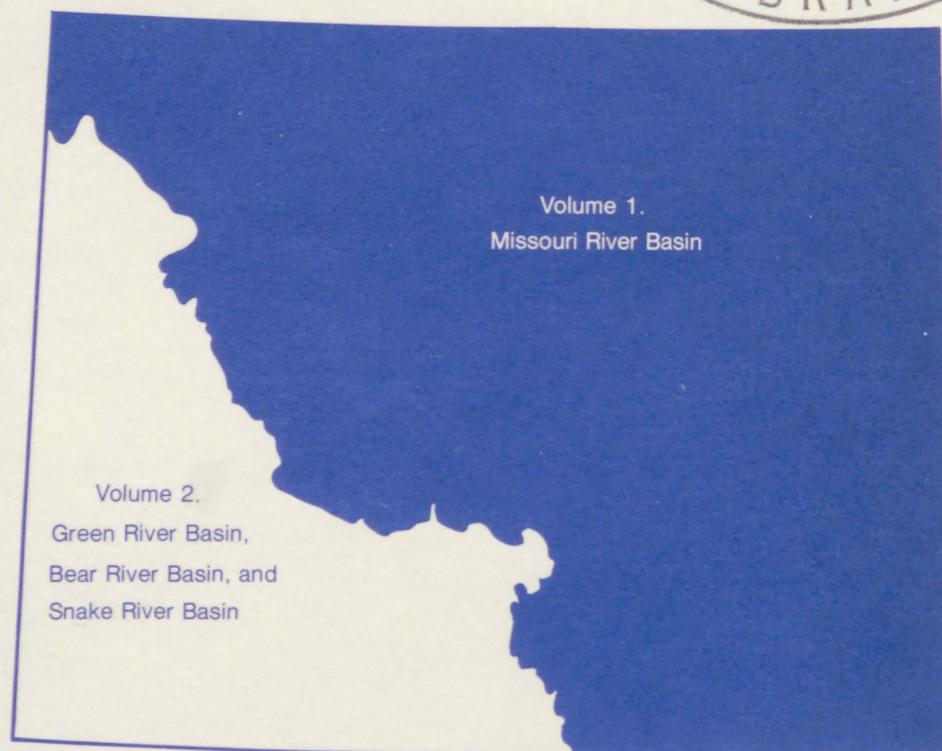
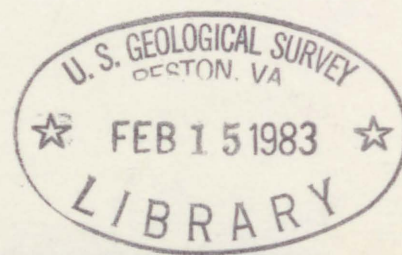


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Water Resources Data Wyoming Water Year 1981

Volume 1. Missouri River Basin



U.S. GEOLOGICAL SURVEY WATER-DATA REPORT WY-81-1
Prepared in cooperation with the State of Wyoming
and with other agencies

CALENDAR FOR WATER YEAR 1981

1980

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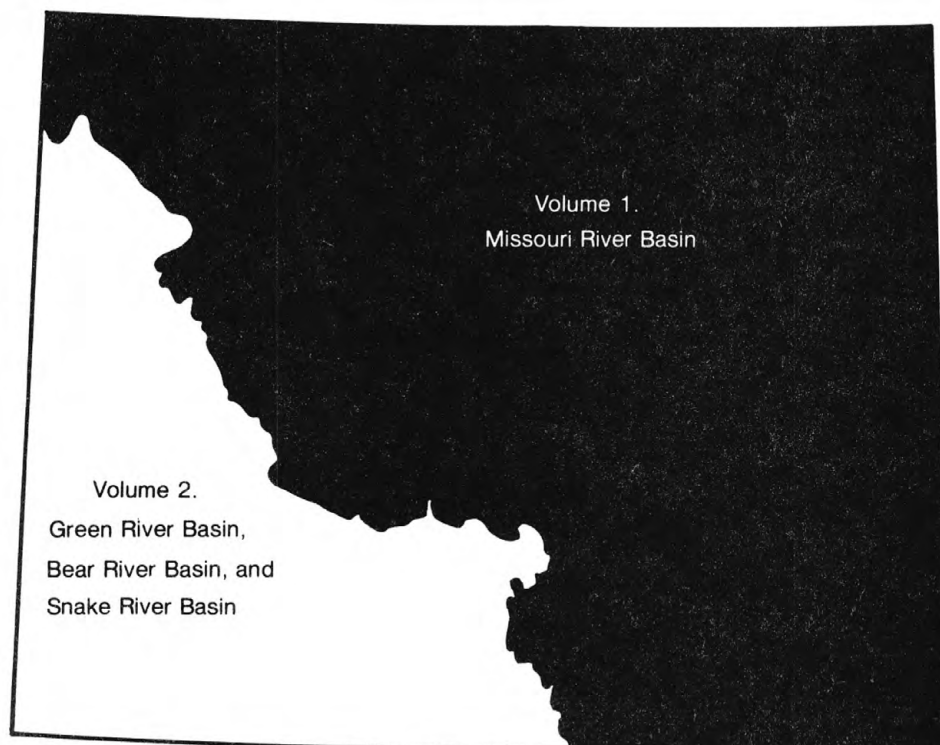
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Volume 1. Missouri River Basin



U.S. GEOLOGICAL SURVEY WATER-DATA REPORT WY-81-1
Prepared in cooperation with the State of Wyoming
and with other agencies

UNITED STATES DEPARTMENT OF THE INTERIOR

JAMES G. WATT, Secretary

GEOLOGICAL SURVEY

Dallas L. Peck, Director

For information on the water program in Wyoming write to
District Chief, Water Resources Division
U.S. Geological Survey
2120 Capitol Avenue
P.O. Box 1125
Cheyenne, Wyoming 82003

1982

PREFACE

This report was prepared by personnel of the Wyoming district of the Water Resources Division of the U.S. Geological Survey under the supervision of William W. Dudley, Jr., District Chief, and Alfred Clebsch, Jr., Regional Hydrologist, Central Region. It was done in cooperation with the State of Wyoming and with other agencies.

This report is one of a series issued by State. General direction for the series is by Philip Cohen, Chief Hydrologist, U.S. Geological Survey, and James E. Biesecker, Assistant Chief Hydrologist for Scientific Publications and Data Management.

Data for Wyoming are in two volumes as follows:

- Volume 1. Missouri River Basin
- Volume 2. Green River, Bear River, and Snake River Basins

REPORT DOCUMENTATION PAGE	1. REPORT NO. USGS/WRD/HD-82/022	2.	3. Recipient's Accession No.
4. Title and Subtitle Water Resources Data for Wyoming, Water Year 1981 Volume 1. Missouri River Basin			5. Report Date December 1982
7. Author(s)			6.
9. Performing Organization Name and Address U.S. Geological Survey, Water Resources Division P.O. Box 1125 Cheyenne, WY 82003			8. Performing Organization Rept. No. USGS-WRD-WY-81-1
12. Sponsoring Organization Name and Address U.S. Geological Survey, Water Resources Division P.O. Box 1125 Cheyenne, WY 82003			10. Project/Task/Work Unit No.
			11. Contract(C) or Grant(G) No. (C) (G)
13. Type of Report & Period Covered Annual - Oct. 1, 1980 to Sept. 30, 1981			14.
15. Supplementary Notes Prepared in cooperation with the State of Wyoming and with other agencies.			
16. Abstract (Limit: 200 words) Water resources data for the 1981 water year for Wyoming consists of records of stage, discharge, and water quality of streams; stage, contents, and water quality of lakes and reservoirs; and water levels and water quality of ground water. Volume 1 of this report contains discharge records for 155 gaging stations; stage only for records for 1 lake; stage and contents for 11 lakes and reservoirs; water quality for 89 gaging stations, and 45 ungaged stations; and water levels for 33 observation wells. Also included are 74 crest-stage partial-record stations and 2 precipitation monitoring sites. Additional water data were collected at various sites, not part of the systematic data collection program, and are published as miscellaneous measurements. These data together with the data in Volume 2 represent that part of the National Water Data System operated by the U.S. Geological Survey and cooperating State and Federal agencies in Wyoming.			
17. Document Analysis: a. Descriptors *Wyoming, *Hydrologic data, *Surface water, *Ground water, *Water quality, Flow-rate, Gaging stations, Lakes, Reservoirs, Chemical analyses, Sediments, Water Temperatures, Sampling sites, Water levels, Water analyses. b. Identifiers/Open-Ended Terms c. COSATI Field/Group			
18. Availability Statement This report may be purchased from: National Technical Information Service Springfield, VA 22161		19. Security Class (This Report) UNCLASSIFIED	21. No. of Pages 575
		20. Security Class (This Page) UNCLASSIFIED	22. Price

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Letter after station name designates type of data: [(d) discharge, (e) elevation, gage height, or contents, (c) chemical, (b) biological, (m) microbiological, (p) pesticides, (t) water temperature, (s) sediment]

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WATER RESOURCES DATA FOR WYOMING, 1981

VOLUME 1: MISSOURI RIVER BASIN VOLUME 2: GREEN RIVER, BEAR RIVER, AND SNAKE RIVER BASINS

INTRODUCTION

Water resources data for the 1981 water year for Wyoming consists of records of stage, discharge, and water quality of streams; stage, contents, and water quality of lakes and reservoirs; and water levels and water quality of ground water. This volume contains discharge records for 155 gaging stations; stage only records for 1 lake; stage and contents for 11 lakes and reservoirs, water quality for 89 gaging stations, and 45 ungaged stations; and water levels for 33 observation wells. Also included are 74 crest-stage partial-record stations and 2 precipitation monitoring sites. Locations of gaging stations and water-quality stations are shown in figure 1, and locations of observation wells and crest-stage partial-record stations are shown in figure 2. Additional water data were collected at various sites, not part of the systematic data collection program, and are published as miscellaneous measurements. These data together with the data in Volume 2 represent that part of the National Water Data System operated by the U.S. Geological Survey and cooperating State and Federal agencies in Wyoming.

Records of discharge or stage of streams, and contents or stage of lakes and reservoirs were first published in a series of U.S. Geological Survey water-supply papers entitled "Surface Water Supply of the United States." Through September 30, 1960, these water-supply papers were in an annual series and then in a 5-year series for 1961-65 and 1966-70. Records of chemical quality, water temperatures, and suspended sediment were published from 1941 to 1970 in an annual series of water-supply papers entitled "Quality of Surface Waters of the United States." Records of ground-water levels were published from 1935 to 1974 in a series of water-supply papers entitled "Ground-Water Levels in the United States." Water-supply papers may be consulted in the libraries of the principal cities in the United States or may be purchased from Branch of Distribution, U.S. Geological Survey, 604 South Pickett Street, Arlington, VA 22304.

For water years 1961 through 1970, streamflow data were released by the Geological Survey in annual reports on a State-boundary basis. Water-quality records for water years 1964 through 1970 were similarly released either in separate reports or in conjunction with streamflow records.

Beginning with the 1971 water year, water data for streamflow, water quality, and ground water are published in official Survey reports on a State-boundary basis. These official Survey reports carry an identification number consisting of the two letter State abbreviation, the last two digits of the water year, and the volume number. For example, this report is identified as "U.S. Geological Survey Water-Data Report WY-81-1." Water-Data reports are for sale in paper copy or in microfiche, by the National Technical Information Service, U.S. Department of Commerce, Springfield, VA 22161.

Additional information, including current prices, for ordering specific reports may be obtained from the District Chief at the address given on the back of the title page or by telephone (307) 772-2153.

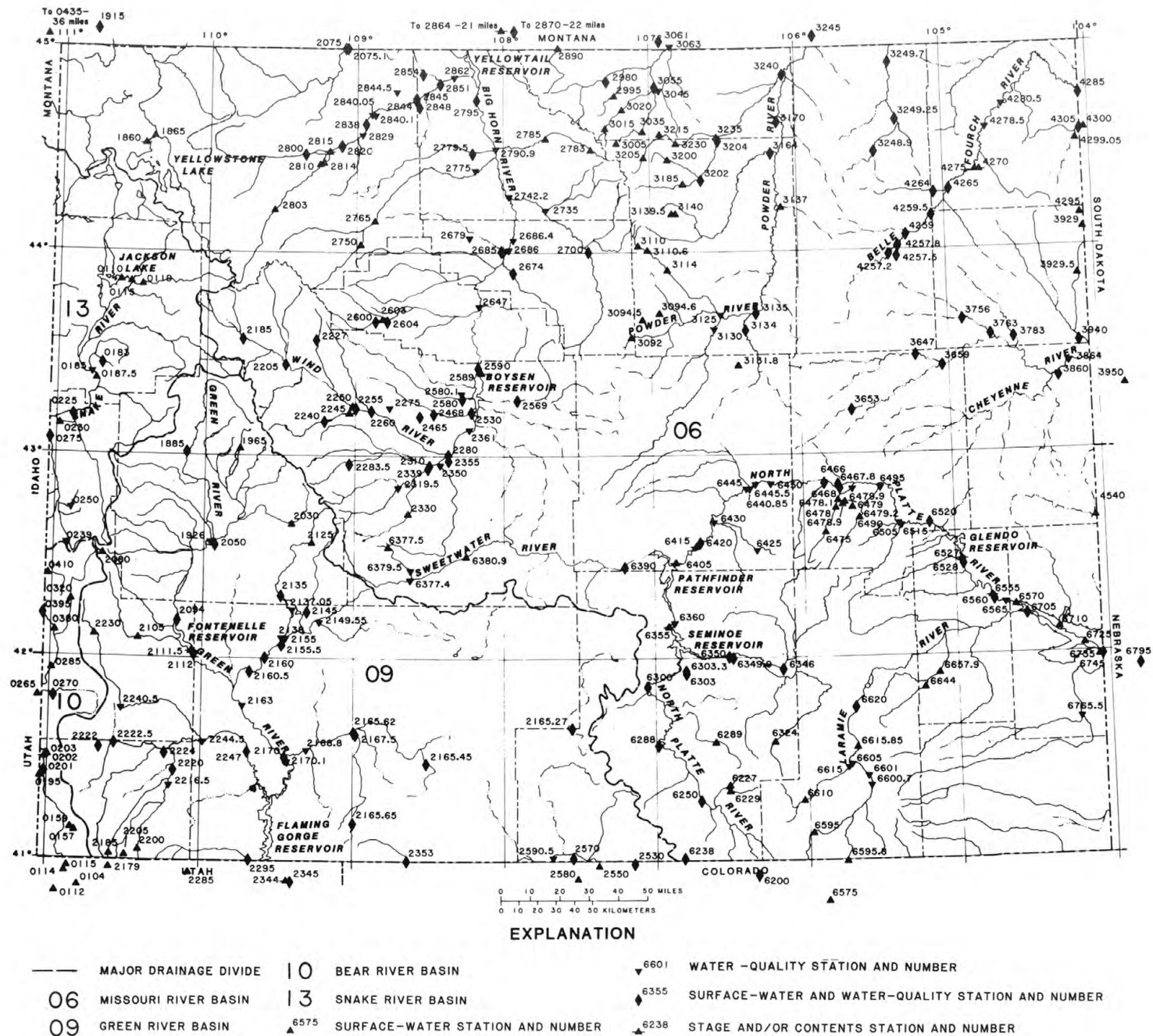


Figure 1.--Map showing locations of lake- and stream-gaging stations and water-quality stations, 1981 water year.

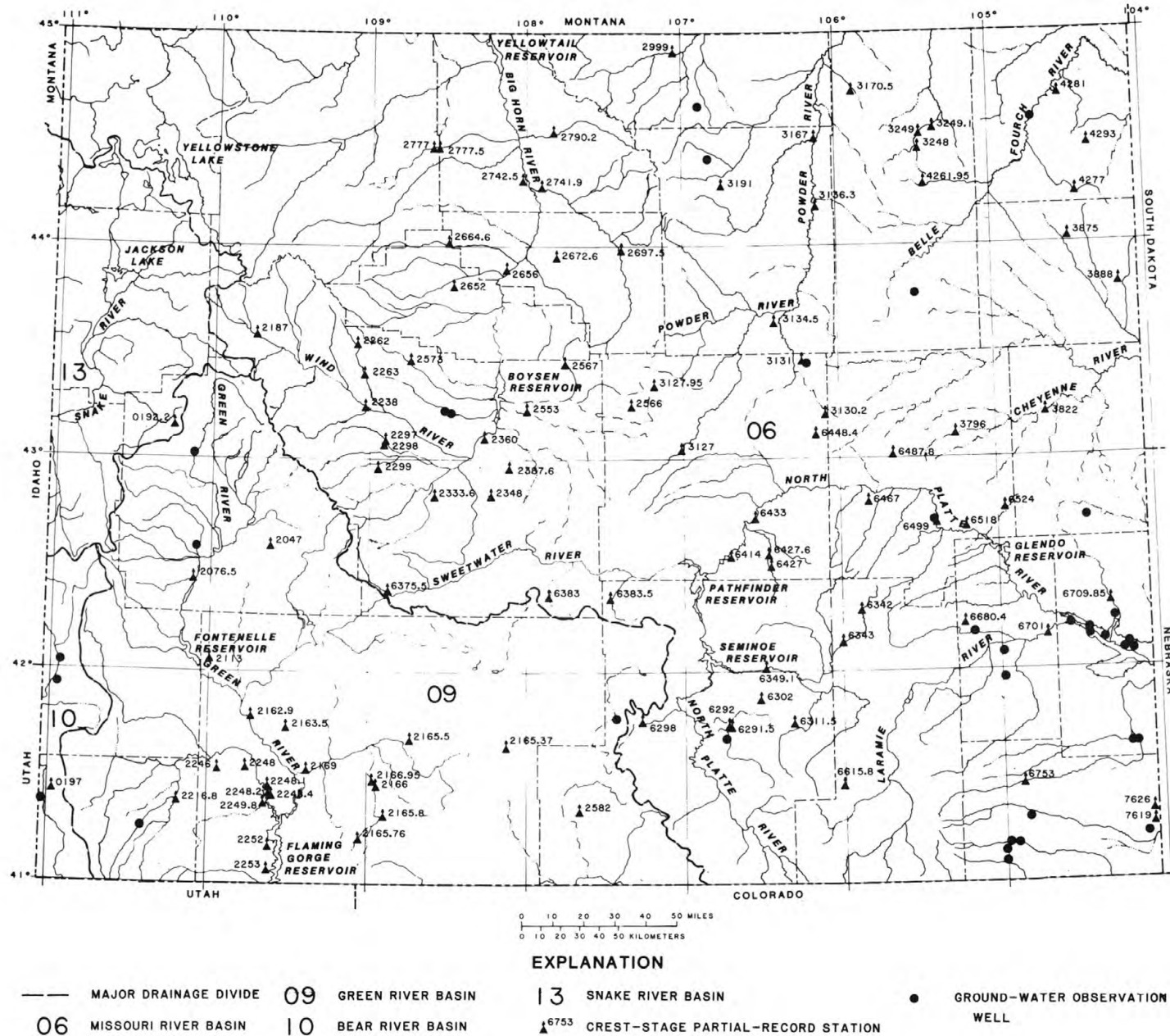


Figure 2.--Map showing locations of crest-stage partial-record stations and ground-water observation wells.

COOPERATION

The U.S. Geological Survey and organizations of the State of Wyoming have had cooperative agreements for the systematic collection of streamflow records since 1895, for ground-water levels since 1940, and for water-quality records since 1946. Some records have been collected and computed by contractors in accordance with U.S. Geological Survey specifications and under Geological Survey quality control. Organizations that assisted in collecting data through cooperative agreement with the Survey are:

Wyoming State Engineer, George L. Christopoulos

Wyoming Department of Agriculture, John Orton, Commissioner of Agriculture

Wyoming Highway Department, Leno H. Menghini, Superintendent and Chief Engineer

Wyoming Department of Environmental Quality, Robert E. Sundin, Director

Wyoming Department of Economic Planning and Development, Myron W. Goodson, Chief of Water Development

Wyoming Game and Fish Department, W. Donald Dexter, Director

City of Cheyenne, Board of Public Utilities, Herman Noe, Director

Assistance in the form of funds and services was given by the Bureau of Land Management, U.S. Department of the Interior, in collecting records for 9 gaging stations, 11 water-quality stations, and 10 sediment stations; by the Environmental Protection Agency for 13 water-quality stations; by the Bureau of Reclamation, U.S. Department of the Interior for 9 gaging stations and 7 sediment stations; by the Bureau of Indian Affairs, U.S. Department of the Interior for 2 gaging stations and 1 water-quality station; and by the Corps of Engineers for 2 gaging stations, published in this report.

Organizations that supplied data are acknowledged in station descriptions.

HYDROLOGIC CONDITIONS

During the 1981 water year precipitation was less than normal throughout most of the State. In general, precipitation was less than normal from October through March and about normal from April through September. Precipitation data from published reports of the U.S. Department of Commerce, National Oceanic and Atmospheric Administration, National Weather Service, for the 10 major drainage basins in Wyoming are shown in table 1.

Table 1. Precipitation and departures from normal, in inches

Drainage basin	October-March		April-September		1981 water year	
	Precipitation	Departure from normal	Precipitation	Departure from normal	Precipitation	Departure from normal
Yellowstone River	4.66	-2.18	9.53	+0.11	14.19	-2.07
SNAKE RIVER	7.73	-4.87	10.54	+0.67	18.27	-4.20
Green and Bear Rivers	3.36	-1.04	5.28	-.79	8.64	-1.83
Bighorn River	3.21	+0.75	7.80	+0.90	11.01	+1.65
Powder, Little Missouri, and Tongue Rivers	3.50	-.59	10.14	-.10	13.64	-.69
Belle Fourche River	3.57	-.76	12.25	+0.29	15.82	-.47
Cheyenne and Niobrara Rivers	2.89	-.28	10.22	-.41	13.11	-.69
Lower North Platte River	3.00	-.65	12.55	+1.94	15.55	+1.29
Upper North Platte River	3.47	-1.09	8.45	+1.06	11.92	-.03
Wind River	3.03	+0.01	6.54	-.98	9.57	-.97

All drainage basins, with the exception of the Bighorn River and Wind River basins, had less than normal precipitation from October through March. From April through September, precipitation ranged from 0.98 inch less than normal in the Wind River drainage basin to 1.94 inches greater than normal in the Lower North Platte River drainage basin. Precipitation was less than normal for the year except in the Bighorn River and the Lower North Platte River basins.

Streamflow

Less than normal precipitation during the winter resulted in less than normal streamflow for most streams during spring runoff. The lack of spring runoff caused the yearly mean discharge to be lower than the average of the mean discharges for the previous 10 water years at all stations listed in table 2. The ratio of the 1981 water year mean versus the mean for water years 1971-80 ranged from 0.44 for station 06630000 to 0.86 for station 06285100.

Table 2.--Ratios of mean water discharges for the 1981 water year to mean water discharges for the 1971 through 1980 water years

Stream	Station number	Mean discharge (cubic feet per second)		Ratio 1981 mean 1971-80 mean
		1981 water year	1971-80 water years	
Bighorn River at Kane	06279500	1,739	2,420	0.72
Shoshone River near Lovell	06285100	877	1,020	.86
Powder River at Arvada	06317000	162	325	.49
North Platte River above Seminole Reser- voir, near Sinclair	06630000	551	1,252	.44
Green River near Green River	09217000	1,078	1,874	.58
Snake River above reservoir, near Alpine	13022500	3,537	4,864	.73

Rain falling on the melting snowpack in the northwestern part of the State in early June caused flooding. Most of the flooding was confined to the Bighorn, Wind, and Shoshone Rivers and their tributaries.

Reservoir Storage

In the Yellowstone River basin, storage in Bull Lake, and in Anchor, Boysen, Buffalo Bill and Bighorn Reservoirs, decreased 63,290 acre-feet during the year; storage in Keyhole Reservoir decreased 63,340 acre-feet during the year. In the North Platte River basin, storage in the major reservoirs decreased 515,300 acre-feet. In the Green River basin, storage decreased 52,900 acre-feet in Fontenelle Reservoir and 161,000 acre-feet in Flaming Gorge Reservoir during the year.

Chemical Quality of Streamflow

An analysis was made of specific-conductance records from sampling stations on six streams, representing the major streamflow of Wyoming, to determine if significant changes in chemical quality of streamflow are occurring. Monthly samples were used in the analysis because only two of the stations had daily sampling frequencies.

Specific conductance can be used to approximate the dissolved-solids concentration in water because it is related to the concentration and species of ions in the water. A statistical technique called the t-test was used to determine whether significant differences exist between the mean of the specific conductance measured in the 1981 water year and the mean recorded for the previous 10 water years. A 95-percent level of significance ($\alpha = 0.05$) was used for each t-test, with the assumption that the data were normally distributed.

The procedure requires computing a t statistic and comparing it with a value taken from Student's t table. If the computed t value (t_c) is less than the table t value (t_{tab}), the hypothesis that the means are equal is accepted. If the value of t_c is greater than t_{tab} , the hypothesis is rejected and the means are not equal. In terms of specific conductance, a rejection of the hypothesis indicates that there was a significant difference in chemical quality of water at a particular site during the 1981 water year compared to the mean for the previous 10 water years.

Results of the t-tests for the six stations are given in table 3. Means are statistically similar for four stations, indicating that no significant difference exists between the means for the 1981 water year and the means for the previous 10 water years for these four stations. The means for two stations (06279500 Bighorn River at Kane and 06285100 Shoshone River near Lovell) are significantly different.

Table 3.--Results of t-tests comparing specific-conductance means for the 1981 water year with means for the previous 10 water years at selected water-quality sampling sites

[Specific conductance in micromhos per centimeter at 25° Celsius]

Stream basin and station identification	Specific conductance 1981 water year			Specific conductance 1971-80 water years			t-test		Hypothesis
	Number of Values	Mean	Standard Deviation	Number of Values	Mean	Standard Deviation	t _{tab}	t _c	
Bighorn River 06279500	14	1,050	139	161	908	210	2.093	3.492	Rejected
Shoshone River 06285100	12	1,010	289	174	791	216	2.201	2.541	Rejected
Powder River 06317000	12	3,242	903	146	2,821	868	2.160	1.557	Accepted
North Platte River 06630000	12	491	119	98	433	121	2.145	1.591	Accepted
Green River 09217000	11	637	154	243	616	172	2.201	.44	Accepted
Snake River 13022500	11	345	62	171	322	68	2.179	1.185	Accepted

In any particular stream, specific conductance is inversely proportional to the volume of water being discharged by that stream; for example, the larger the flow in the stream, the lower the specific conductance.

The mean flows for the 1981 water year were less than the mean flows for the previous 10-year period for all streams, as indicated in table 2. However, the hypothesis that the mean specific conductances are equal was rejected only at the the Bighorn River and the Shoshone River stations.

Ground-Water Levels

Most of the ground-water observation wells in the State are located close to flowing streams. Because of less than normal precipitation and streamflow, water levels in most observation wells showed a slight decline from the previous year.

DEFINITION OF TERMS

Terms related to streamflow, water-quality, and other hydrologic data, as used in this report, are defined below. See also the table for converting English units to International System of units (SI) on the inside of the back cover.

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

Adenosine triphosphate (ATP) is the primary energy donor in cellular life process. Its central role in living cells makes it an excellent indicator of the presence of living material in water. A measure of ATP therefore provides a sensitive and rapid estimate of biomass. ATP is reported in micrograms per liter of the original water sample.

Algae are mostly aquatic single-celled, colonial, or multi-celled plants, containing chlorophyll and lacking roots, stems, and leaves.

Algal growth potential (AGP) is the maximum algal dry weight biomass that can be produced in a natural water sample under standardized laboratory conditions. The growth potential is the algal biomass present at stationary phase and is expressed as milligrams dry weight of algae produced per liter of sample.

Aquifer is a geologic formation, group of formations, or part of a formation that contains sufficient saturated permeable material to yield significant quantities of water to wells and springs.

Artesian means confined and is used to describe a well in which the water level stands above the top of the aquifer, tapped by the well. A flowing artesian well is one in which the water level is above the land surface.

Bacteria are microscopic unicellular organisms, typically spherical, rodlike, or spiral and threadlike in shape, often clumped into colonies. Some bacteria cause disease, others perform an essential role in nature in the recycling of materials; for example, by decomposing organic matter into a form available for reuse by plants.

Total coliform bacteria are a particular group of bacteria that are used as indicators of possible sewage pollution. They are characterized as aerobic or facultative anaerobic, gram-negative, nonspore-forming, rod-shaped bacteria which ferment lactose with gas formation within 48 hours at 35°C. In the laboratory these bacteria are defined as all the organisms which produce colonies with a golden-green metallic sheen within 24 hours when incubated at 35°C $\pm$ 1.0°C on M-Endo medium (nutrient medium for bacterial growth). Their concentrations are expressed as number of colonies per 100 mL of sample.

Fecal coliform bacteria are bacteria that are present in the intestines or feces of warm blooded animals. They are often used as indicators of the sanitary quality of the water. In the laboratory they are defined as all organisms which produce blue colonies within 24 hours when incubated at 44.5°C $\pm$ 0.2°C on M-FC medium (nutrient medium for bacterial growth). Their concentrations are expressed as number of colonies per 100 mL of sample.

Fecal streptococcal bacteria are bacteria found also in intestines of warm-blooded animals. Their presence in water is considered to verify fecal pollution. They are characterized as gram-positive, cocci bacteria which are capable of growth in brain-heart infusion broth. In the laboratory they are defined as all the organisms which produce red or pink colonies within 48 hours at 35°C $\pm$ 1.0°C on M-enterococcus medium (nutrient medium for bacterial growth). Their concentrations are expressed as number of colonies per 100 mL of sample.

Bed material is the unconsolidated material of which a streambed, lake, pond, reservoir, or estuary bottom is composed.

Biochemical oxygen demand (BOD) is a measure of the quantity of dissolved oxygen, in milligrams per liter, necessary for the decomposition of organic matter by microorganisms, such as bacteria.

Biomass is the amount of living matter present at any given time, expressed as the mass per unit area or volume of habitat.

Ash mass is the mass or amount of residue present after the residue from the dry mass determination has been ashed in a muffle furnace at a temperature of 500°C for 1 hour. The ash mass values of zooplankton and phytoplankton are expressed in grams per cubic meter (g/m³), and periphyton and benthic organisms in grams per square meter (g/m²).

Dry mass refers to the mass of residue present after drying in an oven at 60°C for zooplankton and 105°C for periphyton, until the mass remains unchanged. This mass represents the total organic matter, ash and sediment, in the sample. Dry mass values are expressed in the same units as ash mass.

Organic mass or volatile mass of the living substance is the difference between the dry mass and ash mass, and represents the actual mass of the living matter. The organic mass is expressed in the same units as for ash mass and dry mass.

Wet mass is the mass of living matter plus contained water.

Bottom material: See Bed material.

Recoverable from bottom material the amount of a given constituent that is in solution after a representative sample of bottom material has been digested by a method (usually using an acid or mixture of acids) that results in dissolution of only readily soluble substances. Complete dissolution of all bottom material is not achieved by the digestion treatment and thus the determination represents less than the total amount (that is, less than 95 percent) of the constituent in the sample. To achieve comparability of analytical data, equivalent digestion procedures would be required of all laboratories performing such analyses because different digestion procedures are likely to produce different analytical results.

Total in bottom material the total amount of a given constituent in a representative sample of bottom material. This term is used only when the analytical procedure assures measurement of at least 95 percent of the constituent determined. A knowledge of the expected form of the constituent in the sample, as well as the analytical methodology used, is required to judge when the results should be reported as "total in bottom material."

Cells/volume refers to the number of cells of any organism which is counted by using a microscope and grid or counting cell. Many planktonic organisms are multicelled and are counted according to the number of contained cells per sample, usually milliliters (mL) or liters (L).

Cfs-day is the volume of water represented by flow of 1 cubic foot per second for 24 hours. It is equivalent to 86,400 cubic feet, approximately 1.9835 acre-feet, about 646,000 gallons or 2,447 cubic meters.

Chemical oxygen demand (COD) is a measure of the chemically oxidizable material in the water, and furnishes an approximation of the amount of organic and reducing material present. The determined value may correlate with natural water color or with carbonaceous organic pollution from sewage or industrial wastes.

Chlorophyll refers to the green pigments of plants. Chlorophyll a and b are the two most common pigments in plants.

Color unit is produced by one milligram per liter of platinum in the form of the chloroplatinate ion. Color is expressed in units of the platinum-cobalt scale.

Contents is the volume of water in a reservoir or lake. Unless otherwise indicated, volume is computed on the basis of a level pool and does not include bank storage.

Control designates a feature downstream from the gage that determines the stage-discharge relation at the gage. This feature may be a natural constriction of the channel, an artificial structure, or a uniform cross section over a long reach of the channel.

Control structure as used in this report is a structure on a stream or canal that is used to regulate the flow or stage of the stream or to prevent the intrusion of salt water.

Cubic feet per second per square mile (CFSM) is the average number of cubic feet of water flowing per second from each square mile of area drained, assuming that the runoff is distributed uniformly in time and area.

Cubic foot per second (FT³/S, ft³/s) is the rate of discharge representing a volume of 1 cubic foot passing a given point during 1 second and is equivalent to approximately 7.48 gallons per second or 448.8 gallons per minute or 0.02832 cubic meters per second.

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

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

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

Dissolved that material in a representative water sample which passes through a 0.45 µm membrane filter. This is a convenient operational definition used by Federal agencies that collect water data. Determinations of "dissolved" constituents are made on subsamples of the filtrate.

Diversity index is a numerical expression of evenness of distribution of aquatic organisms. The formula for diversity index is:

$$\bar{d} = -\sum_{i=1}^s \frac{n_i}{n} \log_2 \frac{n_i}{n}$$

Where n_i is the number of individuals per taxon, n is the total number of individuals, and s is the total number of taxa in the sample of the community. Diversity index values range from zero, when all the organisms in the sample are the same, to some positive number, when some or all of the organisms in the sample are different.

Drainage area of a stream at a specific location is that area, measured in a 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. Figures of drainage area given herein include all closed basins, or noncontributing areas, within the area unless otherwise noted.

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

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

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

Hardness of water is a physical-chemical characteristic that is commonly recognized by the increased quantity of soap required to produce lather. It is attributable to the presence of alkaline earths (principally calcium and magnesium) and is expressed as equivalent calcium carbonate (CaCO₃).

Hydrologic unit is a geographic area representing part or all of a surface drainage basin or distinct hydrologic feature as delineated by the Office of Water Data Coordination on the State Hydrologic Unit Maps; each hydrologic unit is identified by an 8-digit number.

Metamorphic stage refers to the stage of development that an organism exhibits during its transformation from an immature form to an adult form. This developmental process exists for most insects, and the degree of difference from the immature stage to the adult form varies from relatively slight to pronounced, with many intermediates. Examples of metamorphic stages of insects are egg-larva-adult or egg-nymph-adult.

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

Micrograms per gram ($\mu\text{g/g}$) is a unit expressing the concentration of a chemical element as the mass (micrograms) of the element sorbed per unit mass (gram) of sediment.

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

Milligrams per liter (mg/L , mg/L) is a unit for expressing the concentration of chemical constituents in solution. Milligrams per liter represent the mass of solute per unit volume (liter) of water. Concentration of suspended sediment also is expressed in mg/L , and is based on the mass of sediment per liter of water-sediment mixture.

National Geodetic Vertical Datum of 1929 (NGVD) is a geodetic datum derived from a general adjustment of the first order level nets of both the United States and Canada. It was formerly called "Sea Level Datum of 1929" or "mean sea level" in this series of reports. Although the datum was derived from the average sea level over a period of many years at 26 tide stations along the Atlantic, Gulf of Mexico, and Pacific Coasts, it does not necessarily represent local mean sea level at any particular place.

Organism is any living entity, such as an insect, phytoplankter, or zooplankter.

Organism count/area refers to the number of organisms collected and enumerated in a sample and adjusted to the number per area habitat, usually square meters (m^2), acres, or hectares. Periphyton benthic organisms, and macrophytes are expressed in these terms.

Organism count/volume refers to the number of organisms collected and enumerated in a sample and adjusted to the number per sample volume, usually milliliters (mL) or liters (L). Numbers of planktonic organisms can be expressed in these terms.

Total organism count is the total number of organisms collected and enumerated in any particular sample.

Partial-record station is a particular site where limited streamflow and/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 diameter of particles in either distilled water (chemically dispersed) or in native water (the river water at the time and point of sampling).

Particle-size classification used in this report agrees with recommendations made by the American Geophysical Union Subcommittee on Sediment Terminology.

The classification is as follows:

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 all particles in transport in the stream. Most of the organic material is removed and the sample is subjected to mechanical and chemical dispersion before analysis in distilled water. Chemical dispersion is not used for native water analysis.

Percent composition is a unit for expressing the ratio of a particular part of a sample or population to the total sample or population, in terms of types, numbers, mass or volume.

Periphyton is the assemblage of microorganisms attached to and growing upon solid surfaces. While primarily consisting of algae, they also include bacteria, fungi, protozoa, rotifers, and other small organisms.

Pesticides are chemical compounds used to control undesirable plants and animals. Major categories of pesticides include insecticides, miticides, fungicides, herbicides, and rodenticides. Insecticides and herbicides, which control insects and plants respectively, are the two categories reported.

Picocurie (PC, pCi) is one trillionth (1×10^{-12}) of the amount of radioactivity represented by a curie (Ci). A curie is the amount of radioactivity that yields 3.7×10^{10} radioactive disintegrations per second. A picocurie yields 2.22 dpm (disintegrations per minute).

Plankton is the community of suspended, floating, or weakly swimming organisms that live in the open water of lakes and rivers.

Phytoplankton is the plant part of the plankton. They are usually microscopic and their movement is subject to the water currents. Phytoplankton growth is dependent upon solar radiation and nutrient substances. Because they are able to incorporate as well as release materials to the surrounding water, the phytoplankton have a profound effect upon the quality of the water. They are the primary food producers in the aquatic environment, and are commonly known as algae.

Blue-green algae are a group of phytoplankton organisms having a blue pigment, in addition to the green pigment called chlorophyll. Blue-green algae often cause nuisance conditions in water.

Diatoms are the unicellular or colonial algae having a siliceous shell. Their concentrations are expressed as number of cells/mL of sample.

Green algae have chlorophyll pigments similar in color to those of higher green plants. Some forms produce algal mats or floating "moss" in lakes. Their concentrations are expressed as number of cells/mL of sample.

Zooplankton is the animal part of the plankton. Zooplankton are capable of extensive movements within the water column, and are often large enough to be seen with the unaided eye. Zooplankton are secondary consumers feeding upon bacteria, phytoplankton, and detritus. Because they are the grazers in the aquatic environment, the zooplankton are a vital part of the aquatic food web. The zooplankton community is dominated by small crustaceans and rotifers.

Polychlorinated biphenyls (PCBs) are industrial chemicals that are mixtures of chlorinated biphenyl compounds having various percentages of chlorine. They are similar in structure to organochlorine insecticides.

Primary productivity is a measure of the rate at which new organic matter is formed and accumulated through photosynthetic and chemosynthetic activity of producer organisms (chiefly green plants). The rate of primary production is estimated by measuring the amount of oxygen released (oxygen method) or the amount of carbon assimilated by the plants (carbon method).

Milligrams of carbon per area or volume per unit time [mg C/(m².time) for periphyton and macrophytes and mg C/(m³.time)] for phytoplankton are units for expressing primary productivity. They define the amount of carbon dioxide consumed as measured by radioactivity carbon (carbon 14). The carbon 14 method is of greater sensitivity than the oxygen light and dark bottle method, and is preferred for use in unenriched waters. Unit time may be either the hour or day, depending on the incubation period.

Milligrams of oxygen per area or volume per unit time [mg O₂/(m².time) for periphyton and macrophytes and mg O₂/(m³.time)] for phytoplankton are the units for expressing primary productivity. They define production and respiration rates as estimated from changes in the measured dissolved oxygen concentration. The oxygen light and dark bottle method is preferred if the rate of primary production is sufficient for accurate measurements to be made within 24 hours. Unit time may be either the hour or day, depending on the incubation period.

Runoff in inches (IN, in) shows the depth to which the drainage area would be covered if all the runoff for a given time period were uniformly distributed on it.

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

Suspended, recoverable the amount of a given constituent that is in solution after the part of a representative water-suspended sediment sample that is retained on a 0.45 m membrane filter has been digested by a method (usually using a dilute acid solution) that results in dissolution of only readily soluble substances. Complete dissolution of all the particulate matter is not achieved by the digestion treatment and thus the determination represents something less than the "total" amount (that is, less than 95 percent) of the constituent present in the sample. To achieve comparability of analytical data, equivalent digestion procedures would be required of all laboratories performing such analyses because different digestion procedures are likely to produce different analytical results.

Determinations of "suspended, recoverable" constituents are made either by analyzing portions of the material collected on the filter or, more commonly, by difference, based on determinations of (1) dissolved and (2) total recoverable concentrations of the constituent.

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 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).

Suspended-sediment discharge (tons/day) 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 volume, that passes a section in a given time. It is computed by multiplying discharge times mg/L times 0.0027.

Suspended-sediment load is the quantity of suspended sediment passing a section in a specified period.

Suspended, total the total amount of a given constituent in the part of a representative water-suspended sediment sample that is retained on a 0.45 m membrane filter. This term is used only when the analytical procedure assures measurement of at least 95 percent of the constituent determined. A knowledge of the expected form of the constituent in the sample, as well as the analytical methodology used, is required to determine when the results should be reported as "suspended, total."

Determinations of "suspended, total" constituents are made either by analyzing portions of the material collected on the filter or, more commonly, by difference, based on determinations of (1) dissolved and (2) total concentrations of the constituent.

Total the total amount of a given constituent in a representative water-suspended sediment sample, regardless of the constituent's physical or chemical form. This term is used only when the analytical procedure assures measurement of at least 95 percent of the constituent present in both the dissolved and suspended phases of the sample. A knowledge of the expected form of the constituent in the sample, as well as the analytical methodology used, is required to judge when the results should be reported as "total." (Note that the word "total" does double duty here, indicating both that the sample consists of a water-suspended sediment mixture and that the analytical method determines all of the constituent in the sample.)

Total, recoverable the amount of a given constituent that is in solution after a representative water-suspended sediment sample has been digested by a method (usually using a dilute acid solution) that results in dissolution of only readily soluble substances. Complete dissolution of all particulate matter is not achieved by the digestion treatment, and thus the determination represents something less than the "total" amount (that is, less than 95 percent) of the constituent present in the dissolved and suspended phases of the sample. To achieve comparability of analytical data, equivalent digestion procedures would be required of all laboratories performing such analyses because different digestion procedures are likely to produce different analytical results.

Total sediment discharge (tons/day) is the sum of the suspended-sediment discharge and the bed-load discharge. It is the total quantity of sediment, as measured by dry weight or volume, that passes a section during a given time.

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

Sodium-adsorption-ratio (SAR) is the expression of relative activity of sodium ions in exchange reaction 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. It is expressed in micromhos per centimeter at 25°C. Specific conductance is related to the type and concentration of ions in solution and can be used for approximating the dissolved-solids content of the water. Commonly, the concentration 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, and it may vary in the same source with changes in the composition of the water.

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

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" as streamflow may be applied to discharge whether or not it is affected by diversion or regulation.

Substrate is the physical surface upon which an organism lived.

Natural substrates refers to any naturally occurring emerged or submersed solid surface, such as a rock or tree, upon which an organism lived.

Artificial substrate is a device which is purposely placed in a stream or lake for colonization of organisms. The artificial substrate simplifies the community structure by standardizing the substrate from which each sample is taken. Examples of artificial substrates are basket samplers (made of wire cages filled with clean streamside rocks) and multi-plate samplers (made of hardboard) for benthic organism collection, and plexiglass strips for periphyton collection.

Surface area of a lake is that area outlined on the latest U.S.G.S. topographic map as the boundary of the lake and measured by a planimeter in acres. In localities not covered by topographic maps, the areas are computed from the best maps available at the time planimetered. All areas shown are those for the stage when the planimetered map was made.

Surficial bed material is that part (0.1 to 0.2 ft) of the bed material that is sampled using U.S. Series Bed-Material Samplers.

Suspended (as used in tables of chemical analyses) refers to the amount (concentration) of the total concentration in a water-sediment mixture. The water-sediment mixture is associated with (or sorbed on) that material retained on a 0.45 micrometer filter.

Taxonomy is the division of biology concerned with the classification and naming of organisms. The classification of organisms is based upon a hierarchical scheme beginning with Kingdom and ending with Species at the base. The higher the classification level, the fewer features the organisms have in common. For example, the taxonomy of a particular mayfly, Hexagenia limbata is the following:

Kingdom.....Animal
Phylum.....Arthropoda
Class.....Insecta
Order.....Ephemeroptera
Family.....Ephemeridae
Genus.....Hexagenia
Species.....Hexagenia limbata

Thermograph is an instrument that continuously records variations of temperature on a chart. The more general term "temperature recorder" is used in the table headings and refers to any instrument that records temperature whether on a chart, a tape, or any other medium.

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

Tons per acre-foot indicates the dry mass 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 substance in solution or suspension that passes a stream section during a 24-hour day.

Total load (tons) is the total quantity of any individual constituent, as measured by dry mass or volume, that is dissolved in a specific amount of water (discharge) during a given time. It is computed by multiplying the total discharge, times the mg/L of the constituent, times the factor 0.0027, times the number of days.

Water year in Geological Survey reports dealing with surface-water supply is the 12-month period, October 1 through September 30. The water year is designated by the calendar year in which it ends and which includes 9 of the 12 months. Thus, the year ending September 30, 1980, is called the "1980 water year."

WDR is used as an abbreviation for "Water-Data Report" in the REVISED RECORDS paragraph to refer to State annual basic-data reports (WRD was used as an abbreviation for "Water-Resources Data" in reports published prior to 1976).

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

WSP is used as an abbreviation for "Water-Supply Paper" in reference to previously published reports.

DOWNSTREAM ORDER AND STATION NUMBER

Since October 1, 1950, the order of listing hydrologic-station records in Survey reports is in a downstream direction along the main stream. All stations on a tributary entering upstream from a main-stream station are listed before that station. A station on a tributary that enters between two main-stream stations is listed between them. A similar order is followed in listing stations on first rank, second rank, and other ranks of tributaries. The rank of any tributary on which a station is situated with respect to the stream to which it is immediately tributary is indicated by an indentation in a list of stations in the front of the report. Each indentation represents one rank. This downstream order and system of indentation show which stations are on tributaries between any two stations and the rank of the tributary on which each station is situated.

As an added means of identification, each hydrologic 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 stations and other stations; therefore, the station number for a partial-record station indicates downstream-order position in a list made up of both types of stations. Gaps are left in the series of 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 06630000, which appears just to the left of the station name, includes the 2-digit part number "06" plus the 6-digit downstream order number "630000".

NUMBERING SYSTEM FOR WELLS AND MISCELLANEOUS SITES

The 8-digit downstream order station numbers are not assigned to wells and miscellaneous sites where only random water-quality samples or discharge measurements are taken.

The well and miscellaneous site numbering system of the U.S. Geological Survey is based on the grid system of latitude and longitude. The system provides the geographic location of the well or miscellaneous site and a unique number for each site. The number consists of 15 digits. The first 6 digits denote the degrees, minutes, and seconds of latitude, the next 7 digits denote degrees, minutes, and seconds of longitude, and the last 2 digits (assigned sequentially) identify the wells or other sites within a 1-second grid. See figure 3 below.

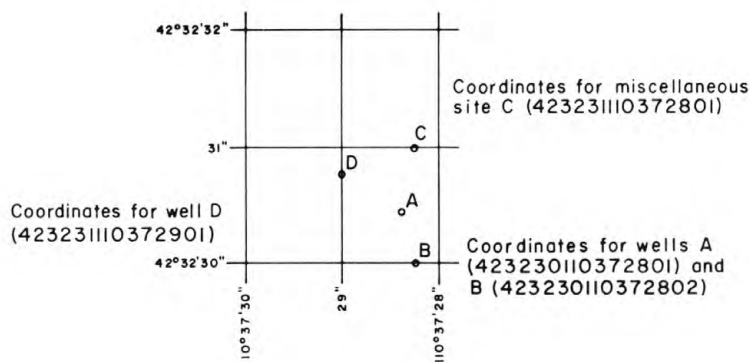


Figure 3.—System for numbering wells and miscellaneous sites (latitude and longitude).

In order to compare data for wells in other publications, such as the county ground-water studies, the wells in this report are also numbered according to a system based on the location in the public land classification of the U.S. Bureau of Land Management. The system is illustrated in figure 4. The first numeral denotes the township north of a base line, the second numeral denotes the range west of the fifth principal meridian, and the third numeral denotes the section in which the well is located. The letters A, B, C, and D designate, respectively, the northeast, northwest, southwest, and southeast quarter section, quarter-quarter section, and quarter-quarter-quarter section (10-acre or 4-hectare tract). For example, well 26N-063W-32CDA is in the NE¼SE¼SW¼ sec.32, T.26 N., R.63 W. Consecutive terminal numbers are added if more than one well is recorded within a 10-acre tract.

For a small irregularly-shaped area in west central Wyoming, the well numbers are based on the Wind River Meridian and Base Line system. The uppercase letter that begins the number designates the quadrant of the system. The quadrants are lettered A, B, C, and D in a counter-clockwise direction beginning with A in the northeast quadrant. Otherwise, the well numbers are the same as given in the preceding paragraph.

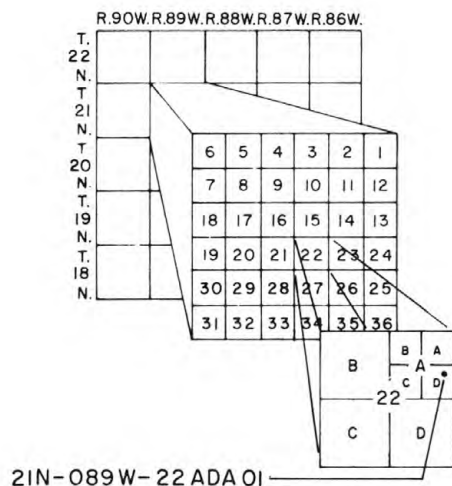


Figure 4—System for numbering wells and miscellaneous sites (township and range).

SPECIAL NETWORKS AND PROGRAMS

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.

National stream-quality accounting network (NASQAN) is a data collection network designed by the U.S. Geological Survey to meet many of the information demands of agencies or groups involved in national or regional water-quality planning and management. Both accounting and broad-scale monitoring objectives have been incorporated into the network design. Areal configuration of the network is based on river-basin accounting units (identified by 8-digit hydrologic-unit numbers) designated by the Office of Water Data Coordination in consultation with the Water Resources Council. Primary objectives of the network are (1) to depict areal variability of streamflow and water-quality conditions nationwide on a year-by-year basis and (2) to detect and assess long-term changes in streamflow and stream quality.

Pesticide program is a network of regularly sampled water-quality stations where samples are collected to determine the concentration and distribution of pesticides in streams where potential contamination could result from the application of the commonly used insecticides and herbicides. Operation of the network is a Federal interagency activity.

Radiochemical program is a network of regularly sampled water-quality stations where samples are collected to be analyzed for radioisotopes. The streams that are sampled represent major drainage basins in the conterminous United States.

Tritium network is a network of stations which has been established to provide baseline information on the occurrence of tritium in the Nation's surface waters. In addition to the surface-water stations in the network, tritium data are also obtained at a number of precipitation stations. The purpose of the precipitation stations is to provide an estimate sufficient for hydrologic studies of the tritium input to the United States.

EXPLANATION OF STAGE AND WATER-DISCHARGE RECORDS

Collection and computation of data

The base data collected at gaging stations consist of records of stage and measurements of discharge of streams or canals, and stage, surface area, and contents of lakes or reservoirs. In addition, observations of factors affecting the stage-discharge relation or the stage-capacity relation, weather records, and other information are used to supplement base data in determining the daily flow or volume of water in storage. Records of stage are obtained from either direct readings on a nonrecording gage or from a water-stage recorder that gives either a continuous graph of the fluctuations or a tape punched at selected time intervals. Measurements of discharge are made with a current meter, using the general methods adopted by the Geological Survey. These methods are described in standard text-books, in Water-Supply Paper 888, and in U.S. Geological Survey Techniques of Water Resources Investigations, book 3, chapter A6.

For stream-gaging stations, rating tables giving the discharge for any stage are prepared from stage-discharge relation curves. If extensions to the rating curves are necessary to express discharge greater than measured, they are made on the basis of indirect measurements of peak discharge (such as slope-area or contracted-opening measurements, computation of flow over dams or weirs), step-backwater techniques, velocity-area studies, and logarithmic plotting. The daily mean discharge is computed from gage heights and rating tables, then the monthly and yearly mean discharge are computed from the daily figures. If the stage-discharge relation is subject to change because of frequent or continual change in the physical features that form the control, the daily mean discharge is computed by the shifting-control method, in which correction factors based on individual discharge measurements and notes by engineers and observers are used in applying the gage heights to the rating tables. If the stage-discharge relation for a station is temporarily changed by the presence of aquatic growth or debris on the control, the daily mean discharge is computed by what is basically the shifting-control method.

At some stream-gaging stations the stage-discharge relation is affected by the backwater from reservoirs, tributary streams, or other sources. This necessitates the use of the slope method in which the slope or fall in a reach of the stream is a factor in computing discharge. The slope or fall is obtained by means of an auxiliary gage set at some distance from the base gage. At some stations the stage-discharge relation is affected by changing stage; at these stations the rate of change in stage is used as a factor in computing discharge.

At some northern stream-gaging stations the stage-discharge relation is affected by ice in the winter, and it becomes impossible to compute the discharge in the usual manner. Discharge for periods of ice effect is computed on the basis of gage-height record and occasional winter discharge measurements. Consideration is given to the available information on temperature and precipitation, notes by gage observers and hydrologists, and comparable records of discharge for other stations in the same or nearby basins.

For a lake or reservoir station, capacity tables giving the contents for any stage are prepared from stage-area relation curves defined by surveys. The application of the stage to the capacity table gives the contents, from which the daily, monthly, or yearly change in contents is computed.

If the stage-capacity curve is subject to changes because of deposition of sediment in the reservoir, periodic resurveys of the reservoir are necessary to define new stage-capacity curves. During the period between reservoir surveys the computed contents may be increasingly in error due to the gradual accumulation of sediment.

For some gaging stations there are periods when no gage-height record is obtained or the recorded gage height is so faulty that it cannot be used to compute daily discharge or contents. This happens when the recorder stops or otherwise fails to operate properly, intakes are plugged, the float is frozen in the well, or for various other reasons. For such periods the daily discharges are estimated on the basis of recorded range in stage, prior and subsequent records, discharge measurements, weather records, and comparison with records for other stations in the same or nearby basins. Likewise daily contents may be estimated on the basis of operator's log, prior and subsequent records, inflow-outflow studies, and other information.

The data in this report generally comprise a description of the station and tabulations of daily and monthly figures. For gaging stations on streams or canals a table showing the daily discharge and monthly and yearly discharge is given. For gaging stations on lakes and reservoirs a monthly summary table of stage and contents or a table showing the daily contents is given. Tables of daily mean gage heights are included for some streamflow stations and for some reservoir stations. Records are published for the water year, which begins on October 1 and ends on September 30.

The description of the gaging station gives the location, drainage area, period of record, notations of revisions of previously published records, type and history of gages, general remarks, average discharge, and extremes of discharge or contents. The location of the gaging station and the drainage area are obtained from the most accurate maps available. River mileage, given under "LOCATION" for some stations, is that determined and used by the Corps of Engineers or other agencies. Periods for which there are published records for the present station or for stations generally equivalent to the present one are given under "PERIOD OF RECORD."

Previously published streamflow records of some stations have been found to be in error on the basis of data or information later obtained. Revisions of such records are usually published along with the current records in one of the annual or compilation reports. In order to make it easier to find such revised records, a paragraph headed "REVISED RECORDS" has been added to the description of all stations for which revised records have been published. Listed therein are all the reports in which revisions have been published, each followed by the water years for which figures are revised in that report. In listing the water years only one number is given; for instance, 1965 stands for the water year October 1, 1964, to September 30, 1965. If no daily, monthly, or annual figures of discharge are affected by the revision, the fact is brought out by notations after the year dates as follows: "(M)" means that only the instantaneous maximum discharge was revised; "(m)" that only the instantaneous minimum was revised; and "(P)" that only peak discharges were revised. If the drainage area has been revised, the report in which the revised figure was first published is given. It should be noted that for all stations for which cubic feet per second per square mile and runoff in inches are published, a revision of the drainage area necessitates corresponding revision of all figures based on the drainage area. Revised figures of cubic feet per second per square mile and runoff in inches resulting from a revision of the drainage area only are usually not published in the annual series of reports.

The type of gage currently in use, the datum of the present gage referred to National Geodetic Vertical Datum, and condensed history of the types, locations, and datums of previous gages used during the period of record are given under "GAGE." National Geodetic Vertical Datum is explained in "DEFINITION OF TERMS".

Information pertaining to the accuracy of the discharge records and to conditions which affect the natural flow of the gaging station is given under "REMARKS." For reservoir stations information on the dam forming the reservoir, the capacity, outlet works and spillway, and purpose and use of the reservoir is given under "REMARKS."

The average discharge for the number of years indicated is given under "AVERAGE DISCHARGE"; it is not given for stations having fewer than 5 complete years of record or for stations where changes in water development during the period of record cause the figure to have little significance. In addition, the median of yearly mean discharges is given for stream-gaging stations having 10 or more complete years of record if the median differs from the average by more than 10 percent. Under "EXTREMES" are given first, the extremes for the period of record, second, information available outside the period of record, and last, those for the current year. Unless otherwise qualified, the maximum discharge (or contents) is the instantaneous maximum corresponding to the crest stage obtained by use of a water-stage recorder (graphic or digital), a crest-stage gage, or a nonrecording gage read at the time of the crest. If the maximum gage height did not occur on the same day as the maximum discharge (or contents), it is given separately. Similarly, the minimum is the instantaneous minimum unless otherwise qualified. For some stations peak discharges are listed with EXTREMES FOR THE CURRENT YEAR; if they are, all independent peaks, including the maximum for the year, above the selected base with the time of occurrence and corresponding gage heights are published in tabular format. The base discharge, which is given in the table heading, is selected so that an average of about three peaks a year will be presented. Peak discharges are not published for any canals, ditches, drains, or for any stream for which the peaks are subject to substantial control by man. Time of day is expressed in 24-hour local standard time; for example, 12:30 a.m. is 0030, 1:30 p.m. is 1330. The minimums for these stations are published in a separate paragraph following the table of peaks.

The daily table for stream-gaging stations gives the mean discharge for each day and is followed by monthly and yearly summaries. In the monthly summary below the daily table, the line headed "TOTAL" gives the sum of the daily figures. The line headed "MEAN" gives the average flow in cubic feet per second during the month. The lines headed "MAX" and "MIN" give the maximum and minimum daily discharges, respectively, for the month. Discharge for the month also may be expressed in cubic feet per second per square mile (line headed "CFSM"), or in inches (line headed "IN"), or in acre-feet (line headed "AC-FT"). Figures for cubic feet per second per square mile and runoff in inches are omitted if there is extensive regulation or diversion, if the drainage area includes large noncontributing areas, or if the average annual rainfall over the drainage basin is usually less than 20 inches. In the yearly summary below the monthly summary, the figures shown are the appropriate daily discharges for the calendar and water years.

Footnotes to the table of daily discharge are introduced by the word "NOTE." Footnotes are used to indicate periods for which the discharge is computed or estimated by special methods because of no gage-height record, backwater from various sources, or other unusual conditions. Periods of no gage-height record are indicated if the period is continuous for a month or more or includes the maximum discharge for the year. Periods of backwater from an unusual source, of indefinite stage-relation, or of any other unusual condition at the gage site are indicated only if they are a month or more in length and the accuracy of the records is affected. Days on which the stage-discharge relation is affected by ice are not indicated. The methods used in computing discharge for various unusual conditions have been explained in preceding paragraphs.

For most gaging stations on lakes and reservoirs the data presented comprise a description of the station and a monthly summary table of stage and contents. For some reservoirs a table showing daily contents or stage is given. A skeleton table of capacity at given stages is published for all reservoirs for which records are published on a daily basis, but is not published for reservoirs for which only monthly data are given.

Data collected at partial-record stations follow the information for continuous record sites. Data for partial-record discharge stations are presented in two tables. The first is a table of discharge measurements at low-flow partial-record stations, and the second is a table of annual maximum stage and discharge at crest-stage stations. The tables of partial-record stations are followed by a listing of discharge measurements made at sites other than continuous-record or partial-record stations. Occasionally, a series of discharge measurements are made within a short time period to investigate the seepage gains or losses along a reach of a stream or to determine the low-flow characteristics of an area. Such measurements are also given in special tables following the tables of partial-record stations.

Accuracy of field data and computed results

The accuracy of streamflow data depends primarily on (1) the stability of the stage-discharge relation or, if the control is unstable, the frequency of discharge measurements, and (2) the accuracy of observations of stage, measurements of discharge, and interpretations of records.

The station description under "REMARKS" states the degree of accuracy of the records. "Excellent" means that about 95 percent of the daily discharges are within 5 percent; "good", within 10 percent; and "fair" within 15 percent. "Poor" means that daily discharges have less than "fair" accuracy.

Figures of daily mean discharge in this report are shown to the nearest hundredth of a cubic foot per second for discharges of less than 1 cfs; to tenths between 1.0 and 10 cfs; to whole numbers between 10 and 1,000 cfs; and to 3 significant figures above 1,000 cfs. The number of significant figures used is based solely on the magnitude of the figure. The same rounding rules apply to discharge figures listed for partial-record stations.

Discharge at many stations, as indicated by the monthly mean, may not reflect natural runoff due to the effects of diversion, consumption, regulation by storage, increase or decrease in evaporation due to artificial causes, or to other factors. For such stations, figures of cubic feet per second per square mile and of runoff in inches are not published unless satisfactory adjustments can be made for diversions, for changes in contents of reservoirs, or for other changes incident to use and control. Evaporation from a reservoir is not included in the adjustments for changes in reservoir contents, unless it is so stated. Even at those stations where adjustments are made, large errors in computed runoff may occur if adjustments or losses are large in comparison with the observed discharge.

Other data available

Information of a more detailed nature than that published for most of the gaging stations such as observations of water temperatures, discharge measurements, gage-height records, and rating tables is on file in the district office. Also most gaging-station records are available in computer-usable form and many statistical analyses have been made.

Information on the availability of unpublished data or statistical analyses may be obtained from the district office.

Records of discharge collected by agencies other than the Geological Survey

The National Water Data Exchange, Water Resources Division, U.S. Geological Survey, National Center, Reston, VA 22092, maintains an index of such sites. Information on records available at specific sites can be obtained upon request.

EXPLANATION OF WATER-QUALITY RECORDS

Collection and examination of data

Surface water samples for analyses usually are collected at or near gaging stations. The quality-of-water records are given immediately following the discharge records at these stations.

The descriptive heading for water-quality records gives the period of record for all water-quality data; the period of daily record for parameters that are measured on a daily basis (specific conductance, pH, dissolved oxygen, water temperature, sediment discharge, etc.); extremes for the period of daily record; extremes for the current year; and general remarks.

For ground-water records, no descriptive statements are given; however, the well number, depth of well, date of sampling and/or other pertinent data are given in the table containing the chemical analyses of the ground water.

Water analysis

Most methods for collecting and analyzing water samples are described in the U.S. Geological Survey Techniques of Water-Resources Investigations listed on the following page.

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 mixing of the stream. Some streams must be sampled through several vertical sections to obtain a representative sample needed for an accurate mean concentration and for use in calculating load.

Chemical-quality data published in this report are considered to be the most representative values available for the stations listed. The values reported represent water-quality conditions at the time of sampling as much as possible, consistent with available sampling techniques and methods of analysis. In the rare case where an apparent inconsistency exists between a reported pH value and the relative abundance of carbon dioxide species (carbonate and bicarbonate), the inconsistency is the result of a slight uptake of carbon dioxide from the air by the sample between measurement of pH in the field and determination of carbonate and bicarbonate in the laboratory.

For chemical-quality stations equipped with digital monitors, the records consist of daily maximum, minimum, and mean values for each constituent measured and are based upon hourly punches beginning at 0100 hours and ending at 2400 hours for the day of record. More detailed records (hourly values) may be obtained from the district office.

Water temperature

Water temperatures are measured at most of the water-quality stations. In addition, water temperatures are taken at time of discharge measurements for water-discharge stations. For stations where water temperatures are taken manually once or twice daily, the water temperatures

are taken at about the same time each day. Large streams have a small daily 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 recording instruments are used, either mean temperatures or maximum and minimum temperatures for each day are published.

Sediment

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

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

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

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

EXPLANATION OF GROUND-WATER LEVEL RECORDS

Collection of the data

Only ground-water level data from a basic network of observation wells are published herein. This basic network contains observation wells so located that the most significant data are obtained from the fewest wells in the most important aquifers.

Each well is identified by means of (1) a 15-digit number that is based on latitude and longitude and (2) a local number that is provided for local needs. See figures 1 and 2.

Measurements are made in many types of wells, under varying conditions of access and at different temperatures, hence, neither the method of measurement nor the equipment can be standardized. At each observation well, however, the equipment and techniques used are those that will ensure that measurements at each well are consistent.

Water-level measurements in this report are given in feet with reference to either National Geodetic Vertical Datum of 1929 or land-surface datum (lsd). National Geodetic Vertical Datum of 1929 is explained in the Definition of Terms paragraph. Land-surface datum is a datum plane that is approximately at land surface at each well. If known, the altitude of the land-surface datum above National Geodetic Vertical Datum of 1929 is given in the well description. The height of the measuring point (MP) above or below land-surface datum is given in each well description. Water levels in wells equipped with recording gages are reported for every fifth day and the end of each month (eom).

Water levels are reported to as many significant figures as can be justified by the local conditions. For example, in a measurement of a depth to water of several hundred feet, the error in determining the absolute value of the total depth to water may be a few tenths of a foot, whereas the error in determining the net change of water level between successive measurements may be only a hundredth or a few hundredths of a foot. For lesser depths to water the accuracy is greater. Accordingly, most measurements are reported to a hundredth of a foot, but some are given only to a tenth of a foot or a larger unit.

Thirty-four manuals by the U.S. Geological Survey have been published to date in the series on techniques describing procedures for planning and executing specialized work in water-resources investigations. The material is grouped under major subject headings called books and is further divided into sections and chapters. For example, Section A of Book 3 (Applications of Hydraulics) is on surface water. The chapter, the unit of publication, is limited to a narrow field of subject matter. This format permits flexibility in revision and publication as the need arises. The reports listed below are for sale by the U.S. Geological Survey, Branch of Distribution, 1200 South Eads Street, Arlington, VA 22202 (authorized agent of the Superintendent of Documents, Government Printing Office).

NOTE: When ordering any of these publications, please give the title, book number, chapter number, and "U.S. Geological Survey Techniques of Water-Resources Investigations".

- 1-D1. *Water temperature--influential factors, field measurement, and data presentation*, by H. H. Stevens, Jr., J. F. Ficke, and G. F. Smoot: USGS--TWRI Book 1, Chapter D1. 1975. 65 pages.
- 1-D2. *Guidelines for collection and field analysis of ground-water samples for selected unstable constituents*, by W. W. Wood: USGS--TWRI Book 1, Chapter D2. 1976. 24 pages.
- 2-D1. *Application of surface geophysics to ground-water investigations*, by A. A. R. Zohdy, G. P. Eaton, and D. R. Mabey: USGS--TWRI Book 2, Chapter D1. 1974. 116 pages.
- 2-E1. *Application of borehole geophysics to water-resources investigations*, by W. S. Keys and L. M. MacCary: USGS--TWRI Book 2, Chapter E1. 1971. 126 pages.
- 3-A1. *General field and office procedures for indirect discharge measurements*, by M. A. Benson and Tate Dalrymple: USGS--TWRI Book 3, Chapter A1. 1967. 30 pages.
- 3-A2. *Measurement of peak discharge by the slope-area method*, by Tate Dalrymple and M. A. Benson: USGS--TWRI Book 3, Chapter A2. 1967. 12 pages.
- 3-A3. *Measurement of peak discharge at culverts by indirect methods*, by G. L. Bodhaine: USGS--TWRI Book 3, Chapter A3. 1968. 60 pages.
- 3-A4. *Measurement of peak discharge at width contractions by indirect methods*, by H. F. Matthai: USGS--TWRI Book 3, Chapter A4. 1967. 44 pages.
- 3-A5. *Measurement of peak discharge at dams by indirect methods*, by Harry Hulsing: USGS--TWRI Book 3, Chapter A5. 1967. 29 pages.
- 3-A6. *General procedure for gaging streams*, by R. W. Carter and Jacob Davidian: USGS--TWRI Book 3, Chapter A6. 1968. 13 pages.
- 3-A7. *Stage measurements at gaging stations*, by T. J. Buchanan and W. P. Somers: USGS--TWRI Book 3, Chapter A7. 1968. 28 pages.
- 3-A8. *Discharge measurements at gaging stations*, by T. J. Buchanan and W. P. Somers: USGS--TWRI Book 3, Chapter A8. 1969. 65 pages.
- 3-A11. *Measurement of discharge by moving-boat method*, by G. F. Smoot and C. E. Novak: USGS--TWRI Book 3, Chapter A11. 1969. 22 pages.
- 3-B1. *Aquifer-test design, observation, and data analysis*, by R. W. Stallman: USGS--TWRI Book 3, Chapter B1. 1971. 26 pages.
- 3-B2. *Introduction to ground-water hydraulics, a programed text for self-instruction*, by G. D. Bennett: USGS--TWRI Book 3, Chapter B2. 1976. 172 pages.
- 3-C1. *Fluvial sediment concepts*, by H. P. Guy: USGS--TWRI Book 3, Chapter C1. 1970. 55 pages.
- 3-C2. *Field methods for measurement of fluvial sediment*, by H. P. Guy and V. W. Norman: USGS--TWRI Book 3, Chapter C2. 1970. 59 pages.
- 3-C3. *Computation of fluvial-sediment discharge*, by George Porterfield: USGS--TWRI Book 3, Chapter C3. 1972. 66 pages.
- 4-A1. *Some statistical tools in hydrology*, by H. C. Riggs: USGS--TWRI Book 4, Chapter A1. 1968. 39 pages.
- 4-A2. *Frequency curves*, by H. C. Riggs: USGS--TWRI Book 4, Chapter A2. 1968. 15 pages.
- 4-B1. *Low-flow investigations*, by H. C. Riggs: USGS--TWRI Book 4, Chapter B1. 1972. 18 pages.
- 4-B2. *Storage analyses for water supply*, by H. C. Riggs and C. H. Hardison: USGS--TWRI Book 4, Chapter B2. 1973. 20 pages.
- 4-B3. *Regional analyses of streamflow characteristics*, by H. C. Riggs: USGS--TWRI Book 4, Chapter B3. 1973. 15 pages.
- 4-D1. *Computation of rate and volume of stream depletion by wells*, by C. T. Jenkins: USGS--TWRI Book 4, Chapter D1. 1970. 17 pages.
- 5-A1. *Methods for determination of inorganic substances in water and fluvial sediments*, by M. W. Skougstad and others, editors: USGS--TWRI Book 5, Chapter A1. 1979. 626 pages.
- 5-A2. *Determination of minor elements in water by emission spectroscopy*, by P. R. Barnett and E. C. Mallory, Jr.: USGS--TWRI Book 5, Chapter A2. 1971. 31 pages.
- 5-A3. *Methods for analysis of organic substances in water*, by D. F. Goerlitz and Eugene Brown: USGS--TWRI Book 5, Chapter A3. 1972. 40 pages.
- 5-A4. *Methods for collection and analysis of aquatic biological and microbiological samples*, edited by P. E. Greenson, T. A. Ehlke, G. A. Irwin, B. W. Lium, and K. V. Slack: USGS--TWRI Book 5, Chapter A4. 1977. 332 pages.
- 5-A5. *Methods for determination of radioactive substances in water and fluvial sediments*, by L. L. Thatcher, V. J. Janzer, and K. W. Edwards: USGS--TWRI Book 5, Chapter A5. 1977. 95 pages.
- 5-C1. *Laboratory theory and methods for sediment analysis*, by H. P. Guy: USGS--TWRI Book 5, Chapter C1. 1969. 58 pages.
- 7-C1. *Finite difference model for aquifer simulation in two dimensions with results of numerical experiments*, by P. C. Trescott, G. F. Pinder, and S. P. Larson: USGS--TWRI Book 7, Chapter C1. 1976. 116 pages.
- 7-C2. *Computer model of two-dimensional solute transport and dispersion in ground water*, by L. F. Konikow and J. D. Bredehoeft: USGS--TWRI Book 7, Chapter C2. 1978. 90 pages.
- 8-A1. *Methods of measuring water levels in deep wells*, by M. S. Garber and F. C. Koopman: USGS--TWRI Book 8, Chapter A1. 1968. 23 pages.
- 8-B2. *Calibration and maintenance of vertical-axis type current meters*, by G. F. Smoot and C. E. Novak: USGS--TWRI Book 8, Chapter B2. 1968. 15 pages.

06043500 GALLATIN RIVER NEAR GALLATIN GATEWAY, MT

LOCATION (revised).--Lat 45°29'51", long 111°25'12", in SE¼SE¼SE¼ sec.7, T.4 S., R.4 E., Gallatin County, Hydrologic Unit 10020008, on left bank 0.3 mi (0.5 km) downstream from Spanish Creek, 7.3 mi (11.7 km) south of Gallatin Gateway, and at mile 47.7 (76.7 km), revised.

DRAINAGE AREA.--825 mi² (2,137 km²).

