- PENDED SEDIMENT (MG/L)	SUS- PENDED SEDIMENT DIS- CHARGE (T/DAY)	SUS. SED. FALL DIAM. % FINER THAN .002 MM	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	SUS. SED. FALL DIAM. % FINER THAN .500 MM
FEB.												
03...	1725	.0	1.8	619	3.0	33	47	59	70	89	100	--
JULY												
22...	1155	24.0	17	15000	688	76	94	100	--	--	--	--
AUG.												
20...	2230	17.0	104	132000	37100	22	23	43	81	98	100	--
21...	1930	16.0	20	30300	1640	50	65	94	98	100	--	--
28...	1215	19.0	158	73300	31300	24	27	43	75	95	100	--
31...	0700	13.0	15	39400	1600	52	66	95	97	99	100	--
SEP.												
30...	0655	10.0	96	37800	9800	13	13	29	70	93	98	100

PARTICLE-SIZE DISTRIBUTION OF SURFACE BED MATERIAL, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DATE	TIME	TEMP- ERATURE (DEG C)	DIS- CHARGE (CFS)	BED MAT. FALL DIAM. % FINER THAN .125 MM	BED MAT. FALL DIAM. % FINER THAN .250 MM	BED MAT. FALL DIAM. % FINER THAN .500 MM	BED MAT. SIEVE 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
FEB.												
03...	1725	.0	1.8	16	58	80	86	88	91	94	98	100

SAN JUAN RIVER BASIN

09379500 SAN JUAN RIVER NEAR BLUFF, UTAH
(Irrigation network station)

LOCATION.--Lat 37°09'04", long 109°52'00", in SE $\frac{1}{4}$ NW $\frac{1}{4}$ sec.7, T.42 S., R.19 E., San Juan County, at bridge on State Highway 47, 1,800 ft downstream from gaging station, 20 miles southwest of Bluff, and 114 miles upstream from mouth.

DRAINAGE AREA.--23,000 sq mi, approximately (at gaging station).

PERIOD OF RECORD.--Chemical analyses: February to June 1927, October 1929 to September 1971.

Water temperatures: May 1944 to September 1961, October 1964 to September 1971.

Sediment records: August to September 1928, July 1929 to September 1971.

EXTREMES.--1970-71:

Specific conductance: Maximum daily, 1,900 micromhos Aug. 9; minimum daily, 420 micromhos June 25.

Water temperatures: Maximum, 28.5°C July 13, 14, 19; minimum, freezing point on several days during December and January.

Sediment concentrations: Maximum daily, 115,000 mg/l Aug. 28; minimum daily, 333 mg/l July 18.

Sediment loads: Maximum daily, 1,430,000 tons Aug. 28; minimum daily, 584 tons May 3.

Period of record:

Specific conductance (1941-71): Maximum daily, 2,790 micromhos Sept. 19, 1959; minimum daily (1929-71), 208 micromhos June 17, 1952.

Water temperatures: Maximum, 33.0°C July 31, 1959; minimum (1944-61, 1965-71), freezing point on many days during winter period of most years.

Sediment concentrations (1929-71): Maximum daily, 383,000 mg/l Sept. 21, 1929; minimum daily, no flow for several days in 1934 and 1939.

Sediment loads (1929-71): Maximum daily, 12,000,000 tons Oct. 14, 1941; minimum daily, 0 tons on several days in 1934 and 1939.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DATE	TIME	TEMP- ERATURE (DEG C)	DIS- CHARGE (CFS)	DIS- SOLVED SILICA (SI02) (MG/L)	DIS- SOLVED CAL- CIUM (CA) (MG/L)	DIS- SOLVED MAG- NE- SIUM (MG)	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)
OCT.												
21...	0910	10.0	2290	11	65	18	46	3.1	146	0	196	11
NOV.												
20...	1130	--	2370	11	65	17	47	2.3	135	0	192	12
20...	1345	3.0	2370	12	63	18	43	2.4	140	0	190	12
DEC.												
15...	1130	2.0	2320	12	63	16	40	2.2	131	0	160	13
JAN.												
18...	1115	2.0	2580	13	57	14	35	2.5	125	0	170	9.5
FEB.												
03...	1050	5.0	3180	12	49	15	37	2.7	123	0	140	8.3
19...	1700	5.0	1050	--	100	--	--	--	--	--	330	--
MAR.												
07...	1150	.5	2850	12	52	12	32	2.3	126	0	110	24
APR.												
20...	1300	9.0	1350	--	80	24	72	4.6	151	0	280	16
MAY												
12...	1540	17.0	1330	--	94	37	73	3.3	183	0	330	20
JUNE												
14...	1415	21.0	2310	--	67	16	35	2.2	129	0	180	10
JULY												
13...	1050	25.0	1020	--	75	18	50	2.7	138	0	240	14
AUG.												
02...	1345	23.0	454	--	84	35	98	3.9	146	0	410	27
SEP.												
01...	1340	25.0	1610	12	130	25	140	7.9	191	0	500	21

DATE	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 CONSTITU- ENTS) (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)
OCT.											
21...	.1	--	--	423	.58	2620	236	116	1.3	638	7.8
NOV.											
20...	.3	--	--	414	.56	2650	232	121	1.3	632	8.2
20...	.4	--	--	410	.56	2620	230	115	1.2	628	8.1
DEC.											
15...	.3	--	--	370	.50	2320	220	113	1.2	568	8.1
JAN.											
18...	.6	--	0	364	.50	2540	200	97	1.1	511	7.5
FEB.											
03...	--	--	--	325	.44	2790	180	79	1.2	496	7.9
19...	--	--	--	--	--	--	--	--	--	985	8.5
MAR.											
07...	--	--	--	310	.42	2390	180	77	1.0	469	8.3
APR.											
20...	--	.50	--	553	.75	2020	300	170	1.8	809	7.6
MAY											
12...	--	1.0	--	648	.88	2330	390	240	1.6	941	7.9
JUNE											
14...	--	.55	30	374	.51	2330	230	130	1.0	580	7.9
JULY											
13...	--	.07	--	468	.64	1290	260	150	1.3	700	7.7
AUG.											
02...	--	.52	--	730	.99	895	350	230	2.3	1040	7.8
SEP.											
01...	.7	1.7	150	938	1.28	4080	430	270	2.9	1280	7.6

SAN JUAN RIVER BASIN

59

09379500 SAN JUAN RIVER NEAR BLUFF, UTAH--Continued

SPECIFIC CONDUCTANCE (MICROMHOS AT 25°C), WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	614	635	656	502	507	434	728	957	600	495	990	1250
2	610	634	639	---	508	448	700	972	620	540	1000	900
3	---	630	623	535	498	455	---	1050	670	---	1100	910
4	632	632	614	538	506	462	674	1130	710	690	1100	---
5	620	612	---	541	486	455	683	1210	---	675	1200	1000
6	648	625	---	466	---	---	700	1170	670	690	1100	980
7	636	---	605	509	508	---	710	1060	650	680	---	1000
8	633	640	596	496	466	452	740	---	640	690	1550	1010
9	633	669	611	---	468	465	756	942	575	725	1900	1200
10	---	706	608	488	438	483	---	1120	535	---	1350	1700
11	631	771	639	509	461	586	750	1050	515	710	1200	---
12	631	656	610	503	474	761	771	901	---	680	1250	1150
13	620	615	597	512	---	819	830	901	510	680	1400	1020
14	615	---	564	545	480	816	830	856	585	690	---	970
15	617	612	563	542	594	821	904	---	585	710	1200	970
16	615	589	595	---	795	829	789	770	610	750	1200	---
17	---	604	571	511	889	814	---	666	600	---	1200	1020
18	626	591	560	502	853	834	750	631	585	790	1150	1080
19	628	600	---	513	957	825	754	605	---	820	1250	1080
20	626	610	---	597	---	---	754	592	475	840	1200	1080
21	630	---	556	619	837	772	748	603	455	1220	---	1100
22	628	594	550	569	475	754	769	---	445	1350	1500	1080
23	617	591	538	---	457	724	792	705	445	1650	1800	1100
24	---	582	565	508	453	724	---	762	435	---	1450	1080
25	---	587	513	493	465	722	---	779	420	1380	1400	---
26	662	583	492	484	461	788	912	764	---	975	1500	1100
27	641	607	558	488	---	---	946	806	460	920	1250	1130
28	660	---	525	492	450	792	791	850	460	900	---	1130
29	638	731	550	552	---	789	940	---	475	890	1100	1120
30	635	659	528	---	---	794	914	696	495	925	940	1050
31	643	---	524	523	---	776	---	590	---	1380	890	---
MONTH	630	629	576	521	562	681	785	857	547	868	1270	---

TEMPERATURE (°C) OF WATER, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971
(ONCE-DAILY MEASUREMENT)

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	17.0	10.0	6.0	1.0	5.5	0.5	9.5	17.0	16.0	23.0	25.5	25.0
2	16.0	8.0	5.0	---	6.0	1.0	11.0	16.0	16.0	23.0	28.0	25.0
3	---	6.0	4.0	1.0	4.0	2.5	---	17.0	16.0	---	24.5	19.5
4	18.0	6.5	3.5	0.0	3.0	0.5	10.5	12.0	17.0	23.0	24.0	---
5	15.5	6.5	---	0.0	2.0	4.5	11.5	14.0	---	23.0	25.0	20.5
6	15.0	7.5	---	0.0	---	---	12.0	14.5	17.0	23.0	24.0	23.5
7	9.5	---	4.0	0.0	2.0	---	12.0	14.0	19.0	23.0	---	23.5
8	10.5	6.0	5.0	0.0	3.0	4.0	12.0	---	19.5	23.0	23.5	22.5
9	10.5	6.5	4.5	---	3.0	6.0	12.5	11.5	19.0	26.0	23.5	23.0
10	---	7.0	4.5	5.0	4.0	8.0	---	15.5	19.0	---	25.5	18.0
11	10.5	7.0	4.0	5.0	5.0	7.5	13.0	15.5	18.0	24.0	24.0	---
12	11.0	6.0	2.0	5.0	5.5	10.0	14.5	17.5	---	27.0	25.0	23.5
13	12.0	6.5	3.0	5.0	---	8.0	15.5	18.0	19.5	28.5	24.5	25.0
14	12.0	---	3.0	1.5	5.5	8.5	14.5	19.0	20.5	28.5	---	24.5
15	11.5	5.0	2.0	2.0	6.0	8.5	14.0	---	22.0	26.0	24.5	18.5
16	10.5	4.5	2.0	---	6.5	8.5	15.5	17.0	22.0	26.0	23.5	---
17	---	4.5	2.5	1.0	7.5	9.0	---	15.0	22.0	---	24.0	18.5
18	11.5	4.5	3.0	4.0	7.0	7.5	12.0	13.0	21.0	27.0	24.5	16.0
19	11.0	4.5	---	4.5	5.0	7.5	10.0	14.5	---	28.5	24.0	15.0
20	11.0	5.0	---	5.0	---	---	10.5	17.0	22.0	25.5	25.5	18.0
21	12.0	---	3.0	5.0	4.0	9.0	10.5	15.0	23.0	25.5	---	17.0
22	10.0	3.0	3.0	4.0	2.5	9.0	12.5	---	24.0	27.0	24.0	19.0
23	10.0	5.5	2.5	---	3.0	11.0	11.5	12.0	24.0	25.5	21.5	18.5
24	---	6.5	2.0	2.0	3.5	11.5	---	17.0	24.0	---	25.0	20.0
25	---	6.0	0.5	3.0	3.5	13.5	---	18.0	24.0	28.0	24.5	---
26	7.5	7.0	0.0	4.5	2.0	14.0	10.0	18.5	---	25.0	24.5	15.0
27	6.0	7.5	1.0	4.5	---	---	12.5	18.0	16.0	25.0	25.5	17.0
28	5.5	---	1.5	4.5	1.0	13.0	14.5	18.0	16.0	25.0	---	18.5
29	6.5	6.0	1.5	5.0	---	14.0	15.0	---	13.0	23.5	25.0	16.0
30	10.5	6.5	1.5	---	---	14.0	15.0	13.5	13.0	25.0	23.5	17.0
31	8.0	---	1.5	5.0	---	11.0	---	15.0	---	28.0	25.0	---
MONTH	11.0	6.0	3.0	3.0	4.0	8.0	12.5	15.5	19.5	25.5	24.5	20.0

SAN JUAN RIVER BASIN

09379500 SAN JUAN RIVER NEAR BLUFF, UTAH--Continued

SUSPENDED-SOLIDMENT DISCHARGE, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCTOBER			NOVEMBER			DECEMBER		
	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
1	2240	2780	16800	2290	2960	18300	2370	3540	22700
2	2250	2140	13000	2290	3430	21200	2370	2860	18300
3	2240	2410	14600	2290	3590	22200	2360	2980	19000
4	2250	2670	16200	2300	3490	21700	2310	3310	20600
5	2210	2040	12200	2260	3420	20900	2330	3140	19800
6	2240	3010	18200	2280	3340	20600	2320	2970	18600
7	2210	3050	18200	2370	2510	16100	2310	2800	17500
8	2230	3300	19900	2440	4140	27300	2300	2800	17400
9	2270	3360	20600	2430	3050	20000	2320	3560	22300
10	2300	2760	17100	1800	1600	7780	2370	2940	18800
11	2250	2160	13100	2140	3080	17800	2370	4020	25700
12	2280	2750	16900	2320	3040	19000	2390	3490	22500
13	2260	2650	16200	2330	4300	27100	2300	2840	17600
14	2280	2330	14300	2300	3660	22700	2230	2390	14400
15	2270	2600	15900	2310	3020	18800	2260	2460	15000
16	2400	3280	21300	2300	2660	16500	2280	3530	21700
17	2350	2360	15000	2300	2820	17500	2510	3870	26200
18	2410	1440	9370	2300	4020	25000	2560	3680	25400
19	2390	3140	20300	2290	3240	20000	2630	3530	25100
20	2360	3220	20500	2280	3770	23200	2590	3380	23600
21	2300	2790	17300	2220	3430	20600	2540	3230	22200
22	2260	2360	14400	2210	3090	18400	2630	3220	22900
23	2490	3330	22400	2200	2820	16800	2610	4240	29900
24	2560	3050	21100	2230	2540	15300	2520	4500	30600
25	2360	2760	17600	2300	2290	14200	2500	4200	28400
26	2300	2480	15400	2340	2400	15200	2460	2290	15200
27	2310	2720	17000	2420	3820	25000	2430	2000	13100
28	2300	2310	14300	2500	3330	22500	2480	2000	13400
29	2300	2470	15300	2410	2840	18500	2560	2000	13800
30	2280	2000	12300	2380	3780	24300	2560	4210	29100
31	2300	2000	12400	--	--	--	2510	1280	8670
TOTAL	71450	--	509170	68830	--	594480	75280	--	639470

DAY	JANUARY			FEBRUARY			MARCH		
	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
1	2500	3190	21500	3110	3520	29600	2920	3880	30600
2	2530	2280	15600	3120	3520	29700	2870	4520	35000
3	2530	1380	9430	3190	3520	30300	2860	3840	29700
4	2560	1720	11900	3210	3520	30500	2890	2940	22900
5	2460	2060	13700	3160	3520	30000	2900	3350	26200
6	2250	2400	14600	3080	3520	29300	2980	3610	29000
7	2180	2740	16100	3100	3520	29500	2820	3870	29500
8	2150	3080	17900	3090	3520	29400	2910	4600	36100
9	2200	3410	20300	3030	3520	28800	2910	3460	27200
10	2260	3750	22900	3100	3520	29500	2150	2630	15300
11	2390	4090	26400	3140	3520	29800	1100	1550	4600
12	2500	3420	23100	3120	3520	29700	1080	706	2060
13	2470	3720	24800	3110	3520	29600	1100	1340	3980
14	2460	4220	28000	2130	2250	12900	1100	1840	5460
15	2500	3760	25400	1110	1980	5930	1090	1230	3620
16	2480	3770	25200	1040	2080	5840	1100	1100	3270
17	2600	3780	26500	967	1680	4390	1010	1380	3760
18	2630	3460	24600	1010	1110	3030	1050	1680	4760
19	2650	4160	29800	1010	1260	3440	1000	1540	4160
20	2790	4040	30400	1100	1340	3980	1030	1620	4510
21	3050	4480	36900	2870	6130	47500	1120	1520	4600
22	3140	4890	41500	3110	6000	50400	1150	1520	4720
23	3140	4950	42000	2980	4520	36400	1170	2230	7040
24	3100	5000	41900	2910	4400	34600	1150	1810	5620
25	3040	3110	25500	2980	2200	17700	998	1140	3070
26	3020	3370	27500	2980	3480	28000	988	1420	3790
27	3010	4120	33500	2960	2250	18000	1040	1400	3930
28	3060	3400	28100	2910	1100	8640	1050	1380	3910
29	3080	1510	12600	--	--	--	999	1050	2830
30	3060	2840	23500	--	--	--	1120	1240	3750
31	3050	4170	34300	--	--	--	1290	2120	7380
TOTAL	82840	--	775430	72627	--	666450	50945	--	372320

SUSPENDED-SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

APRIL				MAY			JUNE		
DAY	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
1	1320	1820	6490	723	608	1190	2140	4960	28700
2	1360	1400	5140	652	666	1170	1750	2900	13700
3	1430	1680	6490	598	362	584	1540	1800	7480
4	1340	1960	7090	550	421	625	1600	1980	8550
5	1250	1540	5200	560	526	795	1660	1830	8200
6	1250	1780	6010	652	752	1320	1670	1680	7580
7	1180	2440	7770	1120	979	2960	1690	2490	11400
8	1170	2090	6600	1200	1240	4020	1810	2020	9870
9	1110	1410	4230	1460	3660	14400	2320	3080	19300
10	1130	1140	3480	1580	3750	16000	2380	3500	22500
11	1060	876	2510	1500	6560	26600	2340	3930	24800
12	967	1030	2690	1410	2600	9900	2270	2400	14700
13	929	1070	2680	1370	2760	10200	1970	870	4630
14	954	1230	3170	1610	2270	9870	1820	1800	8850
15	1080	1520	4430	1820	3060	15000	1620	1860	8140
16	1300	1600	5620	2040	3860	21300	1530	1710	7060
17	1310	1160	4100	2000	3640	19700	1880	1780	9040
18	1410	705	2680	2030	2500	13700	2140	2150	12400
19	1250	1190	4020	2140	3100	17900	2090	2230	12600
20	1340	1690	6110	1960	1740	9210	2460	2310	15300
21	1360	1960	7200	1710	1810	8360	2440	1940	12800
22	1350	1820	6630	1390	1560	5850	2670	2340	16900
23	1300	1250	4390	1180	1320	4210	2750	2140	15900
24	1160	1530	4790	1210	1950	6370	2620	2310	16300
25	1060	1800	5150	1360	2450	9000	2450	2320	15300
26	930	1900	4770	1270	1230	4220	2300	1790	11100
27	873	1650	3890	1060	1550	4440	2150	1260	7310
28	857	1530	3540	1150	2410	7480	2100	1580	8960
29	878	1120	2660	1490	3280	13200	2000	2620	14100
30	836	714	1610	2220	4120	24700	1950	2200	11600
31	--	--	--	2440	4960	32700	--	--	--
TOTAL	34744	--	141140	43455	--	316974	62110	--	385070
JULY				AUGUST			SEPTEMBER		
DAY	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
1	1890	2080	10600	529	594	848	1980	34600	185000
2	1770	2020	9650	476	462	594	1470	20000	79400
3	1740	2930	13800	944	2410	6690	1170	9500	30000
4	1430	3840	14800	771	2720	5660	1490	29000	117000
5	1420	1420	5440	602	3480	5660	981	11200	29700
6	1340	1240	4490	510	1740	2400	955	5180	13400
7	1240	1070	3580	505	1500	2050	796	7240	15600
8	1230	1220	4050	1000	10800	30100	811	4920	10800
9	1270	1060	3630	784	17500	37000	2060	14200	79000
10	1290	828	2880	795	12200	26200	1600	13200	57000
11	1230	592	1970	739	4100	8180	1200	10500	34000
12	1070	656	1900	664	5300	9500	922	8120	20200
13	995	352	946	579	7960	12400	810	6340	13900
14	909	626	1540	574	4810	7450	770	4750	9880
15	812	630	1380	512	1660	2290	704	5410	10300
16	756	450	919	447	1680	2030	639	3320	5730
17	707	430	821	433	1040	1220	579	1260	1970
18	654	333	588	477	2210	2850	528	3900	5560
19	655	358	633	436	3390	3990	537	4990	7240
20	658	412	732	537	7820	11300	504	5630	7660
21	797	6810	16400	4220	49600	565000	554	5150	7700
22	1490	17600	80600	5370	73500	1120000	520	1210	1700
23	1070	16300	47100	2940	54400	469000	498	3080	4140
24	1170	29000	91600	5260	74700	1110000	510	4120	5670
25	900	20000	48600	4000	71600	789000	520	3440	4830
26	949	6600	16900	3680	88200	917000	504	2760	3760
27	889	3590	8620	3390	109000	1060000	483	4410	5750
28	837	2780	6280	4620	115000	1430000	520	3220	4520
29	739	1310	2610	2570	61100	436000	638	3910	6740
30	697	973	1830	2670	56000	454000	704	3800	7220
31	592	700	1120	3320	78200	880000	--	--	--
TOTAL	33196	--	406009	54354	--	9408412	25957	--	785370
TOTAL DISCHARGE FOR YEAR (CFS-DAYS)									675788
TOTAL SUSPENDED-SEDIMENT DISCHARGE FOR YEAR (TONS)									15000295

SAN JUAN RIVER BASIN

09379500 SAN JUAN RIVER NEAR BLUFF, UTAH--Continued

PARTICLE-SIZE DISTRIBUTION OF SUSPENDED SEDIMENT, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DATE	TIME	TEMP- ERATURE (DEG C)	DIS- CHARGE (CFS)	SUS- PEN- DED SEDI- MENT (MG/L)	SUS- PEN- DED SED- IMENT DIS- CHARGE (T/DAY)	SUS. SED. FALL DIAM. % FINER THAN .002 MM	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	SUS. SED. FALL DIAM. % FINER THAN .500 MM
MAY 12...	1840	17.0	1330	2980	10700	24	31	44	57	68	87	100
JULY 25...	1200	28.0	834	23100	52000	66	83	95	97	98	100	--
AUG. 22...	1100	24.0	4600	67200	835000	46	53	64	89	96	98	100
24...	1400	25.0	4230	69100	789000	43	53	67	84	97	99	100
SEP. 01...	1315	22.0	1590	24600	106000	59	72	83	96	100	--	--

PARTICLE-SIZE DISTRIBUTION OF SURFACE BED MATERIAL, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DATE	TIME	TEMP- ERATURE (DEG C)	DIS- CHARGE (CFS)	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	BED MAT. SIEVE 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
MAY 12...	1840	17.0	1330	2	5	39	88	96	96	96	96	100

LOCATION.--Lat 37°11'54", long 113°12'25", in SE $\frac{1}{4}$ NW $\frac{1}{4}$ NE $\frac{1}{4}$ sec.28, T.41 S., R.12 W., Washington County, at gaging station 1.1 miles west of Virgin. and 2.3 miles downstream from North Creek.

PERIOD OF RECORD.--Chemical analyses: October 1950 to September 1956.

Water temperatures: October 1950 to September 1956, May 1962 to June 1971 (discontinued).

Sediment records: May 1962 to June 1971 (discontinued).

EXTREMES.--October 1970 to June 1971:

Sediment concentrations: Maximum daily, 39,300 mg/l Nov. 26; minimum daily, 41 mg/l June 19.

Sediment loads: Maximum daily, 79,500 tons Nov. 26; minimum daily, 9.7 tons June 19.

Period of record:

Sediment concentrations: Maximum daily, 150,000 mg/l Sept. 5, 1965; minimum daily, 19 mg/l July 11, 1969.

Sediment loads: Maximum daily, 1,300,000 tons Dec. 6, 1966; minimum daily, 4.6 tons July 11, 1969.

[illegible]

VIRGIN RIVER BASIN

09406000 VIRGIN RIVER AT VIRGIN, UTAH--Continued

SUSPENDED-SEDIMENT DISCHARGE, OCTOBER 1970 TO JUNE 1971

DAY	OCTOBER			NOVEMBER			DECEMBER		
	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
1	80	1000	216	98	800	212	179	1410	681
2	80	1630	352	99	750	200	159	1200	515
3	78	1520	320	94	750	190	148	998	399
4	77	1410	293	98	750	198	139	792	297
5	74	1300	260	100	731	197	135	585	213
6	70	620	117	101	1360	371	134	448	162
7	75	653	132	113	1060	323	136	513	188
8	76	686	141	127	755	259	142	579	222
9	80	718	155	114	717	221	160	644	278
10	80	643	139	103	680	189	198	710	380
11	81	568	124	104	642	180	133	775	278
12	80	493	106	107	636	184	131	872	308
13	80	418	90	108	631	184	130	968	340
14	81	790	173	110	625	186	133	862	310
15	78	1160	244	105	619	175	137	756	280
16	79	1110	237	112	614	186	134	650	235
17	88	1060	252	109	608	179	145	544	213
18	84	1010	229	112	602	182	137	440	163
19	88	960	228	116	583	183	130	409	144
20	90	910	221	120	564	183	138	378	141
21	91	859	211	117	546	172	143	347	134
22	95	734	188	122	527	174	140	316	119
23	91	609	150	127	508	174	130	285	100
24	95	483	124	126	500	170	119	428	138
25	92	540	134	134	1500	543	115	571	177
26	96	596	154	703	39300	79500	120	714	231
27	97	624	163	300	10500	8510	131	516	183
28	99	652	174	148	2000	799	143	317	122
29	98	469	124	239	3530	2920	135	249	91
30	106	800	229	463	11000	18500	129	484	169
31	105	800	227	--	--	--	126	720	245
TOTAL	2664	--	5907	4629	--	115644	4309	--	7456

DAY	JANUARY			FEBRUARY			MARCH		
	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
1	132	640	228	141	973	370	114	530	163
2	137	560	207	137	786	291	110	560	166
3	119	480	154	137	598	221	110	447	133
4	104	400	112	111	506	152	130	299	105
5	109	320	94	112	415	125	137	151	56
6	119	240	77	124	381	128	116	218	68
7	132	464	165	116	347	109	114	286	88
8	141	688	262	117	313	99	128	492	170
9	153	911	376	119	348	112	129	698	243
10	143	1000	386	114	384	118	131	904	320
11	122	1050	346	116	420	132	139	1110	417
12	133	339	122	116	455	143	139	1000	375
13	130	384	135	116	512	160	160	892	385
14	133	430	154	117	570	180	154	783	326
15	129	475	165	116	623	195	133	674	242
16	126	521	177	114	684	211	132	565	201
17	126	566	193	174	1450	681	133	551	198
18	136	645	237	197	2100	1120	128	537	186
19	152	724	297	167	920	415	128	478	165
20	161	803	349	160	840	363	133	418	150
21	167	882	398	138	738	275	132	359	128
22	148	840	336	126	636	216	132	439	156
23	132	798	284	135	534	195	136	520	191
24	125	756	255	124	432	145	149	600	241
25	127	714	245	124	332	111	150	360	146
26	131	672	238	115	420	130	157	540	229
27	138	671	250	102	509	140	198	1220	652
28	141	670	255	104	500	140	210	840	476
29	134	669	242	--	--	--	181	720	352
30	132	900	321	--	--	--	181	670	327
31	134	1160	420	--	--	--	199	571	307
TOTAL	4146	--	7480	3589	--	6677	4423	--	7362

VIRGIN RIVER BASIN

65

09406000 VIRGIN RIVER AT VIRGIN, UTAH--Continued

SUSPENDED-SEDIMENT DISCHARGE, OCTOBER 1970 TO JUNE 1971

DAY	APRIL			MAY			JUNE		
	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
1	152	510	209	137	1000	370	175	550	260
2	138	450	168	162	1900	831	155	366	153
3	133	389	140	172	2200	1020	137	282	104
4	132	288	103	179	1500	725	122	198	65
5	131	321	114	170	1200	551	120	200	65
6	137	355	131	277	5040	4170	118	200	64
7	149	388	156	251	2200	1490	115	200	62
8	139	369	138	355	4390	6100	112	198	60
9	146	407	160	278	4100	3080	107	161	47
10	159	444	191	434	6550	8610	104	124	35
11	160	482	208	360	4100	3990	108	87	25
12	157	520	220	330	1400	1250	116	83	26
13	160	557	241	310	1380	1160	112	80	24
14	172	595	276	300	1360	1100	104	76	21
15	145	500	196	295	2110	1680	103	166	47
16	161	984	428	290	2870	2250	101	259	71
17	177	1200	573	280	2190	1660	94	351	89
18	230	800	497	260	1510	1060	95	196	50
19	182	600	295	200	831	449	88	41	9.7
20	172	504	234	190	754	387	85	122	28
21	161	506	220	187	676	341	83	203	45
22	190	508	261	178	599	288	80	142	31
23	158	511	218	189	525	268	78	80	17
24	143	513	198	183	452	223	78	117	25
25	142	420	161	172	378	176	90	155	38
26	140	326	123	170	304	140	96	192	50
27	135	233	85	158	450	192	91	417	102
28	135	502	183	144	596	232	91	642	158
29	133	771	277	181	550	269	95	867	222
30	130	1040	365	199	552	297	94	800	203
31	--	--	--	189	765	390	--	--	--
TOTAL	4599	--	6769	7180	--	44749	3147	--	2196.7

TOTAL DISCHARGE FOR PERIOD OCT. 1 TO JUNE 30 (CFS-DAYS)

38686

TOTAL SUSPENDED-SEDIMENT DISCHARGE PERIOD OCT. 1 TO JUNE 30 (TONS)

204240.7

PARTICLE-SIZE DISTRIBUTION OF SUSPENDED SEDIMENT, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DATE	TIME	TEMP- ERATURE (DEG C)	DIS- CHARGE (CFS)	SUS- PEN- DED SED- IMENT (MG/L)	SUS- PEN- DED SED- IMENT DIS- CHARGE (T/DAY)	SUS. SED. FALL DIAM. % FINER THAN .002 MM	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	SUS. SED. FALL DIAM. % FINER THAN .500 MM
OCT.												
05...	1425	20.5	75	1670	338	4	6	--	21	64	97	100
NOV.												
06...	1150	13.0	101	3130	854	5	7	12	20	52	97	100
26...	0900	9.5	101	52500	14300	11	16	23	41	67	92	100
30...	1710	7.5	287	3430	2660	23	28	41	58	82	98	100
JAN.												
11...	1645	6.0	132	1010	360	4	5	11	24	52	93	100
MAR.												
24...	0920	8.0	147	491	195	16	22	34	42	54	87	100
MAY												
04...	1105	10.5	220	1570	933	11	12	20	37	76	94	100

VIRGIN RIVER BASIN

09406000 VIRGIN RIVER AT VIRGIN, UTAH--Continued

PARTICLE-SIZE DISTRIBUTION OF SURFACE BED MATERIAL,
WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DATE	TIME	TEMP- ERATURE (DEG C)	DIS- CHARGE (CFS)	BED MAT. FALL DIAM.	BED MAT. FALL DIAM.	BED MAT. FALL DIAM.	BED MAT. FALL DIAM.
				% FINER THAN .062 MM	% FINER THAN .125 MM	% FINER THAN .250 MM	% FINER THAN .500 MM
NOV. 06...	1150	13.0	101	0	8	69	100
JAN. 11...	1645	6.0	132	0	2	4	73
MAY 04...	1105	10.5	220	1	10	44	80

DATE	BED MAT. SIEVE DIAM.	BED MAT. SIEVE DIAM.	BED MAT. SIEVE DIAM.	BED MAT. SIEVE DIAM.	BED MAT. SIEVE DIAM.	BED MAT. SIEVE DIAM.
	% FINER THAN 1.00 MM	% FINER THAN 2.00 MM	% FINER THAN 4.00 MM	% FINER THAN 8.00 MM	% FINER THAN 16.0 MM	% FINER THAN 32.0 MM
NOV. 06...	--	--	--	--	--	--
JAN. 11...	76	76	77	79	90	100
MAY 04...	85	86	87	89	95	100

VIRGIN RIVER BASIN

67

09408150 VIRGIN RIVER NEAR HURRICANE, UTAH

LOCATION.--Lat 37°09'45", long 113°23'42', in NE $\frac{1}{4}$ NE $\frac{1}{4}$ SW $\frac{1}{4}$ sec.2, T.42 S., R.14 W., Washington County, at gaging station 6.2 miles west of Hurricane, 15 miles northeast of St. George, and 1.8 miles downstream from Quail Creek.

DRAINAGE AREA.--1,530 sq mi, approximately.

PERIOD OF RECORD.--Water temperatures: March 1967 to September 1971.

Sediment records: March 1967 to September 1971.

EXTREMES.--1970-71:

Water temperatures: Maximum, 30.0°C June 15, July 27, Aug. 9, 15, 16; minimum, 0.5°C Jan. 3, 10.

Sediment concentrations: Maximum daily, 181,000 mg/l Aug. 21; minimum daily, 463 mg/l June 25, July 10.

Sediment loads: Maximum daily, 605,000 tons Aug. 21; minimum daily, 93 tons July 8.

Period of record:

Water temperatures: Maximum, 31.0°C July 3, 25, 1967, Aug. 1, 8, 1969; minimum, freezing point Dec. 14, 1967, Dec. 29, 31, 1969, Jan. 2, 1970.

Sediment concentrations: Maximum daily, 219,000 mg/l Aug. 5, 1970; minimum daily, 37 mg/l July 12, 1969.

Sediment loads: Maximum daily, 756,000 tons Jan. 25, 1969; minimum daily, 9.0 tons July 15, 1969.

TEMPERATURE (°C) OF WATER, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971
(ONCE-DAILY MEASUREMENT)

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	21.0	11.0	10.0	6.0	7.0	5.5	14.5	--	--	21.0	22.0	--
2	14.5	13.5	7.0	5.5	10.5	2.0	17.0	--	--	19.0	24.0	18.0
3	19.5	8.0	6.0	0.5	7.0	7.5	17.0	--	--	18.0	21.0	18.0
4	21.0	12.0	9.0	--	3.5	6.0	7.5	15.0	7.0	19.0	21.0	16.0
5	16.0	--	10.5	1.0	9.0	9.5	10.0	--	8.0	16.0	27.0	15.0
6	20.5	--	7.0	--	9.5	11.0	16.0	--	--	20.0	29.0	--
7	11.0	--	9.5	--	4.0	4.5	18.0	--	7.5	21.0	27.0	20.0
8	15.5	--	10.0	3.5	8.5	9.5	13.0	--	6.0	21.0	23.0	15.0
9	10.0	14.5	--	6.0	6.0	6.0	20.0	--	6.0	19.0	30.0	18.0
10	12.0	8.5	5.0	0.5	6.0	14.0	--	--	4.0	20.0	28.0	26.0
11	18.0	--	8.0	7.0	7.0	8.0	11.0	--	7.0	18.0	21.0	23.0
12	11.0	8.0	9.0	5.0	12.5	15.5	21.0	--	7.0	21.0	21.0	26.0
13	--	10.0	6.0	5.5	13.5	11.0	15.0	--	11.0	25.0	20.0	--
14	15.0	11.0	9.0	6.5	7.0	5.5	15.0	--	11.0	25.0	24.0	--
15	8.0	7.0	9.0	7.0	11.0	6.0	12.0	--	30.0	24.0	30.0	15.0
16	16.5	10.5	4.5	8.0	11.0	15.0	20.5	--	24.0	23.0	30.0	24.0
17	17.0	4.5	7.5	4.5	9.0	8.0	--	14.0	28.0	24.0	29.0	13.0
18	11.0	9.0	8.5	6.0	8.0	4.0	10.0	22.0	22.0	23.0	--	13.0
19	17.0	5.0	5.5	12.0	6.5	14.0	10.5	17.0	18.0	27.0	25.0	12.0
20	10.5	11.0	5.0	8.0	8.0	15.0	17.0	--	18.0	24.0	25.0	21.0
21	17.0	10.5	6.5	8.5	3.5	7.0	14.0	17.0	22.0	24.0	21.0	21.0
22	12.0	7.5	6.0	10.0	6.0	9.0	18.0	--	24.0	23.0	21.0	12.0
23	16.0	12.0	8.5	9.0	11.0	15.5	17.5	--	24.0	23.0	23.0	20.0
24	15.5	6.5	3.0	9.0	5.5	11.0	18.0	--	20.0	22.0	20.0	--
25	11.5	--	--	4.5	6.0	15.0	--	17.0	24.0	22.0	21.0	10.0
26	7.0	--	--	10.5	7.5	19.0	--	--	18.0	22.0	20.0	--
27	4.0	--	--	6.5	9.0	17.0	--	--	--	30.0	21.0	11.0
28	10.0	--	--	7.0	3.5	13.0	--	20.0	18.0	26.0	21.0	--
29	5.0	--	--	11.0	--	10.5	--	--	28.0	26.0	19.0	16.0
30	14.5	8.0	--	11.0	--	18.0	25.0	--	18.0	24.0	22.0	--
31	14.0	--	--	11.5	--	11.5	--	--	--	23.0	--	--
MONTH	---	---	---	---	7.5	10.5	---	---	---	22.5	22.0	---