PERIOD OF RECORD.--August 1889 to September 1894, June 1930 to September 1969, annual maximum, water years 1970-71, October 1971 to September 1981 (discontinued). Monthly discharge only for some periods, published in WSP 1309. Published as West Gallatin River near Bozeman 1889-94.

REVISED RECORDS.--WSP 1389: 1892(M), 1893-94. WSP 1559: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 5,167.7 ft (1,575.11 m), National Geodetic Vertical Datum of 1929. Prior to Oct. 20, 1932, nonrecording gages at several different sites and datums within 0.8 mi (1.3 km) of present site.

REMARKS.--Records good. Diversions for irrigation of about 1,400 acres (5.67 km²) above station.

AVERAGE DISCHARGE.--54 years, 815 ft³/s (23.08 m³/s), 590,500 acre-ft/yr (728 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 9,690 ft³/s (274 m³/s) June 17, 1974, gage height, 7.38 ft (2.249 m); minimum, 117 ft³/s (3.31 m³/s) Jan. 19, 1935, gage height, 0.68 ft (0.207 m), result of freezeup.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 2,900 ft³/s (82.1 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
June 1	0100	4,790 136	4.94 1.506
June 9	0015	*5,920 168	5.56 1.695

Minimum discharge, 239 ft³/s (6.77 m³/s) Jan. 17, gage height, 1.14 ft (0.347 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	478	428	363	363	322	297	320	1740	4230	2190	692	495
2	473	432	364	347	302	297	320	2170	3630	2140	688	483
3	471	424	385	317	293	302	301	1890	3680	1950	679	478
4	466	425	389	352	288	302	306	1530	3370	1810	667	477
5	460	431	383	358	288	313	297	1410	3410	1710	656	472
6	454	434	338	327	288	324	320	1510	4330	1700	635	476
7	449	446	328	322	307	321	303	1320	4510	1730	619	467
8	447	534	302	302	322	312	298	1160	4960	1510	617	461
9	444	475	314	332	297	312	303	1080	4870	1330	613	455
10	431	439	282	317	265	302	297	1070	3650	1250	602	453
11	431	459	317	288	269	301	300	1120	3280	1250	597	449
12	435	465	322	279	288	311	308	1010	3170	1200	588	443
13	465	414	327	283	302	317	309	963	3190	1120	585	442
14	444	298	317	279	327	318	309	974	2770	1060	577	439
15	454	286	352	269	317	318	356	1140	2500	1010	589	439
16	436	292	358	265	317	329	436	1250	2440	966	573	437
17	442	314	352	256	352	330	478	1200	2920	960	566	432
18	454	335	347	297	327	313	517	1350	2530	977	562	429
19	454	334	312	307	342	305	593	1740	2840	944	559	427
20	448	362	347	312	352	319	621	2090	2970	885	563	446
21	460	351	368	307	312	315	612	2410	2860	843	558	439
22	454	378	368	317	312	317	529	3410	2860	819	568	440
23	401	378	368	327	312	320	542	3300	3070	803	542	447
24	399	352	368	332	317	312	782	3290	2910	786	531	447
25	439	338	374	337	312	314	1060	3350	2720	812	529	485
26	464	337	396	327	317	321	1060	4010	2800	796	520	526
27	444	365	418	327	322	333	1170	4130	2870	781	515	494
28	412	374	412	332	302	316	1070	4000	2600	744	510	516
29	409	386	363	337	---	330	1130	3950	2250	731	504	541
30	438	394	368	327	---	338	1360	3980	2150	725	507	533
31	435	---	385	332	---	317	---	4430	---	702	513	---
TOTAL	13791	11680	10987	9774	8671	9776	16607	67977	96340	36234	18024	13968
MEAN	445	389	354	315	310	315	554	2193	3211	1169	581	466
MAX	478	534	418	363	352	338	1360	4430	4960	2190	692	541
MIN	399	286	282	256	265	297	297	963	2150	702	504	427
AC-FT	27350	23170	21790	19390	17200	19390	32940	134800	191100	71870	35750	27710
CAL YR 1980	TOTAL	294639	MEAN	805	MAX	3930	MIN	240	AC-FT	584400		
WTR YR 1981	TOTAL	313829	MEAN	860	MAX	4960	MIN	256	AC-FT	622500		

YELLOWSTONE RIVER BASIN

06186000 YELLOWSTONE LAKE AT BRIDGE BAY, YELLOWSTONE NATIONAL PARK

LOCATION.--Lat 44°32'00", long 110°26'20", Yellowstone National Park, Hydrologic Unit 10070001, at marina at Bridge Bay, 3.7 mi (6.0 km) southwest of lake outlet.

DRAINAGE AREA.--1,006 mi² (2,606 km²).

PERIOD OF RECORD.--October 1921 to current year (gage heights only). Prior to October 1966, published as Yellowstone Lake at Lake Hotel.

REVISED RECORDS.--WSP 1916: Drainage area.

GAGE.--Nonrecording gage usually read once daily except during winter months, when it is read occasionally. Datum of gage is 7,729.45 ft (2,355.936 m), National Geodetic Vertical Datum of 1929. Prior to Oct. 1, 1966, nonrecording gages at Lake Hotel dock at same datum.

REMARKS.--No regulation.

EXTREMES FOR PERIOD OF RECORD.--Maximum gage height observed, 7.34 ft (2.237 m) June 28, 30, 1974; minimum observed, -0.1 ft (-0.03 m) Dec. 7, 8, 1931.

EXTREMES FOR CURRENT YEAR.--Maximum gage height observed, 5.09 ft (1.551 m) June 29; minimum observed, 0.98 ft (0.299 m) Apr. 13, 20.

GAGE HEIGHT (FEET ABOVE DATUM), WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.26	---	---	---	---	---	---	---	3.36	5.05	3.62	2.44
2	---	---	---	---	1.06	---	---	---	---	5.04	3.55	2.40
3	---	1.72	---	---	---	---	---	---	---	5.01	3.52	2.39
4	---	---	---	---	---	---	---	1.58	---	4.97	3.48	2.33
5	---	---	---	1.22	---	1.00	---	---	---	4.92	3.43	2.27
6	---	---	---	---	---	---	1.00	1.68	---	4.90	3.32	2.29
7	---	---	---	---	---	---	---	---	---	4.91	3.29	2.23
8	2.26	---	1.44	---	---	---	---	---	4.09	4.88	3.28	2.19
9	---	---	---	---	1.04	1.01	---	---	---	4.80	3.25	2.20
10	---	1.66	---	---	---	---	---	---	---	4.74	3.19	2.19
11	---	---	---	---	---	---	---	1.90	---	4.77	3.15	2.15
12	---	---	---	---	---	---	---	---	---	4.63	3.13	2.13
13	---	---	---	1.16	---	---	.98	---	---	4.65	3.09	2.09
14	---	---	---	---	---	---	---	---	---	4.57	3.04	2.08
15	---	---	1.42	---	---	---	---	---	5.03	4.54	3.02	2.04
16	---	---	---	---	1.02	---	---	---	---	4.44	3.00	2.01
17	---	1.60	---	---	---	1.02	---	---	---	4.36	2.93	1.98
18	---	---	---	---	---	---	---	2.08	---	4.32	2.90	1.95
19	---	---	---	---	---	---	---	---	---	4.28	2.83	1.91
20	2.04	---	---	1.06	---	---	.98	---	---	4.22	2.83	1.90
21	---	---	---	---	---	---	---	---	---	4.18	2.81	1.87
22	---	---	---	---	---	---	---	---	4.93	4.12	2.77	1.86
23	---	---	---	---	1.02	---	---	---	---	4.06	2.76	1.81
24	---	1.44	---	---	---	---	---	---	5.02	3.99	2.68	1.75
25	---	---	---	---	---	---	---	2.58	---	3.98	2.71	1.72
26	---	---	---	---	---	---	---	---	---	3.84	2.67	1.69
27	---	---	---	1.04	---	---	1.22	---	---	3.88	2.67	---
28	1.82	---	---	---	---	---	---	---	---	3.80	2.57	1.75
29	---	---	1.20	---	---	---	---	---	5.09	3.78	2.56	---
30	---	---	---	---	---	---	---	---	---	3.77	2.55	1.70
31	---	---	---	---	---	---	---	---	---	3.66	2.50	---
MAX	---	---	---	---	---	---	---	---	---	5.05	3.62	---
MIN	---	---	---	---	---	---	---	---	---	3.66	2.50	---

06186500 YELLOWSTONE RIVER AT YELLOWSTONE LAKE OUTLET, YELLOWSTONE NATIONAL PARK

LOCATION.--Lat 44°34'03", long 110°22'48", Yellowstone National Park, Hydrologic Unit 10070001, on left bank 450 ft (137 m) downstream from Fishing Bridge, 0.3 mi (0.5 km), revised, downstream from outlet of Yellowstone Lake, and at mile 616.4 (991.8 km).

DRAINAGE AREA.--1,006 mi² (2,606 km²).

PERIOD OF RECORD.--December 1922 to current year (prior to October 1926, gage heights only). Monthly discharge only for winter periods in water years 1927-30, 1932-33, 1935-38, 1940, 1942-46, published in WSP 1309; figures of daily discharge for these months published in WSP 646, 666, 686, 701, 731, 746, 786, 806, 826, 856, 896, 956, 976, 1006, 1036, and 1056 have been found to be unreliable and should not be used.

REVISED RECORDS.--WSP 1309: See PERIOD OF RECORD. WSP 1729: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 7,727.91 ft (2,355.467 m), National Geodetic Vertical Datum of 1929. Prior to Oct. 2, 1928, nonrecording gage at site 450 ft (137 m) upstream at datum 1.07 ft (0.326 m) higher.

REMARKS.--Records good. No artificial regulation.

AVERAGE DISCHARGE.--55 years (water years 1927-81), 1,320 ft³/s (37.38 m³/s), 17.82 in/yr (453 mm/yr), 956,300 acre-ft/yr (1.18 km³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 9,170 ft³/s (260 m³/s) June 28, 1974, gage height, 8.20 ft (2.499 m); minimum daily, 130 ft³/s (3.68 m³/s) Mar. 1-31, 1935, but may have been less during periods of ice effect; minimum gage height, 1.45 ft (0.442 m) Dec. 17, 1936.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 4,270 ft³/s (121 m³/s) June 28, gage height, 6.07 ft (1.850 m); minimum daily, 404 ft³/s (11.4 m³/s) Mar. 19.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1040	692	585	503	440	432	420	600	2000	4200	2280	1180
2	1030	687	570	498	444	428	432	650	2070	4170	2230	1140
3	1020	670	570	494	440	432	428	680	2170	4130	2170	1100
4	1010	665	560	494	440	428	428	700	2240	4080	2120	1080
5	991	660	560	494	432	428	424	720	2320	4030	2060	1050
6	984	660	560	489	432	424	432	731	2410	3980	2020	1030
7	970	660	550	485	432	424	428	775	2580	3950	1960	1010
8	963	665	540	476	436	420	424	798	2800	3870	1930	998
9	949	650	540	476	428	420	432	810	3200	3770	1870	970
10	928	650	540	472	424	420	432	816	3600	3720	1840	963
11	921	655	540	468	424	416	432	858	3800	3660	1790	956
12	914	655	540	464	424	412	432	870	3900	3610	1760	928
13	907	645	540	464	424	412	424	876	3980	3550	1730	914
14	888	645	540	460	424	408	420	876	4070	3500	1680	894
15	870	640	548	456	424	408	416	900	4070	3430	1660	876
16	852	640	543	452	424	408	420	900	4070	3320	1610	864
17	840	635	543	452	436	408	416	928	4100	3250	1590	846
18	840	625	543	456	436	408	416	949	4070	3190	1570	834
19	828	620	534	452	436	404	416	977	4030	3130	1530	828
20	822	620	530	448	436	408	424	1010	4070	3050	1500	810
21	822	620	534	444	436	412	440	1080	4050	2980	1500	792
22	786	610	534	440	436	420	448	1120	4030	2900	1470	764
23	786	605	530	440	436	428	444	1170	4070	2840	1440	742
24	769	600	530	440	436	428	440	1220	4120	2730	1410	714
25	758	595	534	440	436	420	450	1270	4150	2640	1380	714
26	742	590	530	440	436	420	470	1350	4170	2610	1350	703
27	731	585	521	440	436	416	490	1460	4240	2580	1330	697
28	725	590	516	436	432	416	520	1560	4250	2510	1280	687
29	720	590	516	440	---	416	560	1660	4240	2470	1260	660
30	709	585	512	436	---	420	580	1770	4220	2410	1240	655
31	697	---	503	440	---	420	---	1890	---	2340	1200	---
TOTAL	26812	19009	16736	14289	12120	12964	13338	31974	107090	102600	51760	26399
MEAN	865	634	540	461	433	418	445	1031	3570	3310	1670	880
MAX	1040	692	585	503	444	432	580	1890	4250	4200	2280	1180
MIN	697	585	503	436	424	404	416	600	2000	2340	1200	655
AC-FT	53180	37700	33200	28340	24040	25710	26460	63420	212400	203500	102700	52360
CAL YR 1980	TOTAL	430157	MEAN	1175	MAX	3770	MIN	250	AC-FT	853200		
WTR YR 1981	TOTAL	435091	MEAN	1192	MAX	4250	MIN	404	AC-FT	863000		

YELLOWSTONE RIVER BASIN

06191500 YELLOWSTONE RIVER AT CORWIN SPRINGS, MT

LOCATION (revised).--Lat 45°06'43", long 110°47'37", in NW¼SE¼NW¼ sec.30, T.8 S., R.8 E., Park County, Hydrologic Unit 10070002, on left bank 20 ft (6 m) downstream from highway bridge at Corwin Springs, 1.3 mi (2.1 km) upstream from Mol Herron Creek, 7 mi (11 km) northwest of Gardiner, and at mile 549.7 (884.5 km).

DRAINAGE AREA.--2,623 mi² (6,794 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--August 1889 to November 1893 (published as "at Horr"), September 1910 to current year. Monthly discharge only for some periods, published in WSP 1309.

REVISED RECORDS.--WSP 1309: 1912. WSP 1509: 1889-94, 1911, 1913, 1916-18, 1920-21, 1925, 1927. WSP 1559: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 5,079.09 ft (1,548.107 m), National Geodetic Vertical Datum of 1929. Aug. 12, 1889, to Nov. 4, 1893, nonrecording gages at site 2 mi (3 km) upstream at different datums. Sept. 2, 1910, to Apr. 19, 1935, nonrecording gages on bridge at present datum.

REMARKS.--Records good. Natural storage in Yellowstone Lake. Diversions for irrigation of about 960 acres (3.89 km²) of which 40 acres (162,000 m²) are below station.

AVERAGE DISCHARGE.--75 years, 3,107 ft³/s (87.99 m³/s), 16.08 in/yr (408 mm/yr), 2,251,000 acre-ft/yr (2.77 km³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge observed, 32,000 ft³/s (906 m³/s) June 14, 15, 1918, gage height, 11.5 ft (3.51 m), from rating curve extended above 18,000 ft³/s (510 m³/s); minimum observed, 389 ft³/s (11.0 m³/s) Feb. 23, Mar. 5, 9, 1937, gage height, 0.05 ft (0.015 m).

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 12,000 ft³/s (340 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
May 31	0900	14,600 413	7.13 2.195
June 9	0900	*20,300 575	8.56 2.609

Minimum daily discharge, 650 ft³/s (18.4 m³/s) Feb. 10 (result of freezeup).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1890	1270	1090	945	814	818	849	4780	13500	7880	3280	1770
2	1830	1270	1150	925	783	846	879	6190	10800	7600	3200	1730
3	1810	1250	1060	875	818	819	855	5800	10900	7290	3130	1670
4	1780	1240	1030	936	808	813	839	4460	10400	7030	3060	1640
5	1750	1230	949	956	796	829	805	4190	9970	6750	3000	1620
6	1720	1220	995	888	792	851	868	4250	11300	6550	2920	1610
7	1700	1240	976	850	815	841	847	3980	12100	6580	2850	1560
8	1680	1730	950	833	825	810	804	3510	13900	6280	2810	1530
9	1660	1580	1000	869	780	848	858	3170	17700	5850	2780	1510
10	1610	1400	973	870	650	816	865	3120	12900	5660	2730	1490
11	1580	1360	978	815	660	809	843	3360	11200	5580	2660	1470
12	1590	1390	996	756	834	822	857	3090	10800	5470	2600	1450
13	1660	1300	1040	790	845	836	871	2880	10600	5280	2550	1420
14	1610	1110	977	821	858	840	852	2890	9730	5130	2520	1400
15	1590	1020	1030	820	859	841	911	3080	9000	4970	2470	1370
16	1520	1100	1020	802	848	853	1040	3400	8580	4830	2430	1360
17	1490	1150	990	788	865	876	1260	3520	9740	4710	2350	1340
18	1510	1140	1010	839	867	828	1460	4660	8780	4650	2300	1320
19	1510	1160	975	847	874	816	1730	5200	8680	4680	2250	1300
20	1510	1170	959	836	919	842	1780	5870	10200	4480	2230	1300
21	1500	1100	990	827	856	835	1670	6090	9880	4320	2190	1280
22	1500	1050	1000	830	860	840	1550	7010	9670	4200	2170	1270
23	1380	999	1000	824	863	850	1460	7800	10500	4090	2090	1230
24	1330	1050	995	833	854	845	1880	8360	10400	3970	2040	1200
25	1350	1040	994	845	852	838	2820	9120	9190	3910	2000	1230
26	1390	1080	1020	834	848	859	3450	10300	9410	4040	1960	1310
27	1360	1100	1050	835	859	871	3500	12900	9640	3930	1930	1260
28	1290	1090	1050	844	822	819	3210	11800	9250	3720	1900	1280
29	1280	1030	972	854	---	846	2790	11200	8440	3570	1850	1280
30	1290	1060	955	845	---	874	3470	11300	8090	3440	1840	1280
31	1300	---	993	837	---	843	---	13900	---	3360	1830	---
TOTAL	47970	35929	31167	26269	23124	25974	45873	191180	315250	159800	75920	42480
MEAN	1547	1198	1005	847	826	838	1529	6167	10510	5155	2449	1416
MAX	1890	1730	1150	956	919	876	3500	13900	17700	7880	3280	1770
MIN	1280	999	949	756	650	809	804	2880	8090	3360	1830	1200
AC-FT	95150	71270	61820	52100	45870	51520	90990	379200	625300	317000	150600	84260

CAL YR 1980	TOTAL	986921	MEAN	2697	MAX	12200	MIN	410	AC-FT	1958000
WTR YR 1981	TOTAL	1020936	MEAN	2797	MAX	17700	MIN	650	AC-FT	2025000

06191500 YELLOWSTONE RIVER AT CORWIN SPRINGS, MT--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1965, 1969-74, 1977 to September 1981 (discontinued).

PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: June 1977 to September 1981 (discontinued).

INSTRUMENTATION.--Temperature recorder since June 28, 1977.

EXTREMES FOR PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: Maximum, 21.5°C July 22, 23, 1977; minimum, 0.0°C on many days during winter periods.

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURE: Maximum, 19.5°C Aug. 27-29; minimum, 0.0°C on many days during November to February.

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
OCTOBER			NOVEMBER			DECEMBER			JANUARY			
1	13.0	11.0	12.0	7.5	5.5	6.5	2.5	1.5	2.0	4.5	3.5	4.0
2	12.0	9.5	11.0	7.0	6.0	6.5	2.0	1.0	1.5	4.0	2.5	3.0
3	12.0	9.5	10.5	6.5	5.5	6.0	4.0	2.0	3.0	2.5	1.5	2.0
4	12.5	10.0	11.0	8.0	6.0	7.0	4.5	3.5	4.0	4.0	2.0	3.0
5	13.0	10.5	11.5	8.0	6.5	7.0	4.0	2.0	3.0	4.0	2.5	3.0
6	13.0	10.5	11.5	7.5	6.5	7.0	2.0	.0	1.0	2.5	1.5	2.0
7	12.5	10.0	11.5	8.5	6.5	8.0	.5	.0	.5	2.5	1.0	1.5
8	12.5	10.0	11.5	8.5	6.5	7.5	.0	.0	.0	1.5	.5	1.0
9	12.0	10.0	11.0	6.5	5.5	5.5	.0	.0	.0	2.0	1.0	1.5
10	10.0	8.0	9.0	6.0	5.0	5.5	.5	.0	.5	2.5	1.0	1.5
11	9.5	7.0	8.5	6.0	5.0	5.5	1.0	.5	.5	1.5	.0	1.0
12	11.0	8.5	9.5	5.5	4.5	5.0	1.0	.0	.5	1.0	.0	.5
13	10.5	9.0	9.5	4.5	3.0	4.0	1.5	.0	1.0	1.5	.0	1.0
14	9.0	8.0	8.5	3.0	1.5	2.0	2.0	.5	1.0	1.5	.5	1.0
15	8.0	6.0	7.0	2.0	.5	1.0	3.0	1.5	2.5	1.5	.5	1.0
16	6.0	5.0	5.5	1.0	.0	.5	3.5	2.0	3.0	1.5	.5	1.0
17	5.5	5.0	5.0	1.0	.0	.5	3.5	2.0	3.0	1.5	.0	.5
18	8.0	5.0	6.5	1.5	.5	1.0	2.5	.5	1.5	3.0	1.5	2.0
19	8.5	6.5	7.5	2.0	1.0	1.5	2.0	.5	1.0	3.0	1.5	2.5
20	9.5	7.0	8.0	2.0	1.0	1.5	2.5	1.0	1.5	3.0	1.0	2.0
21	8.5	7.5	8.0	2.5	1.5	2.0	4.0	2.5	3.5	2.5	1.0	2.0
22	7.5	6.0	7.0	4.0	2.5	3.0	4.5	4.0	4.0	3.5	2.0	2.5
23	6.0	4.5	5.0	2.5	1.5	2.0	4.5	3.5	4.0	3.5	1.5	2.5
24	5.0	3.0	4.0	2.0	1.0	1.5	3.5	2.0	3.0	3.5	2.5	3.0
25	5.5	3.5	4.5	1.0	.0	.5	4.5	3.5	4.0	3.5	2.5	3.0
26	6.0	5.0	5.5	2.0	.5	1.0	5.5	4.5	5.0	3.0	2.0	2.5
27	6.0	5.0	5.5	2.5	1.0	1.5	6.5	5.0	5.5	4.0	2.0	2.5
28	6.0	4.5	5.0	3.5	1.5	2.5	6.0	4.5	5.0	4.0	2.5	3.0
29	5.5	3.5	4.5	4.0	3.0	3.5	4.0	3.0	3.5	5.0	3.5	4.0
30	6.5	4.5	5.5	4.0	3.0	3.5	4.0	3.0	3.5	4.0	3.0	3.5
31	7.0	5.5	6.0	---	---	---	5.0	3.5	4.0	3.5	2.0	2.5
MONTH	13.0	3.0	8.0	8.5	.0	3.5	6.5	.0	2.5	5.0	.0	2.0

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	FEBRUARY			MARCH			APRIL			MAY		
1	2.5	1.0	2.0	5.5	2.5	4.0	7.5	5.0	6.0	9.0	7.5	8.0
2	2.5	1.0	2.0	6.0	2.5	4.0	6.5	5.0	6.0	9.0	6.5	7.0
3	2.0	.0	1.0	6.0	2.5	4.0	8.0	4.5	6.0	6.5	5.5	6.0
4	2.0	.0	1.0	5.5	2.5	4.0	7.0	4.5	5.5	7.5	6.0	6.5
5	1.5	.0	.5	5.5	3.0	4.5	7.5	4.0	6.0	7.5	7.0	7.5
6	1.5	.5	1.0	6.0	4.0	5.0	8.0	4.5	6.5	7.5	6.5	7.0
7	2.0	.5	1.5	7.5	4.0	5.5	7.5	5.0	6.0	6.0	4.5	5.5
8	2.0	1.0	1.5	6.5	4.0	5.5	7.5	3.5	5.0	5.5	4.5	5.0
9	1.0	.0	.5	7.5	4.5	5.5	7.0	4.5	5.5	7.5	4.5	6.0
10	.0	.0	.0	7.0	3.5	5.0	7.5	4.5	5.5	8.5	7.0	7.5
11	.0	.0	.0	6.5	3.5	5.0	9.5	5.0	7.0	7.5	5.5	6.5
12	1.0	.0	.5	7.0	3.5	5.0	10.0	6.5	8.0	6.0	4.5	5.5
13	2.0	.5	1.5	7.5	3.5	5.5	10.0	6.0	8.0	7.5	5.5	6.5
14	5.0	2.0	4.0	7.5	4.0	5.5	10.5	6.0	8.5	9.0	7.0	8.0
15	5.0	4.0	4.5	7.5	4.0	5.5	11.5	7.0	9.0	9.0	8.0	8.5
16	5.0	3.5	4.5	6.5	4.5	5.5	11.0	8.5	9.5	8.5	7.5	8.0
17	6.0	4.0	5.0	6.0	4.0	5.0	11.0	7.5	9.5	9.5	7.5	8.5
18	5.5	4.0	4.5	6.5	3.5	4.5	11.0	8.0	9.5	9.0	8.5	9.0
19	6.5	4.5	5.0	6.0	3.5	4.5	9.5	8.0	8.5	9.0	8.5	8.5
20	5.5	4.0	4.5	6.0	4.5	5.5	8.0	7.0	7.5	9.5	7.5	8.0
21	5.0	3.5	4.0	8.0	4.0	6.0	9.0	6.5	7.5	8.0	7.0	7.5
22	5.5	3.0	4.0	8.0	5.5	6.5	8.5	6.5	7.5	7.5	6.5	7.0
23	5.5	3.0	4.5	9.0	5.5	7.0	11.0	7.0	9.0	9.0	6.5	7.5
24	6.0	3.0	4.5	9.0	5.5	7.0	11.0	8.5	10.0	9.0	7.5	8.0
25	6.0	3.0	4.5	7.5	5.5	6.5	10.0	7.5	9.0	8.5	6.5	7.5
26	5.0	3.5	4.0	7.5	6.0	6.5	9.0	7.5	8.0	8.5	6.5	7.5
27	6.5	3.5	4.5	7.0	5.5	6.0	8.0	6.5	7.5	9.0	6.0	7.0
28	5.0	3.0	4.0	9.5	5.0	7.0	7.5	6.5	6.5	9.5	6.0	7.5
29	---	---	---	8.0	6.0	7.0	8.0	6.0	7.5	10.0	7.0	8.5
30	---	---	---	8.0	5.5	6.5	9.5	7.5	8.5	10.0	7.0	8.5
31	---	---	---	7.5	5.0	6.0	---	---	---	9.5	7.0	8.0
MONTH	6.5	.0	3.0	9.5	2.5	5.5	11.5	3.5	7.5	10.0	4.5	7.5
	JUNE			JULY			AUGUST			SEPTEMBER		
1	8.5	6.5	7.5	14.0	13.5	14.0	17.5	15.0	16.5	16.5	13.5	15.5
2	9.0	6.5	7.5	14.0	13.0	13.5	17.5	15.5	16.5	17.0	14.5	16.0
3	9.0	7.0	8.0	15.0	14.0	14.5	17.5	15.5	16.5	17.0	14.5	15.5
4	9.0	6.5	7.5	15.5	14.5	15.0	17.5	15.0	16.0	16.5	14.0	15.5
5	10.0	8.0	9.0	16.0	15.0	15.5	17.0	15.5	16.0	15.5	15.0	15.0
6	11.0	8.0	9.5	17.0	16.0	16.5	18.0	15.0	16.5	17.0	14.5	16.0
7	10.5	7.5	8.5	16.5	14.5	15.5	18.5	15.5	17.0	17.5	14.5	16.0
8	8.0	7.0	7.0	14.0	12.5	13.0	18.5	16.0	17.0	18.5	15.0	16.5
9	8.0	6.0	7.0	15.5	13.0	14.0	18.5	16.0	17.0	18.5	15.5	16.5
10	9.0	7.0	8.0	16.5	15.0	15.5	18.0	15.0	16.5	18.5	15.5	17.0
11	9.5	7.5	8.5	16.5	15.5	16.0	18.5	15.5	17.0	18.5	15.5	17.0
12	10.0	9.0	9.5	17.0	16.0	16.5	19.0	16.5	17.5	18.0	15.0	16.5
13	10.0	6.5	8.0	17.5	16.0	16.5	19.0	17.0	17.5	18.0	15.0	16.5
14	6.5	5.5	6.0	16.5	15.0	15.5	18.0	16.5	17.5	17.5	15.0	16.5
15	7.0	6.0	6.5	16.0	14.5	15.5	19.0	16.0	17.5	17.0	14.5	15.5
16	9.5	7.5	8.0	16.0	15.0	15.5	19.0	16.0	17.5	17.0	14.0	15.5
17	9.0	7.5	8.0	17.0	16.0	16.0	18.5	16.5	17.5	17.0	14.0	15.5
18	8.5	7.0	7.5	16.5	15.5	16.0	18.5	16.0	17.0	17.0	14.0	15.5
19	10.0	8.5	9.0	15.5	15.0	15.0	18.5	16.0	17.0	16.0	14.0	15.0
20	10.0	9.0	9.5	16.5	15.5	16.0	19.0	16.0	17.5	15.0	13.5	14.0
21	10.5	8.5	9.5	16.5	15.5	16.0	18.5	16.5	17.5	14.5	12.0	13.0
22	11.5	9.0	10.0	16.5	15.0	16.0	19.0	16.5	17.5	14.0	11.5	12.0
23	11.5	10.0	10.5	17.0	15.0	16.0	19.0	16.0	17.5	13.0	10.5	11.5
24	11.5	9.5	10.5	16.0	15.0	15.5	18.0	16.0	17.0	14.0	10.5	12.0
25	12.5	10.5	11.0	16.5	15.0	15.5	18.5	15.5	17.0	13.5	11.5	12.0
26	12.5	12.0	12.5	15.0	14.0	14.5	19.0	16.0	17.5	12.0	9.5	11.0
27	12.5	11.5	12.0	16.0	13.5	15.0	19.5	16.5	17.5	12.0	9.0	10.5
28	12.0	11.5	11.5	18.0	15.0	16.5	19.5	16.5	18.0	14.0	10.5	12.0
29	13.0	11.0	11.5	18.0	16.0	17.0	19.5	17.0	18.0	12.5	11.5	12.0
30	14.0	12.5	13.0	18.0	16.0	17.0	17.5	16.0	17.0	13.0	10.5	11.5
31	---	---	---	17.5	15.5	16.5	17.5	14.5	16.0	---	---	---
MONTH	14.0	5.5	9.0	18.0	12.5	15.5	19.5	14.5	17.0	18.5	9.0	14.5
YEAR	19.5	.0	8.0									

06207500 CLARKS FORK YELLOWSTONE RIVER NEAR BELFRY, MT

LOCATION.--Lat 45°00'37", long 109°03'53", in NW¼SW¼NW¼ sec.32, T.9 S., R.22 E., Carbon County, Hydrologic Unit 10070006, on left bank 0.2 mi (0.3 km) upstream from county road bridge and Big Sand Coulee, 0.8 mi (1.3 km) north of Wyoming-Montana State line, 9.5 mi (15.3 km) southwest of Belfry, and at mile 71.2 (114.6 km).

DRAINAGE AREA.--1,154 mi² (2,989 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--July 1921 to current year. Monthly discharge only for some periods, published in WSP 1309. Published as Clarks Fork at Chance prior to October 1956 and as Clarks Fork Yellowstone River at Chance, October 1956 to September 1968.

REVISED RECORDS.--WSP 1309: 1922(M). WSP 1729: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 3,986.24 ft (1,215.006 m), National Geodetic Vertical Datum of 1929 (levels by U.S. Army Corps of Engineers). Prior to Nov. 15, 1934, nonrecording gage, and Nov. 15, 1934, to July 26, 1951, water-stage recorder at bridge 0.4 mi (0.6 km) downstream at different datum. July 27, 1951, to Sept. 30, 1953, water-stage recorder at present site at datum 0.98 ft (0.299 m) higher.

REMARKS.--Records good. Diversions for irrigation of about 11,100 acres (44.9 km²) above station.

AVERAGE DISCHARGE.--60 years, 953 ft³/s (26.99 m³/s), 690,400 acre-ft/yr (851 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 14,800 ft³/s (419 m³/s) June 9, 1981, gage height, 9.97 ft (3.039 m); minimum observed, 32 ft³/s (0.91 m³/s) Apr. 26, 1961, result of discharge measurement.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 5,400 ft³/s (153 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
June 1	0400	7,180 203	6.57 2.003	June 24	0400	5,800 164	5.90 1.798
June 9	0900	*14,800 419	9.97 3.039				

Minimum discharge, 70 ft³/s (1.98 m³/s) Apr. 15, gage height, 0.49 ft (0.149 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	500	327	340	345	220	221	221	1300	6670	3670	590	184
2	480	318	330	340	210	225	229	1950	4910	3640	566	172
3	420	318	428	322	210	221	232	2160	4640	3470	542	166
4	390	318	385	300	210	214	221	1710	4350	3250	483	158
5	370	313	320	331	210	221	218	1500	4180	3150	472	155
6	350	313	280	296	220	221	218	1470	5250	2910	434	158
7	330	331	270	269	220	232	221	1350	6610	3030	406	158
8	310	515	250	262	210	221	200	1140	8260	3000	395	153
9	300	602	270	292	150	214	166	956	12300	2400	412	138
10	290	483	331	292	100	214	172	900	7490	2030	417	110
11	290	461	376	243	120	207	169	980	4870	1840	406	106
12	290	461	412	232	180	207	160	908	4250	1860	390	100
13	290	467	358	262	300	214	155	795	4350	1830	358	92
14	290	401	354	251	327	218	110	739	3520	1700	345	90
15	310	290	354	247	296	221	78	795	2840	1490	336	90
16	380	290	354	266	281	218	92	948	2370	1300	340	92
17	400	310	345	240	300	229	143	1230	2580	1150	336	96
18	440	367	322	269	251	221	218	1600	2300	1140	363	94
19	450	390	260	281	251	214	309	1880	2210	1090	313	90
20	460	423	240	269	266	207	266	2370	4020	1020	292	88
21	440	401	290	262	254	207	197	2560	4370	956	292	90
22	430	406	381	262	251	207	184	2850	4070	932	304	92
23	412	381	290	262	243	211	153	4150	4750	865	288	92
24	372	345	230	262	240	211	190	4450	5270	809	277	94
25	376	310	340	254	236	211	395	3940	4640	851	269	92
26	390	330	372	243	232	214	739	4920	4430	879	258	92
27	390	340	372	251	236	221	739	6490	4800	900	247	96
28	363	376	395	251	232	232	739	6490	4890	774	232	96
29	336	381	372	258	---	225	648	6140	4180	669	200	106
30	358	381	345	251	---	240	816	6120	3780	620	193	104
31	345	---	349	243	---	236	---	6820	---	596	190	---
TOTAL	11552	11349	10315	8408	6456	6775	8598	81611	143150	53821	10946	3444
MEAN	373	378	333	271	231	219	287	2633	4772	1736	353	115
MAX	500	602	428	345	327	240	816	6820	12300	3670	590	184
MIN	290	290	230	232	100	207	78	739	2210	596	190	88
AC-FT	22910	22510	20460	16680	12810	13440	17050	161900	283900	106800	21710	6830
CAL YR 1980	TOTAL	358840	MEAN 980	MAX 8170	MIN 160	AC-FT 711800						
WTR YR 1981	TOTAL	356425	MEAN 977	MAX 12300	MIN 78	AC-FT 707000						

YELLOWSTONE RIVER BASIN

06207500 CLARKS FORK YELLOWSTONE RIVER NEAR BELFRY, MT--Continued

WATER-QUALITY RECORDS

LOCATION.--Samples collected at bridge on county road, 0.4 mi (0.6 km) downstream from discharge station, just upstream from Sand Coulee, 0.8 mi (1.3 km) north of Wyoming-Montana State line, 9.5 mi (15.3 km) southwest of Belfry, and at mile 71.2 (114.6 km), revised.

PERIOD OF RECORD.--Water years 1966 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE LAB (UMHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	HARD- NESS (MG/L AS CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)
OCT 23...	1000	424	326	8.4	3.5	140	38	11	11	.4	1.1
NOV 20...	0916	405	306	--	1.0	140	40	10	9.0	.3	1.3
DEC 11...	0900	377	330	8.0	1.5	150	40	12	10	.4	1.4
JAN 14...	0945	226	353	8.1	.0	170	41	16	12	.4	1.3
FEB 19...	0920	261	348	7.9	3.5	160	40	14	14	.5	1.4
MAR 18...	1430	222	367	8.7	6.0	140	40	10	11	.4	1.6
APR 15...	0840	88	327	--	8.5	150	40	11	9.2	.3	1.4
MAY 12...	1340	828	206	8.2	5.5	130	36	10	16	.6	.8
JUN 02...	1130	4680	96	7.8	8.0	47	11	4.7	5.9	.4	.8
JUL 15...	0930	1590	141	8.1	13.0	56	14	4.8	5.0	.3	.5
AUG 13...	0920	371	299	--	15.5	120	38	7.3	7.0	.3	1.5
SEP 22...	1150	93	439	--	10.0	200	56	14	14	.4	1.6

DATE	ALKA- LINITY LAB (MG/L AS CACO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTITUENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)	SOLIDS, DIS- SOLVED (TONS PER DAY)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	PHOS- PHORUS, TOTAL (MG/L AS P)
OCT 23...	120	44	1.0	.3	10	187	.25	214	.24	.000
NOV 20...	120	40	.1	.2	6.1	180	.24	197	2.4	.000
DEC 11...	120	46	2.0	.6	8.1	192	.26	195	.10	.030
JAN 14...	140	49	1.0	.4	11	213	.29	130	.13	.000
FEB 19...	130	54	1.5	.3	.0	206	.28	145	.17	.010
MAR 18...	120	36	1.5	.3	7.5	180	.24	108	.01	.010
APR 15...	130	30	.8	.2	22	190	.26	45.1	.00	.030
MAY 12...	120	28	4.8	.3	4.8	175	.24	391	.62	.290
JUN 02...	44	11	4.4	.2	7.5	72	.10	910	.07	.120
JUL 15...	55	13	1.5	.1	5.4	77	.10	331	.04	.030
AUG 13...	120	25	1.2	.2	5.9	150	.20	150	.11	.000
SEP 22...	190	32	1.9	.1	10	240	.33	60.3	.84	.010

06207510 BIG SAND COULEE AT WYOMING-MONTANA STATE LINE

LOCATION.--Lat 45°00'17", long 109°03'29", in SE¼NE¼SW¼ sec.32, T.9 S., R.22 E., Carbon County, MT., Hydrologic Unit 10070006, on right bank 0.3 mi (0.5 km) north of Wyoming-Montana State line and 0.5 mi (0.8 km) upstream from mouth.

DRAINAGE AREA.--134 mi² (347 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--May 1973 to September 1981 (discontinued). No winter records.

GAGE.--Water-stage recorder. Altitude of gage is 4,000 ft (1,219 m), from topographic map.

REMARKS.--Records good. Natural flow of stream affected by transbasin diversions and return flow from irrigated areas.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 478 ft³/s (13.5 m³/s) May 10, 1980, gage height, 5.13 ft (1.564 m), from rating curve extended above 180 ft³/s (5.10 m³/s) on basis of slope-area measurement at gage height 4.75 ft (1.448 m); minimum daily during periods of operation, 1.2 ft³/s (0.034 m³/s) Apr. 18, 1974.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 387 ft³/s (11.0 m³/s) May 23, gage height, 4.73 ft (1.442 m); minimum daily during period of operation, 2.4 ft³/s (0.068 m³/s) Apr. 7.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	83					4.0	2.7	45	101	76	62	63
2	76					3.0	2.7	64	97	75	66	61
3	76					3.0	2.7	71	103	62	63	58
4	86					3.0	2.5	62	104	61	69	58
5	91					3.0	2.5	56	111	55	64	59
6	87					3.0	2.5	65	111	75	63	58
7	82					3.0	2.4	67	104	64	59	56
8	82					3.0	4.0	80	101	58	61	56
9	76					3.4	18	87	87	52	65	52
10	78					3.0	14	89	82	44	64	53
11	71					3.0	13	122	93	50	56	50
12	70					3.0	16	197	93	52	50	44
13	67					3.0	15	140	94	41	51	38
14	71					3.0	16	119	82	41	51	38
15	90					3.0	42	117	77	41	54	38
16	90					4.0	63	161	56	46	71	42
17	80					4.4	87	143	71	46	73	51
18	72					3.0	93	153	80	46	66	47
19	75					2.6	100	152	85	52	65	46
20	70					2.7	91	146	105	52	62	52
21	65					2.7	70	128	111	49	57	54
22	66					2.7	56	201	107	52	62	55
23	67					2.7	44	277	107	51	61	57
24	72					2.7	40	179	108	54	58	62
25	71					2.9	52	185	93	57	56	69
26	67					3.0	56	193	80	69	56	72
27	66					3.0	59	168	82	65	53	90
28	65					3.0	59	130	93	59	52	93
29	65					2.9	45	107	93	59	61	87
30	66					2.7	35	100	83	55	61	86
31	70					2.7	---	111	---	61	62	---
TOTAL	2313					94.1	1106.0	3915	2794	1720	1874	1745
MEAN	74.6					3.04	36.9	126	93.1	55.5	60.5	58.2
MAX	91					4.4	100	277	111	76	73	93
MIN	65					2.6	2.4	45	56	41	50	38
AC-FT	4590					187	2190	7770	5540	3410	3720	3460

YELLOWSTONE RIVER BASIN

06207510 BIG SAND COULEE AT WYOMING-MONTANA STATE LINE--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1973 to September 1981 (discontinued).

PERIOD OF DAILY RECORD.--

SUSPENDED SEDIMENT DISCHARGE: May 1973 to September 1981 (no winter records) discontinued.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SEDIMENT CONCENTRATIONS: Maximum daily mean, 37,200 mg/L May 8, 1975; minimum daily mean, 1 mg/L Mar. 27, 1977.

SEDIMENT LOADS: Maximum daily, 13,100 tons (11,900 tonnes) May 10, 1980; minimum daily, 0.01 ton (0.01 tonne)

Mar. 3, 7, 1976, Mar. 27, Apr. 1, 1977.

EXTREMES FOR CURRENT YEAR.--

SEDIMENT CONCENTRATIONS: Maximum daily mean, 7,700 mg/L May 12; minimum daily mean, 3.0 mg/L Mar. 17, 19.

SEDIMENT LOADS: Maximum daily, 5,460 tons (4,950 tonnes) May 23; minimum daily, 0.02 ton (0.02 tonne) Mar. 19.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	TIME	STREAM-FLOW, INSTANTANEOUS (CFS)	SPECIFIC CONDUCTANCE (UMHOS)	PH (UNITS)	TEMPERATURE (DEG C)	HARDNESS (MG/L AS CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNESIUM DIS-SOLVED (MG/L AS MG)
MAR 18...	1030	2.7	635	7.6	12.0	300	89	20
MAY 12...	0845	221	450	8.6	4.5	33	10	2.0
JUL 15...	1520	43	260	8.2	19.0	98	28	6.7
SEP 22...	1300	56	420	--	12.0	170	46	13

DATE	SODIUM DIS-SOLVED (MG/L AS NA)	SODIUM ADSORPTION RATIO	POTASSIUM DIS-SOLVED (MG/L AS K)	ALKALINITY LAB (MG/L AS CACO3)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLORIDE DIS-SOLVED (MG/L AS CL)	FLUORIDE DIS-SOLVED (MG/L AS F)	SILICA DIS-SOLVED (MG/L AS SI02)	SOLIDS, SUM OF CONSTITUENTS, DIS-SOLVED (MG/L)
MAR 18...	29	.7	3.7	280	78	4.0	.3	12	417
MAY 12...	81	6.1	2.8	95	110	5.6	.3	7.2	277
JUL 15...	22	1.0	1.7	82	45	1.7	.1	8.2	165
SEP 22...	25	.8	3.0	160	63	4.5	.3	8.9	261

DATE	SOLIDS, DIS-SOLVED (TONS PER AC-FT)	SOLIDS, DIS-SOLVED (TONS PER DAY)	NITROGEN, NO2+NO3 TOTAL (MG/L AS N)	NITROGEN, NO2+NO3 DIS-SOLVED (MG/L AS N)	NITROGEN, AMMONIA TOTAL (MG/L AS N)	NITROGEN, ORGANIC TOTAL (MG/L AS N)	NITROGEN, AMMONIA + ORGANIC TOTAL (MG/L AS N)	PHOSPHORUS, TOTAL (MG/L AS P)
MAR 18...	.57	3.0	2.8	2.8	.070	.91	.98	.030
MAY 12...	.38	165	.43	.23	.110	9.9	10.0	5.10
JUL 15...	.22	19.2	.34	--	.090	.60	.69	.110
SEP 22...	.36	39.5	.22	.19	.030	.67	.70	.040

DATE	TIME	TEMPERATURE (DEG C)	STREAM-FLOW, INSTANTANEOUS (CFS)	SEDIMENT, SUSPENDED (MG/L)	SEDIMENT, DISCHARGE, SUSPENDED (T/DAY)	SED. SUSP. FALL DIAM. % FINER THAN .004 MM	SED. SUSP. FALL DIAM. % FINER THAN .016 MM	SED. SUSP. FALL DIAM. % FINER THAN .062 MM	SED. SUSP. FALL DIAM. % FINER THAN .125 MM	SED. SUSP. FALL DIAM. % FINER THAN .250 MM
MAY 12...	1200	4.5	221	9560	5700	89	95	96	98	100

WATER-QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

SUSPENDED-SEDIMENT, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

[illegible]

SUSPENDED-SEDIMENT, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

[illegible]

06218500 WIND RIVER NEAR DUBOIS, WY

LOCATION.--Lat 43°34'43", long 109°45'33", in NW¼NE¼ sec.25, T.42 N., R.108 W., Fremont County, Hydrologic Unit 10080001, on left bank 2.5 mi (4.0 km) upstream from Warm Springs Creek and 6.7 mi (10.8 km) northwest of Dubois.

DRAINAGE AREA.--232 mi² (601 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1945 to current year.

REVISED RECORDS.--WSP 1709: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 7,188.71 ft (2,191.119 m), National Geodetic Vertical Datum of 1929 (levels by Bureau of Reclamation).

REMARKS.--Records good except those for winter period, which are poor. Diversions above station for irrigation of about 2,300 acres (9.31 km²).

AVERAGE DISCHARGE.--36 years, 176 ft³/s (4.984 m³/s), 127,500 acre-ft/yr (157 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,940 ft³/s (54.9 m³/s) June 8, 1972, gage height, 5.48 ft (1.670 m); maximum gage height, 5.66 ft (1.725 m) June 2, 1956; minimum daily discharge, 30 ft³/s (0.85 m³/s) Dec. 12, 1949, Jan. 5, 1950, Nov. 20, 1957.

EXTREMES FOR CURRENT YEAR.--Peak discharge above base of 850 ft³/s (24.1 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
June 9	0930	*1,520 43.0	5.07 1.545

Minimum daily discharge, 34 ft³/s (0.96 m³/s) Jan. 27.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	89	74	70	48	40	54	56	346	549	291	80	78
2	87	77	70	49	41	54	59	444	510	264	78	73
3	87	73	66	50	43	53	57	347	491	260	77	70
4	87	76	64	50	44	56	53	248	487	247	79	68
5	86	75	66	49	45	58	53	235	470	247	79	66
6	85	76	64	46	44	56	60	232	622	240	76	69
7	84	84	60	45	43	55	55	204	799	250	75	71
8	84	115	62	45	42	56	56	170	991	218	73	68
9	83	87	64	44	40	56	56	148	1400	180	80	66
10	81	87	66	42	35	55	56	143	866	170	103	64
11	80	86	68	41	38	56	59	159	618	166	100	63
12	84	84	70	40	42	58	64	152	565	164	96	64
13	86	79	70	40	46	56	66	132	612	167	94	61
14	86	84	66	43	48	58	69	123	472	156	99	61
15	95	64	64	42	49	56	80	141	402	141	96	60
16	86	62	60	41	50	57	83	167	347	133	90	59
17	85	64	58	40	50	55	100	213	391	126	88	59
18	87	68	54	39	50	53	110	231	322	128	86	58
19	85	74	50	40	50	55	124	252	306	135	82	56
20	86	80	47	42	50	55	94	306	315	123	81	56
21	86	82	50	40	50	53	94	287	326	112	92	56
22	82	82	52	40	50	52	84	300	349	105	110	56
23	71	82	50	40	50	55	90	298	415	101	90	56
24	73	80	48	40	50	54	118	369	438	99	84	56
25	85	78	50	38	51	55	141	446	375	99	82	62
26	82	74	50	36	52	57	169	409	385	127	77	72
27	82	72	50	34	52	58	186	529	426	147	80	70
28	72	70	50	35	53	56	194	597	378	122	78	69
29	75	68	48	36	---	62	235	604	315	106	80	66
30	78	66	47	37	---	62	265	610	300	93	83	66
31	74	---	49	38	---	58	---	646	---	86	81	---
TOTAL	2573	2323	1803	1290	1298	1734	2986	9488	15242	5003	2649	1919
MEAN	83.0	77.4	58.2	41.6	46.4	55.9	99.5	306	508	161	85.5	64.0
MAX	95	115	70	50	53	62	265	646	1400	291	110	78
MIN	71	62	47	34	35	52	53	123	300	86	73	56
AC-FT	5100	4610	3580	2560	2570	3440	5920	18820	30230	9920	5250	3810
CAL YR 1980	TOTAL	59285	MEAN 162	MAX 861	MIN 38	AC-FT 117600						
WTR YR 1981	TOTAL	48308	MEAN 132	MAX 1400	MIN 34	AC-FT 95820						

YELLOWSTONE RIVER BASIN

06218500 WIND RIVER NEAR DUBOIS, WY--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1947-48, 1950-51, 1953, 1965 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	TIME	DIS- CHARGE, IN CUBIC FEET PER SECOND	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	TUR- BID- ITY (NTU)	OXYGEN, DIS- SOLVED (MG/L)
OCT 06...	1200	--	85	--	8.0	7.0	2.0	9.0
NOV 04...	1330	--	74	--	7.9	6.0	--	11.5
DEC 02...	1045	70	--	--	--	.0	--	--
JAN 07...	0955	45	--	--	--	.0	--	--
FEB 06...	1030	44	--	275	8.0	.0	--	--
MAR 03...	1145	--	56	190	8.1	2.0	--	--
APR 06...	1140	--	59	200	8.0	4.5	--	--
MAY 05...	1140	--	228	--	--	10.0	--	--
JUN 01...	0905	--	567	--	--	6.0	--	--
JUL 06...	0920	--	261	--	--	13.0	--	--
AUG 04...	0900	--	78	--	--	12.0	--	--
SEP 03...	0855	--	69	--	--	8.5	--	--

DATE	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	HARD- NESS (MG/L AS CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LINITY LAB (MG/L AS CACO3)	SULFATE DIS- SOLVED (MG/L AS SO4)
OCT 06...	12	78	23	4.9	7.0	.3	2.2	80	15
NOV 04...	K2	85	21	7.9	8.1	.4	1.4	90	15
DEC 02...	22	75	16	8.6	9.0	.5	2.0	82	13
JAN 07...	K2	91	28	4.8	9.0	.4	2.0	98	9.9
FEB 06...	K2	86	22	7.8	8.5	.4	2.7	90	12
MAR 03...	<1	89	22	8.2	9.4	.4	1.4	98	8.2
APR 06...	K7	97	26	16	10	.4	2.0	110	12
MAY 05...	K2	62	16	5.0	7.0	.4	1.6	62	9.9
JUN 01...	22	--	--	--	--	--	--	--	--
JUL 06...	K7	49	14	3.2	3.8	.2	1.4	50	9.9
AUG 04...	K5	--	--	--	--	--	--	--	--
SEP 03...	21	--	--	--	--	--	--	--	--

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

YELLOWSTONE RIVER BASIN

06220500 EAST FORK WIND RIVER NEAR DUBOIS, WY

LOCATION.--Lat 43°27'16", long 109°27'57", in SE¼SW¼NW¼ sec.34, T.6 N., R.6 W., Fremont County, Hydrologic Unit 10080001, Wind River Indian Reservation, on left bank 1.0 mi (1.6 km) upstream from mouth and 9.9 mi (15.9 km) southeast of Dubois.

DRAINAGE AREA.--427 mi² (1,106 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--April 1950 to September 1957, October 1975 to current year. Prior to October 1953, published as North Fork Wind River near Dubois.

GAGE.--Water-stage recorder. Altitude of gage is 6,440 ft (1,963 m), from topographic map. Prior to Sept. 30, 1957, at site 500 ft (152 m) upstream at same datum.

REMARKS.--Records fair except those for winter period, which are poor. Diversions for irrigation of about 2,000 acres (8.09 hm²) above station.

AVERAGE DISCHARGE.--13 years, 263 ft³/s (7.448 m³/s), 190,500 acre-ft/yr (235 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 5,980 ft³/s (169 m³/s) June 9, 1981, gage height, 7.69 ft (2.344 m), from rating curve extended above 2,600 ft³/s (73.6 m³/s); maximum gage height, 9.27 ft (2.825 m) June 30, 1957; minimum daily discharge, 18 ft³/s (0.51 m³/s) Jan. 9, 1977.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 5,980 ft³/s (169 m³/s) June 9, gage height, 7.69 ft (2.344 m), from floodmarks, from rating curve extended above 2,600 ft³/s (73.6 m³/s); minimum daily, 33 ft³/s (0.93 m³/s) Nov. 17.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	96	83	54	64	52	44	54	400	956	473	117	74
2	98	83	54	62	52	44	59	600	943	480	106	71
3	98	74	56	60	52	43	54	400	1390	470	104	69
4	96	70	56	58	52	43	52	250	1540	450	100	69
5	94	74	56	56	52	44	56	220	1580	400	93	70
6	95	72	58	54	52	45	54	208	2170	346	90	80
7	95	76	58	52	52	45	49	212	2150	451	92	79
8	93	107	56	47	50	44	49	158	1710	374	90	74
9	90	81	58	47	47	44	57	141	2990	256	105	70
10	85	81	60	46	42	45	62	122	1210	273	108	68
11	83	78	62	45	40	45	85	137	854	257	94	69
12	83	76	64	44	42	45	90	125	920	249	88	68
13	85	76	66	44	45	45	98	104	1060	328	86	67
14	85	45	66	44	47	45	151	88	566	260	99	68
15	101	34	66	44	47	45	237	119	520	206	99	68
16	93	34	68	44	47	45	141	134	400	184	91	68
17	85	33	68	43	48	44	119	144	390	181	89	67
18	83	34	68	42	48	44	81	199	380	190	87	64
19	83	36	66	43	48	45	95	222	348	185	93	64
20	85	37	70	45	48	48	237	212	484	166	82	64
21	81	39	70	46	48	53	288	259	468	152	89	65
22	83	42	70	47	47	52	300	166	637	145	96	65
23	76	43	68	47	47	50	276	177	903	139	81	66
24	64	43	64	47	47	48	212	294	762	136	76	66
25	76	43	60	50	46	47	276	404	643	192	75	67
26	83	45	62	50	46	50	307	362	726	219	73	72
27	93	44	62	49	45	60	426	588	777	220	103	68
28	81	45	64	48	44	64	472	798	650	161	89	68
29	76	50	64	50	---	64	294	1140	479	147	81	67
30	88	54	62	52	---	60	199	1140	490	134	77	67
31	85	---	64	52	---	56	---	1370	---	126	75	---
TOTAL	2692	1732	1940	1522	1333	1496	4930	10893	29096	7950	2828	2062
MEAN	86.8	57.7	62.6	49.1	47.6	48.3	164	351	970	256	91.2	68.7
MAX	101	107	70	64	52	64	472	1370	2990	480	117	80
MIN	64	33	54	42	40	43	49	88	348	126	73	64
AC-FT	5340	3440	3850	3020	2640	2970	9780	21610	57710	15770	5610	4090
CAL YR 1980	TOTAL	89055	MEAN 243	MAX 2700	MIN 31	AC-FT 176600						
WTR YR 1981	TOTAL	68474	MEAN 188	MAX 2990	MIN 33	AC-FT 135800						

YELLOWSTONE RIVER BASIN

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06220500 EAST FORK WIND RIVER NEAR DUBOIS, WY--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--December 1975 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	TIME	DIS- CHARGE, IN CUBIC FEET PER SECOND	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	SEDI- MENT, SUS- PENDE (MG/L)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (T/DAY)
OCT								
06...	1015	--	90	180	8.4	5.0	8	1.9
NOV								
04...	1130	--	83	100	8.3	5.0	6	1.3
DEC								
02...	1015	54	--	120	8.2	.0	2	.29
JAN								
07...	1300	52	--	120	--	.0	4	.56
FEB								
06...	1300	52	--	360	8.4	.0	14	2.0
MAR								
03...	1030	--	33	310	8.3	.5	16	1.4
APR								
06...	0920	--	59	220	8.0	4.5	20	3.2
MAY								
05...	0955	--	227	180	--	7.0	16	9.8
JUN								
01...	1130	--	968	110	--	7.0	--	--
JUL								
06...	1115	--	431	135	--	14.0	16	19
AUG								
04...	1120	--	103	240	--	15.0	14	3.9
SEP								
03...	1030	--	70	210	--	8.0	4	.76

YELLOWSTONE RIVER BASIN

06222700 CROW CREEK NEAR TIPPERARY, WY

LOCATION.--Lat 43°34'37", long 109°15'42", in sec.20, T.7 N., R.4 W., Fremont County, Hydrologic Unit 10080001, Wind River Indian Reservation, on right bank just above Crow Creek Canyon, 2.0 mi (3.2 km) downstream from Trail Creek, 5.0 mi (8.0 km) north of Tipperary, and 19 mi (31 km) north of Crowheart.

DRAINAGE AREA.--30.2 mi² (78.2 km²).

WATER-DISCHARGE RECORDS

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

REVISED RECORDS.--WDR-76-1: Drainage area.

GAGE.--Water-stage recorder. Altitude of gage is 8,600 ft (2,621 m), from topographic map.

REMARKS.--Records fair except those for winter period and those for periods of no gage-height record, Oct. 1-6, Dec. 9-15, Jan. 6-30, Feb. 10 to Mar. 12, June 9, which are poor. No diversion above station.

AVERAGE DISCHARGE.--19 years, 21.6 ft³/s (0.612 m³/s), 15,650 acre-ft/yr (19.3 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 568 ft³/s (16.1 m³/s) June 16, 1965, gage height, 5.20 ft (1.585 m), from rating curve extended above 220 ft³/s (6.23 m³/s) on basis of velocity-area study; maximum gage height, 5.64 ft (1.719 m) Jan. 14, 1975 (backwater from ice); minimum daily discharge, 0.48 ft³/s (0.014 m³/s) Jan. 9, 1977.

EXTREMES FOR CURRENT YEAR.--Peak discharge above base of 180 ft³/s (5.10 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
June 9	unknown	*340 9.63	4.90 1.494

Minimum daily discharge, 1.5 ft³/s (0.042 m³/s) Feb. 10.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.5	4.7	3.1	1.8	2.1	2.9	3.4	14	100	24	9.4	4.5
2	3.6	4.7	3.0	1.8	2.0	2.9	3.2	14	106	27	9.0	4.5
3	3.8	4.7	2.9	1.8	2.0	2.8	3.2	14	110	26	8.2	4.3
4	3.8	4.3	3.0	1.9	2.0	2.8	3.5	14	110	25	6.3	4.1
5	3.8	5.0	3.1	1.9	2.0	2.8	3.5	16	114	24	6.6	5.8
6	3.7	5.5	3.0	1.9	2.0	2.8	3.4	18	116	22	6.9	6.0
7	3.5	6.3	2.9	1.9	2.1	2.9	3.5	19	124	19	8.3	5.5
8	4.7	6.7	2.7	1.9	2.1	2.9	3.5	20	124	20	7.5	3.9
9	4.7	7.5	2.8	1.8	1.8	2.9	3.4	21	126	21	9.4	3.5
10	4.3	7.9	2.9	1.8	1.5	2.9	3.7	23	82	19	8.6	3.7
11	4.1	7.2	3.0	1.8	1.8	3.0	3.9	24	66	21	6.9	3.5
12	4.3	7.9	3.1	1.7	2.2	3.0	4.3	26	65	22	6.6	3.5
13	4.7	3.6	2.9	1.7	2.4	3.0	4.5	28	56	21	6.6	3.5
14	4.5	3.3	3.0	1.7	2.5	3.0	4.7	29	52	21	7.9	3.5
15	5.2	3.2	3.0	1.7	2.6	3.0	5.0	31	48	21	8.3	3.5
16	5.0	3.0	3.1	1.7	2.6	3.0	5.5	32	46	21	6.6	3.5
17	4.5	2.9	3.0	1.6	2.7	3.2	6.0	35	41	21	6.0	3.5
18	4.7	2.9	2.9	1.6	2.6	3.2	6.0	38	40	19	6.0	3.4
19	4.5	3.1	2.5	1.7	2.6	3.1	6.0	39	38	17	5.5	3.5
20	4.3	3.2	2.3	1.8	2.7	3.2	7.2	40	34	17	5.0	3.5
21	4.3	3.3	2.1	1.8	2.6	3.3	7.5	42	34	16	7.2	3.7
22	4.4	3.3	1.9	1.8	2.8	3.2	8.6	45	33	15	5.5	3.9
23	4.2	3.2	1.8	1.9	2.8	3.1	8.6	46	33	14	5.0	3.7
24	4.2	3.1	1.8	1.9	2.7	2.9	9.8	51	32	13	4.7	3.7
25	4.3	3.0	1.9	2.0	2.7	2.9	11	52	31	11	4.5	4.7
26	4.2	3.1	2.0	2.0	2.8	3.2	12	58	28	11	5.0	4.5
27	4.2	3.0	2.0	2.1	2.9	3.4	12	66	29	11	5.5	4.1
28	4.3	3.1	1.9	2.1	2.9	3.4	12	77	29	9.8	7.2	4.5
29	4.4	3.2	1.9	2.1	---	3.2	14	85	28	9.8	6.0	3.7
30	4.5	3.2	1.9	2.1	---	3.4	14	93	26	9.4	5.5	4.7
31	4.6	---	1.8	2.1	---	3.5	---	100	---	9.8	4.7	---
TOTAL	132.8	129.1	79.2	57.4	66.5	94.8	196.9	1210	1901	557.8	206.4	121.9
MEAN	4.28	4.30	2.55	1.85	2.38	3.06	6.56	39.0	63.4	18.0	6.66	4.06
MAX	5.2	7.9	3.1	2.1	2.9	3.5	14	100	126	27	9.4	6.0
MIN	3.5	2.9	1.8	1.6	1.5	2.8	3.2	14	26	9.4	4.5	3.4
AC-FT	263	256	157	114	132	188	391	2400	3770	1110	409	242

CAL YR 1980	TOTAL	8383.0	MEAN 22.9	MAX 267	MIN 1.8	AC-FT 16630
WTR YR 1981	TOTAL	4753.8	MEAN 13.0	MAX 126	MIN 1.5	AC-FT 9430

YELLOWSTONE RIVER BASIN

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06222700 CROW CREEK NEAR TIPPERARY, WY--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1974 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	TIME	DIS- CHARGE, IN CUBIC FEET PER SECOND	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)
OCT						
07...	1035	--	5.0	80	7.6	4.0
NOV						
04...	0915	--	4.1	100	7.6	1.0
DEC						
16...	1230	3.1	--	100	7.2	.0
JAN						
29...	1150	2.1	--	135	7.2	.0
MAR						
12...	1120	3.0	--	120	7.4	1.0
APR						
09...	1030	--	3.9	105	7.3	1.0
MAY						
26...	0955	--	59	65	--	4.5
JUN						
19...	1350	--	38	70	--	9.0
JUL						
06...	1355	--	24	70	--	17.0
AUG						
04...	1405	--	7.5	100	--	17.0
SEP						
03...	1215	--	5.0	95	--	10.0

YELLOWSTONE RIVER BASIN

06224000 BULL LAKE CREEK ABOVE BULL LAKE, WY

LOCATION.--Lat 43°10'37", long 109°12'08", in NE¼SW¼ sec.2, T.2 N., R.4 W., Fremont County, Hydrologic Unit 10080001, Wind River Indian Reservation, on left bank 1.2 mi (1.9 km) upstream from high-water line of Bull Lake and 9.0 mi (14.5 km) south of Crowheart.

DRAINAGE AREA.--187 mi² (484 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--June 1941 to December 1953, October 1966 to current year. Monthly discharge only for some periods, published in WSP 1309. Prior to October 1950, published as "above Bull Lake Reservoir."

GAGE.--Water-stage recorder. Altitude of gage is 5,874 ft (1,790 m), from topographic map.

REMARKS.--Records good. No diversions above station.

AVERAGE DISCHARGE.--27 years (water years 1942-53, 1967-81), 297 ft³/s (8.411 m³/s), 215,200 acre-ft/yr (265 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 4,470 ft³/s (127 m³/s) June 9, 1981, gage height, 7.98 ft (2.432 m); minimum, 5.2 ft³/s (0.15 m³/s) Jan. 28, 1970, gage height, 1.44 ft (0.439 m).

EXTREMES FOR CURRENT YEAR.--Peak discharge above base of 1,500 ft³/s (42.5 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
June 9	1430	*4,470 127	7.98 2.432

Minimum daily discharge, 14 ft³/s (0.40 m³/s) Feb. 10.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	71	46	34	27	17	16	23	322	1330	933	321	256
2	69	45	34	26	17	16	22	437	1140	900	324	228
3	68	43	34	24	20	16	24	487	1120	827	320	208
4	66	42	35	26	17	15	21	399	1180	803	317	195
5	66	40	36	25	19	17	22	340	1110	787	314	196
6	66	39	34	20	20	17	22	312	1390	797	311	198
7	66	39	34	24	19	17	20	278	2040	874	312	176
8	68	43	36	23	19	16	19	233	2120	970	318	158
9	71	40	37	25	17	17	20	203	3560	840	376	154
10	72	40	38	22	14	17	20	184	2770	709	397	159
11	71	39	39	17	15	16	24	186	1650	697	352	163
12	69	46	39	19	16	16	25	186	1250	742	320	165
13	71	51	40	21	17	17	24	178	1370	760	300	175
14	68	47	39	21	17	16	24	171	1100	713	296	179
15	81	36	39	21	17	17	26	181	801	625	302	178
16	77	36	38	22	17	17	25	285	624	534	311	178
17	72	35	33	17	17	16	30	477	562	470	321	179
18	69	36	32	22	17	16	33	454	505	442	328	176
19	66	36	26	20	18	16	48	424	485	437	325	172
20	63	36	28	21	18	17	51	492	599	419	316	167
21	62	36	31	20	16	20	47	477	671	402	328	154
22	59	36	30	20	17	20	47	464	720	391	352	137
23	55	36	29	20	17	20	47	516	838	377	340	117
24	52	35	27	20	17	19	59	541	1050	364	318	102
25	51	33	29	19	17	19	79	610	1020	367	307	105
26	50	34	28	16	17	19	105	697	998	395	309	112
27	52	33	28	15	16	28	144	861	1210	385	307	106
28	51	34	29	18	16	29	158	970	1300	344	298	98
29	50	32	26	18	---	28	203	1090	1140	307	292	91
30	50	32	28	18	---	27	256	1170	996	299	292	89
31	48	---	27	19	---	23	---	1290	---	308	282	---
TOTAL	1970	1156	1017	646	481	580	1668	14915	36649	18218	9906	4771
MEAN	63.5	38.5	32.8	20.8	17.2	18.7	55.6	481	1222	588	320	159
MAX	81	51	40	27	20	29	256	1290	3560	970	397	256
MIN	48	32	26	15	14	15	19	171	485	299	282	89
AC-FT	3910	2290	2020	1280	954	1150	3310	29580	72690	36140	19650	9460

CAL YR 1980 TOTAL 115486 MEAN 316 MAX 2210 MIN 13 AC-FT 229100
WTR YR 1981 TOTAL 91977 MEAN 252 MAX 3560 MIN 14 AC-FT 182400

06224000 BULL LAKE CREEK ABOVE BULL LAKE, WY--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1974 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)
OCT					
10...	1100	71	48	6.8	6.0
DEC					
16...	1050	38	80	6.8	2.0
JAN					
29...	1050	18	125	7.3	1.5
MAR					
12...	1030	16	160	7.8	4.5
APR					
09...	0825	23	120	7.8	7.5
MAY					
14...	1115	171	45	--	6.0
JUN					
08...	1110	2140	40	--	7.0
JUL					
08...	1050	997	40	--	12.0
AUG					
17...	1000	322	65	--	15.0
SEP					
24...	1120	103	100	--	10.0

YELLOWSTONE RIVER BASIN

06225000 BULL LAKE CREEK NEAR LENORE, WY

LOCATION.--Lat 43°14'33", long 109°01'20", in NE¼NW¼ sec.17, T.3 N., R.2 W., Fremont County, Hydrologic Unit 10080001, Wind River Indian Reservation, on left bank 700 ft (213 m) upstream from mouth, 2.8 mi (4.5 km) downstream from Bull Lake, and 8.5 mi (13.1 km) southeast of Lenore.

DRAINAGE AREA.--213 mi² (552 km²), of which 12 mi² (31 km²) is probably noncontributing.

PERIOD OF RECORD.--May 1918 to current year.

REVISED RECORDS.--WSP 1309: 1921(M, date only), 1925(M), 1926(M), 1930(M). WSP 1709: Drainage area.

GAGE.--Water-stage recorder. Altitude of gage is 5,654 ft (1,723 m), from topographic map. May 18, 1918, to Sept. 30, 1922, at site 10 ft (3 m) upstream at datum 0.86 ft (0.262 m) higher; Oct. 1, 1922, to Oct. 3, 1934, at present site at datum 2.00 ft (0.610 m) lower.

REMARKS.--Records good except those for winter period, which are fair. Flow completely regulated by Bull Lake 2.8 mi (4.5 km) upstream since April 1938. (See station 06224500.) Diversions above station for irrigation of about 730 acres (2.95 km²) below.

AVERAGE DISCHARGE.--63 years, 279 ft³/s (7.901 m³/s), 202,100 acre-ft/yr (249 hm³/yr), unadjusted.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 6,200 ft³/s (176 m³/s) Aug. 8, 1951, gage height, 7.09 ft (2.161 m), result of automatic spillway gates releasing on Bull Lake Dam, from rating curve extended above 2,000 ft³/s (56.6 m³/s) on basis of slope-area measurement of peak flow; minimum prior to construction of Bull Lake Dam not determined, probably occurred during period of ice effect in March 1933; no flow Feb. 28 to Apr. 7, 1937 (result of regulation).

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,350 ft³/s (38.2 m³/s) July 24, Aug. 6, 7, gage height, 3.88 ft (1.183 m); minimum daily, 11.0 ft³/s (0.312 m³/s) Mar. 24-26, 30, 31, Apr. 6.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	197	22	22	20	15	16	12	15	13	1040	974	749
2	124	22	21	20	15	16	12	15	13	1020	965	763
3	92	22	21	20	15	17	14	16	13	957	965	820
4	79	17	22	20	15	17	15	16	13	857	965	842
5	71	12	22	20	15	17	13	16	13	749	957	834
6	70	42	21	20	15	17	11	16	14	708	1180	834
7	60	37	21	20	15	17	26	16	14	637	1340	827
8	43	30	21	20	15	17	22	15	14	620	1270	827
9	40	26	21	20	15	16	21	98	14	671	1150	842
10	29	26	20	20	15	16	22	280	16	702	1050	842
11	29	22	20	20	15	16	22	298	22	798	1010	842
12	29	22	20	19	15	16	21	326	25	834	965	842
13	28	22	20	20	15	16	20	302	24	834	902	842
14	26	23	20	20	15	16	18	363	24	784	820	834
15	30	23	21	20	15	16	16	507	50	763	777	834
16	28	22	22	20	15	16	16	507	96	894	777	834
17	29	21	22	20	15	16	16	376	73	990	827	827
18	34	21	20	20	15	16	15	228	78	1030	957	820
19	36	22	19	20	15	16	16	170	298	1030	1010	805
20	32	22	19	20	15	12	16	83	342	1160	1060	798
21	27	22	20	20	15	14	13	32	342	1220	1090	791
22	27	22	20	20	15	13	13	14	298	1270	1070	770
23	27	22	20	20	15	12	13	13	322	1300	1010	770
24	27	22	20	20	15	11	13	13	342	1320	974	749
25	26	21	20	17	15	11	13	13	310	1340	934	702
26	27	22	20	17	15	11	13	13	334	1270	894	665
27	28	21	20	17	16	15	13	12	615	1130	849	654
28	27	22	20	16	16	14	13	13	872	1060	791	642
29	23	22	20	15	---	13	13	13	957	1040	756	637
30	22	22	20	15	---	11	14	13	1040	1010	756	522
31	22	---	20	15	---	11	---	13	---	982	763	---
TOTAL	1389	694	635	591	422	458	475	3825	6601	30020	29808	23360
MEAN	44.8	23.1	20.5	19.1	15.1	14.8	15.8	123	220	968	962	779
MAX	197	42	22	20	16	17	26	507	1040	1340	1340	842
MIN	22	12	19	15	15	11	11	12	13	620	756	522
AC-FT	2760	1380	1260	1170	837	908	942	7590	13090	59540	59120	46330
CAL YR 1980	TOTAL	108725.0	MEAN	297	MAX	2400	MIN	4.9	AC-FT	215700		
WTR YR 1981	TOTAL	98278.0	MEAN	269	MAX	1340	MIN	11	AC-FT	194900		

06225500 WIND RIVER NEAR CROWHEART, WY

LOCATION.--Lat 43°14'33", long 109°00'35", in NW¼NW¼ sec.16, T.3 N., R.2 W., Fremont County, Hydrologic Unit 10080001, Wind River Indian Reservation, on right bank 0.9 mi (1.4 km) downstream from Bull Lake Creek and 9.0 mi (14.5 km) southeast of Crowheart.

DRAINAGE AREA.--1,891 mi² (4,898 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1945 to current year.

REVISED RECORDS.--WSP 1116: 1946-47. WSP 1709: Drainage area.

GAGE.--Water-stage recorder. Altitude of gage is 5,635 ft (1,718 m), from topographic map.

REMARKS.--Records good except those for winter period, which are poor. Some regulation by Bull Lake on Bull Lake Creek. (See station 06224500.) Diversions for irrigation of about 25,000 acres (101 km²) above station.

AVERAGE DISCHARGE.--36 years, 1,230 ft³/s (34.83 m³/s), 891,100 acre-ft/yr (1,100 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 13,000 ft³/s (368 m³/s) June 16, 1963, gage height, 9.16 ft (2.792 m); maximum gage height, 9.59 ft (2.923 m) June 9, 1981; minimum daily discharge, 180 ft³/s (5.10 m³/s) Feb. 10, 11, 1981.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of June 29, 1927, reached a discharge of 13,000 ft³/s (368 m³/s); discharge measurement made by Bureau of Reclamation at site 1.0 mi (1.6 km) downstream.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 10,600 ft³/s (300 m³/s) June 9, gage height, 9.59 ft (2.923 m); minimum daily, 180 ft³/s (5.10 m³/s) Feb. 10, 11.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	647	491	410	350	230	281	285	1540	3560	2960	1610	1380
2	616	484	390	330	220	295	284	1980	2970	2810	1600	1360
3	600	486	400	310	220	298	309	1780	2790	2730	1590	1380
4	594	467	410	290	210	278	289	1360	2870	2570	1570	1380
5	585	474	400	290	210	279	256	1100	2530	2480	1550	1370
6	582	494	370	260	210	293	254	1030	3430	2430	1790	1390
7	573	490	340	240	200	298	290	1020	4610	2410	1920	1390
8	552	507	310	250	200	285	262	865	4830	2510	1870	1370
9	549	546	360	250	190	271	261	798	8180	2320	1860	1360
10	541	498	400	250	180	291	262	883	7250	2150	1780	1350
11	535	500	400	240	180	282	264	899	4990	2140	1690	1350
12	528	502	400	240	200	272	260	955	4940	2230	1580	1340
13	531	522	400	250	220	283	275	880	4250	2340	1500	1330
14	533	482	380	250	230	292	291	865	3810	2210	1420	1340
15	572	400	390	250	240	296	308	976	2640	2020	1410	1340
16	613	360	400	250	250	294	370	1090	1690	1970	1380	1330
17	565	340	400	240	260	298	375	1240	1660	1940	1460	1320
18	548	360	390	230	270	298	441	1270	1430	1980	1600	1290
19	551	370	350	230	270	278	580	1210	1510	1970	1650	1280
20	535	380	340	240	270	268	593	1360	1640	2010	1710	1280
21	529	390	360	250	270	318	489	1400	1710	2000	1770	1280
22	526	410	360	250	280	291	445	1260	1810	2010	1850	1260
23	512	410	350	260	290	270	393	1290	2220	2020	1760	1230
24	469	390	340	250	290	268	505	1560	2610	2000	1680	1200
25	458	350	370	250	290	261	698	2170	2400	2080	1610	1160
26	492	350	380	240	290	265	795	2260	2410	2270	1550	1150
27	527	400	380	240	290	367	867	2760	3080	2180	1570	1140
28	533	420	370	240	292	385	832	3340	3400	1930	1480	1120
29	491	430	350	240	---	331	965	3440	3200	1800	1400	1090
30	496	430	330	240	---	326	1150	3400	3020	1710	1410	1030
31	501	---	350	240	---	314	---	3960	---	1640	1430	---
TOTAL	16884	13133	11580	7940	6752	9126	13648	49941	97440	67820	50050	38590
MEAN	545	438	374	256	241	294	455	1611	3248	2188	1615	1286
MAX	647	546	410	350	292	385	1150	3960	8180	2960	1920	1390
MIN	458	340	310	230	180	261	254	798	1430	1640	1380	1030
AC-FT	33490	26050	22970	15750	13390	18100	27070	99060	193300	134500	99270	76540
CAL YR 1980	TOTAL	456508	MEAN	1247	MAX	7050	MIN	196	AC-FT	905500		
WTR YR 1981	TOTAL	382904	MEAN	1049	MAX	8180	MIN	180	AC-FT	759500		

YELLOWSTONE RIVER BASIN

06225500 WIND RIVER NEAR CROWHEART, WY--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1972 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	TIME	TEMPER- ATURE (DEG C)	DIS- CHARGE, IN CUBIC FEET PER SECOND	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SEDI- MENT, SUS- PENDED (MG/L)	SEDI- MENT, DIS- CHARGE, SUS- PENDED (T/DAY)	SED. SUSP. FALL DIAM. % FINER THAN .004 MM
OCT							
09...	1110	11.0	--	549	7	10	--
NOV							
14...	1135	4.0	--	487	9	12	--
DEC							
08...	1300	.0	310	--	9	7.5	--
JAN							
13...	0925	.0	250	--	6	4.0	--
FEB							
12...	1200	.0	200	--	14	7.6	--
MAR							
09...	1040	4.5	--	291	6	4.7	--
APR							
10...	1035	7.5	--	254	8	5.5	--
22...	1330	11.0	--	435	66	78	--
29...	0945	9.0	--	801	106	229	--
MAY							
06...	1335	12.0	--	1080	44	128	--
13...	0930	8.0	--	889	41	98	--
20...	1330	11.0	--	1660	394	1770	--
27...	0930	10.0	--	3080	1480	12300	27
JUN							
03...	1205	12.0	--	3130	114	963	--
10...	0930	11.0	--	7940	2140	45900	14
17...	0930	11.0	--	1640	146	646	--
24...	0930	16.0	--	3060	582	4810	12
JUL							
01...	0930	15.0	--	3060	110	909	--
08...	0930	13.0	--	2600	78	548	--
15...	0930	15.0	--	2030	25	137	--
22...	0930	14.0	--	1960	17	90	--
29...	0930	16.0	--	1810	28	137	--
AUG							
05...	0930	16.0	--	1550	9	38	--
12...	0930	16.0	--	1620	8	35	--
19...	0930	17.0	--	1650	13	58	--
26...	0930	18.0	--	1560	9	38	--
SEP							
02...	0930	18.0	--	1360	10	37	--
09...	0930	16.0	--	1360	7	26	--
14...	0930	17.0	--	1330	8	29	--
22...	1000	14.0	--	1260	9	31	--

YELLOWSTONE RIVER BASIN

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06225500 WIND RIVER NEAR CROWHEART, WY--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	SED. SUSP. FALL DIAM. % FINER THAN .016 MM	SED. SUSP. FALL DIAM. % FINER THAN .062 MM	SED. SUSP. FALL DIAM. % FINER THAN .125 MM	SED. SUSP. FALL DIAM. % FINER THAN .250 MM	SED. SUSP. FALL DIAM. % FINER THAN .500 MM	SED. SUSP. FALL DIAM. % FINER THAN .062 MM
OCT						
09...	--	--	--	--	--	96
NOV						
14...	--	--	--	--	--	95
DEC						
08...	--	--	--	--	--	--
JAN						
13...	--	--	--	--	--	--
FEB						
12...	--	--	--	--	--	--
MAR						
09...	--	--	--	--	--	--
APR						
10...	--	--	--	--	--	--
22...	--	--	--	--	--	98
29...	--	--	--	--	--	92
MAY						
06...	--	--	--	--	--	89
13...	--	--	--	--	--	91
20...	--	--	--	--	--	76
27...	45	72	89	99	100	--
JUN						
03...	--	--	--	--	--	88
10...	27	52	73	92	100	--
17...	--	--	--	--	--	50
24...	26	58	75	95	100	12
JUL						
01...	--	--	--	--	--	36
08...	--	--	--	--	--	38
15...	--	--	--	--	--	64
22...	--	--	--	--	--	58
29...	--	--	--	--	--	81
AUG						
05...	--	--	--	--	--	77
12...	--	--	--	--	--	81
19...	--	--	--	--	--	80
26...	--	--	--	--	--	78
SEP						
02...	--	--	--	--	--	83
09...	--	--	--	--	--	85
14...	--	--	--	--	--	84
22...	--	--	--	--	--	87

YELLOWSTONE RIVER BASIN

06226000 WYOMING CANAL NEAR LENORE, WY

LOCATION.--Lat 43°13'45", long 108°53'40", in SE¼SE¼ sec.17, T.3 N., R.1 W., Fremont County, Hydrologic Unit 10080001, on right bank 3.3 mi (5.3 km) downstream from diversion dam on Wind River and 15 mi (24 km) south-east of Lenore.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--May 1941 to September 1945 (irrigation season only), May 1949 to current year (no winter record 1976, 1977, and 1978). Monthly discharge only for some periods, published in WSP 1309.

GAGE.--Water-stage recorder. Datum of gage is 5,560.85 ft (1,694.947 m), National Geodetic Vertical Datum of 1929. May 1, 1941, to Sept. 30, 1945, nonrecording gage at site 3.2 mi (5.1 km) upstream at different datum. May 3, 1949, to Oct. 2, 1952, and Apr. 12 to May 15, 1971, water-stage recorder at site 3.0 mi (4.8 km) upstream at different datum.

REMARKS.--Records good. Flow used for irrigation on Riverton project.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 1,830 ft³/s (51.8 m³/s) July 17, 19-21, 26-31, 1976; no flow at times in most years.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	10	.00	.00	.00	.00	202	258	593	456	1770	1070	976
2	.00	.00	.00	.00	.00	202	260	590	737	1760	1070	937
3	.00	.00	.00	.00	.00	229	271	590	879	1770	1050	953
4	.00	.00	.00	.00	.00	254	270	660	977	1770	1040	976
5	.00	.00	.00	.00	.00	226	251	710	1130	1770	1030	960
6	.00	.00	.00	.00	.00	232	235	760	1170	1770	1140	976
7	.00	.00	.00	.00	.00	250	257	808	1040	1770	1370	981
8	.00	.00	.00	.00	.00	254	258	734	1060	1780	1340	961
9	.00	.00	.00	.00	.00	246	242	509	902	1760	1300	954
10	.00	.00	.00	.00	.00	252	245	572	1390	1710	1260	945
11	.00	.00	.00	.00	.00	257	256	561	1450	1570	1190	944
12	.00	.00	.00	.00	.00	229	251	561	1510	1550	1100	940
13	.00	.00	.00	.00	.00	244	251	570	1590	1570	1010	927
14	.00	.00	.00	.00	.00	251	258	514	1540	1570	927	929
15	.00	.00	.00	.00	.00	267	265	593	1560	1480	886	953
16	.00	.00	.00	.00	.00	257	290	693	1310	1420	886	959
17	.00	.00	.00	.00	.00	268	314	825	989	1380	922	946
18	.00	.00	.00	.00	.00	273	331	895	938	1420	1070	935
19	.00	.00	.00	.00	.00	260	346	876	925	1390	1160	938
20	.00	.00	.00	.00	.00	226	374	951	1070	1410	1170	939
21	.00	.00	.00	.00	.00	263	406	1090	1070	1430	1240	958
22	.00	.00	.00	.00	.00	273	346	978	1240	1410	1270	956
23	.00	.00	.00	.00	.00	251	194	995	1420	1420	1290	945
24	.00	.00	.00	.00	.00	252	185	1100	1610	1390	1210	922
25	.00	.00	.00	.00	.00	246	407	1260	1650	1410	1170	892
26	.00	.00	.00	.00	.00	244	493	1270	1640	1470	1110	862
27	.00	.00	.00	.00	.00	295	531	1210	1740	1500	1080	868
28	.00	.00	.00	.00	.00	347	564	1010	1720	1390	1050	852
29	.00	.00	.00	.00	---	306	568	802	1760	1260	989	837
30	.00	.00	.00	.00	---	288	608	803	1770	1180	972	769
31	.00	---	.00	.00	---	292	---	593	---	1090	984	---
TOTAL	10.00	.00	.00	.00	.00	7936	9785	24676	38243	47340	34356	27890
MEAN	.32	.000	.000	.000	.000	256	326	796	1275	1527	1108	930
MAX	10	.00	.00	.00	.00	347	608	1270	1770	1780	1370	981
MIN	.00	.00	.00	.00	.00	202	185	509	456	1090	886	769
AC-FT	20	.00	.00	.00	.00	15740	19410	48940	75850	93900	68150	55320
CAL YR 1980	TOTAL	190906.00	MEAN	522	MAX	1770	MIN	.00	AC-FT	378700		
WTR YR 1981	TOTAL	190236.00	MEAN	521	MAX	1780	MIN	.00	AC-FT	377300		

YELLOWSTONE RIVER BASIN

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06226000 WYOMING CANAL NEAR LENORE, WY--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1975 to current year.

REMARKS.--Samples collected by Bureau of Reclamation.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	TIME	TEMPER- ATURE (DEG C)	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SEDI- MENT, SUS- PENDE (MG/L)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (T/DAY)	SED. SUSP. FALL DIAM. % FINER THAN .004 MM	SED. SUSP. FALL DIAM. % FINER THAN .016 MM	SED. SUSP. FALL DIAM. % FINER THAN .062 MM	SED. SUSP. FALL DIAM. % FINER THAN .125 MM	SED. SUSP. FALL DIAM. % FINER THAN .062 MM
APR										
15...	1030	9.0	265	14	10	--	--	--	--	93
22...	1515	8.0	285	94	72	--	--	--	--	100
29...	1115	10.0	540	66	96	--	--	--	--	96
MAY										
06...	1030	10.0	712	69	133	--	--	--	--	89
13...	1100	8.5	569	53	81	--	--	--	--	96
20...	1515	11.0	1100	190	564	--	--	--	--	93
27...	1100	11.0	1200	1160	3760	60	84	100	--	--
JUN										
03...	0945	11.0	877	126	298	--	--	--	--	89
10...	1100	11.0	1440	1030	4010	31	60	96	100	--
17...	1100	11.0	909	96	236	--	--	--	--	81
24...	1045	14.0	670	270	488	20	42	86	100	--
JUL										
01...	1015	15.0	1770	104	497	--	--	--	--	47
08...	1100	14.0	1790	68	329	--	--	--	--	42
15...	1100	15.0	1480	46	184	--	--	--	--	52
22...	1045	15.0	1400	38	144	--	--	--	--	38
29...	1045	16.0	1240	49	164	--	--	--	--	72
AUG										
05...	1100	17.0	1030	17	47	--	--	--	--	54
12...	1100	17.0	1120	22	67	--	--	--	--	61
19...	1100	17.0	1160	25	78	--	--	--	--	63
26...	1100	18.0	1120	19	57	--	--	--	--	54
SEP										
02...	1100	18.0	926	19	48	--	--	--	--	73
09...	1100	17.0	949	15	38	--	--	--	--	70
14...	1015	17.0	926	17	43	--	--	--	--	74
22...	1130	15.0	954	13	33	--	--	--	--	74

YELLOWSTONE RIVER BASIN

06227500 WYOMING CANAL BELOW PILOT DIVERSION, NEAR MORTON, WY

LOCATION.--Lat 43°14', long 108°46', in NE¼ sec.20, T.3 N., R.1 E., Fremont County, Hydrologic Unit 10080005, at former gaging station, 0.2 mi (0.3 km) downstream from diversion to Pilot Butte powerplant and Pilot Butte Reservoir, and 1.5 mi (2.4 km) northwest of Morton.

PERIOD OF RECORD.--Water years 1975 to current year.

REMARKS.--Samples collected and discharge furnished by Bureau of Reclamation.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	TIME	TEMPER- ATURE (DEG C)	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SEDI- MENT, SUS- PENDE (MG/L)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (T/DAY)	SED. SUSP. FALL DIAM. % FINER THAN .004 MM	SED. SUSP. FALL DIAM. % FINER THAN .016 MM	SED. SUSP. FALL DIAM. % FINER THAN .062 MM	SED. SUSP. FALL DIAM. % FINER THAN .125 MM	SED. SUSP. FALL DIAM. % FINER THAN .250 MM	SED. SUSP. FALL DIAM. % FINER THAN .062 MM
APR 15...	1330	11.0	170	16	7.3	--	--	--	--	--	89
MAY 06...	1330	4.0	360	37	36	--	--	--	--	--	97
JUN 03...	1245	14.0	350	62	59	--	--	--	--	--	96
JUN 24...	1345	16.0	800	342	739	19	39	80	99	100	--
JUL 29...	1345	17.0	650	36	63	--	--	--	--	--	88
AUG 26...	1345	18.0	560	13	20	--	--	--	--	--	85

06228000 WIND RIVER AT RIVERTON, WY

LOCATION.--Lat 43°00'38", long 108°22'32", in NE¼NW¼ sec.2, T.1 S., R.4 E., Fremont County, Hydrologic Unit 10080001, Wind River Indian Reservation, on left bank 265 ft (81 m) downstream from bridge on State Highway 789, 1.1 mi (1.8 km) southeast of post office in Riverton, and 1.5 mi (2.4 km) upstream from Little Wind River.

DRAINAGE AREA.--2,309 mi² (5,980 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--May to August 1906, August to December 1907, May to October 1908, May 1911 to current year. Monthly discharge only for some periods, published in WSP 1309. Published as Big Wind River near Arapahoe Agency 1906 and as Big Wind River near Riverton 1907-08.

REVISED RECORDS.--WSP 1509: 1935. WSP 1709: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 4,901.56 ft (1,493.995 m), National Geodetic Vertical Datum of 1929. See WSP 1729 for history of changes prior to Oct. 13, 1930. Oct. 13, 1930, to Apr. 15, 1968, water-stage recorder at site 280 ft (85 m) upstream at datum 2.00 ft (0.610 m) higher. Apr. 16 to Nov. 17, 1968, water-stage recorder at site 880 ft (268 m) upstream at datum 2.00 ft (0.610 m) higher. Nov. 18, 1968, to July 28, 1970, water-stage recorder at site 225 ft (69 m) upstream at datum 2.00 ft (0.610 m) higher. July 29, 1970, to Sept. 30, 1977, water-stage recorder at present site at datum 2.00 ft (0.610 m) higher.

REMARKS.--Records good except those for winter period, which are poor. Some regulation by Bull Lake beginning in 1938 (see station 06224500) and Pilot Butte Reservoir beginning in 1926, combined capacity, 182,000 acre-ft (224 hm³). Diversions above station for irrigation of about 128,000 acres (518 km²) above and below station. The Wyoming canal of the Riverton project is the major diversion. This diversion began in 1926 and part of it can be returned to the river above station through Pilot wasteway. Additional waste water returns to river below station through Fivemile and Muddy Creeks.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 13,300 ft³/s (377 m³/s) June 15, 1935, gage height, 10.15 ft (3.094 m), present datum, from rating curve extended above 7,200 ft³/s (204 m³/s); minimum daily, 9.8 ft³/s (0.28 m³/s) May 28, July 16, 1977.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 7,780 ft³/s (220 m³/s) June 10, gage height, 10.13 ft (3.088 m); minimum daily, 31 ft³/s (0.88 m³/s) May 15.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	539	534	350	350	210	125	52	544	3420	601	233	134
2	500	529	340	350	205	106	52	867	2260	668	223	132
3	490	524	360	340	200	102	57	1050	1600	529	216	131
4	481	519	380	340	190	87	63	736	1590	443	218	110
5	467	509	420	320	190	84	58	317	1200	285	192	116
6	476	524	400	320	190	87	59	185	1430	258	187	215
7	481	539	340	310	190	91	51	103	2670	222	190	221
8	436	534	310	300	200	87	52	70	3220	234	189	238
9	405	570	310	290	200	82	51	53	4310	96	245	232
10	393	570	320	280	200	76	49	55	6650	55	241	254
11	397	534	340	260	200	72	52	61	3290	123	228	252
12	414	539	360	250	200	75	50	88	1600	138	222	264
13	418	575	360	250	210	71	46	70	1530	220	224	250
14	436	559	350	250	210	75	46	34	1250	263	236	242
15	519	495	340	250	210	70	46	31	612	134	226	226
16	618	390	340	250	210	69	49	46	269	78	228	212
17	591	340	350	240	210	66	62	228	257	82	215	217
18	612	320	360	230	210	66	53	153	345	105	193	223
19	596	310	360	230	210	62	153	83	215	153	165	209
20	580	310	340	230	210	61	320	46	230	151	156	202
21	564	310	340	230	220	74	216	59	234	170	156	186
22	564	320	350	230	220	82	122	60	304	192	203	168
23	554	330	360	220	220	67	101	96	257	204	225	165
24	529	350	360	220	230	60	120	106	401	194	180	162
25	495	340	370	220	210	56	157	320	413	231	173	156
26	519	330	380	220	120	54	178	662	227	369	138	152
27	554	330	390	220	87	64	231	847	440	377	131	167
28	580	330	390	210	114	75	257	1550	1030	298	145	170
29	539	340	370	210	---	67	201	2280	1010	244	129	176
30	524	350	360	210	---	57	314	2350	815	246	124	194
31	549	---	350	210	---	52	---	2900	---	236	119	---
TOTAL	15820	13054	11050	8040	5476	2322	3318	16050	43079	7599	5950	5776
MEAN	510	435	356	259	196	74.9	111	518	1436	245	192	193
MAX	618	575	420	350	230	125	320	2900	6650	668	245	264
MIN	393	310	310	210	87	52	46	31	215	55	119	110
AC-FT	31380	25890	21920	15950	10860	4610	6580	31840	85450	15070	11800	11460

CAL YR 1980 TOTAL 224430 MEAN 613 MAX 4820 MIN 68 AC-FT 445200
WTR YR 1981 TOTAL 137534 MEAN 377 MAX 6650 MIN 31 AC-FT 272800

YELLOWSTONE RIVER BASIN

06228000 WIND RIVER AT RIVERTON, WY--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1947-58, 1960 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	TIME	DIS- CHARGE, IN CUBIC FEET PER SECOND	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	HARD- NESS (MG/L AS CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM AD- SORP- TION RATIO
OCT 08...	1245	--	436	--	8.5	12.0	180	46	15	20	.7
NOV 05...	0920	--	519	--	8.4	5.0	180	47	16	23	.7
DEC 05...	1350	420	--	--	8.2	.0	190	51	15	26	.8
JAN 12...	1400	250	--	--	--	.0	210	53	20	32	1.0
FEB 02...	1120	205	--	550	8.1	.0	210	52	18	30	.9
MAR 11...	1045	--	71	690	8.6	7.0	250	66	21	63	1.7
30...	1050	--	58	740	8.5	9.0	260	67	22	67	1.8
MAY 08...	1430	--	77	--	--	9.0	170	44	15	35	1.2
AUG 06...	1355	--	185	--	--	24.0	120	38	6.7	25	1.0

DATE	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LINITY LAB (MG/L AS CACO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)	SOLIDS, DIS- SOLVED (TONS PER DAY)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	PHOS- PHORUS, TOTAL (MG/L AS P)
OCT 08...	2.3	150	62	1.2	.4	11	250	.34	294	.03	.040
NOV 05...	2.6	160	67	4.1	.5	14	271	.37	380	.00	.000
DEC 05...	2.0	160	66	3.1	.5	12	274	.37	311	.22	.070
JAN 12...	3.0	190	84	4.7	.4	18	325	.44	219	.05	.000
FEB 02...	3.4	180	79	5.9	.4	15	314	.43	174	.09	.000
MAR 11...	2.4	210	150	9.2	1.0	14	457	.62	87.6	.11	.010
30...	2.5	220	150	9.3	.9	14	460	.63	72.0	.09	.050
MAY 08...	2.8	140	87	10	.4	11	290	.39	60.3	.09	.050
AUG 06...	2.5	110	67	3.4	.4	8.5	210	.29	105	.00	.030

06228350 SOUTH FORK LITTLE WIND RIVER ABOVE WASHAKIE RESERVOIR, NEAR FORT WASHAKIE, WY

LOCATION.--Lat 42°58'06", long 109°02'13", in SE¼SW¼SE¼ sec.18, T.1 S., R.2 W., Fremont County, Hydrologic Unit 10080002, Wind River Indian Reservation, on right bank 1.9 mi (3.1 km) upstream from Washakie Dam and 8.0 mi (12.9 km) southwest of Fort Washakie.

DRAINAGE AREA.--90.3 mi² (233.9 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1976 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 6,440 ft (1,963 m), from topographic map.

REMARKS.--Records good.

AVERAGE DISCHARGE.--5 years, 118 ft³/s (3.34 m³/s), 85,490 acre-ft/yr (105 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,080 ft³/s (58.9 m³/s) June 9, 1981, gage height, 8.21 ft (2.502 m); minimum daily, 4.5 ft³/s (0.13 m³/s) Feb. 1-9, 1977.

EXTREMES FOR CURRENT YEAR.--Peak discharge above base of 740 ft³/s (21.0 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)		Gage height (ft) (m)	
June 9	0730	*2,080	58.9	8.21	2.502

Minimum daily discharge, 9.5 ft³/s (0.27 m³/s) Feb. 10.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	32	25	20	18	11	10	17	227	663	318	76	44
2	31	24	21	18	11	11	17	305	571	305	72	41
3	31	21	23	17	11	11	17	259	629	305	68	39
4	30	25	23	17	11	11	16	176	677	278	65	37
5	29	23	25	17	11	11	16	148	675	251	62	38
6	29	24	24	15	11	11	17	136	838	242	60	45
7	28	23	22	16	11	10	17	118	1090	284	60	45
8	28	25	23	16	10	10	16	99	1090	296	59	43
9	25	16	23	16	10	10	16	89	1620	227	83	41
10	24	25	23	15	9.5	10	16	85	962	191	81	39
11	23	24	23	14	9.8	11	18	98	738	182	73	37
12	23	26	23	14	10	11	21	96	592	182	66	36
13	26	22	24	14	10	11	23	92	634	178	62	35
14	25	21	23	14	10	11	23	81	488	163	59	34
15	31	20	23	13	10	10	26	102	400	144	57	34
16	32	19	23	13	10	10	26	140	330	128	56	34
17	31	18	23	13	10	10	36	206	280	113	56	33
18	31	18	22	13	10	10	44	215	260	110	54	33
19	31	19	19	13	11	10	75	221	240	116	52	31
20	30	20	20	13	10	11	54	241	290	110	52	31
21	29	20	20	13	10	12	51	198	330	102	52	29
22	28	20	20	12	10	12	49	189	380	95	56	28
23	23	20	20	12	11	13	53	245	440	88	55	26
24	22	20	19	12	11	14	73	265	420	84	54	25
25	26	18	19	11	11	14	92	314	410	93	52	26
26	25	17	19	11	10	15	121	368	400	116	50	31
27	27	16	19	11	10	18	144	454	450	123	50	30
28	25	18	19	11	10	17	124	508	480	108	52	29
29	26	20	18	11	---	17	138	571	400	93	50	27
30	28	19	19	11	---	18	178	578	334	85	48	28
31	28	---	18	11	---	17	---	667	---	80	46	---
TOTAL	857	626	660	425	290.3	377	1534	7491	17111	5190	1838	1029
MEAN	27.6	20.9	21.3	13.7	10.4	12.2	51.1	242	570	167	59.3	34.3
MAX	32	26	25	18	11	18	178	667	1620	318	83	45
MIN	22	16	18	11	9.5	10	16	81	240	80	46	25
AC-FT	1700	1240	1310	843	576	748	3040	14860	33940	10290	3650	2040
CAL YR 1980	TOTAL	55595.0	MEAN 152	MAX 1190	MIN 10	AC-FT 110300						
WTR YR 1981	TOTAL	37428.3	MEAN 103	MAX 1620	MIN 9.5	AC-FT 74240						

YELLOWSTONE RIVER BASIN

06228350 SOUTH FORK LITTLE WIND RIVER ABOVE WASHAKIE RESERVOIR, NEAR FORT WASHAKIE, WY--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1977 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	TIME	DIS- CHARGE, IN CUBIC FEET PER SECOND	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	HARD- NESS (MG/L AS CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)
OCT 03...	1030	--	30	70	7.3	7.0	34	8.7	2.9	2.8	.2	.6
NOV 05...	1045	--	22	75	7.4	3.0	35	8.8	3.2	3.5	.3	.7
DEC 03...	1100	--	22	80	7.4	2.0	38	9.6	3.4	3.7	.3	.7
JAN 19...	0950	--	13	155	7.5	.0	55	14	4.8	6.4	.4	.8
FEB 18...	1050	10	--	175	7.7	1.0	61	16	5.2	5.8	.3	.9
MAR 17...	1015	--	6.7	200	8.2	3.0	63	16	5.6	6.4	.4	.9
APR 08...	1400	--	20	130	7.9	6.5	46	12	3.8	4.9	.3	.7
MAY 13...	1015	--	80	64	--	2.5	21	5.5	1.8	2.2	.2	.5
JUN 09...	0930	--	2010	50	--	7.0	12	3.4	.8	1.0	.1	.6
JUN 30...	1110	--	357	68	--	12.0	12	3.6	.7	1.1	.1	.4
AUG 18...	0940	--	54	80	--	13.0	24	6.6	1.8	1.8	.2	.4
SEP 08...	0855	--	43	88	--	10.0	26	6.9	2.2	2.6	.2	.5

DATE	ALKA- LINITY LAB (MG/L AS CACO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTITUENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)	SOLIDS, DIS- SOLVED (TONS PER DAY)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHORUS TOTAL (MG/L AS PO4)	CARBON, ORGANIC TOTAL (MG/L AS C)
OCT 03...	31	2.1	5.9	.1	4.1	46	.06	3.7	.00	.010	.03	--
NOV 05...	34	5.1	6.5	.1	5.2	54	.07	3.3	.15	.040	.12	--
DEC 03...	39	1.4	7.2	.1	5.7	56	.08	3.3	.14	.030	.09	--
JAN 19...	53	6.3	11	.1	7.1	83	.11	2.9	.20	--	--	--
FEB 18...	39	13	12	.1	7.4	85	.12	2.3	.16	.010	.03	--
MAR 17...	47	9.2	13	.1	7.4	87	.12	1.6	.13	.030	.09	--
APR 08...	43	2.1	7.8	.1	7.7	65	.09	3.5	.10	.020	.06	--
MAY 13...	16	1.7	2.3	.0	5.1	29	.04	6.3	.05	.030	.09	9.5
JUN 09...	24	1.3	.6	.0	3.0	25	.03	136	.01	.120	.37	--
JUN 30...	13	2.0	.6	.0	2.4	19	.03	18.3	.04	.010	.03	--
AUG 18...	22	<1.0	2.6	.0	2.9	--	--	--	.15	.020	.06	--
SEP 08...	28	<5.0	3.8	.0	3.5	41	.06	4.8	.02	.020	.06	--

06231000 LITTLE WIND RIVER ABOVE ARAPAHOE, WY

LOCATION.--Lat 42°57'35", long 108°29'51", in NW¼NW¼SW¼ sec.23, T.1 S., R.3 E., Fremont County, Hydrologic Unit 10080002, Wind River Indian Reservation, on left bank 0.4 mi (0.6 km) southwest of Arapahoe school, 1.2 mi (1.9 km) upstream from Popo Agie River, and 5.4 mi (8.7 km) downstream from Seventeen Mile bridge.

DRAINAGE AREA.--660 mi² (1,709 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--May 1906 to December 1909, May 1911 to November 1918, October 1979 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 4,990 ft (1,521 m), from topographic map.

REMARKS.--Records good except those for winter period and period of no gage-height record, Oct. 1-18, which are poor. Some regulation by Washakie Reservoir, 34 mi (54.7 km) upstream, capacity 7,940 acre-ft (9.79 hm³), and return flow from irrigation. Diversions for irrigation of about 26,000 acres (105 km²) above station.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge observed, 3,840 ft³/s (109 m³/s) June 17, 1911, gage height, 6.60 ft (2.012 m), datum then in use; maximum gage height 12.15 ft (3.703 m) June 10, 1981; minimum daily recorded, 15 ft³/s (0.42 m³/s) Sept. 16, 17, 20, 21, 1914, Sept. 20, 1981.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 3,280 ft³/s (92.9 m³/s) June 10, gage height, 12.15 ft (3.703 m); minimum daily, 15 ft³/s (0.42 m³/s) Sept. 20.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	34	100	105	82	62	76	64	130	1250	298	44	24
2	80	100	110	84	60	78	63	133	1130	269	32	25
3	84	100	110	85	60	78	61	166	950	225	25	24
4	80	98	110	85	58	80	61	196	1010	226	26	23
5	78	91	114	84	58	86	63	170	965	215	26	22
6	72	91	113	82	58	87	63	145	967	186	31	28
7	70	91	112	80	58	84	61	133	1350	164	30	31
8	70	91	106	78	60	82	59	122	1840	137	31	28
9	66	89	100	78	60	80	56	106	1930	130	49	23
10	66	89	104	78	60	80	56	96	2800	120	84	22
11	66	89	107	78	60	80	56	86	2110	110	70	19
12	66	89	110	78	60	78	56	81	1190	100	54	21
13	66	93	110	76	60	78	56	47	859	84	45	21
14	66	98	106	74	60	76	57	35	798	66	35	22
15	70	98	105	72	64	76	59	28	595	48	36	18
16	96	86	100	70	66	76	61	35	386	40	34	18
17	96	80	100	67	68	74	63	277	283	32	32	20
18	103	78	95	66	68	74	66	417	225	40	32	21
19	103	74	88	64	68	66	68	266	184	68	30	18
20	103	76	82	66	70	64	92	226	151	59	24	15
21	103	80	86	68	70	68	103	208	152	49	26	19
22	100	84	90	68	72	84	91	231	215	48	30	18
23	96	90	90	66	72	80	85	262	240	44	30	18
24	93	90	84	64	72	74	87	260	292	34	26	19
25	93	88	80	62	72	66	100	253	367	35	24	21
26	93	88	84	62	72	64	139	295	362	76	24	36
27	96	86	86	64	74	64	142	334	313	96	27	40
28	100	90	87	64	76	84	155	419	372	87	32	42
29	100	96	84	65	---	98	152	798	407	70	29	45
30	100	100	82	64	---	98	124	1030	377	54	28	50
31	100	---	82	62	---	74	---	1150	---	44	26	---
TOTAL	2609	2693	3022	2236	1818	2407	2419	8135	24070	3254	1072	751
MEAN	84.2	89.8	97.5	72.1	64.9	77.6	80.6	262	802	105	34.6	25.0
MAX	103	100	114	85	76	98	155	1150	2800	298	84	50
MIN	34	74	80	62	58	64	56	28	151	32	24	15
AC-FT	5170	5340	5990	4440	3610	4770	4800	16140	47740	6450	2130	1490

CAL YR 1980 TOTAL 77643 MEAN 212 MAX 1990 MIN 26 AC-FT 154000
WTR YR 1981 TOTAL 54486 MEAN 149 MAX 2800 MIN 15 AC-FT 108100

YELLOWSTONE RIVER BASIN

06231000 LITTLE WIND RIVER ABOVE ARAPAHOE, WY--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1966 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	TIME	DIS- CHARGE, IN CUBIC FEET PER SECOND	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	HARD- NESS (MG/L AS CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM AD- SORP- TION RATIO
OCT 10...	1000	--	66	--	8.4	6.5	480	110	54	99	1.9
NOV 12...	1135	--	91	--	8.3	3.5	390	90	41	69	1.5
DEC 05...	1030	114	--	--	8.2	.5	380	84	41	74	1.7
JAN 14...	1040	74	--	--	--	.0	400	84	46	68	1.5
FEB 09...	1430	60	--	1000	8.2	.0	360	82	39	63	1.4
MAR 13...	1200	--	76	1000	8.4	6.5	370	82	40	73	1.7
APR 20...	1115	--	113	--	--	11.0	370	82	41	67	1.5
MAY 28...	1350	--	417	--	--	16.0	150	33	15	25	.9
JUN 18...	1050	--	218	--	--	14.0	180	48	14	36	1.2
JUL 13...	1400	--	82	--	--	20.5	280	66	29	56	1.4
AUG 10...	1500	--	86	--	--	23.0	420	98	42	100	2.1
SEP 16...	1400	--	18	--	--	19.5	440	89	54	120	2.5

DATE	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LINITY LAB (MG/L AS CACO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)	SOLIDS, DIS- SOLVED (TONS PER DAY)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	PHOS- PHORUS, TOTAL (MG/L AS P)
OCT 10...	3.5	200	450	13	.7	.0	850	1.2	151	.06	.020
NOV 12...	2.2	180	320	12	.6	1.2	650	.88	160	.17	.050
DEC 05...	2.8	170	340	9.1	.7	3.7	656	.89	202	.35	.010
JAN 14...	2.8	200	340	12	.7	11	685	.93	137	.31	.000
FEB 09...	3.6	180	270	12	.6	9.6	590	.80	95.6	.33	.000
MAR 13...	2.6	170	310	13	.8	2.9	620	.84	127	.06	.010
APR 20...	3.2	160	320	17	.7	7.6	637	.87	194	.05	.090
MAY 28...	1.3	90	97	8.6	.4	6.1	243	.33	274	.05	.140
JUN 18...	2.0	98	130	19	.3	--	--	.44	188	.15	.020
JUL 13...	2.4	150	220	8.3	.6	3.7	480	.65	106	.04	.040
AUG 10...	5.2	190	390	11	.7	8.1	760	1.0	176	.24	.070
SEP 16...	3.2	210	450	14	.9	9.2	870	1.2	42.3	.40	.100

06231950 BALDWIN CREEK AT LANDER, WY

LOCATION.--Lat 42°50'55", long 108°43'00", in NE¼SE¼NW¼ sec.8, T.33 N., R.99 W., Fremont County, Hydrologic Unit 10080003, 800 ft (244 m) downstream from point effluent from sewage lagoon enters stream, 1.2 mi (1.9 km) northeast of the Lander Post Office, and 1.6 mi (2.6 km) upstream from mouth.

PERIOD OF RECORD.--February to September 1981.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	TUR- BID- ITY (NTU)	OXYGEN, DIS- SOLVED (MG/L)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	NITRO- GEN, NITRATE TOTAL (MG/L AS N)
FEB 23...	1230	13	1200	8.1	1.5	20	9.9	2000	--
MAR 19...	1415	10	--	--	9.0	4.0	--	2700	--
APR 21...	0925	12	--	--	9.0	8.0	--	K700	--
MAY 13...	1310	14	1000	8.7	13.5	10	10.6	K190	--
JUN 15...	1410	30	--	--	14.0	20	--	200	.18
30...	1320	34	--	--	20.0	9.0	--	290	--
AUG 05...	0900	9.1	900	8.2	17.0	3.0	7.4	120	--
SEP 08...	1100	22	--	--	12.0	7.0	--	400	--

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

DATE	NITRO- GEN, NITRITE TOTAL (MG/L AS N)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO- GEN, TOTAL (MG/L AS N)	NITRO- GEN, TOTAL (MG/L AS NO3)	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHORUS TOTAL (MG/L AS PO4)
FEB 23...	--	.28	2.50	1.0	3.50	3.8	17	1.40	4.3
MAR 19...	--	.02	1.40	1.2	2.60	2.6	12	.920	2.8
APR 21...	--	.07	.890	1.3	2.20	2.3	10	.780	2.4
MAY 13...	--	.07	.390	1.8	2.20	2.3	10	.920	2.8
JUN 15...	.020	.20	.040	2.0	2.00	2.2	9.7	.340	1.0
30...	--	.03	.590	.81	1.40	1.4	6.3	.260	.80
AUG 05...	--	.19	1.00	1.3	2.30	2.5	11	.880	2.7
SEP 08...	--	.07	.670	1.0	1.70	1.8	7.8	.520	1.6

YELLOWSTONE RIVER BASIN

06233000 LITTLE POPO AGIE RIVER NEAR LANDER, WY

LOCATION.--Lat 42°43'00", long 108°38'34", in NE¼SE¼ sec.27, T.32 N., R.99 W., Fremont County, Hydrologic Unit 10080003, on left bank 700 ft (213 m) downstream from bridge on State Highway 28, 2.5 mi (4.0 km) downstream from Red Canyon Creek, and 9.5 mi (15.3 km) southeast of post office in Lander.

DRAINAGE AREA.--125 mi² (324 km²).

PERIOD OF RECORD.--March 1946 to current year (no winter records since 1971).

REVISED RECORDS.--WSP 1709: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 5,436.49 ft (1,657.042 m), National Geodetic Vertical Datum of 1929.

REMARKS.--Records good. Diversions for irrigation of about 540 acres (2.19 km²) above station. Slight regulation by Christina Lake, capacity, about 3,860 acre-ft (4.76 hm³).

COOPERATION.--Records collected and computed by Office of the Wyoming State Engineer and reviewed by Geological Survey.

AVERAGE DISCHARGE.--25 years (water years 1947-71), 80.3 ft³/s (2.274 m³/s), 58,180 acre-ft/yr (71.7 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,010 ft³/s (56.9 m³/s) June 16, 1963, gage height, 6.64 ft (2.024 m); minimum daily, 12 ft³/s (0.34 m³/s) Jan. 20, 21, Feb. 26 to Mar. 2, 1960, Jan. 10, 11, 18, 19, 1963.

EXTREMES FOR CURRENT YEAR.--Peak discharge above base of 350 ft³/s (9.91 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
June 9	0700	*446 12.6	4.28 1.305

Minimum daily discharge during period of operation, 20 ft³/s (0.57 m³/s) Apr. 3, 4.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1							22	99	310	86	39	47
2							21	113	263	93	36	47
3							20	120	281	101	35	46
4							20	102	284	93	33	45
5							23	91	263	83	32	45
6							23	86	294	75	32	53
7							24	80	362	83	32	50
8							27	69	342	83	43	48
9							29	68	390	72	60	47
10							32	65	306	65	60	47
11							40	72	257	62	57	46
12							39	71	242	60	55	43
13							37	67	254	60	54	43
14							37	65	200	55	53	43
15							39	69	162	54	53	42
16							34	85	145	50	57	40
17							43	120	145	48	55	42
18							45	120	130	48	54	40
19							51	113	120	50	51	36
20							43	132	126	48	51	36
21							43	132	130	45	51	34
22							41	139	122	41	58	31
23							42	170	122	39	55	30
24							45	209	122	37	54	27
25							54	218	109	42	53	25
26							61	239	104	53	51	24
27							71	272	105	57	53	24
28							72	284	107	51	53	23
29							77	306	102	46	53	22
30							86	272	94	42	48	22
31							---	298	---	41	47	---
TOTAL							1241	4346	5993	1863	1518	1148
MEAN							41.4	140	200	60.1	49.0	38.3
MAX							86	306	390	101	60	53
MIN							20	65	94	37	32	22
AC-FT							2460	8620	11890	3700	3010	2280

06233900 POPO AGIE RIVER NEAR ARAPAHOE, WY

LOCATION.--Lat 42°56'47", Long 108°30'34", in NE¼NE¼SW¼ sec.27, T.1 S., R.3 E., Fremont County, Hydrologic Unit 10080003, Wind River Indian Reservation, on left bank 1.4 mi (2.3 km) southwest of Arapahoe school and 3.0 mi (4.8 km) upstream from Little Wind River.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1979 to current year.

GAGE.--Water-stage recorder. Datum of gage is 4,995.72 ft (1,522.695 m), National Geodetic Vertical Datum of 1929.

REMARKS.--Records good except those for winter period, which are poor. Diversions for irrigation of about 36,900 acres (149 km²) above station.

EXTREMES FOR PERIOD OF RECORD: Maximum discharge, 3,190 ft³/s (9.03 m³/s) June 12, 1980, gage height, 9.21 ft (2.807 m); minimum daily, 28 ft³/s (0.79 m³/s) Aug. 6, 1981.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 2,430 ft³/s (68.8 m³/s) June 9, gage height, 7.94 ft (2.420 m); minimum daily, 28 ft³/s (0.79 m³/s) Aug. 6.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	150	188	190	110	78	110	115	400	1610	332	85	95
2	160	179	200	110	79	110	115	430	1430	358	64	95
3	170	173	200	110	78	115	120	450	1360	380	52	97
4	165	164	200	110	80	120	130	450	1460	415	45	97
5	160	167	200	105	84	120	125	360	1390	365	35	90
6	155	170	190	100	85	120	120	300	1540	311	28	162
7	150	170	180	98	84	115	120	270	1990	350	33	164
8	140	167	170	96	82	115	115	240	2080	438	46	147
9	135	167	160	96	78	115	110	210	2200	358	115	142
10	139	153	160	95	74	110	105	180	2080	286	219	131
11	156	162	160	90	76	110	110	130	1390	245	170	123
12	164	159	160	86	76	110	110	120	1110	213	150	115
13	162	185	160	82	78	105	120	160	1100	232	150	112
14	142	164	160	82	80	97	130	110	923	210	156	115
15	204	160	150	82	88	99	120	90	694	167	153	107
16	226	155	140	82	94	105	120	100	540	153	156	110
17	216	150	140	82	98	110	120	280	495	133	156	120
18	207	140	130	82	100	110	130	580	466	125	150	125
19	197	150	120	82	100	110	140	470	422	131	142	123
20	197	160	120	84	100	153	176	400	454	133	131	120
21	194	170	120	83	100	156	145	450	515	112	131	125
22	201	180	120	82	100	153	142	480	528	97	153	117
23	188	180	120	80	100	133	145	540	519	90	150	115
24	173	180	110	79	99	128	176	500	536	71	136	99
25	167	170	110	80	98	125	188	560	478	62	125	83
26	179	160	110	78	100	142	216	680	422	123	110	73
27	188	160	110	78	100	173	286	840	466	201	97	83
28	191	170	110	76	105	136	343	1320	519	185	105	87
29	191	180	110	76	---	112	365	1390	458	139	105	80
30	191	190	105	76	---	115	380	1360	369	117	105	83
31	194	---	105	77	---	115	---	1480	---	99	95	---
TOTAL	5452	5023	4520	2729	2494	3747	4837	15330	29544	6631	3548	3335
MEAN	176	167	146	88.0	89.1	121	161	495	985	214	114	111
MAX	226	190	200	110	105	173	380	1480	2200	438	219	164
MIN	135	140	105	76	74	97	105	90	369	62	28	73
AC-FT	10810	9960	8970	5410	4950	7430	9590	30410	58600	13150	7040	6610
CAL YR 1980	TOTAL	162978	MEAN 445	MAX 2910	MIN 78	AC-FT 323300						
WTR YR 1981	TOTAL	87190	MEAN 239	MAX 2200	MIN 28	AC-FT 172900						

YELLOWSTONE RIVER BASIN

06233900 POPO AGIE RIVER NEAR ARAPAHOE, WY--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--May 1980 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	TIME	DIS- CHARGE, IN CUBIC FEET PER SECOND	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	HARD- NESS (MG/L AS CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)
DEC 05...	1330	200	--	675	8.2	.5	370	84	39	69	1.6	3.2
JAN 14...	1000	82	--	--	--	.0	370	89	35	53	1.2	2.2
FEB 02...	1355	79	--	1000	7.9	.0	350	86	32	49	1.1	2.3
MAR 13...	1055	--	97	1000	8.4	5.5	390	91	39	66	1.5	2.3
APR 20...	1005	--	197	--	--	9.5	260	64	25	36	1.0	2.1
MAY 28...	1045	--	1300	--	--	12.0	100	27	9.1	15	.6	1.3
JUN 18...	0930	--	458	--	--	13.0	180	43	17	27	.9	1.5
AUG 10...	1350	--	223	--	--	20.5	380	86	39	66	1.6	4.8
SEP 16...	0950	--	107	--	--	12.0	390	93	38	62	1.4	3.0

DATE	ALKA- LINITY LAB (MG/L AS CACO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)	SOLIDS, DIS- SOLVED (TONS PER DAY)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS NH4)
DEC 05...	130	380	4.6	.2	8.1	503	666	.91	360	--	--
JAN 14...	190	280	6.3	.4	9.0	610	589	.80	130	.240	.31
FEB 02...	180	270	6.5	.3	9.3	595	564	.77	120	--	--
MAR 13...	180	330	6.7	.3	6.9	675	650	.88	170	--	--
APR 20...	130	210	5.7	.3	9.5	459	431	.59	229	--	--
MAY 28...	56	71	1.4	.1	7.6	172	166	.23	583	--	--
JUN 18...	89	150	2.6	.2	7.9	306	303	.41	375	--	--
AUG 10...	170	320	6.4	.3	10	646	635	.86	382	--	--
SEP 16...	190	300	5.4	.3	4.4	663	620	.84	179	--	--

06233900 POPO AGIE RIVER NEAR ARAPAHOE, WY--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	TEMPER- ATURE (DEG C)	2,4-D, TOTAL (UG/L)	2,4-D, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	2, 4-DP TOTAL (UG/L)	2,4-DP, IN BOTTOM MAT. (UG/KG)	2,4,5-T TOTAL (UG/L)	2,4,5-T TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	SILVEX, TOTAL (UG/L)	SILVEX, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)
OCT 10...	1210	136	8.5	.02	0	.00	.00	.00	0	.00	0
JUN 18...	0930	458	13.0	.04	0	.00	.00	.00	0	.00	0
JUL 13...	0950	219	20.5	.06	0	.00	.00	.00	0	.00	0
AUG 10...	1350	223	20.5	.64	0	.00	.00	.00	0	.00	0
SEP 16...	0950	107	12.0	.02	0	.00	.00	.00	0	.00	0

DATE	TOTAL DICAMBA (UG/L)	DICAMBA IN BOTTOM MA- TERIAL (UG/KG)	TOTAL PICLORAM (UG/L)	PICLORAM IN BOTTOM MA- TERIAL (UG/KG)
OCT 10...	.03	.0	.04	.0
JUN 18...	.07	.0	.04	.0
JUL 13...	.09	.0	.07	.0
AUG 10...	.59	.0	.06	.0
SEP 16...	.79	.0	.03	.0

YELLOWSTONE RIVER BASIN

06235000 BEAVER CREEK NEAR ARAPAHOE, WY

LOCATION.--Lat 42°57'16", long 108°25'39", in NW¼NE¼ sec.29, T.1 S., R.4 E., Fremont County, Hydrologic Unit 10080002, Wind River Indian Reservation, at former gaging station, 1.0 mi (1.6 km) upstream from mouth, and 3.8 mi (6.1 km) east of Arapahoe.

DRAINAGE AREA.--354 mi² (917 km²).

PERIOD OF RECORD.--Water years 1950-53, 1968 to current year.

REMARKS.--No flow observed Oct. 3, Aug. 5, Sept. 18.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	HARD- NESS (MG/L AS CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)
NOV 06...	1400	7.5	--	8.3	9.5	680	190	49	210	3.5	22
DEC 03...	1510	3.1	--	7.9	.0	820	240	55	270	4.1	16
JAN 14...	1330	.64	--	--	.0	690	190	53	230	3.8	14
FEB 20...	1515	15	2000	8.3	4.0	500	150	32	170	3.3	11
MAR 11...	1340	11	1900	8.4	12.0	590	96	86	180	3.2	12
31...	0945	3.7	2000	8.4	4.0	650	190	42	180	3.1	11
MAY 29...	0845	34	--	--	13.0	350	92	29	92	2.1	6.9

DATE	ALKA- LITY LAB (MG/L AS CACO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)	SOLIDS, DIS- SOLVED (TONS PER DAY)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	PHOS- PHORUS, TOTAL (MG/L AS P)
NOV 06...	210	710	150	1.2	18	1480	2.0	30.0	.12	.050
DEC 03...	260	880	150	1.5	4.4	1780	2.4	14.9	.18	.060
JAN 14...	260	790	120	1.5	20	1580	2.1	7.7	.25	.010
FEB 20...	160	550	91	1.7	.0	1100	1.5	44.6	.11	.030
MAR 11...	200	640	120	1.8	19	1276	1.7	37.9	.30	.690
31...	210	650	93	3.5	18	1300	1.8	13.0	.19	.010
MAY 29...	150	350	44	.8	18	727	.99	66.7	.19	.180

06235500 LITTLE WIND RIVER NEAR RIVERTON, WY

LOCATION.--Lat 42°59'51", long 108°22'29", in NE&NW¼ sec.11, T.1 S., R.4 E., Fremont County, Hydrologic Unit 10080002, Wind River Indian Reservation, on right bank 1.8 mi (2.9 km) upstream from mouth and 1.9 mi (3.1 km) southeast of Riverton.

DRAINAGE AREA.--1,904 mi² (4,931 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--May 1941 to current year. Prior to October 1958, published as Popo Agie River near Riverton.

REVISED RECORDS.--WSP 1729: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 4,901.84 ft (1,494.081 m), National Geodetic Vertical Datum of 1929. Prior to Sept. 19, 1956, at site 600 ft (183 m) downstream at same datum.

REMARKS.--Records good except those for winter period, which are poor. Diversions for irrigation of about 62,900 acres (255 km²) above station.

AVERAGE DISCHARGE.--40 years, 581 ft³/s (16.45 m³/s), 420,900 acre-ft/yr (519 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 14,700 ft³/s (416 m³/s) June 17, 1963, gage height, 10.85 ft (3.307 m); minimum daily, 41 ft³/s (1.16 m³/s) Aug. 7, 1960.

EXTREMES FOR CURRENT YEAR.--Peak discharge above base of 3,200 ft³/s (90.6 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
June 10	2100	*4,720 134	6.69 2.039

Minimum daily discharge, 95 ft³/s (2.69 m³/s) Aug. 4.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	243	327	280	220	150	200	209	601	2860	658	111	137
2	273	318	280	220	145	200	200	684	2600	629	101	139
3	292	308	280	220	145	210	214	822	2300	626	97	130
4	287	299	280	220	145	228	235	836	2490	665	95	130
5	279	296	280	210	150	218	224	656	2390	638	98	140
6	267	297	280	210	150	220	224	521	2470	563	108	150
7	256	298	270	200	160	216	220	481	3160	507	190	160
8	240	295	250	200	160	210	206	417	3840	594	240	170
9	233	294	260	200	170	209	196	343	4050	563	280	170
10	236	285	270	190	170	205	191	296	4480	484	289	170
11	244	286	280	190	160	200	193	238	3620	411	260	180
12	254	289	280	180	160	210	204	214	2260	357	227	180
13	255	319	270	180	160	210	217	221	1780	368	214	170
14	239	319	270	180	170	210	230	153	1660	334	204	159
15	274	308	260	180	180	210	226	127	1250	273	196	153
16	363	230	260	180	180	205	225	156	904	242	200	146
17	343	220	250	170	180	200	213	712	728	228	201	152
18	350	200	230	170	180	200	230	1130	668	264	195	161
19	330	200	220	170	185	198	261	798	578	263	191	160
20	323	210	220	180	190	192	325	703	537	218	168	152
21	320	210	230	180	190	212	304	773	602	199	159	158
22	323	220	230	170	190	246	284	805	673	185	170	159
23	313	230	220	170	190	242	268	1020	718	157	182	153
24	303	230	210	170	190	225	265	1050	752	181	168	145
25	291	230	220	170	190	208	287	1080	821	287	154	130
26	309	240	220	160	195	198	345	1180	758	337	150	130
27	317	240	220	160	200	211	412	1410	731	284	142	140
28	333	250	220	160	200	264	479	1780	838	224	153	140
29	326	260	210	155	---	281	482	2110	874	186	145	150
30	328	270	210	155	---	258	522	2430	764	161	144	160
31	328	---	220	150	---	229	---	2560	---	133	137	---
TOTAL	9072	7978	7680	5670	4835	6725	8091	26307	52156	11219	5369	4574
MEAN	293	266	248	183	173	217	270	849	1739	362	173	152
MAX	363	327	280	220	200	281	522	2560	4480	665	289	180
MIN	233	200	210	150	145	192	191	127	537	133	95	130
AC-FT	17990	15820	15230	11250	9590	13340	16050	52180	103500	22250	10650	9070
CAL YR 1980	TOTAL	258015	MEAN	705	MAX	4880	MIN	125	AC-FT	511800		
WTR YR 1981	TOTAL	149676	MEAN	410	MAX	4480	MIN	95	AC-FT	296900		

YELLOWSTONE RIVER BASIN

06235500 LITTLE WIND RIVER NEAR RIVERTON, WY--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1949-58, 1960-64, 1966 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	TIME	DIS- CHARGE, IN CUBIC FEET PER SECOND	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	HARD- NESS (MG/L AS CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM AD- SORP- TION RATIO
OCT 08...	1115	--	242	--	8.3	12.0	400	91	42	72	1.6
NOV 10...	0950	--	289	--	8.4	7.0	380	99	32	61	1.4
DEC 05...	1000	280	--	--	8.2	.0	380	91	38	73	1.6
JAN 06...	1350	210	--	--	--	.0	350	85	34	73	1.7
FEB 02...	1030	145	--	1020	8.2	.0	370	90	36	70	1.6
MAR 04...	1415	--	218	1200	8.5	4.5	450	96	50	81	1.7
30...	0835	--	269	1500	8.4	7.5	520	110	61	140	2.7
MAY 08...	1030	--	402	--	--	12.0	180	41	18	27	.9
JUL 07...	1010	--	485	--	--	26.5	220	53	21	35	1.0

DATE	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LINITY LAB (MG/L AS CACO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTITUENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)	SOLIDS, DIS- SOLVED (TONS PER DAY)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	PHOS- PHORUS, TOTAL (MG/L AS P)
OCT 08...	3.9	180	350	8.4	.6	3.7	680	.92	444	.00	.040
NOV 10...	3.0	180	290	12	.3	4.4	610	.83	476	.00	.050
DEC 05...	2.6	180	340	11	.7	6.2	673	.92	509	.35	.030
JAN 06...	2.8	180	300	14	.6	8.0	628	.85	356	.15	.010
FEB 02...	3.6	200	310	15	.6	8.4	654	.89	256	.33	.030
MAR 04...	3.3	190	400	14	.3	5.6	761	1.0	448	.21	.090
30...	3.4	200	580	21	.7	8.5	1000	1.4	726	.69	.020
MAY 08...	2.0	98	120	9.0	.4	7.0	279	.38	303	.08	.040
JUL 07...	1.7	120	160	5.1	.4	6.1	360	.49	471	.02	.050

06236100 WIND RIVER ABOVE BOYSEN RESERVOIR, NEAR SHOSHONI, WY

LOCATION.--Lat 43°07'43", long 108°13'28", in NW¼NE¼NE¼ sec.25, T.2 N., R.5 E., Fremont County, Hydrologic Unit 10080001, Wind River Indian Reservation, 4.0 mi (6.4 km) upstream from Muskrat Creek, 5.3 mi (8.5 km) upstream from high-water line of Boysen Reservoir at elevation 4,725 ft (1,440 m), and 9.4 mi (15.1 km) southwest of Shoshoni.

DRAINAGE AREA.--4,390 mi² (11,370 km²).

PERIOD OF RECORD.--Water years 1974 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	TUR- BID- ITY (NTU)	OXYGEN, DIS- SOLVED (MG/L)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	HARD- NESS (MG/L AS CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)
OCT 02...	1145	1200	--	8.5	10.0	100	9.2	K70	180	46
NOV 03...	1130	1140	--	8.4	4.0	6.0	12.0	K36	240	61
DEC 04...	1130	750	--	--	.0	--	--	100	250	64
JAN 06...	0930	604	--	--	.0	--	--	K750	250	64
FEB 04...	1030	241	850	8.2	.0	--	--	200	290	76
MAR 04...	1035	412	950	8.2	.0	--	--	600	320	80
APR 07...	1130	452	1100	8.6	9.0	--	--	<5	400	95
MAY 04...	1145	2140	--	--	12.0	--	--	390	100	28
JUN 02...	1300	5210	--	--	14.0	--	--	140	78	22
JUL 01...	1050	2040	--	--	17.0	--	--	240	130	34
AUG 03...	1125	830	--	--	21.0	--	--	220	200	52
SEP 02...	1100	640	--	--	18.0	--	--	180	240	60

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

DATE	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LITY LAB (MG/L AS CACO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SiO2)
OCT 02...	15	40	1.3	2.3	150	110	4.9	.3	9.2
NOV 03...	21	46	1.3	2.8	170	140	6.9	.4	10
DEC 04...	23	47	1.3	3.3	190	150	7.2	.4	13
JAN 06...	23	47	1.3	2.4	180	170	8.1	.4	12
FEB 04...	25	57	1.5	3.1	200	190	9.6	.4	15
MAR 04...	30	72	1.7	3.3	180	270	15	.5	11
APR 07...	39	100	2.2	3.4	190	400	15	.4	7.9
MAY 04...	7.8	17	.7	1.8	70	55	3.0	.2	10
JUN 02...	5.5	11	.5	1.4	53	43	2.4	.1	9.6
JUL 01...	9.8	19	.7	1.5	91	72	2.5	.2	9.0
AUG 03...	18	49	1.6	2.4	150	150	5.3	.3	9.0
SEP 02...	21	57	1.6	3.1	180	160	5.6	.3	6.5

YELLOWSTONE RIVER BASIN

06236100 WIND RIVER ABOVE BOYSEN RESERVOIR, NEAR SHOSHONI, WY--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, SUM OF CONSTITUENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)	SOLIDS, DIS- SOLVED (TONS PER DAY)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS NH4)	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHORUS TOTAL (MG/L AS PO4)
OCT 02...	--	318	.43	1030	.00	--	--	.220	.67
NOV 03...	--	390	.53	1200	.00	--	--	.080	.25
DEC 04...	465	423	.58	857	.30	--	--	--	--
JAN 06...	426	436	.59	711	.12	.340	.44	--	--
FEB 04...	479	498	.68	324	.32	--	--	--	--
MAR 04...	589	591	.80	657	.30	--	--	--	--
APR 07...	764	775	1.1	946	.10	--	--	--	--
MAY 04...	171	165	.22	953	.11	--	--	--	--
JUN 02...	122	127	.17	1790	.07	--	--	--	--
JUL 01...	208	203	.28	1120	.04	--	--	--	--
AUG 03...	391	377	.51	845	.15	--	--	--	--
SEP 02...	408	422	.57	729	.03	--	--	--	--

06246500 OCEAN DRAIN AT OCEAN LAKE OUTLET, NEAR PAVILLION, WY

LOCATION.--Lat 43°11'56", long 108°34'08", in NE¼NE¼NW¼ sec.31, T.3 N., R.3 E., Fremont County, Hydrologic Unit 10080005, on left bank 2,000 ft (610 m) downstream from Ocean Lake outlet, 6.4 mi (10.3 km) northeast of Kinnear, and 6.9 mi (11.1 km) southeast of Pavillion.

DRAINAGE AREA.--Indeterminate.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--September 1948 to September 1953, April 1978 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 5,230 ft (1,594 m) from topographic map. Sept. 1, 1948, to Sept. 30, 1953, water-stage recorder at site 1,850 ft (564 m) upstream at datum 1.32 ft (0.402 m) higher.

REMARKS.--Records good.

AVERAGE DISCHARGE.--8 years, 28.9 ft³/s (0.818 m³/s), 20,940 acre-ft/yr (25.8 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 141 ft³/s (3.99 m³/s) Aug. 24, 1979, gage height, 4.21 ft (1.283 m); no flow at times in 1949 and 1952.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 113 ft³/s (3.20 m³/s) Aug. 19, gage height, 4.00 ft (1.219 m); minimum daily, 2.9 ft³/s (0.082 m³/s) Apr. 17, 18, 23.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	79	50	39	29	24	18	6.0	3.7	21	32	67	93
2	80	50	39	29	23	18	5.4	3.7	21	34	68	91
3	82	49	38	28	23	18	5.4	3.1	21	35	67	91
4	82	47	38	28	23	18	5.4	3.5	21	36	68	91
5	80	47	39	28	23	18	5.4	3.7	20	38	67	91
6	78	47	39	28	22	18	5.2	3.7	21	40	67	94
7	78	46	39	28	22	18	5.2	4.1	21	40	67	94
8	76	45	38	28	22	18	4.9	4.6	21	39	68	94
9	73	44	38	27	22	17	4.6	4.4	20	39	72	94
10	72	43	37	27	21	17	4.1	4.4	19	40	73	94
11	70	43	36	27	21	17	4.0	4.6	18	40	75	94
12	69	42	35	27	20	17	3.8	4.6	19	41	77	93
13	67	43	35	27	20	17	3.7	5.2	20	42	78	92
14	66	43	34	27	20	17	3.5	5.2	19	43	78	91
15	68	43	34	27	20	16	3.3	5.8	18	43	78	90
16	67	42	34	27	20	16	3.1	5.8	19	44	78	89
17	67	41	34	26	20	16	2.9	9.3	19	44	79	88
18	65	40	33	26	19	16	2.9	11	18	46	92	88
19	64	40	33	25	19	16	3.3	12	20	48	109	86
20	63	39	33	25	19	15	3.5	13	21	49	108	85
21	63	39	32	24	18	16	3.5	15	22	50	106	85
22	61	39	32	25	18	16	3.5	15	23	51	105	85
23	59	38	31	24	18	16	2.9	17	25	51	103	86
24	57	38	31	24	18	16	3.3	18	25	52	101	85
25	56	38	29	23	18	15	3.5	18	25	55	101	84
26	55	38	30	23	18	15	3.7	20	27	58	100	81
27	54	38	30	24	18	16	3.5	22	28	61	98	81
28	53	38	29	23	18	17	3.9	26	28	63	97	82
29	52	39	30	23	---	17	3.9	25	29	65	97	81
30	52	39	29	23	---	16	3.5	25	31	67	95	83
31	51	---	29	24	---	8.0	---	23	---	66	94	---
TOTAL	2059	1268	1057	804	567	509.0	120.8	339.4	660	1452	2633	2656
MEAN	66.4	42.3	34.1	25.9	20.3	16.4	4.03	10.9	22.0	46.8	84.9	88.5
MAX	82	50	39	29	24	18	6.0	26	31	67	109	94
MIN	51	38	29	23	18	8.0	2.9	3.1	18	32	67	81
AC-FT	4080	2520	2100	1590	1120	1010	240	673	1310	2880	5220	5270
CAL YR 1980	TOTAL	15157.56	MEAN	41.4	MAX	84	MIN	.10	AC-FT	30070		
WTR YR 1981	TOTAL	14125.20	MEAN	38.7	MAX	109	MIN	2.9	AC-FT	28020		

YELLOWSTONE RIVER BASIN

06246500 OCEAN DRAIN AT OCEAN LAKE OUTLET, NEAR PAVILLION, WY--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--September 1947 to August 1951, April 1978 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	HARD- NESS (MG/L AS CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)
OCT 03...	0910	83	1500	8.4	15.0	8.4	230	57
NOV 13...	1240	44	1450	8.4	5.0	9.0	240	59
DEC 01...	1010	39	1750	8.4	2.5	10.2	240	59
JAN 09...	1320	27	850	8.4	3.5	12.4	270	67
FEB 13...	0940	20	1900	8.6	4.0	12.8	290	74
MAR 16...	1040	16	1300	8.8	5.0	11.5	230	58
APR 22...	1035	3.5	1450	8.3	11.0	9.9	260	68
MAY 27...	0830	21	1800	8.4	14.5	9.7	280	71
JUN 17...	1355	19	1600	8.5	15.0	9.3	270	71
JUL 15...	1115	43	1700	8.6	19.0	7.5	280	74
AUG 20...	0900	108	1500	8.4	22.0	7.2	270	69
SEP 22...	1030	86	1600	8.4	17.0	7.0	260	68

DATE	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LINITY LAB (MG/L AS CACO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SI02)
OCT 03...	22	220	6.3	5.5	150	540	17	.6	12
NOV 13...	22	220	6.2	4.1	160	480	16	.5	12
DEC 01...	23	220	6.2	6.2	170	500	18	.6	12
JAN 09...	25	240	6.4	4.1	170	560	17	.7	12
FEB 13...	26	250	6.4	4.3	180	570	18	.6	13
MAR 16...	21	200	5.7	3.4	110	370	17	.5	9.3
APR 22...	23	230	6.2	3.7	130	570	19	.6	9.2
MAY 27...	24	230	6.0	4.2	170	550	33	.5	10
JUN 17...	23	230	6.1	4.3	170	560	17	.6	10
JUL 15...	24	230	5.9	4.1	170	540	19	.2	13
AUG 20...	23	220	6.3	4.3	180	520	18	.6	13
SEP 22...	22	220	6.4	4.3	170	500	17	.6	11

YELLOWSTONE RIVER BASIN

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06246500 OCEAN DRAIN AT OCEAN LAKE OUTLET, NEAR PAVILLION, WY--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	SOLIDS, SUM OF CONSTITUENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)	SOLIDS, DIS- SOLVED (TONS PER DAY)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS NH4)	BORON, DIS- SOLVED (UG/L AS B)	IRON, DIS- SOLVED (UG/L AS FE)
OCT 03...	964	1.3	216	.00	--	--	70	<10
NOV 13...	910	1.2	108	.01	--	--	110	30
DEC 01...	942	1.3	99.2	.08	--	--	130	<10
JAN 09...	1030	1.4	75.1	.00	.860	1.1	80	10
FEB 13...	1060	1.4	57.2	.01	--	--	90	10
MAR 16...	746	1.0	32.2	.08	--	--	60	10
APR 22...	1000	1.4	9.5	.14	--	--	50	10
MAY 27...	1030	1.4	59.2	.07	--	--	80	<10
JUN 17...	1020	1.4	52.3	.03	--	--	90	20
JUL 15...	1010	1.4	117	.02	--	--	100	20
AUG 20...	976	1.3	285	.00	--	--	100	<10
SEP 22...	945	1.3	219	<.10	--	--	90	<10

YELLOWSTONE RIVER BASIN

06246800 OCEAN DRAIN NEAR MIDVALE, WY

LOCATION.--Lat 43°12'41", long 108°28'33", in NE¼SW¼NW¼ sec.25, T.3 N., R.3 E., Fremont County, Hydrologic Unit 10080005, on right bank 1,000 ft (305 m) downstream from highline road, 1.0 mi (1.6 km) above mouth, 2.1 mi (3.4 km) east of Midvale, and 5.5 mi (8.8 km) downstream from Ocean Lake Outlet.

DRAINAGE AREA.--Indeterminate.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1979 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 5,140 ft (1,567 m), from topographic map.

REMARKS.--Records poor.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 167 ft³/s (4.73 m³/s) Oct. 1, 1979, gage height, 6.42 ft (1.957 m); minimum daily, 1.4 ft³/s (0.04 m³/s) Mar. 3, 1980.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 160 ft³/s (4.53 m³/s) Aug. 24, gage height, 6.34 ft (1.932 m); minimum daily, 4.4 ft³/s (0.12 m³/s) Apr. 2.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	88	55	43	33	25	19	4.7	17	33	57	89	110
2	86	54	42	33	24	19	4.4	19	34	61	89	110
3	84	53	41	33	24	19	4.9	20	36	59	88	110
4	82	52	41	32	24	19	4.9	21	36	61	87	110
5	81	52	41	32	24	19	4.7	22	36	65	80	110
6	80	52	42	32	23	19	4.9	23	26	63	76	110
7	80	50	42	32	23	19	4.9	30	26	65	74	115
8	79	50	41	31	23	19	9.2	28	29	67	74	115
9	77	49	41	31	23	18	7.5	27	31	64	77	115
10	75	48	40	31	22	18	7.5	28	36	66	81	115
11	74	48	39	31	22	18	7.4	36	37	60	87	115
12	73	48	38	31	21	18	7.2	38	35	61	90	115
13	72	48	38	31	21	18	7.0	32	32	62	94	110
14	70	46	37	31	21	18	6.9	32	40	64	93	110
15	72	46	37	33	21	18	7.0	29	43	66	97	110
16	70	45	37	31	21	19	7.2	31	41	68	98	105
17	70	44	37	30	21	19	7.4	51	39	70	101	105
18	69	44	36	30	20	18	7.8	41	43	73	89	105
19	68	41	36	29	20	18	8.1	35	47	85	120	105
20	67	40	35	29	20	18	8.2	40	49	93	127	105
21	66	40	36	28	19	19	8.1	45	49	100	144	105
22	66	40	36	29	19	19	8.3	43	50	94	140	105
23	62	40	35	28	19	17	9.8	40	45	88	151	101
24	61	40	35	27	19	16	14	37	46	84	151	101
25	60	40	33	26	19	15	12	38	47	84	128	90
26	60	39	34	27	19	16	13	41	54	98	128	87
27	58	39	34	28	19	17	12	37	51	111	118	85
28	58	40	33	27	19	17	16	36	51	113	122	83
29	56	41	34	25	---	18	19	34	51	107	115	82
30	56	42	33	25	---	13	15	37	51	109	117	80
31	55	---	33	27	---	5.1	---	37	---	94	112	---
TOTAL	2175	1366	1160	923	595	542.1	259.0	1025	1224	2412	3237	3124
MEAN	70.2	45.5	37.4	29.8	21.3	17.5	8.63	33.1	40.8	77.8	104	104
MAX	88	55	43	33	25	19	19	51	54	113	151	115
MIN	55	39	33	25	19	5.1	4.4	17	26	57	74	80
AC-FT	4310	2710	2300	1830	1180	1080	514	2030	2430	4780	6420	6200
CAL YR 1980	TOTAL	19647.6	MEAN	53.7	MAX	140	MIN	1.4	AC-FT	38970		
WTR YR 1981	TOTAL	18042.1	MEAN	49.4	MAX	151	MIN	4.4	AC-FT	35790		

YELLOWSTONE RIVER BASIN

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06246800 OCEAN DRAIN NEAR MIDVALE, WY--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--October 1979 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	TIME	DIS- CHARGE, IN CUBIC FEET PER SECOND	STREAM- FLOW, INSTAN- TANEOUS (CFS)	TEMPER- ATURE (DEG C)	SEDI- MENT, SUS- PENDED (MG/L)	SEDI- MENT, DIS- CHARGE, SUS- PENDED (T/DAY)
OCT 03...	1040	--	84	12.0	44	10
NOV 13...	1050	--	47	4.5	32	4.1
DEC 01...	1140	--	43	1.5	35	4.1
JAN 09...	1200	--	31	1.5	83	6.9
FEB 13...	1100	21	--	1.0	66	3.7
MAR 16...	0845	--	19	3.0	22	1.1
APR 22...	1130	--	8.3	12.0	58	1.3
MAY 27...	0930	--	40	15.0	97	10
JUN 17...	1245	--	38	15.5	100	10
JUL 15...	0950	--	71	18.0	302	58
AUG 20...	1040	--	125	21.0	114	38
SEP 22...	1145	--	106	17.0	158	45

YELLOWSTONE RIVER BASIN

06253000 FIVEMILE CREEK NEAR SHOSHONI, WY

LOCATION.--Lat 43°13'20", long 108°13'06", in NW¼SW¼ sec.19, T.3 N., R.6 E., Fremont County, Hydrologic Unit 10080005, on right bank 1.2 mi (1.9 km) upstream from normal high-water line of Boysen Reservoir at elevation 4,725 ft (1,440 m) and 5.0 mi (8.0 km) west of Shoshoni.