VIRGIN RIVER BASIN

09408150 VIRGIN RIVER NEAR HURRICANE, UTAH--Continued

SUSPENDED-SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCTOBER			NOVEMBER			DECEMBER		
	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
1	62	1500	251	124	1650	552	293	4600	3640
2	69	1560	291	127	1640	562	223	3780	2280
3	64	1440	249	127	1880	645	200	2680	1450
4	66	1450	258	109	1810	533	184	2280	1130
5	64	1470	254	112	1900	575	169	2230	1020
6	60	1310	212	112	1990	602	172	2460	1140
7	67	1680	304	117	2070	654	169	2060	940
8	67	1090	197	149	2160	869	172	1980	920
9	69	1270	237	130	2250	790	175	4320	2040
10	71	1390	266	122	2030	669	266	6390	4590
11	74	1610	322	124	2210	740	181	2060	1010
12	74	1280	256	130	2390	839	169	1620	739
13	69	1310	244	149	2580	1040	155	1550	649
14	69	1430	266	149	1920	772	158	1960	836
15	76	1620	332	146	2130	840	163	2150	946
16	80	1460	315	141	1960	746	161	1540	669
17	80	1650	356	124	1610	539	163	1790	788
18	76	1460	300	124	2030	680	169	2000	913
19	82	1520	337	119	1610	517	161	1570	682
20	93	2120	532	124	1840	616	161	1740	756
21	95	1520	390	124	1810	606	175	1850	874
22	102	1740	479	124	1670	559	194	2380	1250
23	112	1950	590	124	1670	559	175	1460	690
24	105	1510	428	122	1630	537	155	2170	908
25	102	1520	419	122	1600	527	152	2050	841
26	109	1880	553	699	18000	34000	155	1920	804
27	109	1620	477	428	8000	9240	163	1800	792
28	112	1760	532	213	4000	2300	178	1680	807
29	119	2150	691	240	6000	3890	166	1560	699
30	127	2340	802	666	18000	32400	166	1440	645
31	133	1820	654	--	--	--	155	1310	548
TOTAL	2657	--	11794	5421	--	98398	5498	--	35996
DAY	JANUARY			FEBRUARY			MARCH		
	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
1	161	1190	517	187	1130	571	160	1140	492
2	178	1640	788	188	1810	919	154	1200	499
3	169	1970	899	185	1270	634	155	1100	460
4	152	1590	653	172	1580	734	176	1280	608
5	138	1760	656	166	1450	650	175	1210	572
6	135	971	354	180	1060	515	158	988	421
7	149	1100	443	171	1260	582	155	1030	431
8	143	1870	722	164	1390	615	168	1090	494
9	158	1260	538	169	1090	497	172	1200	557
10	166	1320	592	168	1280	581	171	1710	790
11	178	1660	798	170	1310	601	179	1260	609
12	188	1430	726	170	1660	762	178	1400	673
13	183	1650	815	170	1290	592	188	1610	817
14	184	1920	954	168	1360	617	190	2040	1050
15	177	1500	717	164	1170	518	162	846	370
16	173	1660	775	161	1270	552	161	961	418
17	176	1530	727	196	1140	603	156	1080	455
18	189	1580	806	279	3420	2580	156	1130	476
19	214	1870	1080	224	1890	1140	154	960	399
20	216	1830	1070	217	2170	1270	166	1110	498
21	219	1870	1110	194	3380	1770	162	1020	446
22	203	1500	822	178	1310	630	156	1080	455
23	187	1640	828	183	1490	736	157	1060	449
24	183	1490	724	179	1300	628	166	1060	475
25	179	1220	590	173	1120	523	154	894	372
26	182	1720	845	166	1560	699	146	769	303
27	183	1450	716	152	1310	538	152	2020	829
28	185	1540	769	152	1030	423	169	1480	675
29	184	1390	691	--	--	--	147	1290	512
30	183	1500	741	--	--	--	156	1020	430
31	183	1280	632	--	--	--	139	944	354
TOTAL	5495	--	23098	5046	--	21480	5038	--	16389

09408150 VIRGIN RIVER NEAR HURRICANE, UTAH--Continued.

SUSPENDED-SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	APRIL			MAY			JUNE		
	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
1	124	904	303	100	650	176	149	800	322
2	103	820	228	125	800	270	135	800	292
3	92	772	192	141	1000	381	129	800	279
4	90	591	144	148	1190	476	117	798	252
5	91	571	140	155	1200	502	107	729	211
6	95	707	181	294	1400	1110	100	776	210
7	104	853	240	341	1100	1010	97	824	216
8	110	743	221	414	1800	2010	90	716	174
9	106	542	155	370	3000	3000	89	610	147
10	110	600	178	375	3000	3040	86	610	142
11	115	658	204	513	2500	3460	88	611	145
12	118	1010	322	353	1300	1240	92	498	124
13	109	614	181	299	1550	1250	92	627	156
14	140	1840	696	291	1790	1410	90	742	180
15	157	1470	623	287	2040	1580	86	815	189
16	157	1440	610	284	2280	1750	81	569	124
17	168	1310	594	253	2530	1730	80	884	191
18	191	1180	609	214	1780	1030	82	723	160
19	174	1520	714	193	1530	797	82	1130	250
20	145	986	386	204	1460	804	80	502	108
21	133	842	302	200	1390	751	78	622	131
22	163	1490	656	179	1220	590	76	655	134
23	134	1270	459	197	1060	564	75	682	138
24	128	722	250	181	892	436	75	842	171
25	114	706	217	156	726	306	78	463	98
26	114	691	213	146	926	365	85	957	220
27	101	675	184	136	880	323	83	820	184
28	101	659	180	119	834	268	83	682	153
29	96	644	167	145	800	313	84	1440	327
30	93	628	158	171	800	369	83	1250	280
31	--	--	--	155	800	335	--	--	--
TOTAL	3676	--	9707	7139	--	31646	2752	--	5708

DAY	JULY			AUGUST			SEPTEMBER		
	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
1	80	974	210	109	5950	1750	81	19900	4350
2	78	553	116	99	1180	315	79	5650	1210
3	78	799	168	102	678	187	74	4400	879
4	75	633	128	125	5000	1690	70	3460	654
5	75	1120	227	299	26500	21400	70	2650	501
6	78	825	174	283	42500	37400	70	2760	522
7	80	731	158	394	111000	131000	70	2870	542
8	73	473	93	320	58400	58300	70	3860	730
9	74	749	150	219	17200	10200	70	2160	408
10	76	463	95	414	54500	81400	70	1710	323
11	74	607	121	118	2040	650	71	1520	291
12	75	691	140	82	10600	3340	71	2120	406
13	76	913	187	76	5860	1200	72	2080	404
14	78	1020	215	122	29300	29600	73	2050	404
15	78	620	131	218	49800	47000	75	1800	365
16	85	956	219	70	4600	869	75	2720	551
17	77	782	163	72	3850	748	73	2110	416
18	118	1280	408	140	21000	7940	72	2790	542
19	90	16000	3890	309	129000	165000	72	3500	680
20	89	1950	469	162	86300	42600	72	2590	503
21	120	1160	376	710	181000	605000	72	1740	338
22	106	2740	784	200	92300	189000	73	1800	355
23	96	1660	430	110	83600	24800	71	1590	305
24	86	1870	434	94	35700	9060	67	1440	260
25	84	1040	236	90	20000	4860	61	1280	211
26	73	870	171	89	101000	24300	59	1510	241
27	72	488	95	87	33200	7800	57	1730	266
28	82	1120	248	85	23200	5320	57	1450	223
29	85	514	118	84	42400	9620	60	1170	190
30	88	596	142	83	6920	1550	64	1200	207
31	101	1120	305	82	72600	16100	--	--	--
TOTAL	2600	--	10801	5447	--	1539999	2091	--	17277

TOTAL DISCHARGE FOR YEAR (CFS-DAYS)

TOTAL SUSPENDED-SEDIMENT DISCHARGE FOR YEAR (TONS)

52860
1822293

VIRGIN RIVER BASIN

09408150 VIRGIN RIVER NEAR HURRICANE, UTAH--Continued

PARTICLE-SIZE DISTRIBUTION OF SUSPENDED SEDIMENT, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DATE	TIME	TEMP- ERATURE (DEG C)	DIS- CHARGE (CFS)	SUS- PEN- DED SEDI- MENT (MG/L)	SUS- PEN- DED SEDI- MENT DIS- CHARGE (T/DAY)	SUS. SED. FALL DIAM. % FINER THAN .002 MM	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	SUS. SED. FALL DIAM. % FINER THAN .500 MM
NOV.												
04...	1710	12.0	99	1060	283	4	6	16	31	76	100	--
JAN.												
11...	1320	7.0	168	1220	553	3	4	11	20	51	94	100
FEB.												
18...	1120	8.0	317	3420	2930	22	29	36	45	63	95	100
MAR.												
19...	1050	--	135	909	331	--	22	36	41	55	96	100
MAY												
04...	1940	15.0	173	974	455	14	21	29	45	63	93	100
28...	1700	20.0	134	630	228	5	9	--	27	59	95	100
JULY												
19...	0600	23.0	89	14800	3560	68	80	95	96	97	100	--
AUG.												
05...	1325	20.0	247	20900	13900	38	50	80	95	98	100	--
07...	0700	25.0	91	74100	18200	47	53	75	97	99	100	--
21...	0730	21.0	817	69500	153000	20	21	33	61	94	100	--
26...	0700	20.0	166	101000	45300	37	44	58	80	95	99	100
29...	0730	19.0	152	42400	17400	42	45	66	82	95	100	--
SEP.												
01...	0700	--	166	19900	8920	41	48	68	78	93	99	100
16...	1900	24.5	74	2010	402	14	19	30	49	88	100	--

PARTICLE-SIZE DISTRIBUTION OF SURFACE BED MATERIAL, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DATE	TIME	TEMP- ERATURE (DEG C)	DIS- CHARGE (CFS)	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
NOV.							
04...	1710	12.0	99	1	18	65	81
JAN.							
11...	1320	7.0	168	1	7	54	78
MAY							
04...	1940	15.0	173	1	7	61	98
28...	1700	20.0	134	0	7	55	80
AUG.							
05...	1325	20.0	247	0	92	97	99
SEP.							
16...	1900	24.5	74	1	19	68	91

DATE	BED MAT. SIEVE 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
NOV.						
04...	81	82	82	85	90	100
JAN.						
11...	80	81	83	87	95	100
MAY						
04...	99	99	99	100	--	--
28...	82	82	82	85	90	100
AUG.						
05...	99	99	100	--	--	--
SEP.						
16...	94	95	96	98	100	--

VIRGIN RIVER BASIN

71

09415000 VIRGIN RIVER AT LITTLEFIELD, ARIZ.
(Irrigation network station)

LOCATION.--Lat 36°53', long 113°56', in SW $\frac{1}{4}$ SW $\frac{1}{4}$ sec.4, T.40 N., R.15 W., Mohave County, at gaging station 0.4 mile downstream from Beaver Dam Wash, 0.4 mile upstream from Littlefield, and 36 miles upstream from waterline of Lake Mead at elevation 1,221 ft above mean sea level.

DRAINAGE AREA.--5,090 sq mi, approximately.

PERIOD OF RECORD.--Chemical analyses: July 1949 to September 1971.

Water temperatures: October 1947 to September 1971.

Sediment records: October 1947 to September 1968.

EXTREMES.--1970-71:

Specific conductance: Maximum daily, 3,480 micromhos Oct. 10; minimum daily, 1,550 micromhos May 11.

Water temperatures: Maximum, 29.0°C on several days during July and August; minimum, 2.0°C Jan. 4, 5.

Period of record:

Specific conductance: Maximum daily, 4,650 micromhos Aug. 21, 1966; minimum daily, 689 micromhos May 14, 15, 1969.

Water temperatures: Maximum, 33.5°C July 7, 1953; minimum, 2.0°C Jan. 4, 1949, Jan. 4, 1950, Jan. 4, 5, 1971.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DATE	TIME	TEMP- ERATURE (DEG C)	DIS- CHARGE (CFS)	DIS- SOLVED SILICA (SiO ₂) (MG/L)	DIS- SOLVED CAL- CIUM (CA) (MG/L)	DIS- SOLVED MAG- NE- SIUM (MG)	DIS- SOLVED SODIUM (NA) (MG/L)	DIS- SOLVED PO- TAS- SIUM (K) (MG/L)	BICAR- BONATE (HCO ₃) (MG/L)	CAR- BONATE (CO ₃) (MG/L)	DIS- SOLVED SULFATE (SO ₄) (MG/L)	DIS- SOLVED CHLO- RIDE (CL) (MG/L)
NOV. 04...	0930	13.0	128	19	400	89	300	26	345	0	900	410
DEC. 23...	1030	10.0	193	21	290	85	220	22	321	0	710	330
JAN. 15...	1230	9.5	192	20	240	69	250	22	334	0	740	320
FEB. 11...	1100	16.0	121	20	290	86	250	26	298	0	870	360
MAR. 23...	1200	17.0	135	--	290	94	250	27	285	0	920	360
APR. 29...	1240	23.0	73	--	360	120	280	38	304	0	1100	400
JUNE 09...	1600	30.0	68	--	350	110	270	28	195	0	1200	370
AUG. 03...	0940	22.0	62	--	350	110	250	25	293	0	1100	380
SEP. 16...	0900	18.0	63	23	360	110	260	28	314	0	1200	380

DATE	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 CONSTITUENTS) (MG/L)	DIS- SOLVED SOLIDS (TONS PER AC-FT)	DIS- SOLVED SOLIDS (TONS PER DAY)	HARD- NESS (CA, MG) (MG/L)	NON- CAR- BONATE HARD- NESS (MG/L)	SODIUM AD- SORP- TION RATIO	SPECI- FIC COND- UCTANCE (MICRO- MHOS)	PH (UNITS)
NOV. 04...	.7	1.2	880	2300	3.13	795	1360	1080	3.5	3150	7.6
DEC. 23...	.8	.90	720	1840	2.50	959	1100	837	2.9	2600	8.0
JAN. 15...	1.0	.90	630	1800	2.45	933	890	616	3.7	2590	7.6
FEB. 11...	--	.00	--	2100	2.86	686	1100	856	3.3	2830	8.0
MAR. 23...	--	.20	--	2080	2.83	758	1100	880	3.3	2680	7.7
APR. 29...	--	.30	--	2450	3.33	483	1400	1100	3.3	3256	7.8
JUNE 09...	--	.24	--	2070	2.82	380	1300	1200	3.2	3200	7.3
AUG. 03...	--	.16	--	2360	3.21	395	1300	1100	3.0	3100	7.2
SEP. 16...	.3	.26	1000	2520	3.43	433	1400	1100	3.1	3240	7.3

VIRGIN RIVER BASIN

09415000 VIRGIN RIVER AT LITTLEFIELD, ARIZ.--Continued

SPECIFIC CONDUCTANCE (MICROMHOS AT 25°C), WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3080	2990	1830	2180	2330	2560	2830	3100	2900	3000	3000	3100
2	3130	3050	2230	1860	2450	2510	2950	3200	3000	3000	3000	3200
3	3170	3010	1640	2370	2500	2380	3040	3200	3100	3000	3100	3300
4	3180	2940	2440	2360	2440	2530	3040	3100	3000	3100	2900	3000
5	3210	3000	2560	2200	2450	2430	3050	---	3000	3200	3000	3100
6	3410	---	2600	2780	2620	2360	3040	2800	3100	3100	3000	3100
7	3310	3000	2610	2830	2620	2530	3040	2200	3100	3100	2600	3100
8	3250	3150	2610	2630	2390	2510	3040	2000	3100	3100	2850	3000
9	3360	2830	2450	2700	2730	2450	3040	1800	3000	3100	2900	3200
10	3480	2920	1970	2540	2650	2470	3070	2100	3100	3100	3300	3200
11	3250	3010	2290	2520	---	2600	3060	1550	3000	3200	2900	3200
12	3280	2990	2370	2450	2660	2540	3080	1900	3000	3100	3000	3100
13	3250	2980	2610	2390	2590	2450	---	2150	3100	3100	3100	3200
14	3360	2660	2330	2500	2390	2310	2910	2050	3000	3100	---	3200
15	3360	2820	2630	2430	2350	2460	2850	2150	3000	3100	3000	3200
16	3360	2800	2490	2410	2480	2520	2880	2400	3000	3000	3200	3200
17	3330	2800	2650	2350	2390	2590	2920	2100	3000	3000	3200	3200
18	3380	2930	2540	2430	2090	2680	2770	2400	3000	3000	3100	3200
19	3400	2990	---	2370	2180	2660	2460	2700	3000	3000	3900	3200
20	3410	2920	2530	2370	2280	2670	2790	2900	3000	3100	3000	3200
21	3330	2920	2570	2330	2380	2580	2890	2900	3000	3200	2400	3200
22	3260	2900	2490	2330	2300	2590	2900	2900	3000	3200	3000	3200
23	3340	2930	2400	2280	2440	2610	2830	2900	3100	3100	3100	3100
24	3300	2870	2490	2380	2350	2630	2950	3000	3100	3100	2600	3100
25	3320	---	---	2480	2390	2680	---	3200	3100	3100	2900	3200
26	3390	2120	2570	2360	2570	2860	---	---	3100	3100	2900	3200
27	3340	---	2510	2460	2610	2800	2920	3200	3100	3100	2900	3100
28	3330	2210	2450	2340	2610	2530	3020	3200	3200	3000	3000	3100
29	3220	2460	2470	2540	---	2580	3020	3200	3200	3000	2500	3200
30	3360	1860	2560	2500	---	2850	3040	3000	3100	3200	2700	3100
31	3230	---	2600	2530	---	2890	---	3000	---	3000	---	---
MONTH	3300	2820	2430	2430	2450	2580	2940	2630	3050	3080	2970	3160

TEMPERATURE (°C) OF WATER, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971
(ONCE-DAILY MEASUREMENT)

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	23.0	15.0	11.0	11.0	15.0	9.0	18.0	23.0	20.0	25.0	27.0	24.0
2	23.0	16.0	11.0	8.0	15.0	10.0	20.0	21.0	20.0	24.0	27.0	23.0
3	23.0	16.0	11.0	3.0	11.0	15.0	20.0	21.0	20.0	27.0	28.0	23.0
4	23.0	14.0	11.0	2.0	11.0	15.0	21.0	19.0	25.0	25.0	29.0	23.0
5	23.0	18.0	11.0	2.0	12.0	13.0	21.0	---	24.0	25.0	28.0	26.0
6	22.0	---	12.0	6.0	12.0	13.0	21.0	14.0	25.0	25.0	28.0	25.0
7	17.0	16.0	12.0	8.0	13.0	15.0	21.0	16.0	28.0	25.0	28.0	25.0
8	19.0	16.0	12.0	10.0	14.0	16.0	22.0	19.0	25.0	26.0	27.0	25.0
9	21.0	16.0	11.0	11.0	15.0	17.0	20.0	21.0	22.0	25.0	27.0	26.0
10	20.0	16.0	11.0	10.0	16.0	16.0	20.0	22.0	22.0	26.0	29.0	26.0
11	20.0	16.0	9.0	9.0	---	18.0	22.0	21.0	23.0	26.0	28.0	26.0
12	20.0	16.0	11.0	9.0	17.0	15.0	22.0	20.0	26.0	29.0	26.0	27.0
13	20.0	12.0	11.0	9.0	17.0	16.0	---	22.0	26.0	28.0	28.0	27.0
14	20.0	13.0	---	10.0	13.0	16.0	19.0	24.0	26.0	29.0	---	26.0
15	20.0	13.0	11.0	10.0	13.0	17.0	20.0	24.0	25.0	29.0	25.0	25.0
16	19.0	18.0	11.0	11.0	15.0	18.0	22.0	20.0	25.0	29.0	27.0	24.0
17	20.0	14.0	10.0	13.0	13.0	15.0	14.0	17.0	26.0	29.0	28.0	19.0
18	20.0	14.0	10.0	13.0	13.0	14.0	16.0	20.0	25.0	29.0	29.0	19.0
19	19.0	14.0	---	15.0	9.0	15.0	16.0	22.0	25.0	29.0	28.0	21.0
20	18.0	16.0	10.0	15.0	9.0	17.0	17.0	20.0	25.0	29.0	27.0	21.0
21	18.0	14.0	10.0	14.0	11.0	17.0	15.0	17.0	25.0	28.0	27.0	21.0
22	18.0	16.0	10.0	12.0	12.0	18.0	19.0	18.0	25.0	28.0	26.0	21.0
23	19.0	14.0	10.0	12.0	13.0	19.0	19.0	23.0	27.0	28.0	26.0	22.0
24	19.0	16.0	10.0	18.0	13.0	20.0	18.0	23.0	25.0	27.0	27.0	22.0
25	17.0	---	---	20.0	11.0	20.0	---	23.0	24.0	29.0	26.0	20.0
26	16.0	14.0	10.0	13.0	11.0	19.0	---	---	24.0	28.0	26.0	19.0
27	15.0	---	10.0	14.0	11.0	19.0	20.0	17.0	24.0	29.0	26.0	18.0
28	15.0	12.0	10.0	14.0	12.0	19.0	18.0	17.0	22.0	29.0	27.0	19.0
29	16.0	12.0	10.0	10.0	---	20.0	22.0	19.0	23.0	29.0	27.0	19.0
30	16.0	10.0	10.0	14.0	---	19.0	23.0	20.0	25.0	28.0	24.0	16.0
31	16.0	---	11.0	14.0	---	18.0	---	18.0	---	28.0	---	---
MONTH	19.0	14.5	10.5	11.0	13.0	16.5	19.5	20.0	24.0	27.5	27.0	22.5

BEAR RIVER BASIN

73

10039500 BEAR RIVER AT BORDER, WYO.

LOCATION.--Lat 42°12'40", long 111°03'00", in NE $\frac{1}{4}$ NE $\frac{1}{4}$ sec.15, T.14 S., R.46 E., Bear Lake County, Idaho, at gaging station, 0.2 mile west of Wyoming-Idaho State line, 0.5 mile west of Border, and 2.1 miles upstream from Thomas Fork.

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

PERIOD OF RECORD.--Chemical analyses: October 1965 to September 1971.
Water temperatures: October 1965 to September 1971.

EXTREMES.--1970-71:

Specific conductance: Maximum daily, 734 micromhos Dec. 15; minimum daily, 357 micromhos Mar. 28.
Water temperatures: Maximum, 21.5°C Aug. 2, 6; minimum, freezing point Dec. 26, Feb. 21, 25.

Period of record:

Specific conductance: Maximum daily, 883 micromhos July 21, 1966; minimum daily, 312 micromhos Apr. 3, 1969.
Water temperatures: Maximum, 23.0°C Aug. 7, 1970; minimum, freezing point on many days during winter period each year.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DATE	TIME	TEMP- ERATURE (DEG C)	DIS- CHARGE (CFS)	DIS- SOLVED SILICA (SI02) (MG/L)	DIS- SOLVED CAL- CIUM (CA) (MG/L)	DIS- SOLVED MAG- NE- SIUM (MG)	DIS- SOLVED SODIUM (NA) (MG/L)	DIS- SOLVED PO- TAS- SIUM (K) (MG/L)	BICAR- BONATE (HC03) (MG/L)	CAR- BONATE (C03) (MG/L)	DIS- SOLVED SULFATE (S04) (MG/L)	DIS- SOLVED CHLO- RIDE (CL) (MG/L)
OCT.												
10...	1140	5.5	238	8.5	64	23	23	1.9	261	0	58	28
NOV.												
04...	--	3.0	195	6.8	74	17	25	1.7	256	0	68	29
04...	1100	.5	200	6.0	57	23	26	2.0	259	0	59	23
DEC.												
01...	1700	1.0	240	8.0	67	25	28	2.2	253	8	70	29
JAN.												
07...	1320	.0	220	9.2	76	27	27	1.8	306	0	76	28
29...	1000	.0	310	14	70	19	27	2.2	244	0	67	28
MAR.												
12...	1345	.0	300	8.1	62	24	20	2.3	266	0	52	25
APR.												
03...	1335	4.0	1740	11	52	22	26	4.9	229	0	56	22
MAY												
17...	1130	9.0	2600	11	60	17	14	2.7	238	0	39	13
20...	1500	8.5	2500	--	52	22	18	2.4	247	0	35	15
JUNE												
02...	1930	13.5	2160	8.3	55	18	14	2.0	229	0	31	16
JULY												
10...	0830	15.5	1040	8.8	56	23	24	2.2	259	0	43	21
AUG.												
04...	1240	19.5	433	8.4	60	21	20	1.3	248	0	49	17
13...	1140	17.0	285	--	65	22	23	2.1	284	0	57	23
SEP.												
03...	0850	13.5	261	8.3	62	21	19	1.8	232	0	61	17

DATE	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 CONSTITUENTS) (MG/L)	DIS- SOLVED SOLIDS (TONS PER AC-FT)	DIS- SOLVED SOLIDS (TONS PER DAY)	HARD- NESS (CA,MG) (MG/L)	NON- CAR- BONATE HARD- NESS (MG/L)	SODIUM AD- SORP- TION RATIO	SPECI- FIC COND- UCTANCE (MICRO- MHOS)	PH (UNITS)
OCT.											
10...	.3	--	30	335	.46	215	260	46	.6	540	8.1
NOV.											
04...	.2	--	70	348	.47	183	260	50	.7	581	8.1
04...	--	--	--	324	.44	175	236	24	.7	594	8.1
DEC.											
01...	.3	--	50	362	.49	235	270	49	.7	615	8.3
JAN.											
07...	.2	--	50	396	.54	235	300	49	.7	662	7.9
29...	.2	--	60	348	.47	291	260	60	.7	591	7.7
MAR.											
12...	--	.00	--	324	.44	262	250	32	.5	563	8.2
APR.											
03...	.3	--	70	307	.42	1440	220	32	.8	480	7.9
MAY											
17...	.3	--	50	274	.37	1920	220	25	.4	434	8.0
20...	--	.12	60	249	.33	1680	220	18	.5	511	7.8
JUNF											
02...	.2	--	50	257	.35	1500	210	22	.4	428	8.2
JULY											
10...	.2	--	70	306	.42	859	240	28	.7	502	8.0
AUG.											
04...	.3	--	60	299	.41	350	240	37	.6	526	8.1
13...	--	.05	--	307	.42	236	250	20	.6	570	7.9
SEP.											
03...	.2	--	80	305	.41	215	240	50	.5	526	8.2

BEAR RIVER BASIN

10039500 BEAR RIVER AT BORDER, WYO.--Continued

SPECIFIC CONDUCTANCE (MICROMHOS AT 25°C), WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	552	585	622	604	538	657	435	593	438	478	503	552
2	569	595	603	604	516	658	450	588	450	488	506	550
3	579	592	612	616	523	661	502	560	464	502	521	556
4	575	582	588	642	538	648	541	510	494	504	521	547
5	564	574	629	649	538	639	579	501	501	511	522	485
6	568	576	630	659	531	632	581	501	525	524	543	453
7	535	540	679	658	555	620	589	491	535	530	546	453
8	568	568	627	641	594	587	585	486	547	524	548	472
9	556	590	616	632	612	589	585	488	496	533	555	474
10	549	585	619	609	638	581	582	480	502	533	536	506
11	544	592	630	599	622	567	556	482	477	525	534	507
12	562	600	650	592	609	536	567	474	498	533	565	527
13	551	598	697	585	613	540	584	464	503	517	570	557
14	569	611	721	590	590	542	585	461	512	534	565	556
15	575	621	734	585	568	518	579	459	508	534	567	559
16	542	616	683	581	575	464	565	462	499	538	552	551
17	546	602	680	573	586	459	557	455	490	540	555	554
18	566	599	660	559	558	482	537	459	492	556	550	550
19	552	609	640	537	523	504	539	494	480	510	556	556
20	549	613	664	534	553	578	552	496	464	536	558	539
21	561	606	671	545	599	606	566	519	438	547	558	540
22	565	592	655	573	626	607	586	494	438	552	561	545
23	568	637	627	575	646	614	584	519	448	567	541	546
24	572	605	652	556	646	453	634	530	453	564	544	550
25	576	612	675	563	659	460	631	538	446	561	---	555
26	588	587	668	567	660	406	616	524	447	567	534	562
27	594	584	674	572	671	361	645	502	451	557	523	566
28	581	592	668	555	663	357	648	485	448	564	535	550
29	580	606	644	576	---	373	648	462	449	534	522	556
30	587	626	626	599	---	386	666	448	465	544	523	559
31	590	---	620	560	---	397	---	436	---	516	499	---
MONTH	566	597	650	590	591	532	576	496	479	533	540	534

TEMPERATURE (°C) OF WATER, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971
(ONCE-DAILY MEASUREMENT)

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG.	SEP
1	14.0	5.0	2.0	2.5	1.5	1.5	2.0	11.0	11.5	19.0	21.0	18.5
2	15.0	5.5	2.5	1.5	2.0	2.0	3.5	12.0	12.0	16.0	21.5	15.5
3	13.0	5.5	2.0	1.0	0.5	1.5	4.0	12.5	14.0	16.0	21.0	19.0
4	13.5	5.0	2.0	1.0	1.5	2.5	6.0	11.0	13.0	17.5	20.5	16.0
5	12.0	5.0	1.5	0.5	1.0	1.5	7.0	10.0	14.0	16.5	20.0	12.5
6	15.0	4.5	1.5	1.0	0.5	2.5	7.5	11.0	14.5	18.5	21.5	17.0
7	7.5	5.0	1.0	1.0	0.5	1.5	7.0	10.0	15.0	15.5	19.0	16.5
8	8.5	5.5	4.0	1.0	1.0	1.5	7.5	10.0	16.0	18.0	19.5	12.0
9	6.5	5.0	2.5	1.0	0.5	1.0	8.0	10.5	15.5	18.5	19.5	11.5
10	10.0	4.5	2.0	1.0	1.5	2.0	8.5	10.0	17.0	19.0	20.5	19.0
11	9.0	5.0	2.0	2.0	2.0	2.0	8.5	10.5	16.0	17.0	20.0	17.5
12	9.5	4.0	2.5	1.5	1.0	1.0	7.5	14.0	15.0	19.0	20.5	13.0
13	10.5	4.5	1.5	1.0	3.0	2.5	8.5	13.0	17.5	19.0	18.5	16.0
14	8.0	4.5	1.0	1.0	1.5	2.0	9.5	12.0	18.0	20.0	19.0	15.0
15	8.5	4.0	1.5	1.0	1.0	2.0	9.5	14.0	17.5	20.0	21.0	12.5
16	8.0	4.5	1.5	1.5	1.0	2.0	9.0	10.5	16.5	20.5	21.0	10.0
17	9.0	4.0	2.0	1.5	1.0	2.5	10.0	9.0	17.5	21.0	20.0	9.0
18	8.0	3.5	1.0	2.0	1.5	4.5	10.5	7.0	17.0	20.0	20.0	10.0
19	9.0	3.5	1.0	2.0	1.0	2.0	7.5	9.0	19.0	19.0	19.0	10.0
20	7.5	4.0	2.0	1.5	2.0	2.0	7.5	11.0	19.0	19.0	18.0	10.0
21	7.0	2.5	1.0	1.5	0.0	2.0	7.0	10.5	20.5	20.5	20.0	11.0
22	6.0	2.0	1.0	1.5	0.5	2.0	8.0	10.5	19.5	16.0	19.5	12.0
23	5.0	3.0	0.5	1.5	0.5	3.0	7.5	12.0	18.0	20.0	19.5	12.0
24	5.0	4.0	1.0	2.0	2.0	2.5	8.5	14.0	20.5	20.0	18.5	9.0
25	5.0	4.5	1.5	1.0	0.0	4.0	9.0	12.5	16.0	20.0	---	12.0
26	4.5	4.0	0.0	2.0	1.0	4.0	7.5	15.0	20.5	19.5	19.0	9.5
27	4.0	3.0	0.5	2.0	1.0	2.5	8.0	14.0	17.0	20.0	18.0	9.0
28	4.5	3.5	1.5	1.5	1.5	2.0	8.0	14.0	18.0	20.0	18.0	10.0
29	2.5	2.5	1.0	1.0	---	1.0	10.0	13.0	13.0	18.0	18.5	8.5
30	4.5	4.0	1.5	2.0	---	3.0	10.0	11.5	14.0	16.5	18.0	7.5
31	2.0	---	2.0	2.0	---	3.0	---	10.5	---	19.5	19.0	---
MONTH	8.0	4.0	1.5	1.5	1.0	2.0	8.0	11.5	16.5	18.5	19.5	12.5

WEBER RIVER BASIN

75

10136500 WEBER RIVER AT GATEWAY, UTAH

LOCATION.--Lat 41°08'15", long 111°49'55", in NW $\frac{1}{4}$ SW $\frac{1}{4}$ sec.27, T.5 N., R.1 E., Morgan County, at gaging station, on left bank 400 ft downstream from tailrace of Gateway powerplant, 500 ft upstream from Union Pacific Railroad bridge, 1,200 ft downstream from Strawberry Creek, and 3,200 ft east of section house at Gateway.

DRAINAGE AREA.--1,610 sq mi, approximately.

PERIOD OF RECORD.--Chemical analyses: May 1958 to September 1971.

Water temperatures: October 1958 to September 1959.

REMARKS.--Flow regulated by Rockport, Echo, and East Canyon Reservoirs.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DATE	TIME	TEMP- ERATURE (DEG C)	DIS- CHARGE (CFS)	DIS- SOLVED SILICA (SiO ₂) (MG/L)	DIS- SOLVED CAL- CIUM (CA) (MG/L)	DIS- SOLVED MAG- NE- SIUM (MG)	DIS- SOLVED SODIUM (NA) (MG/L)	DIS- SOLVED PO- TAS- SIUM (K) (MG/L)	BICAR- BONATE (HCO ₃) (MG/L)	CAR- BONATE (CO ₃) (MG/L)	DIS- SOLVED SULFATE (SO ₄) (MG/L)	DIS- SOLVED CHLO- RIDE (CL) (MG/L)
OCT. 27...	1630	--	110	10	63	19	19	3.5	241	0	33	28
NOV. 30...	1600	3.5	200	10	47	11	15	3.4	196	0	23	16
JAN. 19...	--	3.5	1300	11	42	8.9	12	2.6	152	0	20	15
MAR. 15...	1245	4.5	480	9.9	61	17	19	3.3	250	0	31	28
APR. 02...	1450	5.5	1950	--	58	13	12	2.3	218	0	27	14
JUNE 08...	1330	11.0	710	9.3	48	11	11	1.7	187	0	23	16

DATE	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 CONSTITUENTS) (MG/L)	DIS- SOLVED SOLIDS (TONS PER AC-FT)	DIS- SOLVED SOLIDS (TONS PER DAY)	HARD- NESS (CA+MG) (MG/L)	NON- CAR- BONATE HARD- NESS (MG/L)	SODIUM AD- SORP- TION RATIO	SPECI- FIC COND- UCTANCE (MICRO- MHOS)	PH (UNITS)
OCT. 27...	1.3	.60	80	296	.38	87.9	235	37	.5	500	7.8
NOV. 30...	.2	.60	60	222	.33	120	162	1	.5	395	8.0
JAN. 19...	.2	.80	40	190	.26	667	140	15	.4	328	8.2
MAR. 15...	--	.10	--	290	.39	376	220	15	.6	503	8.2
APR. 02...	--	.30	--	235	.32	1240	200	21	.4	407	8.1
JUNE 08...	.2	1.9	30	221	.30	424	170	12	.4	369	8.1

JORDAN RIVER BASIN

10172200 RED BUTTE CREEK AT FORT DOUGLAS, NEAR SALT LAKE CITY, UTAH
(Hydrologic bench-mark, pesticide, and radiochemical station)

LOCATION.--Lat 40°46'48", long 111°48'19", in NW $\frac{1}{4}$ sec.35, T.1 N., R.1 E., Salt Lake County, at gaging station 0.3 mile upstream from spillway of Red Butte Reservoir, 1.5 miles northeast of Fort Douglas, and 5 miles north-east of Salt Lake City.