DRAINAGE AREA.--418 mi² (1,083 km²), of which 133 mi² (344 km²) is probably noncontributing.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--May 1941 to September 1942, August 1948 to current year.

REVISED RECORDS.--WSP 1709: Drainage area.

GAGE.--Water-stage recorder. Altitude of gage is 4,750 ft (1,448 m), from topographic map. May 10, 1941, to Sept. 30, 1942, nonrecording gage at site 1.0 mi (1.6 km) downstream at different datum.

REMARKS.--Records fair except those for winter period, which are poor. Natural flow of stream affected by regulation of Bureau of Indian Affairs reservoir system in the headwaters, diversions for irrigation, and return flow from irrigated areas.

AVERAGE DISCHARGE.--34 years, 154 ft³/s (4.361 m³/s), 111,600 acre-ft/yr (138 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 3,390 ft³/s (96.0 m³/s) June 15, 1962, gage height, 7.85 ft (2.393 m), from rating curve extended above 2,500 ft³/s (70.8 m³/s); maximum gage height, 9.61 ft (2.929 m) Dec. 27, 1954 (backwater from ice); minimum daily discharge, 1.0 ft³/s (0.028 m³/s) Jan. 4-6, 1942.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of July 24, 1923, discharge, 3,500 ft³/s (99.1 m³/s), estimated by Bureau of Reclamation, exceeded all floods at this location during period of record.

EXTREMES FOR CURRENT YEAR.--Maximum discharge recorded, 522 ft³/s (14.8 m³/s) June 28, gage height, 3.96 ft (1.207 m); maximum gage height, 5.05 ft (1.539 m) Feb. 11 (backwater from ice); minimum daily discharge, 50 ft³/s (1.42 m³/s) Mar. 8-10.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	302	108	80	64	54	59	51	133	189	304	375	382
2	187	109	75	64	52	56	56	134	226	371	368	385
3	161	103	76	63	54	54	58	162	234	320	371	384
4	160	100	78	62	56	53	53	169	201	310	364	378
5	153	101	80	62	58	51	52	186	243	324	358	409
6	148	102	78	60	58	51	54	198	240	320	351	393
7	147	97	75	60	58	51	137	192	237	341	348	394
8	146	97	75	59	58	50	135	199	246	334	358	395
9	145	93	76	58	60	50	137	227	273	337	368	394
10	137	92	78	58	62	50	139	215	276	327	378	387
11	141	90	80	56	58	52	138	224	276	317	399	389
12	144	89	80	56	58	52	136	237	279	344	382	385
13	140	89	78	56	58	52	132	216	301	358	382	382
14	138	87	75	58	56	52	115	196	317	354	378	380
15	159	84	76	60	56	52	117	201	354	348	385	370
16	152	81	76	60	56	52	120	201	324	364	382	360
17	147	79	74	58	58	53	108	337	291	368	375	360
18	145	79	71	56	60	53	107	337	285	378	354	350
19	138	78	72	54	62	53	119	220	295	403	374	340
20	133	76	70	54	62	54	129	216	282	389	354	340
21	131	78	70	54	64	55	122	249	273	364	354	327
22	130	80	70	56	63	57	113	240	285	382	355	300
23	127	80	68	56	61	56	109	246	285	378	360	282
24	124	79	63	56	61	54	113	213	285	368	361	289
25	125	74	64	58	60	53	100	216	276	403	352	306
26	124	76	66	56	60	54	97	255	288	392	352	299
27	120	76	66	56	60	57	118	252	285	446	347	292
28	118	78	66	56	59	59	138	175	304	492	348	302
29	115	80	64	56	---	57	143	150	307	479	347	291
30	111	82	62	58	---	56	129	163	310	438	362	301
31	111	---	62	56	---	54	---	206	---	407	375	---
TOTAL	4459	2617	2244	1796	1642	1662	3275	6565	8267	11460	11317	10546
MEAN	144	87.2	72.4	57.9	58.6	53.6	109	212	276	370	365	352
MAX	302	109	80	64	64	59	143	337	354	492	399	409
MIN	111	74	62	54	52	50	51	133	189	304	347	282
AC-FT	8840	5190	4450	3560	3260	3300	6500	13020	16400	22730	22450	20920
CAL YR 1980	TOTAL	64915	MEAN 177	MAX 429	MIN 35	AC-FT 128800						
WTR YR 1981	TOTAL	65850	MEAN 180	MAX 492	MIN 50	AC-FT 130600						

06253000 FIVEMILE CREEK NEAR SHOSHONI, WY--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1948 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	TIME	DIS- CHARGE, IN CUBIC FEET PER SECOND	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	HARD- NESS (MG/L AS CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)
OCT 03...	1345	--	159	--	8.5	11.0	350	94	27	200	4.7	3.4
NOV 13...	0900	--	92	--	8.5	5.0	480	130	38	260	5.2	4.0
DEC 01...	1330	--	68	2050	8.4	2.0	520	140	38	290	5.6	4.4
JAN 08...	1400	59	--	--	--	.0	490	140	37	310	6.0	4.3
FEB 06...	1330	58	--	2150	8.4	.0	560	150	44	350	6.5	6.1
MAR 05...	1105	--	51	2000	8.5	4.5	610	170	44	320	5.7	4.7
APR 07...	1045	--	141	1200	8.4	6.0	320	86	25	150	3.7	3.0
MAY 11...	1020	--	231	--	--	10.0	280	73	23	100	2.6	3.8
JUN 17...	0930	--	294	--	--	14.0	220	74	9.3	97	2.8	3.5
JUL 15...	0815	--	337	--	--	17.0	190	55	14	89	2.8	2.8
AUG 19...	1130	--	371	--	--	19.0	220	63	15	120	3.5	2.8
SEP 21...	1015	--	324	--	--	15.0	230	63	18	140	4.0	2.8

DATE	ALKA- LINITY LAB (MG/L AS CACO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)	SOLIDS, DIS- SOLVED (TONS PER DAY)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	PHOS- PHORUS, TOTAL (MG/L AS P)	SEDI- MENT, SUS- PENDE (MG/L)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (T/DAY)
OCT 03...	210	530	16	.9	11	1000	1.4	429	1.4	.040	79	34
NOV 13...	230	750	19	1.0	10	1350	1.8	335	1.8	.000	38	9.4
DEC 01...	240	820	22	.9	6.2	1500	2.0	275	9.9	.000	48	8.8
JAN 08...	250	820	22	.9	9.3	1500	2.0	239	2.4	.000	49	7.8
FEB 06...	270	980	26	1.1	9.5	1730	2.4	271	3.0	.010	81	13
MAR 05...	250	940	30	1.0	8.3	1670	2.3	230	2.6	.030	8	1.1
APR 07...	180	410	13	.7	18	820	1.1	312	.87	.090	306	116
MAY 11...	170	300	13	.5	12	636	.87	397	.70	.220	280	175
JUN 17...	160	270	17	.4	11	580	.79	460	.76	.060	200	159
JUL 15...	150	210	8.3	.7	9.7	480	.65	437	.61	.310	268	244
AUG 19...	170	290	9.6	.7	8.8	620	.84	621	.57	.200	165	165
SEP 21...	180	330	9.5	.8	8.2	680	.92	595	.78	.350	123	108

YELLOWSTONE RIVER BASIN

06256900 DRY CREEK NEAR BONNEVILLE, WY

LOCATION.--Lat 43°16'52", long 107°54'45", in NW¼NW¼ sec.8, T.38 N., R.92 W., Fremont County, Hydrologic Unit 10080006, on left bank 0.4 mi (0.6 km) upstream from mouth and 8.0 mi (12.9 km) east of Bonneville.

DRAINAGE AREA.--52.6 mi² (136 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1965 to September 1981 (discontinued).

GAGE.--Water-stage recorder. Altitude of gage is 5,010 ft (1,527 m), from topographic map.

REMARKS.--Records fair. Diversions for irrigation of about 200 acres (81 hm²) above station.

AVERAGE DISCHARGE.--16 years, 2.71 ft³/s (0.071 m³/s), 1,960 acre-ft/yr (2.42 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,650 ft³/s (46.7 m³/s) June 17, 1967, gage height, 12.41 ft (3.783 m), from rating curve extended above 160 ft³/s (4.53 m³/s) on basis of slope-area measurement of peak flow; no flow for most of each year.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 50 ft³/s (1.42 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)		Gage height (ft) (m)	
May 22	2230	221	6.26	6.20	1.890
July 26	2030	*359	10.2	6.97	2.124

No flow for many days.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.00	.00	.00	.00	.00	6.0	.00	.00	.00
2	.00	.00	.00	.00	.00	.00	.00	.00	4.6	.00	.00	.00
3	.00	.00	.00	.00	.00	.00	.00	.00	1.5	.42	.00	.00
4	.00	.00	.00	.00	.00	.00	.00	.00	1.3	.46	.00	.00
5	.00	.00	.00	.00	.00	.00	.00	.00	.72	.00	.00	.00
6	.00	.00	.00	.00	.00	.00	.00	.00	.05	.00	.00	.00
7	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
8	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
9	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
10	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
11	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
12	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
13	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
14	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
15	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
16	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
17	.00	.00	.00	.00	.00	.00	.00	.00	.00	.03	.00	.00
18	.00	.00	.00	.00	.00	.00	.00	3.0	.00	.16	.00	.00
19	.00	.00	.00	.00	.00	.00	.00	.21	.00	.00	.00	.00
20	.00	.00	.00	.00	.00	.00	.00	.01	.00	.00	.00	.00
21	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
22	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
23	.00	.00	.00	.00	.00	.00	.00	45	.00	.00	.00	.00
24	.00	.00	.00	.00	.00	.00	.00	20	.00	.00	.00	.00
25	.00	.00	.00	.00	.00	.00	.00	13	.00	.00	.00	.00
26	.00	.00	.00	.00	.00	.00	.00	10	.00	43	.00	.00
27	.00	.00	.00	.00	.00	.00	.00	16	.00	2.9	.00	.00
28	.00	.00	.00	.00	.00	.00	.00	9.6	.00	.00	.00	.00
29	.00	.00	.00	.00	---	.00	.00	8.0	.00	.00	.00	.00
30	.00	.00	.00	.00	---	.00	.00	8.0	.00	.00	.00	.00
31	.00	---	.00	.00	---	.00	---	6.0	---	.00	.00	---
TOTAL	.00	.00	.00	.00	.00	.00	.00	181.82	14.17	46.97	.00	.00
MEAN	.000	.000	.000	.000	.000	.000	.000	5.87	.47	1.52	.000	.000
MAX	.00	.00	.00	.00	.00	.00	.00	45	6.0	43	.00	.00
MIN	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
AC-FT	.00	.00	.00	.00	.00	.00	.00	361	28	93	.00	.00
CAL YR 1980	TOTAL	255.43	MEAN .70	MAX 39	MIN .00	AC-FT 507						
WTR YR 1981	TOTAL	242.96	MEAN .67	MAX 45	MIN .00	AC-FT 482						

06256900 DRY CREEK NEAR BONNEVILLE, WY--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1965 to September 1981 (discontinued).

PERIOD OF DAILY RECORD.--

SUSPENDED-SEDIMENT DISCHARGE: September 1965 to September 1981 (discontinued).

REMARKS.--No flow observed Oct. 2, Nov. 7, Dec. 1, Jan. 8, Feb. 6, Apr. 13, May 12, Aug. 6, Sept. 1.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SEDIMENT CONCENTRATIONS: Maximum daily mean, not determined; minimum daily mean, no flow for many days each year.

SEDIMENT LOADS: Maximum daily, 19,000 tons (17,200 tonnes) June 15, 1967; minimum daily, 0 tons on many days each year.

EXTREMES FOR CURRENT YEAR.--

SEDIMENT CONCENTRATIONS: Maximum daily mean, not determined; minimum daily mean, no flow for many days during year.

SEDIMENT LOADS: Maximum daily, 224 tons (203 tonnes) May 23; minimum daily, 0 tons on many days during year.

WATER QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	HARD- NESS (MG/L AS CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LITY LAB (MG/L AS CACO3)
MAY 27...	1125	18	325	8.2	15.0	120	38	6.6	17	.7	2.8	77
JUN 02...	0910	6.0	340	8.2	12.0	150	45	9.0	17	.6	1.7	110

DATE	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)	SOLIDS, DIS- SOLVED (TONS PER DAY)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHORUS TOTAL (MG/L AS PO4)	SEDI- MENT, SUS- PENDE (MG/L)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (T/DAY)
MAY 27...	69	2.4	.2	17	200	.27	9.8	.17	.330	1.0	910	45
JUN 02...	65	1.9	.2	19	225	.31	3.6	.00	--	--	116	1.9

MONTHLY AND ANNUAL SUMMARY OF WATER AND SUSPENDED-SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

SUSPENDED SEDIMENT

MONTH	DISCHARGE (CFS-DAYS)	RUNOFF (ACRE-FEET)	DISCHARGE (TONS)	DAILY DISCHARGE (TONS)			CONCENTRATION (MG/L)	
				MEAN	MAXIMUM	MINIMUM	WEIGHTED MEAN	MAXIMUM OBSERVED
OCTOBER 1980...	0	0	0	0	0	0		
NOVEMBER.....	0	0	0	0	0	0		
DECEMBER.....	0	0	0	0	0	0		
JANUARY 1981...	0	0	0	0	0	0		
FEBRUARY.....	0	0	0	0	0	0		
MARCH.....	0	0	0	0	0	0		
APRIL.....	0	0	0	0	0	0		
MAY.....	181.82	361	432.87	13.96	224	0		
JUNE.....	14.17	28.1	11.67	0.39	5.7	0		
JULY.....	46.97	93.2	203.64	6.57	201	0		
AUGUST.....	0	0	0	0	0	0		
SEPTEMBER.....	0	0	0	0	0	0		
WATER YEAR...	242.96	482	648.18	1.78	224	0		

YELLOWSTONE RIVER BASIN

06256900 DRY CREEK NEAR BONNEVILLE, WY--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	TIME	TEMPER- ATURE (DEG C)	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SED. SUSP. FALL DIAM. % FINER THAN .004 MM	SED. SUSP. FALL DIAM. % FINER THAN .016 MM	SED. SUSP. FALL DIAM. % FINER THAN .062 MM	SED. SUSP. FALL DIAM. % FINER THAN .125 MM	SED. SUSP. FALL DIAM. % FINER THAN .250 MM	SED. SUSP. FALL DIAM. % FINER THAN .500 MM	BED MAT. FALL DIAM. % FINER THAN .062 MM
MAY 27...	1125	15.0	18	50	60	66	78	98	100	2

DATE	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. FALL DIAM. % FINER THAN 1.00 MM	BED MAT. SIEVE DIAM. % FINER THAN 2.00 MM	BED MAT. SIEVE DIAM. % FINER THAN 4.00 MM	BED MAT. SIEVE DIAM. % FINER THAN 8.00 MM	BED MAT. SIEVE DIAM. % FINER THAN 16.0 MM	BED MAT. SIEVE DIAM. % FINER THAN 32.0 MM
MAY 27...	3	7	27	37	50	60	68	82	100

06258000 MUDDY CREEK NEAR SHOSHONI, WY

LOCATION.--Lat 43°17'10", long 108°16'30", in NE¼NW¼ sec.34, T.4 N., R.5 E., Fremont County, Hydrologic Unit 10080005, on left bank 2.5 mi (4.0 km) upstream from normal high-water line of Boysen Reservoir at elevation 4,725 ft (1,440 m) and 9.0 mi (14.5 km) northwest of Shoshoni.

DRAINAGE AREA.--332 mi² (860 km²).

PERIOD OF RECORD.--March 1949 to September 1968, October 1972 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 4,780 ft (1,457 m), from topographic map. Prior to May 13, 1949, water-stage recorder at site 50 ft (15 m) upstream at different datum.

REMARKS.--Records good except those for winter periods and periods of no gage-height record, Oct. 1, 2, Jan. 3-8, Aug. 8-18, Sept. 22-30, which are poor. Natural flow of stream affected by regulation of Bureau of Indian Affairs reservoir system in the headwaters, diversions for irrigation, and return flow from irrigated areas.

AVERAGE DISCHARGE.--28 years (water years 1950-68, 1973-81), 20.7 ft³/s (0.586 m³/s), 15,000 acre-ft/yr (18.5 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,430 ft³/s (40.5 m³/s) July 22, 1951, gage height, 7.50 ft (2.286 m); no flow at times in some years.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of July 24, 1923, reached a discharge of 16,300 ft³/s (462 m³/s), from slope-area measurement of peak flow.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, about 96 ft³/s (2.72 m³/s) occurred sometime during the period of Aug. 9-15, gage height, unknown; maximum gage height, 3.32 ft (1.012 m) Feb. 25 (backwater from ice); minimum daily discharge, 7.0 ft³/s (0.198 m³/s) Feb. 2.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	29	12	11	8.0	7.8	11	9.6	22	21	37	84	36
2	26	12	11	8.1	7.0	12	9.2	21	20	35	83	33
3	25	12	10	8.1	7.4	13	9.6	28	32	24	84	33
4	26	12	10	8.1	7.8	16	42	37	26	27	85	34
5	20	11	11	8.1	8.0	15	65	27	20	27	85	37
6	17	11	11	8.1	8.4	13	66	28	26	24	86	46
7	16	11	10	8.1	8.2	13	69	26	25	21	86	49
8	16	10	10	8.1	8.2	12	70	25	23	33	90	50
9	16	10	10	8.1	8.4	12	71	23	29	35	92	42
10	15	9.7	10	8.0	8.4	12	65	21	36	32	94	43
11	15	9.6	10	7.8	8.4	12	47	22	28	37	96	52
12	15	9.6	11	7.6	8.2	11	43	22	40	36	94	51
13	15	9.8	11	7.6	8.2	11	55	22	46	39	92	49
14	14	9.8	10	7.6	8.2	11	55	23	48	35	92	53
15	22	9.6	10	7.8	8.0	11	20	21	54	32	94	53
16	21	9.2	10	7.8	8.0	10	13	22	57	34	92	48
17	17	8.8	9.8	7.8	8.0	10	11	42	49	29	90	37
18	16	8.4	9.6	7.6	8.0	11	24	51	49	33	88	40
19	14	8.2	9.4	7.2	8.2	10	40	44	49	45	85	42
20	14	8.6	9.4	7.2	8.2	10	51	47	43	45	79	43
21	14	8.8	9.2	7.2	8.4	10	46	37	46	50	81	40
22	13	9.2	9.2	7.4	8.6	10	37	31	48	49	84	38
23	13	9.4	9.0	7.6	9.0	10	40	48	49	43	82	36
24	13	9.4	8.8	7.6	9.0	9.6	39	46	40	41	76	37
25	13	9.2	8.6	7.8	9.0	9.2	39	45	34	46	68	38
26	14	9.0	8.6	7.8	9.4	10	39	46	38	71	59	38
27	13	9.2	8.4	7.6	9.8	11	38	47	38	89	51	37
28	12	9.6	8.4	7.8	10	14	32	40	39	81	47	38
29	12	10	8.4	7.8	---	13	31	29	40	82	35	37
30	12	11	8.2	8.0	---	12	24	21	38	82	38	38
31	11	---	8.0	8.0	---	11	---	25	---	83	37	---
TOTAL	509	297.1	299.0	241.4	234.2	355.8	1200.4	989	1131	1377	2429	1248
MEAN	16.4	9.90	9.65	7.79	8.36	11.5	40.0	31.9	37.7	44.4	78.4	41.6
MAX	29	12	11	8.1	10	16	71	51	57	89	96	53
MIN	11	8.2	8.0	7.2	7.0	9.2	9.2	21	20	21	35	33
AC-FT	1010	589	593	479	465	706	2380	1960	2240	2730	4820	2480

CAL YR 1980 TOTAL 7651.3 MEAN 20.9 MAX 48 MIN 5.4 AC-FT 15180
WTR YR 1981 TOTAL 10310.9 MEAN 28.2 MAX 96 MIN 7.0 AC-FT 20450

YELLOWSTONE RIVER BASIN

06258010 COTTONWOOD DRAIN NEAR SHOSHONI, WY

LOCATION.--Lat 43°18'08", long 108°16'52", in NW¼NW¼NW¼ sec.27, T.4 N., R.5 E., Fremont County, Hydrologic Unit 10080005, at concrete drop structure, 1.3 mi (2.1 km) upstream from high-water line of Lake Cameahwait, and 9.6 mi (15.4 km) northwest of Shoshoni.

PERIOD OF RECORD.--June 1979 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	TEMPER- ATURE (DEG C)	SEDI- MENT, SUS- PENDED (MG/L)	SEDI- MENT, DIS- CHARGE, SUS- PENDED (T/DAY)
MAY					
11...	1100	18	12.0	59	2.9
JUN					
17...	1030	36	14.5	170	17
JUL					
15...	0725	4.3	19.0	34	.39
AUG					
19...	0840	15	20.0	36	1.5

06259000 WIND RIVER BELOW BOYSEN RESERVOIR, WY

LOCATION.--Lat 43°25'30", long 108°10'42", in NW¼SW¼ sec.9, T.5 N., R.6 E., Fremont County, Hydrologic Unit 10080005, on right bank 0.6 mi (1.0 km) downstream from Boysen Dam and 13 mi (21 km) north of Shoshoni.

DRAINAGE AREA.--7,701 mi² (19,946 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--May 1951 to current year.

REVISED RECORDS.--WSP 1709: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 4,608.58 ft (1,404.695 m), National Geodetic Vertical Datum of 1929.

REMARKS.--Records good. Flow regulated by Boysen Reservoir (station number 06258900) since October 1951. Natural flow also affected by Bull Lake, Pilot Butte Reservoir, and several small reservoirs, combined capacity, 190,000 acre-ft (234 hm³), and diversions for irrigation of about 196,000 acres (793 km²) above station.

AVERAGE DISCHARGE.--30 years, 1,414 ft³/s (40.04 m³/s), 1,024,000 acre-ft/yr (1,263 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 13,500 ft³/s (382 m³/s) July 7, 1967, gage height, 13.35 ft (4.069 m); minimum daily, 4.7 ft³/s (0.13 m³/s) Apr. 3, 1962.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 2,030 ft³/s (57.5 m³/s) June 9, 12, 17, gage height, 5.86 ft (1.786 m); minimum daily, 712 ft³/s (20.2 m³/s) Apr. 19.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1480	1100	1100	1120	925	924	740	847	934	1410	1250	1150
2	1450	1110	1110	1120	923	927	744	845	941	1580	1240	1390
3	1230	1100	1120	1120	928	931	734	846	940	1590	1240	1600
4	1110	1110	1120	1120	940	913	732	849	934	1440	1240	1420
5	1110	1120	1130	1130	929	907	739	851	937	1210	1240	1080
6	1100	1120	1120	1010	926	853	771	853	933	1210	1240	1080
7	1100	1110	1130	919	922	782	767	860	933	1210	1250	1080
8	974	1110	1110	921	923	780	743	858	1070	1210	1260	1080
9	1110	1110	1120	922	921	781	738	860	1540	1220	1250	1080
10	1100	1110	1110	923	921	783	730	867	1990	1210	1260	1080
11	1110	1110	1110	922	906	789	732	872	1920	1210	1240	1070
12	1110	1110	1100	924	924	792	735	872	1970	1200	1240	1070
13	1120	1110	1110	927	916	796	739	875	1980	1220	1250	1060
14	1110	1110	1110	926	931	792	722	877	1980	1240	1250	1070
15	1120	1110	1110	926	930	788	729	880	1980	1240	1240	1060
16	1130	1110	1110	926	929	783	729	880	1990	1230	1250	1070
17	1130	1120	1110	925	930	776	724	887	1990	1220	1240	1080
18	1130	1120	1120	923	930	775	717	887	2000	1230	1190	1080
19	1120	1120	1110	922	926	775	712	901	2000	1230	1140	1080
20	1120	1120	1110	924	987	775	767	902	2000	1230	1140	1080
21	1110	1120	1110	944	923	772	871	908	2000	1230	1140	1080
22	1110	1120	1110	927	920	767	872	912	2000	1230	1150	1080
23	1110	1120	1120	944	919	767	872	915	1810	1230	1150	1090
24	1110	1120	1120	975	927	762	866	914	1460	1230	1150	1080
25	1110	1110	1120	932	920	762	863	912	1470	1230	1150	1080
26	1110	1110	1120	928	928	756	862	913	1300	1230	1140	1080
27	1120	1100	1120	930	921	763	856	921	1180	1250	1140	1090
28	1110	1100	1120	928	915	756	853	921	1190	1250	1140	1090
29	1120	1090	1120	930	---	756	855	935	1180	1240	1140	1090
30	1110	1110	1120	931	---	739	848	928	1180	1230	1150	1090
31	1110	---	1120	927	---	748	---	945	---	1240	1140	---
TOTAL	35194	33340	34570	29846	25940	24770	23362	27493	45732	39130	37240	33610
MEAN	1135	1111	1115	963	926	799	779	887	1524	1262	1201	1120
MAX	1480	1120	1130	1130	987	931	872	945	2000	1590	1260	1600
MIN	974	1090	1100	919	906	739	712	845	933	1200	1140	1060
AC-FT	69810	66130	68570	59200	51450	49130	46340	54530	90710	77610	73870	66670
CAL YR 1980	TOTAL	576906	MEAN	1576	MAX	6420	MIN	802	AC-FT	1144000		
WTR YR 1981	TOTAL	390227	MEAN	1069	MAX	2000	MIN	712	AC-FT	774000		

WATER-QUALITY RECORDS

WATER TEMPERATURES: December 1953 to September 1954, December 1960 to September 1981 (discontinued).

WATER TEMPERATURES: Maximum, 22.0°C on several days in 1961, 1970, 1971; minimum, 0.0°C Jan. 6-9, 1976.

WATER TEMPERATURES: Maximum, 20.0°C Aug. 15; minimum, 1.0°C Dec. 24.

[illegible]

WATER-QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

[illegible]

YELLOWSTONE RIVER BASIN

06259000 WIND RIVER BELOW BOYSEN RESERVOIR, WY--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	CARBON, ORGANIC SUS- PENDED TOTAL (MG/L AS C)	PHYTO- PLANK- TON, TOTAL (CELLS PER ML)	PERI- PHYTON BIOMASS ASH WEIGHT G/SQ M	PERI- PHYTON BIOMASS TOTAL DRY WEIGHT G/SQ M	BIOMASS CHLORO- PHYLL RATIO PERI- PHYTON (UNITS)	CHLOR-A PERI- PHYTON CHROMO- GRAPHIC FLUOROM (MG/M2)	CHLOR-B PERI- PHYTON CHROMO- GRAPHIC FLUOROM (MG/M2)	SEDI- MENT, DIS- CHARGE, SUS- PENDED (MG/L)	SEDI- MENT, DIS- CHARGE, SUS- PENDED (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
OCT 02...	--	--	2.28	3.70	394	3.60	2.15	16	63	97
NOV 03...	.5	490	--	--	--	--	--	15	45	97
DEC 04...	--	--	--	--	--	--	--	--	--	--
JAN 05...	.1	--	--	--	--	--	--	9	27	67
FEB 03...	--	--	--	--	--	--	--	--	--	--
MAR 02...	--	11000	--	--	--	--	--	2	5.0	79
APR 02...	--	--	--	--	--	--	--	--	--	--
MAY 04...	.3	2900	--	--	--	--	--	25	58	83
JUN 02...	--	--	--	--	--	--	--	--	--	--
JUL 01...	.7	790	--	--	--	--	--	6	19	86
AUG 03...	--	--	--	--	--	--	--	--	--	--
SEP 02...	--	16000	--	--	--	--	--	7	22	62

DATE	TIME	ARSENIC TOTAL (UG/L AS AS)	ARSENIC SUS- PENDED TOTAL (UG/L AS AS)	ARSENIC DIS- SOLVED (UG/L AS AS)	BARIUM, TOTAL RECOV- ERABLE (UG/L AS BA)	BARIUM, SUS- PENDED RECOV- ERABLE (UG/L AS BA)	BARIUM, DIS- SOLVED (UG/L AS BA)	CADMIUM TOTAL RECOV- ERABLE (UG/L AS CD)	CADMIUM SUS- PENDED RECOV- ERABLE (UG/L AS CD)	CADMIUM DIS- SOLVED (UG/L AS CD)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR)
NOV 03...	0845	2	0	3	100	40	60	1	0	2	0
JAN 05...	1130	2	0	2	100	40	60	0	--	<1	0
MAY 04...	0940	2	0	2	100	40	60	0	--	<1	0
JUL 01...	1000	2	1	1	0	0	100	0	--	<1	0

DATE	CHRO- MIUM, SUS- PENDED RECOV. (UG/L AS CR)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR)	COBALT, TOTAL RECOV- ERABLE (UG/L AS CO)	COBALT, DIS- SOLVED (UG/L AS CO)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU)	COPPER, SUS- PENDED RECOV- ERABLE (UG/L AS CU)	COPPER, DIS- SOLVED (UG/L AS CU)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	IRON, SUS- PENDED RECOV- ERABLE (UG/L AS FE)	IRON, DIS- SOLVED (UG/L AS FE)	LEAD, TOTAL RECOV- ERABLE (UG/L AS PB)
NOV 03...	0	0	0	<3	6	0	9	160	140	20	4
JAN 05...	0	0	0	<3	15	11	4	130	110	20	5
MAY 04...	0	10	0	<3	220	80	140	120	100	20	0
JUL 01...	0	0	1	<3	110	0	130	130	100	30	9

YELLOWSTONE RIVER BASIN

81

06259000 WIND RIVER BELOW BOYSEN RESERVOIR, WY--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	LEAD, SUS- PENDE RECov- ERABLE (UG/L AS PB)	LEAD, DIS- SOLVED (UG/L AS PB)	MANGA- NESE, TOTAL RECov- ERABLE (UG/L AS MN)	MANGA- NESE, SUS- PENDE RECov. (UG/L AS MN)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	MERCURY TOTAL RECov- ERABLE (UG/L AS HG)	MERCURY SUS- PENDE RECov- ERABLE (UG/L AS HG)	MERCURY DIS- SOLVED (UG/L AS HG)	NICKEL, TOTAL RECov- ERABLE (UG/L AS NI)	NICKEL, SUS- PENDE RECov- ERABLE (UG/L AS NI)
NOV 03...	0	4	20	10	7	--	--	.1	6	4
JAN 05...	1	4	30	20	10	.1	.1	.0	0	0
MAY 04...	0	2	20	10	10	15	6.0	9.0	54	24
JUL 01...	9	0	10	0	20	10	5.0	5.0	26	8

DATE	NICKEL, DIS- SOLVED (UG/L AS NI)	SELE- NIUM, TOTAL (UG/L AS SE)	SELE- NIUM, SUS- PENDE TOTAL (UG/L AS SE)	SELE- NIUM, DIS- SOLVED (UG/L AS SE)	SILVER, TOTAL RECov- ERABLE (UG/L AS AG)	SILVER, SUS- PENDE RECov- ERABLE (UG/L AS AG)	SILVER, DIS- SOLVED (UG/L AS AG)	ZINC, TOTAL RECov- ERABLE (UG/L AS ZN)	ZINC, SUS- PENDE RECov- ERABLE (UG/L AS ZN)	ZINC, DIS- SOLVED (UG/L AS ZN)
NOV 03...	2	1	1.	0	0	0	0	10	0	10
JAN 05...	0	1	0	1	0	0	0	20	10	10
MAY 04...	30	1	0	1	0	0	0	30	20	10
JUL 01...	18	1	0	1	0	0	0	10	0	10

DATE	TIME	GROSS ALPHA, DIS- SOLVED (UG/L AS U-NAT)	GROSS ALPHA, SUSP. TOTAL (UG/L AS U-NAT)	GROSS BETA, DIS- SOLVED (PCI/L AS CS-137)	GROSS BETA, SUSP. TOTAL (PCI/L AS CS-137)	GROSS BETA, DIS- SOLVED (PCI/L AS YT-90)	GROSS BETA, SUSP. TOTAL (PCI/L AS YT-90)	RADIUM 226, DIS- SOLVED, RADON METHOD (PCI/L)	URANIUM NATURAL DIS- SOLVED (UG/L AS U)	GROSS ALPHA, DIS- SOLVED (PCI/L AS U-NAT)	GROSS ALPHA, SUSP. TOTAL (PCI/L AS U-NAT)
OCT 02...	1000	16	<.4	5.3	1.0	5.1	1.0	.07	8.4	11	<.3

YELLOWSTONE RIVER BASIN

06259000 WIND RIVER BELOW BOYSEN RESERVOIR, WY--Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	556	567	589	627	693	655	705	703	713	620	623	593
2	567	567	597	624	685	657	697	728	713	633	601	595
3	556	570	595	632	684	663	726	722	704	617	623	582
4	544	574	592	625	680	649	708	709	716	611	585	613
5	547	567	600	657	680	649	693	720	710	609	623	624
6	547	575	605	666	680	652	690	725	710	630	598	616
7	551	578	603	667	678	679	704	704	696	611	598	591
8	544	576	598	661	680	660	698	728	704	627	609	619
9	544	579	601	656	681	644	693	707	704	614	609	604
10	559	577	604	667	686	671	693	701	699	617	620	621
11	552	580	607	672	655	647	701	717	693	603	609	616
12	555	580	604	669	655	652	690	725	688	649	598	607
13	554	574	604	666	668	652	693	714	699	598	604	607
14	558	580	606	682	655	655	685	720	699	605	598	590
15	559	580	601	680	657	660	674	714	677	598	598	618
16	565	585	606	677	657	657	677	714	692	633	577	615
17	560	580	607	676	647	785	688	704	692	628	579	610
18	558	582	633	676	655	902	690	704	687	623	582	612
19	561	587	638	672	655	770	685	712	671	582	585	601
20	561	590	616	676	663	693	685	717	655	588	585	604
21	554	580	616	672	660	789	685	720	652	596	588	624
22	562	580	622	670	650	723	685	717	636	612	588	624
23	591	580	624	665	652	690	696	717	647	617	577	635
24	582	585	643	670	652	696	686	712	652	623	583	638
25	572	580	632	669	650	682	678	717	671	634	627	668
26	569	590	630	676	655	687	688	717	660	598	621	629
27	574	585	615	673	655	719	683	717	665	614	604	640
28	572	585	621	669	657	714	683	709	687	617	590	632
29	572	590	621	667	---	708	694	729	639	625	630	601
30	572	584	632	669	---	708	683	718	633	620	616	610
31	572	---	628	669	---	705	---	724	---	626	604	---
MEAN	561	580	613	664	665	693	691	716	682	615	601	615
WTR YR 1981	MEAN	641	MAX	902	MIN	544						

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	15.0	9.0	5.0	2.0	2.0	3.5	5.5	7.0	13.0	16.0	16.5	17.5
2	15.0	9.0	4.0	2.0	2.0	3.5	5.5	10.0	11.5	16.0	17.0	17.5
3	14.0	9.0	4.0	2.0	2.0	3.5	5.5	6.5	12.0	16.0	18.5	17.5
4	15.0	9.0	4.0	2.0	2.0	3.5	5.5	9.0	12.5	16.5	18.0	18.5
5	14.0	9.0	4.0	2.0	2.0	3.5	5.0	9.0	12.5	16.5	16.5	18.0
6	14.0	9.0	4.0	2.0	2.0	4.0	5.5	9.5	13.0	16.5	18.0	17.5
7	14.0	9.0	4.0	2.0	2.0	4.5	5.5	9.5	14.5	16.5	18.0	17.5
8	14.0	9.0	4.0	2.0	2.0	4.5	5.5	9.5	14.5	16.5	18.0	17.0
9	14.0	9.0	3.0	2.0	2.0	4.5	6.0	10.0	14.5	16.5	18.5	17.0
10	14.0	9.0	2.0	2.0	2.0	4.5	5.5	10.0	15.0	16.5	17.0	16.5
11	14.0	9.0	3.0	2.0	2.0	4.5	5.5	10.0	15.0	17.0	17.0	16.5
12	14.0	9.0	2.0	2.0	2.0	4.5	5.5	10.0	15.5	16.0	17.0	17.0
13	14.0	9.0	2.0	2.0	2.0	4.5	5.5	10.0	15.5	17.0	17.0	17.5
14	14.0	8.0	3.0	2.0	2.0	4.5	5.5	10.0	15.5	17.0	17.5	16.5
15	14.0	8.0	3.0	2.0	2.0	4.5	5.5	10.0	15.5	17.0	20.0	16.5
16	14.0	8.0	2.0	2.0	2.0	4.5	6.0	10.5	15.5	16.5	18.5	16.5
17	14.0	8.0	3.0	2.0	2.0	4.5	6.0	10.0	15.5	16.5	18.5	16.5
18	14.0	6.0	3.0	2.0	2.0	4.5	6.5	10.0	15.5	16.5	18.5	16.5
19	12.0	6.0	4.0	2.0	2.0	4.5	6.5	10.0	15.5	17.0	18.5	16.5
20	12.0	6.0	3.0	2.0	2.0	4.5	5.5	10.5	15.5	17.0	18.5	16.5
21	12.0	6.0	4.0	2.0	2.0	4.5	6.0	10.5	15.5	17.0	18.5	17.0
22	12.0	6.0	2.0	2.0	2.0	4.5	6.0	10.5	15.5	17.0	18.5	16.0
23	10.0	6.0	3.0	2.0	2.0	4.5	6.0	11.0	15.5	17.0	18.5	15.5
24	10.0	5.0	1.0	2.0	2.0	4.5	6.5	11.0	15.5	17.0	18.5	15.5
25	10.0	5.0	2.0	2.0	3.5	4.5	7.0	11.0	16.0	15.5	18.5	15.5
26	10.0	5.0	2.0	2.0	3.5	4.5	6.5	11.0	16.5	16.5	18.0	15.5
27	10.0	5.0	2.0	2.0	3.5	4.5	6.5	11.0	15.5	16.5	17.5	15.5
28	9.0	5.0	2.0	2.0	3.5	4.5	6.5	11.0	16.0	16.5	17.5	15.5
29	9.0	5.0	3.0	2.0	---	5.0	6.5	11.0	16.0	16.5	17.5	15.5
30	9.0	5.0	3.0	2.0	---	5.5	7.0	11.0	16.0	16.5	17.5	15.0
31	9.0	---	3.0	2.0	---	5.0	---	13.0	---	16.5	17.5	---
MEAN	12.5	7.5	3.0	2.0	2.0	4.5	6.0	10.0	15.0	16.5	18.0	16.5
WTR YR 1981	MEAN	9.5	MAX	20.0	MIN	1.0						

06259000 WIND RIVER BELOW BOYSEN RESERVOIR, WY--Continued

QUALITATIVE AND ASSOCIATED QUANTITATIVE ANALYSES OF BIOLOGICAL DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

PHYTOPLANKTON ANALYSES

DATE TIME	NOV 3,80 0845	MAR 2,81 1115	MAY 4,81 0940	JUL 1,81 1000	SEP 2,81 0910
TOTAL CELLS/ML	490	11000	2900	790	16000
DIVERSITY: DIVISION	1.2	0.2	0.8	0.6	0.1
...CLASS	1.2	0.2	0.8	0.6	0.1
...ORDER	1.7	0.2	0.9	2.1	0.1
...FAMILY	1.8	0.2	0.9	2.1	0.1
...GENUS	1.9	0.2	1.0	2.2	0.1

ORGANISM	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT
BACILLARIOPHYTA (DIATOMS)										
..BACILLARIOPHYCEAE										
...ACHNANTHALES										
...ACHNANTHACEAE										
....ACHNANTHES	--	-	--	-	26	1	--	-	--	-
....COCCONEIS	--	-	--	-	--	-	--	-	*	0
....RHOICOSPHENIA	--	-	--	-	--	-	26	3	*	0
..BACILLARIALES										
...NITZSCHIAEAE										
....NITZSCHIA	13	3	--	-	--	-	--	-	--	-
..EUPODISCALES										
...COSCINODISCACEAE										
....CYCLOTELLA	64	13	11000#	98	--	-	26	3	--	-
....STEPHANODISCUS	13	3	--	-	26	1	13	2	--	-
..FRAGILARIALES										
...FRAGILARIACEAE										
....ASTERIONELLA	--	-	--	-	--	-	52	7	--	-
....DIATOMA	--	-	--	-	170	6	--	-	86	1
..NAVICULALES										
...GOMPHONEMACEAE										
....GOMPHONEMA	--	-	--	-	--	-	--	-	*	0
...NAVICULACEAE										
....NAVICULA	26	5	--	-	39	1	--	-	--	-
CHLOROPHYTA (GREEN ALGAE)										
..CHLOROPHYCEAE										
...CHLOROCOCCALES										
...CHLOROCOCCACEAE										
....SCHROEDERIA	13	3	--	-	--	-	--	-	--	-
...OOCYSTACEAE										
....ANKISTRODESMUS	26	5	--	-	--	-	--	-	--	-
....SELENASTRUM	--	-	--	-	130	4	--	-	--	-
CRYPTOPHYTA (CRYPTOMONADS)										
..CRYPTOPHYCEAE										
...CRYPTOMONADALES										
...CRYPTOCHRYSIDACEAE										
....CHROOMONAS	--	-	--	-	*	0	--	-	--	-
...CRYPTOMONADACEAE										
....CRYPTOMONAS	--	-	100	1	*	0	--	-	--	-
CYANOPHYTA (BLUE-GREEN ALGAE)										
..CYANOPHYCEAE										
...CHROOCOCCALES										
...CHROOCOCCACEAE										
....AGMENELLUM	--	-	--	-	2500#	85	--	-	--	-
....ANACYSTIS	26	5	--	-	26	1	150#	20	--	-
...NOSTOCALES										
...NOSTOCACEAE										
....APHANIZOMENON	310#	63	--	-	--	-	280#	36	15000#	99
..OSCILLATORIALES										
...OSCILLATORIACEAE										
....OSCILLATORIA	--	-	--	-	--	-	230#	30	--	-
PYRRHOPHYTA (FIRE ALGAE)										
..DINOPHYCEAE										
...DINOKONTAE										
...GLENODINIACEAE										
....GLENODINIUM	--	-	100	1	--	-	--	-	--	-

NOTE: # - DOMINANT ORGANISM; EQUAL TO OR GREATER THAN 15%

* - OBSERVED ORGANISM, MAY NOT HAVE BEEN COUNTED; LESS THAN 1/2%

YELLOWSTONE RIVER BASIN

06260000 SOUTH FORK OWL CREEK NEAR ANCHOR, WY

LOCATION.--Lat 43°40'01", long 108°51'18", in sec.28, T.43 N., R.100 W., Hot Springs County, Hydrologic Unit 10080007, on left bank 0.2 mi (0.3 km) upstream from normal high-water line of Anchor Reservoir, 1.6 mi (2.6 km) upstream from Anchor Dam, 2.6 mi (4.2 km) southwest of Anchor, and 33 mi (53 km) west of Thermopolis.

DRAINAGE AREA.--85.5 mi² (221 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--April to May 1932, August 1939 to September 1943 (no winter records except 1941 water year), April 1959 to current year.

REVISED RECORDS.--WDR WY-76-1: Drainage area.

GAGE.--Water-stage recorder and concrete flume. Datum of gage is 6,453.11 ft (1,966.908 m), National Geodetic Vertical Datum of 1929. See WSP 1916 for history of changes prior to Aug. 11, 1965. Aug. 11, 1965, to Nov. 3, 1968, at present site and datum. Nov. 4, 1968, to June 5, 1970, at site 0.7 mi (1.1 km) upstream on left bank at datum 51.36 ft (15.655 m) higher. June 6, 1970, to Sept. 30, 1972, at site 0.7 mi (1.1 km) upstream on right bank at datum 51.22 ft (15.612 m) higher. Oct. 1, 1972, to June 5, 1978, at site 0.7 mi (1.1 km) upstream on left bank at datum 51.36 ft (15.655 m) higher.

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

AVERAGE DISCHARGE.--23 years (water years 1941, 1960-81), 34.8 ft³/s (0.986 m³/s), 25,210 acre-ft/yr (31.1 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,940 ft³/s (54.9 m³/s) July 25, 1941, gage height, 8.73 ft (2.661 m), site and datum then in use, from rating curve extended above 640 ft³/s (18.1 m³/s) on basis of slope-area measurement of peak flow; no flow Jan. 10-17, 1979.

EXTREMES FOR CURRENT YEAR.--Peak discharge above base of 200 ft³/s (5.66 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
June 9	0300	*814 23.1	3.68 1.121

Minimum daily discharge, 2.0 ft³/s (0.057 m³/s) Feb. 10.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	13	7.8	3.4	6.0	2.8	3.0	6.8	56	248	79	18	10
2	13	7.8	3.5	6.4	3.0	3.3	6.0	56	218	69	17	10
3	13	6.4	4.0	6.4	3.2	3.2	5.6	55	246	73	17	10
4	13	7.0	5.0	6.4	3.2	3.7	5.6	40	226	67	17	9.8
5	12	7.4	4.8	6.2	3.0	3.5	7.0	26	240	66	16	10
6	12	7.0	4.3	6.2	2.8	3.3	6.6	25	322	63	15	15
7	12	7.6	3.9	6.2	2.6	3.5	6.0	24	314	72	18	11
8	12	7.6	4.0	6.2	2.4	3.8	6.4	20	295	53	16	11
9	12	7.2	4.2	6.2	2.2	3.3	6.8	20	459	42	21	11
10	12	6.6	4.6	6.2	2.0	3.9	7.2	21	207	44	20	11
11	12	5.8	5.0	6.0	2.4	4.2	7.4	23	174	43	17	11
12	12	5.0	4.8	5.8	3.0	4.5	7.2	20	198	41	16	11
13	12	4.7	5.0	5.8	3.1	5.0	6.3	19	193	40	15	11
14	12	4.7	5.4	5.0	3.2	5.0	6.0	18	124	36	16	11
15	11	4.6	5.8	4.7	3.3	5.5	8.0	27	105	31	17	11
16	10	4.6	6.4	3.8	3.4	6.1	15	30	105	29	17	12
17	10	4.2	5.6	4.1	3.4	5.4	24	33	110	28	16	11
18	11	4.2	4.6	4.4	3.6	4.4	27	37	83	39	14	12
19	11	4.3	4.4	4.6	3.9	4.7	25	37	91	30	13	11
20	11	4.5	4.0	4.9	3.6	5.0	12	56	102	26	12	11
21	11	4.8	4.6	5.3	3.1	5.0	11	55	100	24	14	11
22	10	5.2	5.8	5.6	3.5	5.4	11	54	113	24	14	10
23	9.0	5.0	5.6	6.0	3.5	5.4	11	60	129	22	12	10
24	9.0	4.7	5.2	5.2	3.4	6.0	25	86	116	21	11	10
25	9.6	4.2	5.7	4.6	3.3	7.0	39	106	106	30	11	11
26	8.6	4.4	6.6	4.0	3.2	6.6	40	150	115	37	11	11
27	7.4	4.3	7.6	4.5	3.0	6.0	37	207	113	30	11	9.7
28	7.4	4.8	7.2	4.3	3.0	5.6	25	224	100	24	19	9.3
29	8.0	5.0	7.0	4.1	---	6.0	38	246	88	23	13	9.3
30	8.4	4.1	6.6	3.7	---	5.6	49	248	87	21	11	8.8
31	8.4	---	6.0	3.3	---	6.0	---	290	---	19	10	---
TOTAL	332.8	165.5	160.6	162.1	86.1	148.9	487.9	2369	5127	1246	465	320.9
MEAN	10.7	5.52	5.18	5.23	3.08	4.80	16.3	76.4	171	40.2	15.0	10.7
MAX	13	7.8	7.6	6.4	3.9	7.0	49	290	459	79	21	15
MIN	7.4	4.1	3.4	3.3	2.0	3.0	5.6	18	83	19	10	8.8
AC-FT	660	328	319	322	171	295	968	4700	10170	2470	922	637

CAL YR 1980	TOTAL	13876.87	MEAN	37.9	MAX	536	MIN	.04	AC-FT	27520
WTR YR 1981	TOTAL	11071.80	MEAN	30.3	MAX	459	MIN	2.0	AC-FT	21960

YELLOWSTONE RIVER BASIN

85

06260000 SOUTH FORK OWL CREEK NEAR ANCHOR, WY--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1974 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	TEMPER- ATURE (DEG C)
OCT				
02...	1315	12	160	5.5
NOV				
03...	1240	6.3	180	1.0
DEC				
09...	1200	4.2	190	.0
JAN				
05...	1315	6.1	180	.0
FEB				
18...	1310	3.6	180	.0
MAR				
12...	1310	4.5	200	.0
APR				
13...	1315	6.3	195	3.0
MAY				
06...	1230	24	100	11.0
JUN				
03...	2400	307	100	10.0
19...	1010	85	105	9.0
JUL				
29...	1230	22	175	15.0

YELLOWSTONE RIVER BASIN

06260400 SOUTH FORK OWL CREEK BELOW ANCHOR RESERVOIR, WY

LOCATION.--Lat 43°39'57", long 108°47'34", in sec.25, T.43 N., R.100 W., Hot Springs County, Hydrologic Unit 10080007, on left bank 1.6 mi (2.6 km) downstream from Anchor Dam and 30 mi (48 km) west of Thermopolis.

DRAINAGE AREA.--131 mi² (339 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--April 1959 to current year.

REVISED RECORDS.--WDR WY-76-1: Drainage area.

GAGE.--Water-stage recorder. Altitude of gage is 6,120 ft (1,865 m), from topographic map.

REMARKS.--Records good except those for winter period, which are poor. Flow regulated by Anchor Dam (see station 06260300). No diversion above station.

AVERAGE DISCHARGE.--22 years, 21.5 ft³/s (0.609 m³/s), 15,580 acre-ft/yr (19.2 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 373 ft³/s (10.6 m³/s) May 26, 1967, gage height, 3.64 ft (1.109 m); no flow at times most years.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 130 ft³/s (3.68 m³/s) June 17, gage height, 3.19 ft (0.972 m); no flow Mar. 31 to Apr. 12.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	9.0	6.2	1.9	2.8	1.6	2.1	.00	9.4	25	117	11	7.8
2	8.6	6.2	2.0	3.0	1.8	2.3	.00	9.8	27	105	11	7.5
3	8.6	5.9	2.1	3.0	1.9	2.2	.00	11	35	100	11	6.8
4	8.2	5.9	2.3	2.9	1.9	2.6	.00	11	60	99	11	7.2
5	8.2	5.9	2.3	3.0	1.8	2.4	.00	11	73	97	11	7.5
6	8.2	5.9	2.1	3.0	1.7	2.6	.00	11	69	97	11	6.5
7	7.8	5.9	2.0	3.0	1.6	2.9	.00	11	80	96	11	5.3
8	8.2	5.9	2.1	3.0	1.3	3.3	.00	9.8	105	92	11	5.9
9	8.2	5.6	2.2	2.9	1.3	3.1	.00	9.4	99	91	12	7.2
10	7.8	5.2	2.4	2.7	1.2	3.4	.00	9.4	105	89	12	7.2
11	7.5	4.7	2.6	2.5	1.3	3.9	.00	9.4	108	88	20	7.5
12	7.5	4.2	2.5	2.1	1.7	4.5	.00	9.4	110	85	11	7.8
13	7.5	3.6	2.7	2.4	1.9	4.0	1.3	9.4	110	86	9.8	7.8
14	7.8	3.4	2.8	1.3	2.1	3.4	3.0	9.4	110	88	10	7.8
15	7.4	3.1	3.0	2.1	2.3	3.4	3.4	11	108	86	13	7.2
16	7.4	3.0	3.1	2.1	2.5	3.0	3.8	16	107	85	12	6.5
17	7.8	2.5	2.8	1.8	2.6	3.0	4.0	26	110	80	11	7.2
18	7.8	2.6	2.6	1.6	2.7	3.6	4.0	26	115	79	9.8	7.5
19	8.2	2.7	2.5	1.6	2.9	2.8	4.3	24	115	78	9.8	7.5
20	8.2	2.8	2.2	1.9	2.6	1.9	4.3	22	108	73	8.6	7.2
21	7.8	2.9	2.5	2.3	2.3	1.9	4.3	20	96	76	9.4	2.2
22	7.8	3.0	2.9	2.4	2.6	1.3	4.3	18	85	76	11	2.2
23	7.8	2.9	2.9	2.6	2.6	1.1	4.3	18	85	70	8.6	4.0
24	7.5	2.7	2.6	2.5	2.4	1.1	4.5	18	83	60	8.6	5.6
25	6.8	2.4	2.8	2.5	2.3	1.0	5.0	18	83	45	8.2	6.5
26	6.2	2.5	3.0	2.4	2.2	1.1	5.3	18	83	39	8.2	6.8
27	6.2	2.4	3.4	2.3	2.2	1.1	5.6	9.0	83	34	8.6	6.8
28	6.4	2.6	3.3	2.3	2.1	1.0	5.6	7.5	83	29	11	7.2
29	6.5	2.7	3.1	2.2	---	1.0	6.8	11	86	21	11	7.8
30	6.5	2.4	3.0	2.0	---	.80	9.4	17	115	19	11	7.5
31	6.2	---	2.8	1.8	---	.00	---	23	---	14	11	---
TOTAL	235.6	117.7	80.5	74.0	57.4	71.80	83.20	442.9	2661	2294	333.6	199.5
MEAN	7.60	3.92	2.60	2.39	2.05	2.32	2.77	14.3	88.7	74.0	10.8	6.65
MAX	9.0	6.2	3.4	3.0	2.9	4.5	9.4	26	115	117	20	7.8
MIN	6.2	2.4	1.9	1.3	1.2	.00	.00	7.5	25	14	8.2	2.2
AC-FT	467	233	160	147	114	142	165	878	5280	4550	662	396
CAL YR 1980	TOTAL	11421.89	MEAN	31.2	MAX	184	MIN	.00	AC-FT	22660		
WTR YR 1981	TOTAL	6651.20	MEAN	18.2	MAX	117	MIN	.00	AC-FT	13190		

06260400 SOUTH FORK OWL CREEK BELOW ANCHOR RESERVOIR, WY--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1974 to current year.

REMARKS.--No flow observed Apr. 13.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	TEMPER- ATURE (DEG C)
OCT				
02...	1130	8.6	170	4.5
NOV				
03...	1045	5.8	175	4.0
DEC				
09...	1030	2.2	200	.0
JAN				
05...	1050	2.9	195	.0
FEB				
18...	1100	2.7	200	.0
MAR				
12...	1105	4.5	200	.5
MAY				
06...	1430	11	115	12.0
JUN				
03...	1805	40	155	9.0
19...	1140	113	100	12.5
JUL				
29...	1040	20	165	15.0

YELLOWSTONE RIVER BASIN

06264700 BIGHORN RIVER AT LUCERNE, WY

LOCATION.--Lat 43°44'10", long 108°09'38", in SE¼ sec.32, T.44 N., R.94 W., Hot Springs County, Hydrologic Unit 10080007, at bridge on Black Mountain road, 0.7 mi (1.1 km) upstream from Kirby Creek, 0.8 mi (1.3 km) east of Lucerne, and 1.0 mi (1.6 km) downstream from Owl Creek.

PERIOD OF RECORD.--Water years 1966 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	TUR- BID- ITY (NTU)	OXYGEN, DIS- SOLVED (MG/L)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	HARD- NESS (MG/L AS CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)
OCT												
09...	1040	780	870	7.4	14.0	2.0	11.1	20	250	62	24	58
NOV												
10...	1015	780	920	7.7	10.0	2.0	12.8	27	280	72	24	73
DEC												
09...	1010	750	800	8.3	2.0	3.0	12.9	57	280	71	25	79
31...	0900	690	980	8.2	2.0	4.0	11.2	83	280	68	27	84
FEB												
17...	1300	790	930	8.2	6.5	5.0	--	340	300	74	27	85
MAR												
16...	0900	800	870	7.8	6.0	3.0	9.8	87	290	73	26	73
APR												
23...	0910	560	880	8.5	12.0	3.0	9.3	K16	280	69	26	74
MAY												
19...	1515	620	1050	7.9	17.0	15	9.6	100	290	80	25	72
JUN												
22...	0845	1470	950	8.5	17.0	7.0	10.0	K80	--	--	--	--
JUL												
16...	0900	834	890	8.3	19.0	4.0	9.1	--	--	--	--	--
AUG												
10...	1345	834	1150	8.2	21.0	35	--	980	--	--	--	--
SEP												
03...	1130	1720	810	8.0	19.0	15	8.6	K10000	270	71	23	93

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

DATE	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LINITY LAB (MG/L AS CACO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)	SOLIDS, DIS- SOLVED (TONS PER DAY)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	PHOS- PHORUS, TOTAL (MG/L AS P)
OCT												
09...	1.6	3.5	140	220	11	.5	8.6	470	.64	990	.93	.030
NOV												
10...	1.9	3.0	160	250	16	.3	7.3	540	.73	1140	1.1	.050
DEC												
09...	2.1	2.6	160	270	9.6	.7	4.6	557	.76	1130	.23	.020
31...	2.2	3.0	160	270	10	.6	18	580	.79	1080	.47	.050
FEB												
17...	2.2	3.6	180	270	13	.6	.0	583	.79	1240	.07	.020
MAR												
16...	1.9	3.4	170	220	22	.7	6.6	520	.71	1120	.07	.020
APR												
23...	1.9	3.4	170	240	17	.6	8.0	536	.73	810	.04	.040
MAY												
19...	1.8	3.8	130	260	15	.7	8.8	550	.75	921	.40	.130
JUN												
22...	--	--	--	--	--	--	--	--	--	--	--	--
JUL												
16...	--	--	--	--	--	--	--	--	--	--	--	--
AUG												
10...	--	--	--	--	--	--	--	--	--	--	--	--
SEP												
03...	2.5	3.8	170	260	15	.9	8.8	580	.79	2690	.77	.440

06267400 EAST FORK NOWATER CREEK NEAR COLTER, WY

LOCATION.--Lat 43°54'55", long 107°55'46", in SE¼NE¼ sec.31, T.46 N., R.92 W., Washakie County, Hydrologic Unit 10080007, on left bank 50 ft (15 m) upstream from county road, 1.8 mi (2.9 km) upstream from mouth, 5.2 mi (8.4 km) southeast of Colter, and 7.0 mi (11.3 km) south of Worland.

DRAINAGE AREA.--149 mi² (386 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1971 to current year.

REVISED RECORDS.--WDR WY-75-1: 1972-73.

GAGE.--Water-stage recorder. Altitude of gage is 4,165 ft (1,269 m), from topographic map.

REMARKS.--Records poor. No gage-height record Oct. 1-14, Nov. 16 to Jan. 8, Jan. 28-30, Feb. 14 to Mar. 5, Mar. 21-23, Apr. 28 to May 6.

AVERAGE DISCHARGE.--10 years, 4.84 ft³/s (0.137 m³/s), 3,510 acre-ft/yr (4.33 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 3,040 ft³/s (86.1 m³/s) May 18, 1978, gage height, 6.65 ft (2.027 m); no flow for most of each year.

EXTREMES FOR CURRENT YEAR.--Peak discharge above base of 300 ft³/s (8.50 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
May 22	2330	*560 15.86	2.73 0.832

No flow for many days.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.00	.00	.00	.24	.00	.00	.00	.00	.00
2	.00	.00	.00	.00	.00	.00	.06	.00	.00	.00	.00	.00
3	.00	.00	.00	.00	.00	.00	.01	.00	.00	3.9	.00	.00
4	.00	.00	.00	.00	.00	.00	.00	.00	.00	.36	.00	.00
5	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
6	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
7	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
8	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
9	.00	.00	.00	.00	.00	.00	.00	.67	.00	.00	.00	.00
10	.00	.00	.00	.00	.00	.00	.00	.85	.00	.00	.00	.00
11	.00	.00	.00	.00	.00	.00	.00	.68	.00	.00	.00	.00
12	.00	.00	.00	.00	.00	.00	.00	.42	.00	.10	.00	.00
13	.00	.00	.00	.00	.00	.00	.00	.10	.00	1.8	.00	.00
14	.00	.00	.00	.00	.00	.00	.00	.00	.00	.02	.00	.00
15	16	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
16	.00	.00	.00	.00	.00	.00	.00	.06	.00	.00	.00	.00
17	3.4	.00	.00	.00	.00	.01	.00	65	.00	.00	.00	.00
18	11	.00	.00	.00	.00	4.0	.00	24	.00	22	.00	.00
19	4.3	.00	.00	.00	.00	2.2	.01	3.0	.00	.28	.00	.00
20	1.5	.00	.00	.00	.00	7.3	.00	.54	.00	.00	.00	.00
21	.86	.00	.00	.00	.00	1.8	.00	.13	.00	.00	.00	.00
22	.28	.00	.00	.00	.00	.85	.00	157	.00	.00	.00	.00
23	.00	.00	.00	.00	.00	1.0	.00	90	.00	.00	.00	.00
24	.00	.00	.00	.00	.00	2.0	.00	4.7	.00	.00	.00	.00
25	.00	.00	.00	.00	.00	4.0	.00	1.5	.00	37	.00	.00
26	.00	.00	.00	.00	.00	1.5	.02	.85	.00	22	.00	.00
27	.00	.00	.00	.00	.00	.00	.06	.54	.00	.68	.00	.00
28	.00	.00	.00	.00	.00	.00	.00	.06	.00	.24	.00	.00
29	.00	.00	.00	.00	.00	4.7	.00	.00	.00	.00	.00	.00
30	.00	.00	.00	.00	.00	2.2	.00	.00	.00	.00	.00	2.0
31	.00	---	.00	.00	---	.68	---	.00	---	.00	.00	---
TOTAL	37.34	.00	.00	.00	7.50	41.37	.32	350.10	.00	88.38	.00	2.00
MEAN	1.20	.000	.000	.000	.27	1.33	.011	11.3	.000	2.85	.000	.067
MAX	16	.00	.00	.00	4.0	16	.24	157	.00	37	.00	2.0
MIN	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
AC-FT	74	.00	.00	.00	.00	15	.6	694	.00	175	.00	4.0

CAL YR 1980 TOTAL 424.08 MEAN 1.16 MAX 35 MIN .00 AC-FT 841
WTR YR 1981 TOTAL 527.01 MEAN 1.44 MAX 157 MIN .00 AC-FT 1050

YELLOWSTONE RIVER BASIN

06267400 EAST FORK NOWATER CREEK NEAR COLTER, WY--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--March 1977 to September 1981 (discontinued).

PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: October 1978 to September 1981 (discontinued).

SUSPENDED-SEDIMENT DISCHARGE: October 1978 to September 1981 (discontinued).

EXTREMES FOR PERIOD OF RECORD.--

SEDIMENT CONCENTRATIONS: Maximum daily mean, 64,200 mg/L May 22, 1981; minimum daily, no flow for many days each year.

SEDIMENT LOADS: Maximum daily, 43,300 tons (39,300 tonnes) May 22, 1981; minimum daily, 0 tons on many days each year.

EXTREMES FOR CURRENT YEAR.--

SEDIMENT CONCENTRATIONS: Maximum daily mean, 64,200 mg/L May 22; minimum daily, no flow for many days.

SEDIMENT LOADS: Maximum daily, 43,300 tons (39,300 tonnes) May 22; minimum daily, 0 tons on many days.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	TUR- BID- ITY (NTU)	HARD- NESS (MG/L AS CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM AD- SORP- TION RATIO
MAR											
23...	1030	1.1	420	7.3	5.5	14000	26	6.4	2.5	54	4.6
30...	1040	2.1	455	8.0	8.0	27000	19	3.7	2.3	68	6.8
MAY											
18...	0830	33	--	--	12.0	38000	34	9.0	2.7	73	5.5
22...	1410	89	--	--	11.0	280	62	14	6.5	76	4.2
JUL											
13...	1415	.69	--	--	20.0	10000	25	6.1	2.3	58	5.1
25...	1500	5.1	--	--	17.0	15000	34	6.8	4.2	55	4.1

DATE	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LINITY LAB (MG/L AS CACO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, SUM OF CONSTITUENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)	SOLIDS, DIS- SOLVED (TONS PER DAY)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N)
MAR										
23...	3.0	58	120	5.2	.5	7.3	238	.32	.73	1.7
30...	4.0	57	97	8.5	.6	8.2	231	.31	1.3	5.3
MAY										
18...	3.5	75	130	5.1	.6	7.8	279	.38	24.9	2.0
22...	21	79	100	9.3	.5	8.9	324	.44	77.9	1.9
JUL										
13...	4.7	76	80	4.7	.6	8.8	212	.29	.40	.39
25...	3.2	81	61	13	.6	6.8	204	.28	2.8	1.3

DATE	NITRO- GEN, AMMONIA TOTAL (MG/L AS N)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N)	NITRO- GEN, AM- MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO- GEN, TOTAL (MG/L AS N)	NITRO- GEN, TOTAL (MG/L AS NO3)	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHORUS TOTAL (MG/L AS PO4)	SEDI- MENT, SUS- PENDE (MG/L)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
MAR										
23...	.010	14	14.0	16	70	2.90	8.9	17200	53	100
30...	22.0	1.0	23.0	28	130	3.90	12	32400	184	100
MAY										
18...	.050	43	43.0	45	200	8.80	27	55100	4910	95
22...	.040	22	22.0	24	110	5.20	16	69200	16600	--
JUL										
13...	.280	8.8	9.10	9.5	42	2.70	8.3	9540	18	100
25...	.330	25	25.0	26	120	4.60	14	27500	379	100

YELLOWSTONE RIVER BASIN

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06267400 EAST FORK NOWATER CREEK NEAR COLTER, WY--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	TIME	ALUM- INUM, TOTAL RECOV- ERABLE (UG/L AS AL)	ALUM- INUM, SUS- PENDE RECOV. (UG/L AS AL)	ALUM- INUM, DIS- SOLVED (UG/L AS AL)	ARSENIC TOTAL (UG/L AS AS)	ARSENIC SUS- PENDE TOTAL (UG/L AS AS)	ARSENIC DIS- SOLVED (UG/L AS AS)	BARIUM, DIS- SOLVED (UG/L AS BA)	BERYL- LIUM, TOTAL RECOV- ERABLE (UG/L AS BE)	BERYL- LIUM, SUS- PENDE RECOV. (UG/L AS BE)
MAR										
23...	1030	--	--	--	--	--	--	--	--	--
30...	1040	--	--	--	--	--	--	--	--	--
MAY										
18...	0830	--	--	--	--	--	--	--	--	--
22...	1410	230000	220000	13000	--	--	10	--	20	20
JUL										
13...	1415	--	--	--	--	--	--	--	--	--
25...	1500	210000	210000	2400	6	1	5	100	10	10

DATE	BERYL- LIUM, DIS- SOLVED (UG/L AS BE)	BORON, DIS- SOLVED (UG/L AS B)	CADMIUM TOTAL RECOV- ERABLE (UG/L AS CD)	CADMIUM SUS- PENDE RECOV- ERABLE (UG/L AS CD)	CADMIUM DIS- SOLVED (UG/L AS CD)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR)	CHRO- MIUM, SUS- PENDE RECOV- ERABLE (UG/L AS CR)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU)	COPPER, SUS- PENDE RECOV- ERABLE (UG/L AS CU)
MAR										
23...	--	2300	--	--	--	--	--	--	--	--
30...	--	2100	--	--	--	--	--	--	--	--
MAY										
18...	--	190	--	--	--	--	--	--	--	--
22...	0	17000	6	5	1	260	250	10	800	790
JUL										
13...	--	260	--	--	--	--	--	--	--	--
25...	0	210	5	5	0	240	230	10	460	430

DATE	COPPER, DIS- SOLVED (UG/L AS CU)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	IRON, SUS- PENDE RECOV- ERABLE (UG/L AS FE)	IRON, DIS- SOLVED (UG/L AS FE)	LEAD, TOTAL RECOV- ERABLE (UG/L AS PB)	LEAD, SUS- PENDE RECOV- ERABLE (UG/L AS PB)	LEAD, DIS- SOLVED (UG/L AS PB)	LITHIUM TOTAL RECOV- ERABLE (UG/L AS LI)	LITHIUM SUS- PENDE RECOV- ERABLE (UG/L AS LI)	LITHIUM DIS- SOLVED (UG/L AS LI)
MAR										
23...	--	--	--	1800	--	--	--	--	--	--
30...	--	--	--	1900	--	--	--	--	--	--
MAY										
18...	--	--	--	1700	--	--	--	--	--	--
22...	14	290000	280000	10000	380	370	7	380	360	20
JUL										
13...	--	--	--	1100	--	--	--	--	--	--
25...	30	220000	220000	2200	230	230	4	230	220	10

DATE	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)	MANGA- NESE, SUS- PENDE RECOV- ERABLE (UG/L AS MN)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	MERCURY TOTAL RECOV- ERABLE (UG/L AS HG)	MERCURY SUS- PENDE RECOV- ERABLE (UG/L AS HG)	MERCURY DIS- SOLVED (UG/L AS HG)	MOLYB- DENUM, TOTAL RECOV- ERABLE (UG/L AS MO)	MOLYB- DENUM, SUS- PENDE RECOV- ERABLE (UG/L AS MO)	MOLYB- DENUM, DIS- SOLVED (UG/L AS MO)	NICKEL, TOTAL RECOV- ERABLE (UG/L AS NI)
MAR										
23...	--	--	--	--	--	--	--	--	--	--
30...	--	--	--	--	--	--	--	--	--	--
MAY										
18...	--	--	--	--	--	--	--	--	--	--
22...	1900	1900	30	.1	.0	.2	0	--	--	540
JUL										
13...	--	--	--	--	--	--	--	--	--	--
25...	1900	1900	10	2.0	1.3	.7	2	0	2	360

YELLOWSTONE RIVER BASIN

06267400 EAST FORK NOWATER CREEK NEAR COLTER, WY--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	NICKEL, SUS- PENDE RECov- ERABLE (UG/L AS NI)	NICKEL, DIS- SOLVED (UG/L AS NI)	SELE- NIUM, TOTAL (UG/L AS SE)	SELE- NIUM, SUS- PENDE TOTAL (UG/L AS SE)	SELE- NIUM, DIS- SOLVED (UG/L AS SE)	VANA- DIUM, DIS- SOLVED (UG/L AS V)	ZINC, TOTAL RECov- ERABLE (UG/L AS ZN)	ZINC, SUS- PENDE RECov- ERABLE (UG/L AS ZN)	ZINC, DIS- SOLVED (UG/L AS ZN)
MAR									
23...	--	--	--	--	--	--	--	--	--
30...	--	--	--	--	--	--	--	--	--
MAY									
18...	--	--	--	--	--	--	--	--	--
22...	530	12	2	0	14	19	2500	2400	120
JUL									
13...	--	--	--	--	--	--	--	--	--
25...	360	2	24	24	0	9.0	1900	1800	80

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1						---	15.0	---		---		
2						---	---	---		---		
3						---	---	---		---		
4						---	---	---		---		
5						---	---	---		---		
6						---	---	---		---		
7						---	---	---		---		
8						---	---	---		---		
9						---	---	---		---		
10						---	---	---		---		
11						---	---	---		---		
12						---	---	---		---		
13						---	---	---		20.0		
14						---	---	---		---		
15						---	---	---		---		
16						---	---	---		---		
17						---	---	---		---		
18						---	---	12.0		---		
19						---	---	18.0		---		
20						---	---	---		---		
21						---	---	---		---		
22						---	---	11.0		---		
23						5.5	---	10.5		---		
24						---	---	---		---		
25						---	---	---		17.0		
26						---	---	20.0		---		
27						---	---	15.0		21.0		
28						---	---	---		---		
29						---	---	---		---		
30						8.0	---	---		---		
31						---	---	---		---		
MEAN						7.0	15.0	14.5		19.5		
WTR YR 1981	MEAN	14.5		MAX	21.0		MIN	5.5				

06267400 EAST FORK NOWATER CREEK NEAR COLTER, WY--Continued

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

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)
OCTOBER				NOVEMBER			DECEMBER		
1	.00	---	.00	.00		.00	.00		.00
2	.00	---	.00	.00		.00	.00		.00
3	.00	---	.00	.00		.00	.00		.00
4	.00	---	.00	.00		.00	.00		.00
5	.00	---	.00	.00		.00	.00		.00
6	.00	---	.00	.00		.00	.00		.00
7	.00	---	.00	.00		.00	.00		.00
8	.00	---	.00	.00		.00	.00		.00
9	.00	---	.00	.00		.00	.00		.00
10	.00	---	.00	.00		.00	.00		.00
11	.00	---	.00	.00		.00	.00		.00
12	.00	---	.00	.00		.00	.00		.00
13	.00	---	.00	.00		.00	.00		.00
14	.00	---	.00	.00		.00	.00		.00
15	16	26000	1120	.00		.00	.00		.00
16	.00	---	.00	.00		.00	.00		.00
17	3.4	10300	95	.00		.00	.00		.00
18	11	22400	677	.00		.00	.00		.00
19	4.3	12700	147	.00		.00	.00		.00
20	1.5	5000	20	.00		.00	.00		.00
21	.86	3000	7.0	.00		.00	.00		.00
22	.28	1100	.83	.00		.00	.00		.00
23	.00	---	.00	.00		.00	.00		.00
24	.00	---	.00	.00		.00	.00		.00
25	.00	---	.00	.00		.00	.00		.00
26	.00	---	.00	.00		.00	.00		.00
27	.00	---	.00	.00		.00	.00		.00
28	.00	---	.00	.00		.00	.00		.00
29	.00	---	.00	.00		.00	.00		.00
30	.00	---	.00	.00		.00	.00		.00
31	.00	---	.00	---			.00		.00
TOTAL	37.34	---	2066.83	0.00		0.00	0.00		0.00
JANUARY				FEBRUARY			MARCH		
1	.00		.00	.00	---	.00	.00	---	.00
2	.00		.00	.00	---	.00	.00	---	.00
3	.00		.00	.00	---	.00	.00	---	.00
4	.00		.00	.00	---	.00	.00	---	.00
5	.00		.00	.00	---	.00	.00	---	.00
6	.00		.00	.00	---	.00	.00	---	.00
7	.00		.00	.00	---	.00	.00	---	.00
8	.00		.00	.00	---	.00	.00	---	.00
9	.00		.00	.00	---	.00	.00	---	.00
10	.00		.00	.00	---	.00	.00	---	.00
11	.00		.00	.00	---	.00	.00	---	.00
12	.00		.00	.00	---	.00	.00	---	.00
13	.00		.00	.00	---	.00	.00	---	.00
14	.00		.00	.00	---	.00	.00	---	.00
15	.00		.00	.00	---	.00	.00	---	.00
16	.00		.00	.00	---	.00	.00	---	.00
17	.00		.00	.00	---	.00	.01	---	.01
18	.00		.00	.00	---	.00	4.0	11800	127
19	.00		.00	.00	---	.00	2.2	6600	39
20	.00		.00	.00	---	.00	7.3	18300	361
21	.00		.00	.00	---	.00	1.8	6300	31
22	.00		.00	.00	---	.00	.85	2900	6.7
23	.00		.00	.00	---	.00	1.0	11500	31
24	.00		.00	2.0	5600	30	.42	3800	4.3
25	.00		.00	4.0	7900	85	.13	250	.09
26	.00		.00	1.5	4800	19	.02	200	.01
27	.00		.00	.00	---	.00	.06	250	.04
28	.00		.00	.00	---	.00	16	45600	1970
29	.00		.00	---	---	---	4.7	51800	657
30	.00		.00	---	---	---	2.2	32200	191
31	.00		.00	---	---	---	.68	24500	45
TOTAL	0.00		0.00	7.50	---	134.00	41.37	---	3463.15

YELLOWSTONE RIVER BASIN

06267400 EAST FORK NOWATER CREEK NEAR COLTER, WY--Continued

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

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)
APRIL				MAY			JUNE		
1	.24	21800	14	.00	---	.00	.00		.00
2	.06	15000	2.4	.00	---	.00	.00		.00
3	.01	3000	.08	.00	---	.00	.00		.00
4	.00	---	.00	.00	---	.00	.00		.00
5	.00	---	.00	.00	---	.00	.00		.00
6	.00	---	.00	.00	---	.00	.00		.00
7	.00	---	.00	.00	---	.00	.00		.00
8	.00	---	.00	.00	---	.00	.00		.00
9	.00	---	.00	.67	2500	4.5	.00		.00
10	.00	---	.00	.85	3100	7.1	.00		.00
11	.00	---	.00	.68	2200	4.0	.00		.00
12	.00	---	.00	.42	1300	1.5	.00		.00
13	.00	---	.00	.10	250	.07	.00		.00
14	.00	---	.00	.00	---	.00	.00		.00
15	.00	---	.00	.00	---	.00	.00		.00
16	.00	---	.00	.06	5100	.83	.00		.00
17	.00	---	.00	65	57500	10100	.00		.00
18	.00	---	.00	24	50600	3280	.00		.00
19	.01	200	.01	3.0	48600	394	.00		.00
20	.00	---	.00	.54	25600	37	.00		.00
21	.00	---	.00	.13	4300	1.5	.00		.00
22	.00	---	.00	157	64200	43300	.00		.00
23	.00	---	.00	90	57600	22600	.00		.00
24	.00	---	.00	4.7	15500	197	.00		.00
25	.00	---	.00	1.5	26500	107	.00		.00
26	.00	---	.00	.85	27000	62	.00		.00
27	.00	---	.00	.54	10800	16	.00		.00
28	.00	---	.00	.06	1900	.31	.00		.00
29	.00	---	.00	.00	---	.00	.00		.00
30	.00	---	.00	.00	---	.00	.00		.00
31	---	---	---	.00	---	.00	---		.00
TOTAL	0.32	---	16.49	350.10	---	80112.81	0.00		0.00
JULY				AUGUST			SEPTEMBER		
1	.00	---	.00	.00		.00	.00	---	.00
2	.00	---	.00	.00		.00	.00	---	.00
3	3.9	17200	344	.00		.00	.00	---	.00
4	.36	4900	4.8	.00		.00	.00	---	.00
5	.00	---	.00	.00		.00	.00	---	.00
6	.00	---	.00	.00		.00	.00	---	.00
7	.00	---	.00	.00		.00	.00	---	.00
8	.00	---	.00	.00		.00	.00	---	.00
9	.00	---	.00	.00		.00	.00	---	.00
10	.00	---	.00	.00		.00	.00	---	.00
11	.00	---	.00	.00		.00	.00	---	.00
12	.10	390	.11	.00		.00	.00	---	.00
13	1.8	14700	152	.00		.00	.00	---	.00
14	.02	960	.05	.00		.00	.00	---	.00
15	.00	---	.00	.00		.00	.00	---	.00
16	.00	---	.00	.00		.00	.00	---	.00
17	.00	---	.00	.00		.00	.00	---	.00
18	22	29100	1730	.00		.00	.00	---	.00
19	.28	1200	.91	.00		.00	.00	---	.00
20	.00	---	.00	.00		.00	.00	---	.00
21	.00	---	.00	.00		.00	.00	---	.00
22	.00	---	.00	.00		.00	.00	---	.00
23	.00	---	.00	.00		.00	.00	---	.00
24	.00	---	.00	.00		.00	.00	---	.00
25	37	29200	7650	.00		.00	.00	---	.00
26	22	44000	2610	.00		.00	.00	---	.00
27	.68	30000	55	.00		.00	.00	---	.00
28	.24	18800	12	.00		.00	.00	---	.00
29	.00	---	.00	.00		.00	.00	---	.00
30	.00	---	.00	.00		.00	2.0	6600	36
31	.00	---	.00	.00		.00	---	---	---
TOTAL	88.38	---	12558.87	0.00		0.00	2.00	---	36.00
YEAR	527.01		98388.15						

06267900 MIDDLE FORK FIFTEENMILE CREEK NEAR WORLAND, WY

LOCATION.--Lat 44°04'12", long 108°13'43", in SW¼NW¼SW¼ sec.2, T.47 N., R.95 W., Washakie County, Hydrologic Unit 10080007, 2.0 mi (3.2 km) upstream from mouth, 13.4 mi (21.6 km) northwest of Nieber, and 14.3 mi (23.0 km) west of Worland.