DRAINAGE AREA.--7.25 sq mi.

PERIOD OF RECORD.--Chemical analyses: April 1964 to September 1966, August 1967 to September 1971.

Water temperatures: April 1964 to September 1971.

Sediment records: November 1969 to September 1971 (partial-record station).

XTREMES.--1970-71:

Water temperatures: Maximum, 20.5°C on several days during July and August; minimum, freezing point Feb. 21, 26-28.

Period of record:

Water temperatures: Maximum (1964-66, 1967-71), 24.0°C July 29, 31, Aug. 1, 3, 4, 1969; minimum, freezing point on many days during winter period each year.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DATE	TIME	TEMP- ERATURE (DEG C)	DIS- CHARGE (CFS)	DIS- SOLVED SILICA (SiO ₂) (MG/L)	DIS- SOLVED CAL- CIUM (CA) (MG/L)	DIS- SOLVED MAG- NE- SIUM (MG)	DIS- SOLVED SODIUM (NA) (MG/L)	DIS- SOLVED PO- TAS- SIUM (K) (MG/L)	BICAR- BONATE (HCO ₃) (MG/L)	CAR- BONATE (CO ₃) (MG/L)	DIS- SOLVED SULFATE (SO ₄) (MG/L)	DIS- SOLVED CHLO- RIDE (CL) (MG/L)
NOV. 06...	1420	6.5	2.3	12	83	24	13	0.9	289	0	88	10
DEC. 16...	1250	1.0	2.4	12	86	27	11	1.1	287	0	98	13
JAN. 13...	1315	.5	2.3	11	88	26	11	1.2	294	0	98	13
FEB. 12...	1030	1.0	3.9	10	76	22	13	3.0	273	0	64	11
MAR. 16...	1035	1.5	4.5	11	88	23	11	.8	283	0	78	12
APR. 15...	1430	10.0	20	12	64	19	11	1.4	250	2	39	12
MAY 15...	1450	14.1	7.5	11	61	24	10	.7	217	0	72	11
JULY 09...	1530	17.8	4.6	12	65	25	11	1.0	271	0	63	12
SEP. 24...	1040	8.0	2.3	13	84	28	12	.9	283	0	89	3.7

DATE	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 CONSTITUENTS) (MG/L)	DIS- SOLVED SOLIDS (TONS PER AC-FT)	DIS- SOLVED SOLIDS (TONS PER DAY)	HARD- NESS (CA,MG) (MG/L)	NON- CAR- BONATE HARD- NESS (MG/L)	SODIUM AD- SORP- TION RATIO	SPECI- FIC COND- UCTANCE (MICRO- MHOS)	PH (UNITS)
NOV. 06...	.3	.10	40	373	.55	2.51	306	69	.3	640	8.0
DEC. 16...	.1	.20	30	390	.53	2.53	330	95	.3	627	8.1
JAN. 13...	.3	.20	20	390	.53	2.42	330	89	.3	632	8.3
FEB. 12...	--	.00	--	330	.45	3.50	280	56	.3	555	8.1
MAR. 16...	.2	.00	40	360	.49	4.39	310	78	.3	595	8.2
APR. 15...	.1	.00	20	286	.39	15.5	240	30	.3	498	8.4
MAY 15...	.2	.01	0	297	.40	6.02	250	73	.3	550	7.8
JULY 09...	.2	.03	40	323	.44	4.08	270	43	.3	551	7.9
SEP. 24...	.2	.04	20	376	.51	2.36	320	93	.3	623	7.9

JORDAN RIVER BASIN

77

10172200 RED BUTTE CREEK AT FORT DOUGLAS, NEAR SALT LAKE CITY, UTAH--Continued

TEMPERATURE (°C) OF WATER, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	13.5	8.5	7.0	4.0	3.0	1.5	1.0	0.5	4.5	2.0	1.0	0.5
2	13.5	8.5	7.0	4.0	3.0	1.5	1.0	0.5	3.5	1.5	1.0	0.5
3	14.0	8.5	6.0	3.5	1.5	1.5	0.5	0.5	1.5	1.0	3.0	0.5
4	14.0	9.0	6.0	3.5	1.5	1.5	0.5	0.5	1.0	1.0	4.5	2.0
5	12.5	9.5	6.5	5.5	3.0	1.5	0.5	0.5	2.0	1.0	3.0	0.5
6	11.0	7.0	7.5	6.5	1.5	1.5	0.5	0.5	1.5	1.0	3.0	0.5
7	9.0	6.5	7.0	4.0	1.5	1.5	0.5	0.5	1.5	1.0	3.5	0.5
8	9.5	4.5	6.0	4.0	3.0	1.0	1.0	0.5	1.5	1.0	5.5	1.5
9	7.5	7.5	7.5	4.5	2.5	1.0	0.5	0.5	1.5	1.0	6.0	0.5
10	9.5	6.5	6.5	4.5	1.0	1.0	0.5	0.5	3.5	1.0	6.5	2.0
11	10.0	5.5	5.0	3.5	1.0	1.0	0.5	0.5	6.0	2.5	5.5	2.0
12	10.0	6.5	5.0	4.0	1.0	1.0	0.5	0.5	5.5	1.0	7.5	3.0
13	10.0	6.0	5.5	3.5	1.0	1.0	0.5	0.5	6.5	2.0	5.5	2.0
14	8.5	5.0	4.5	3.5	1.0	1.0	0.5	0.5	6.5	2.0	5.5	1.0
15	9.0	4.5	3.5	3.0	1.0	1.0	1.0	0.5	3.5	2.5	3.5	0.5
16	9.0	4.5	4.0	3.0	1.0	0.5	1.5	1.0	5.0	0.5	7.0	2.0
17	9.0	4.5	4.0	3.0	1.0	0.5	2.0	1.5	4.5	1.5	3.5	0.5
18	9.0	5.0	3.5	3.0	0.5	0.5	2.0	1.0	3.0	1.0	3.0	0.5
19	10.0	6.5	3.0	3.0	0.5	0.5	3.5	1.0	3.0	1.5	5.0	0.5
20	10.0	6.5	3.0	3.0	0.5	0.5	3.0	1.5	3.5	0.5	7.5	0.5
21	9.0	7.5	3.5	3.0	0.5	0.5	1.5	0.5	2.0	0.0	7.5	1.5
22	8.0	5.5	3.5	3.5	0.5	0.5	2.0	1.0	2.0	0.5	7.0	3.0
23	7.0	4.5	5.0	3.0	0.5	0.5	1.5	1.0	1.5	0.5	6.5	4.0
24	7.0	4.5	5.0	4.5	0.5	0.5	3.5	1.5	4.0	0.5	6.5	3.5
25	6.5	3.5	5.0	3.0	0.5	0.5	3.5	1.5	2.5	0.5	7.5	3.0
26	5.0	4.0	3.5	2.5	0.5	0.5	4.5	3.0	0.5	0.0	7.5	4.5
27	5.0	3.5	3.5	2.5	0.5	0.5	4.0	2.5	0.5	0.0	7.5	3.0
28	4.5	3.5	3.5	2.5	0.5	0.5	4.0	1.5	1.0	0.0	8.5	2.5
29	5.5	3.5	3.5	2.5	0.5	0.5	3.5	1.5	---	---	9.5	2.5
30	6.5	3.5	3.0	1.5	0.5	0.5	4.5	2.0	---	---	9.0	3.0
31	6.5	4.5	---	---	1.0	0.5	5.0	2.0	---	---	5.0	2.0
MONTH	14.0	3.5	7.5	1.5	3.0	0.5	5.0	0.5	---	---	9.5	0.5

DAY	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	8.0	1.0	14.0	5.0	14.0	7.0	16.0	10.0	20.0	13.0	17.5	12.5
2	9.0	1.5	14.5	5.5	12.5	6.5	18.0	11.0	19.5	13.0	17.5	12.5
3	9.5	2.5	14.0	5.5	13.5	7.0	18.0	11.0	20.5	13.5	14.0	11.5
4	9.5	2.0	10.0	6.0	13.5	7.0	17.5	11.5	20.5	15.0	14.5	9.5
5	10.5	2.5	8.0	5.0	14.0	7.5	18.0	11.0	18.5	14.5	15.5	9.5
6	10.5	3.0	11.5	5.0	15.0	7.5	18.0	11.0	20.5	14.5	16.5	11.0
7	8.0	4.5	10.0	6.0	16.0	7.0	18.0	11.0	20.5	14.0	15.5	12.5
8	10.5	3.5	9.0	5.0	16.0	8.0	18.5	12.0	20.0	14.5	15.5	10.5
9	11.0	3.5	9.5	5.5	15.0	8.5	18.5	11.5	20.5	14.5	16.0	10.5
10	11.0	4.5	10.0	5.0	15.0	8.5	18.5	11.0	19.5	13.0	17.0	11.5
11	8.5	3.5	14.0	5.5	12.5	9.0	18.5	11.0	19.5	13.0	16.5	12.0
12	11.0	3.5	14.5	6.0	15.5	7.0	18.5	11.5	19.0	12.5	17.0	11.5
13	11.0	3.0	11.5	6.5	15.0	8.5	18.5	12.0	19.0	12.5	16.5	11.5
14	10.0	5.0	15.0	6.5	17.5	9.5	19.5	12.5	20.0	13.5	15.0	11.0
15	11.0	5.0	15.0	6.5	17.5	9.0	20.0	13.0	19.5	14.0	13.0	8.5
16	12.0	4.0	10.0	6.0	18.0	9.5	20.0	13.5	20.0	14.0	12.5	8.0
17	9.5	4.5	8.0	4.5	18.0	10.0	20.0	14.0	20.0	14.0	11.0	7.0
18	7.0	4.0	10.0	4.0	16.5	10.0	20.0	14.5	20.0	14.0	10.5	5.5
19	7.0	4.5	12.5	4.0	18.0	9.5	20.0	14.5	19.0	13.0	10.5	6.0
20	8.5	4.0	11.0	6.0	18.5	10.0	20.0	14.5	18.5	13.0	10.0	7.0
21	9.0	4.5	11.0	7.5	19.0	10.5	20.0	14.5	19.5	13.5	11.5	6.5
22	7.5	5.5	11.5	5.5	19.0	11.0	19.0	13.5	20.0	14.0	11.0	7.0
23	7.5	4.5	12.5	5.5	19.0	11.0	19.0	13.0	19.0	14.0	12.0	7.5
24	9.5	4.5	13.5	5.5	19.0	11.0	19.5	13.0	17.5	11.5	12.5	7.5
25	8.0	3.5	14.5	6.5	19.0	10.5	20.0	13.5	17.0	13.5	12.0	9.0
26	7.0	3.5	15.5	7.0	18.5	10.5	19.5	13.0	19.0	13.5	11.5	8.5
27	10.0	3.0	15.5	7.0	16.5	11.0	19.0	12.5	17.5	14.0	9.5	8.0
28	10.0	4.0	13.5	8.0	15.0	10.5	19.0	12.5	16.0	14.5	9.5	5.5
29	12.0	4.0	11.0	7.5	17.0	10.5	19.5	13.0	15.0	13.5	10.0	7.0
30	13.5	4.0	10.0	7.5	17.0	8.5	19.5	13.5	16.0	12.5	8.5	4.5
31	---	---	13.5	7.0	---	---	20.5	13.5	18.0	12.5	---	---
MONTH	13.5	1.0	15.5	4.0	19.0	6.5	20.5	10.0	20.5	11.5	17.5	4.5

JORDAN RIVER BASIN

10172200 RED BUTTE CREEK AT FORT DOUGLAS, NEAR SALT LAKE CITY, UTAH--Continued

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

DATE	TIME	TEMP- ERATURE (DEG C)	DIS- CHARGE (CFS)	SUS- PENDE SEDI- MENT (MG/L)	SUS- PENDE SEDI- MENT DIS- CHARGE (T/DAY)
NOV.					
05...	1555	5.0	1.7	102	.49
DEC.					
18...	1430	2.5	1.6	75	.33
JAN.					
27...	1625	3.5	2.5	17	.12
MAR.					
03...	1410	5.0	2.4	57	.38
MAY					
11...	1510	9.0	13	57	2.0
AUG.					
11...	1215	22.0	2.3	72	.45
SEP.					
22...	1425	11.0	2.0	51	.28

SUSPENDED SEDIMENT DISCHARGE MEASUREMENTS,
WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DATE	TIME	TEMP- ERATURE (DEG C)	DIS- CHARGE (CFS)	SUS- PENDE SEDI- MENT (MG/L)	SUS- PENDE SEDI- MENT DIS- CHARGE (T/DAY)
NOV.					
06...	1310	6.5	2.3	36	.22
DEC.					
16...	1245	1.0	2.4	11	.07
JAN.					
18...	1250	2.0	5.8	102	1.6
FEB.					
12...	0810	2.0	3.9	14	.15
MAR.					
16...	1035	1.5	4.5	13	.16
APR.					
15...	1430	10.0	20	81	4.4
MAY					
21...	1245	9.5	14	17	.64
JUNE					
15...	1255	14.1	7.0	24	.45
JULY					
09...	1530	17.8	4.7	25	.32
SEP.					
24...	1040	8.0	2.3	13	.08

SEVIER LAKE BASIN

79

10191500 SEVIER RIVER BELOW PIUTE DAM, NEAR MARYSVALE, UTAH
(Irrigation network station)

LOCATION.--Lat 38°19'55", long 112°11'15", in NW¼SE¼ sec.34, T.28 S., R.3 W., Piute County, at gaging station 0.8 mile downstream from Piute Dam, and 8 miles south of Marysville.

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

PERIOD OF RECORD.--Chemical analyses: March 1958 to September 1959, February 1961 to September 1971.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DATE	TIME	TEMP- ERATURE (DEG C)	DIS- CHARGE (CFS)	DIS- SOLVED SILICA (SiO2) (MG/L)	DIS- SOLVED CAL- CIUM (CA) (MG/L)	DIS- SOLVED MAG- NE- SIUM (MG)	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)
OCT. 20...	1110	8.5	100	14	40	22	34	5.5	259	0	38	15
NOV. 20...	1210	3.5	43	19	38	20	33	4.2	240	10	34	15
DEC. 15...	0935	.0	2.7	28	48	23	34	3.9	299	0	31	15
JAN. 25...	1025	1.0	2.6	30	52	23	30	3.3	305	0	21	12
FEB. 17...	1200	4.5	2.9	26	49	21	32	3.1	278	0	31	13
MAR. 11...	1415	8.0	3.3	--	46	22	31	3.2	271	0	32	13
APR. 21...	1400	10.0	139	--	45	21	33	5.8	259	0	25	11
JUNE 29...	1020	18.0	487	--	41	22	31	4.4	258	0	43	13
AUG. 06...	1315	20.0	274	--	42	23	30	4.8	260	0	42	15
SEP. 23...	1100	11.5	117	15	45	23	33	5.0	276	0	28	12

DATE	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 CONSTITUENTS) (MG/L)	DIS- SOLVED SOLIDS (TONS PER AC-FT)	DIS- SOLVED SOLIDS (TONS PER DAY)	HARD- NESS (CA+MG) (MG/L)	NON- CAR- BONATE HARD- NESS (MG/L)	SODIUM AD- SORP- TION RATIO	SPECI- FIC COND- UCTANCE (MICRO- MHOS)	PH (UNITS)
OCT. 20...	.1	.50	79	299	.41	80.7	190	0	1.1	498	7.9
NOV. 20...	.3	.30	80	293	.40	34.3	178	0	1.1	497	8.4
DEC. 15...	.4	1.1	140	336	.46	2.49	210	0	1.0	534	8.1
JAN. 25...	.5	.30	90	323	.44	2.27	220	0	.9	522	8.3
FEB. 17...	--	.10	--	313	.43	2.45	210	0	1.0	493	7.9
MAR. 11...	--	.20	--	281	.38	2.50	210	0	.9	500	8.2
APR. 21...	--	.20	--	271	.37	102	200	0	1.0	475	7.7
JUNE 29...	--	.03	--	281	.38	369	190	0	1.0	495	7.9
AUG. 06...	--	.06	70	285	.39	211	200	0	.9	475	7.8
SEP. 23...	.2	.21	110	298	.41	94.1	210	0	1.0	518	7.9

SEVIER LAKE BASIN

10204200 MILL CREEK NEAR GLENWOOD, UTAH

LOCATION.--Lat 38°45'01", long 111°58'35" in NW $\frac{1}{4}$ sec.1, T.24 S., R.2 W., Sevier County, at gaging station 30 feet downstream from Mill Creek detention dam, and 1.5 miles southeast of Glenwood.

DRAINAGE AREA.--18.9 sq mi.

PERIOD OF RECORD.--Sediment records: May 1963 to September 1971.

REMARKS.--This station is operated in conjunction with a trap efficiency study of the Mill Creek detention reservoir.

SUSPENDED SEDIMENT, WATER YEARS OCTOBER 1963 TO SEPTEMBER 1971
(WHERE NO MEAN CONCENTRATIONS ARE SHOWN, LOADS ARE COMPUTED FROM DISCHARGE-SEDIMENT LOAD CURVES)

Date	Outflow duration (hours)	Total Outflow (acre-feet)	Mean discharge for period (cfs)	Suspended sediment	
				Mean concentration (mg/l)	Outflow sediment load (tons)
Aug. 7, 1964	4.0	0.14	0.41	9,000	1.8
Aug. 15	4.0	2.2	6.7	17,300	550
July 18, 1965	4.0	1.1	3.3	4,200	40
July 29	2.0	2.0	12.1	3,300	110
Aug. 1	2.0	.67	4.1	---	30
Aug. 17	3.0	4.0	16.0	4,900	240
Sept. 22, 1967	3.0	.40	1.6	---	18
Sept. 23	2.0	.14	.84	---	3
May 6, 1968	4.0	.14	.41	---	3
June 24, 1969	1.0	.02	.04	---	.1
Oct. 18, 1969	1.5	.02	.08	---	T
Dec. 22	1.0	.02	.04	---	T
Mar. 26, 1971	7.5	6.5	10.0	8,190	474
Mar. 27	19.0	4.4	2.7	8,520	85
Mar. 28	5.0	.08	.19	417	.21
July 19	3.5	5.4	19.0	7,880	381
July 20	3.0	.04	.13	2,000	.71
Aug. 6	7.0	1.1	1.8	2,440	33
Aug. 28	4.0	6.3	19.0	5,670	450
Aug. 29	3.0	.04	.19	375	.19

T Less than 0.05 ton

10204200 MILL CREEK NEAR GLENWOOD, UTAH--Continued
(RESERVOIR OUTFLOW)

Periodic determinations of suspended-sediment discharge, and particle-size analyses of suspended sediment
October 1963 to September 1971
(Methods of analysis: P, pipet; S, sieve; N, in native water; W, in distilled water; C. Chemically dispersed; V, visual accumulation tube)

Date	Time	Water temperature (°C)	Discharge (cfs)	Mean concentration (mg/l)	Discharge (tons per day)	Suspended sediment											Methods of analysis
						Percent finer than indicated size, in millimeters											
						0.002	0.004	0.008	0.016	0.031	0.062	0.125	0.250	0.500	1.000	2.000	
August 7, 1964	1730	-	1.6	110,000	475	36	52		92	100							VPWC
August 15, 1964	1945	-	29.0	220,000	17,200	24	34		66	99	100						VPWC
August 15, 1964	1/	-	-	440,000	-	24	28		39	95	100						VPWC
August 15, 1964	1/	-	-	189,000	-	23	36		63	99	100						VPWC
July 18, 1965	1730	-	0.8	17,100	37	52	72		96	100							SPWC
July 29, 1965	1500	-	7.9	34,000	725	43	60		96	100							SPWC
July 29, 1965	1525	-	20.0	55,800	3,010	41	54		94	100							SPWC
August 17, 1965	1615	-	24.0	51,100	3,310	38	53		91	100							SPWC
August 17, 1965	1750	-	1.2	23,700	77	44	61		94	100							SPWC
August 17, 1965	1/	-	-	383,000	-	29	41		64	97	100						VPWC
August 17, 1965	1/	-	-	325,000	-	28	44		68	99	100						VPWC
August 17, 1965	1/	-	-	93,200	-	35	39		75	99	99	100					VPWC
March 26, 1971	1/	-	8	44,800	967	41	50		89	100							VPWC
March 27, 1971	1750	6.5	10.6	20,500	587	32	39		63	100							VPWC
July 19, 1971	1/			511,000		24	30		51	96	100						VPWC
July 19, 1971	1/			526,000		24	27		43	97	100						VPWC
August 6, 1971	1/			123,000		31	43		81	100							VPWC
August 6, 1971	1/			117,000		35	44		84	100							SPWC
August 6, 1971	1930	19.0	0.77	19,400	40	56	73		89	99	100						VPWC
August 28, 1971	1/			392,000		25	27		47	97	100						VPWC
August 28, 1971	1/			271,000		21	36		71	100							VPWC
August 28, 1971	1/			172,000		21	33		64	99	100						VPWC
August 28, 1971	2400	16.5	.58	8,810	11	36	47		65	100							SPWC
1/ Automatic suspended-sediment sampler; exact time of sampling is not known.																	
(RESERVOIR INFLOW)																	

1/ Automatic suspended-sediment sampler; exact time of sampling is not known.

(RESERVOIR INFLOW)

Periodic determinations of suspended-sediment discharge, and particle-size analyses of suspended sediment
October 1963 to September 1971
(Methods of analysis: P, pipet; S, sieve; N, in native water; W, in distilled water; C. Chemically dispersed; V, visual accumulation tube)

Date	Time	Water temperature (°C)	Discharge (cfs)	Mean concentration (mg/l)	Discharge (tons per day)	Suspended sediment											Methods of analysis
						Percent finer than indicated size, in millimeters											
						0.002	0.004	0.008	0.016	0.031	0.062	0.125	0.250	0.500	1.000	2.000	
August 15, 1964	1930	-	-	214,000	-	26	35		59		87	95	99	100			SPWC
May 24, 1965 ^{1/}	1745	-	-	54,400	-	49	58		91		100						VPWC
May 24, 1965 ^{1/}	1845	-	-	122,000	-	28	33		79		96	97	98	99	99	100	SVPWC
Sept. 22, 1967	1345	57	-	123,000	-	37	39		69		97	99	100				VPWC
Sept. 22, 1967	^{2/}	-	-	54,500	-	38	50		84		98	99	100				VPWC
June 24, 1969	1400	10.0	-	152,000	-	24	31		56		92	98	100				VPWC
August 28, 1971	^{2/}	-	-	244,000	-	16	23		37		83	94	98	100			VPWC
August 28, 1971	^{2/}	-	-	294,000	-	12	22		36		77	91	98	100			VPWC
^{1/} Inflow to reservoir but no outflow from reservoir.																	
^{2/} Automatic suspended-sediment sampler; exact time of sampling is not known.																	

1/ Inflow to reservoir but no outflow from reservoir.

2/ Automatic suspended-sediment sampler; exact time of sampling is not known.

SEVIER LAKE BASIN

10224000 SEVIER RIVER NEAR LYNN DYLL, UTAH
(Irrigation network station)

LOCATION.--Lat 39°30', long 112°24', in SE $\frac{1}{4}$ sec.23, T.15 S., R.5 W., Millard County, at bridge on county road, 1.5 miles upstream from gaging station, and about 2 miles south of Lynndyl.

DRAINAGE AREA.--6,270 sq mi, approximately (at gaging station).

PERIOD OF RECORD.--Chemical analyses: March 1951 to September 1971.
Water temperatures: March 1951 to September 1971.

EXTREMES.--1970-71:

Specific conductance: Maximum daily, 3,280 micromhos Feb. 7; minimum daily, 1,390 micromhos Jan. 13, 14.
Water temperatures: Maximum, 25.0°C on several days during September; minimum, freezing point on several days during December and January.

Period of record:

Specific conductance: Maximum daily, 8,300 micromhos Dec. 27, 1962; minimum daily, 431 micromhos Feb. 4, 1962.
Water temperatures: Maximum, 29.0°C July 21-23, 1956, Aug. 9, 10, 1963, Aug. 1, 1969; minimum, 1.0°C on many days during winter period each year.

REMARKS.--Discharges are adjusted to compensate for inflow from deep well discharging to the river between the sampling point and the gaging station.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DATE	TIME	TEMP- ERATURE (DEG C)	DIS- CHARGE (CFS)	DIS- SOLVED SILICA (SI02) (MG/L)	DIS- SOLVED CAL- CIUM (CA) (MG/L)	DIS- SOLVED MAG- NE- SIUM (MG)	DIS- SOLVED SODIUM (NA) (MG/L)	DIS- SOLVED PO- TAS- SIUM (K) (MG/L)	BICAR- BONATE (HC03) (MG/L)	CAR- BONATE (C03) (MG/L)	DIS- SOLVED SULFATE (S04) (MG/L)	DIS- SOLVED CHLO- RIDE (CL) (MG/L)
OCT. 22...	0930	--	66	11	74	88	261	9.0	321	0	339	330
NOV. 24...	1355	8.0	58	15	73	72	231	5.8	320	0	285	310
DEC. 17...	1500	1.5	61	17	73	75	230	5.5	317	0	270	320
FEB. 02...	1435	6.0	48	16	95	88	340	0.4	327	0	420	490
MAR. 11...	0940	5.5	18	18	120	130	480	--	370	0	580	650
APR. 06...	1050	10.5	160	--	73	80	290	9.2	329	0	380	370
27...	1200	8.5	95	--	88	85	250	6.6	317	0	350	390
MAY 24...	1800	14.0	607	15	73	78	280	7.5	312	0	360	330
JUNE 23...	1200	17.0	790	--	62	77	310	6.7	336	0	330	360
JULY 22...	1420	20.0	378	16	64	79	280	6.9	322	0	350	360
AUG. 19...	1045	19.0	247	16	60	75	290	7.4	325	0	340	370
SEP. 27...	1140	10.5	27	18	97	110	390	6.0	359	0	560	480

DATE	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 CONSTITUENTS) (MG/L)	DIS- SOLVED SOLIDS (TONS PER AC-FT)	DIS- SOLVED SOLIDS (TONS PER DAY)	HARD- NESS (CA,MG) (MG/L)	NON- CAR- BONATE HARD- NESS (MG/L)	SODIUM AD- SORP- TION RATIO	SPECI- FIC COND- UCTANCE (MICRO- MHOS)	PH (UNITS)
OCT. 22...	.6	--	--	1270	1.88	248	546	283	4.9	2160	8.1
NOV. 24...	.3	--	--	1150	1.78	207	478	215	4.6	1940	7.9
DEC. 17...	.4	--	--	1100	1.50	182	490	230	4.5	1970	8.2
FEB. 02...	--	.30	--	1600	2.18	208	600	332	6.0	2650	8.0
MAR. 11...	--	.10	--	2200	2.99	111	840	536	7.2	3460	8.1
APR. 06...	--	.60	--	1370	1.86	592	510	240	5.6	2180	8.1
27...	--	.30	--	1326	1.80	340	570	310	4.6	2220	7.4
MAY 24...	.4	.50	340	1300	1.77	2130	500	250	5.4	2050	8.1
JUNE 23...	--	.64	--	1312	1.78	2800	470	200	6.2	2100	8.0
JULY 22...	.4	.46	390	1320	1.80	1350	480	220	5.5	2080	8.0
AUG. 19...	.3	.20	480	132	1.80	880	460	190	5.9	2220	8.1
SEP. 27...	.6	.21	440	1840	2.50	139	690	400	6.4	3050	7.9

SEVIER LAKE BASIN

83

10224000 SEVIER RIVER NEAR LYNN DYK, UTAH--Continued

SPECIFIC CONDUCTANCE (MICROMHOS AT 25°C), WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2370	1980	1840	1680	2930	2950	1990	2000	2000	2000	2000	2200
2	2380	1990	1900	2800	2930	2890	1990	2050	2100	2100	2000	2800
3	2380	1910	1840	1680	2920	2900	2000	2030	2150	2100	2000	2800
4	2360	1810	1900	1690	2920	2900	1990	2030	2100	2100	2000	2800
5	2360	1850	1910	1690	3260	3060	2030	2010	2100	2050	2000	2800
6	2360	1820	1860	1740	3240	3110	1990	2020	2100	2050	2000	2800
7	1560	1860	1900	1420	3280	3060	2030	2030	2100	2150	2000	2800
8	1530	1850	1900	1490	3180	3070	1990	2030	2100	2150	2050	2800
9	1530	1820	1970	1530	3150	3120	1990	2030	2100	2100	2100	2800
10	1530	1870	2020	1430	3230	3250	2010	2050	2100	2100	2150	2800
11	1520	1910	1990	1440	3220	3270	1990	2050	2000	2150	2150	2800
12	1540	1850	1970	1400	3220	3270	2000	2040	2100	2100	2100	2800
13	1530	1820	1940	1390	3170	3250	2180	2030	2100	2100	2150	2800
14	2380	1910	1940	1390	3230	3260	2180	2020	2100	2100	2150	2800
15	2430	1940	1930	2240	3240	3260	2190	2050	2150	2100	2150	2500
16	2420	1830	1920	1750	3210	2030	2200	2020	2150	2050	2150	2500
17	2430	1820	1890	1740	3230	1990	2200	1990	2150	2100	2150	2500
18	2430	1890	1920	1740	3210	1980	2180	2040	2150	2100	2150	2500
19	2010	1890	1880	1440	3200	1960	2180	2030	2150	2100	2150	2500
20	2000	1830	1900	1720	3130	1990	2180	2010	2150	2100	2050	2500
21	2000	1910	1960	1750	3230	1980	2170	2060	2150	2100	2150	2500
22	1990	1810	1750	1720	3230	1990	2180	2050	2150	2100	2150	2550
23	2010	1770	1890	2250	3170	1980	1940	2050	2150	2100	2150	2550
24	2010	1770	1710	1750	3210	1990	1920	2050	2150	2100	2150	2550
25	2000	1760	1770	2230	3210	1980	1920	2050	2150	2100	2150	2550
26	1990	1760	1730	2280	3210	1980	1920	2050	2150	2100	2150	2550
27	1990	1690	1770	2280	3240	1980	1920	2050	2100	2100	2150	1950
28	1980	1710	1770	2270	3170	1990	2040	2050	2150	2050	2150	1900
29	2000	1740	1610	2280	---	1980	2030	2050	2150	2150	2150	1950
30	2000	1780	1610	2250	---	1980	2050	2060	2150	2150	2150	1950
31	1980	---	1610	2290	---	1990	---	2050	---	2150	2450	---
MONTH	2030	1840	1850	1430	3170	2530	2050	2040	2120	2100	2120	2550

TEMPERATURE (°C) OF WATER, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971
(ONCE-DAILY MEASUREMENT)

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	16.0	7.0	5.0	1.0	6.0	2.0	9.0	16.0	17.0	19.0	22.0	21.0
2	16.0	7.0	5.0	1.0	6.0	2.0	10.0	16.0	17.0	19.0	22.0	25.0
3	16.0	7.0	5.0	1.0	6.0	4.0	11.0	16.0	17.0	19.0	22.0	25.0
4	16.0	7.0	5.0	1.0	6.0	6.0	11.0	16.0	17.0	19.0	22.0	25.0
5	15.0	7.0	5.0	1.0	6.0	7.0	16.0	16.0	17.0	19.0	22.0	25.0
6	12.0	7.0	5.0	1.0	7.0	7.0	16.0	16.0	17.0	20.0	22.0	25.0
7	11.0	7.0	5.0	0.0	7.0	7.0	16.0	16.0	18.0	20.0	22.0	25.0
8	12.0	7.0	5.0	0.0	6.0	9.0	16.0	16.0	18.0	20.0	22.0	25.0
9	12.0	7.0	5.0	1.0	8.0	11.0	16.0	16.0	18.0	20.0	23.0	25.0
10	12.0	7.0	4.0	1.0	6.0	10.0	16.0	16.0	18.0	20.0	23.0	25.0
11	12.0	6.0	4.0	1.0	6.0	9.0	16.0	14.0	18.0	20.0	23.0	25.0
12	12.0	6.0	2.0	1.0	9.0	9.0	16.0	14.0	18.0	22.0	23.0	25.0
13	12.0	6.0	2.0	1.0	10.0	9.0	16.0	14.0	19.0	22.0	23.0	25.0
14	12.5	6.0	2.0	1.0	10.5	9.0	16.0	14.0	20.0	22.0	24.0	14.0
15	12.0	6.0	1.0	1.0	9.0	9.0	16.0	14.0	20.0	22.0	22.0	14.0
16	11.0	6.0	1.0	1.0	8.0	9.0	16.0	14.0	20.0	22.0	22.0	12.0
17	11.0	6.0	1.0	1.0	7.0	9.0	16.0	14.0	20.0	22.0	22.0	11.0
18	10.5	5.0	1.0	1.0	6.0	9.0	15.0	14.0	20.0	22.0	22.0	11.0
19	10.0	5.0	1.0	1.0	5.0	9.0	14.0	14.0	20.0	22.0	22.0	11.0
20	10.0	5.0	0.0	1.0	4.0	9.0	13.0	14.0	20.0	23.0	22.0	11.0
21	10.0	4.5	0.0	1.0	4.0	9.0	13.0	15.0	20.0	23.0	22.5	11.0
22	10.0	4.5	0.0	1.0	3.0	9.0	13.0	15.0	20.0	23.0	22.0	11.0
23	10.0	5.0	0.0	1.0	3.0	9.0	14.0	16.0	20.0	23.0	22.0	11.0
24	10.0	5.0	0.0	2.0	2.0	10.0	14.0	16.0	20.0	22.0	22.0	11.0
25	8.0	5.0	0.0	2.0	2.0	9.0	14.0	17.0	20.0	22.0	22.0	11.0
26	8.0	5.0	0.0	2.0	2.0	9.0	14.0	17.0	20.0	22.0	21.0	11.0
27	8.0	5.0	1.0	3.0	2.0	9.0	14.5	17.0	18.0	22.0	21.0	10.0
28	8.0	4.5	1.0	3.0	2.0	9.0	15.0	17.0	18.0	22.0	21.0	10.0
29	8.0	5.0	1.0	4.0	---	9.0	15.0	17.0	18.5	22.0	21.0	10.0
30	7.0	5.0	1.0	5.0	---	9.0	16.0	17.0	20.0	22.0	21.0	9.0
31	7.0	---	1.0	5.5	---	8.0	---	17.0	---	22.0	21.0	---
MONTH	11.0	6.0	2.0	1.5	6.0	8.0	14.5	15.5	19.0	21.5	22.0	17.0