PERIOD OF RECORD.--August 1978 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	TUR- BID- ITY (NTU)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	HARD- NESS (MG/L AS CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM AD- SORP- TION RATIO
MAY 06...	0940	26	1450	8.3	8.5	1800	K6200	78	24	4.3	260	13
18...	1125	21	810	8.9	15.0	32000	K16000	29	8.5	1.8	150	12
SEP 06...	1030	.12	420	8.7	14.0	16000	K1600	44	11	4.0	76	5.4

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

DATE	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LINITY LAB (MG/L AS CACO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, SUM OF CONSTITUENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)	SOLIDS, DIS- SOLVED (TONS PER DAY)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N)
MAY 06...	4.6	81	480	6.6	.8	5.3	835	1.1	58.6	.24	.100
18...	3.7	120	230	13	.7	7.6	489	.67	27.7	7.0	.050
SEP 06...	5.2	120	30	12	.7	37	252	.34	.08	1.6	.200

DATE	NITRO- GEN, ORGANIC TOTAL (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO- GEN, TOTAL (MG/L AS N)	NITRO- GEN, TOTAL (MG/L AS NO3)	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHORUS TOTAL (MG/L AS PO4)	BORON, DIS- SOLVED (UG/L AS B)	IRON, DIS- SOLVED (UG/L AS FE)	SEDI- MENT, SUS- PENDEDED (MG/L)	SEDI- MENT, DIS- CHARGE, SUS- PENDEDED (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
MAY 06...	460	460	460	2000	17.0	52	360	60	64200	4510	96
18...	39	39.0	46	200	7.20	22	190	950	64000	3630	92
SEP 06...	21	21.0	23	100	9.50	29	70	4100	19400	6.3	100

YELLOWSTONE RIVER BASIN

06268500 FIFTEENMILE CREEK NEAR WORLAND, WY

LOCATION.--Lat 44°01'14", long 108°00'42", in NW¼NW¼NE¼ sec.27, T.47 N., R.93 W., Washakie County, Hydrologic Unit 10080007, on left bank 300 ft (91 m) upstream from Bighorn Canal spillway, 2.0 mi (3.2 km) upstream from mouth, and 2.8 mi (4.5 km) west of Worland.

DRAINAGE AREA.--518 mi² (1,340 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--March 1951 to December 1972, June 1978 to current year. Occasional measurements and annual maximum, January 1973 to May 1978.

GAGE.--Water-stage recorder. Attitude of gage is 4,070 ft (1,241 m), from topographic map. Prior to Oct. 1, 1956, at site 400 ft (122 m) upstream at datum 5.52 ft (1.682 m) higher. Oct. 1, 1956, to Sept. 30, 1969, at present site at datum 2.00 ft (0.610 m) higher. Jan. 1, 1973, to May 31, 1978, crest-stage gage at present site and datum.

REMARKS.--Records fair except those for periods of no gage-height record, Oct. 4-20, Nov. 1 to Feb. 26, Apr. 8 to May 5, July 21-25, Aug. 15-20, which are poor. Bureau of Land Management has extensive spreader systems on some of the tributaries above station.

AVERAGE DISCHARGE.--24 years (water years 1952-72, 1979-81), 10.7 ft³/s (0.303 m³/s), 7,750 acre-ft/yr (9.56 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 4,270 ft³/s (121 m³/s) May 18, 1978, gage height, 10.58 ft (3.225 m), from floodmarks, from rating curve extended above 1,700 ft³/s (48 m³/s); no flow for many days each year.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 400 ft³/s (11.3 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
May 18	0700	443 12.5	3.66 1.116	May 27	0500	718 20.3	4.42 1.347
May 23	0745	1,110 31.4	5.28 1.609	July 12	2100	*2,590 73.3	8.04 2.451

No flow for many days.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.00	.00	.00	22	.00	47	.00	.00	.00
2	.00	.00	.00	.00	.00	.00	17	.00	9.6	.00	.00	.00
3	.00	.00	.00	.00	.00	.00	9.6	.00	3.8	.00	.00	.00
4	.00	.00	.00	.00	.00	.00	3.5	.00	1.4	.00	.00	.00
5	.00	.00	.00	.00	.00	.00	3.0	.00	.52	.00	.00	.00
6	.00	.00	.00	.00	.00	.00	1.4	41	.18	.00	4.4	1.3
7	.00	.00	.00	.00	.00	.00	.33	25	.00	.00	1.0	.68
8	.00	.00	.00	.00	.00	.00	.00	66	.00	.00	.15	.16
9	.00	.00	.00	.00	.00	.00	.00	20	.00	.00	33	.00
10	.00	.00	.00	.00	.00	.00	.00	15	.00	.00	22	.00
11	.00	.00	.00	.00	.00	.00	.00	12	.00	.00	2.5	.00
12	.00	.00	.00	.00	.00	.00	.00	66	5.3	283	.28	.00
13	.00	.00	.00	.00	.00	.00	.00	17	3.8	341	.12	.00
14	.00	.00	.00	.00	.00	.00	.00	6.9	.28	71	.00	.00
15	12	.00	.00	.00	.00	.00	.00	3.0	.08	8.2	.00	.00
16	37	.00	.00	.00	.00	.00	.00	1.4	.00	3.0	.00	.00
17	18	.00	.00	.00	.00	.00	.00	7.0	.00	1.9	.00	.00
18	11	.00	.00	.00	.00	.00	.00	198	.00	.96	.00	.00
19	33	.00	.00	.00	.00	.00	.00	38	.00	.00	.00	.00
20	14	.00	.00	.00	.00	.00	.00	8.2	.00	.00	.00	.00
21	7.3	.00	.00	.00	.00	.00	.00	3.8	.00	.00	.00	.00
22	5.4	.00	.00	.00	.00	.00	.00	159	.00	.00	.00	.00
23	2.5	.00	.00	.00	.00	.00	.00	950	.00	.00	.00	.00
24	1.0	.00	.00	.00	.00	.00	.00	278	.00	.00	.00	.00
25	.49	.00	.00	.00	.00	.00	.00	160	.00	.00	.00	.00
26	.00	.00	.00	.00	.00	.00	.00	90	.00	.00	.00	.00
27	.00	.00	.00	.00	.00	.00	.00	222	.00	.00	.00	.00
28	.00	.00	.00	.00	.00	5.2	.00	66	.00	.00	.00	.00
29	.00	.00	.00	.00	---	72	.00	32	.00	.00	.00	.00
30	.00	.00	.00	.00	---	99	.00	12	.00	.00	.00	.00
31	.00	---	.00	.00	---	34	---	4.5	---	.00	.00	---
TOTAL	141.69	.00	.00	.00	.00	210.20	56.83	2501.80	71.96	709.06	63.45	2.14
MEAN	4.57	.000	.000	.000	.000	6.78	1.89	80.7	2.40	22.9	2.05	.071
MAX	37	.00	.00	.00	.00	99	22	950	47	341	33	1.3
MIN	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
AC-FT	281	.00	.00	.00	.00	417	113	4960	143	1410	126	4.2
CAL YR 1980	TOTAL	3869.22	MEAN 10.6	MAX 400	MIN .00	AC-FT 7670						
WTR YR 1981	TOTAL	3757.13	MEAN 10.3	MAX 950	MIN .00	AC-FT 7450						

06268500 FIFTEENMILE CREEK NEAR WORLAND, WY--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD -August 1949 to December 1972, June 1978 to current year.

PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: March 1979 to current year.

SUSPENDED-SEDIMENT DISCHARGE: August 1949 to December 1972, June 1978 to current year.

INSTRUMENTATION.--Sediment pumping sampler since June 1978.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SEDIMENT CONCENTRATIONS: Maximum daily, 135,000 mg/L Apr. 16, 1952; minimum daily, no flow for many days each year.

SEDIMENT LOADS: Maximum daily, 418,000 tons (379,200 tonnes) May 22, 1952; minimum daily, 0 tons on many days each year.

EXTREMES FOR CURRENT YEAR.--

SEDIMENT CONCENTRATIONS: Maximum daily, 87,000 mg/L Aug. 10; minimum daily, no flow on many days.

SEDIMENT LOADS: Maximum daily, 130,000 tons (118,000 tonnes) May 23; minimum daily, 0 tons on many days.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	TUR- BID- ITY (NTU)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	HARD- NESS (MG/L AS CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM AD- SORP- TION RATIO
MAY												
06...	1215	58	480	8.8	11.5	1400	21000	30	8.3	2.3	74	5.9
18...	1430	185	--	--	15.0	16000	29000	26	8.1	1.5	120	10

DATE	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LITY LAB (MG/L AS CACO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)	SOLIDS, DIS- SOLVED (TONS PER DAY)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N)
MAY											
06...	3.2	68	77	5.1	.6	6.5	223	.30	34.9	.05	.030
18...	2.9	110	190	5.3	.7	7.6	404	.55	199	8.4	.060

DATE	NITRO- GEN, ORGANIC TOTAL (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO- GEN, TOTAL (MG/L AS N)	NITRO- GEN, TOTAL (MG/L AS NO3)	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHORUS TOTAL (MG/L AS PO4)	BORON, DIS- SOLVED (UG/L AS B)	IRON, DIS- SOLVED (UG/L AS FE)	SEDI- MENT, SUS- PENDE (MG/L)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
MAY											
06...	280	280	280	1200	16.0	49	3200	2100	50600	7920	100
18...	45	45.0	53	240	9.40	29	190	1500	67100	33000	95

YELLOWSTONE RIVER BASIN

06268500 FIFTEENMILE CREEK NEAR WORLAND, WY--Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1								---	1240	---		
2								---	917	---		
3								---	828	---		
4								---	---	---		
5								---	---	---		
6								695	---	---		
7								1400	---	---		
8								842	---	---		
9								643	---	---		
10								690	---	---		
11								609	---	---		
12								589	---	---		
13								634	---	1280		
14								569	---	1180		
15								---	---	876		
16								---	---	---		
17								483	---	---		
18								608	---	---		
19								575	---	---		
20								656	---	---		
21								728	---	---		
22								562	---	---		
23								801	---	---		
24								610	---	---		
25								545	---	---		
26								552	---	---		
27								1410	---	---		
28								727	---	---		
29								682	---	---		
30								693	---	---		
31								593	---	---		
MEAN								704	995	1110		
WTR YR 1981	MEAN	774		MAX	1410		MIN	483				

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---					---	12.0	---	---		---	
2	---					---	---	---	---		---	
3	---					---	---	---	---		---	
4	---					---	---	---	15.0		---	
5	---					---	---	---	---		---	
6	---					---	---	11.5	---		---	
7	---					---	10.0	10.0	---		---	
8	---					---	---	---	---		---	
9	---					---	---	---	---		---	
10	---					---	---	---	---		21.0	
11	---					---	---	---	---		17.0	
12	---					---	---	6.0	---		---	
13	---					---	---	---	---		---	
14	---					---	---	12.0	---		---	
15	---					---	---	---	---		---	
16	---					---	---	---	---		---	
17	---					---	---	---	---		---	
18	---					---	---	15.0	---		---	
19	---					---	---	18.0	---		---	
20	7.0					---	---	---	---		---	
21	---					---	---	---	---		---	
22	---					---	---	---	---		---	
23	---					---	---	12.0	---		---	
24	---					---	---	---	---		---	
25	---					---	---	---	---		---	
26	---					---	---	20.0	---		---	
27	---					---	---	---	---		---	
28	---					---	---	---	---		---	
29	---					---	---	---	---		---	
30	---					7.5	---	---	---		---	
31	---					9.5	---	---	---		---	
MEAN	7.0					8.5	11.0	13.0	15.0		19.0	
WTR YR 1981	MEAN	12.5		MAX	21.0		MIN	6.0				

06268500 FIFTEENMILE CREEK NEAR WORLAND, WY--Continued

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

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)
OCTOBER				NOVEMBER			DECEMBER		
1	.00	---	.00	.00		.00	.00		.00
2	.00	---	.00	.00		.00	.00		.00
3	.00	---	.00	.00		.00	.00		.00
4	.00	---	.00	.00		.00	.00		.00
5	.00	---	.00	.00		.00	.00		.00
6	.00	---	.00	.00		.00	.00		.00
7	.00	---	.00	.00		.00	.00		.00
8	.00	---	.00	.00		.00	.00		.00
9	.00	---	.00	.00		.00	.00		.00
10	.00	---	.00	.00		.00	.00		.00
11	.00	---	.00	.00		.00	.00		.00
12	.00	---	.00	.00		.00	.00		.00
13	.00	---	.00	.00		.00	.00		.00
14	.00	---	.00	.00		.00	.00		.00
15	12	5950	702	.00		.00	.00		.00
16	37	31300	3130	.00		.00	.00		.00
17	18	20000	972	.00		.00	.00		.00
18	11	15600	463	.00		.00	.00		.00
19	33	22300	1990	.00		.00	.00		.00
20	14	19800	748	.00		.00	.00		.00
21	7.3	19200	378	.00		.00	.00		.00
22	5.4	17800	260	.00		.00	.00		.00
23	2.5	8700	59	.00		.00	.00		.00
24	1.0	2400	6.5	.00		.00	.00		.00
25	.49	230	.30	.00		.00	.00		.00
26	.00	---	.00	.00		.00	.00		.00
27	.00	---	.00	.00		.00	.00		.00
28	.00	---	.00	.00		.00	.00		.00
29	.00	---	.00	.00		.00	.00		.00
30	.00	---	.00	.00		.00	.00		.00
31	.00	---	.00	---			.00		.00
TOTAL	141.69	---	8708.80	0.00		0.00	0.00		0.00
JANUARY				FEBRUARY			MARCH		
1	.00		.00	.00		.00	.00	---	.00
2	.00		.00	.00		.00	.00	---	.00
3	.00		.00	.00		.00	.00	---	.00
4	.00		.00	.00		.00	.00	---	.00
5	.00		.00	.00		.00	.00	---	.00
6	.00		.00	.00		.00	.00	---	.00
7	.00		.00	.00		.00	.00	---	.00
8	.00		.00	.00		.00	.00	---	.00
9	.00		.00	.00		.00	.00	---	.00
10	.00		.00	.00		.00	.00	---	.00
11	.00		.00	.00		.00	.00	---	.00
12	.00		.00	.00		.00	.00	---	.00
13	.00		.00	.00		.00	.00	---	.00
14	.00		.00	.00		.00	.00	---	.00
15	.00		.00	.00		.00	.00	---	.00
16	.00		.00	.00		.00	.00	---	.00
17	.00		.00	.00		.00	.00	---	.00
18	.00		.00	.00		.00	.00	---	.00
19	.00		.00	.00		.00	.00	---	.00
20	.00		.00	.00		.00	.00	---	.00
21	.00		.00	.00		.00	.00	---	.00
22	.00		.00	.00		.00	.00	---	.00
23	.00		.00	.00		.00	.00	---	.00
24	.00		.00	.00		.00	.00	---	.00
25	.00		.00	.00		.00	.00	---	.00
26	.00		.00	.00		.00	.00	---	.00
27	.00		.00	.00		.00	.00	---	.00
28	.00		.00	.00		.00	5.2	11500	161
29	.00		.00	---			72	59000	11500
30	.00		.00	---			99	44700	11900
31	.00		.00	---			34	22300	2050
TOTAL	0.00		0.00	0.00		0.00	210.20	---	25611.00

YELLOWSTONE RIVER BASIN

06268500 FIFTEENMILE CREEK NEAR WORLAND, WY--Continued

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

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)
APRIL			MAY			JUNE			
1	22	13500	802	.00	---	.0	47	39600	6560
2	17	13000	597	.00	---	.0	9.6	19700	511
3	9.6	11200	290	.00	---	.0	3.8	9300	95
4	3.5	10000	94	.00	---	.0	1.4	7000	26
5	3.0	5000	40	.00	---	.0	.52	3200	4.5
6	1.4	3000	11	41	31900	6700	.18	800	.39
7	.33	900	.80	25	56300	3800	.00	---	.00
8	.00	---	.00	66	44300	7890	.00	---	.00
9	.00	---	.00	20	30300	1800	.00	---	.00
10	.00	---	.00	15	33800	1370	.00	---	.00
11	.00	---	.00	12	26900	963	.00	---	.00
12	.00	---	.00	66	40000	7580	5.3	17000	243
13	.00	---	.00	17	26800	1230	3.8	12000	123
14	.00	---	.00	6.9	19800	369	.28	2000	1.5
15	.00	---	.00	3.0	15300	124	.08	500	.11
16	.00	---	.00	1.4	12300	46	.00	---	.00
17	.00	---	.00	7.0	13700	374	.00	---	.00
18	.00	---	.00	198	61200	37300	.00	---	.00
19	.00	---	.00	38	25800	3020	.00	---	.00
20	.00	---	.00	8.2	21200	469	.00	---	.00
21	.00	---	.00	3.8	19300	198	.00	---	.00
22	.00	---	.00	159	36200	29500	.00	---	.00
23	.00	---	.00	950	50600	130000	.00	---	.00
24	.00	---	.00	278	34500	28700	.00	---	.00
25	.00	---	.00	160	31600	13700	.00	---	.00
26	.00	---	.00	90	30700	7460	.00	---	.00
27	.00	---	.00	222	51100	41700	.00	---	.00
28	.00	---	.00	66	16300	2900	.00	---	.00
29	.00	---	.00	32	25700	2220	.00	---	.00
30	.00	---	.00	12	17800	577	.00	---	.00
31	---	---	---	4.5	11800	143	---	---	---
TOTAL	56.83	---	1834.80	2501.80	---	330133.0	71.96	---	7564.50
JULY			AUGUST			SEPTEMBER			
1	.00	---	.00	.00	---	.00	.00	---	.00
2	.00	---	.00	.00	---	.00	.00	---	.00
3	.00	---	.00	.00	---	.00	.00	---	.00
4	.00	---	.00	.00	---	.00	.00	---	.00
5	.00	---	.00	.00	---	.00	.00	---	.00
6	.00	---	.00	4.4	12200	238	1.3	5500	19
7	.00	---	.00	1.0	5500	15	.68	3000	5.5
8	.00	---	.00	.15	940	.38	.16	1000	.43
9	.00	---	.00	33	40000	3560	.00	---	.00
10	.00	---	.00	22	87800	6160	.00	---	.00
11	.00	---	.00	2.5	25000	169	.00	---	.00
12	283	20000	15300	.28	8500	6.4	.00	---	.00
13	341	61200	56300	.12	1400	.45	.00	---	.00
14	71	20200	4780	.00	---	.00	.00	---	.00
15	8.2	6600	146	.00	---	.00	.00	---	.00
16	3.0	2700	22	.00	---	.00	.00	---	.00
17	1.9	1600	8.2	.00	---	.00	.00	---	.00
18	.96	710	1.8	.00	---	.00	.00	---	.00
19	.00	---	.00	.00	---	.00	.00	---	.00
20	.00	---	.00	.00	---	.00	.00	---	.00
21	.00	---	.00	.00	---	.00	.00	---	.00
22	.00	---	.00	.00	---	.00	.00	---	.00
23	.00	---	.00	.00	---	.00	.00	---	.00
24	.00	---	.00	.00	---	.00	.00	---	.00
25	.00	---	.00	.00	---	.00	.00	---	.00
26	.00	---	.00	.00	---	.00	.00	---	.00
27	.00	---	.00	.00	---	.00	.00	---	.00
28	.00	---	.00	.00	---	.00	.00	---	.00
29	.00	---	.00	.00	---	.00	.00	---	.00
30	.00	---	.00	.00	---	.00	.00	---	.00
31	.00	---	.00	.00	---	.00	---	---	---
TOTAL	709.06	---	76558.00	63.45	---	10149.23	2.14	---	24.93
YEAR	3757.13		460584.26						

LOCATION.--Lat 44°00'53", long 107°58'08", in SW¼NE¼ sec.25, T.47 N., R.93 W., Washakie County, Hydrologic Unit 10080007, 40 ft (12 m) downstream from former gaging station, at bridge on U.S. Highway 20 at Worland, and 0.5 mi (0.8 km) downstream from Fifteen Mile Creek.

PERIOD OF RECORD.--Water years 1965 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	HARD- NESS (MG/L AS CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)
OCT 09...	1125	500	--	7.6	14.0	250	66	21	63	1.7	3.9
NOV 10...	1140	482	--	8.0	11.0	280	75	21	89	2.3	3.6
DEC 09...	1120	850	820	8.5	2.0	290	72	27	93	2.4	4.0
31...	1000	1260	1080	8.5	4.0	280	69	27	99	2.6	4.8
FEB 17...	1345	850	1080	8.3	6.5	310	77	28	100	2.5	4.4
MAR 16...	1100	795	1000	7.8	7.0	300	75	27	98	2.5	4.2
APR 23...	0950	112	--	--	14.0	320	80	30	110	2.7	5.4
MAY 19...	1550	550	--	--	18.0	370	92	35	140	3.2	5.6
JUN 22...	0945	1400	--	--	17.0	290	66	30	82	2.1	3.9
JUL 16...	1000	230	--	--	19.0	290	73	25	90	2.3	4.2
AUG 07...	1000	274	--	--	21.0	310	72	31	91	2.3	4.6
SEP 03...	1215	530	--	--	18.0	--	--	--	--	--	--

[illegible]

YELLOWSTONE RIVER BASIN

06268640 SLICK CREEK NEAR WORLAND, WY

LOCATION.--Lat 44°03'30", long 107°55'59", in NE¼NW¼SE¼ sec.7, T.47 N., R.92 W., Washakie County, Hydrologic Unit 10080007, at bridge on U.S. Highway 16-20, 0.4 mi (0.6 km) upstream from mouth, and 2.5 mi (4.0 km) northeast of Worland city limits.

PERIOD OF RECORD.--June to September 1981.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE LAB (UMHOS)	PH LAB (UNITS)	TEMPER- ATURE (DEG C)	HARD- NESS (MG/L AS CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)
JUN 17...	1315	58	885	8.0	18.0	310	80	27	87	2.1	3.9
JUL 31...	1345	37	958	8.1	23.0	290	77	24	81	2.1	3.8
AUG 28...	0900	56	951	8.2	17.0	290	72	27	98	2.5	3.4
SEP 21...	1430	96	843	8.2	19.0	250	63	23	83	2.3	3.4

DATE	ALKA- LITY LAB (MG/L AS CACO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)	SOLIDS, DIS- SOLVED (TONS PER DAY)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	PHOS- PHORUS, TOTAL (MG/L AS P)
JUN 17...	180	280	34	.6	10	630	.86	98.7	.90	.020
JUL 31...	200	250	18	.7	12	590	.80	58.9	1.6	.490
AUG 28...	200	290	15	.8	11	640	.87	96.8	1.3	.370
SEP 21...	160	230	14	.7	8.4	530	.72	137	.50	.350

06270000 NOWOOD RIVER NEAR TEN SLEEP, WY

LOCATION.--Lat 44°00'48", long 107°25'39", in SW¼NW¼ sec.27, T.47 N., R.88 W., Washakie County, Hydrologic Unit 10080008, on right bank 1.7 mi (2.7 km) southeast of Ten Sleep and 4.3 mi (6.9 km) upstream from Tensleep Creek.

DRAINAGE AREA.--803 mi² (2,080 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--May 1938 to September 1943, March 1950 to December 1955 (published as Nowood Creek near Tensleep), October 1972 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 4,420 ft (1,347 m), from topographic map. May 6, 1938, to Sept. 30, 1943, nonrecording gage at site 200 ft (61 m) downstream at different datum. Mar. 17, 1950, to Dec. 31, 1955, water-stage recorder at site 100 ft (30 m) upstream at different datum.

REMARKS.--Records good except those for winter period and periods of no gage-height record, Nov. 18, 19, 26-28, Dec. 1, 2, 8-11, Dec. 22 to Jan. 6, Jan. 14-16, Feb. 2-6, 12, 13, 15, 16, 20-24, July 11 to Aug. 18, Sept. 5-18, which are poor. Diversions for irrigation of about 550 acres (2.23 km²) above station.

AVERAGE DISCHARGE.--19 years (water years 1939-43, 1951-55, 1973-81), 115 ft³/s (3.257 m³/s), 83,320 acre-ft/yr (103 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 3,380 ft³/s (95.7 m³/s) May 19, 1978, gage height, 12.94 ft (3.944 m); maximum gage height observed, 13.0 ft (3.96 m) Mar. 12, 13, 1942 (ice jam), site and datum then in use; minimum daily discharge, 0.70 ft³/s (0.020 m³/s) Aug. 13, 1940.

EXTREMES FOR CURRENT YEAR.--Peak discharge above base of 500 ft³/s (14.2 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
May 23	2345	*642 18.2	6.70 2.042

Minimum daily discharge, 15 ft³/s (0.42 m³/s) July 25.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	55	80	77	52	46	74	76	93	214	48	31	31
2	54	82	70	49	49	74	74	83	194	48	29	34
3	56	82	72	48	53	73	73	84	171	48	28	34
4	56	82	76	46	56	73	74	87	173	48	27	36
5	57	82	80	45	56	73	74	86	166	40	26	37
6	58	82	78	44	56	71	74	82	138	37	26	38
7	57	82	70	43	50	71	73	72	126	33	26	38
8	54	85	64	42	43	70	71	78	122	25	26	37
9	55	85	64	42	43	70	71	87	116	27	26	35
10	57	85	66	41	40	70	70	84	109	31	26	35
11	58	85	66	40	37	70	73	95	97	33	35	35
12	58	85	70	40	42	70	83	117	93	36	35	36
13	55	88	70	39	50	70	113	114	90	38	34	36
14	56	90	70	39	62	70	122	95	91	34	33	35
15	63	85	70	38	77	70	108	87	94	30	32	35
16	71	79	74	38	80	69	103	86	94	24	32	35
17	79	70	76	39	85	77	130	110	89	20	31	36
18	80	67	76	41	89	87	159	283	84	19	32	36
19	77	66	72	43	92	80	158	230	80	19	32	35
20	74	68	56	45	96	74	198	197	77	19	31	39
21	73	73	58	48	88	77	239	193	71	20	28	40
22	76	80	60	50	88	79	181	276	66	19	28	39
23	77	82	65	54	90	76	138	434	62	18	35	39
24	80	84	60	56	94	74	114	577	54	18	27	37
25	82	80	52	58	85	73	131	419	47	15	23	36
26	82	76	54	54	79	71	187	371	45	24	20	35
27	79	74	56	50	77	74	178	339	46	40	21	37
28	79	74	62	50	76	80	145	364	48	38	26	37
29	80	76	60	52	---	82	123	312	48	37	26	37
30	83	80	56	54	---	79	105	271	48	35	28	49
31	80	---	54	54	---	77	---	241	---	33	28	---
TOTAL	2101	2389	2054	1434	1879	2298	3518	6047	2953	954	888	1099
MEAN	67.8	79.6	66.3	46.3	67.1	74.1	117	195	98.4	30.8	28.6	36.6
MAX	83	90	80	58	96	87	239	577	214	48	35	49
MIN	54	66	52	38	37	69	70	72	45	15	20	31
AC-FT	4170	4740	4070	2840	3730	4560	6980	11990	5860	1890	1760	2180

CAL YR 1980	TOTAL	25774.1	MEAN 70.4	MAX 201	MIN 4.9	AC-FT 51120
WTR YR 1981	TOTAL	27614.0	MEAN 75.7	MAX 577	MIN 15	AC-FT 54770

YELLOWSTONE RIVER BASIN

06270000 NOWOOD RIVER NEAR TEN SLEEP, WY--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1968 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	HARD- NESS (MG/L AS CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LITY LAB (MG/L AS CACO3)
OCT 14...	1000	55	--	7.2	9.5	530	130	47	32	.6	2.2	190
NOV 21...	0935	75	--	7.8	.0	480	130	36	17	.3	1.8	190
DEC 11...	1130	67	960	8.1	.0	510	140	40	16	.3	1.8	190
JAN 06...	1030	44	910	8.6	.0	440	120	36	20	.4	1.3	180
FEB 24...	1000	94	950	7.8	.0	420	110	32	20	.4	2.2	180
MAR 23...	0940	81	900	8.2	7.5	430	120	34	20	.4	1.6	170
APR 14...	1000	123	730	8.1	10.0	350	91	28	15	.4	1.6	160
MAY 15...	1220	89	--	--	15.0	360	95	31	21	.5	1.7	160
19...	1050	229	--	--	13.5	--	--	--	--	--	--	--
23...	1200	377	--	--	11.5	--	--	--	--	--	--	--
24...	1000	614	--	--	11.0	--	--	--	--	--	--	--
JUN 19...	1030	82	--	--	13.0	--	--	--	--	--	--	--
JUL 21...	1015	20	--	--	20.0	--	--	--	--	--	--	--
AUG 18...	1300	32	--	--	18.0	--	--	--	--	--	--	--
SEP 18...	1035	36	--	--	14.5	560	140	49	45	.8	2.0	200

DATE	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)	SOLIDS, DIS- SOLVED (TONS PER DAY)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	PHOS- PHORUS, TOTAL (MG/L AS P)	SEDI- MENT, SUS- PENDEDED (MG/L)	SEDI- MENT, DIS- CHARGE, SUS- PENDEDED (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
OCT 14...	370	3.0	1.0	.0	700	.95	104	.11	.340	48	7.1	--
NOV 21...	300	.8	.4	8.1	610	.83	124	2.2	.010	98	20	81
DEC 11...	320	.7	.5	8.1	640	.87	116	2.3	.010	60	11	--
JAN 06...	290	1.7	.4	11	591	.80	70.2	.43	.000	62	7.4	--
FEB 24...	270	2.2	.4	.0	547	.74	139	.53	.150	488	124	77
MAR 23...	270	4.5	.5	6.1	560	.76	122	.00	.000	120	26	91
APR 14...	210	1.6	.4	18	460	.63	153	.21	.150	648	215	85
MAY 15...	230	16	.5	4.3	490	.67	118	.06	.190	132	32	88
19...	--	--	--	--	--	--	--	--	--	1620	1000	80
23...	--	--	--	--	--	--	--	--	--	3000	3050	--
24...	--	--	--	--	--	--	--	--	--	3730	6180	--
JUN 19...	--	--	--	--	--	--	--	--	--	52	12	--
JUL 21...	--	--	--	--	--	--	--	--	--	80	4.3	96
AUG 18...	--	--	--	--	--	--	--	--	--	47	4.1	--
SEP 18...	450	3.4	.5	9.0	820	1.1	79.7	1.1	.100	33	3.2	--

06270000 NOWOOD RIVER NEAR TEN SLEEP, WY--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	TIME	TEMPER- ATURE (DEG C)	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SED. SUSP. FALL DIAM. % FINER THAN .004 MM	SED. SUSP. FALL DIAM. % FINER THAN .016 MM	SED. SUSP. FALL DIAM. % FINER THAN .062 MM	SED. SUSP. FALL DIAM. % FINER THAN .125 MM	SED. SUSP. FALL DIAM. % FINER THAN .250 MM
MAY								
23...	1200	11.5	377	45	62	87	98	100
24...	1000	11.0	614	38	60	87	97	100

DATE	TIME	2,4-D, TOTAL (UG/L)	2,4-D, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	2,4-DP, TOTAL (UG/L)	2,4-DP, IN BOTTOM MAT. (UG/KG)	2,4,5-T TOTAL (UG/L)	2,4,5-T TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	SILVEX, TOTAL (UG/L)	SILVEX, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)
JUN									
19...	1030	.00	0	.00	.00	.00	0	.00	0

DATE	TOTAL DICAMBA (UG/L)	DICAMBA IN BOTTOM MA- TERIAL (UG/KG)	TOTAL PICLORAM (UG/L)	PICLORAM IN BOTTOM MA- TERIAL (UG/KG)
JUN				
19...	.00	.0	.01	.0

YELLOWSTONE RIVER BASIN

06273500 PAINT ROCK CREEK NEAR MOUTH, BELOW HYATTVILLE, WY

LOCATION.--Lat 44°12'20", long 107°42'54", in SW¼SE¼NW¼ sec.19, T.49 N., R.90 W., Big Horn County, Hydrologic Unit 10080008, at bridge on county road, 0.5 mi (0.8 km) south of State Secondary Highway 0201, 1.0 mi (1.6 km) upstream from mouth, and 6.4 mi (10.3 km) southwest of Hyattville.

DRAINAGE AREA.--376 mi² (974 km²), approximately.

PERIOD OF RECORD.--Water years 1951-53, 1968 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	HARD- NESS (MG/L AS CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)
OCT 10...	1420	72	--	9.0	10.0	370	100	27	38	.9	2.0
NOV 21...	1120	20	--	8.1	.0	410	110	33	28	.6	1.8
DEC 11...	0930	60	780	8.2	.0	390	110	28	26	.6	2.0
JAN 06...	1145	40	900	8.4	.0	390	110	29	35	.8	2.0
FEB 24...	1130	40	930	8.1	4.5	400	110	30	39	.9	1.9
MAR 23...	1120	38	1000	8.3	9.5	420	110	33	40	.9	2.0
APR 14...	1105	23	1300	8.2	11.5	540	150	43	62	1.1	2.2
MAY 15...	1030	35	--	--	4.0	430	120	35	55	1.1	2.1
AUG 18...	1430	25	--	--	25.0	650	180	49	80	1.4	3.3

DATE	ALKA- LITY LAB (MG/L AS CACO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, SUM OF CONSTITUENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)	SOLIDS, DIS- SOLVED (TONS PER DAY)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	PHOS- PHORUS, TOTAL (MG/L AS P)
OCT 10...	160	270	2.1	.4	8.0	555	.75	108	.00	.010
NOV 21...	180	270	1.1	.4	8.2	560	.76	30.2	1.3	.000
DEC 11...	180	250	1.2	.4	9.2	540	.73	87.5	1.5	.000
JAN 06...	190	270	1.8	.5	12	571	.78	61.7	.26	.000
FEB 24...	200	280	3.1	.4	.0	585	.80	63.2	.22	.030
MAR 23...	180	280	4.0	.5	8.2	590	.80	60.5	.00	.000
APR 14...	180	460	4.6	.6	19	850	1.2	52.8	.01	.040
MAY 15...	180	340	14	.7	3.9	179	.24	16.9	.01	.110
AUG 18...	180	590	4.5	.5	11	1000	1.4	67.5	.03	.040

06273500 PAINT ROCK CREEK NEAR MOUTH, BELOW HYATTVILLE, WY--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	TEMPER- ATURE (DEG C)	2,4-D, TOTAL 2,4-D, TOTAL (UG/L)	2,4-D, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	2, 4-DP TOTAL (UG/L)	2,4-DP, IN BOTTOM MAT. (UG/KG)	2,4,5-T TOTAL (UG/L)	2,4,5-T TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	SILVEX, TOTAL (UG/L)	SILVEX, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)
JUN 19...	1145	279	13.0	.01	0	.00	.00	.00	0	.00	0
AUG 18...	1430	25	25.0	.04	0	.00	.00	.00	0	.00	0
SEP 18...	1150	21	15.0	.00	0	.00	.00	.00	0	.00	0

DATE	TOTAL DICAMBA (UG/L)	DICAMBA IN BOTTOM MA- TERIAL (UG/KG)	TOTAL PICLORAM (UG/L)	PICLORAM IN BOTTOM MA- TERIAL (UG/KG)
JUN 19...	.00	.0	.00	.0
AUG 18...	.00	.0	.00	.0
SEP 18...	.00	.0	.00	.0

YELLOWSTONE RIVER BASIN

06274220 NOWOOD RIVER AT MANDERSON, WY

LOCATION.--Lat 44°16'34", long 107°57'35", in NE&SW¼ sec.30, T.50 N., R.92 W., Big Horn County, Hydrologic Unit 10080008, at bridge on State Secondary Highway 0201, and 0.5 mi (0.8 km) upstream from mouth near corporate limits of Manderson.

DRAINAGE AREA.--2,000 mi² (5,180 km²), approximately.

PERIOD OF RECORD.--Water years 1965 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	HARD- NESS (MG/L AS CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)
OCT 10...	1330	186	--	7.9	11.0	450	110	40	38	.8	1.6
NOV 21...	1210	105	--	8.1	.0	460	120	36	30	.6	2.3
DEC 11...	0845	208	980	8.2	.0	500	140	37	33	.6	2.3
JAN 06...	1210	110	1000	8.5	.0	430	110	36	35	.7	2.2
FEB 24...	1220	150	920	8.2	.0	400	100	34	33	.7	2.2
MAR 23...	1240	168	1000	8.4	11.5	440	110	39	39	.8	2.0
APR 14...	1200	161	940	8.3	13.0	430	110	38	39	.8	2.2
MAY 15...	0945	191	--	--	14.0	380	94	34	41	.9	1.5
JUN 19...	1215	466	--	--	13.0	200	56	15	19	.6	1.7
AUG 18...	1530	53	--	--	25.0	590	150	55	100	1.8	4.7
SEP 18...	1230	53	--	--	18.0	620	150	58	87	1.5	3.2

DATE	ALKA- LINITY LAB (MG/L AS CACO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, SUM OF CONSTITUENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)	SOLIDS, DIS- SOLVED (TONS PER DAY)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	PHOS- PHORUS, TOTAL (MG/L AS P)
OCT 10...	160	330	3.2	.4	4.0	630	.86	316	.36	.030
NOV 21...	190	310	1.5	.4	6.9	620	.84	176	1.6	.000
DEC 11...	180	350	2.3	.4	6.8	680	.92	382	2.0	.000
JAN 06...	170	290	3.8	.4	9.3	587	.80	174	.36	.000
FEB 24...	170	290	3.7	.4	.0	570	.78	231	.52	.130
MAR 23...	160	330	5.0	.5	5.4	630	.86	286	.25	.010
APR 14...	150	340	4.2	.5	12	630	.86	274	.00	.050
MAY 15...	160	290	15	.5	2.0	570	.78	294	.02	.150
JUN 19...	90	140	12	.1	5.4	300	.41	377	.07	.020
AUG 18...	160	580	10	.5	6.2	1000	1.4	143	.00	.090
SEP 18...	170	590	6.7	.6	8.2	1000	1.4	143	.68	.160

YELLOWSTONE RIVER BASIN

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06274220 NOWOOD RIVER AT MANDERSON, WY--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	TIME	2,4-D, TOTAL (UG/L)	2,4-D, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	2, 4-DP TOTAL (UG/L)	2,4-DP, IN BOTTOM MAT. (UG/KG)	2,4,5-T TOTAL (UG/L)	2,4,5-T TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	SILVEX, TOTAL (UG/L)	SILVEX, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)
JUN 19...	1215	.03	0	.00	.00	.00	0	.01	0
AUG 18...	1530	.08	0	.00	.00	.00	0	.00	0
SEP 18...	1230	.02	0	.00	.00	.00	0	.00	0

DATE	TOTAL DICAMBA (UG/L)	DICAMBA IN BOTTOM MA- TERIAL (UG/KG)	TOTAL PICLORAM (UG/L)	PICLORAM IN BOTTOM MA- TERIAL (UG/KG)
JUN 19...	.00	.0	.00	.0
AUG 18...	.02	.0	.00	.0
SEP 18...	.00	.0	.00	.0

YELLOWSTONE RIVER BASIN

06275000 WOOD RIVER AT SUNSHINE, WY

LOCATION.--Lat 44°02'15", long 108°58'24", in NW¼SW¼ sec.15, T.47 N., R.101 W., Park County, Hydrologic Unit 10080009, on right bank at bridge on county road, 1.0 mi (1.6 km) downstream from Ernest May Ranch, 5.2 mi (8.4 km) downstream from Dick Creek, and 10 mi (16 km) southwest of Meeteetse.

DRAINAGE AREA.--194 mi² (502 km²), approximately.

PERIOD OF RECORD.--August 1945 to current year.

REVISED RECORDS.--WSP 1309: 1947(M). WSP 1709: Drainage area.

GAGE.--Water-stage recorder. Altitude of gage is 6,450 ft (1,966 m), from topographic map. Prior to Sept. 18, 1952, and Oct. 28, 1953, to June 15, 1963, water-stage recorder at site 2.0 mi (3.2 km) upstream at different datum. Sept. 18, 1952, to Oct. 27, 1953, nonrecording gage at site 2.0 mi (3.2 km) upstream at different datum. June 16, 1963, to Aug. 13, 1967, water-stage recorder at site 1.4 mi (2.3 km) upstream at different datum. Aug. 14 to Oct. 5, 1967, nonrecording gage at present site and datum.

REMARKS.--Records fair except those for October to March, which are poor. Water diverts above station to Lower Sunshine Reservoir since 1972. Diversion above station for irrigation of about 3,200 acres (13.0 km²), of which about 1,000 acres (4.05 km²) are below station.

AVERAGE DISCHARGE.--27 years (water years 1946-72), prior to Lower Sunshine diversion, 117 ft³/s (3.313 m³/s), 84,770 acre-ft/yr (105 hm³/yr); 9 years (water years 1973-81), 98.4 ft³/s (2.787 m³/s), 71,290 acre-ft/yr (87.9 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 5,080 ft³/s (144 m³/s) June 15, 1963, gage height, 7.00 ft (2.134 m), from floodmark, site and datum then in use, from contracted-opening measurement of peak flow; maximum gage height, 7.98 ft (2.432 m) June 9, 1981; minimum daily, 0.40 ft³/s (0.011 m³/s) Mar. 13, 1978.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,700 ft³/s (43.1 m³/s) June 9, gage height, 7.98 ft (2.432 m); minimum daily, 1.1 ft³/s (0.031 m³/s) Dec. 28.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	77	74	43	1.3	5.6	5.8	6.8	168	278	200	120	75
2	77	74	45	3.0	5.2	6.2	6.8	180	196	190	116	78
3	74	68	48	2.8	5.4	6.6	6.5	152	216	200	114	82
4	76	73	48	2.4	5.8	6.8	5.6	142	197	185	110	84
5	74	70	46	4.2	6.0	7.0	5.9	132	443	182	108	80
6	74	65	35	6.0	6.0	5.0	5.9	140	627	188	108	75
7	71	43	25	5.7	5.5	4.0	5.9	172	795	218	106	72
8	70	14	25	5.4	5.2	3.5	6.2	170	999	190	106	67
9	68	12	25	5.2	4.6	3.0	5.0	160	1070	168	135	63
10	66	14	25	4.9	4.1	3.5	4.5	175	512	162	126	64
11	64	13	23	5.4	4.3	4.0	6.5	200	460	158	114	64
12	64	13	20	5.2	4.7	4.5	9.5	194	488	202	106	64
13	62	14	18	5.0	5.2	4.5	7.5	178	460	258	102	63
14	63	16	16	4.5	5.4	4.4	5.3	160	354	182	104	63
15	72	20	14	4.0	5.4	2.5	5.6	175	285	160	98	61
16	67	25	12	3.7	5.2	3.1	6.5	197	249	150	92	58
17	68	34	10	4.0	4.9	3.5	5.9	143	270	150	92	60
18	70	37	9.0	4.5	4.5	3.3	7.9	159	228	152	85	60
19	73	40	7.6	4.9	4.7	4.5	7.5	172	237	146	85	58
20	73	50	6.4	5.2	5.0	7.2	44	185	264	135	80	60
21	70	49	5.2	5.6	4.5	8.7	90	186	264	130	83	60
22	65	48	4.0	6.0	5.0	7.9	86	122	291	126	81	56
23	56	48	3.1	6.5	6.0	8.7	94	185	340	126	78	57
24	60	48	2.8	7.0	8.0	11	124	211	291	132	78	58
25	64	42	2.4	6.4	8.0	13	140	285	231	155	76	63
26	66	45	2.0	5.8	6.8	17	138	353	273	172	78	70
27	64	42	1.6	5.8	6.0	20	133	409	267	158	80	70
28	60	46	1.1	6.4	5.7	22	117	425	225	141	85	63
29	64	50	1.3	6.4	---	16	137	420	200	135	80	56
30	66	49	1.3	6.4	---	11	154	406	200	128	76	61
31	70	---	1.3	6.0	---	10	---	434	---	122	74	---
TOTAL	2108	1236	527.1	155.6	152.7	238.2	1378.3	6790	11210	5101	2976	1965
MEAN	68.0	41.2	17.0	5.02	5.45	7.68	45.9	219	374	165	96.0	65.5
MAX	77	74	48	7.0	8.0	22	154	434	1070	258	135	84
MIN	56	12	1.1	1.3	4.1	2.5	4.5	122	196	122	74	56
AC-FT	4180	2450	1050	309	303	472	2730	13470	22240	10120	5900	3900
CAL YR 1980	TOTAL	31765.4	MEAN	86.8	MAX	654	MIN	1.1	AC-FT	63010		
WTR YR 1981	TOTAL	33837.9	MEAN	92.7	MAX	1070	MIN	1.1	AC-FT	67120		

06276500 GREYBULL RIVER AT MEETEETSE, WY

LOCATION.--Lat 44°09'20", long 108°52'35", in sec.4, T.48 N., R.100 W., Park County, Hydrologic Unit 10080009, on right bank at Meeteetse, 0.3 mi (0.5 km) upstream from bridge on State Highway 120, and 3.0 mi (4.8 km) upstream from Meeteetse Creek.

DRAINAGE AREA.--681 mi² (1,764 km²).

PERIOD OF RECORD.--June to December 1897, April to October 1903 (gage heights and discharge measurements only), July 1920 to current year (no winter records since 1971). Monthly discharge only for some periods, published in WSP 1309.

REVISED RECORDS.--WSP 1309: 1923(M), 1924, 1925(M). WSP 1709: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 5,739.42 ft (1,749.375 m), National Geodetic Vertical Datum of 1929. See WSP 1916 for history of changes prior to Apr. 28, 1938. Apr. 28, 1938, to May 24, 1961, at site on left bank at datum 2.00 ft (0.610 m) higher. May 25, 1961, to May 9, 1967, at site 100 ft (30 m) downstream at present datum.

REMARKS.--Records fair. Some regulation by Sunshine Reservoir beginning May 1940, capacity, 52,990 acre-ft (65.3 hm³), and Lower Sunshine Reservoir beginning December 1972, capacity, 58,900 acre-ft (72.6 hm³). Diversions for irrigation of about 10,600 acres (42.9 km²) above station. Several diversions above station for irrigation below station.

COOPERATION.--Records collected and computed by Office of the Wyoming State Engineer and reviewed by Geological Survey.

AVERAGE DISCHARGE.--51 years (water years 1921-71), 347 ft³/s (9.827 m³/s), 251,400 acre-ft/yr (310 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 13,600 ft³/s (385 m³/s) June 15, 1963, gage height, 9.20 ft (2.804 m), from floodmark, from rating curve extended above 4,600 ft³/s (130 m³/s) on basis of velocity-area study; minimum daily, 16 ft³/s (0.45 m³/s) Mar. 4, 1963.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 8,400 ft³/s (238 m³/s) June 9, gage height, 6.06 ft (1.847 m); minimum daily during period of operation, 34 ft³/s (0.96 m³/s) Apr. 7.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1							56	495	691	675	657	480
2							51	535	500	639	693	462
3							50	450	520	738	675	468
4							46	345	505	614	693	432
5							41	354	963	622	693	414
6							36	363	1660	630	675	468
7							34	381	4140	830	657	438
8							37	317	4250	756	648	408
9							42	368	4760	648	693	366
10							43	400	1850	729	693	360
11							45	329	1480	810	648	340
12							47	129	1580	937	630	325
13							50	107	1630	993	614	320
14							44	302	1110	830	606	335
15							47	321	830	792	590	366
16							44	410	675	792	574	390
17							50	363	765	830	566	378
18							50	280	574	840	582	372
19							52	288	566	810	622	366
20							83	317	639	783	622	360
21							218	305	666	756	639	350
22							191	242	720	756	648	345
23							191	317	1110	756	622	350
24							280	325	988	747	606	360
25							358	475	720	830	598	355
26							354	567	970	860	574	340
27							363	810	1340	783	606	310
28							277	904	1340	729	574	310
29							317	876	1280	666	529	295
30							450	886	880	630	529	275
31							---	944	---	648	515	---
TOTAL							3947	13505	39702	23459	19271	11138
MEAN							132	436	1323	757	622	371
MAX							450	944	4760	993	693	480
MIN							34	107	500	614	515	275
AC-FT							7830	26790	78750	46530	38220	22090

YELLOWSTONE RIVER BASIN

06277500 GREYBULL RIVER NEAR BASIN, WY

LOCATION.--Lat 44°24'24", long 108°11'10", in NE&NW&SW¼ sec.8, T.51 N., R.94 W., Big Horn County, Hydrologic Unit 10080009, at former gaging station, at bridge on State Secondary Highway 0200, 3.0 mi (4.8 km) upstream from Dorsey Creek, and 8.0 mi (12.9 km) west of Basin.

DRAINAGE AREA.--1,115 mi² (2,888 km²).

PERIOD OF RECORD.--Water years 1951-53, 1965 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	HARD- NESS (MG/L AS CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)
OCT 10...	1200	62	--	7.8	10.0	360	90	33	150	3.4	4.2
NOV 12...	1145	177	--	8.4	4.0	300	72	28	72	1.8	3.0
DEC 04...	1315	120	700	8.5	.0	240	57	23	62	1.8	2.4
JAN 05...	1345	E150	1140	8.3	1.0	360	83	37	110	2.5	3.3
FEB 24...	1015	E120	1100	8.3	.5	330	83	31	99	2.4	3.6
MAR 17...	1200	E100	1100	8.0	6.0	370	90	35	110	2.5	3.6
APR 20...	1345	7.6	--	--	19.0	390	84	43	180	4.0	4.4
MAY 28...	1130	1200	--	--	14.0	130	30	13	38	1.5	1.9
JUL 02...	1220	30	--	--	21.0	300	76	26	150	3.8	3.3
AUG 03...	1300	47	--	--	20.0	280	63	29	130	3.4	3.7
SEP 15...	1330	37	--	--	18.5	290	71	28	180	4.6	3.6

E-Estimate.

DATE	ALKA- LINITY LAB (MG/L AS CACO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, SUM OF CONSTITUENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)	SOLIDS, DIS- SOLVED (TONS PER DAY)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	PHOS- PHORUS, TOTAL (MG/L AS P)
OCT 10...	280	360	10	.8	16	834	1.1	140	.63	.020
NOV 12...	230	220	5.8	.3	13	550	.75	263	.23	.050
DEC 04...	190	170	3.1	.5	4.2	443	.60	144	.24	.020
JAN 05...	260	290	6.9	.5	14	705	.96	--	.32	.010
FEB 24...	260	280	10	.5	.0	668	.91	--	.40	.040
MAR 17...	250	310	9.5	.6	11	720	.98	194	.25	.010
APR 20...	280	440	27	.7	13	954	1.3	19.6	.08	.040
MAY 28...	120	89	.4	.4	16	262	.36	849	.29	.190
JUL 02...	250	350	13	.7	26	800	1.1	64.8	2.2	.150
AUG 03...	290	240	9.5	.6	20	650	.88	82.5	.50	.130
SEP 15...	290	340	16	1.0	19	840	1.1	83.9	.88	.080

06277950 DRY CREEK NEAR GREYBULL, WY

LOCATION.--Lat 44°29'48", long 108°12'33", in NW¼SW¼NW¼ sec.7, T.52 N., R.94 W., Big Horn County, Hydrologic Unit 10080011, on left bank 1.0 mi (1.6 km) downstream from Kellerman Gulch, 7.3 mi (11.7 km) northeast of Otto, and 7.7 mi (12.4 km) west of Greybull.

DRAINAGE AREA.--432 mi² (1,120 km²), of which 18 mi² (47 km²) is probably noncontributing.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--April 1979 to September 1981 (discontinued).

GAGE.--Water-stage recorder. Altitude of gage is 4,020 ft (1,225 m) from topographic map.

REMARKS.--Records good except those for winter period, which are poor. Diversions for irrigation of about 800 acres (3.2 km²) above station.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 970 ft³/s (27.5 m³/s) Sept. 16, 1980, gage height, 5.06 ft (1.542 m); minimum daily, 4.6 ft³/s (0.130 m³/s) Jan. 30, 1980.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 689 ft³/s (19.5 m³/s) May 22, gage height, 4.48 ft (1.366 m); minimum daily, 7.1 ft³/s (0.201 m³/s) May 5.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	40	21	14	14	11	18	16	10	73	43	61	37
2	39	20	15	14	10	17	14	14	60	46	46	33
3	39	21	14	13	9.6	18	13	13	69	26	43	31
4	33	20	14	13	10	16	12	9.3	60	25	47	32
5	24	20	14	13	10	14	12	7.1	52	19	46	32
6	24	21	12	13	10	15	12	8.0	51	10	60	33
7	25	21	10	13	11	13	12	16	45	12	68	31
8	26	21	10	12	10	14	12	37	32	31	64	28
9	27	21	10	12	9.2	13	12	32	45	24	117	25
10	32	20	11	11	9.2	13	12	32	65	24	118	20
11	38	20	12	11	9.6	13	12	60	60	27	92	19
12	39	19	11	12	12	12	12	65	64	30	96	19
13	39	19	9.8	13	13	12	11	32	65	33	64	17
14	40	18	9.4	12	14	12	11	16	61	39	56	16
15	54	18	9.6	12	16	12	14	16	72	45	54	16
16	48	17	10	12	17	12	15	53	62	53	53	17
17	28	16	10	11	18	13	15	97	66	62	45	20
18	35	15	9.6	12	19	16	17	82	64	64	39	29
19	32	15	8.8	12	21	15	15	70	52	67	32	34
20	31	15	8.4	12	22	15	14	65	50	66	35	30
21	28	15	9.2	12	24	14	14	61	65	62	36	34
22	25	15	10	12	25	14	23	277	69	59	36	31
23	24	15	9.6	12	27	13	32	288	55	46	37	30
24	26	14	10	12	29	13	26	111	59	39	38	35
25	25	14	12	11	33	13	36	53	61	33	40	35
26	24	15	14	10	28	13	54	69	68	27	39	35
27	22	15	14	10	23	12	51	69	70	17	38	39
28	22	15	13	11	26	13	23	76	83	41	37	39
29	22	14	14	11	---	21	10	66	74	77	37	41
30	21	14	14	11	---	20	9.3	72	61	94	38	39
31	21	---	15	11	---	17	---	73	---	83	39	---
TOTAL	953	524	357.4	370	476.6	446	541.3	1949.4	1833	1324	1651	877
MEAN	30.7	17.5	11.5	11.9	17.0	14.4	18.0	62.9	61.1	42.7	53.3	29.2
MAX	54	21	15	14	33	21	54	288	83	94	118	41
MIN	21	14	8.4	10	9.2	12	9.3	7.1	32	10	32	16
AC-FT	1890	1040	709	734	945	885	1070	3870	3640	2630	3270	1740
CAL YR 1980	TOTAL	12987.2	MEAN 35.5	MAX 492	MIN 4.6	AC-FT 25760						
WTR YR 1981	TOTAL	11302.7	MEAN 31.0	MAX 288	MIN 7.1	AC-FT 22420						

YELLOWSTONE RIVER BASIN

06277950 DRY CREEK NEAR GREYBULL, WY--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--June 1979 to September 1981 (discontinued).

WATER-QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	TUR- BID- ITY (NTU)	COLI- FORM, TOTAL, IMMED. (COLS. PER 100 ML)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	STREP- TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)	HARD- NESS (MG/L AS CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)
NOV 12...	1020	19	2500	7.6	4.0	5.9	850	100	310	650	140	73
FEB 24...	1300	29	4400	8.4	.5	420	9300	130	82	840	170	100
MAY 20...	0915	66	1690	8.2	13.0	120	--	2100	10400	400	88	44
SEP 15...	1200	16	1390	8.9	15.0	14	--	K370	4100	340	84	31

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

DATE	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LINITY LAB (MG/L AS CACO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)	SOLIDS, DIS- SOLVED (TONS PER DAY)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N)
NOV 12...	340	5.8	21	320	920	66	1.6	18	1770	2.4	90.8	2.8
FEB 24...	500	7.5	53	290	1500	170	1.2	14	2680	3.6	210	1.4
MAY 20...	170	3.7	14	230	510	33	.7	15	1010	1.4	180	1.1
SEP 15...	130	3.3	4.0	270	360	9.6	1.2	19	801	1.1	34.6	1.7

DATE	NITRO- GEN, AMMONIA TOTAL (MG/L AS N)	NITRO- GEN, AMMONIA TOTAL (MG/L AS NH4)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO- GEN, TOTAL (MG/L AS N)	NITRO- GEN, TOTAL (MG/L AS NO3)	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHORUS TOTAL (MG/L AS PO4)	BORON, DIS- SOLVED (UG/L AS B)	IRON, DIS- SOLVED (UG/L AS FE)	SEDI- MENT, SUS- PENDE (MG/L)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (T/DAY)
NOV 12...	.020	.02	1.3	1.30	4.1	18	.020	.06	470	90	14	.71
FEB 24...	.110	--	1.8	1.90	3.3	15	.410	1.3	1000	70	--	--
MAY 20...	.060	--	2.0	2.10	3.2	14	.380	1.2	350	30	--	--
SEP 15...	.070	--	1.3	1.40	3.1	14	.060	.18	180	28	--	--

06278300 SHELL CREEK ABOVE SHELL RESERVOIR, WY

LOCATION.--Lat 44°30'29", long 107°24'11", in sec.1, T.52 N., R.88 W., Big Horn County, Hydrologic Unit 10080010, Bighorn National Forest, on right bank 0.2 mi (0.3 km) upstream from Shell Reservoir, 1.1 mi (1.8 km) downstream from Buckley Creek, 6.0 mi (9.7 km) southeast of Shell Creek ranger station, and 19 mi (31 km) east of Shell.

DRAINAGE AREA.--23.1 mi² (59.8 km²).

PERIOD OF RECORD.--October 1956 to current year. Prior to October 1969, published as Shell Creek above Shell Creek Reservoir.

REVISED RECORDS.--WSP 1629: 1958. WSP 1709: Drainage area.

GAGE.--Water-stage recorder. Altitude of gage is 9,050 ft (2,758 m), from topographic map.

REMARKS.--Records good except those for periods of ice effect, which are poor. No diversions above station.

AVERAGE DISCHARGE.--25 years, 36.2 ft³/s (1.025 m³/s), 26,230 acre-ft/yr (32.3 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,870 ft³/s (53.0 m³/s) June 15, 1963, gage height, 7.84 ft (2.390 m), from floodmarks, from rating curve extended above 725 ft³/s (20.5 m³/s) on basis of velocity-area study; minimum daily, 0.60 ft³/s (0.017 m³/s) Mar. 7, 1967.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 400 ft³/s (11.3 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
May 27	2200	705 20.0	5.62 1.713
June 8	0300	775 21.9	5.80 1.768

Minimum daily discharge, 1.0 ft³/s (0.028 m³/s) Apr. 8.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	22	9.8	5.1	2.5	2.0	1.6	1.3	60	227	42	12	5.4
2	21	9.5	4.7	2.4	1.9	1.6	1.3	75	204	41	11	5.1
3	21	9.2	4.5	2.4	1.9	1.6	1.3	53	255	39	10	5.0
4	20	9.1	4.5	2.4	1.8	1.6	1.2	40	254	36	9.7	4.9
5	19	9.1	4.5	2.3	1.8	1.6	1.1	32	312	34	9.3	4.9
6	18	9.1	4.3	2.3	1.7	1.6	1.1	36	397	29	9.4	8.1
7	18	8.9	4.0	2.3	1.7	1.6	1.1	28	350	28	9.5	6.9
8	17	8.5	3.8	2.3	1.6	1.6	1.0	22	432	27	9.3	6.3
9	17	8.8	3.6	2.3	1.5	1.5	1.1	18	390	24	9.3	5.9
10	15	8.4	3.5	2.2	1.4	1.5	1.1	19	149	22	9.2	5.4
11	15	8.3	3.5	2.2	1.3	1.5	1.2	16	130	20	8.7	5.4
12	15	8.1	3.5	2.2	1.3	1.5	1.2	14	205	21	8.2	5.2
13	15	7.8	3.4	2.2	1.3	1.5	1.2	13	233	36	7.9	5.1
14	14	7.0	3.3	2.2	1.4	1.6	1.2	13	123	26	7.6	5.0
15	14	7.0	3.2	2.2	1.5	1.6	1.3	21	84	23	7.5	5.0
16	13	7.0	3.2	2.2	1.5	1.6	1.6	42	79	20	7.7	5.0
17	15	7.0	3.1	2.1	1.5	1.6	1.8	51	87	18	7.9	4.9
18	14	7.0	3.1	1.9	1.5	1.5	2.5	63	62	19	7.7	4.8
19	14	7.0	3.0	1.9	1.6	1.4	4.0	86	67	18	7.4	4.7
20	14	7.0	2.8	2.0	1.6	1.3	5.0	147	136	17	7.0	4.6
21	15	7.0	2.8	2.0	1.6	1.3	4.5	100	110	15	7.8	4.5
22	13	7.0	2.8	2.0	1.6	1.3	4.0	61	110	14	7.5	4.5
23	11	6.5	2.8	2.0	1.6	1.3	3.8	69	126	13	6.9	4.4
24	12	6.0	2.8	2.0	1.7	1.3	5.0	95	113	13	6.7	4.4
25	12	5.7	2.7	2.0	1.7	1.3	10	168	87	17	6.6	4.7
26	12	5.6	2.6	2.0	1.7	1.4	20	280	86	20	6.3	5.7
27	11	5.6	2.6	2.0	1.7	1.4	50	551	88	20	6.1	5.4
28	11	5.5	2.6	2.0	1.7	1.4	44	364	71	17	6.0	5.2
29	11	5.5	2.6	2.0	---	1.4	35	316	56	15	5.8	4.9
30	10	5.4	2.6	2.0	---	1.3	45	324	47	14	5.7	5.5
31	10	---	2.5	2.0	---	1.3	---	326	---	12	5.4	---
TOTAL	459	223.4	104.0	66.5	45.1	45.6	253.9	3503	5070	710	247.1	156.8
MEAN	14.8	7.45	3.35	2.15	1.61	1.47	8.46	113	169	22.9	7.97	5.23
MAX	22	9.8	5.1	2.5	2.0	1.6	50	551	432	42	12	8.1
MIN	10	5.4	2.5	1.9	1.3	1.3	1.0	13	47	12	5.4	4.4
AC-FT	910	443	206	132	89	90	504	6950	10060	1410	490	311

CAL YR 1980	TOTAL	10463.72	MEAN 28.6	MAX 500	MIN .82	AC-FT 20750
WTR YR 1981	TOTAL	10884.40	MEAN 29.8	MAX 551	MIN 1.0	AC-FT 21590

YELLOWSTONE RIVER BASIN

06278500 SHELL CREEK NEAR SHELL, WY

LOCATION.--Lat 44°33'54", long 107°42'44", in SE¼SW¼ sec.17, T.53 N., R.90 W., Big Horn County, Hydrologic Unit 10080010, on right bank 0.9 mi (1.4 km) upstream from White Creek and 5.0 mi (8.0 km) northeast of Shell.

DRAINAGE AREA.--145 mi² (376 km²).

PERIOD OF RECORD.--October 1940 to current year (no winter records since 1971). Prior to December 1940, monthly discharge only, published in WSP 1309.

REVISED RECORDS.--WSP 1239: 1941, 1945(M). WSP 1709: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 4,370.05 ft (1,331.991 m), National Geodetic Vertical Datum of 1929.

REMARKS.--Records good. Some regulation by two small reservoirs, capacity, 3,650 acre-ft (4.50 hm³). Diversions above station for irrigation of about 80 acres (32 hm²) below station.

COOPERATION.--Records collected and computed by Office of the Wyoming State Engineer and reviewed by Geological Survey.

AVERAGE DISCHARGE.--31 years (water years (1941-71), 119 ft³/s (3.370 m³/s), 86,220 acre-ft/yr (106 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 3,020 ft³/s (85.5 m³/s) June 24, 1945, gage height, 7.49 ft (2.283 m), from rating curve extended above 1,600 ft³/s (45.3 m³/s); minimum daily, 18 ft³/s (0.51 m³/s) Mar. 5, 7, 1950, Jan. 30, 31, 1951.

EXTREMES FOR CURRENT YEAR.--Peak discharge above base of 750 ft³/s (21.2 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
May 28	0115	*1,190 33.7	4.78 1.457

Minimum daily discharge during period of operation, 26 ft³/s (0.74 m³/s) Apr. 4.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1							29	321	554	151	106	79
2							30	332	475	167	102	76
3							28	238	554	157	100	75
4							26	159	546	149	99	74
5							28	144	536	142	97	74
6							30	177	695	136	97	84
7							28	145	724	132	108	74
8							27	114	832	124	114	70
9							28	99	912	120	115	68
10							28	102	500	114	112	67
11							28	104	402	109	109	66
12							29	89	408	134	106	64
13							29	86	590	200	103	63
14							28	84	436	140	104	62
15							31	108	370	126	103	62
16							32	199	349	120	102	61
17							93	235	349	114	102	60
18							54	260	310	116	96	60
19							66	243	286	112	96	59
20							61	398	325	108	94	59
21							59	346	355	102	99	59
22							48	283	301	97	93	58
23							47	383	310	94	92	58
24							70	438	301	116	85	56
25							138	542	270	132	92	59
26							237	765	242	140	85	62
27							251	1140	248	136	84	59
28							169	930	232	120	82	56
29							154	768	208	115	80	54
30							231	685	187	110	80	60
31							---	730	---	109	79	---
TOTAL							2137	10647	12807	3942	3016	1938
MEAN							71.2	343	427	127	97.3	64.6
MAX							251	1140	912	200	115	84
MIN							26	84	187	94	79	54
AC-FT							4240	21120	25400	7820	5980	3840

06279090 SHELL CREEK NEAR GREYBULL, WY

LOCATION.--Lat 44°30'34", long 108°02'52", in NW¼SW¼ sec.4, T.52 N., R.93 W., Big Horn County, Hydrologic Unit 10080010, at bridge on county road, 0.4 mi (0.6 km) upstream from mouth, and 1.5 mi (2.4 km) north of post office in Greybull.

DRAINAGE AREA.--560 mi² (1,450 km²), approximately.

PERIOD OF RECORD.--Water years 1951, 1965 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	HARD- NESS (MG/L AS CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)
OCT 10...	1100	48	1320	7.5	8.0	530	140	42	83	1.6	2.2
NOV 12...	0915	61	1140	7.1	4.5	450	120	35	76	1.6	1.2
DEC 04...	1200	54	1250	7.9	.5	400	100	34	65	1.4	2.0
DEC 30...	1415	35	1260	8.0	3.0	390	99	36	66	1.4	1.7
FEB 26...	0930	38	1100	8.2	2.5	440	110	37	63	1.3	1.6
MAR 24...	1420	28	1650	8.2	12.0	590	150	53	150	2.7	2.8
APR 20...	0900	15	--	--	9.0	800	200	74	280	4.3	4.6
MAY 28...	1050	1600	--	--	9.0	130	35	11	18	.7	1.5
JUN 23...	0815	240	--	--	18.0	210	58	15	30	.9	1.8
AUG 03...	1200	40	--	--	20.0	640	170	54	130	2.2	3.7
SEP 15...	0855	34	--	--	15.0	760	200	61	160	2.5	3.0

DATE	ALKA- LINITY LAB (MG/L AS CACO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTITUENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)	SOLIDS, DIS- SOLVED (TONS PER DAY)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	PHOS- PHORUS, TOTAL (MG/L AS P)
OCT 10...	200	480	3.6	.5	6.2	880	1.2	114	.27	.010
NOV 12...	200	380	.5	.3	2.2	740	1.0	122	.45	.050
DEC 04...	200	340	1.8	.6	5.1	669	.91	97.5	.66	.080
DEC 30...	180	340	2.4	.5	14	670	.91	63.3	.51	.010
FEB 26...	200	350	3.6	.6	8.4	695	.95	71.3	.48	.020
MAR 24...	200	650	7.3	.6	7.5	1100	1.5	83.2	.38	.020
APR 20...	250	1100	14	.9	5.8	1810	2.5	73.3	.05	.070
MAY 28...	90	83	.7	.3	57	261	.36	1130	.47	.140
JUN 23...	120	140	13	.3	5.6	330	.45	214	.16	.020
AUG 03...	220	690	4.3	.9	13	1200	1.6	130	.03	.060
SEP 15...	250	850	5.3	1.1	11	1400	1.9	129	.29	.080

YELLOWSTONE RIVER BASIN

06279090 SHELL CREEK NEAR GREYBULL, WY--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	TIME	2,4-D, TOTAL 2,4-D, (UG/L)	2,4-D, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	2, 4-DP TOTAL (UG/L)	2,4-DP, IN BOTTOM MAT. (UG/KG)	2,4,5-T TOTAL (UG/L)	2,4,5-T TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	SILVEX, TOTAL (UG/L)	SILVEX, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)
JUN 23...	0815	.00	0	.00	.00	.00	0	.00	0
AUG 03...	1200	.02	0	.00	.00	.00	0	.00	0
SEP 15...	0855	.04	0	.00	.00	.00	0	.00	0

DATE	TOTAL DICAMBA (UG/L)	DICAMBA IN BOTTOM MA- TERIAL (UG/KG)	TOTAL PICLORAM (UG/L)	PICLORAM IN BOTTOM MA- TERIAL (UG/KG)
JUN 23...	.00	.0	.00	.0
AUG 03...	.00	.0	.01	.0
SEP 15...	.00	.0	.00	.0

06279500 BIGHORN RIVER AT KANE, WY

LOCATION.--Lat 44°45'31", long 108°10'51", in NW¼NE¼SW¼ sec.9, T.55 N., R.94 W., Big Horn County, Hydrologic Unit 10080010, on right bank 180 ft (55 m) upstream from Bighorn Canyon National Recreation Area boundary, 0.5 mi (0.8 km) upstream from normal high-water line of Bighorn Lake at elevation 3,660 ft (1,116 m), 1.3 mi (2.1 km) upstream from Five Springs Creek, and 5.9 mi (9.5 km) south of Kane.

DRAINAGE AREA.--15,765 mi² (40,831 km²). Area at sites used prior to May 17, 1956, 15,846 mi² (41,041 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--August 1928 to current year.

REVISED RECORDS.--WSP 1309: 1929(M). WSP 1509: 1929. WSP 1709: Drainage area.

GAGE.--Water-stage recorder. Altitude of gage is 3,660 ft (1,116 m), from topographic map. Aug. 29, 1928, to Apr. 25, 1932, nonrecording gage, and Apr. 25, 1932, to May 16, 1956, water-stage recorder, at site 12.5 mi (20.1 km) downstream at different datum.

REMARKS.--Records fair except those for periods of ice effect, which are poor. Some regulation by Boysen Reservoir (station 06258900) since October 1951. Diversions for irrigation of about 376,000 acres (1,522 km²) above station.

AVERAGE DISCHARGE.--53 years, 2,272 ft³/s (64.34 m³/s), 1,646,000 acre-ft/yr (2,030 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 25,200 ft³/s (714 m³/s) June 16, 1935, gage height, 11.10 ft (3.383 m), site and datum then in use; minimum daily, 179 ft³/s (5.07 m³/s) July 22, 1934.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since at least 1923, 14.8 ft (4.51 m) Sept. 30, 1923, site and datum in use April 1932 to May 1956.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 8,720 ft³/s (247 m³/s) May 23, gage height, 5.28 ft (1.609 m); maximum gage height, 9.74 ft (2.969 m) Dec. 22 (backwater from ice); minimum daily discharge, 615 ft³/s (17.4 m³/s) July 25.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2140	1900	1800	1770	1700	1470	1180	908	5830	1310	1030	958
2	2090	1890	1700	1750	1500	1470	1080	1090	4840	1190	985	932
3	2060	1890	1750	1710	1400	1450	1070	1200	4150	1300	967	949
4	2030	1900	1900	1720	1500	1470	1060	1110	4130	1630	940	1090
5	1780	1920	1900	1710	1500	1440	1040	924	4050	1630	900	1280
6	1680	1920	1800	1680	1600	1410	1050	836	4410	1420	876	1260
7	1630	1930	1700	1650	1700	1400	1050	860	5570	1110	868	1180
8	1590	1930	1640	1540	1700	1320	1040	1060	6040	994	852	1110
9	1570	1900	1690	1540	1600	1270	1030	1090	5920	1040	900	1080
10	1510	1870	1780	1630	1300	1260	1000	1030	7310	967	1280	1050
11	1590	1860	1880	1600	1300	1230	976	1050	5330	876	1130	1020
12	1660	1860	2000	1470	1400	1220	932	1290	4530	860	1000	994
13	1830	1890	1900	1380	1500	1210	908	1250	5030	2510	916	967
14	1890	1920	1800	1500	1500	1230	900	1090	5720	2060	892	949
15	1870	1840	1700	1500	1600	1200	892	1010	4530	1570	868	932
16	2190	1770	1800	1480	1700	1190	860	1000	3870	1150	852	908
17	2240	1720	1900	1300	1700	1190	820	1190	3470	1010	844	916
18	2200	1700	2000	1400	1600	1220	796	2010	3250	958	828	932
19	2240	1700	1800	1500	1700	1250	745	2500	2960	1010	788	967
20	2170	1780	1700	1500	1700	1220	724	2090	2790	1080	766	985
21	2110	1930	1800	1600	1500	1200	738	2280	2810	1010	717	1000
22	2040	1900	1900	1700	1600	1200	731	4050	2860	916	738	985
23	2000	1920	2000	1600	1500	1190	812	7430	2600	868	812	985
24	1930	1890	1900	1600	1500	1160	752	5260	2980	900	844	1020
25	1930	1800	1900	1700	1510	1140	704	4800	2700	615	828	1080
26	1950	1800	2000	1800	1510	1060	766	5050	2040	1280	766	1130
27	1930	1840	2080	1700	1480	1010	1060	6420	1980	2110	773	1200
28	1930	1810	2080	1700	1500	1130	1170	7900	2170	1870	804	1230
29	1930	1860	1810	1700	---	1180	1040	6930	1900	1560	876	1270
30	1920	1870	1740	1700	---	1310	892	6150	1570	1290	900	1290
31	1920	---	1740	1700	---	1260	---	6040	---	1130	940	---
TOTAL	59550	55710	57090	49830	43300	38960	27818	86898	117340	39224	27480	31649
MEAN	1921	1857	1842	1607	1546	1257	927	2803	3911	1265	886	1055
MAX	2240	1930	2080	1800	1700	1470	1180	7900	7310	2510	1280	1290
MIN	1510	1700	1640	1300	1300	1010	704	836	1570	615	717	908
AC-FT	118100	110500	113200	98840	85890	77280	55180	172400	232700	77800	54510	62780
CAL YR 1980	TOTAL	789627	MEAN	2157	MAX	6410	MIN	908	AC-FT	1566000		
WTR YR 1981	TOTAL	634849	MEAN	1739	MAX	7900	MIN	615	AC-FT	1259000		

YELLOWSTONE RIVER BASIN

06279500 BIGHORN RIVER AT KANE, WY--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1947 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	TUR- BID- ITY (NTU)	OXYGEN, DIS- SOLVED (MG/L)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	HARD- NESS (MG/L AS CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)
OCT 17...	1215	2230	950	7.6	5.0	2400	8.4	730	300	79	24	93
NOV 20...	1200	1900	870	8.4	.0	--	--	K1	330	83	29	85
DEC 17...	1045	1940	1040	8.7	.0	140	12.5	140	290	73	27	87
JAN 05...	1100	1630	1050	8.4	1.0	--	--	46	330	79	33	96
FEB 26...	1220	1500	1100	8.2	4.5	--	--	68	350	87	33	110
MAR 24...	1245	1180	1180	8.3	9.0	--	--	110	350	86	32	100
APR 20...	1030	712	1250	8.4	13.5	--	--	K9	390	94	38	100
MAY 24...	1300	5260	690	7.9	18.0	--	--	13300	180	50	14	100
JUN 23...	0930	2570	1000	8.5	19.0	--	--	220	260	66	22	69
JUL 28...	1530	1790	1120	8.0	23.0	--	--	2100	320	86	25	94
AUG 19...	1015	777	1200	8.4	22.0	--	--	--	360	93	31	120
SEP 23...	1045	1000	1140	8.6	14.0	--	--	K24	300	51	42	110

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

DATE	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LINITY LAB (MG/L AS CACO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)	SOLIDS, DIS- SOLVED (TONS PER DAY)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)
OCT 17...	2.4	3.8	160	320	14	.6	8.4	640	.87	3850	--	.40
NOV 20...	2.0	3.8	180	300	14	.5	5.4	630	.86	3230	.18	.92
DEC 17...	2.2	4.7	160	280	17	.7	5.0	595	.81	3120	.29	.10
JAN 05...	2.3	4.3	190	320	17	.6	7.3	667	.91	2940	.22	.22
FEB 26...	2.5	4.7	190	360	23	.6	8.4	737	1.0	2980	.27	.28
MAR 24...	2.3	3.9	200	350	20	.5	9.0	720	.98	2290	.25	.35
APR 20...	2.2	5.0	200	380	27	.7	5.0	770	1.0	1480	.12	.14
MAY 24...	3.2	4.3	160	230	11	.7	8.7	520	.71	7390	1.2	1.6
JUN 23...	1.9	3.7	150	240	18	.5	6.8	510	.69	3540	.14	.18
JUL 28...	2.3	5.5	180	320	20	.8	8.8	670	.91	3240	.82	1.0
AUG 19...	2.8	4.3	200	380	16	.5	9.1	770	1.0	1620	.59	.55
SEP 23...	2.8	4.9	170	370	15	.8	7.6	700	.95	1890	.33	.35

06279500 BIGHORN RIVER AT KANE, WY--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	NITRO- GEN, AMMONIA TOTAL (MG/L AS N)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N)	NITRO- GEN, AMMONIA TOTAL (MG/L AS NH4)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS NH4)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO- GEN, TOTAL (MG/L AS N)	NITRO- GEN, TOTAL (MG/L AS NO3)	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHORUS TOTAL (MG/L AS PO4)	SEDI- MENT, SUS- PENDEDED (MG/L)	SEDI- MENT, DIS- CHARGE, SUS- PENDEDED (T/DAY)
OCT 17...	--	--	--	--	--	--	--	--	.370	--	618	3720
NOV 20...	.070	--	.08	--	.38	.45	.63	2.8	.000	.12	46	236
DEC 17...	.020	--	.02	--	.46	.48	.77	3.4	.080	.12	68	356
JAN 05...	.010	--	.01	--	.68	.69	.91	4.0	.030	.09	66	290
FEB 26...	.050	--	--	--	.94	.99	1.3	5.6	.110	.37	248	1000
MAR 24...	.020	--	--	--	.98	1.00	1.3	5.5	.150	.49	284	905
APR 20...	.040	--	--	--	.69	.73	.85	3.8	.070	.15	69	133
MAY 24...	.070	--	--	--	14	14.0	15	67	.060	19	18100	257000
JUN 23...	.080	.020	--	.03	.90	.98	1.1	5.0	.040	.40	310	2150
JUL 28...	.060	--	--	--	5.8	5.90	6.7	30	.100	12	6240	30200
AUG 19...	.120	--	--	--	.81	.93	1.5	6.7	.070	.18	142	298
SEP 23...	.120	--	--	--	.88	1.00	1.3	5.9	.110	.15	110	297

DATE	TIME	TEMPER- ATURE (DEG C)	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SED. SUSP. FALL DIAM. % FINER THAN .004 MM	SED. SUSP. FALL DIAM. % FINER THAN .016 MM	SED. SUSP. FALL DIAM. % FINER THAN .062 MM	SED. SUSP. FALL DIAM. % FINER THAN .125 MM	SED. SUSP. FALL DIAM. % FINER THAN .250 MM
MAY 24...	1300	18.0	5260	68	86	96	98	100
JUL 28...	1530	23.0	1790	72	95	97	99	100

YELLOWSTONE RIVER BASIN

06280000 NORTH FORK SHOSHONE RIVER NEAR WAPITI, WY

LOCATION.--Lat 44°28'45", long 109°20'28", in NW¼NE¼SE¼ sec.15, T.52 N., R.104 W., Park County, Hydrologic Unit 10080012, on left bank 600 ft (183 m) downstream from Trout Creek, 1.6 mi (2.6 km) upstream from normal high-water line of Buffalo Bill Reservoir at elevation 5,369 ft (1,636 m), 4.8 mi (7.7 km) east of Wapiti, and 14 mi (23 km) west of Cody.

DRAINAGE AREA.--775 mi² (2,007 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--January 1921 to September 1926, May 1979 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 5,400 ft (1,646 m), from topographic map. January 1921 to September 1926, water-stage recorder at site 0.6 mi (1.0 km) downstream at different datum.

REMARKS.--Records good, except those for December through February, which are poor. Diversion for irrigation of about 2,700 acres (10.9 km²) above station.

AVERAGE DISCHARGE.--7 years (water years 1922-26, 1980-81), 842 ft³/s (23.85 m³/s), 610,000 acre-ft/yr (752 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 20,000 ft³/s (566 m³/s), June 9, 1981, gage height, 12.0 ft (3.66 m), from floodmarks; minimum daily, 94 ft³/s (2.66 m³/s) Jan. 28, 1980.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 20,000 ft³/s (566 m³/s) June 9, gage height 12.0 ft (3.66 m), from floodmarks; minimum daily, 110 ft³/s (3.12 m³/s) Feb. 10.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	556	281	200	200	125	148	182	1790	3660	3250	617	284
2	529	277	200	185	125	153	188	2040	3190	2990	591	273
3	507	274	210	170	125	156	182	1680	3430	2840	574	264
4	486	274	210	155	120	158	174	1200	3170	2650	557	261
5	470	274	190	140	120	171	169	1150	3430	2590	533	265
6	460	270	145	140	125	180	185	1190	4700	2510	510	270
7	445	285	130	140	120	166	180	1180	5070	2650	502	256
8	430	450	125	140	125	158	166	999	8050	2090	495	246
9	421	324	170	135	120	166	171	966	13800	1780	518	247
10	398	304	185	120	110	156	169	974	6780	1790	480	245
11	389	300	210	125	120	169	169	1130	4790	1730	451	242
12	384	308	220	125	140	174	182	974	4420	1720	424	238
13	380	296	219	135	160	185	209	878	3980	1620	410	230
14	371	235	209	130	160	191	219	894	3090	1480	401	225
15	393	166	235	125	170	194	320	1010	2560	1270	404	227
16	375	158	238	120	170	200	416	1110	2240	1180	395	227
17	362	182	220	120	160	191	506	1560	2620	1140	377	221
18	362	219	200	130	170	177	673	1900	2090	1120	367	216
19	380	259	145	130	170	169	795	1930	2530	1070	365	212
20	380	249	150	130	150	171	550	2040	3990	990	356	211
21	362	249	210	140	148	174	500	1870	3320	936	384	205
22	345	281	200	150	146	174	460	2140	3400	893	361	210
23	300	249	185	150	148	171	455	2220	4500	831	338	206
24	266	222	175	150	153	174	753	2570	4530	821	330	202
25	308	197	190	145	161	171	1090	2860	3940	821	329	213
26	320	190	220	140	158	177	1190	3350	4100	936	323	227
27	316	195	250	140	161	182	1150	4110	4480	882	333	222
28	289	230	240	145	146	185	958	4040	4100	725	326	221
29	289	225	200	145	---	209	974	3970	3390	707	308	209
30	296	210	200	140	---	212	1380	4040	3250	680	302	230
31	289	---	200	125	---	185	---	4180	---	661	296	---
TOTAL	11858	7633	6081	4365	4006	5447	14715	61945	126600	47353	12957	7005
MEAN	383	254	196	141	143	176	491	1998	4220	1528	418	234
MAX	556	450	250	200	170	212	1380	4180	13800	3250	617	284
MIN	266	158	125	120	110	148	166	878	2090	661	296	202
AC-FT	23520	15140	12060	8660	7950	10800	29190	122900	251100	93920	25700	13890
CAL YR 1980	TOTAL	309847	MEAN	847	MAX	4870	MIN	94	AC-FT	614600		
WTR YR 1981	TOTAL	309965	MEAN	849	MAX	13800	MIN	110	AC-FT	614800		

06280000 NORTH FORK SHOSHONE RIVER NEAR WAPITI, WY--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--May 1979 to current year.

PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: May 1979 to current year.

INSTRUMENTATION.--Temperature recorder since May 1979.

COOPERATION.--Records furnished by Wyoming Game and Fish Department.

EXTREMES FOR PERIOD OF RECORD.--

WATER TEMPERATURES: Maximum daily, 20.0°C Aug. 16, 1981; minimum, 0.5°C many days in March 1980.

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURES: Maximum daily, 20.0°C Aug. 16; minimum observed, 1.0°C Mar. 14.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE LAB (UMHOS)	PH LAB (UNITS)	TEMPER- ATURE (DEG C)	HARD- NESS (MG/L AS CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)
JUN 09...	2025	11000	175	7.3	8.0	49	13	3.9	11	.7	1.1
AUG 12...	1230	432	161	7.7	15.0	44	12	3.4	13	.9	.0
SEP 08...	1535	248	159	7.9	18.0	50	13	4.0	15	.9	.5

DATE	ALKA- LINITY LAB (MG/L AS CACO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)	SOLIDS, DIS- SOLVED (TONS PER DAY)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	PHOS- PHORUS, TOTAL (MG/L AS P)
JUN 09...	48	12	10	.2	15	95	.13	2820	.05	.700
AUG 12...	57	16	1.9	.1	17	98	.13	114	.07	.080
SEP 08...	70	8.2	1.4	.0	20	100	.14	67.0	.01	.290

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

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

06280300 SOUTH FORK SHOSHONE RIVER NEAR VALLEY, WY

LOCATION.--Lat 44°12'30", long 109°33'15", in NE¼ sec.24, T.49 N., R.106 W., Park County, Hydrologic Unit 10080013, Shoshone National Forest, on left bank 75 ft (23 m) downstream from U.S. Forest Service bridge, 0.4 mi (0.6 km) downstream from Boulder Creek, 3.2 mi (5.1 km) northeast of Valley, and 34 mi (55 km) southwest of Cody.

DRAINAGE AREA.--297 mi² (769 km²).

PERIOD OF RECORD.--October 1956 to September 1958, October 1959 to current year.

REVISED RECORDS.--WRD WY 1974: 1963.

GAGE.--Water-stage recorder. Altitude of gage is 6,200 ft (1,890 m), from topographic map. Prior to Nov. 22, 1961, at site 75 ft (23 m) upstream at same datum.

REMARKS.--Records good, except those for May and June, which are poor. Diversions for irrigation of about 450 acres (1.82 km²) above station.

AVERAGE DISCHARGE.--24 years, 422 ft³/s (11.95 m³/s), 305,700 acre-ft/yr (377 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 10,000 ft³/s (283 m³/s) June 9, 1981, gage height, 9.24 ft (2.816 m), from floodmarks; minimum daily, 41 ft³/s (1.16 m³/s) Feb. 27, 28, 1961, Mar. 29, 1975.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 2,500 ft³/s (70.8 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)		Gage height (ft) (m)	
June 9	unknown	*10,000	283	9.24	2.816
June 27	unknown	2,650	75.0	5.21	1.588

Minimum daily discharge, 62 ft³/s (1.76 m³/s) Feb. 10.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	221	141	104	99	83	79	88	669	1500	1400	292	173
2	213	141	98	96	74	81	89	774	1300	1400	283	167
3	207	138	116	90	71	79	87	543	1400	1310	279	162
4	199	138	115	99	69	79	85	363	1340	1180	271	159
5	194	138	108	95	69	83	80	335	1300	1230	259	153
6	189	136	96	88	71	86	88	340	2100	1220	251	153
7	185	139	88	83	68	83	83	358	2300	1250	240	153
8	183	155	94	79	69	80	82	320	4000	1050	236	148
9	179	145	86	81	66	83	82	270	6100	794	240	143
10	173	143	80	84	62	81	83	290	1900	787	232	135
11	171	139	94	76	68	84	82	400	1890	794	229	135
12	170	141	95	72	72	86	84	480	2000	780	212	132
13	172	136	93	75	78	88	88	450	1900	767	206	130
14	174	113	92	79	81	88	91	470	1260	681	206	128
15	191	92	108	81	81	89	114	520	1050	588	210	126
16	185	76	108	83	82	91	123	580	926	543	196	124
17	179	68	107	78	80	90	137	650	990	532	187	121
18	182	66	106	89	82	88	184	700	891	511	183	120
19	185	65	94	87	84	86	264	720	954	495	183	120
20	182	64	91	89	80	87	190	800	1080	452	184	121
21	176	66	107	87	80	87	161	740	1160	431	267	119
22	167	90	105	90	82	85	129	700	1400	406	236	118
23	148	100	100	89	78	84	136	820	1780	381	211	119
24	138	98	99	92	84	83	259	900	1820	377	198	117
25	148	87	101	89	85	84	349	1160	1630	396	194	138
26	153	97	104	80	84	86	391	1200	1760	468	198	136
27	153	97	105	79	83	95	381	1600	1920	426	244	125
28	146	108	103	84	79	90	300	1700	1770	358	211	121
29	143	110	94	87	---	100	340	1700	1390	335	198	119
30	146	113	96	85	---	101	473	1700	1380	326	191	121
31	143	---	99	87	---	92	---	1800	---	309	182	---
TOTAL	5395	3340	3086	2652	2145	2678	5123	24052	52191	21977	6909	4036
MEAN	174	111	99.5	85.5	76.6	86.4	171	776	1740	709	223	135
MAX	221	155	116	99	85	101	473	1800	6100	1400	292	173
MIN	138	64	80	72	62	79	80	270	891	309	182	117
AC-FT	10700	6620	6120	5260	4250	5310	10160	47710	103500	43590	13700	8010
CAL YR 1980	TOTAL	154024	MEAN 421	MAX 2770	MIN 57	AC-FT 305500						
WTR YR 1981	TOTAL	133584	MEAN 366	MAX 6100	MIN 62	AC-FT 265000						

YELLOWSTONE RIVER BASIN

06281000 SOUTH FORK SHOSHONE RIVER ABOVE BUFFALO BILL RESERVOIR, WY

LOCATION.--Lat 44°25'58", long 109°15'06", in lot 46, sec.33, T.52 N., R.103 W., Park County, Hydrologic Unit 10080013, on left bank at bridge on county road, 1.0 mi (1.6 km) upstream from normal high-water line of Buffalo Bill Reservoir at elevation 5,369 ft (1,636 m), 1.1 mi (1.8 km) downstream from Cody Canal diversion, and 11.5 mi (18.5 km) southwest of Cody.

DRAINAGE AREA.--585 mi² (1,515 km²).

PERIOD OF RECORD.--May to November 1903, May 1905 to September 1908, January 1921 to September 1926, October 1973 to current year (gage heights only June to September 1908). No winter records 1906, 1908, 1922. Published as "at Marquette" 1903, 1905-8, and as Shoshone River above Shoshone Reservoir 1921-26.

REVISED RECORDS.--WSP 1309: 1907.

GAGE.--Water-stage recorder. Altitude of gage is 5,410 ft (1,649 m), from topographic map. Apr. 26 to Nov. 30, 1903, and May 1905 to May 30, 1908, nonrecording gages at sites within about 6.0 mi (9.7 km) downstream at different datums.

REMARKS.--Records good except those for December through February, which are poor. Diversions for irrigation of about 11,000 acres (44.5 km²) above station.

AVERAGE DISCHARGE.--13 years (water years 1907, 1923-26, 1974-81), 421 ft³/s (11.92 m³/s), 305,000 acre-ft/yr (376 km³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 9,960 ft³/s (282 m³/s) June 9, 1981, gage height, 9.41 ft (2.868 m); minimum daily discharge, 2.8 ft³/s (0.079 m³/s) Oct. 24, 1977.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 9,960 ft³/s (282 m³/s) June 9, gage height, 9.41 ft (2.868 m); minimum daily, 5.2 ft³/s (0.15 m³/s) Sept. 22.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	124	200	150	134	115	123	127	373	1690	1280	31	7.9
2	120	200	145	137	110	118	127	490	1470	1190	30	7.6
3	108	196	153	124	105	113	127	288	1620	1150	29	8.4
4	89	196	158	129	100	110	122	115	1520	1010	26	8.2
5	83	196	152	132	96	108	113	65	1490	1020	25	7.1
6	79	196	137	126	100	108	124	54	2600	990	24	7.9
7	64	196	124	120	96	104	124	124	3090	1190	22	8.2
8	56	206	104	114	97	97	122	104	4580	823	19	7.9
9	51	209	124	118	94	106	120	53	7370	498	18	7.4
10	37	206	127	120	90	106	113	65	2840	536	16	7.2
11	31	200	129	115	96	106	104	137	2360	510	15	6.8
12	25	196	139	110	100	106	102	181	2410	504	14	6.7
13	23	196	142	110	110	110	104	164	2680	473	14	6.9
14	23	172	147	113	120	113	110	175	1600	385	13	7.1
15	117	139	144	120	120	113	97	243	1090	263	14	6.7
16	200	120	134	120	125	115	108	304	786	222	16	6.0
17	193	117	130	115	125	117	81	535	965	192	13	5.8
18	190	115	130	120	127	115	102	634	628	173	13	5.8
19	193	110	120	125	127	113	196	660	667	157	13	6.6
20	161	108	115	125	127	113	139	770	1010	119	13	5.3
21	158	110	130	125	125	115	83	686	1040	80	22	5.4
22	152	125	130	125	125	113	53	653	1250	68	43	5.2
23	134	158	120	125	125	110	31	799	1900	47	12	5.5
24	115	155	120	125	128	110	83	987	1980	39	11	7.9
25	122	140	120	125	130	108	213	1350	1650	46	9.5	7.2
26	127	150	122	120	130	110	229	1430	1770	99	8.2	7.3
27	132	150	125	110	130	127	233	1900	2140	111	10	7.4
28	127	160	125	110	130	129	155	2040	1840	43	12	6.0
29	122	160	120	120	---	134	142	2030	1330	38	9.2	6.1
30	184	165	129	120	---	144	190	2020	1270	33	8.7	6.3
31	206	---	132	120	---	134	---	2110	---	33	8.2	---
TOTAL	3546	4947	4077	3752	3203	3548	3774	21539	58636	13322	531.8	205.8
MEAN	114	165	132	121	114	114	126	695	1955	430	17.2	6.86
MAX	206	209	158	137	130	144	233	2110	7370	1280	43	8.4
MIN	23	108	104	110	90	97	31	53	628	33	8.2	5.2
AC-FT	7030	9810	8090	7440	6350	7040	7490	42720	116300	26420	1050	408
CAL YR 1980	TOTAL	128207.0	MEAN	350	MAX	2850	MIN	11	AC-FT	254300		
WTR YR 1981	TOTAL	121081.6	MEAN	332	MAX	7370	MIN	5.2	AC-FT	240200		

06281400 DIAMOND CREEK NEAR MOUTH, NEAR CODY, WY

LOCATION.--Lat 44°27'21", long 109°08'17", in SE¼NE¼NE¼ sec.29, T.52 N., R.102 W., Park County, Hydrologic Unit 10080013, on left bank 40 ft (12 m) downstream from Cody Canal crossing, 0.8 mi (1.3 km) upstream from bridge on State Highway 291, 3.9 mi (6.3 km) southeast of Buffalo Bill Dam, and 6.3 mi (10.1 km) southwest of Cody.

DRAINAGE AREA.--7.34 mi² (19.01 km²).

PERIOD OF RECORD.--December 1980 to September 1981.

GAGE.--Nonrecording gage and wooden control read once daily. Altitude of gage is 5,420 ft (1,652 m) from topographic map.

REMARKS.--Records fair except those for winter period, which are poor.

EXTREMES FOR CURRENT YEAR.--December 1980 to September 1981: Maximum discharge during period of operation, 31 ft³/s (0.88 m³/s) May 7, gage height, 1.60 ft (0.488 m), from floodmarks; minimum daily during period of operation, 0.18 ft³/s (0.005 m³/s) Feb. 10.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1			1.1	.69	.50	.58	.91	4.1	13	12	8.8	8.8
2			1.1	.69	.54	.60	1.2	8.8	14	12	8.8	9.6
3			1.1	.69	.58	.64	1.2	5.8	12	15	9.6	6.6
4			1.2	.91	.50	.68	1.2	5.8	13	14	9.6	7.3
5			1.1	.91	.35	.68	.69	6.6	12	10	5.2	8.1
6			.90	.91	.30	.77	1.4	11	12	17	5.2	14
7			.90	.91	.25	.70	.91	22	14	19	5.2	8.8
8			1.0	.69	.25	.63	.69	19	14	18	5.8	9.6
9			1.1	.69	.22	.63	.69	21	10	17	6.6	5.8
10			1.1	.64	.18	.63	.32	9.6	.32	15	15	7.3
11			1.0	.80	.22	.58	.69	14	13	15	12	9.6
12			1.0	1.0	.30	.35	.69	9.6	14	11	12	5.8
13			1.0	.90	.45	.28	.59	9.6	12	16	14	8.8
14			1.1	1.0	.45	.40	8.8	12	8.1	17	7.3	8.8
15			1.1	.90	.50	.45	8.1	11	13	18	7.3	4.6
16			2.0	.70	.54	.45	5.2	13	12	19	8.8	5.8
17			2.5	.80	.54	.49	9.6	12	9.6	18	9.6	5.8
18			2.7	.90	.66	.49	11	13	9.6	19	6.6	4.6
19			2.0	.90	.74	.69	12	9.6	9.6	18	9.6	5.8
20			1.6	.90	.65	.69	10	13	13	18	9.6	3.5
21			1.1	1.0	.65	.69	12	8.1	12	13	8.8	2.9
22			1.2	1.3	.65	.40	15	8.1	14	13	9.6	5.8
23			.91	1.1	.65	.45	15	12	14	12	9.6	5.8
24			1.2	.90	.65	.45	16	8.8	15	15	8.8	9.6
25			1.2	.80	.62	.45	17	14	14	14	8.8	10
26			1.2	.80	.56	.49	11	13	13	19	9.6	13
27			.91	.80	.56	.69	15	14	13	18	9.6	11
28			.91	.80	.56	.69	14	14	13	14	9.6	9.6
29			.69	.80	---	.80	8.8	13	14	14	9.6	9.6
30			.69	.60	---	.91	4.6	13	11	14	9.6	9.6
31			.69	.50	---	.45	---	13	---	13	9.6	---
TOTAL			37.30	25.93	13.62	17.88	204.28	361.5	361.22	477	279.8	235.9
MEAN			1.20	.84	.49	.58	6.81	11.7	12.0	15.4	9.03	7.86
MAX			2.7	1.3	.74	.91	17	22	15	19	15	14
MIN			.69	.50	.18	.28	.32	4.1	.32	10	5.2	2.9
AC-FT			74	51	27	35	405	717	716	946	555	468

YELLOWSTONE RIVER BASIN

06282000 SHOSHONE RIVER BELOW BUFFALO BILL RESERVOIR, WY

LOCATION.--Lat 44°31'00", long 109°05'50", in lot 71, NE¼ sec.3, T.52 N., R.102 W., Park County, Hydrologic Unit 10080014, on left bank 0.5 mi (0.8 km) downstream from Trail Creek, 1.0 mi (1.6 km) west of Cody city limits, and 5.5 mi (8.8 km) downstream from Buffalo Bill Reservoir.

DRAINAGE AREA.--1,538 mi² (3,983 km²). Area at site prior to Oct. 1, 1949, 1,502 mi² (3,890 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--January 1921 to current year. Prior to October 1944, published as "below Shoshone Reservoir".

GAGE.--Water-stage recorder. Altitude of gage is 4,900 ft (1,494 m), from topographic map. Prior to Oct. 1, 1949, at site 2.5 mi (4.0 km) upstream at different datum.

REMARKS.--Records good. Flow completely regulated by Buffalo Bill Reservoir. (See station 09281500.) Diversions above station for irrigation of about 56,100 acres (227 km²), of which about 37,900 acres (153 km²) are below station. Diversion, 2.1 mi (3.4 km) upstream, to Heart Mountain Canal began in 1943.

AVERAGE DISCHARGE.--21 years (water years 1922-42), prior to Heart Mountain diversion, 1,256 ft³/s (35.57 m³/s), 909,300 acre-ft/yr (1,121 hm³/yr); 39 years (water years 1943-81), 1,132 ft³/s (32.06 m³/s), 820,100 acre-ft/yr (1,011 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 17,300 ft³/s (490 m³/s) June 9, 1981, gage height, 11.57 ft (3.527 m); minimum daily discharge, 14 ft³/s (0.40 m³/s) Nov. 19, 1933.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum flood since construction of Buffalo Bill Reservoir in 1909, 18,700 ft³/s (530 m³/s) June 15, 1918, by computation of flow over dam.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 17,300 ft³/s (490 m³/s) June 9, gage height, 11.57 ft (3.527 m); minimum daily, 180 ft³/s (5.10 m³/s) Feb. 16.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	685	364	360	360	221	261	210	1270	2710	3960	1210	980
2	685	368	360	360	225	255	220	1360	3270	3650	1210	966
3	680	368	364	360	221	264	225	1340	3940	3420	1210	973
4	680	368	360	360	234	218	225	1350	4330	3030	1140	973
5	685	368	353	364	215	234	225	1340	4270	2770	1140	973
6	685	368	364	364	215	234	220	1300	5300	2670	1130	951
7	685	371	364	357	218	251	220	1230	6680	2650	1130	887
8	685	371	360	336	218	238	220	1200	8320	2410	1130	873
9	685	375	357	318	238	228	230	1160	15100	2070	1140	859
10	685	375	353	322	230	234	220	1100	14000	1880	1130	852
11	685	375	357	322	235	228	225	547	10700	1720	1130	859
12	685	350	346	322	215	241	220	274	8440	1640	1100	859
13	697	308	368	322	205	228	245	287	7420	1550	1090	859
14	685	264	368	325	205	231	275	294	5870	1410	1100	852
15	593	482	357	325	200	231	280	291	4300	1260	1100	852
16	430	482	371	325	180	234	390	294	3400	1330	1090	852
17	375	430	360	325	240	238	410	297	3000	1510	1100	859
18	318	375	360	325	250	238	380	294	2560	1520	1100	859
19	318	368	360	325	258	200	560	294	2350	1490	1100	859
20	336	368	360	308	258	200	620	294	2850	1510	1090	852
21	346	368	360	274	258	195	890	301	3170	1580	1090	852
22	346	368	357	271	258	195	1140	336	3300	1550	1070	852
23	336	368	357	277	258	230	1270	346	4070	1360	1080	845
24	343	368	360	274	261	220	1260	346	5140	1280	1100	762
25	364	368	357	281	261	220	1300	350	5090	1310	1090	756
26	364	371	357	271	261	210	1310	473	4860	1310	1090	703
27	346	375	360	241	261	215	1310	973	5200	1300	1040	685
28	336	368	360	225	261	220	1310	1350	5360	1300	1030	625
29	360	360	360	225	---	215	1260	1700	4820	1230	1020	593
30	364	360	360	234	---	220	1230	1740	4290	1220	980	598
31	364	---	360	221	---	220	---	2100	---	1210	980	---
TOTAL	15831	11172	11150	9519	6560	7046	18100	25831	164110	58100	34140	25120
MEAN	511	372	360	307	234	227	603	833	5470	1874	1101	837
MAX	697	482	371	364	261	264	1310	2100	15100	3960	1210	980
MIN	318	264	346	221	180	195	210	274	2350	1210	980	593
AC-FT	31400	22160	22120	18880	13010	13980	35900	51240	325500	115200	67720	49830
CAL YR 1980	TOTAL	302117	MEAN	825	MAX	4870	MIN	230	AC-FT	599200		
WTR YR 1981	TOTAL	386679	MEAN	1059	MAX	15100	MIN	180	AC-FT	767000		

06282000 SHOSHONE RIVER BELOW BUFFALO BILL RESERVOIR, WY--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1947-49, 1965 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	HARD- NESS (MG/L AS CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)
OCT 08...	1200	693	510	6.7	14.5	190	56	12	13	.4	2.7
NOV 06...	0910	364	1250	6.7	10.5	570	180	28	21	.4	3.4
DEC 02...	1300	360	790	6.9	9.0	360	110	23	21	.5	3.6
29...	1200	363	730	7.6	8.0	300	87	20	21	.5	4.3
FEB 19...	1230	268	950	7.1	10.5	470	140	31	25	.5	4.7
MAR 16...	1300	229	920	6.8	13.0	450	130	29	25	.5	6.0
APR 21...	1300	838	--	--	9.0	240	69	17	21	.6	2.6
MAY 20...	1240	315	--	--	14.5	360	110	23	23	.5	4.7
JUN 09...	1430	16600	--	--	11.0	80	24	5.1	15	.7	1.1
JUL 14...	1130	1390	--	--	20.0	97	29	6.4	15	.7	1.6
AUG 12...	1700	1110	--	--	15.0	99	25	8.8	13	.6	2.0
SEP 08...	1240	881	--	--	18.0	160	48	10	13	.4	2.3

DATE	ALKA- LITY LAB (MG/L AS CACO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)	SOLIDS, DIS- SOLVED (TONS PER DAY)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	PHOS- PHORUS, TOTAL (MG/L AS P)
OCT 08...	140	78	4.6	.4	14	260	.35	486	.03	.070
NOV 06...	200	370	4.5	.7	5.3	730	.99	717	.04	.060
DEC 02...	230	160	3.0	.9	7.6	469	.64	456	.04	.030
29...	230	120	3.9	.6	17	414	.56	406	.00	.040
FEB 19...	310	190	5.8	.8	.0	587	.80	425	.02	.010
MAR 16...	330	150	7.8	1.0	13	560	.76	346	.01	.020
APR 21...	54	130	--	.6	15	294	.40	665	.05	.070
MAY 20...	170	240	5.1	.7	16	520	.71	442	.10	.030
JUN 09...	71	30	9.9	.2	15	140	.19	6270	.03	.010
JUL 14...	90	30	3.6	.3	14	150	.20	563	.01	.170
AUG 12...	98	20	4.1	.6	14	150	.20	450	.04	.180
SEP 08...	120	67	2.9	.1	15	230	.31	547	.25	.140

YELLOWSTONE RIVER BASIN

06282900 SHOSHONE RIVER ABOVE DRY CREEK, NEAR CODY, WY

LOCATION.--Lat 44°34'37", long 108°58'18", in SE¼NW¼NW¼ sec.13, T.53 N., R.101 W., Park County, Hydrologic Unit 10080014, at bridge on U.S. Highway 14A, 160 ft (49 m) downstream from Dry Gulch, 480 ft (146 m) upstream from Dry Creek, 0.4 mi (0.6 km) south of Trotters Station, and 5.5 mi (8.8 km) northeast of Cody.

PERIOD OF RECORD.--Water years 1974 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	TUR- BID- ITY (NTU)	OXYGEN, DIS- SOLVED (MG/L)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	HARD- NESS (MG/L AS CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)
OCT 08...	1300	710	650	8.4	15.0	7.0	13.5	K20	220	60
NOV 05...	1510	400	940	8.5	13.0	2.0	14.2	54	310	85
DEC 03...	1315	380	1000	8.6	8.5	6.0	14.0	--	320	91
30...	1030	420	950	8.0	6.0	4.0	13.8	44	340	91
FEB 19...	1315	275	980	8.5	10.5	4.0	9.5	K9	420	120
MAR 18...	1230	270	1080	8.3	3.0	3.0	11.6	K20	420	120
APR 22...	1100	860	470	7.5	10.5	45	9.0	84	160	46
MAY 21...	0730	E550	900	7.7	11.0	310	9.0	K200	280	81
JUN 24...	0910	E5000	250	7.0	12.0	60	11.8	140	63	18
JUL 14...	1315	1450	450	8.0	18.0	25	10.0	K100	130	36
AUG 12...	1745	1150	440	7.1	18.0	20	--	48	160	44
SEP 03...	1545	1100	460	8.0	20.0	15	11.4	120	170	47

E-Estimate.

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

DATE	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LINITY LAB (MG/L AS CACO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)
OCT 08...	16	38	1.1	3.4	160	140	3.4	.5	16	--
NOV 05...	23	43	1.1	4.8	190	200	6.2	.6	15	--
DEC 03...	22	44	1.1	6.2	220	190	5.7	.7	15	513
30...	27	80	1.9	4.8	240	240	5.9	.5	14	589
FEB 19...	29	49	1.0	5.5	200	250	9.3	.6	13	590
MAR 18...	28	46	1.0	5.8	260	230	8.0	.7	13	584
APR 22...	11	26	.9	2.6	130	84	3.0	.3	15	296
MAY 21...	20	47	1.2	4.4	220	190	6.2	.5	14	525
JUN 24...	4.3	13	.7	1.3	62	36	1.2	.1	16	128
JUL 14...	8.5	18	.7	1.9	79	67	2.7	.2	17	204
AUG 12...	11	22	.8	2.1	110	81	2.6	.3	17	249
SEP 03...	12	25	.9	2.7	130	94	2.7	.5	16	287

06282900 SHOSHONE RIVER ABOVE DRY CREEK, NEAR CODY, WY--Continued)

WATER-QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	SOLIDS, SUM OF CONSTITUENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)	SOLIDS, DIS- SOLVED (TONS PER DAY)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHORUS TOTAL (MG/L AS PO4)	PHOS- PHORUS, DIS- SOLVED (MG/L AS P)	PHOS- PHORUS, ORTHO, DIS- SOLVED (MG/L AS P)	PHOS- PHATE, ORTHO, DIS- SOLVED (MG/L AS PO4)
OCT 08...	374	.51	717	.00	.140	.43	.110	--	--
NOV 05...	492	.67	531	.10	.050	.15	.010	--	--
DEC 03...	508	.69	521	.19	--	--	.050	--	--
30...	608	.83	689	.18	--	--	--	--	--
FEB 19...	597	.81	443	.04	--	--	--	--	--
MAR 18...	608	.83	443	.15	--	--	--	--	--
APR 22...	266	.36	618	.08	--	--	--	--	--
MAY 21...	495	.67	735	--	--	--	--	--	--
JUN 24...	127	.17	1710	--	--	--	--	--	--
JUL 14...	200	.27	783	.32	--	--	--	.060	.18
AUG 12...	246	.33	764	.07	--	--	--	--	--
SEP 03...	279	.38	829	.13	--	--	--	--	--

06283800 SHOSHONE RIVER ABOVE WILLWOOD DAM, NEAR WILLWOOD, WY

LOCATION.--Lat 44°38'29", long 108°56'16", in SE¼NE¼SE¼ sec.19, T.54 N., R.100 W., Park County, Hydrologic Unit 10080014, on left bank 3.3 mi (5.3 km) upstream from Willwood Dam, 6.3 mi (10 km) southwest of Ralston, and 9.6 mi (15 km) southwest of Willwood.

DRAINAGE AREA.--1,830 mi² (4,740 km²), approximately.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--November 1979 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 4,520 ft (1,378 m), from topographic map.

REMARKS.--Records good except those for periods of no gage-height record, Oct. 1-8, Jan. 17-21, Feb. 1-19, Mar. 14-18, Mar. 25 to Apr. 22, June 9, 10, 14-16, which are poor. Flow regulated by Buffalo Bill Reservoir. (See station 06281500.) Diversions above station for irrigation of about 137,900 acres (558 km²), of which about 50,100 acres (203 km²) are below station.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 16,800 ft³/s (476 m³/s) June 10, 1981, gage height, 7.80 ft (2.377 m), from floodmarks; minimum daily, 230 ft³/s (6.51 m³/s) Feb. 16, 1981.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 16,800 ft³/s (476 m³/s) June 10, gage height, 7.80 ft (2.377 m), from floodmarks; minimum daily, 230 ft³/s (6.51 m³/s) Feb. 16.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	460	451	400	395	286	300	265	473	2500	3120	504	447
2	450	440	400	390	286	293	270	544	2960	2890	504	420
3	450	440	405	390	290	332	275	532	3780	2660	497	414
4	440	446	410	385	285	297	275	550	4410	2410	447	427
5	440	446	395	390	290	293	275	538	4540	2240	447	427
6	430	451	400	390	280	304	270	544	5490	2090	427	408
7	430	446	400	390	280	300	270	668	6580	2000	414	408
8	420	446	400	376	280	304	270	564	8060	1800	433	420
9	410	446	400	358	290	293	280	526	12800	1500	447	389
10	420	446	395	353	285	300	270	468	14600	1240	467	384
11	425	451	395	353	290	293	275	654	10200	1050	467	356
12	430	440	395	358	280	300	270	451	8290	940	447	345
13	440	405	400	358	270	293	285	446	6890	846	433	361
14	446	286	405	358	270	295	305	430	6250	648	460	356
15	582	490	405	362	255	295	310	415	4790	543	453	340
16	473	490	420	362	230	295	370	420	3350	568	453	345
17	446	468	415	362	280	300	380	514	2950	812	453	340
18	508	400	405	362	290	300	360	520	2760	880	453	340
19	514	390	395	362	300	272	400	446	2480	835	460	335
20	526	395	395	346	300	286	410	440	2800	835	453	326
21	473	395	395	324	297	290	420	446	3120	904	467	331
22	468	395	405	316	297	283	500	538	3250	892	482	326
23	462	400	405	316	300	279	538	718	3650	639	482	340
24	473	395	405	324	300	272	544	526	4450	497	489	295
25	496	400	400	324	304	272	532	557	4450	560	497	291
26	496	405	405	324	308	265	557	502	4190	602	519	295
27	496	400	410	304	308	269	550	978	4320	620	489	313
28	484	405	405	286	304	272	532	1260	4370	620	497	322
29	490	405	400	286	---	270	502	1690	3940	543	497	308
30	490	405	395	283	---	272	462	1790	3420	527	440	308
31	462	---	395	286	---	272	---	1960	---	512	440	---
TOTAL	14430	12678	12455	10773	8035	8961	11222	21108	155640	36823	14418	10717
MEAN	465	423	402	348	287	289	374	681	5188	1188	465	357
MAX	582	490	420	395	308	332	557	1960	14600	3120	519	447
MIN	410	286	395	283	230	265	265	415	2480	497	414	291
AC-FT	28620	25150	24700	21370	15940	17770	22260	41870	308700	73040	28600	21260
CAL YR 1980	TOTAL	238447	MEAN 651	MAX 5100	MIN 286	AC-FT 473000						
WTR YR 1981	TOTAL	317260	MEAN 869	MAX 14600	MIN 230	AC-FT 629300						

06283800 SHOSHONE RIVER ABOVE WILLWOOD DAM, NEAR WILLWOOD, WY--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--December 1980 to September 1981.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981.

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	SEDI- MENT, SUS- PENDE (MG/L)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
OCT 08...	1215	390	--	--	14.0	13	14	78
NOV 06...	0830	469	--	--	9.0	36	46	51
DEC 03...	1545	425	1110	8.6	8.0	44	50	85
DEC 30...	0830	410	1500	8.3	6.0	86	95	72
FEB 19...	1215	296	1300	8.4	9.0	90	72	93
MAR 18...	1110	293	1070	8.1	7.0	32	25	91
APR 22...	1020	375	--	--	11.5	171	173	94
MAY 21...	0945	449	--	--	12.0	256	310	89
JUN 08...	1600	8340	--	--	14.5	1200	27000	--
JUN 24...	0910	4670	--	--	11.0	344	4340	56
JUL 14...	1500	630	--	--	20.0	112	191	91
AUG 12...	1540	544	--	--	16.5	45	66	76
SEP 08...	1630	388	--	--	20.0	38	40	--

DATE	TIME	TEMPER- ATURE (DEG C)	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SED. SUSP. FALL DIAM. % FINER THAN .004 MM	SED. SUSP. FALL DIAM. % FINER THAN .016 MM	SED. SUSP. FALL DIAM. % FINER THAN .062 MM	SED. SUSP. FALL DIAM. % FINER THAN .125 MM	SED. SUSP. FALL DIAM. % FINER THAN .250 MM	SED. SUSP. FALL DIAM. % FINER THAN .500 MM
JUN 08...	1600	14.5	8340	22	37	60	79	92	100

YELLOWSTONE RIVER BASIN

06284005 WILLWOOD CANAL NEAR RALSTON, WY

LOCATION.--Lat 44°40'21", long 108°54'34", in NW¼NE¼SW¼ sec.9, T.54 N., R.100 W., Park County, Hydrologic Unit 10080014, at bridge on county road, 200 ft (61 m) downstream from headgate, 200 ft (61 m) north of Willwood Dam on Shoshone River, and 4.0 mi (6.4 km) southwest of Ralston.

PERIOD OF RECORD.--June to September 1981.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	TIME	TEMPER- ATURE (DEG C)	SEDI- MENT, SUS- PENDED (MG/L)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
JUN 24...	0705	11.0	204	84
JUL 14...	1540	20.0	50	--
AUG 12...	1345	16.5	38	--
SEP 08...	1230	20.0	43	--

06284010 SHOSHONE RIVER BELOW WILLWOOD DAM, NEAR RALSTON, WY

LOCATION.--Lat 44°40'25", long 108°54'59", in SE¼SE¼NE¼ sec.8, T.54 N., R.100 W., Park County, Hydrologic Unit 10080014, 2,500 ft (762 m) downstream from Willwood Dam and 4.0 mi (6.4 km) southwest of Ralston.

PERIOD OF RECORD.--June to September 1981.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	TIME	TEMPER- ATURE (DEG C)	SEDI- MENT, SUS- PENDED (MG/L)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
JUN 24...	0715	11.0	236	79
JUL 14...	1555	20.0	61	--
AUG 12...	1400	16.5	32	--
SEP 08...	1245	21.0	36	--

YELLOWSTONE RIVER BASIN

06284400 SHOSHONE RIVER NEAR GARLAND, WY

LOCATION.--Lat 44°44'20", long 108°35'38", in SE¼SE¼ sec.13, T.55 N., R.98 W., Park County, Hydrologic Unit 10080014, on right bank 50 ft (15 m) downstream from bridge on county road, 600 ft (183 m) downstream from Penrose Dam, 1.3 mi (2.1 km) upstream from Bitter Creek, 4.3 mi (6.9 km) southeast of Garland, and 8.0 mi (12.9 km) east of Powell.

DRAINAGE AREA.--2,036 mi² (5,273 km²).

PERIOD OF RECORD.--Water years 1974 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	TEMPER- ATURE (DEG C)	2,4-D, TOTAL IN BOT- TOM MA- TERIAL (UG/L)	2,4-D, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	2, 4-DP TOTAL (UG/L)	2,4-DP, IN BOTTOM MAT. (UG/KG)	2,4,5-T TOTAL (UG/L)	2,4,5-T TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	SILVEX, TOTAL (UG/L)	SILVEX, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)
JUN 23...	1330	3500	15.0	.12	0	.00	.00	.00	0	.00	0
AUG 12...	1150	166	17.0	.00	0	.00	.00	.00	0	.00	0
SEP 08...	1230	150	20.0	.06	0	.00	.00	.00	0	.00	0

DATE	TOTAL DICAMBA (UG/L)	DICAMBA IN BOTTOM MA- TERIAL (UG/KG)	TOTAL PICLORAM (UG/L)	PICLORAM IN BOTTOM MA- TERIAL (UG/KG)
JUN 23...	.00	.0	.00	.0
AUG 12...	.00	.0	.01	.0
SEP 08...	.00	.0	.00	.0

06284450 BITTER CREEK BELOW SEWAGE LAGOON, NEAR POWELL, WY

LOCATION.--Lat 44°47'10", long 108°43'44", in SE¼NW¼SW¼ sec.36, T.56 N., R.99 W., Park County, Hydrologic Unit 10080014, 0.7 mi (1.1 km) upstream from bridge on County Road 7, 1.9 mi (3.1 km) northeast of water tower in Powell, and 3.4 mi (5.5 km) northwest of Garland.

PERIOD OF RECORD.--March to September 1981.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	TUR- BID- ITY (NTU)	OXYGEN, DIS- SOLVED (MG/L)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)
MAR 18...	0830	6.2	1850	7.9	4.0	9.0	11.0	3600	2.1	--
APR 21...	1615	54	920	8.1	12.5	290	9.7	2100	--	--
MAY 21...	1130	18	2430	8.9	13.0	10	11.4	1300	2.5	--
JUN 23...	1600	101	710	8.0	21.0	180	8.9	3400	1.2	.00
JUL 14...	1700	85	750	8.0	24.0	220	7.2	6600	1.1	--
AUG 13...	0800	115	620	7.9	15.0	140	7.6	1500	.87	--
SEP 03...	1430	78	880	8.5	18.5	40	10.2	1800	.10	--

DATE	NITRO- GEN, AMMONIA TOTAL (MG/L AS N)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS NH4)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO- GEN, TOTAL (MG/L AS N)	NITRO- GEN, TOTAL (MG/L AS NO3)	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHORUS TOTAL (MG/L AS PO4)
MAR 18...	2.60	--	--	--	140	--	630	2.20	6.7
APR 21...	--	--	--	--	--	--	--	--	--
MAY 21...	.080	--	--	3.6	3.70	6.2	27	.650	2.0
JUN 23...	.300	.020	.03	1.7	2.00	3.2	14	.210	.64
JUL 14...	.400	--	--	1.5	1.90	3.0	13	.300	.92
AUG 13...	.170	--	--	1.7	1.90	2.8	12	.560	1.7
SEP 03...	.080	--	--	.65	.73	.83	3.7	.050	.15

YELLOWSTONE RIVER BASIN

06284500 BITTER CREEK NEAR GARLAND, WY

LOCATION.--Lat 44°45'13", long 108°35'29", in SW¼SW¼SW¼ sec.7, T.55 N., R.97 W., Big Horn County, Hydrologic Unit 10080014, on left bank 100 ft (30 m) downstream from bridge on county road, 1.0 mi (1.6 km) upstream from mouth, 4.0 mi (6.4 km) southeast of Garland, and 5.0 mi (8.0 km) southwest of Byron.

DRAINAGE AREA.--80.5 mi² (208.5 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--March 1950 to December 1953, October 1957 to September 1960, October 1968 to current year.

REVISED RECORDS.--WSP 1709: Drainage area. WRD WY 1975: 1960(M), 1969(M), 1973(M).

GAGE.--Water-stage recorder. Altitude of gage is 4,080 ft (1,244 m), from topographic map.

REMARKS.--Records good except those for winter periods, which are poor. Flow is mainly return flow from Garland Canal system of Shoshone irrigation project.

AVERAGE DISCHARGE.--19 years (water years 1951-53, 1958-60, 1969-81), 143 ft³/s (4.050 m³/s), 103,600 acre-ft/yr (128 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,230 ft³/s (34.8 m³/s) July 4, 1975, gage height, 4.74 ft (1.445 m), from rating curve extended above 580 ft³/s (16.4 m³/s) on basis of slope-area measurement of peak flow; minimum daily, 0.50 ft³/s (0.014 m³/s) Jan. 30 to Feb. 3, 1969.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 406 ft³/s (11.5 m³/s) May 11, gage height, 2.68 ft (0.817 m); minimum daily, 17 ft³/s (0.48 m³/s) Apr. 7-10, 12-15.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	184	39	27	23	24	20	18	215	85	248	291	288
2	185	38	28	22	24	20	18	209	132	242	316	267
3	199	37	29	23	22	20	18	226	165	244	313	274
4	217	36	28	22	20	19	18	226	167	245	299	276
5	215	36	27	22	21	19	18	207	150	252	286	288
6	218	36	27	21	21	19	18	226	156	265	288	317
7	204	35	27	20	20	18	17	254	146	245	301	300
8	195	36	27	21	21	19	17	224	164	225	318	240
9	189	34	26	23	21	19	17	231	188	227	351	215
10	189	33	25	20	20	19	17	262	164	238	311	209
11	193	32	25	18	18	19	18	328	165	232	259	221
12	192	32	25	20	19	19	17	140	187	241	237	238
13	191	31	25	20	21	19	17	98	213	258	254	251
14	185	30	27	19	22	19	17	108	254	250	259	246
15	193	30	24	20	22	19	17	100	241	252	257	246
16	116	30	24	19	23	19	46	93	249	252	274	265
17	78	29	25	19	23	20	62	92	264	267	279	268
18	67	29	24	21	21	19	78	90	276	279	291	262
19	59	29	24	20	23	19	105	88	288	307	297	263
20	75	28	23	21	24	19	122	93	296	298	285	289
21	54	29	23	20	21	19	139	93	325	289	288	318
22	50	28	23	21	21	19	175	177	318	274	280	286
23	49	28	24	21	21	19	166	162	309	265	291	271
24	59	29	24	23	21	19	138	109	285	271	312	265
25	49	29	25	23	21	19	154	146	287	285	321	275
26	47	26	25	25	20	19	160	98	271	296	290	285
27	45	28	25	30	20	19	185	76	256	296	285	260
28	43	26	24	35	20	19	187	69	251	279	289	246
29	41	26	23	28	---	19	183	81	258	282	295	216
30	40	26	23	25	---	18	196	84	237	292	300	215
31	40	---	23	24	---	18	---	82	---	279	316	---
TOTAL	3861	935	779	689	595	590	2358	4687	6747	8175	9033	7860
MEAN	125	31.2	25.1	22.2	21.3	19.0	78.6	151	225	264	291	262
MAX	218	39	29	35	24	20	196	328	325	307	351	318
MIN	40	26	23	18	18	18	17	69	85	225	237	209
AC-FT	7660	1850	1550	1370	1180	1170	4680	9300	13380	16220	17920	15590
CAL YR 1980	TOTAL	47998	MEAN 131	MAX 376	MIN 13	AC-FT	95200					
WTR YR 1981	TOTAL	46309	MEAN 127	MAX 351	MIN 17	AC-FT	91850					

06284500 BITTER CREEK NEAR GARLAND, WY--Continued

WATER-QUALITY RECORDS

LOCATION.--Daily water temperatures and samples for specific conductance collected at bridge on county road 100 ft (30 m) upstream from discharge station.

PERIOD OF RECORD.--Water years 1951-53, 1958-61, 1969 to current year.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: April 1969 to current year.

WATER TEMPERATURES: July 1969 to current year.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Maximum daily, 4,150 micromhos Dec. 12, 1972; minimum daily, 451 micromhos July 9, 1978.

WATER TEMPERATURES: Maximum, 26.0°C July 21, 1977; minimum, 0.0°C on many days during winter periods.

EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum daily, 1,900 micromhos Feb. 19; minimum daily, 527 micromhos June 21.

WATER TEMPERATURES: Maximum, 23.0°C July 5, 15, Aug. 20; minimum, 0.0°C Dec. 8, 24, 25, Feb. 7, 9, 10, 11.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	HARD- NESS (MG/L AS CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)
OCT								
07...	1600	196	840	8.6	15.5	230	61	20
NOV								
06...	1115	36	1600	8.5	8.0	290	69	28
DEC								
04...	0830	29	1700	8.4	2.0	360	88	34
29...	1330	21	2000	8.9	2.5	310	75	30
FEB								
18...	1500	21	2100	8.5	3.5	370	88	36
MAR								
17...	1200	21	1980	8.2	5.0	340	81	34
APR								
21...	1230	133	780	8.2	10.5	220	60	17
MAY								
20...	1530	91	1350	8.7	17.0	330	80	31
JUN								
23...	1300	324	600	8.1	18.0	160	41	13
JUL								
15...	0915	289	790	8.0	14.5	200	52	17
AUG								
12...	1215	321	1000	7.7	16.0	210	56	17
SEP								
08...	1130	269	810	7.8	16.0	230	61	20

DATE	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LINITY LAB (MG/L AS CACO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L)
OCT									
07...	89	2.5	3.8	200	230	6.5	.8	15	553
NOV									
06...	210	5.4	4.2	260	470	13	1.0	13	982
DEC									
04...	240	5.5	6.0	300	530	17	1.1	15	1130
29...	240	5.9	3.9	270	480	17	.9	15	1040
FEB									
18...	310	7.0	4.3	290	750	16	.9	16	1410
MAR									
17...	260	6.1	3.5	290	570	20	1.0	12	1170
APR									
21...	70	2.1	3.7	180	200	6.9	.6	15	487
MAY									
20...	190	4.6	3.2	240	420	12	.5	16	915
JUN									
23...	58	2.0	2.3	130	150	4.5	.4	17	372
JUL									
15...	78	2.4	2.8	170	190	6.2	.6	19	479
AUG									
12...	80	2.6	2.8	180	200	5.9	.6	18	498
SEP									
08...	83	2.5	3.4	190	200	5.5	.6	18	514

YELLOWSTONE RIVER BASIN

06284500 BITTER CREEK NEAR GARLAND, WY--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	SOLIDS, DIS- SOLVED (TONS PER AC-FT)	SOLIDS, DIS- SOLVED (TONS PER DAY)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHORUS, TOTAL (MG/L AS PO4)	PHOS- PHORUS, DIS- SOLVED (MG/L AS P)	PHOS- PHORUS, ORTHO, DIS- SOLVED (MG/L AS P)	PHOS- PHATE, ORTHO, DIS- SOLVED (MG/L AS PO4)
OCT 07...	.75	293	1.4	.230	.71	.150	--	--
NOV 06...	1.3	96.0	4.0	.160	.49	.070	--	--
DEC 04...	1.5	88.5	4.5	.190	.58	.180	--	--
29...	1.4	60.1	4.3	.300	.92	.330	--	--
FEB 18...	1.9	79.9	3.6	.550	1.7	.460	--	--
MAR 17...	1.6	67.6	3.3	.460	1.4	.420	--	--
APR 21...	.66	175	1.3	.550	1.7	.110	--	--
MAY 20...	1.2	226	4.1	.130	.40	.060	--	--
JUN 23...	.51	325	1.7	.430	1.3	.120	--	--
JUL 15...	.65	374	2.6	.190	.58	.150	.130	.40
AUG 12...	.68	432	2.2	.370	1.1	.110	--	--
SEP 08...	.70	373	1.8	.250	.77	.100	--	--

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	807	1280	1530	1580	1730	1670	1700	730	1230	639	715	689
2	809	1340	1630	1550	1740	1660	1680	728	898	630	674	700
3	804	1300	1540	1500	1610	1690	1680	717	757	641	653	736
4	775	1300	1580	1570	1620	1650	1500	694	700	641	653	694
5	769	1300	1550	1600	1640	1720	1500	715	711	662	718	721
6	784	1350	1550	1570	1640	1690	1560	759	700	650	675	678
7	782	1420	1560	1680	1690	1690	1580	926	700	640	658	716
8	788	1450	1450	1620	1680	1690	1620	792	719	640	675	733
9	789	1400	1380	1600	1580	1700	1620	781	676	650	653	817
10	785	1360	1500	1600	1670	1630	1610	749	805	698	694	828
11	786	1440	1500	1600	1700	1670	1600	995	682	692	748	761
12	809	1470	1570	1620	1510	1700	1620	1150	695	682	710	762
13	818	1400	1540	1620	1590	1710	1620	1270	641	711	705	742
14	827	1380	1540	1610	1480	1640	1530	1260	574	708	705	818
15	827	1420	1540	1610	1540	1640	1600	1270	671	721	687	811
16	999	1450	1530	1640	1710	1640	1740	1300	628	743	689	783
17	1120	1430	1610	1600	1850	1690	957	1270	596	732	676	741
18	1230	1480	1620	1600	1840	1720	946	1270	607	700	735	736
19	1230	1470	1560	1610	1900	1690	842	1270	607	650	712	745
20	1250	1470	1520	1660	1810	1710	807	1270	593	671	717	741
21	1230	1470	1500	1680	1720	1730	753	1230	527	650	691	694
22	1320	1460	1530	1640	1700	1650	655	1580	554	650	704	778
23	1220	1470	1440	1660	1680	1610	638	1290	543	726	699	770
24	1270	1520	1440	1700	1710	1640	698	1270	543	715	688	765
25	1220	1490	1450	1670	1700	1630	723	947	538	704	705	761
26	1320	1500	1590	1700	1700	1720	690	1280	628	715	694	742
27	1270	1490	1580	1770	1710	1700	728	1430	596	677	671	748
28	1330	1500	1580	1740	1620	785	722	1390	586	693	677	740
29	1320	1460	1450	1700	---	1360	717	1380	615	688	683	836
30	1250	1470	1610	1730	---	1720	717	1360	615	718	683	833
31	1280	---	1610	1730	---	1680	---	1200	---	715	678	---
MEAN	1030	1420	1530	1640	1680	1640	1210	1110	665	682	691	754
WTR YR 1981	MEAN	1170		MAX	1900		MIN	527				

06284500 BITTER CREEK NEAR GARLAND, WY--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	16.0	12.0	1.0	6.5	.5	10.0	7.0	19.0	12.0	19.0	19.0	18.0
2	15.0	9.5	1.0	6.0	1.5	10.0	4.0	13.0	20.0	19.0	15.0	20.0
3	15.0	10.0	3.0	5.5	1.0	10.0	5.5	8.0	13.5	21.5	15.0	21.0
4	15.0	12.0	2.0	5.5	1.0	10.5	6.0	8.0	19.0	20.0	15.5	19.0
5	13.5	12.0	4.0	4.0	2.0	11.5	10.0	9.5	15.0	23.0	15.0	20.5
6	16.0	9.0	1.5	4.0	1.5	8.0	11.0	10.5	22.0	22.0	15.0	17.5
7	15.5	10.0	1.0	2.0	.0	5.5	11.5	9.0	14.5	16.5	21.5	18.0
8	16.0	8.5	.0	4.5	.5	5.0	4.0	13.0	14.0	12.0	19.0	20.0
9	14.5	9.0	2.0	5.0	.0	5.5	14.0	9.5	20.0	13.0	18.5	20.0
10	14.5	11.0	1.5	4.5	.0	12.0	10.5	16.0	18.0	13.5	15.0	19.0
11	12.0	9.0	5.0	2.5	.0	2.0	9.0	9.0	18.5	20.0	15.0	19.0
12	12.0	6.0	6.0	2.5	1.0	9.0	7.0	7.0	19.5	20.0	17.0	20.5
13	13.5	3.0	3.5	3.0	2.0	2.0	5.0	7.0	17.0	22.0	20.5	19.0
14	12.5	1.5	3.0	2.5	2.0	3.0	15.5	17.0	12.5	17.0	16.0	18.0
15	7.5	4.5	6.0	2.0	1.5	3.0	6.0	16.0	15.5	23.0	15.0	17.5
16	6.0	2.5	6.5	2.0	3.5	3.0	9.5	10.0	16.5	15.0	20.0	18.0
17	7.0	2.5	3.0	2.5	3.0	5.0	10.0	15.0	14.5	20.0	22.0	17.5
18	11.5	1.5	1.0	2.0	3.5	9.0	3.5	17.0	10.0	18.5	22.0	17.0
19	11.5	4.0	1.0	2.0	1.0	4.0	9.5	10.5	17.0	18.0	22.0	16.0
20	8.0	2.0	1.5	3.0	1.0	12.5	9.0	11.5	19.0	14.5	23.0	16.0
21	12.5	3.5	1.5	3.5	2.0	13.5	10.5	11.5	17.0	20.0	21.5	14.0
22	7.0	4.0	5.0	6.0	2.0	12.5	7.5	11.0	19.0	15.0	16.5	16.0
23	10.5	6.5	1.0	5.0	9.5	4.0	9.5	15.0	19.0	21.5	18.0	10.0
24	10.0	2.0	.0	3.0	11.0	5.0	10.0	18.0	18.0	15.5	20.0	15.0
25	10.5	4.5	.0	4.5	10.0	5.5	17.5	15.0	20.0	17.5	21.0	15.0
26	8.0	1.0	5.0	1.0	8.0	6.0	15.0	13.5	19.5	15.5	20.0	13.0
27	6.5	1.0	7.0	1.0	9.0	4.5	14.5	12.0	17.0	13.0	19.5	14.5
28	6.0	6.0	3.0	4.0	9.0	14.0	10.0	12.5	18.5	19.5	21.0	12.5
29	5.5	7.0	2.5	2.0	---	14.0	10.0	12.5	20.0	15.5	19.0	15.0
30	12.5	5.0	7.0	2.0	---	6.0	11.0	13.0	20.5	21.0	16.0	15.0
31	10.5	---	7.5	2.0	---	14.0	---	20.0	---	21.5	20.5	---
MEAN	11.5	6.0	3.0	3.5	3.0	7.5	9.5	12.5	17.0	18.0	18.5	17.0
WTR YR 1981	MEAN	10.5		MAX	23.0		MIN	.0				

YELLOWSTONE RIVER BASIN

06284800 WHISTLE CREEK NEAR GARLAND, WY

LOCATION.--Lat 44°43'21", long 108°34'16", in NW¼NW¼NE¼ sec.30, T.55 N., R.97 W., Big Horn County, Hydrologic Unit 10080014, on right bank 300 ft (91 m) upstream from Elk-Lovell Canal, 5.6 mi (9.0 km) southeast of Garland, and 6.3 mi (10.1 km) southwest of Byron.

DRAINAGE AREA.--101 mi² (262 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--May 1958 to May 1960, October 1968 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 4,150 ft (1,265 m), from topographic map. Prior to May 31, 1960, at different datum.

REMARKS.--Records fair except those for periods of ice effect periods of no gage-height record, Oct. 1-7, Nov. 14 to Dec. 29, Dec. 31 to Feb. 19, Feb. 21 to Mar. 17, Mar. 29, Apr. 1-3, Apr. 8 to May 6, May 14-20, June 20-23, Aug. 4-11, which are poor. Part of flow is return flow from areas irrigated by diversions from the Shoshone River.

AVERAGE DISCHARGE.--14 years (water years 1959, 1969-81), 27.5 ft³/s (0.779 m³/s), 19,920 acre-ft/yr (24.6 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 4,780 ft³/s (135 m³/s) July 3, 1975, gage height, 12.44 ft (3.792 m), from floodmarks, on basis of slope-area measurement of peak flow; minimum daily, 0.05 ft³/s (0.001 m³/s) Jan. 12, 1971.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Sept. 19, 1961, reached a discharge of 4,260 ft³/s (121 m³/s), at site 6.5 mi (10.5 km) upstream.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,060 ft³/s (30.0 m³/s) May 23, gage height, 4.78 ft (1.457 m); minimum daily, 0.86 ft³/s (0.024 m³/s) Mar. 18.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	40	2.4	2.0	1.9	2.1	1.4	1.7	12	5.0	35	36	37
2	41	2.4	2.3	1.8	2.1	1.5	1.8	12	34	31	36	40
3	43	2.2	2.3	1.8	1.9	1.5	2.0	14	66	30	42	40
4	42	2.2	2.3	2.1	1.8	1.4	2.2	18	51	32	39	40
5	41	2.2	2.0	2.0	1.9	1.3	2.7	22	32	37	35	40
6	38	2.2	1.9	1.8	1.9	1.2	2.2	30	51	35	36	46
7	39	2.0	2.0	1.7	1.8	1.1	3.6	60	57	34	41	49
8	41	3.3	1.8	1.8	1.9	1.2	2.7	88	50	34	45	49
9	34	2.0	1.7	2.1	1.9	1.3	2.0	47	40	33	52	47
10	41	2.0	1.7	1.8	1.9	1.2	1.5	12	35	36	58	45
11	48	2.0	1.7	1.5	1.7	1.1	1.3	84	35	34	53	49
12	46	2.4	1.8	1.7	1.7	1.1	1.3	77	39	31	51	48
13	48	2.0	1.8	1.7	1.8	1.1	1.3	27	39	39	50	50
14	46	1.9	1.8	1.6	2.1	1.1	1.3	7.2	45	42	53	50
15	56	1.7	1.8	1.9	2.3	1.2	1.2	5.2	44	44	53	44
16	19	1.7	1.9	1.8	2.4	1.1	1.2	5.1	45	41	53	47
17	7.2	1.8	1.9	1.5	2.4	1.1	1.2	5.2	50	45	49	50
18	25	1.7	1.5	1.8	2.6	.86	1.1	4.6	56	51	40	46
19	23	1.7	1.4	1.7	2.7	2.7	1.1	3.7	48	66	37	48
20	8.8	1.7	1.3	1.9	2.5	1.1	1.2	3.0	54	71	35	52
21	7.2	1.8	1.4	1.8	2.2	2.2	1.2	3.6	57	61	32	56
22	5.0	1.9	1.5	2.0	2.0	2.2	2.7	235	60	58	34	57
23	4.3	1.7	1.6	2.0	1.7	1.6	3.5	244	51	56	41	50
24	3.6	1.9	1.4	2.2	1.8	1.6	5.2	22	54	40	46	41
25	3.3	1.7	1.6	2.2	1.8	1.6	7.0	14	51	40	45	47
26	3.3	2.0	1.7	2.5	1.5	1.6	7.2	54	48	50	42	50
27	3.0	2.2	1.9	3.2	1.4	1.6	8.0	6.3	39	60	34	51
28	2.7	2.2	2.1	4.2	1.3	1.8	8.4	5.0	40	56	34	55
29	2.7	2.2	2.0	3.0	---	1.8	10	2.7	39	49	33	47
30	3.0	2.0	2.1	2.5	---	1.8	12	23	32	58	40	48
31	2.7	---	2.0	2.2	---	1.8	---	55	---	49	35	---
TOTAL	767.8	61.1	56.2	63.7	55.1	45.16	99.8	1201.6	1347.0	1378	1310	1419
MEAN	24.8	2.04	1.81	2.05	1.97	1.46	3.33	38.8	44.9	44.5	42.3	47.3
MAX	56	3.3	2.3	4.2	2.7	2.7	12	244	66	71	58	57
MIN	2.7	1.7	1.3	1.5	1.3	.86	1.1	2.7	5.0	30	32	37
AC-FT	1520	121	111	126	109	90	198	2380	2670	2730	2600	2810
CAL YR 1980	TOTAL	9570.57	MEAN	26.1	MAX	477	MIN	.06	AC-FT	18980		
WTR YR 1981	TOTAL	7804.46	MEAN	21.4	MAX	244	MIN	.86	AC-FT	15480		

06284800 WHISTLE CREEK NEAR GARLAND, WY--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1958-60, 1969 to current year.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: April 1969 to current year.