ANALYSES OF SAMPLES COLLECTED AT WATER-QUALITY PARTIAL-RECORD STATIONS
CHEMICAL ANALYSES, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DATE	TIME	TEMP- ERATURE (DEG C)	DIS- CHARGE (CFS)	DIS- SOLVED SILICA (SI02) (MG/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 (HC03) (MG/L)	CAR- BONATE (C03) (MG/L)	DIS- SOLVED SULFATE (S04) (MG/L)	DIS- SOLVED CHLO- RIDE (CL) (MG/L)
COLORADO RIVER BASIN												
DIRTY DEVIL RIVER BASIN												
09333500 DIRTY DEVIL RIVER NEAR HITE, UTAH (LAT 38°05'50", LONG 110°24'27")												
NOV. 17...	1330	4.0	96	21	208	45	153	7.5	189	0	712	120
FEB. 10...	1100	.0	114	24	160	38	120	6.0	185	0	500	110
MAY 12...	1015	16.0	31	--	230	77	340	10	149	0	980	290
AUG. 11...	1100	25.0	4.8	--	750	120	440	23	610	0	2300	360
ESCALANTE RIVER BASIN												
09337500 ESCALANTE RIVER NEAR ESCALANTE, UTAH (LAT 37°46'00", LONG 111°34'00")												
NOV. 12...	1700	7.0	15	20	75	27	56	3.9	208	0	164	50
APR. 06...	1630	--	18	--	66	27	46	4.0	169	0	150	65
VIRGIN RIVER BASIN												
09413500 VIRGIN RIVER NEAR ST. GEORGE, UTAH (LAT 37°01'00", LONG 113°40'00")												
NOV. 03...	1300	14.0	70	20	330	72	330	23	288	0	700	430
MAR. 23...	1500	17.0	70	--	230	60	250	19	260	0	590	340
THE GREAT BASIN												
BEAR RIVER BASIN												
10011500 BEAR RIVER NEAR UTAH-WYOMING STATE LINE (LAT 40°57'58", LONG 110°51'04")												
NOV. 07...	1800	.0	105	5.0	19	6.0	2.1	.6	90	0	6.2	.0
JUNE 22...	0900	4.5	1900	--	6.3	1.5	.8	.4	24	0	3.0	1.8
10020300 BEAR RIVER BELOW RESERVOIR, NEAR WOODRUFF, UTAH (LAT 41°30'20", LONG 111°00'50")												
NOV. 03...	1045	3.0	11	2.0	47	19	22	2.4	240	0	21	20
JUNE 21...	1530	20.0	1890	--	29	9.6	5.2	1.7	138	0	13	5.9
10026500 BEAR RIVER NEAR RANDOLPH, UTAH (LAT 41°48'02", LONG 111°04'20")												
NOV. 04...	0930	.0	56	9.0	64	29	40	1.9	326	2	43	46
JUNE 21...	1130	20.0	1120	--	41	22	20	3.3	235	0	18	20
10041000 THOMAS FORK NEAR WYOMING-IDAHO STATE LINE (LAT 42°24'10", LONG 111°01'30")												
NOV. 04...	1345	.0	19	8.0	66	17	145	1.5	263	0	55	180
MAY 20...	1030	5.0	541	--	61	14	30	1.4	237	0	23	37
10046000 RAINBOW INLET CANAL NEAR DINGLE, IDAHO (LAT 42°13'48", LONG 111°17'43")												
NOV. 04...	1500	2.0	187	6.0	63	26	32	1.8	275	0	64	37
MAR. 12...	1145	2.0	--	9.0	70	23	30	2.4	282	0	52	35
MAY 20...	1700	9.0	3220	--	53	20	22	2.8	249	0	38	22
AUG. 13...	1300	20.0	247	--	62	25	31	2.0	263	0	58	36

ANALYSES OF SAMPLES COLLECTED AT WATER-QUALITY PARTIAL-RECORD STATIONS

85

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DATE	DIS- SOLVED FLUO- RIDE (F) (MG/L)	DIS- SOLVED NITRITE PLUS NITRATE (N) (MG/L)	DIS- SOLVED BORON (R) (UG/L)	DIS- SOLVED SOLIDS (SUM OF CONSTITUENTS) (MG/L)	DIS- SOLVED SOLIDS (TONS PER AC-FT)	DIS- SOLVED SOLIDS (TONS PER DAY)	HARD- NESS (CA+MG) (MG/L)	NON- CAR- BONATE HARD- NESS (MG/L)	SODIUM AD- SORP- TION RATIO	SPECI- FIC COND- UCTANCE (MICRO- MHOS)	PH (UNITS)
COLORADO RIVER BASIN--Continued											
DIRTY DEVIL RIVER BASIN--Continued											
09333500 DIRTY DEVIL RIVER NEAR HITE, UTAH--Continued											
NOV. 17...	--	--	--	1360	2.04	389	704	549	2.5	1890	8.1
FEB. 10...	.4	.40	110	1050	1.43	323	560	408	2.2	1490	7.9
MAY 12...	--	.60	--	2000	2.72	168	890	770	5.0	2840	7.9
AUG. 11...	--	.35	--	4300	5.85	56.0	2400	1900	3.9	4600	7.1
ESCALANTE RIVER BASIN--Continued											
09337500 ESCALANTE RIVER NEAR ESCALANTE, UTAH--Continued											
NOV. 12...	--	--	--	498	.76	20.2	298	127	1.4	845	8.0
APR. 06...	--	.00	--	441	.60	21.4	280	140	1.2	758	8.4
VIRGIN RIVER BASIN--Continued											
09413500 VIRGIN RIVER NEAR ST. GEORGE, UTAH--Continued											
NOV. 03...	.6	1.4	760	2000	2.96	412	1120	884	4.3	2820	7.4
MAR. 23...	--	.60	--	1620	2.20	306	820	610	3.8	2170	7.8
THE GREAT BASIN--Continued											
BEAR RIVER BASIN--Continued											
10011500 BEAR RIVER NEAR UTAH-WYOMING STATE LINE--Continued											
NOV. 02...	--	--	--	83	.11	23.5	72	0	.1	156	8.0
JUNE 22...	--	.10	10	30	.04	154	22	2	.1	43	7.8
10020300 BEAR RIVER BELOW RESERVOIR, NEAR WOODRUFF, UTAH--Continued											
NOV. 03...	--	.90	--	252	.34	7.89	196	0	.7	466	8.1
JUNE 21...	--	.05	30	132	.18	674	110	0	.2	241	7.4
10026500 BEAR RIVER NEAR RANDOLPH, UTAH--Continued											
NOV. 04...	--	--	--	395	.54	59.7	279	8	1.0	694	8.3
JUNE 21...	--	.09	70	240	.33	726	190	0	.6	454	7.7
10041000 THOMAS FORK NEAR WYOMING-IDAHO STATE LINE--Continued											
NOV. 04...	--	--	--	602	.82	30.9	234	18	4.1	1150	8.1
MAY 20...	--	.29	100	283	.38	413	210	16	.9	533	7.8
10046000 RAINBOW INLET CANAL NEAR DINGLE, IDAHO--Continued											
NOV. 04...	--	--	--	365	.50	185	264	38	.9	649	8.0
MAR. 12...	--	.00	--	360	.49	--	270	39	.8	632	8.2
MAY 20...	--	.00	40	--	--	--	210	10	.7	536	7.8
AUG. 13...	--	.05	--	--	--	--	260	42	.8	574	8.0

ANALYSES OF SAMPLES COLLECTED AT WATER-QUALITY PARTIAL-RECORD STATIONS

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DATE	TIME	TEMP- ERATURE (DEG C)	DIS- CHARGE (CFS)	DIS- SOLVED SILICA (SiO ₂) (MG/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 (HCO ₃) (MG/L)	CAR- BONATE (CO ₃) (MG/L)	DIS- SOLVED SULFATE (SO ₄) (MG/L)	DIS- SOLVED CHLO- RIDE (CL) (MG/L)
THE GREAT BASIN--Continued												
BEAR RIVER BASIN--Continued												
10059500 BEAR LAKE OUTLET CANAL NEAR PARIS, IDAHO (LAT 42°13'00", LONG 111°20'35")												
NOV. 04...	1600	3.0	14	7.0	65	35	39	2.6	297	0	79	44
MAR. 12...	1030	3.0	739	11	43	48	38	4.8	328	0	68	45
MAY 20...	1800	10.0	600	--	57	24	27	3.5	258	0	52	27
AUG. 13...	1500	22.0	1450	--	43	46	35	4.1	330	0	56	38
10090450 WEST CACHE CANAL AT CORNISH, UTAH (LAT 41°59'10", LONG 111°57'14")												
NOV. 05...	1340	6.0	26	16	58	40	68	11	377	0	65	80
MAY 25...	0910	12.5	1.0	--	100	54	110	9.2	360	0	160	190
10092700 BEAR RIVER AT CORNISH, UTAH (LAT 41°58'32", LONG 111°57'11")												
MAY 25...	1010	11.5	3200	--	55	23	25	4.5	264	0	32	31
AUG. 19...	1100	19.0	1100	14	59	41	44	6.2	366	0	56	50
10098000 CUB RIVER AT FRANKLIN, IDAHO (LAT 42°00'50", LONG 111°49'10")												
NOV. 05...	0950	5.0	5.0	13	50	21	33	5.9	280	0	8.2	29
MAR. 10...	1130	4.0	56	12	54	15	10	2.3	231	0	11	10
MAY 25...	1340	10.0	443	--	48	9.8	3.0	.8	195	0	6.0	2.9
AUG. 19...	1200	19.0	2.0	19	47	20	33	8.2	303	0	11	26
10098800 WORM CREEK NEAR FAIRVIEW, IDAHO (LAT 42°01'42", LONG 111°51'49")												
NOV. 05...	1100	5.0	3.5	15	50	31	22	9.7	355	0	8.5	8.0
MAY 25...	1110	12.0	3.0	--	61	36	25	9.0	384	0	18	22
10125500 MALAD RIVER AT WOODRUFF, IDAHO (LAT 42°02'00", LONG 112°14'00")												
NOV. 05...	1515	13.0	37	25	124	55	644	48	452	0	184	950
MAR. 09...	1440	9.0	84	23	120	60	460	43	417	0	180	770
MAY 24...	1300	18.0	140	--	90	53	340	36	456	0	120	540
AUG. 20...	1600	27.0	17	26	140	47	1100	80	416	0	83	1900
10126100 BEAR RIVER AT MIGRATORY BIRD REFUGE, NEAR BRIGHAM CITY, UTAH (LAT 41°48'49", LONG 112°15'50")												
NOV. 06...	1100	6.0	665	12	62	35	130	15	347	0	52	170
MAR. 09...	1145	3.5	1260	14	67	41	110	9.8	347	0	68	170
MAY 24...	1000	13.0	3100	--	52	21	46	5.0	256	0	27	67
AUG. 20...	1200	24.0	750	15	60	38	130	11	361	0	56	200

ANALYSES OF SAMPLES COLLECTED AT WATER-QUALITY PARTIAL-RECORD STATIONS

87

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DATE	DIS- SOLVED FLUO- RIDE (F) (MG/L)	DIS- SOLVED NITRATE (N) (MG/L)	DIS- SOLVED BORON (B) (UG/L)	DIS- SOLVED SOLIDS (SUM OF CONSTITUENTS) (MG/L)	DIS- SOLVED SOLIDS (TONS PER AC-FT)	DIS- SOLVED SOLIDS (TONS PER DAY)	HARD- NESS (CA-MG) (MG/L)	NON- CAR- BONATE HARD- NESS (MG/L)	SODIUM AD- SORP- TION RATIO	SPECI- FIC COND- UCTANCE (MICRO- MHOS)	PH (UNITS)
THE GREAT BASIN--Continued											
BEAR RIVER BASIN--Continued											
10059500 BEAR LAKE OUTLET CANAL NEAR PARIS, IDAHO--Continued											
NOV. 04....	--	--	--	418	.61	15.8	306	62	1.0	722	8.1
MAR. 17....	--	.00	--	420	.57	838	300	31	.9	726	8.3
MAY 20....	--	1.0	70	322	.44	522	240	30	.8	580	7.7
AUG. 13....	--	.04	--	385	.52	1510	300	26	.9	691	7.9
10090450 WEST CACHE CANAL AT CORNISH, UTAH--Continued											
NOV. 05....	--	--	--	523	.70	36.4	309	0	1.7	890	8.1
MAY 25....	--	2.0	150	800	1.1	2.16	470	180	2.2	1330	8.0
10092700 BEAR RIVER AT CORNISH, UTAH--Continued											
MAY 25....	--	.19	20	301	.41	2600	230	15	.7	527	8.0
AUG. 19....	.3	.25	160	452	.61	1340	320	16	1.1	752	8.0
10098000 CUB RIVER AT FRANKLIN, IDAHO--Continued											
NOV. 05....	--	--	--	298	.41	4.02	212	0	1.0	528	7.4
MAR. 10....	--	.10	--	229	.31	34.6	200	11	.3	393	8.3
MAY 25....	--	.46	0	166	.23	199	160	0	.1	294	8.2
AUG. 19....	.3	.34	140	316	.43	1.71	200	0	1.0	531	7.5
10098800 WORM CREEK NEAR FAIRVIEW, IDAHO--Continued											
NOV. 05....	--	--	--	319	.45	3.16	252	0	.6	582	8.1
MAY 25....	--	3.0	40	373	.51	3.02	300	0	.5	645	8.2
10125500 MALAD RIVER AT WOODRUFF, IDAHO--Continued											
NOV. 05....	--	--	--	2250	3.21	236	536	165	12	4080	7.7
MAR. 09....	--	.00	--	1900	2.58	430	550	208	8.6	3220	7.9
MAY 24....	--	.10	440	1400	1.90	529	440	69	7.0	2420	7.8
AUG. 20....	.5	.19	700	3580	4.87	164	540	200	21	6530	7.6
10126100 BEAR RIVER AT MIGRATORY BIRD REFUGE, NEAR BRIGHAM CITY, UTAH--Continued											
NOV. 05....	--	.70	--	650	.88	1170	298	13	3.3	1210	7.9
MAR. 09....	--	.20	--	652	.89	2220	340	55	2.6	1140	8.2
MAY 24....	--	.86	10	--	.47	344	220	6	1.4	600	7.9
AUG. 20....	.3	.08	210	689	.94	1400	310	10	3.2	1170	7.9

CHEMICAL ANALYSES, IN MILLIGRAMS PER LITER, OF GROUND WATERS IN UTAH

Well number	Geologic source	Depth of well (feet)	Date of collection	Temperature (°C)	Silica (SiO ₂)	Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Bicarbonate (HCO ₃)	Carbonate (CO ₃)
CENTRAL VIRGIN RIVER BASIN											
Washington County											
(C-41-17)17cba-1	JRn	626	8-04-71	17	-	-	-	-	-	-	-
(C-42-16)22dca-1	Qu	88	8-04-71	25	-	-	-	-	-	-	-
(C-43-15)25ddd-1	Qu	144	8-04-71	21	-	570	160	150	15	105	0
BLUFF AREA											
San Juan County											
(D-40-22)30bbb-1	JR gc	825	7-12-71	22	-	1.9	0.4	190	1.2	379	23
ESCALANTE VALLEY, BERYL-ENTERPRISE DISTRICT											
Iron County											
(C-34-16)28dcc-2	QTvf	148	6-22-71	13	-	-	-	-	-	-	-
(C-35-16)9add-1	QTvf	150	6-22-71	11	-	-	-	-	-	-	-
(C-36-16)9bcd-1	QTvf	272	6-22-71	12	-	-	-	-	-	-	-
(C-36-16)19aab-1	QTvf	352	6-22-71	11	-	-	-	-	-	-	-
(C-36-16)29daa-1	QTvf	-	6-22-71	17	-	-	-	-	-	-	-
(C-36-16)31ccc-1	QTvf	222	6-22-71	11	-	-	-	-	-	-	-
(C-37-17)12bdc-1	QTvf	170	6-22-71	13	-	-	-	-	-	-	-
ESCALANTE VALLEY-MILFORD DISTRICT											
Beaver County											
(C-28-10)5dad-2	QTvf	-	5-07-71	12.5	-	310	200	510	8.1	270	0
(C-28-10)8add-2	QTvf	200	5- -71	-	-	-	-	-	11	-	-
(C-28-10)17ccc-1	QTvf	-	7-15-71	13	-	520	180	400	11	293	-
(C-28-10)28cdd-1	QTvf	355	5-15-71	16	-	120	67	63	3.9	186	-
(C-28-11)23cbb-2	QTvf	95	5-06-71	14	-	120	54	170	8.4	191	-
(C-28-11)25dcd-1	QTvf	431	5-14-71	18	-	150	38	52	5.7	180	-
(C-29-10)5cdd-5	QTvf	-	5-11-71	13	-	120	26	30	4.7	240	-
(C-29-11)1add-2	QTvf	200	5-17-71	14	-	120	23	34	5.5	238	-
(C-29-11)11cdd-2	QTvf	90	5-14-71	14	-	190	37	69	6.8	199	-
(C-29-11)28add-2	QTvf	196	5- -71	-	-	-	-	-	-	-	-
CEDAR CITY VALLEY											
Iron County											
(C-36-12)20aac-1	QTvf	500	7-02-71	10	-	-	-	-	-	-	-
(C-36-12)32dbb-1	QTvf	-	9-13-71	14	-	-	-	-	-	-	-
(C-37-12)23acb-1	QTvf	300	7-02-71	14	-	-	-	-	-	-	-
(C-37-12)34abb-1	QTvf	190	7-02-71	11	-	-	-	-	-	-	-
(C-38-12)20bba-1	QTvf	-	8-02-71	-	-	-	-	-	-	-	-
PAROWAN VALLEY											
Iron County											
(C-33-8)35bcb-1	QTvf	250	9-13-71	14	-	-	-	-	-	-	-
(C-33-9)35acd-2	QTvf	500	9-13-71	14	-	-	-	-	-	-	-
(C-34-9)16cdd-2	QTvf	353	7-02-71	10	-	-	-	-	-	-	-
(C-34-10)13cbd-2	QTvf	-	7-02-71	11	-	-	-	-	-	-	-
BEAVER VALLEY											
Beaver County											
(C-29-7)19bcd-1	QTvf	-	7-18-71	13	-	-	-	-	-	-	-
(C-29-8)25cac-2	QTvf	340	7-18-71	19	-	-	-	-	-	-	-
(C-29-8)31add-1	QTvf	310	7-18-71	14	-	-	-	-	-	-	-
PAVANT VALLEY											
Millard County											
(C-19-4)31dbb-1	QTvf	523	6-25-71	14	-	-	-	-	-	-	-
(C-21-5)8bdc-2	QTvf	407	6-25-71	17	-	-	-	-	-	-	-
(C-21-5)30dbc-3	QTvf	787	6-25-71	20	-	-	-	-	-	-	-
(C-23-6)8abd-1	QTpf	200	6-22-71	15	-	590	220	750	10	288	-
(C-23-6)9bca-1	QTpf	-	6-22-71	17	-	560	200	1,000	48	184	-
(C-23-6)15bca-1	QTvf	145	6-23-71	18	-	-	-	-	-	-	-
(C-23-6)16bad-1	QTvf	130	6-23-71	15	-	560	180	820	30	382	-
(C-23-6)21add-1	QTvf	445	6-23-71	14	-	-	-	-	-	-	-
(C-23-6)21bdd-1	QTvf	415	6-23-71	14	-	320	180	470	25	304	-
UPPER SEVIER VALLEY											
Garfield County											
(C-26-1)23ddb-1	QTvf	200	7-02-71	11.5	-	-	-	-	-	-	-
(C-29-2)35bad-1	QTvf	197	8-04-71	18	-	-	-	-	-	-	-
(C-32-5)35bab-1	QTvf	456	6-28-71	14	-	-	-	-	-	-	-