WATER TEMPERATURES: July 1969 to current year.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Maximum daily, 12,300 micromhos Jan. 10, 1970; minimum daily, 279 micromhos Feb. 28, 1975.

WATER TEMPERATURES: Maximum, 30.0°C July 21, 1977; minimum, 0.0°C on many days during winter periods.

EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum daily, 5,500 micromhos Jan. 23; minimum daily, 344 micromhos June 23.

WATER TEMPERATURES: Maximum, 28.0°C July 5, 14; minimum, 0.0°C Nov. 24, Dec. 29, Feb. 9, 10, 11, 12, 13.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	HARD- NESS (MG/L AS CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)
OCT								
08...	0930	47	760	8.0	10.5	240	64	19
NOV								
06...	1240	2.6	6000	7.5	8.0	810	160	99
DEC								
04...	0945	2.4	5500	8.2	.5	860	180	100
29...	1500	2.0	6000	8.2	.0	910	200	100
FEB								
19...	0930	2.8	2500	8.1	.5	340	74	37
MAR								
17...	1400	1.2	5200	8.2	5.0	830	170	99
APR								
21...	1415	1.2	5600	8.2	15.5	840	170	100
MAY								
20...	1115	19	1200	8.5	14.0	57	15	4.8
JUN								
23...	1700	54	500	8.2	24.0	110	30	7.6
JUL								
15...	0800	46	560	8.1	17.0	180	49	13
AUG								
12...	1020	53	690	7.9	16.5	180	49	15
SEP								
08...	1300	56	790	8.2	20.0	240	63	19

DATE	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LINITY LAB (MG/L AS CACO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, SUM OF CONSTITUENTS, DIS- SOLVED (MG/L)
OCT									
08...	66	1.9	3.5	160	230	4.7	.5	14	498
NOV									
06...	760	12	11	160	2100	45	.5	7.1	3290
DEC									
04...	900	13	11	400	2300	54	.6	8.4	3810
29...	880	13	7.4	350	2500	.1	.4	6.4	3920
FEB									
19...	370	8.8	5.0	170	930	18	.3	5.4	1550
MAR									
17...	880	13	7.0	330	2300	63	.4	4.4	3730
APR									
21...	970	15	8.7	320	2600	60	.4	5.1	4120
MAY									
20...	170	9.8	4.5	160	320	8.7	.6	8.2	637
JUN									
23...	32	1.4	1.8	110	100	2.7	.2	14	255
JUL									
15...	55	1.8	2.7	100	170	4.1	.2	16	372
AUG									
12...	49	1.7	2.6	120	160	3.9	.3	15	367
SEP									
08...	70	2.1	3.7	150	220	5.0	.3	15	488

YELLOWSTONE RIVER BASIN

06284800 WHISTLE CREEK NEAR GARLAND, WY--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	SOLIDS, DIS- SOLVED (TONS PER AC-FT)	SOLIDS, DIS- SOLVED (TONS PER DAY)	NITRO- GEN, NO ₂ +NO ₃ DIS- SOLVED (MG/L AS N)	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHORUS TOTAL (MG/L AS PO ₄)	PHOS- PHORUS, DIS- SOLVED (MG/L AS P)	PHOS- PHORUS, ORTHO, DIS- SOLVED (MG/L AS P)	PHOS- PHATE, ORTHO, DIS- SOLVED (MG/L AS PO ₄)
OCT 08...	.68	63.2	.00	.250	.77	.060	--	--
NOV 06...	4.5	23.2	3.0	.040	.12	.000	--	--
DEC 04...	5.2	24.7	4.0	.100	.31	.020	--	--
29...	5.3	21.6	3.6	.020	.06	.030	--	--
FEB 19...	2.1	11.7	2.2	.990	3.0	.050	--	--
MAR 17...	5.1	12.1	1.9	.030	.09	.020	--	--
APR 21...	5.6	13.3	2.5	.070	.21	.030	--	--
MAY 20...	.87	33.4	2.0	--	74	.050	--	--
JUN 23...	.35	37.5	.12	.330	1.0	.070	--	--
JUL 15...	.51	46.2	.35	.190	.58	.070	.060	.18
AUG 12...	.50	52.5	.08	.250	.77	.050	--	--
SEP 08...	.66	73.8	.38	.190	.58	.050	--	--

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	683	4030	4380	4180	4750	4240	3380	589	1840	577	783	612
2	683	4110	4440	4240	4910	4400	4330	736	539	832	797	590
3	672	4080	4610	4390	4990	4380	4330	642	431	655	736	590
4	738	4080	4570	4360	4970	4390	4670	549	528	633	464	582
5	675	4080	4730	4620	4830	4400	4540	606	431	537	461	585
6	743	4200	4630	4620	4920	4410	4580	598	442	640	458	604
7	710	4220	4610	4840	4880	4470	4900	859	401	619	457	548
8	800	4170	4670	4750	4880	4510	4890	707	451	420	458	571
9	801	4290	4710	4610	4810	4660	4930	790	614	724	460	649
10	702	4210	4760	4850	4830	4750	4930	681	630	734	472	613
11	697	4210	4790	4850	4940	4750	4950	722	466	745	655	641
12	708	4210	4590	4820	4700	4740	5030	676	405	745	547	571
13	712	4210	4540	4830	4510	4860	4800	1620	587	656	466	583
14	712	4210	4490	4820	4400	4790	5040	2330	492	574	483	692
15	686	4420	4310	4840	4480	4780	4930	2810	500	557	590	585
16	1300	4630	4260	4840	806	4730	4820	1350	492	771	494	706
17	2480	4540	4650	5050	797	5000	4860	3820	556	475	552	791
18	852	4490	4590	5080	1530	4270	4950	1590	545	426	566	820
19	1270	4710	4560	5040	2140	4280	4930	2660	433	426	555	601
20	1970	4460	4490	5200	2550	4360	4800	3830	494	466	544	610
21	3400	4440	4490	5370	2540	3490	4910	1960	399	520	542	795
22	3260	4140	4220	5200	2920	3490	865	689	522	509	533	636
23	3650	4190	4340	5500	3500	3430	786	766	344	412	533	650
24	3650	4800	4440	5140	3500	3340	584	1440	457	634	487	658
25	3910	4800	3870	5000	4080	2440	522	2650	449	747	523	895
26	3930	4590	3940	5100	4150	4170	589	753	628	661	526	671
27	3980	4630	3920	5240	4150	4320	553	2040	436	549	599	683
28	3930	4270	3940	5230	4200	4620	553	2700	428	618	649	696
29	3950	4230	4330	4840	---	3230	543	2910	456	618	638	705
30	3990	4260	4260	4920	---	1110	587	4090	663	618	655	715
31	4040	---	4280	4840	---	2010	---	747	---	608	596	---
MEAN	1940	4330	4430	4880	3880	4090	3500	1580	535	603	557	655
WTR YR 1981	MEAN	2580		MAX	5500		MIN	344				

06284800 WHISTLE CREEK NEAR GARLAND, WY--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	17.5	10.0	1.0	4.0	.5	8.0	11.0	12.5	12.0	21.0	26.0	21.0
2	17.0	10.0	1.0	2.0	1.0	8.5	3.0	14.0	22.0	26.5	16.0	21.5
3	17.0	8.5	2.0	3.0	1.0	8.5	2.5	11.5	15.0	26.0	27.0	20.0
4	17.0	10.5	.5	2.5	1.0	9.5	11.0	7.0	20.0	24.5	25.5	21.0
5	18.5	10.5	2.0	2.0	1.0	9.5	11.5	9.5	15.0	28.0	22.5	19.0
6	10.5	8.0	1.5	2.0	.5	7.0	4.0	12.0	15.0	25.5	23.5	20.0
7	18.0	9.5	1.5	2.0	2.0	3.0	5.0	8.0	15.0	18.0	24.5	20.5
8	10.5	6.5	2.0	2.0	1.0	3.0	1.5	8.0	14.5	13.0	21.0	22.5
9	14.0	8.0	1.0	2.0	.0	3.0	6.0	16.0	13.5	14.0	21.5	20.0
10	16.0	6.0	1.0	2.0	.0	2.0	7.0	10.0	13.0	15.0	15.5	22.5
11	14.0	6.0	1.5	2.0	.0	1.0	7.0	7.5	23.5	21.0	16.0	22.0
12	8.5	4.0	2.0	1.5	.0	1.0	7.0	6.0	23.5	22.0	15.5	16.5
13	13.5	3.0	2.0	1.5	.0	2.0	4.5	5.0	21.0	27.0	24.0	15.5
14	12.5	2.0	2.0	1.5	1.0	2.0	3.0	20.0	14.5	28.0	17.5	18.5
15	6.5	2.0	1.5	2.0	1.5	2.0	5.0	19.0	10.0	17.0	17.5	19.5
16	5.0	3.0	1.5	2.0	2.0	2.0	8.0	12.0	18.5	17.5	22.0	19.0
17	5.0	3.0	1.0	2.0	7.5	5.0	8.0	16.5	17.0	23.5	26.5	12.5
18	8.5	2.0	.5	2.5	4.5	2.0	9.5	12.5	9.5	20.5	26.0	12.0
19	9.5	.5	.5	2.0	.5	4.0	8.0	9.0	20.5	21.0	25.5	19.0
20	5.0	1.0	1.5	1.5	.6.5	4.0	8.0	12.0	21.5	23.0	26.5	19.0
21	5.0	1.5	.5	2.0	6.0	2.0	15.5	11.5	18.5	17.0	24.0	12.0
22	5.0	1.5	2.0	1.5	3.0	2.0	7.5	11.0	24.0	16.5	17.5	18.0
23	9.5	.5	2.0	.5	4.0	3.5	10.0	10.0	22.0	24.5	20.0	10.5
24	8.5	.0	2.0	3.0	3.5	4.0	11.0	12.5	23.0	15.5	23.0	16.5
25	5.0	.5	1.0	2.0	9.0	3.0	18.0	20.5	21.5	17.0	22.0	17.0
26	5.0	1.5	2.5	1.0	7.0	2.0	16.0	15.0	23.0	18.0	22.0	13.5
27	7.5	1.0	3.0	1.0	9.0	5.0	10.5	13.5	25.0	18.0	22.5	11.0
28	3.0	2.0	1.0	.5	6.0	15.0	9.0	12.0	21.0	15.0	23.0	12.0
29	2.0	3.0	.0	2.0	---	10.0	11.0	13.0	25.0	15.5	22.0	15.0
30	10.0	1.5	2.0	1.0	---	9.0	12.0	20.0	24.5	17.0	18.0	15.0
31	11.0	---	5.0	1.0	---	14.0	---	14.5	---	17.5	21.0	---
MEAN	10.0	4.0	1.5	2.0	3.0	5.0	8.5	12.5	18.5	20.0	22.0	17.5
WTR YR 1981	MEAN	10.5		MAX	28.0	MIN	.0					

06285100 SHOSHONE RIVER NEAR LOVELL, WY

LOCATION.--Lat 44°50'20", long 108°26'00", in NW¼NW¼ sec.16, T.56 N., R.96 W., Big Horn County, Hydrologic Unit 10080014, on right bank 30 ft (9 m) upstream from bridge on U.S. Highway 310 and 1.5 mi (2.4 km) west of Lovell.

DRAINAGE AREA.--2,350 mi² (6,090 km²), approximately.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1966 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 3,850 ft (1,173 m), from topographic map. Prior to Oct. 1, 1976, at datum 1.00 ft (0.305 m) higher, Oct. 1, 1976 to Sept. 30, 1980, at datum 1.00 ft (0.305 m) higher.

REMARKS.--Records fair. Flow regulated by Buffalo Bill Reservoir. (See station 06281500.) Natural flow of stream affected by storage reservoirs, power development, diversions above station for irrigation of about 143,000 acres (579 km²), of which about 8,000 acres (32.4 km²) are below station, and return flow from irrigated areas.

AVERAGE DISCHARGE.--15 years, 1,008 ft³/s (28.55 m³/s), 730,300 acre-ft/yr (900 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 16,400 ft³/s (464 m³/s) June 10, 1981, gage height, 9.16 ft (2.792 m) present datum; maximum gage height, 10.09 ft (3.075 m) Feb. 3, 1972 (backwater from ice) present datum; minimum daily discharge, 27 ft³/s (0.76 m³/s) May 31, 1977.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 16,400 ft³/s (464 m³/s) June 10, gage height, 9.16 ft (2.792 m); minimum daily discharge, 41 ft³/s (1.16 m³/s) Apr. 16.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	562	437	506	471	340	410	355	154	2090	3330	482	506
2	543	431	470	471	321	405	350	174	2380	2890	512	494
3	582	448	490	471	326	410	345	293	3170	2520	588	531
4	641	512	510	471	369	415	340	321	3830	2240	543	550
5	588	488	524	471	405	379	340	284	3830	1900	465	641
6	569	476	524	471	379	394	311	311	4040	1680	459	770
7	562	442	510	471	384	379	293	624	5690	1450	459	755
8	550	437	490	454	359	405	289	881	7020	1320	494	661
9	531	421	470	437	350	389	284	614	11000	993	601	531
10	506	431	480	426	335	389	267	476	15200	710	725	494
11	524	465	512	437	330	374	255	945	11300	518	607	454
12	550	531	500	465	330	374	238	818	8450	410	556	454
13	550	575	482	506	320	369	161	471	6920	350	488	488
14	575	494	494	442	315	369	104	399	5830	326	465	459
15	718	537	506	437	310	355	109	340	4590	272	437	384
16	897	696	518	415	305	350	41	330	3460	263	442	374
17	488	689	512	437	360	369	81	359	2790	521	471	389
18	506	614	494	459	437	379	174	454	2440	762	437	394
19	543	575	465	426	431	359	188	350	1980	873	454	389
20	506	575	440	410	442	379	230	340	2180	931	431	431
21	562	575	455	369	410	394	199	316	2950	816	415	494
22	506	582	470	364	410	379	226	836	3190	696	465	518
23	518	569	482	359	415	359	302	1530	3580	562	488	575
24	512	556	426	364	415	355	298	614	4360	379	524	524
25	500	550	488	359	415	340	255	627	4550	389	518	471
26	518	556	506	359	410	359	251	556	4260	543	512	524
27	500	543	500	355	410	355	345	740	4320	668	476	531
28	494	556	488	330	405	384	321	1090	4590	654	476	601
29	500	543	465	316	---	415	272	1380	4320	614	518	569
30	518	537	471	330	---	389	218	1500	3750	537	531	537
31	494	---	476	364	---	379	---	1700	---	482	524	---
TOTAL	17113	15841	15124	12917	10438	11760	7442	19827	148060	30599	15563	15493
MEAN	552	528	488	417	373	379	248	640	4935	987	502	516
MAX	897	696	524	506	442	415	355	1700	15200	3330	725	770
MIN	488	421	426	316	305	340	41	154	1980	263	415	374
AC-FT	33940	31420	30000	25620	20700	23330	14760	39330	293700	60690	30870	30730
CAL YR 1980	TOTAL	266300	MEAN	728	MAX	4040	MIN	124	AC-FT	528200		
WTR YR 1981	TOTAL	320177	MEAN	877	MAX	15200	MIN	41	AC-FT	635100		

06285100 SHOSHONE RIVER NEAR LOVELL, WY--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1967 to current year.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: October 1966 to current year.

WATER TEMPERATURES: October 1966 to current year.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Maximum daily, 1,790 micromhos Apr. 15, 1981; minimum daily, 238 micromhos June 26, 1974.

WATER TEMPERATURES: Maximum, 30.0°C June 6, 1969; minimum, 0.0°C on many days during winter period most years.

EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum daily, 1,790 micromhos Apr. 15; minimum daily, 251 micromhos June 11.

WATER TEMPERATURES: Maximum 21.0°C July 12; minimum, 0.0°C on many days during December, January, and February.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	TUR- BID- ITY (NTU)	OXYGEN, DIS- SOLVED (MG/L)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	HARD- NESS (MG/L AS CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)
OCT											
07...	1130	569	680	8.5	12.0	75	13.4	110	260	66	23
NOV											
05...	1030	502	1190	8.4	7.0	8.0	13.6	240	350	89	31
DEC											
02...	1145	470	1050	8.4	.0	75	14.0	--	370	96	32
29...	1030	483	1220	8.1	2.0	180	14.2	K16	350	89	30
FEB											
18...	1100	420	1100	8.5	2.5	310	12.1	K120	420	110	36
MAR											
24...	1100	345	1270	8.2	7.5	25	11.0	K25	420	110	36
APR											
20...	1200	256	1150	8.3	14.0	20	11.0	110	370	98	31
MAY											
21...	1430	324	1500	8.3	13.0	360	7.7	K650	330	86	29
JUN											
10...	1230	15700	--	--	13.0	--	--	--	--	--	--
23...	1110	3440	380	8.1	15.0	120	11.2	310	110	29	7.9
JUL											
15...	1200	370	890	8.4	22.0	35	11.1	1080	250	69	20
AUG											
13...	0930	518	710	8.1	15.0	65	9.2	530	230	59	20
SEP											
03...	1030	518	900	8.4	16.0	25	11.4	660	250	64	22

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

DATE	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LINEITY LAB (MG/L AS CACO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)	SOLIDS, DIS- SOLVED (TONS PER DAY)
OCT											
07...	81	2.2	3.7	190	240	8.8	.6	13	552	.75	848
NOV											
05...	92	2.1	5.1	220	260	29	.6	12	655	.89	888
DEC											
02...	86	1.9	7.1	240	310	14	.8	15	711	.97	902
29...	83	1.9	5.4	240	280	13	.5	14	663	.90	865
FEB											
18...	110	2.3	5.9	120	450	18	.7	13	820	1.1	930
MAR											
24...	94	2.0	5.8	210	360	17	.8	11	763	1.0	711
APR											
20...	100	2.3	5.4	200	340	17	.7	13	728	.99	503
MAY											
21...	100	2.4	4.8	220	330	13	.7	13	714	.97	625
JUN											
10...	--	--	--	--	--	--	--	--	--	--	--
23...	25	1.1	1.6	90	74	2.9	.2	16	213	.29	1980
JUL											
15...	72	2.0	3.5	160	220	11	.5	16	514	.70	513
AUG											
13...	72	2.2	3.0	180	200	8.2	.5	15	490	.67	685
SEP											
03...	76	2.3	3.5	190	210	12	.5	14	522	.71	730

YELLOWSTONE RIVER BASIN

06285100 SHOSHONE RIVER NEAR LOVELL, WY--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS NO2)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHORUS TOTAL (MG/L AS PO4)	PHOS- PHORUS, DIS- SOLVED (MG/L AS P)	PHOS- PHORUS, ORTHO, DIS- SOLVED (MG/L AS P)	PHOS- PHATE, ORTHO, DIS- SOLVED (MG/L AS PO4)	SEDI- MENT, SUS- PENDEED (MG/L)	SEDI- MENT, DIS- CHARGE, SUS- PENDEED (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
OCT 07...	--	--	.46	.140	.43	.060	--	--	41	63	91
NOV 05...	--	--	.95	.060	.18	.000	--	--	52	70	96
DEC 02...	--	--	1.2	.050	.15	.030	--	--	49	62	--
29...	--	--	.89	.020	.06	.050	--	--	148	193	85
FEB 18...	--	--	.96	.450	1.4	.060	--	--	565	641	98
MAR 24...	--	--	.39	.070	.21	.030	--	--	91	85	94
APR 20...	.050	.16	.49	.080	.25	.020	--	--	229	158	--
MAY 21...	--	--	1.2	.470	1.4	.010	--	--	628	549	98
JUN 10...	--	--	--	--	--	--	--	--	--	--	--
23...	--	--	.58	.400	1.2	.080	--	--	431	4000	70
JUL 15...	--	--	1.2	.130	.40	.090	.070	.21	113	113	96
AUG 13...	--	--	1.0	.180	.55	.060	--	--	137	192	96
SEP 03...	--	--	1.2	.120	.37	.040	--	--	59	83	95

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	787	962	968	972	1180	1120	1180	1050	444	290	787	783
2	782	978	989	982	1220	1120	1120	1040	409	307	782	794
3	764	994	961	1000	1260	1130	1110	929	372	319	782	794
4	770	962	993	1010	1220	1130	1110	859	332	336	732	806
5	780	954	1010	1010	1210	1120	1110	867	303	341	732	744
6	770	954	1050	1000	1200	1140	1100	884	312	351	754	711
7	786	1060	989	986	1230	1120	1240	893	307	362	762	772
8	797	1000	998	1000	1200	1100	1140	776	273	364	758	750
9	822	1010	960	1020	1120	1080	1120	805	272	382	726	839
10	819	987	955	1030	1430	1100	1100	844	312	450	701	817
11	826	977	960	1040	1400	1120	1100	844	251	532	701	828
12	826	968	971	1040	1180	1120	1070	826	253	590	708	843
13	826	954	971	1030	1090	1120	1100	1030	255	623	735	872
14	809	1010	971	1040	1100	1100	1520	1120	267	623	735	844
15	816	1030	967	1030	1080	1120	1790	1100	268	765	755	850
16	735	873	975	1050	1150	1080	1410	1080	314	809	762	883
17	902	868	950	1060	1160	1110	1330	1080	323	820	782	905
18	1000	870	998	1050	1220	1140	1120	1000	333	721	765	905
19	1010	916	1020	1050	1190	1130	1050	1140	369	672	787	899
20	1060	933	998	1040	1190	1140	953	1100	383	667	776	899
21	1060	945	983	1060	1170	1130	1030	1050	356	664	831	890
22	1030	950	965	1080	1140	1100	967	994	322	643	858	890
23	993	958	972	1110	1140	1080	956	852	329	632	776	944
24	1020	947	1020	1130	1140	1100	821	1120	281	738	771	879
25	993	954	967	1120	1140	1070	852	1060	277	820	743	879
26	972	950	947	1110	1120	1100	991	1160	279	752	738	846
27	972	954	991	1100	1120	1120	824	941	285	720	772	831
28	972	935	995	1110	1120	1140	824	703	282	715	815	809
29	966	947	961	1160	---	1130	897	575	277	730	782	814
30	972	978	958	1180	---	1140	933	490	277	751	776	831
31	950	---	982	1180	---	1170	---	620	---	771	778	---
MEAN	890	959	980	1060	1180	1120	1100	930	311	589	763	838
WTR YR 1981	MEAN	891	MAX	1790	MIN	251						

YELLOWSTONE RIVER BASIN

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06285100 SHOSHONE RIVER NEAR LOVELL, WY--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	12.0	7.0	3.0	6.0	.0	4.0	5.5	13.0	13.0	16.0	17.5	13.0
2	10.0	7.0	.0	3.5	.0	6.0	7.5	14.0	12.5	15.5	17.0	15.0
3	10.0	6.0	1.0	2.0	1.0	5.0	5.0	10.5	14.0	17.0	17.0	14.0
4	10.0	7.0	4.0	2.0	.5	4.5	5.5	8.0	13.0	17.0	18.0	14.0
5	13.0	7.0	1.0	3.0	.5	4.0	5.0	10.5	18.0	18.0	17.5	15.5
6	12.0	7.5	.0	1.5	.5	5.0	5.0	12.0	14.5	18.0	18.0	15.0
7	12.0	9.0	2.0	1.0	.5	3.0	5.0	9.0	14.0	18.5	17.0	15.0
8	12.0	9.0	.0	.5	.0	4.5	4.0	6.0	14.0	15.0	17.0	15.5
9	11.5	6.0	1.0	1.5	.0	6.0	10.5	6.0	14.0	15.0	17.5	15.0
10	8.0	7.0	1.0	1.0	.0	5.0	5.0	10.0	12.5	16.0	16.0	15.0
11	7.5	7.0	1.0	.5	.0	4.5	8.0	11.0	12.0	18.0	16.0	15.0
12	8.0	5.5	3.0	1.0	.0	4.5	9.0	6.0	12.0	21.0	17.0	15.0
13	10.0	4.0	1.0	.5	.5	6.5	8.0	6.0	13.0	20.0	17.0	15.5
14	9.0	2.0	.5	1.0	1.0	6.0	14.0	8.0	12.0	18.5	17.5	16.0
15	8.0	1.0	2.0	1.0	2.0	5.0	13.0	11.0	11.0	18.0	18.0	14.0
16	4.0	1.0	3.0	.5	1.5	5.5	12.0	7.0	12.5	18.0	17.0	14.0
17	4.0	.5	4.0	.5	3.0	5.5	10.0	9.5	13.0	18.5	17.0	14.0
18	6.0	1.0	3.0	.5	2.5	4.5	11.0	9.0	12.5	17.0	17.0	16.5
19	7.0	3.0	.0	.5	3.0	5.0	14.0	11.0	14.0	17.0	17.0	14.0
20	7.5	.5	.0	.0	4.0	6.0	14.0	11.5	14.5	17.0	18.0	13.0
21	8.5	3.0	1.0	.5	3.0	4.5	10.0	13.0	14.0	17.0	17.5	13.0
22	7.0	3.0	2.0	1.5	3.0	5.0	8.0	11.0	14.0	17.5	17.0	12.0
23	4.0	2.0	3.0	1.5	3.5	5.0	8.0	11.0	15.0	18.0	17.0	12.0
24	4.0	2.0	.0	1.5	4.0	7.5	11.5	12.0	14.0	17.0	17.0	12.5
25	4.0	.5	1.0	2.0	4.0	6.0	11.0	14.0	13.5	18.0	16.5	14.0
26	6.0	.5	3.0	1.5	3.5	8.0	12.0	15.5	15.0	15.5	17.5	11.0
27	5.0	.5	5.0	1.0	4.0	7.0	11.5	15.0	15.0	14.0	17.0	10.5
28	4.0	1.5	5.5	1.0	4.5	4.0	9.0	14.0	15.0	16.0	16.5	11.0
29	4.0	3.0	2.0	1.0	---	6.0	11.0	15.0	13.5	20.5	17.0	13.0
30	5.0	3.0	4.0	1.0	---	6.5	13.0	14.0	15.5	18.0	17.0	12.0
31	7.0	---	4.0	1.0	---	5.0	---	14.5	---	17.0	13.0	---
MEAN	7.5	4.0	2.0	1.5	2.0	5.5	9.0	11.0	13.5	17.5	17.0	14.0
WTR YR 1981	MEAN	8.5	MAX	21.0	MIN	.0						

YELLOWSTONE RIVER BASIN

06285400 SAGE CREEK AT SIDON CANAL, NEAR DEAVER, WY

LOCATION.--Lat 44°53'08", long 108°33'01", in NE¼NE¼NW¼ sec.34, T.57 N., R.97 W., Big Horn County, Hydrologic Unit 10080014, on left bank 300 ft (91 m) downstream from Polecat Creek, 800 ft (244 m) upstream from Sidon Canal crossing, and 2.4 mi (3.9 km) east of Deaver.

DRAINAGE AREA.--341 mi² (883 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--June 1958 to May 1960, October 1968 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 4,020 ft (1,225 m), from topographic map.

REMARKS.--Records good. Flow is mostly return flow from land irrigated by canals diverting water from Shoshone River.

AVERAGE DISCHARGE.--14 years (water years 1959, 1969-81), 65.0 ft³/s (1.841 m³/s), 47,090 acre-ft/yr (58.1 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,250 ft³/s (63.7 m³/s) June 8, 1958, gage height, 9.22 ft (2.810 m), from floodmark, from rating curve extended above 500 ft³/s (14.2 m³/s) on basis of slope-area measurement of peak flow; minimum daily, 0.50 ft³/s (0.014 m³/s) Feb. 2-6, Feb. 21 to Mar. 5, 1960.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 290 ft³/s (8.21 m³/s) May 23, gage height, 4.23 ft (1.289 m); minimum daily, 12 ft³/s (0.34 m³/s) Apr. 9-14, 17.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	125	30	17	19	18	15	19	35	88	91	93	106
2	124	29	22	18	18	16	19	34	58	82	108	110
3	133	27	22	17	16	17	17	37	63	75	104	114
4	132	27	22	21	15	16	17	42	56	78	94	115
5	130	27	18	19	16	15	16	47	46	77	82	114
6	115	28	17	17	16	15	16	59	59	74	83	112
7	100	27	16	16	15	13	15	100	61	71	91	104
8	99	37	15	17	16	15	13	146	56	65	102	110
9	101	31	16	21	16	16	12	151	64	62	120	110
10	96	30	17	16	15	15	12	130	56	55	136	106
11	93	28	17	14	13	14	12	187	50	55	126	94
12	93	28	18	16	14	14	12	144	77	59	117	98
13	104	27	17	16	15	14	12	65	82	66	99	100
14	113	25	17	15	18	15	12	53	91	62	96	88
15	141	24	18	16	19	15	13	43	95	53	102	86
16	165	24	19	15	20	15	13	44	105	56	118	87
17	163	28	18	13	20	16	12	46	95	54	125	84
18	144	22	14	15	21	16	54	41	81	53	120	83
19	69	21	13	14	23	16	62	31	90	56	111	83
20	51	22	13	16	22	18	59	29	95	54	104	83
21	42	23	14	15	16	18	50	37	88	53	102	84
22	37	24	15	16	16	17	31	143	87	56	106	90
23	35	22	17	16	15	17	26	190	72	56	110	89
24	35	24	13	18	16	17	32	97	73	50	114	93
25	34	19	16	18	16	17	34	56	73	56	110	97
26	34	21	17	20	15	17	31	45	74	71	100	110
27	33	21	19	33	15	18	34	45	86	74	93	115
28	31	23	22	46	13	18	35	38	91	83	103	118
29	30	23	17	22	---	17	36	38	100	91	97	122
30	30	23	21	19	---	18	37	56	97	84	96	122
31	31	---	20	18	---	19	---	80	---	83	99	---
TOTAL	2663	765	537	572	468	499	763	2289	2309	2055	3261	3027
MEAN	85.9	25.5	17.3	18.5	16.7	16.1	25.4	73.8	77.0	66.3	105	101
MAX	165	37	22	46	23	19	62	190	105	91	136	122
MIN	30	19	13	13	13	13	12	29	46	50	82	83
AC-FT	5280	1520	1070	1130	928	990	1510	4540	4580	4080	6470	6000
CAL YR 1980	TOTAL	22513.6	MEAN	61.5	MAX	172	MIN	9.8	AC-FT	44660		
WTR YR 1981	TOTAL	19208.0	MEAN	52.6	MAX	190	MIN	12	AC-FT	38100		

06285400 SAGE CREEK AT SIDON CANAL, NEAR DEEVER, WY--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1958-60, 1969 to current year.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: April 1969 to current year.

WATER TEMPERATURES: July 1969 to November 1976, September 1977 to current year.

REMARKS.--Daily temperature readings not available for water year 1980.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Maximum daily, 6,650 micromhos Apr. 26, 1973; minimum daily, 819 micromhos May 4, 1975.

WATER TEMPERATURES: Maximum, 28.5°C July 17, 1974; minimum, 0.0°C on many days during winter period in most years.

EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum daily, 4,580 micromhos May 16; minimum daily, 954 micromhos June 28.

WATER TEMPERATURES: Maximum, 28.0°C Aug. 18, 19; minimum, 0.5°C Dec. 2.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	HARD- NESS (MG/L AS CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)
OCT								
07...	1415	104	1500	8.4	13.5	470	110	48
NOV								
05...	1305	28	5000	8.7	6.5	1100	230	120
DEC								
02...	1430	24	4000	8.2	.5	1300	270	140
29...	1115	14	4900	7.9	3.0	1200	250	140
FEB								
18...	1310	16	3800	8.4	.5	1000	190	130
MAR								
17...	1030	17	3500	7.9	4.0	1200	240	140
APR								
21...	1100	54	1300	8.2	9.5	420	100	41
MAY								
20...	1430	30	5000	8.5	18.0	1200	230	140
JUN								
23...	1330	79	2100	8.2	20.0	470	110	48
JUL								
15...	1030	58	2000	8.1	18.0	630	140	67
AUG								
13...	0830	107	1510	7.8	16.0	450	110	43
SEP								
03...	1210	124	1310	8.1	15.0	410	100	39

DATE	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LINEITY LAB (MG/L AS CACO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, SUM OF CONSTITUENTS, DIS- SOLVED (MG/L)
OCT									
07...	150	3.0	4.8	200	560	10	.6	14	1020
NOV									
05...	400	5.3	7.8	280	1500	23	.8	10	2470
DEC									
02...	450	5.5	10	360	1800	35	.8	12	2950
29...	510	6.4	6.5	320	1900	--	.7	9.1	--
FEB									
18...	520	7.1	6.2	290	1700	29	.7	11	2770
MAR									
17...	450	5.7	5.4	310	1700	38	.8	7.9	2780
APR									
21...	110	2.3	4.4	150	470	10	.6	14	844
MAY									
20...	660	8.5	7.0	260	2100	61	.4	8.6	3370
JUN									
23...	160	3.2	3.4	170	640	14	.5	14	1100
JUL									
15...	200	3.5	4.9	210	770	17	.6	16	1350
AUG									
13...	120	2.7	3.6	170	500	9.1	.5	16	907
SEP									
03...	120	2.8	4.3	190	470	7.9	.5	15	874

YELLOWSTONE RIVER BASIN

06285400 SAGE CREEK AT SIDON CANAL, NEAR DEEVER, WY--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	SOLIDS, DIS- SOLVED (TONS PER AC-FT)	SOLIDS, DIS- SOLVED (TONS PER DAY)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHORUS TOTAL (MG/L AS PO4)	PHOS- PHORUS, DIS- SOLVED (MG/L AS P)	PHOS- PHORUS, ORTHO, DIS- SOLVED (MG/L AS P)	PHOS- PHATE, ORTHO, DIS- SOLVED (MG/L AS PO4)
OCT 07...	1.4	286	.96	.250	.77	.090	--	--
NOV 05...	3.4	187	2.0	.070	.21	.000	--	--
DEC 02...	4.0	191	3.4	.010	.03	.050	--	--
29...	4.1	115	3.7	.050	.15	.040	--	--
FEB 18...	3.8	120	2.2	.120	.37	.060	--	--
MAR 17...	3.8	128	1.8	.070	.21	.030	--	--
APR 21...	1.1	123	.81	.540	1.7	--	--	--
MAY 20...	4.6	273	1.6	.050	.15	.060	--	--
JUN 23...	1.5	235	1.2	.240	.74	.060	--	--
JUL 15...	1.8	211	1.4	.120	.37	.100	.080	.25
AUG 13...	1.2	262	.62	.220	.67	.070	--	--
SEP 03...	1.2	293	.61	.190	.58	.040	--	--

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1130	3120	3310	3170	3410	3410	3330	2160	1360	1270	1320	1330
2	1130	3130	3330	3430	3490	3400	3360	2000	1400	1300	1290	1230
3	1120	3130	3330	3430	3520	3370	3320	1960	1410	1280	1300	1120
4	1120	---	3350	3510	3500	3340	3450	1940	1230	1370	1310	1120
5	1360	---	3340	3580	3460	3340	3400	2300	1190	1350	1330	1190
6	1350	---	3340	3590	3420	3160	3410	2240	1200	1370	1340	1190
7	1370	3610	3320	3640	3410	3180	3420	2160	1620	1450	1150	1250
8	1390	3720	3360	3630	3490	3170	3400	1480	1620	1440	1160	1250
9	1390	3680	3360	3670	3460	3250	3420	1540	1600	1470	1190	1250
10	1390	3700	3160	3720	3410	3220	3420	1520	1240	1570	1250	1240
11	1520	3700	3180	3540	3410	3230	3460	2910	1240	1570	1260	1250
12	1520	3250	3140	3550	3350	3240	3430	2870	1220	1570	1260	1500
13	1520	3220	3140	3570	3360	3330	3550	2920	1020	1580	1070	1510
14	1080	3250	3150	3530	3350	3320	3540	4470	1000	1940	1080	1500
15	1080	3230	3150	3580	3370	3320	3520	4540	994	1900	1120	1700
16	1080	3330	3440	3570	3400	3500	3000	4580	1020	1660	1040	1660
17	1600	3440	3490	3550	3200	3390	2330	4520	1140	1690	1270	1630
18	2120	3500	3460	3540	3190	3350	2410	4040	1110	1650	1280	1760
19	2120	3540	3390	3550	3290	3310	2340	3890	1250	1660	1280	1750
20	2120	3370	3380	3510	3270	3380	1760	3760	1250	1690	1280	1720
21	2960	3400	3440	3510	3230	3300	1770	3530	1280	1680	1240	1660
22	2990	3390	3380	3460	3300	3320	1740	3550	1260	1660	1260	1690
23	2980	3370	3410	3340	3230	3370	2000	2490	1420	1690	1100	1640
24	3200	3380	3380	3430	3290	3340	1980	2540	1430	1680	1100	1300
25	3200	3330	3200	3400	3370	3370	1960	2510	1450	1630	1120	1270
26	3180	3190	3090	3400	3290	3410	1920	2540	1450	1680	1470	1280
27	3060	3230	3120	3400	3360	3410	1920	2280	1430	1630	1460	1290
28	3090	3230	3110	3410	3420	3410	1930	2280	954	1630	1340	1210
29	3080	3310	3090	3480	---	3460	2130	2250	965	1320	1350	1200
30	3130	3300	3130	3450	---	3370	2140	2260	979	1310	1340	1190
31	3160	---	3200	3400	---	3380	---	2250	---	1320	1340	---
MEAN	2020	3370	3280	3500	3370	3330	2760	2780	1260	1550	1250	1400
WTR YR 1981	MEAN	2480	MAX	4580	MIN	954						

06285400 SAGE CREEK AT SIDON CANAL, NEAR DEAVER, WY--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6.0	5.0	4.0	4.0	4.0	6.0	8.0	16.0	19.0	24.0	24.0	19.0
2	6.0	4.0	.5	4.0	4.0	6.0	7.0	15.0	21.0	23.0	24.0	20.0
3	6.0	4.0	4.0	4.0	4.0	7.0	8.0	12.0	20.0	24.0	24.0	20.0
4	6.0	---	5.0	4.0	4.0	7.5	8.0	16.0	20.0	22.0	24.0	20.0
5	6.0	6.5	---	4.0	4.0	8.0	7.0	11.0	21.0	22.0	23.0	18.0
6	6.0	---	---	4.0	4.0	9.0	7.0	10.0	21.0	24.0	23.0	18.0
7	13.5	5.0	5.0	4.0	4.0	9.0	8.0	9.0	19.0	24.0	23.0	17.0
8	5.0	6.0	4.0	4.0	4.0	10.0	8.0	12.0	19.0	24.0	23.0	17.0
9	5.0	5.0	3.0	4.0	4.0	10.0	9.0	12.0	19.0	24.0	21.0	17.0
10	5.0	6.0	4.0	4.0	3.0	7.0	11.0	9.0	21.0	24.0	22.0	17.0
11	6.0	6.0	4.0	4.0	3.0	7.0	11.0	11.0	22.0	24.0	23.0	17.0
12	5.0	5.0	4.0	4.0	4.0	7.0	9.0	11.0	22.0	22.0	23.0	18.0
13	6.0	5.0	5.0	4.0	4.0	7.0	12.0	12.0	19.0	24.0	23.0	18.0
14	5.0	5.0	4.0	4.0	4.0	7.0	14.0	14.0	17.0	25.0	23.0	17.0
15	5.0	5.0	5.0	4.0	4.0	7.0	15.0	15.0	19.0	25.0	23.0	16.0
16	5.0	5.0	4.0	4.0	4.0	8.0	15.0	10.0	19.0	24.0	23.0	16.0
17	5.0	4.0	3.0	4.0	4.0	4.0	15.0	9.0	19.0	24.0	23.0	16.0
18	5.0	4.0	3.0	4.0	2.0	7.0	14.0	16.0	18.0	23.0	28.0	16.0
19	5.0	4.0	4.0	4.0	4.0	8.0	12.0	16.0	19.0	22.0	28.0	16.0
20	4.0	4.0	4.0	4.0	4.0	8.0	14.0	17.0	19.0	22.0	22.0	15.0
21	5.0	4.0	4.0	4.0	4.0	8.0	9.5	16.0	17.0	21.0	21.0	16.0
22	5.0	4.0	4.0	4.0	4.0	5.0	15.0	16.0	23.0	24.0	23.0	15.0
23	5.0	4.0	3.0	4.0	4.0	5.0	9.0	17.0	20.0	24.0	21.0	15.0
24	5.0	4.0	3.0	4.0	4.0	5.0	9.0	12.0	22.0	24.0	20.0	16.0
25	5.0	4.0	---	4.0	4.0	5.0	15.0	13.0	23.0	24.0	20.0	16.0
26	5.0	4.0	4.0	4.0	4.0	7.0	11.0	19.0	22.0	24.0	21.0	15.0
27	6.0	5.0	4.0	4.0	4.0	5.0	15.0	19.0	22.0	24.0	21.0	14.0
28	6.0	5.0	4.0	4.0	7.0	5.0	15.0	19.0	23.0	24.0	21.0	15.0
29	5.0	5.0	3.0	4.0	---	8.0	15.0	20.0	23.0	24.0	20.0	14.0
30	5.0	4.0	4.0	4.0	---	9.0	15.0	21.0	24.0	24.0	22.0	14.0
31	5.0	---	4.0	4.0	---	9.0	---	18.0	---	24.0	21.0	---
MEAN	5.5	4.5	4.0	4.0	4.0	7.0	11.5	14.5	20.5	23.5	22.5	16.5
WTR YR 1981	MEAN	11.5	MAX	28.0	MIN	.5						

YELLOWSTONE RIVER BASIN

06286200 SHOSHONE RIVER AT KANE, WY

LOCATION.--Lat 44°51'31", long 108°19'52", in NE¼SE¼SE¼ sec.6, T.56 N., R.95 W., Big Horn County, Hydrologic Unit 10080014, at bridge on county road, 3.4 mi (5.5 km) northeast of Lovell, 6.5 mi (10.5 km) west of Kane, 6.6 mi (10.6 km) upstream from high-water line of Bighorn Lake at elevation 3,640 ft (1,109 m), and 7.8 mi (12.6 km) upstream from former discharge station.

DRAINAGE AREA.--2,989 mi² (7,742 km²), at former discharge station.

PERIOD OF RECORD.--Water years 1976 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N)
DEC 02...	0940	500	1300	8.2	.0	1.1	.140
FEB 26...	1040	450	1500	8.3	4.0	.78	.110
MAY 21...	1515	E354	--	--	16.0	1.2	.070
AUG 13...	1130	625	--	--	15.5	1.0	.130

E-Estimate.

DATE	NITRO- GEN, AMMONIA TOTAL (MG/L AS NH4)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO- GEN, TOTAL (MG/L AS N)	NITRO- GEN, TOTAL (MG/L AS NO3)	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHORUS TOTAL (MG/L AS PO4)
DEC 02...	.17	.53	.67	1.8	7.8	.020	.06
FEB 26...	--	.84	.95	1.7	7.7	.130	.40
MAY 21...	--	1.5	1.60	2.8	12	.370	1.1
AUG 13...	--	1.6	1.70	2.7	12	.240	.74

06286400 BIGHORN LAKE NEAR ST. XAVIER, MT

LOCATION.--Lat 45°18'27", long 107°57'26", in SW¼SE¼ sec.18, T.6 S., R.31 E., Big Horn County, Hydrologic Unit 10080010, in block 13 of Yellowtail Dam on Bighorn River, 1.3 mi (2.1 km) upstream from Grapevine Creek, 15.5 mi (24.9 km) southeast of St. Xavier, and at mile 86.6 (139.3 km), revised.

DRAINAGE AREA.--19,626 mi² (50,831 km²).

PERIOD OF RECORD.--November 1965 to current year (monthend contents only). Prior to October 1969, published as "Yellowtail Reservoir."

GAGE.--Water-stage recorder in powerhouse control room. Datum of gage is referenced to National Geodetic Vertical Datum of 1929 (levels by Bureau of Reclamation).

REMARKS.--Reservoir is formed by thin concrete-arch dam; construction began in 1961; completed in 1967. Storage began Nov. 3, 1965. Usable capacity, 1,356,000 acre-ft (1.67 km³) between elevation 3,296.50 ft (1,004.773 m), river outlet invert, and 3,657.00 ft (1,114.654 m), top of flood control. Elevation of spillway crest, 3,593.00 ft (1,095.146 m). Normal maximum operating level, 1,097,000 acre-ft (1.35 km³), elevation, 3,640.00 ft (1,109.472 m). Minimum operating level, 483,400 acre-ft (596 hm³), elevation, 3,547.00 ft (1,081.126 m). Dead storage, 18,970 acre-ft (23.4 hm³) below elevation 3,296.50 ft (1,004.773 m). Figures given herein represent usable contents. Water is used for power production, flood control, irrigation, and recreation.

COOPERATION.--Elevations and capacity table furnished by Bureau of Reclamation.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 1,346,000 acre-ft (1.66 km³) July 6, 1967, elevation, 3,656.43 ft (1,114.480 m); minimum since first filling, 660,700 acre-ft (815 hm³) Mar. 11, 1970, elevation, 3,584.45 ft (1,092.540 m).

EXTREMES FOR CURRENT YEAR.--Maximum contents, 1,111,000 acre-ft (1.37 km³) June 30, elevation, 3,641.07 ft (1,109.798 m); minimum, 822,100 acre-ft (1.01 km³) Apr. 26, elevation, 3,610.33 ft (1,100.429 m).

MONTHEND ELEVATION AND CONTENTS AT 2400, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

Date	Elevation (feet)	Contents (acre-feet)	Change in contents (acre-feet)
Sept. 30	3,637.06	1,061,000	--
Oct. 31	3,631.78	1,003,000	-58,000
Nov. 30	3,631.20	996,800	-6,200
Dec. 31	3,626.38	950,500	-46,300
CAL YR 1980			-31,700
Jan. 31	3,618.98	888,500	-62,000
Feb. 28	3,612.26	833,800	-54,700
Mar. 31	3,611.42	828,400	-5,400
Apr. 30	3,610.69	824,100	-4,300
May 31	3,628.12	966,600	+142,500
June 30	3,641.07	1,111,000	+144,400
July 31	3,635.46	1,043,000	-68,000
Aug. 31	3,634.71	1,034,000	-9,000
Sept. 30	3,634.92	1,036,000	+2,000
WTR YR 1981			-25,000

YELLOWSTONE RIVER BASIN

06287000 BIGHORN RIVER NEAR ST. XAVIER, MT

LOCATION.--Lat 45°19'00", long 107°55'05", in NW¼NE¼ sec.16, T.6 S., R.31 E., Big Horn County, Hydrologic Unit 10080015, on right bank 800 ft (244 m) downstream from Yellowtail afterbay dam, 1,500 ft (460 m) downstream from Lime Kiln Creek, 14 mi (23 km) southwest of St. Xavier, and at mile 83.9 (135.0 km).

DRAINAGE AREA.--19,667 mi² (50,938 km²). Area at site used prior to Apr. 16, 1963, 19,626 mi² (50,831 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1934 to current year.

GAGE.--Water-stage recorder. Datum of gage is 3,158.38 ft (962.558 m), National Geodetic Vertical Datum of 1929 (levels by U.S. Army Corps of Engineers). Prior to Apr. 16, 1963, and June 13, 1964, to Mar. 31, 1965, water-stage recorder at site 1.2 mi (1.9 km) upstream at different datum. Apr. 1, 1965, to July 31, 1966, water-stage recorder at site 1,300 ft (400 m) downstream at present datum.

REMARKS.--Records fair. Figures of discharge given herein are sum of river flow and flow of Bighorn Canal. Some regulation by 14 reservoirs in Wyoming with combined capacity of 1,400,000 acre-ft (1,726 hm³) and complete regulation by Bighorn Lake (see preceding page) since Nov. 3, 1965. Diversions for irrigation of about 375,000 acres (1,520 km²) above station.

AVERAGE DISCHARGE.--47 years, 3,576 ft³/s (101.3 m³/s), 2,591,000 acre-ft/yr (3.19 km³/yr), unadjusted.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 37,400 ft³/s (1,060 m³/s) June 16, 1935; minimum observed, 49 ft³/s (1.39 m³/s) Mar. 29, 1966, result of discharge measurement (dam closure); minimum daily, 112 ft³/s (3.17 m³/s) Apr. 2, 1967.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 10,410 ft³/s (295 m³/s) June 11; minimum daily, 1,080 ft³/s (30.6 m³/s) Apr. 1.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3990	3120	2470	3280	3230	2760	1080	1780	2750	5800	2430	2210
2	3990	3090	2470	3280	3220	2760	1170	1800	2750	5800	2420	2210
3	3990	3010	2500	3290	3210	2750	1980	1800	2750	5810	2400	2220
4	3990	2990	3250	3280	3200	2750	1970	1800	2750	5740	2390	2220
5	3990	2970	3250	3280	3210	2750	1970	1820	3540	5600	2380	2230
6	3990	2970	3250	3280	3210	2740	1970	1940	3760	5590	2360	2230
7	4020	2960	3240	3270	3200	2730	1950	1930	3870	5580	2320	2250
8	4020	2960	3250	3260	3210	2730	1960	1930	4580	4460	2000	2250
9	4020	2960	3270	3280	3200	2720	1960	1920	7320	4390	1980	2240
10	4020	2960	3270	3280	3190	2350	1950	1920	9140	4460	2000	2250
11	4040	2930	3260	3280	3190	1850	1950	1920	9670	4450	2000	2250
12	4020	2950	3260	3270	3190	1830	1950	1900	10200	4450	2270	2260
13	4010	2970	3260	3270	3190	1830	1940	1840	10300	4450	2250	2260
14	4020	2960	3260	3270	3200	1840	1930	1910	10200	3850	1970	2270
15	4030	2960	3250	3270	3180	1840	1440	1910	10100	3840	1960	2270
16	4060	2880	3270	3280	3180	1830	1440	1910	10100	3860	1940	2280
17	4080	2880	3290	3270	3190	1810	1420	1900	8680	3340	1930	2280
18	4130	2610	3290	3270	3180	1830	1430	1830	6680	2860	1920	2280
19	4130	2570	3280	3260	3180	1830	1430	1720	5860	2850	1910	2290
20	4100	2250	3280	3250	3180	1820	1420	2140	5870	2860	1890	2290
21	4110	2330	3290	3250	2780	1820	1420	2150	5860	2840	1880	2310
22	4110	2430	3280	3230	2780	1820	1420	2140	5850	2850	1870	2300
23	4100	2420	3280	3240	2780	1810	1410	2120	5870	2850	1860	2310
24	1610	2420	3280	3240	2780	1810	1450	2120	5850	2850	1850	2300
25	3230	2410	3290	3240	2790	1830	1500	2110	5840	2820	1850	2310
26	3650	2410	3280	3240	2780	1820	1490	2150	5840	2810	1870	2320
27	3560	2410	3280	3230	2780	1810	1630	2720	5850	2810	2180	2320
28	3470	2430	3290	3220	2780	1820	1650	2750	5820	2800	2190	2330
29	3470	2470	3270	3220	---	1810	1710	2740	5820	2870	2200	2330
30	3130	2470	3290	3220	---	1800	1740	2740	5810	2470	2200	2340
31	3120	---	3280	3220	---	1810	---	2750	---	2450	2210	---
TOTAL	118200	82150	99030	101020	86190	65310	49730	64110	189280	120460	64880	68210
MEAN	3813	2738	3195	3259	3078	2107	1658	2068	6309	3886	2093	2274
MAX	4130	3120	3290	3290	3230	2760	1980	2750	10300	5810	2430	2340
MIN	1610	2250	2470	3220	2780	1800	1080	1720	2750	2450	1850	2210
AC-FT	234400	162900	196400	200400	171000	129500	98640	127200	375400	238900	128700	135300
CAL YR 1980	TOTAL	1192810	MEAN	3259	MAX	5280	MIN	1610	AC-FT	2366000		
WTR YR 1981	TOTAL	1108570	MEAN	3037	MAX	10300	MIN	1080	AC-FT	2199000		

06287000 BIGHORN RIVER NEAR ST. XAVIER, MT--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1963 to September 1981 (discontinued).

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: October 1966 to September 1981 (discontinued).

REMARKS.--Flow regulated since Nov. 3, 1965, by Bighorn Lake. Once-daily water temperatures are available in the District office.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Maximum daily, 1,180 micromhos on several days during 1966-67; minimum daily, 492 micromhos Aug. 28, 1971.

EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum daily, 1,040 micromhos Mar. 28, 29; minimum daily, 637 micromhos Sept. 29.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	PH LAB (UNITS)	TEMPER- ATURE (DEG C)	HARD- NESS (MG/L AS CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)
OCT 28...	1300	3410	860	8.1	12.0	270	69	23	74	2.0	3.7
NOV 24...	1330	2430	813	8.3	9.0	290	72	26	82	2.1	3.9
DEC 16...	1145	3310	876	8.1	8.5	270	68	24	77	2.0	3.8
JAN 19...	1330	3200	844	8.3	5.0	280	71	26	80	2.1	3.4
FEB 24...	1330	2790	868	8.3	4.5	300	78	26	79	2.0	3.5
MAR 24...	1325	1810	1020	8.0	4.5	350	89	31	87	2.0	3.9
APR 02...	0935	1010	986	8.2	4.0	350	87	32	88	2.1	3.8
21...	1300	1400	1070	8.1	4.5	360	93	32	93	2.1	4.2
MAY 26...	1145	1930	1020	8.1	6.0	320	81	29	84	2.0	3.9
JUN 15...	0930	9990	960	8.1	6.0	320	82	29	90	2.2	3.6
JUL 28...	0900	2500	905	8.3	14.0	300	77	26	86	2.3	3.5
AUG 25...	0945	1510	880	9.0	15.5	270	70	24	79	2.1	3.6

DATE	ALKA- LINITY LAB (MG/L AS CACO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)	SOLIDS, DIS- SOLVED (TONS PER DAY)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	PHOS- PHORUS, DIS- SOLVED (MG/L AS P)
OCT 28...	160	240	13	.5	10	539	.73	4960	2.2	.020
NOV 24...	160	260	10	.4	10	562	.76	3690	.43	.040
DEC 16...	160	260	11	.5	9.8	552	.75	4930	.49	.030
JAN 19...	170	270	11	.5	9.1	575	.78	4970	.48	.010
FEB 24...	160	280	11	.4	9.9	586	.80	4410	.49	.030
MAR 24...	130	370	13	.5	9.6	684	.93	3340	.38	.010
APR 02...	190	330	13	.5	9.2	680	.92	1850	.46	.020
21...	180	320	24	.5	9.5	684	.93	2590	.01	.010
MAY 26...	160	320	11	.4	9.2	637	.87	3320	.45	.020
JUN 15...	170	320	14	.4	9.6	653	.89	17600	.48	.020
JUL 28...	160	290	12	.4	9.5	603	.82	4070	.46	.040
AUG 25...	150	270	11	.4	9.5	561	.76	2290	.68	--

YELLOWSTONE RIVER BASIN

06287000 BIGHORN RIVER NEAR ST. XAVIER, MT--Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
ONCE-DAILY

JAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	788	855	---	838	910	950	1010	1000	997	920	892	786
2	800	811	875	852	930	955	1000	999	976	927	880	801
3	795	850	862	850	890	951	980	1000	964	924	880	791
4	801	850	839	850	900	960	1020	1000	969	921	881	770
5	809	850	860	837	905	950	1020	1000	948	921	887	781
6	810	840	863	860	909	960	972	979	984	928	879	765
7	810	840	870	850	901	970	981	982	965	925	875	768
8	---	842	861	854	908	962	1020	975	962	919	872	752
9	802	850	842	858	900	959	1000	970	993	922	875	758
10	800	852	811	860	938	962	980	991	994	931	872	744
11	800	859	810	862	888	962	980	987	986	932	859	742
12	800	860	810	857	858	965	1000	1000	986	926	849	744
13	800	859	831	842	850	962	1010	---	976	916	868	737
14	800	860	830	860	848	979	1020	982	969	918	856	722
15	800	860	825	869	847	990	1020	987	967	924	850	721
16	791	860	829	880	849	975	1000	979	966	926	851	713
17	785	850	815	879	842	968	980	972	976	925	842	704
18	780	851	848	861	848	972	987	975	963	925	837	699
19	775	850	850	848	850	1000	1010	990	960	921	836	689
20	779	853	860	842	850	1010	1020	959	952	935	834	698
21	780	830	860	853	850	1030	1020	980	936	916	831	706
22	770	820	848	858	850	1020	1010	980	931	917	841	687
23	779	839	850	860	857	1000	999	965	939	915	821	669
24	890	852	850	850	880	1010	1000	970	942	917	819	665
25	809	851	831	852	889	1020	991	952	942	915	828	661
26	819	848	829	853	909	1030	1000	970	947	907	810	648
27	828	838	810	869	910	1020	1020	972	949	902	809	653
28	828	840	829	880	923	1040	1020	962	931	902	803	654
29	821	860	831	886	---	1040	1020	980	927	912	796	637
30	822	861	818	891	---	1020	1000	974	932	899	786	643
31	829	---	830	890	---	1020	---	961	---	903	793	---
MEAN	803	848	839	860	882	987	1000	980	961	919	846	717
WTR YR 1981	MEAN	887		MAX	1040		MIN	637				

06289000 LITTLE BIGHORN RIVER AT STATE LINE, NEAR WYOLA, MT

LOCATION.--Lat 45°00'25", long 107°37'05", in SW¼NW¼ sec.36, T.9 S., R.33 E., Bighorn County, Hydrologic Unit 10080016, on right bank 20 ft (6 m) downstream from county bridge, 0.5 mi (0.8 km) north of Wyoming-Montana State line, 1.0 mi (1.6 km) downstream from West Fork, 13 mi (21 km) southwest of Wyola, and at mile 115.2 (185.4 km).

DRAINAGE AREA.--193 mi² (500 km²).

PERIOD OF RECORD.--March 1939 to current year. Prior to October 1940, published as Little Horn River at State line, near Wyola.

REVISED RECORDS.--WSP 1729: Drainage area.

GAGE.--Water-stage recorder. Altitude of gage is 4,350 ft (1,326 m), from topographic map.

REMARKS.--Records good. Diversions for irrigation of 163 acres (660,000 m²) above station.

AVERAGE DISCHARGE.--42 years, 155 ft³/s (4.390 m³/s), 112,300 acre-ft/yr (138 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,730 ft³/s (77.3 m³/s) June 3, 1944, gage height, 4.87 ft (1.484 m), from rating curve extended above 1,400 ft³/s (39.6 m³/s); maximum gage height recorded, 5.93 ft (1.807 m) June 9, 1944 (log jam); minimum discharge, 21 ft³/s (0.59 m³/s) Dec. 27, 1954, result of freezeup.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 510 ft³/s (14.4 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
May 22	1945	*1,040 29.5	3.50 1.067	June 9	0500	583 16.5	2.66 0.811
May 26	2330	925 26.2	3.35 1.021				

Minimum daily discharge, 35 ft³/s (0.99 m³/s) Feb. 10 (result of freezeup).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	80	77	61	67	59	58	60	250	492	244	124	95
2	79	78	65	67	60	59	61	270	450	238	123	93
3	79	75	75	66	62	59	60	218	442	235	121	93
4	79	78	73	66	65	59	59	162	428	224	120	94
5	79	77	71	66	64	59	59	158	410	213	119	95
6	78	78	62	65	64	59	60	180	407	210	117	102
7	78	79	54	66	62	58	59	158	391	205	116	95
8	78	88	56	64	63	58	58	135	412	198	116	93
9	79	79	68	65	55	58	59	126	474	192	114	93
10	77	80	74	64	35	58	59	131	393	187	113	92
11	80	78	74	53	52	58	61	142	379	181	111	92
12	81	78	71	63	62	58	63	126	375	178	110	91
13	80	73	70	67	69	59	63	120	436	176	109	90
14	80	67	69	65	67	59	61	123	390	170	108	90
15	83	61	69	65	64	59	65	154	380	164	109	90
16	79	58	69	54	63	59	73	227	380	161	112	89
17	78	67	69	55	64	62	83	314	382	164	108	89
18	83	77	67	69	62	60	88	301	358	159	106	89
19	82	74	51	65	62	60	94	318	353	154	106	89
20	82	73	65	64	63	61	92	369	387	150	104	90
21	82	73	70	64	61	61	91	360	352	146	104	90
22	80	75	72	64	61	59	79	553	337	142	103	89
23	73	73	70	64	61	60	80	837	327	140	102	89
24	78	65	63	64	61	59	99	645	314	139	102	89
25	82	69	73	65	60	59	131	549	301	180	99	90
26	83	71	70	64	60	60	162	535	291	158	98	92
27	81	69	70	64	60	63	168	775	294	147	98	89
28	78	71	69	64	59	62	149	651	282	137	97	88
29	78	71	68	64	---	61	155	620	267	134	97	88
30	78	72	67	64	---	61	195	563	252	129	97	91
31	78	---	68	64	---	60	---	531	---	127	97	---
TOTAL	2465	2204	2093	1981	1700	1845	2646	10601	11136	5382	3360	2739
MEAN	79.5	73.5	67.5	63.9	60.7	59.5	88.2	342	371	174	108	91.3
MAX	83	88	75	69	69	63	195	837	492	244	124	102
MIN	73	58	51	53	35	58	58	120	252	127	97	88
AC-FT	4890	4370	4150	3930	3370	3660	5250	21030	22090	10680	6660	5430
CAL YR 1980	TOTAL	41241	MEAN 113	MAX 475	MIN 35	AC-FT 81800						
WTR YR 1981	TOTAL	48152	MEAN 132	MAX 837	MIN 35	AC-FT 95510						

YELLOWSTONE RIVER BASIN

06298000 TONGUE RIVER NEAR DAYTON, WY

LOCATION.--Lat 44°50'58", long 107°18'14", in NE¼NE¼NE¼ sec.11, T.56 N., R.87 W., Sheridan County, Hydrologic Unit 10090101, on left bank 0.5 mi (0.8 km) upstream from Crystal Draw, 0.6 mi (1.0 km) downstream from intake of Highline ditch, and 2.5 mi (4.0 km) southwest of Dayton.

DRAINAGE AREA.--204 mi² (528 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1918 to September 1929, October 1940 to current year. Monthly discharge only for some periods, published in WSP 1309.

REVISED RECORDS.--WSP 1309: 1921.

GAGE.--Water-stage recorder. Altitude of gage is 4,060 ft (1,237 m), from topographic map.

REMARKS.--Records good. Small diversion above station for Dayton municipal supply. Figures of daily discharge do not include water diverted 0.6 mi (1.0 km) above station by Highline ditch for irrigation below station.

AVERAGE DISCHARGE.--52 years (water years 1919-29, 1941-81), 187 ft³/s (5.296 m³/s), 135,500 acre-ft/yr (167 hm³/yr), unadjusted.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 3,400 ft³/s (96.3 m³/s) June 3, 1944, gage height, 6.45 ft (1.966 m); minimum daily, 18 ft³/s (0.51 m³/s) Nov. 29, 1919.

EXTREMES FOR CURRENT YEAR.--Peak discharge above base of 980 ft³/s (27.8 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
May 22	2030	*2,060 58.3	5.15 1.570	June 9	1000	1,310 37.1	4.41 1.344
May 27	0215	1,940 54.9	5.05 1.539	June 13	0845	1,150 32.6	4.22 1.286

Minimum daily discharge, 28 ft³/s (0.79 m³/s) Jan. 11.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	68	72	52	54	34	38	42	322	860	267	116	66
2	67	74	55	50	39	42	47	385	762	270	113	64
3	68	61	68	43	41	39	43	264	772	266	117	64
4	68	76	64	47	42	40	38	158	792	271	122	63
5	68	74	60	50	43	40	40	158	680	227	119	61
6	68	74	52	43	42	43	45	183	699	212	117	88
7	59	76	46	44	40	40	40	177	704	206	112	77
8	58	87	52	36	42	38	39	139	901	184	110	68
9	61	66	62	42	40	41	42	132	976	177	109	65
10	58	80	65	43	35	39	43	156	667	171	111	64
11	59	75	65	28	43	37	46	177	598	166	106	63
12	63	73	63	35	48	40	51	140	587	171	98	61
13	60	58	60	39	46	41	57	136	888	240	97	59
14	60	45	59	40	43	42	48	150	643	172	94	58
15	65	37	61	42	42	41	61	192	583	154	95	57
16	61	31	63	31	41	43	88	333	554	148	106	57
17	48	39	63	32	42	46	142	665	546	143	104	59
18	67	48	58	44	40	43	202	470	497	146	93	58
19	65	58	41	41	40	42	205	436	476	155	88	57
20	68	61	52	40	41	43	208	513	516	140	84	56
21	71	63	64	40	39	43	167	593	472	131	84	55
22	71	66	65	40	39	41	93	1120	434	128	86	55
23	51	59	57	40	40	43	119	1620	416	125	85	57
24	53	51	50	40	40	39	209	1240	394	121	81	60
25	70	48	64	40	40	42	286	1140	369	233	77	62
26	75	54	59	40	40	46	316	1190	345	212	75	67
27	68	53	59	39	41	47	309	1550	341	162	73	64
28	68	59	59	39	38	45	238	1190	321	140	71	62
29	66	60	48	40	---	41	222	1120	305	133	70	60
30	77	62	57	40	---	47	265	985	282	124	70	66
31	76	---	56	40	---	43	---	996	---	119	67	---
TOTAL	2005	1840	1799	1262	1141	1295	3751	18030	17380	5514	2950	1873
MEAN	64.7	61.3	58.0	40.7	40.8	41.8	125	582	579	178	95.2	62.4
MAX	77	87	68	54	48	47	316	1620	976	271	122	88
MIN	48	31	41	28	34	37	38	132	282	119	67	55
AC-FT	3980	3650	3570	2500	2260	2570	7440	35760	34470	10940	5850	3720
	373	0	0	0	0	0	511	845	238	1320	1280	1230

ADJUSTED FOR DIVERSION BY HIGHLINE DITCH

MEAN	70.7	61.3	58.0	40.7	40.8	41.8	134	595	583	199	116	83.1
AC-FT	4,350	3,650	3,570	2,500	2,260	2,570	7,950	36,610	34,710	12,260	7,130	4,950

UNADJUSTED

ADJUSTED

CAL YR 1980	TOTAL	46208	MEAN 126	MAX 660	MIN 31	AC-FT 91650	MEAN 135	AC-FT 97,940
WTR YR 1981	TOTAL	58840	MEAN 161	MAX 1620	MIN 28	AC-FT 116700	MEAN 169	AC-FT 122,500

Diversion, in acre-ft, above station by Highline ditch.

YELLOWSTONE RIVER BASIN

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06298000 TONGUE RIVER NEAR DAYTON, WY--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1967 to September 1981 (discontinued).

WATER-QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	HARD- NESS (MG/L AS CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LITY LAB (MG/L AS CACO3)
OCT 22...	1315	67	235	8.3	4.5	130	30	11	1.5	.1	1.2	120
NOV 24...	1200	50	280	7.8	1.0	140	38	12	1.0	.0	.5	130
DEC 17...	1300	62	255	8.1	4.0	140	36	12	240	8.8	.4	80
JAN 21...	1400	39	290	8.2	2.0	150	37	14	1.5	.1	1.1	140
FEB 19...	1145	42	260	8.3	7.0	140	36	11	2.0	.1	.6	140
MAR 23...	1400	41	270	8.1	5.0	140	36	12	2.0	.1	2.0	140
APR 23...	1045	84	220	8.2	9.0	120	29	12	1.5	.1	1.8	110
MAY 22...	1245	819	150	7.9	5.0	78	20	6.0	2.0	.1	1.7	79
JUN 23...	1330	425	195	8.3	13.5	110	28	8.8	1.7	.1	1.1	90
JUL 23...	1530	126	240	8.4	18.0	120	31	9.8	1.0	.0	1.0	120
AUG 24...	1215	80	250	8.4	14.0	130	34	10	.5	.0	1.3	120
SEP 24...	1010	61	260	8.5	9.5	130	35	11	.0	.0	.8	140

DATE	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, SUM OF CONSTITUENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)	SOLIDS, DIS- SOLVED (TONS PER DAY)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	PHOS- PHORUS, TOTAL (MG/L AS P)	CYANIDE TOTAL (MG/L AS CN)	PHENOLS (UG/L)
OCT 22...	10	1.1	.1	7.0	133	.18	24.1	.00	.000	--	11
NOV 24...	6.6	.2	.0	4.0	140	.19	18.9	.61	.010	--	--
DEC 17...	.0	24	.2	4.6	369	.50	61.8	.75	.070	--	--
JAN 21...	12	.6	.2	7.3	158	.21	16.6	.23	.000	--	--
FEB 19...	3.3	.8	.1	.0	136	.19	15.4	.17	.010	--	--
MAR 23...	3.3	1.0	.1	6.3	150	.20	16.6	.09	.020	--	--
APR 23...	4.9	8.5	.2	6.0	127	.17	28.8	.03	.060	--	--
MAY 22...	16	1.1	.2	8.1	95	.13	210	.10	1.35	.00	7
JUN 23...	1.6	11	.1	6.4	113	.15	130	.00	.000	.00	1
JUL 23...	1.6	2.8	.2	5.5	120	.16	40.8	.04	.000	--	--
AUG 24...	9.1	1.4	.0	6.1	140	.19	30.2	.00	.330	--	--
SEP 24...	3.4	1.5	.0	5.9	140	.19	23.1	.01	.010	--	--

YELLOWSTONE RIVER BASIN

06299500 WOLF CREEK AT WOLF, WY

LOCATION.--Lat 44°46'21", long 107°14'01", in NE¼SW¼NW¼ sec.4, T.55 N., R.86 W., Sheridan County, Hydrologic Unit 10090101, on left bank at Wolf and 0.5 mi (0.8 km) downstream from Red Canyon Creek.

DRAINAGE AREA.--37.8 mi² (97.9 km²).

PERIOD OF RECORD.--January 1945 to current year (no winter records since 1971). Monthly discharge for January to March 1945, published in WSP 1309.

GAGE.--Water-stage recorder. Altitude of gage is 4,525 ft (1,379 m), from topographic map. Prior to May 26, 1945, nonrecording gage at same site and datum.

REMARKS.--Records good. No diversion above station.

COOPERATION.--Records collected and computed by Office of the Wyoming State Engineer and reviewed by Geological Survey.

AVERAGE DISCHARGE.--26 years (water years 1946-71), 29.3 ft³/s (0.830 m³/s), 21,230 acre-ft/yr (26.2 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,130 ft³/s (32.0 m³/s) June 15, 1963, gage height, 4.60 ft (1.402 m), from rating curve extended above 500 ft³/s (14.2 m³/s); no flow for part of each day Jan. 13, 15, 29, 30, Feb. 26, 1947, result of freezeup.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage, about 5.0 ft (1.52 m) May 18, 1944.