Well number	Sulfate (SO ₄)	Chloride (Cl)	Nitrate (NO ₃)	Dis- solved solids (calc- ulated)	Hardness as CaCO ₃		Sodium- ad- sorp- tion ratio (SAR)	Specific con- ductance (micromhos /cm at 25°C)	pH
					Ca, Mg	Non car- bonate			
CENTRAL VIRGIN RIVER BASIN--Continued									
Washington County--Continued									
(C-41-17)17cba-1	-	-	-	-	-	-	-	460	-
(C-42-16)22dca-1	-	-	-	-	-	-	-	1,500	-
(C-43-15)25ddd-1	2,000	110	-	3,060	2,100	2,000	1.4	3,480	7.7
BLUFF AREA--Continued									
San Juan County--Continued									
(D-40-22)30bbb-1	40	16	0.06	439	6	0	33.0	747	8.6
ESCALANTE VALLEY, BERYL-ENTERPRISE DISTRICT--Continued									
Iron County--Continued									
(C-34-16)28dcc-2	-	-	-	-	-	-	-	915	-
(C-35-16)9add-1	-	-	-	-	-	-	-	530	-
(C-36-16)9bcd-1	-	-	-	-	-	-	-	470	-
(C-36-16)19aab-1	-	-	-	-	-	-	-	440	-
(C-36-16)29daa-1	-	-	-	-	-	-	-	525	-
(C-36-16)31ccc-1	-	-	-	-	-	-	-	545	-
(C-37-17)12bdc-1	-	-	-	-	-	-	-	665	-
ESCALANTE VALLEY-MILFORD DISTRICT--Continued									
Beaver County--Continued									
(C-28-10)5dad-2	1,500	670	-	3,330	1,600	1,400	5.6	4,420	7.7
(C-28-10)8add-2	-	-	-	-	-	-	-	490	-
(C-28-10)17ccc-1	-	-	-	1,260	2,000	1,800	3.9	4,800	7.6
(C-28-10)28cdd-1	330	170	-	847	580	420	1.1	1,300	8.0
(C-28-11)23cbb-2	540	130	-	1,120	520	370	3.2	1,620	8.0
(C-28-11)25cdd-1	330	140	-	806	530	380	1.0	1,220	8.0
(C-29-10)5cdd-5	110	92	-	503	410	210	.6	814	7.8
(C-29-11)1add-2	83	120	-	504	390	200	.7	866	7.7
(C-29-11)11cdd-2	180	290	-	872	630	460	1.2	1,530	7.9
(C-29-11)28add-2	-	-	-	-	-	-	-	1,120	-
CEDAR CITY VALLEY--Continued									
Iron County--Continued									
(C-36-12)20acc-1	-	-	-	-	-	-	-	540	-
(C-36-12)32dbb-1	-	-	-	-	-	-	-	255	-
(C-37-12)23acb-1	-	-	-	-	-	-	-	615	-
(C-37-12)34abb-1	-	-	-	-	-	-	-	875	-
(C-38-12)20bba-1	-	-	-	-	-	-	-	1,600	-
PAROWAN VALLEY--Continued									
Iron County--Continued									
(C-33-8)35bcb-1	-	-	-	-	-	-	-	265	-
(C-33-9)35acd-2	-	-	-	-	-	-	-	510	-
(C-34-9)16cdd-2	-	-	-	-	-	-	-	640	-
(C-34-10)13cbd-2	-	-	-	-	-	-	-	540	-
BEAVER VALLEY--Continued									
Beaver County--Continued									
(C-29-7)19bcd-1	-	-	-	-	-	-	-	415	-
(C-29-8)25cac-2	-	-	-	-	-	-	-	315	-
(C-29-8)31add-1	-	-	-	-	-	-	-	800	-
PAVANT VALLEY--Continued									
Millard County--Continued									
(C-19-4)31dbb-1	-	-	-	-	-	-	-	1,030	-
(C-21-5)8bdc-2	-	-	-	-	-	-	-	770	-
(C-21-5)30dbc-3	-	-	-	-	-	-	-	1,900	-
(C-23-6)8abd-1	1,000	2,100	-	4,810	2,400	2,100	6.7	7,300	7.5
(C-23-6)9bca-1	1,200	2,300	-	5,420	2,200	2,100	9.2	8,310	7.5
(C-23-6)15bca-1	-	-	-	-	-	-	-	5,700	-
(C-23-6)16bad-1	840	2,100	-	4,720	2,100	1,800	7.7	7,280	7.5
(C-23-6)21add-1	-	-	-	-	-	-	-	1,360	-
(C-23-6)21bdd-1	560	1,300	-	3,010	1,500	1,300	5.2	4,830	7.6
UPPER SEVIER VALLEY--Continued									
Garfield County--Continued									
(C-26-1)23dbb-1	-	-	-	-	-	-	-	150	-
(C-29-2)35bad-1	-	-	-	-	-	-	-	495	-
(C-32-5)35bab-1	-	-	-	-	-	-	-	260	-

CHEMICAL ANALYSES, IN MILLIGRAMS PER LITER, OF GROUND WATERS IN UTAH

Well number	Geologic source 1/	Depth of well (feet)	Date of collection	Temperature (°C)	Silica (SiO ₂)	Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Bicarbonate (HCO ₃)	Carbonate (CO ₃)
CENTRAL SEVIER VALLEY											
Sanpete and Sevier Counties											
(C-18-01)25ddc-1	QTvf	500	6-30-71	11	-	-	-	-	-	-	-
(C-21-1)13abd-1	QTvf	291	6-30-71	19	-	-	-	-	-	-	-
(C-23-2)15dcb-4	QTvf	310	6-30-71	11	-	-	-	-	-	-	-
(C-23-2)19dab-1	QTvf	-	6-30-71	15	-	-	-	-	-	-	-
(C-24-2)6abc-1	QTvf	308	6-30-71	11	-	140	43	57	3.9	344	0
JUAB VALLEY											
Juab County											
(D-12-1)19dbb-1	Qal	248	7-14-71	12	-	-	-	-	-	-	-
(C-12-1)24baa-1	Qal	66	7-14-71	12	-	-	-	-	-	-	-
(D-13-1)4ccb-1	Qal	-	7-14-71	12	-	140	37	130	3.9	492	0
(D-13-1)7dbc-1	Qal	210	7-14-71	11	-	94	43	120	3.2	385	0
(D-13-1)17bdd-1	Qal	90	7-14-71	12	-	320	130	280	2.0	543	0
GOSHEN VALLEY											
Utah County											
(C-9-1)34ddc-1	Qu	292	10-12-71	12.5	-	63	42	69	9.2	176	0
(C-10-1)3ddb-1	Qu	495	10-07-71	12	-	89	88	430	3.6	425	0
(C-10-1)4ccb-1	QTvf	1,218	10-07-71	16.5	-	89	35	100	10	180	0
(C-10-1)17aaa-1	Qu	517	10-12-71	18	-	140	50	45	12	154	0
SOUTHERN UTAH VALLEY											
Utah County											
(D-7-3)28bdb-1	Qu	338	10-08-71	24.5	-	-	-	-	-	-	-
(D-8-2)12ddc-1	Qu	172	10-14-71	14	-	-	-	-	-	-	-
(D-8-2)12ddc-2	Qu	372	10-14-71	15.5	-	-	-	-	-	-	-
(D-8-2)23dca-2	Tvf	569	-	16	-	-	-	-	-	-	-
(D-9-3)5bbd-1	Qu	620	-	12.5	-	-	-	-	-	-	-
NORTHERN UTAH VALLEY											
Utah County											
(D-5-1)18cab-2	Tvf	618	10-07-71	14	-	-	-	-	-	-	-
(D-5-1)19ccc-1	Qu	151	10-07-71	11.5	-	-	-	-	-	-	-
(D-5-2)30ccb-2	Qu	225	10-07-71	11	-	-	-	-	-	-	-
EAST SHORE AREA											
Box Elder County											
(A-2-1)7aba-4	QTvf	450	8-25-71	16.5	-	-	-	-	-	-	-
(B-2-1)34add-2	QTvf	410	8-10-71	19.5	-	160	45	420	7.6	150	0
(B-3-1)14cdd-1	QTvf	-	8-10-71	13.5	-	42	14	140	10	513	0
(B-3-1)15bac-1	QTvf	985	8-25-71	-	-	29	2.8	55	2.2	227	-
(B-4-3)19caa-3	-	481	8-25-71	20.5	-	63	13	260	5.2	180	-
(B-5-2)6bdd-3	QTvf	600	8-25-71	17	-	-	-	-	-	-	-
(B-5-2)6bdd-4	QTvf	300	8-25-71	15	-	-	-	-	-	-	-
(B-6-2)27bba-2	QTvf	536	8-25-71	18	-	94	21	100	14	214	-
(B-7-2)16dcd-2	QTvf	1,176	8-25-71	26	-	-	-	-	-	-	-
(B-7-2)32bbb-1	QTvf	546	8-13-71	18.5	-	75	40	340	3.2	190	-
(B-7-3)31aac-2	QTvf	920	10-04-71	40	-	31	5.4	250	19	382	-
(B-8-2)26bcd-1	QTvf	118	8-13-71	12.5	-	61	17	7.3	2.6	251	-
LOWER BEAR RIVER VALLEY											
Box Elder County											
(B-11-4)3ccc-1	Qal	262	8-06-71	-	-	85	46	250	7.2	230	-
(B-12-4)27dbd-1	Qal	478	8-06-71	-	-	87	42	140	3.6	240	-
(B-12-4)34bbd-1	Qal	306	8-06-71	-	-	91	42	150	4.1	248	-
(B-12-4)34cbd-1	Qal	292	8-06-71	-	-	94	44	140	4.1	220	-
CACHE VALLEY											
Cache County											
(A-11-1)8dda-3	QTvf	85	71	-	-	-	-	-	-	-	-
(A-13-1)29bdc-1	-	-	71	-	-	-	-	-	-	-	-
BEAR LAKE VALLEY											
Rich County											
(A-13-6)30bbb-1	-	125	71	-	-	-	-	-	-	-	-
CURLEW VALLEY											
Box Elder County											
(B-12-11)5bdc-1	QTvf	190	5-20-71	14.5	-	-	-	-	-	-	-
(B-14-9)5bbb-1	QTvf	300	5-20-71	16.5	-	-	-	-	-	-	-
(B-14-10)1bbb-1	QTvf	416	9-10-71	16	-	-	-	-	-	-	-
(B-15-9)28cbb-1	QTvf	400	9-10-71	24	-	-	-	-	-	-	-
GROUSE CREEK VALLEY											
Box Elder County											
(B-10-18)33aaa-1	QTvf	84	8-03-71	12	-	110	35	95	7.2	262	-
UINTA BASIN											
Duchesne County											
U(C-2-1)15ddc-1	Tu	560	8-11-71	-	-	-	-	-	-	-	-

1/ Qun, Quaternary, undifferentiated; Qal, Quaternary, alluvium; QTvf, Quaternary and Tertiary, valley fill deposits; Tertiary, Uinta Formation; JRn, Jurassic & Triassic(?), Navajo Sandstone; JRgc, Jurassic & Triassic(?), Glen Canyon

CHEMICAL ANALYSES, IN MILLIGRAMS PER LITER, OF GROUND WATERS IN UTAH

91

Well number	Sulfate (SO ₄)	Chloride (Cl)	Nitrate (NO ₃)	Dis- solved solids (calcu- lated)	Hardness as CaCO ₃		Sodium- ad- sorp- tion ratio (SAR)	Specific con- ductance (micromhos /cm at 25°C)	pH
					Ca	Mg Non car- bonate			
CENTRAL SEVIER VALLEY--Continued									
Sanpete and Sevier Counties--Continued									
(C-18-01)25ddc-1	-	-	-	-	-	-	-	1,900	-
(C-21-1)13abd-1	-	-	-	-	-	-	-	750	-
(C-23-2)15dcb-4	-	-	-	-	-	-	-	635	-
(C-23-2)19dab-1	-	-	-	-	-	-	-	540	-
(C-24-2)6abc-1	290	26	-	732	530	240	1.1	1,220	7.4
JUAB VALLEY--Continued									
Juab County--Continued									
(D-12-1)19dbb-1	-	-	-	-	-	-	-	1,300	-
(C-12-1)24baa-1	-	-	-	-	-	-	-	1,200	-
(D-13-1)4ccb-1	98	220	-	874	500	98	2.5	1,540	7.3
(D-13-1)7dbc-1	59	230	-	742	410	96	2.6	1,400	7.4
(D-13-1)17bdd-1	200	900	-	2,100	1,300	890	3.3	3,880	7.1
GOSHEN VALLEY--Continued									
Utah County--Continued									
(C-9-1)34ddc-1	35	220	-	526	330	190	1.7	1,050	7.5
(C-10-1)3ddb-1	360	510	-	1,690	580	240	7.7	3,070	7.6
(C-10-1)4cbb-1	180	180	-	684	370	220	2.3	1,260	7.6
(C-10-1)17aaa-1	140	200	-	664	560	430	0.8	1,390	7.3
SOUTHERN UTAH VALLEY--Continued									
Utah County--Continued									
(D-7-3)28bdb-1	-	-	-	-	-	-	-	1,000	-
(D-8-2)12ddc-1	-	-	-	-	-	-	-	785	-
(D-8-2)12ddc-2	-	-	-	-	-	-	-	490	-
(D-8-2)23dca-2	-	-	-	-	-	-	-	418	-
(D-9-3)5bdd-1	-	-	-	-	-	-	-	530	-
NORTHERN UTAH VALLEY--Continued									
Utah County--Continued									
(D-5-1)18cab-2	-	-	-	-	-	-	-	305	-
(D-5-1)19ccc-1	-	-	-	-	-	-	-	235	-
(D-5-2)30ccb-2	-	-	-	-	-	-	-	860	-
EAST SHORE AREA--Continued									
Box Elder County--Continued									
(A-2-1)7aba-4	-	-	-	-	-	-	-	265	-
(B-2-1)34add-2	40	1,000	-	1,750	580	460	7.6	3,040	7.6
(B-3-1)14cdd-1	1.8	50	-	514	160	0	4.8	811	7.7
(B-3-1)15bac-1	0.8	13	-	216	84	0	2.6	406	7.6
(B-4-3)19caa-3	9.8	420	-	861	210	63	7.8	1,770	7.7
(B-5-2)6bdd-3	-	-	-	-	-	-	-	350	-
(B-5-2)6bdd-4	-	-	-	-	-	-	-	450	-
(B-6-2)27bba-2	1.8	250	-	588	320	150	2.4	1,230	7.4
(B-7-2)16dcd-2	-	-	-	-	-	-	-	330	-
(B-7-2)32bbb-1	2.3	700	-	1,260	350	200	7.9	2,310	7.7
(B-7-3)31aac-2	2.0	240	-	738	100	0	11	1,390	7.3
(B-8-2)26bcd-1	34	8.8	-	256	220	16	0.2	411	7.6
LOWER BEAR RIVER VALLEY--Continued									
Box Elder County--Continued									
(B-11-4)3ccc-1	48	460	-	1,010	400	210	5.4	2,040	7.9
(B-12-4)27bdb-1	61	330	-	784	390	190	3.1	1,520	7.9
(B-12-4)34bbd-1	62	350	-	823	400	200	3.3	1,560	7.9
(B-12-4)34cbd-1	71	330	-	793	420	240	3.0	1,530	7.7
CACHE VALLEY--Continued									
Cache County--Continued									
(A-11-1)8dda-3	-	-	-	-	-	-	-	490	-
(A-13-1)29bdc-1	-	-	-	-	-	-	-	440	-
BEAR LAKE VALLEY--Continued									
Rich County--Continued									
(A-13-6)30bbb-1	-	-	-	-	-	-	-	405	-
CURLEW VALLEY--Continued									
Box Elder County--Continued									
(B-12-11)5bdc-1	-	-	-	-	-	-	-	1,560	-
(B-14-9)5bbb-1	-	-	-	-	-	-	-	600	-
(B-14-10)1bbb-1	-	-	-	-	-	-	-	590	-
(B-15-9)28cbb-1	-	-	-	-	-	-	-	4,650	-
GROUSE CREEK VALLEY--Continued									
Box Elder County--Continued									
(B-10-18)33aaa-1	110	260	-	748	420	200	2.0	1,370	7.5
UINTA BASIN--Continued									
Duchesne County--Continued									
U(C-2-1)15ddc-1	-	-	-	-	-	-	-	790	-

Qtpf, Quaternary and Tertiary, Pavant flow (basalt); Tvf, Tertiary, valley fill deposits; Tu, Group.

INDEX

	Page		Page
Bear Lake Outlet Canal near Paris, Idaho.....	86	Mill Creek near Glenwood.....	80
Bear River, at Border, Wyo.....	73	Pleasant Creek near Caineville.....	47
at Cornish.....	86	Price River at Woodside.....	39
at migratory bird refuge, near Brigham City....	86		
below reservoir, near Woodruff.....	84	Rainbow Inlet Canal near Dingle, Idaho.....	84
near Randolph.....	84	Red Butte Creek at Fort Douglas, near Salt Lake	
near Utah-Wyoming State line.....	84	City.....	76
Collection and examination of samples.....	12	San Juan River near Bluff.....	58
Colorado River near Cisco.....	21	San Rafael River near Green River.....	45
Cooperation.....	2	Sediment.....	15
Cottonwood Wash near Blanding.....	55	Selected references.....	16
Cub River at Franklin, Idaho.....	86	Sevier River, below Piute Dam, near Marysvale....	79
		near Lynndyl.....	82
Definition of terms.....	2	Solutes.....	14
Dirty Devil River near Hite.....	84	Special networks and programs.....	8
Dolores River near Cisco.....	19		
Downstream order and station number.....	9	Temperature.....	14
Duchesne River near Randlett.....	35	Thomas Fork near Wyoming-Idaho State	
		line.....	84
Escalante River near Escalante.....	84		
		Virgin River, at Littlefield, Ariz.....	71
Fremont River near Caineville.....	51	at Virgin.....	63
		near Hurricane.....	67
Green River, at Green River.....	41	near St. George.....	84
near Greendale.....	28		
near Jensen.....	30	Water-quality records.....	19
Ground waters, chemical analyses of.....	88	Water-supply papers.....	16
		Weber River at Gateway.....	75
Henrys Fork at Linwood.....	26	Well numbers.....	10
		West Cache Canal at Cornish.....	86
Introduction.....	1	White River near Watson.....	37
		Worm Creek near Fairview, Idaho.....	86
Malad River at Woodruff.....	86		

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Geological Survey
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