EXTREMES FOR CURRENT YEAR.--Peak discharge above base of 180 ft³/s (5.10 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
May 26	2030	*421 11.9	3.16 0.963	June 13	0630	230 6.51	2.57 0.786
June 3	2200	342 9.69	2.94 .896				

Minimum daily discharge during period of operation, 5.0 ft³/s (0.14 m³/s) Apr. 1, 5, 7-9.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1							5.0	29	217	49	19	8.6
2							5.5	35	194	49	18	8.0
3							5.5	34	221	48	17	8.3
4							5.2	24	210	46	17	7.7
5							5.0	26	178	42	16	8.3
6							5.5	29	176	39	16	16
7							5.0	29	171	37	16	12
8							5.0	25	190	35	16	9.4
9							5.0	26	210	34	16	8.3
10							5.2	24	145	32	16	8.0
11							5.7	28	134	32	15	7.7
12							6.8	34	132	33	14	7.4
13							8.0	29	178	46	14	7.1
14							6.0	30	134	33	13	7.1
15							7.1	38	122	30	13	6.8
16							9.8	62	111	27	14	6.8
17							14	178	115	26	17	6.8
18							14	156	99	27	13	6.5
19							15	151	96	29	12	6.5
20							16	147	104	25	11	6.5
21							16	149	89	23	11	6.5
22							12	254	82	22	11	6.2
23							12	384	76	21	11	6.2
24							17	331	70	21	10	6.2
25							22	299	66	39	9.8	6.5
26							26	306	62	37	9.8	8.0
27							27	331	62	30	9.4	7.1
28							24	284	60	24	9.0	6.5
29							25	272	57	22	8.6	6.5
30							28	241	51	19	9.0	8.0
31							---	233	---	19	8.6	---
TOTAL							363.3	4218	3812	996	410.2	231.5
MEAN							12.1	136	127	32.1	13.2	7.72
MAX							28	384	221	49	19	16
MIN							5.0	24	51	19	8.6	6.2
AC-FT							721	8370	7560	1980	814	459

06300500 EAST FORK BIG GOOSE CREEK NEAR BIG HORN, WY

LOCATION.--Lat 44°32'18", long 107°13'33", in SE¼SE¼NW¼ sec.28, T.53 N., R.86 W., Johnson County, Hydrologic Unit 10090101, Bighorn National Forest, on right bank 0.7 mi (1.1 km) upstream from Park Reservoir and 16 mi (26 km) southwest of Big Horn.

DRAINAGE AREA.--20.1 mi² (52.1 km²).

PERIOD OF RECORD.--October 1953 to current year (no winter records since 1973). Prior to October 1960, published as East Goose Creek near Big Horn.

GAGE.--Water-stage recorder. Altitude of gage is 8,320 ft (2,536 m), from topographic map. Prior to June 28, 1960, water-stage recorder at site 1.1 mi (1.8 km) downstream at different datum. June 28, 1960, to July 14, 1970, water-stage recorder at site 0.9 mi (1.4 km) downstream at different datums and July 15 to Oct. 7, 1970, nonrecording gage at present site and datum.

REMARKS.--Records good. No gage-height record Apr. 1-30. No diversion above station.

COOPERATION.--Records collected and computed by Office of the Wyoming State Engineer and reviewed by Geological Survey.

AVERAGE DISCHARGE.--20 years (water years 1954-73), 32.6 ft³/s (0.923 m³/s), 23,620 acre-ft/yr (29.1 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,230 ft³/s (34.8 m³/s) June 15, 1963, gage height, 4.59 ft (1.399 m), site and datum then in use, from rating curve extended above 250 ft³/s (7.08 m³/s) on basis of slope-area measurement of peak flow; minimum daily, 1.0 ft³/s (0.03 m³/s) Dec. 11-14, 1963, Mar. 24, 25, Nov. 14, 15, 1964, Mar. 18, 1971.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 180 ft³/s (5.10 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
June 9	0630	*857 24.3	5.91 1.801
June 12	2200	309 8.75	4.81 1.466

Minimum daily discharge during period of operation, 5.0 ft³/s (0.14 m³/s) Sept. 24.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1								72	199	58	14	5.6
2								87	170	56	12	5.6
3								69	195	56	12	5.4
4								42	193	52	11	5.4
5								37	208	46	11	5.6
6								37	291	42	10	14
7								34	285	44	11	14
8								23	382	42	11	11
9								20	439	33	11	10
10								18	153	30	11	9.1
11								19	128	28	10	8.5
12								16	177	28	9.0	8.0
13								13	211	41	8.8	7.5
14								13	116	33	9.0	7.3
15								22	90	27	9.0	7.3
16								48	79	23	12	6.9
17								64	83	21	11	6.7
18								64	68	22	9.0	6.6
19								83	67	20	8.5	6.4
20								120	113	19	8.0	6.0
21								99	111	18	8.2	5.6
22								88	102	17	8.0	5.8
23								132	135	15	8.0	6.0
24								123	124	14	7.5	5.0
25								173	102	18	7.5	5.4
26								246	105	27	7.1	6.6
27								385	106	30	6.9	6.6
28								294	91	24	6.6	6.2
29								249	74	19	6.2	5.8
30								234	63	20	6.0	6.6
31								276	---	15	5.8	---
TOTAL								3200	4660	938	286.1	216.5
MEAN								103	155	30.3	9.23	7.22
MAX								385	439	58	14	14
MIN								13	63	14	5.8	5.0
AC-FT								6350	9240	1860	567	429

YELLOWSTONE RIVER BASIN

06301500 WEST FORK BIG GOOSE CREEK NEAR BIG HORN, WY

LOCATION (REVISED).--Lat 44°36'47", long 107°17'49", in NE¼SE¼NE¼ Sec.35, T.54 N., R.87 W., Sheridan County, Hydrologic Unit 10090101, Bighorn National Forest, on left bank 0.3 mi (0.5 km) downstream from Twin Lakes Branch and 16 mi (26 km) west of Big Horn.

DRAINAGE AREA.--24.4 mi² (63.2 km²).

PERIOD OF RECORD.--October 1953 to current year (no winter records since 1971). Prior to October 1960, published as West Goose Creek near Big Horn.

GAGE.--Water-stage recorder. Altitude of gage is 8,420 ft (2,566 m), from topographic map.

REMARKS.--Records good. Some regulation by Twin Lakes, capacity, 1,200 acre-ft (1.48 hm³) and Dome Lake, capacity, 1,800 acre-ft (2.22 hm³). No diversion above station.

COOPERATION.--Records collected and computed by Office of the Wyoming State Engineer and reviewed by Geological Survey.

AVERAGE DISCHARGE.--18 years (water years 1954-71), 34.4 ft³/s (0.974 m³/s), 24,920 acre-ft/yr (30.7 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,030 ft³/s (29.2 m³/s) June 15, 1963, gage height, 5.37 ft (1.637 m), from rating curve extended above 410 ft³/s (11.6 m³/s) on basis of velocity-area study; minimum daily, 0.80 ft³/s (0.023 m³/s) Dec. 14, 26, 1963, Jan. 15, 16, Feb. 26, 1964.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 618 ft³/s (17.5 m³/s) June 9, gage height, 4.52 ft (1.378 m); minimum daily during period of operation, 1.8 ft³/s (0.051 m³/s) Apr. 14.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1							3.1	13	278	59	43	25
2							3.0	16	214	57	43	23
3							3.4	18	234	55	43	21
4							3.6	11	234	54	42	19
5							3.3	12	240	49	42	20
6							3.1	13	312	44	42	21
7							2.9	16	352	32	41	19
8							2.7	15	464	28	41	16
9							2.6	20	510	29	40	15
10							2.4	20	263	31	38	14
11							2.2	21	176	31	36	13
12							2.1	19	176	36	35	13
13							1.9	19	254	49	34	12
14							1.8	19	189	39	33	12
15							2.2	21	136	34	32	12
16							2.6	29	106	31	32	11
17							3.0	36	77	31	33	10
18							3.6	37	58	31	33	10
19							4.2	50	56	28	34	9.5
20							4.8	51	70	27	33	9.2
21							5.6	60	120	25	32	8.9
22							6.3	56	108	24	31	8.9
23							7.2	70	122	31	29	7.4
24							9.2	64	122	36	28	7.4
25							10	120	104	44	27	7.0
26							13	264	93	47	30	7.4
27							13	476	89	46	31	7.6
28							11	419	86	25	31	7.6
29							11	332	76	22	31	7.6
30							12	282	68	22	29	7.6
31							---	350	---	25	27	---
TOTAL							156.8	2949	5387	1122	1076	382.1
MEAN							5.23	95.1	180	36.2	34.7	12.7
MAX							13	476	510	59	43	25
MIN							1.8	11	56	22	27	7.0
AC-FT							311	5850	10690	2230	2130	758

06302000 BIG GOOSE CREEK NEAR SHERIDAN, WY

LOCATION.--Lat 44°42'08", long 107°10'51", in NW¼NE¼ sec.35, T.55 N., R.86 W., Sheridan County, Hydrologic Unit 10090101, on right bank 0.4 mi (0.6 km) upstream from Cave Creek and 14 mi (23 km) southwest of Sheridan.

DRAINAGE AREA.--120 mi² (311 km²).

PERIOD OF RECORD.--September 1929 to current year (no winter records since 1971). Prior to October 1960, published as Goose Creek near Sheridan. Monthly discharge only for some periods, published in WSP 1309.

REVISED RECORDS.--WSP 1006: Drainage area. WSP 1509: 1930(M), 1931.

GAGE.--Water-stage recorder. Altitude of gage is 4,505 ft (1,375 m), from topographic map.

REMARKS.--Records good. Natural flow of stream affected by transbasin diversions, storage reservoirs, diversions for irrigation of about 20 acres (8.1 hm²) and to Sheridan Filtration plant, and return flow from irrigated areas. PK ditch diverts water 0.6 mi (1.0 km) above station for irrigation of lands downstream from station.

COOPERATION.--Records collected and computed by Office of the Wyoming State Engineer and reviewed by Geological Survey.

AVERAGE DISCHARGE.--42 years (water years 1930-71), 79.6 ft³/s (2.254 m³/s), 57,670 acre-ft/yr (71.1 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 3,160 ft³/s (89.5 m³/s) June 15, 1963, gage height, 5.83 ft (1.777 m), from rating curve extended above 1,600 ft³/s (45.3 m³/s); minimum daily, 1.6 ft³/s (0.045 m³/s) Nov. 29, 1954.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,220 ft³/s (34.6 m³/s) May 28, gage height, 4.20 ft (1.280 m); minimum daily during period of operation, 5.0 ft³/s (0.14 m³/s) Apr. 22.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1							9.9	15	736	101	26	11
2							11	35	585	90	28	11
3							10	33	620	67	30	19
4							8.6	11	635	61	27	16
5							8.6	15	580	51	21	16
6							9.9	15	688	42	24	28
7							8.3	19	772	27	23	22
8							7.5	15	820	22	21	15
9							9.9	17	700	21	22	14
10							9.6	19	560	21	21	14
11							11	25	379	22	19	12
12							15	20	376	24	15	11
13							17	18	635	97	14	11
14							12	19	436	61	16	11
15							15	27	306	39	16	12
16							28	85	248	28	18	12
17							36	252	224	27	18	9.9
18							28	178	174	31	11	12
19							32	167	155	27	11	12
20							29	187	215	22	13	12
21							22	257	220	16	13	10
22							5.0	413	210	13	13	9.3
23							5.8	712	240	19	14	10
24							15	570	243	22	12	10
25							26	565	206	47	11	11
26							44	751	183	55	12	13
27							47	1140	199	57	17	12
28							12	1040	192	28	16	10
29							15	904	169	19	15	8.3
30							19	778	131	15	13	11
31							---	841	---	15	11	---
TOTAL							527.1	9143	11837	1187	541	385.5
MEAN							17.6	295	395	38.3	17.5	12.9
MAX							47	1140	820	101	30	28
MIN							5.0	11	131	13	11	8.3
AC-FT							1050	18140	23480	2350	1070	765

06303500 LITTLE GOOSE CREEK IN CANYON, NEAR BIG HORN, WY

LOCATION.--Lat 44°35'46", long 107°02'22", in SE¼SW¼NE¼ sec.1, T.53 N., R.85 W., Sheridan County, Hydrologic Unit 10090101, on left bank 100 ft (30 m) upstream from headgate of Lower Peralta ditch and 6.5 mi (10.5 km) southwest of Big Horn.

DRAINAGE AREA.--51.6 mi² (133.6 km²).

PERIOD OF RECORD.--April 1941 to current year (no winter records since 1971).

REVISED RECORDS.--WDR WY-76-1: Drainage area.

GAGE.--Water-stage recorder. Altitude of gage is 4,860 ft (1,481 m), from topographic map.

REMARKS.--Records good. Three small reservoirs above station, combined capacity, 860 acre-ft (1.06 hm³), two of which store some imported water. Water imported into drainage basin above station from East Goose Creek basin is diverted below station for irrigation.

COOPERATION.--Records collected and computed by Office of the Wyoming State Engineer and reviewed by Geological Survey.

AVERAGE DISCHARGE.--30 years (water years 1942-71), 63.4 ft³/s (1.795 m³/s), 45,930 acre-ft/yr (56.6 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,350 ft³/s (38.2 m³/s) June 15, 1963, gage height, 6.78 ft (2.067 m), from rating curve extended above 900 ft³/s (25.5 m³/s); minimum recorded, 2.2 ft³/s (0.062 m³/s) Dec. 4, 1949, gage height, 0.71 ft (0.216 m).

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 592 ft³/s (16.8 m³/s) May 23, gage height, 4.64 ft (1.414 m); minimum daily during period of operation, 8.1 ft³/s (0.23 m³/s) Apr. 9.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1							8.8	50	315	79	46	41
2							9.1	64	271	77	45	41
3							9.1	60	284	74	44	42
4							8.8	40	270	76	48	41
5							8.8	45	271	66	49	45
6							9.5	53	302	63	49	58
7							8.8	52	259	64	48	50
8							8.8	45	286	60	48	48
9							8.1	45	268	60	48	47
10							8.4	50	184	55	49	50
11							11	57	179	49	45	52
12							11	54	194	47	43	52
13							16	53	233	59	40	51
14							14	54	177	60	39	51
15							19	61	159	64	38	50
16							39	140	149	64	40	50
17							44	306	146	66	41	46
18							42	259	133	71	34	45
19							39	234	130	68	32	43
20							37	234	134	66	32	43
21							33	272	128	72	32	42
22							27	392	121	72	36	28
23							29	568	116	70	38	25
24							37	508	95	70	38	24
25							44	460	88	87	35	25
26							47	442	86	90	33	38
27							48	472	85	86	38	39
28							43	410	86	67	41	38
29							42	392	82	60	41	38
30							48	333	76	54	42	40
31							---	350	---	50	42	---
TOTAL							758.2	6555	5307	2066	1274	1283
MEAN							25.3	211	177	66.6	41.1	42.8
MAX							48	568	315	90	49	58
MIN							8.1	40	76	47	32	24
AC-FT							1500	13000	10530	4100	2530	2540

06304500 LITTLE GOOSE CREEK AT SHERIDAN, WY

LOCATION.--Lat 44°48'10", long 106°57'10", in NE¼NW¼SW¼ sec.26, T.56 N., R.84 W., Sheridan County, Hydrologic Unit 10090101, at bridge on Sheridan Avenue in Sheridan and 0.6 mi (1.0 km) upstream from mouth.

PERIOD OF RECORD.--March 1979 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	TUR- BID- ITY (NTU)	OXYGEN, DIS- SOLVED (MG/L)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	SOLIDS, RESIDUE AT 105 DEG. C, TOTAL (MG/L)
OCT									
09...	1045	27	675	8.4	12.0	9.0	10.2	200	503
NOV									
14...	1400	37	740	8.3	3.0	3.0	13.5	--	--
DEC									
02...	1000	E64	760	8.3	.0	2.0	--	120	--
JAN									
08...	1345	47	690	8.3	2.0	6.0	13.6	150	--
FEB									
05...	0945	E15	680	8.1	.0	2.0	12.6	K10	--
MAR									
06...	1030	33	760	8.0	4.5	3.0	12.4	K8	--
APR									
06...	1000	20	810	8.3	5.0	2.0	12.4	K4	--
MAY									
06...	1015	4.0	1120	8.3	13.0	3.0	10.7	K18	--
JUN									
05...	1100	268	210	7.9	12.5	15	9.6	260	--
JUL									
15...	1930	10	850	8.0	25.0	7.0	7.0	450	--
AUG									
05...	1020	9.5	800	8.3	22.0	4.0	10.3	380	--
SEP									
01...	1100	4.1	930	8.1	15.5	5.0	10.6	370	--

E-Estimate.

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

DATE	TIME	2,4-D, TOTAL IN BOT- TOM MA- TERIAL (UG/L)	2,4-D, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	2, 4-DP TOTAL (UG/L)	2,4-DP, IN BOTTOM MAT. (UG/KG)	2,4,5-T TOTAL (UG/L)	2,4,5-T TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	SILVEX, TOTAL (UG/L)	SILVEX, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)
JUN									
05...	1100	.00	0	.00	.00	.00	0	.00	0
JUL									
15...	1930	.10	0	.00	.00	.00	0	.00	0
AUG									
05...	1020	.15	0	.00	.00	.00	0	.00	0

DATE	TOTAL DICAMBA (UG/L)	DICAMBA IN BOTTOM MA- TERIAL (UG/KG)	TOTAL PICLORAM (UG/L)	PICLORAM IN BOTTOM MA- TERIAL (UG/KG)
JUN				
05...	.00	.0	.02	.0
JUL				
15...	.00	.0	.04	.0
AUG				
05...	.27	.0	.07	.0

YELLOWSTONE RIVER BASIN

06305500 GOOSE CREEK BELOW SHERIDAN, WY

LOCATION.--Lat 44°49'25", long 106°57'40", in SE¼SW¼ sec.15, T.56 N., R.84 W., Sheridan County, Hydrologic Unit 10090101, on right bank 700 ft (213 m) north of Sheridan city limits and 0.2 mi (0.3 km) downstream from Soldier Creek.

DRAINAGE AREA.--392 mi² (1,015 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1941 to current year. Monthly discharge only for October to December 1941, published in WSP 1309.

GAGE.--Water-stage recorder. Datum of gage is 3,701.36 ft (1,128.175 m), National Geodetic Vertical Datum of 1929. Prior to Aug. 3, 1951, nonrecording gage at site 600 ft (183 m) upstream at datum 2.18 ft (0.664 m) lower.

REMARKS.--Records good. Some regulation by many small reservoirs, combined capacity, about 15,000 acre-ft (18.5 hm³). Natural flow of stream affected by transbasin diversions, storage reservoirs, diversions for irrigation, and return flow from irrigated areas.

AVERAGE DISCHARGE.--40 years, 183 ft³/s (5.183 m³/s), 132,600 acre-ft/yr (163 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 5,450 ft³/s (154 m³/s) June 16, 1963, gage height, 7.82 ft (2.384 m); maximum gage height, 9.11 ft (2.777 m) Feb. 28, 1972 (backwater from ice); minimum daily discharge, 4.0 ft³/s (0.11 m³/s) Aug. 11, 1957.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 2,390 ft³/s (67.7 m³/s) May 22, gage height, 5.75 ft (1.753 m); minimum daily, 12 ft³/s (0.34 m³/s) May 1.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	70	95	71	85	34	52	55	12	1210	187	80	30
2	64	95	59	83	41	51	56	13	997	175	82	30
3	60	95	111	77	59	50	58	26	967	157	75	28
4	58	94	103	74	57	49	55	38	1040	142	68	31
5	60	95	83	82	56	49	50	24	905	126	72	30
6	63	93	68	76	49	49	49	21	985	112	70	42
7	59	92	73	68	50	48	49	42	1100	95	56	55
8	55	102	54	61	51	44	48	45	1170	77	55	51
9	56	96	94	68	48	46	47	43	1410	67	61	47
10	54	88	90	69	36	47	46	40	1030	55	71	41
11	59	87	111	46	44	45	46	54	662	47	69	42
12	71	89	113	58	48	44	47	66	611	45	64	41
13	78	96	97	77	55	42	57	91	908	78	61	38
14	81	84	90	67	54	42	61	120	754	91	61	36
15	103	66	108	70	72	42	52	123	561	70	57	36
16	116	70	110	50	70	44	53	206	476	59	55	37
17	105	68	105	30	74	46	92	684	434	55	58	39
18	109	85	94	68	72	48	73	601	365	59	57	39
19	109	94	59	79	76	47	68	432	326	52	52	37
20	103	92	54	73	81	47	61	386	338	46	50	36
21	110	91	87	70	65	56	57	581	387	40	46	41
22	103	92	100	70	60	55	45	1450	344	37	44	40
23	98	86	92	67	59	53	31	1770	339	31	41	41
24	94	68	46	64	58	49	24	1600	328	29	41	42
25	96	81	92	63	57	48	23	1330	295	97	39	45
26	104	92	112	54	55	47	26	1330	265	170	34	48
27	101	77	103	50	54	49	52	1830	268	183	34	50
28	99	89	98	48	51	61	41	1930	262	125	38	50
29	95	84	88	57	---	57	33	1540	254	104	39	46
30	99	90	82	46	---	53	24	1250	220	93	34	48
31	96	---	85	55	---	61	---	1300	---	89	32	---
TOTAL	2628	2626	2732	2005	1596	1521	1479	18978	19211	2793	1696	1217
MEAN	84.8	87.5	88.1	64.7	57.0	49.1	49.3	612	640	90.1	54.7	40.6
MAX	116	102	113	85	81	61	92	1930	1410	187	82	55
MIN	54	66	46	30	34	42	23	12	220	29	32	28
AC-FT	5210	5210	5420	3980	3170	3020	2930	37640	38110	5540	3360	2410
CAL YR 1980	TOTAL	47469	MEAN 130	MAX 1100	MIN 14	AC-FT 94150						
WTR YR 1981	TOTAL	58482	MEAN 160	MAX 1930	MIN 12	AC-FT 116000						

06305500 GOOSE CREEK BELOW SHERIDAN, WY--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1959-65, 1968 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	TUR- BID- ITY (NTU)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN DEMAND, BIO- CHEM- ICAL, 5 DAY (MG/L)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	HARD- NESS (MG/L AS CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)
OCT											
09...	1315	56	740	8.7	13.0	6.0	10.6	4.6	74000	400	73
NOV											
14...	1200	86	730	8.2	3.0	5.0	13.2	--	82000	340	72
DEC											
02...	1330	59	680	8.4	1.0	7.0	--	--	88000	360	69
JAN											
08...	1130	52	790	8.2	.0	6.0	12.7	--	146000	370	66
FEB											
05...	1130	63	740	8.2	.0	4.0	12.9	--	53000	350	64
MAR											
06...	1245	54	780	8.2	6.0	5.0	13.6	--	53000	350	68
APR											
06...	1130	47	830	8.3	7.0	4.0	11.6	--	80000	380	70
MAY											
06...	1245	17	950	8.0	14.0	3.0	5.6	--	K9000	440	78
18...	1145	607	--	--	9.5	--	--	--	--	--	--
22...	0945	1380	--	--	8.5	--	--	--	--	--	--
JUN											
05...	1430	952	175	7.8	14.0	20	9.5	--	K16000	74	17
JUL											
01...	1545	183	--	--	18.5	--	--	--	--	--	--
15...	1745	67	700	8.6	26.5	5.0	9.0	--	K168000	290	56
AUG											
05...	1300	76	800	8.3	23.5	10	9.4	--	55000	390	66
SEP											
01...	1430	32	900	8.2	19.0	6.0	8.5	--	96000	400	68

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

DATE	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LINITY LAB (MG/L AS CACO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)
OCT											
09...	52	33	.7	3.5	270	170	5.9	.5	.0	498	.68
NOV											
14...	38	18	.4	2.4	230	130	5.8	.2	8.9	420	.57
DEC											
02...	45	28	.6	2.7	250	150	6.7	.5	7.3	457	.62
JAN											
08...	50	36	.8	3.1	270	160	6.8	.5	10	493	.67
FEB											
05...	47	30	.7	3.4	250	150	6.4	.4	8.6	460	.63
MAR											
06...	43	31	.7	2.0	250	140	7.7	.4	6.9	449	.61
APR											
06...	49	34	.8	2.8	250	170	7.6	.4	15	500	.68
MAY											
06...	59	43	.9	5.0	250	260	16	.6	5.2	611	.83
18...	--	--	--	--	--	--	--	--	--	--	--
22...	--	--	--	--	--	--	--	--	--	--	--
JUN											
05...	7.7	7.0	.4	1.1	56	25	7.2	.2	7.3	110	.15
JUL											
01...	--	--	--	--	--	--	--	--	--	--	--
15...	37	26	.7	3.1	200	120	12	.4	3.6	380	.52
AUG											
05...	55	33	.7	4.8	260	210	6.9	.6	8.3	540	.73
SEP											
01...	57	40	.9	3.4	260	210	9.0	.4	5.7	550	.75

YELLOWSTONE RIVER BASIN

06305500 GOOSE CREEK BELOW SHERIDAN, WY--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	SOLIDS, DIS- SOLVED (TONS PER DAY)	SOLIDS, RESIDUE AT 105 DEG. C, SUS- PENDED (MG/L)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N)	NITRO- GEN, AMMONIA TOTAL (MG/L AS NH4)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO- GEN, TOTAL (MG/L AS N)	NITRO- GEN, TOTAL (MG/L AS NO3)
OCT										
09...	75.3	--	.06	.04	1.10	1.3	1.0	2.10	2.2	9.6
NOV										
14...	97.5	--	.00	.05	.990	1.2	1.1	2.10	2.1	9.3
DEC										
02...	72.8	--	.16	.12	1.40	1.7	1.0	2.40	2.6	11
JAN										
08...	69.2	12	.24	.16	1.80	2.2	1.2	3.00	3.2	14
FEB										
05...	78.2	2	.25	.24	1.10	1.3	.60	1.70	2.0	8.6
MAR										
06...	65.5	3	.03	.04	.980	--	1.0	2.00	2.0	9.0
APR										
06...	63.5	11	.13	.04	1.30	--	1.1	2.40	2.5	11
MAY										
06...	28.0	4	.10	.08	2.60	--	7.0	9.60	9.7	43
18...	--	--	--	--	--	--	--	--	--	--
22...	--	--	--	--	--	--	--	--	--	--
JUN										
05...	283	58	.08	.09	.120	--	.88	1.00	1.1	4.8
JUL										
01...	--	--	--	--	--	--	--	--	--	--
15...	68.7	38	.25	.18	.680	--	.82	1.50	1.8	7.7
AUG										
05...	111	32	.22	1.4	1.10	--	1.7	2.80	3.0	13
SEP										
01...	47.5	12	.52	.58	1.70	--	1.9	3.60	4.1	18

DATE	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHORUS TOTAL (MG/L AS PO4)	CARBON, ORGANIC TOTAL (MG/L AS C)	CARBON, ORGANIC DIS- SOLVED (MG/L AS C)	CARBON, ORGANIC SUS- PENDED TOTAL (MG/L AS C)	CYANIDE TOTAL (MG/L AS CN)	PHENOLS (UG/L)	SEDI- MENT, SUS- PENDED (MG/L)	SEDI- MENT, DIS- CHARGE, SUS- PENDED (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
OCT										
09...	.480	--	--	13	.1	.00	4	18	2.7	--
NOV										
14...	.280	--	--	--	--	--	--	13	3.0	--
DEC										
02...	.770	--	--	--	--	--	--	14	2.2	--
JAN										
08...	.580	--	--	7.2	.8	--	--	8	1.1	--
FEB										
05...	.350	--	--	--	--	--	--	11	1.9	--
MAR										
06...	.370	--	--	--	--	--	--	9	1.3	--
APR										
06...	.650	2.0	7.3	--	.3	--	--	6	.76	--
MAY										
06...	1.30	--	--	--	--	--	--	8	.37	--
18...	--	--	--	--	--	.01	4	228	374	87
22...	--	--	--	--	--	--	--	736	2740	--
JUN										
05...	.050	--	--	--	--	.00	1	85	218	80
JUL										
01...	--	--	--	--	--	--	--	28	14	--
15...	.400	--	--	--	--	--	--	--	--	--
AUG										
05...	.370	--	--	--	--	--	--	34	7.0	--
SEP										
01...	.910	--	--	--	--	--	--	32	2.8	--

WATER-QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

[illegible]

YELLOWSTONE RIVER BASIN

06305500 GOOSE CREEK BELOW SHERIDAN, WY--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	LEAD, SUS- PENDE RECOV- ERABLE (UG/L AS PB)	LEAD, DIS- SOLVED (UG/L AS PB)	LITHIUM TOTAL RECOV- ERABLE (UG/L AS LI)	LITHIUM SUS- PENDE RECOV- ERABLE (UG/L AS LI)	LITHIUM DIS- SOLVED (UG/L AS LI)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)	MANGA- NESE, SUS- PENDE RECOV. (UG/L AS MN)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	MERCURY TOTAL RECOV- ERABLE (UG/L AS HG)	MERCURY SUS- PENDE RECOV- ERABLE (UG/L AS HG)	MERCURY DIS- SOLVED (UG/L AS HG)
OCT 09...	0	2	30	0	30	60	30	30	.1	.1	.0
JAN 08...	--	--	--	--	--	--	--	--	--	--	--
FEB 05...	--	--	--	--	--	--	--	--	--	--	--
MAR 06...	--	--	--	--	--	--	--	--	--	--	--
APR 06...	--	--	--	--	--	--	--	--	--	--	--
MAY 06...	--	--	--	--	--	--	--	--	--	--	--
JUN 05...	--	--	--	--	--	--	--	--	--	--	--
JUL 15...	--	--	--	--	--	--	--	--	--	--	--
AUG 05...	--	--	--	--	--	--	--	--	--	--	--
SEP 01...	--	--	--	--	--	--	--	--	--	--	--

DATE	MOLYB- DENUM, TOTAL RECOV- ERABLE (UG/L AS MO)	MOLYB- DENUM, DIS- SOLVED (UG/L AS MO)	NICKEL, TOTAL RECOV- ERABLE (UG/L AS NI)	NICKEL, SUS- PENDE RECOV- ERABLE (UG/L AS NI)	NICKEL, DIS- SOLVED (UG/L AS NI)	SELE- NIUM, TOTAL (UG/L AS SE)	SELE- NIUM, SUS- PENDE TOTAL (UG/L AS SE)	SELE- NIUM, DIS- SOLVED (UG/L AS SE)	VANA- DIUM, DIS- SOLVED (UG/L AS V)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN)	ZINC, DIS- SOLVED (UG/L AS ZN)
OCT 09...	2	<10	18	18	0	0	0	0	.0	20	<3
JAN 08...	--	--	--	--	--	--	--	--	--	--	--
FEB 05...	--	--	--	--	--	--	--	--	--	--	--
MAR 06...	--	--	--	--	--	--	--	--	--	--	--
APR 06...	--	--	--	--	--	--	--	--	--	--	--
MAY 06...	--	--	--	--	--	--	--	--	--	--	--
JUN 05...	--	--	--	--	--	--	--	--	--	--	--
JUL 15...	--	--	--	--	--	--	--	--	--	--	--
AUG 05...	--	--	--	--	--	--	--	--	--	--	--
SEP 01...	--	--	--	--	--	--	--	--	--	--	--

DATE	TIME	TEMPER- ATURE (DEG C)	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SED. SUSP. FALL DIAM. % FINER THAN .004 MM	SED. SUSP. FALL DIAM. % FINER THAN .016 MM	SED. SUSP. FALL DIAM. % FINER THAN .062 MM	SED. SUSP. FALL DIAM. % FINER THAN .125 MM	SED. SUSP. FALL DIAM. % FINER THAN .250 MM	SED. SUSP. FALL DIAM. % FINER THAN .500 MM
MAY 22...	0945	8.5	1380	46	64	88	94	98	100

06306100 SQUIRREL CREEK NEAR DECKER, MT

LOCATION.--Lat 45°03'05", long 106°55'36", in NW¼NW¼ sec.14, T.9 S., R.39 E., Bighorn County, Hydrologic Unit 10090101, on left bank 0.4 mi (0.6 km) upstream from Powers Cormack ditch, 0.5 mi (0.8 km) northwest of C X Ranch, 4 mi (6 km) northwest of Decker, and 7 mi (11 km) upstream from mouth.

DRAINAGE AREA.--33.6 mi² (87.0 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--September 1975 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 3,680 ft (1,122 m), from topographic map.

REMARKS.--Records poor. Two small diversions above station.

AVERAGE DISCHARGE.--6 years, 4.21 ft³/s (0.119 m³/s), 3,050 acre-ft/yr (3.76 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 584 ft³/s (16.5 m³/s) May 18, 1978, gage height, 7.27 ft (2.216 m); no flow may occur many days each year due to instream storage from beaver dams.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 42 ft³/s (1.19 m³/s) May 22, gage height, 2.95 ft (0.899 m), only peak above base of 20 ft³/s (0.57 m³/s); maximum gage height, 3.81 ft (1.161 m) Oct. 27 (backwater from beaver dam); no flow many days due to storage from beaver dams.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.01	.01	.01	.36	.75	.36	5.8	.36	.05	.03
2	.00	.00	.00	.01	.01	.28	.75	.33	7.5	.36	.02	.03
3	.00	.00	.00	.01	.01	.23	1.1	.40	5.2	.30	.01	.03
4	.00	.00	.00	.01	.01	.20	.66	.33	5.6	.23	.00	.02
5	.00	.00	.01	.01	.01	.18	.49	.36	5.4	.17	.00	.02
6	.00	.00	.01	.01	.01	.18	.39	.30	4.0	.13	.01	.04
7	.00	.00	.01	.01	.01	.18	.33	.64	3.4	.10	.01	.04
8	.00	.00	.01	.01	.01	.18	1.7	.98	3.0	.08	.01	.04
9	.00	.00	.01	.01	.01	.30	.71	1.4	3.1	.05	.02	.03
10	.00	.00	.01	.12	.01	.25	.62	2.1	3.1	.05	.00	.03
11	.00	.01	.01	.12	.02	.22	.56	1.7	2.7	.05	.00	.03
12	.00	.01	.01	.13	.06	.22	.41	2.6	2.5	.03	.01	.03
13	.00	.01	.10	.12	.10	.20	.65	2.3	7.8	.01	.01	.03
14	.00	.01	.07	.04	.20	.20	1.2	1.7	11	.01	.01	.03
15	.00	.01	.14	.02	.47	.20	1.0	1.3	5.8	.01	.01	.03
16	.00	.01	.04	.01	.74	.18	.64	1.5	5.1	.01	.01	.03
17	.00	.01	.02	.01	2.1	.18	.76	4.8	4.0	.01	.00	.03
18	.00	.01	.01	.02	1.5	.20	.82	5.1	3.5	.01	.00	.03
19	.00	.01	.01	.03	1.6	.18	.68	2.7	3.1	.01	.01	.03
20	.00	.01	.01	.04	1.4	.18	1.5	1.9	2.4	.01	.01	.03
21	.00	.01	.01	.05	1.0	.18	.96	6.2	2.7	.01	.02	.03
22	.00	.01	.01	.06	.96	.20	.48	21	2.7	.01	.02	.03
23	.00	.01	.01	.06	.82	.20	.41	27	2.0	.08	.02	.03
24	.00	.01	.01	.05	.80	.18	.44	16	1.5	.05	.02	.03
25	.00	.01	.01	.04	.73	.20	.22	10	1.1	.13	.02	.03
26	.00	.01	.01	.03	.56	.22	.24	8.2	.85	.44	.02	.03
27	.01	.01	.01	.02	.41	.20	.20	7.7	.67	1.2	.02	.05
28	.01	.01	.01	.02	.39	.22	.25	7.4	.64	1.1	.03	.03
29	.01	.01	.01	.02	---	.34	.33	6.7	.60	.34	.03	.03
30	.01	.01	.01	.01	---	.33	.30	5.1	.51	.14	.03	.03
31	.02	---	.01	.01	---	.61	---	4.6	---	.08	.03	---
TOTAL	.06	.20	.60	1.12	13.96	7.18	19.55	152.70	107.27	5.57	.46	.93
MEAN	.002	.007	.019	.036	.50	.23	.65	4.93	3.58	.18	.015	.031
MAX	.02	.01	.14	.13	2.1	.61	1.7	27	11	1.2	.05	.05
MIN	.00	.00	.00	.01	.01	.18	.20	.30	.51	.01	.00	.02
AC-FT	.1	.4	1.2	2.2	28	14	39	303	213	11	.9	1.8
CAL YR 1980	TOTAL 604.42		MEAN 1.65	MAX 22	MIN .00	AC-FT 1200						
WTR YR 1981	TOTAL 309.60		MEAN .85	MAX 27	MIN .00	AC-FT 614						

YELLOWSTONE RIVER BASIN

06306100 SQUIRREL CREEK NEAR DECKER, MT--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1976 to current year.

REMARKS.--Scheduled samplings were not possible during periods of no flow.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION)	HARD- NESS (MG/L AS CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)
NOV 19...	1210	.01	1570	7.7	3.0	10.0	85	770	95	130
DEC 15...	1150	.10	1440	7.5	3.5	6.2	53	680	90	110
JAN 12...	1215	.13	1810	7.8	2.0	7.8	64	920	120	150
FEB 17...	1310	1.5	1410	8.0	1.0	11.4	92	740	97	120
MAR 23...	1205	.20	1900	8.0	5.0	10.8	96	900	130	140
APR 20...	1305	2.7	1530	8.0	15.0	10.8	124	840	120	130
MAY 18...	1315	5.0	1180	8.5	13.0	7.8	84	630	91	98
JUN 23...	1100	2.0	1140	8.4	16.5	8.8	104	590	82	94
SEP 14...	1205	.03	1570	7.8	10.5	4.4	45	770	95	130

DATE	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LINITY LAB (MG/L AS CACO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)
NOV 19...	75	1.2	11	510	420	5.7	.6	16	1060	1.4
DEC 15...	69	1.2	10	480	370	3.5	.5	16	958	1.3
JAN 12...	95	1.4	10	540	620	4.8	.6	13	1340	1.8
FEB 17...	61	1.0	9.8	420	440	5.1	.4	12	998	1.4
MAR 23...	76	1.1	10	340	580	--	.5	12	--	--
APR 20...	67	1.0	10	470	460	4.1	.6	12	1090	1.5
MAY 18...	49	.9	8.4	420	310	2.5	.4	12	824	1.1
JUN 23...	39	.7	6.7	390	310	3.5	.3	10	780	1.1
SEP 14...	73	1.3	11	490	440	4.4	.5	18	1070	1.5

06306100 SQUIRREL CREEK NEAR DECKER, MT--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	SOLIDS, DIS- SOLVED (TONS PER DAY)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N)	PHOS- PHORUS, TOTAL (MG/L AS P)	CARBON, ORGANIC DIS- SOLVED (MG/L AS C)	CARBON, ORGANIC SUS- PENDED TOTAL (MG/L AS C)	BORON, DIS- SOLVED (UG/L AS B)	IRON, DIS- SOLVED (UG/L AS FE)
NOV 19...	.03	.00	.100	.40	.50	.040	6.9	.3	170	60
DEC 15...	.26	.00	.190	.41	.60	.050	--	--	140	60
JAN 12...	.47	.04	.100	.00	.08	.040	--	--	130	30
FEB 17...	4.0	.08	.070	.02	.09	.060	20	--	90	70
MAR 23...	--	.02	.090	.55	.64	.030	--	--	100	190
APR 20...	7.9	.02	.130	.69	.82	.080	17	.2	150	20
MAY 18...	11.1	.02	.150	1.4	1.50	.130	--	--	90	20
JUN 23...	4.2	.04	.410	.79	1.20	.070	--	--	90	20
SEP 14...	.09	.00	.210	.56	.77	.010	5.2	.3	140	45

DATE	TIME	ARSENIC TOTAL (UG/L AS AS)	ARSENIC DIS- SOLVED (UG/L AS AS)	BERYL- LIUM, TOTAL RECOV- ERABLE (UG/L AS BE)	BERYL- LIUM, DIS- SOLVED (UG/L AS BE)	CADMIUM TOTAL RECOV- ERABLE (UG/L AS CD)	CADMIUM DIS- SOLVED (UG/L AS CD)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU)	COPPER, DIS- SOLVED (UG/L AS CU)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)
APR 20...	1305	2	2	0	<1	0	<1	10	10	8	3	1100
SEP 14...	1205	2	1	0	<1	0	<1	0	10	3	2	440

DATE	LEAD, TOTAL RECOV- ERABLE (UG/L AS PB)	LEAD, DIS- SOLVED (UG/L AS PB)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	MERCURY TOTAL RECOV- ERABLE (UG/L AS HG)	MERCURY DIS- SOLVED (UG/L AS HG)	NICKEL, TOTAL RECOV- ERABLE (UG/L AS NI)	NICKEL, DIS- SOLVED (UG/L AS NI)	SELE- NIUM, TOTAL (UG/L AS SE)	SELE- NIUM, DIS- SOLVED (UG/L AS SE)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN)	ZINC, DIS- SOLVED (UG/L AS ZN)
APR 20...	0	0	120	80	.1	.0	4	4	0	2	10	10
SEP 14...	14	0	640	640	.1	.0	7	3	0	0	20	16

DATE	TIME	TEMPER- ATURE (DEG C)	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SEDI- MENT, SUS- PENDED (MG/L)	SEDI- MENT, DIS- CHARGE, SUS- PENDED (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
NOV 19...	1210	3.0	.01	45	.00	--
DEC 15...	1150	3.5	.10	79	.02	--
JAN 12...	1215	2.0	.13	59	.02	--
FEB 17...	1310	1.0	1.5	82	.33	--
MAR 23...	1205	5.0	.20	28	.02	--
APR 20...	1305	15.0	2.7	85	.62	--
MAY 18...	1315	13.0	5.0	226	3.1	99
JUN 23...	1100	16.5	2.0	62	.33	--
SEP 14...	1205	10.5	.03	39	.00	--

YELLOWSTONE RIVER BASIN

06306250 PRAIRIE DOG CREEK NEAR ACME, WY

LOCATION.--Lat 44°59'02", long 106°50'21", in NE¼SW¼SW¼ sec.23, T.58 N., R.83 W., Sheridan County, Hydrologic Unit 10090101, on right bank 600 ft (183 m) upstream from county bridge, 0.9 mi (1.5 km) upstream from mouth, 2.8 mi (4.5 km) downstream from Coutant Creek, and 7.6 mi (12.2 km) northeast of Acme.

DRAINAGE AREA.--358 mi² (927 km²).

PERIOD OF RECORD.--Water years 1976 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	TIME	DIS- CHARGE, IN CUBIC FEET PER SECOND	TEMPER- ATURE (DEG C)	2,4-D, TOTAL (UG/L)	2,4-D, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	2, 4-DP TOTAL (UG/L)	2,4-DP, IN BOTTOM MAT. (UG/KG)	2,4,5-T TOTAL (UG/L)	2,4,5-T TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	SILVEX, TOTAL (UG/L)	SILVEX, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)
JUN 23...	1130	46	--	.00	0	.00	.00	.00	0	.00	0
JUL 23...	0900	12	--	.04	0	.00	.00	.00	0	.00	0
AUG 24...	1630	26	23.0	.00	0	.00	.00	.00	0	.00	0

DATE	TOTAL DICAMBA (UG/L)	DICAMBA IN BOTTOM MA- TERIAL (UG/KG)	TOTAL PICLORAM (UG/L)	PICLORAM IN BOTTOM MA- TERIAL (UG/KG)
JUN 23...	.00	.0	.08	.0
JUL 23...	.05	.0	<.01	.0
AUG 24...	.00	.0	.04	.0

LOCATION.--Lat 45°00'32", long 106°50'08", in NW¼NW¼NE¼ sec.33, T.9 S., R.40 E., Big Horn County, Hydrologic Unit 10090101, on left bank 1.0 mi (1.6 km) north of Wyoming-Montana State line, 1.4 mi (2.3 km) southeast of Decker, 1.6 mi (2.6 km) upstream from Badger Creek, and at mile 200.9 (323.2 km).

WATER-DISCHARGE RECORDS

REMARKS.--Records good except those for winter period, which are poor. Flow regulated by many small reservoirs in Wyoming, combined capacity, about 15,000 acre-ft (18.5 hm³). Diversions for irrigation of about 64,300 acres (260 km²) above station.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 17,500 ft³/s (496 m³/s) May 19, 1978, gage height, 14.25 ft (4.343 m); minimum, 3.0 ft³/s (0.11 m³/s) Aug. 23, 1961.

Date	Time	Discharge (ft ³ /s)	(m ³ /s)	Gage height (ft)	(m)	Date	Time	Discharge (ft ³ /s)	(m ³ /s)	Gage height (ft)	(m)
May 23	2230	*4,400	125	7.93	2.417	June 10	0730	2,850	80.7	6.65	2.027
May 28	0230	3,990	113	7.63	2.326	June 14	0330	2,360	66.8	6.18	1.884

Minimum daily discharge, 90 ft³/s (2.55 m³/s) Feb. 10, result of freezeup.

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	192	213	110	210	140	150	163	249	2630	516	231	102
2	189	201	100	190	110	151	158	295	2320	458	222	102
3	178	204	150	190	120	152	157	338	2040	437	219	100
4	176	198	180	190	140	150	155	282	2150	414	201	100
5	170	198	170	190	140	146	146	199	2070	405	198	96
6	173	204	160	190	140	146	137	191	1900	369	195	100
7	168	204	150	180	140	147	136	224	2040	346	189	119
8	160	210	130	170	130	144	135	247	2070	312	181	145
9	152	225	115	170	120	139	134	220	2450	284	181	133
10	155	207	140	180	90	138	130	205	2600	271	198	119
11	152	205	190	170	95	138	126	223	1810	251	219	111
12	155	207	260	160	100	135	125	280	1510	237	213	100
13	165	204	250	180	180	132	126	262	1670	230	201	100
14	176	204	250	170	200	132	140	240	2180	301	189	104
15	189	178	260	160	220	131	144	236	1670	253	187	100
16	225	147	275	170	220	130	141	273	1450	213	192	100
17	243	120	260	150	220	132	154	986	1330	187	198	98
18	225	150	240	120	220	141	239	1760	1270	173	187	94
19	234	200	200	140	220	144	275	1320	1130	176	170	96
20	228	220	170	210	210	140	286	1140	1080	170	163	92
21	222	210	170	200	220	146	283	1180	1150	147	150	91
22	234	220	180	200	210	151	256	3130	1140	128	143	92
23	222	200	180	200	210	149	192	3750	1050	119	138	100
24	204	180	160	200	200	149	165	4120	984	107	133	111
25	192	140	180	190	190	146	220	3250	902	122	131	122
26	207	190	200	190	180	141	278	2980	808	388	122	133
27	215	190	250	190	170	143	313	3220	735	621	113	143
28	216	180	240	180	160	153	313	3680	707	468	107	147
29	207	160	230	170	---	166	254	3200	682	345	107	147
30	204	130	220	160	---	162	225	2870	614	318	109	145
31	215	---	220	160	---	161	---	2600	---	247	107	---
TOTAL	6043	5699	5990	5530	4695	4485	5706	43150	46142	9013	5294	3342
MEAN	195	190	193	178	168	145	190	1392	1538	291	171	111
MAX	243	225	275	210	220	166	313	4120	2630	621	231	147
MIN	152	120	100	120	90	130	125	191	614	107	107	91
AC-FT	11990	11300	11880	10970	9310	8900	11320	85590	91520	17880	10500	6630

CAL	YR 1980	TOTAL	112860	MEAN	308	MAX	1900	MIN	51	AC-FT	223900
WTR	YR 1981	TOTAL	145089	MEAN	398	MAX	4120	MIN	90	AC-FT	287800

YELLOWSTONE RIVER BASIN

06306300 TONGUE RIVER AT STATE LINE, NEAR DECKER, MT--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1966 to current year.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: October 1980 to September 1981.

REMARKS.--Once-daily temperatures are available in the Helena district office.

EXTREMES FOR CURRENT YEAR.--Maximum daily, 975 micromhos Sept. 22; minimum daily, 214 micromhos June 9.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	TUR- BID- ITY (NTU)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	HARD- NESS (MG/L AS CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)
OCT 28...	1045	216	793	8.3	3.0	--	12.0	99	90	370	71
NOV 20...	1210	239	842	8.6	.5	14	12.2	95	37	--	--
DEC 16...	1020	273	782	8.2	.0	7.0	12.4	95	220	340	67
JAN 13...	1230	174	881	8.2	.0	2.4	13.0	100	K17	420	77
FEB 18...	1055	219	741	8.4	.0	2.7	13.8	107	K17	350	69
MAR 24...	1230	151	857	8.2	8.0	3.5	11.8	112	30	420	79
APR 21...	1055	268	421	7.8	11.0	22	10.0	103	120	200	43
MAY 19...	1115	1260	379	8.5	11.0	80	8.6	88	2100	170	37
JUN 24...	0850	986	346	8.3	17.0	19	8.2	95	1500	--	--
JUL 14...	1130	342	468	8.5	22.0	10	7.8	101	340	220	48
AUG 11...	1205	223	712	8.4	20.5	22	9.2	116	49	340	68
SEP 15...	1035	101	958	8.4	16.0	7.2	8.4	96	--	420	87

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

DATE	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LINITY LAB (MG/L AS CACO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)
OCT 28...	47	30	.7	1.9	240	170	1.1	.5	4.6	470	.64
NOV 20...	--	--	--	--	270	--	--	--	--	--	--
DEC 16...	43	35	.8	3.3	180	170	6.4	.6	5.3	468	.64
JAN 13...	56	48	1.0	3.7	270	260	4.1	.4	6.5	616	.84
FEB 18...	43	35	.8	2.8	230	180	3.7	.4	.0	479	.65
MAR 24...	53	46	1.0	3.9	250	250	6.6	.3	4.2	590	.80
APR 21...	23	16	.5	2.4	140	91	2.2	.2	12	280	.38
MAY 19...	19	13	.4	1.9	110	67	8.0	.3	3.8	220	.30
JUN 24...	--	--	--	--	120	--	--	--	--	--	--
JUL 14...	25	22	.6	2.0	170	87	4.1	.4	2.9	250	.34
AUG 11...	40	35	.8	4.2	220	150	3.5	.3	3.4	580	.79
SEP 15...	49	51	1.1	3.7	250	260	5.1	.4	4.9	614	.84

YELLOWSTONE RIVER BASIN

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06306300 TONGUE RIVER AT STATE LINE, NEAR DECKER, MT--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	SOLIDS, DIS- SOLVED (TONS PER DAY)	NITRO- GEN, NO ₂ +NO ₃ TOTAL (MG/L AS N)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N)	PHOS- PHORUS, TOTAL (MG/L AS P)	CARBON, ORGANIC DIS- SOLVED (MG/L AS C)	CARBON, ORGANIC SUS- PENDED TOTAL (MG/L AS C)	BORON, TOTAL RECOV- ERABLE (UG/L AS B)	IRON, DIS- SOLVED (UG/L AS FE)
OCT 28...	274	.00	.400	.28	.68	.000	--	--	100	--
NOV 20...	--	.17	.050	.43	.48	--	10	.8	120	--
DEC 16...	345	.25	.170	.50	.67	.130	--	--	300	--
JAN 13...	289	.19	.120	.78	.90	.060	--	--	250	--
FEB 18...	283	.35	.140	.00	.11	.030	36	.4	180	--
MAR 24...	241	.14	.220	.69	.91	.110	--	--	300	--
APR 21...	203	.17	.180	1.0	1.20	.090	--	--	220	--
MAY 19...	748	.18	.660	1.8	2.50	1.60	13	3.9	--	360
JUN 24...	--	.36	.300	1.1	1.40	--	--	--	370	--
JUL 14...	231	.08	.310	.63	.94	.110	--	--	200	--
AUG 11...	349	.11	.400	.36	.76	.060	--	--	--	--
SEP 15...	167	.00	.130	.77	.90	.070	4.4	1.3	240	<10

DATE	TIME	ALUM- INUM, TOTAL RECOV- ERABLE (UG/L AS AL)	ALUM- INUM, DIS- SOLVED (UG/L AS AL)	ARSENIC TOTAL (UG/L AS AS)	ARSENIC DIS- SOLVED (UG/L AS AS)	BERYL- LIUM, TOTAL RECOV- ERABLE (UG/L AS BE)	BERYL- LIUM, DIS- SOLVED (UG/L AS BE)	CADMIUM TOTAL RECOV- ERABLE (UG/L AS CD)	CADMIUM DIS- SOLVED (UG/L AS CD)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR)
MAY 19...	1115	2700	110	3	3	0	<3	2	<1	10	10
SEP 15...	1035	400	20	1	1	0	<1	1	<1	0	10

DATE	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU)	COPPER, DIS- SOLVED (UG/L AS CU)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	LEAD, TOTAL RECOV- ERABLE (UG/L AS PB)	LEAD, DIS- SOLVED (UG/L AS PB)	LITHIUM TOTAL RECOV- ERABLE (UG/L AS LI)	LITHIUM DIS- SOLVED (UG/L AS LI)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	MERCURY TOTAL RECOV- ERABLE (UG/L AS HG)	MERCURY DIS- SOLVED (UG/L AS HG)
MAY 19...	650	50	4800	39	6	10	10	180	40	.2	.0
SEP 15...	4	3	610	12	0	30	32	80	28	.1	.0

DATE	MOLYB- DENUM, TOTAL RECOV- ERABLE (UG/L AS MO)	MOLYB- DENUM, DIS- SOLVED (UG/L AS MO)	NICKEL, TOTAL RECOV- ERABLE (UG/L AS NI)	NICKEL, DIS- SOLVED (UG/L AS NI)	SELE- NIUM, TOTAL (UG/L AS SE)	SELE- NIUM, DIS- SOLVED (UG/L AS SE)	VANA- DIUM, DIS- SOLVED (UG/L AS V)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN)	ZINC, DIS- SOLVED (UG/L AS ZN)	CYANIDE TOTAL (MG/L AS CN)	PHENOLS (UG/L)
MAY 19...	10	<10	32	6	1	0	4.0	190	60	.00	4
SEP 15...	3	<10	3	2	0	1	1.0	20	7	>.01	1

YELLOWSTONE RIVER BASIN

06306300 TONGUE RIVER AT STATE LINE, NEAR DECKER, MT--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	TIME	TEMPER- ATURE (DEG C)	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SEDI- MENT, SUS- PENDED (MG/L)	SEDI- MENT, DIS- CHARGE, SUS- PENDED (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
OCT 28...	1045	3.0	216	13	7.6	91
NOV 20...	1210	.5	239	57	37	77
DEC 16...	1020	.0	273	29	21	88
JAN 13...	1230	.0	174	9	4.2	86
FEB 18...	1055	.0	219	9	5.3	89
MAR 24...	1230	8.0	151	10	4.1	91
APR 21...	1055	11.0	268	69	50	84
MAY 19...	1115	11.0	1260	213	725	89
JUN 24...	0850	17.0	986	62	165	73
JUL 14...	1130	22.0	342	44	41	96
AUG 11...	1205	20.5	223	79	48	97
SEP 15...	1035	16.0	101	57	16	92

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1		724	740	759	858	870	895	470	246	403	689	882
2		738	780	731	852	858	890	413	257	426	707	883
3		740	810	788	931	860	892	372	263	438	717	873
4		738	852	788	910	875	900	371	259	439	721	880
5		758	780	750	868	840	907	383	252	436	731	885
6		756	808	773	863	832	910	522	259	442	737	875
7		752	800	780	843	865	910	529	244	474	742	884
8		743	860	788	847	862	869	480	225	476	752	839
9		721	861	771	941	868	905	533	214	494	754	841
10		738	867	819	955	860	900	573	218	505	753	833
11		750	820	829	947	852	854	572	266	530	730	892
12		762	758	860	950	863	859	575	293	518	729	904
13		751	721	822	900	878	860	550	292	497	744	906
14		741	719	839	840	888	848	612	261	489	755	948
15		779	716	850	780	888	816	592	291	518	776	966
16		731	715	840	774	879	750	588	308	559	774	960
17		810	738	831	770	870	772	515	330	556	735	944
18		898	738	860	770	870	652	402	340	627	704	924
19		931	820	840	771	857	592	370	346	584	716	930
20		840	820	870	792	890	476	362	361	598	743	950
21		820	820	853	760	891	469	327	354	606	773	960
22		785	820	811	760	910	478	380	348	603	748	975
23		828	780	780	760	912	511	385	343	621	803	962
24		730	782	762	779	891	592	290	356	657	803	902
25		850	782	779	780	919	591	285	352	626	767	873
26		925	780	780	820	920	502	274	353	590	773	851
27		860	781	769	829	931	456	248	368	580	794	813
28		800	710	779	839	911	398	215	378	579	840	823
29		840	712	830	---	897	450	219	376	612	838	782
30		772	729	765	---	890	440	222	381	646	830	799
31		---	731	770	---	890	---	230	---	660	840	---
MEAN		787	779	802	839	880	711	415	304	542	759	891
WTR YR 1981	MEAN	700		MAX	975		MIN	214				

06309200 MIDDLE FORK POWDER RIVER NEAR BARNUM, WY

LOCATION.--Lat 43°34'40", long 107°08'16", in SE¼SW¼NE¼ sec.26, T.42 N., R.86 W., Washakie County, Hydrologic Unit 10090201, on left bank 1,100 ft (335 m) downstream from Rock Creek and 13 mi (21 km) southwest of Barnum.

DRAINAGE AREA.--45.2 mi² (117 km²).

PERIOD OF RECORD.--September 1961 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 7,220 ft (2,201 m), from topographic map. Prior to Oct. 1, 1970, at site 900 ft (274 m) upstream at different datum.

REMARKS.--Records fair except those during winter period and period of no gage-height record, Jan. 28 to Mar. 9, which are poor. No diversion above station.

AVERAGE DISCHARGE.--20 years, 31.7 ft³/s (0.898 m³/s), 22,970 acre-ft/yr (28.3 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 7,110 ft³/s (201 m³/s) June 15, 1963, gage height, 12.6 ft (3.840 m), from floodmark, site and datum then in use, on basis of slope-area measurement of peak flow; minimum daily discharge, 1.0 ft³/s (0.028 m³/s) Dec. 15, 16, 1964, Jan. 24-27, 1966.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 200 ft³/s (5.66 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Apr. 25	1700	265 7.50	2.73 0.832	May 23	0300	*345 9.77	3.07 0.936
May 17	0430	221 6.26	2.52 .768				

Minimum daily discharge, 3.0 ft³/s (0.085 m³/s) Feb. 10.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.4	6.0	5.3	5.6	3.6	4.0	4.8	54	75	10	6.4	5.7
2	3.7	6.0	5.3	5.4	3.7	4.1	5.7	50	68	9.8	6.0	5.3
3	3.7	5.7	5.3	5.2	3.8	4.1	5.3	46	62	9.8	5.7	5.3
4	3.4	5.7	5.7	5.0	3.9	3.9	4.6	43	59	9.3	6.0	5.3
5	3.1	5.7	5.3	5.0	3.9	3.9	4.4	39	50	8.9	6.0	5.6
6	3.1	5.7	4.6	4.7	3.9	4.0	4.4	43	46	8.0	6.0	7.6
7	3.4	6.0	4.6	4.5	3.7	3.8	4.6	37	44	7.6	6.0	6.8
8	3.4	6.4	4.3	4.3	3.5	3.7	4.4	33	39	7.6	5.7	6.0
9	3.1	6.0	4.3	4.2	3.4	3.6	5.3	35	41	7.2	8.0	5.6
10	3.1	5.7	4.3	4.1	3.0	3.7	6.6	40	36	7.2	7.6	6.0
11	3.4	5.3	4.3	4.1	3.2	3.7	10	44	33	7.2	6.4	6.0
12	3.4	5.0	4.3	4.3	3.4	4.0	15	37	29	7.2	6.0	5.6
13	3.4	4.6	4.3	4.2	3.7	4.0	14	33	28	7.6	6.0	5.6
14	3.7	4.3	4.0	4.1	3.9	4.6	20	37	24	6.8	6.0	5.6
15	5.3	3.8	4.0	3.9	3.9	4.6	29	46	24	6.8	6.0	5.6
16	3.7	3.5	4.6	3.6	4.0	4.6	48	80	25	6.4	6.0	5.3
17	5.0	3.5	5.3	3.7	4.2	4.3	57	175	23	19	5.7	5.3
18	5.3	3.8	5.0	3.8	4.1	4.0	79	123	22	13	5.7	5.3
19	5.7	4.0	5.3	3.9	4.2	4.0	71	108	21	8.9	5.3	4.6
20	5.7	4.3	5.3	4.0	4.1	4.0	86	100	19	7.2	5.3	4.6
21	6.0	4.6	4.6	4.1	3.9	4.0	70	99	18	6.8	5.7	4.6
22	5.3	4.9	4.6	4.3	3.9	4.0	46	220	16	6.4	5.7	4.3
23	4.3	4.3	4.6	4.4	4.0	4.1	42	254	15	6.4	5.3	4.3
24	4.5	3.7	4.0	4.5	4.1	4.0	85	191	14	6.4	5.7	4.6
25	6.0	3.4	4.3	4.3	4.1	4.3	156	158	13	8.0	5.3	5.0
26	5.7	3.1	5.3	4.0	4.0	5.0	126	163	13	15	5.3	5.3
27	5.3	3.4	6.8	4.0	4.0	5.0	94	150	12	28	5.7	5.3
28	5.7	5.0	6.0	4.2	3.9	4.3	78	125	12	10	6.0	5.3
29	6.0	5.0	5.8	4.2	---	4.3	69	110	12	8.0	5.7	5.3
30	6.4	5.3	6.4	4.1	---	4.3	61	96	11	7.2	5.7	6.4
31	6.4	---	5.6	4.0	---	4.1	---	86	---	6.8	5.7	---
TOTAL	139.6	143.7	153.4	133.7	107.0	128.0	1306.1	2855	904	284.5	183.6	163.1
MEAN	4.50	4.79	4.95	4.31	3.82	4.13	43.5	92.1	30.1	9.18	5.92	5.44
MAX	6.4	6.4	6.8	5.6	4.2	5.0	156	254	75	28	8.0	7.6
MIN	3.1	3.1	4.0	3.6	3.0	3.6	4.4	33	11	6.4	5.3	4.3
AC-FT	277	285	304	265	212	254	2590	5660	1790	564	364	324
CAL YR 1980	TOTAL	5728.9	MEAN 15.7	MAX 120	MIN 3.1	AC-FT 11360						
WTR YR 1981	TOTAL	6501.7	MEAN 17.8	MAX 254	MIN 3.0	AC-FT 12900						

YELLOWSTONE RIVER BASIN

06309450 BEAVER CREEK BELOW BAYER CREEK, NEAR BARNUM, WY

LOCATION.--Lat 43°39'55", long 107°03'48", in SE¼SE¼NW¼ sec.28, T.43 N., R.85 W., Johnson County, Hydrologic Unit 10090201, on left bank 0.2 mi (0.3 km) downstream from Bayer Creek and 7.7 mi (12.4 km) west of Barnum.

DRAINAGE AREA.--10.9 mi² (28.2 km²).

PERIOD OF RECORD.--October 1974 to current year.

REVISED RECORDS.--WDR WY-79-1: 1975.

GAGE.--Water-stage recorder. Altitude of gage is 7,030 ft (2,143 m), from topographic map. Prior to Mar. 30, 1978, at site 300 ft (91 m) downstream at datum 3.95 ft (1.204 m) lower.

REMARKS.--Records good except those for November to May, which are poor. No diversion above station.

AVERAGE DISCHARGE.--7 years, 7.24 ft³/s (0.205 m³/s), 5,250 acre-ft/yr (6.47 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 186 ft³/s (5.27 m³/s) July 6, 1978, gage height, 2.72 ft (0.829 m); maximum gage height, 2.93 ft (0.893 m) May 7, 1978 (backwater from snow); minimum daily discharge, 0.80 ft³/s (0.023 m³/s) Dec. 30, 31, 1974, Jan. 2, 10-12, 1975, Feb. 10, 1981.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 63 ft³/s (1.78 m³/s) May 17, gage height, 2.03 ft (0.619 m); no other peak above base of 50 ft³/s (1.42 m³/s); minimum daily discharge, 0.80 ft³/s (0.023 m³/s) Feb. 10.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.2	2.2	1.5	1.8	.90	1.5	2.4	4.2	12	6.8	4.6	3.0
2	2.2	2.2	1.5	1.7	1.0	1.5	2.7	4.1	12	6.5	4.4	3.0
3	2.2	1.9	1.8	1.6	1.1	1.5	2.4	4.6	13	6.8	4.4	3.0
4	2.3	1.9	1.8	1.7	1.2	1.5	1.7	4.6	13	6.5	4.2	2.9
5	2.3	2.1	1.8	1.5	1.2	1.5	1.9	4.2	12	6.3	4.1	3.2
6	2.3	2.1	1.7	1.4	1.3	1.5	1.9	4.9	12	6.0	4.1	3.7
7	2.3	2.1	1.6	1.4	1.2	1.5	1.8	4.6	12	6.0	4.1	3.2
8	2.3	2.1	1.5	1.4	1.2	1.5	1.6	4.2	11	6.0	4.1	3.0
9	2.3	1.9	1.5	1.4	1.1	1.5	2.1	5.1	12	6.0	4.6	3.0
10	2.3	1.9	1.6	1.4	.80	1.5	2.7	6.0	11	6.0	4.2	2.9
11	2.3	1.8	1.7	1.5	.90	1.5	4.1	5.8	11	5.8	3.9	2.9
12	2.2	1.7	1.7	1.6	1.1	1.6	5.8	4.9	10	6.0	3.7	2.9
13	2.2	1.5	1.7	1.5	1.4	1.6	5.1	4.7	12	6.0	3.9	2.9
14	2.2	1.5	1.7	1.5	1.6	1.8	4.6	4.7	11	5.8	3.9	2.9
15	2.8	1.4	1.7	1.4	1.5	1.7	5.5	4.8	10	5.8	3.7	2.9
16	1.8	1.5	1.8	1.3	1.6	1.8	9.9	12	9.7	5.5	3.6	2.8
17	1.7	1.5	1.8	1.2	1.6	1.8	10	38	9.7	5.8	3.6	2.8
18	2.8	1.6	1.6	1.3	1.6	1.7	10	13	9.7	5.8	3.4	2.8
19	2.8	1.6	1.5	1.3	1.7	1.7	8.5	9.7	9.3	5.5	3.3	2.7
20	2.7	1.6	1.6	1.3	1.6	1.7	7.4	9.3	8.9	5.3	3.3	2.8
21	2.6	1.7	1.7	1.4	1.5	1.7	6.0	11	8.9	5.1	3.6	2.7
22	2.3	1.9	1.8	1.6	1.5	1.6	4.9	29	8.5	5.1	3.6	2.8
23	2.1	1.7	1.7	1.7	1.5	1.8	5.5	18	7.8	4.9	3.3	2.8
24	2.1	1.6	1.6	1.7	1.6	1.8	7.4	13	7.8	4.9	3.3	2.7
25	2.3	1.5	1.8	1.6	1.6	1.7	9.3	12	7.8	6.0	3.1	2.8
26	2.3	1.6	1.9	1.4	1.6	2.2	7.1	14	7.5	7.4	3.1	3.1
27	2.2	1.6	2.2	1.4	1.6	2.3	6.0	16	7.5	7.5	3.4	2.9
28	2.2	1.6	1.9	1.3	1.5	1.8	5.3	13	7.5	4.9	3.3	2.7
29	2.1	1.6	1.6	1.3	---	1.9	4.9	13	7.1	4.7	3.1	2.7
30	2.3	1.6	1.7	1.3	---	1.9	4.6	13	6.8	4.6	3.0	3.2
31	2.2	---	1.8	1.2	---	1.7	---	13	---	4.6	3.0	---
TOTAL	70.9	52.5	52.8	45.1	38.00	52.3	153.1	318.4	298.5	179.9	114.9	87.7
MEAN	2.29	1.75	1.70	1.45	1.36	1.69	5.10	10.3	9.95	5.80	3.71	2.92
MAX	2.8	2.2	2.2	1.8	1.7	2.3	10	38	13	7.5	4.6	3.7
MIN	1.7	1.4	1.5	1.2	.80	1.5	1.6	4.1	6.8	4.6	3.0	2.7
AC-FT	141	104	105	89	75	104	304	632	592	357	228	174
CAL YR 1980	TOTAL	1353.50	MEAN	3.70	MAX	17	MIN	1.3	AC-FT	2680		
WTR YR 1981	TOTAL	1464.10	MEAN	4.01	MAX	38	MIN	.80	AC-FT	2900		

06309460 BEAVER CREEK ABOVE WHITE PANTHER DITCH, NEAR BARNUM, WY

LOCATION.--Lat 43°41'52", long 106°56'52", in SE¼SW¼NW¼ sec.16, T.43 N., R.84 W., Johnson County, Hydrologic Unit 10090201, on right bank 0.1 mi (0.2 km) upstream from White Panther ditch and 3.0 mi (4.8 km) northwest of Barnum.

DRAINAGE AREA.--24.2 mi² (62.7 km²).

PERIOD OF RECORD.--October 1974 to current year.

REVISED RECORDS.--WDR WY-78-1: 1975-77 (M), WDR WY-79-1: 1975.

GAGE.--Water-stage recorder. Altitude of gage is 5,350 ft (1,631 m), from topographic map.

REMARKS.--Records good. No diversion above station.

AVERAGE DISCHARGE.--7 years, 15.2 ft³/s (0.430 m³/s), 11,010 acre-ft/yr (13.6 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 797 ft³/s (22.6 m³/s) July 6, 1978, gage height, 5.94 ft (1.811 m), from floodmarks, from rating curve extended above 140 ft³/s (3.96 m³/s) on basis of slope-area measurement of peak flow; minimum daily, 5.6 ft³/s (0.16 m³/s) Jan. 12, 1975.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 69 ft³/s (1.95 m³/s) May 17, gage height, 1.32 ft (0.402 m), no peak above base of 70 ft³/s (1.98 m³/s); maximum gage height, 1.39 ft (0.424 m), backwater from log May 17; minimum daily discharge, 5.8 ft³/s (0.16 m³/s) Feb. 11, 12.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	8.7	8.3	7.9	7.5	6.8	6.8	8.3	9.9	18	13	9.8	8.5
2	8.7	8.3	7.9	7.5	7.2	6.8	8.7	9.5	18	13	9.6	8.4
3	8.7	7.9	8.3	7.2	7.2	6.8	9.1	11	19	13	9.9	8.2
4	8.7	7.9	8.7	7.5	7.2	6.8	7.9	11	19	13	9.9	8.1
5	8.3	7.5	8.7	7.9	7.2	6.8	7.5	9.9	18	13	9.9	8.3
6	8.3	7.2	8.3	6.5	7.2	7.2	7.9	11	17	12	9.9	9.4
7	7.9	7.2	8.7	7.2	7.2	7.2	7.5	11	18	12	9.9	8.6
8	8.3	7.5	6.8	7.2	7.2	7.2	7.5	11	17	12	9.9	8.2
9	7.9	7.5	8.3	7.5	7.2	7.2	7.9	11	18	12	10	8.0
10	7.9	7.9	8.3	7.5	6.2	6.8	9.1	12	17	12	9.9	8.0
11	7.9	7.9	8.3	6.8	5.8	6.8	11	12	17	12	9.5	8.0
12	7.9	7.9	8.3	7.2	5.8	6.8	14	11	16	12	9.5	7.9
13	7.9	7.2	8.3	7.5	6.5	7.2	14	11	18	12	10	7.9
14	7.9	7.2	8.3	6.8	7.2	7.2	12	11	17	12	10	7.9
15	9.5	6.5	7.9	7.2	7.5	7.2	13	11	17	11	9.5	7.9
16	8.7	6.8	7.9	7.2	7.5	7.2	15	14	16	11	9.5	8.0
17	7.5	6.8	7.9	7.2	7.5	7.5	17	47	16	11	9.5	7.9
18	9.1	7.5	7.9	7.5	7.5	7.2	16	23	15	12	9.1	7.8
19	9.1	7.9	7.2	7.2	7.5	7.2	15	18	15	12	9.1	7.8
20	9.1	7.9	7.5	7.2	7.5	7.2	15	17	15	11	9.1	7.9
21	8.7	7.5	8.3	7.2	7.2	7.5	13	17	15	11	9.5	7.9
22	8.7	8.3	7.9	7.2	7.2	6.8	12	34	15	11	9.5	7.9
23	8.3	8.3	7.5	7.2	7.2	7.5	11	25	15	11	9.1	8.0
24	7.5	7.5	7.2	7.2	6.8	7.5	13	21	14	11	8.7	8.0
25	8.7	7.9	7.9	7.2	6.8	7.2	15	20	14	12	8.6	8.0
26	8.7	7.9	7.9	7.2	6.8	7.5	14	21	14	12	8.6	8.6
27	8.7	7.9	7.9	7.5	6.8	8.3	12	23	14	15	8.7	8.2
28	8.3	7.9	8.3	7.2	6.8	7.9	12	20	14	11	9.0	7.9
29	8.7	7.9	7.2	7.2	---	7.2	11	20	14	11	8.5	7.9
30	8.7	7.9	7.5	7.2	---	8.3	10	19	13	10	8.4	8.4
31	8.3	---	7.5	7.2	---	6.8	---	19	---	9.9	8.6	---
TOTAL	261.3	229.8	246.5	224.8	196.5	223.6	346.4	521.3	483	365.9	290.7	243.5
MEAN	8.43	7.66	7.95	7.25	7.02	7.21	11.5	16.8	16.1	11.8	9.38	8.12
MAX	9.5	8.3	8.7	7.9	7.5	8.3	17	47	19	15	10	9.4
MIN	7.5	6.5	6.8	6.5	5.8	6.8	7.5	9.5	13	9.9	8.4	7.8
AC-FT	518	456	489	446	390	444	687	1030	958	726	577	483
CAL YR 1980	TOTAL	3864.8	MEAN	10.6	MAX	25	MIN	6.5	AC-FT	7670		
WTR YR 1981	TOTAL	3633.3	MEAN	9.95	MAX	47	MIN	5.8	AC-FT	7210		

06311000 NORTH FORK POWDER RIVER NEAR HAZELTON, WY

LOCATION.--Lat 44°01'43", long 107°04'55", in NW¼SE¼NW¼ sec.21, T.47 N., R.85 W., Johnson County, Hydrologic Unit 10090201, on right bank 0.5 mi (0.8 km) downstream from Twin Creek, 0.7 mi (1.1 km) upstream from Dullknife Reservoir, 7.2 mi (11.6 km) southwest of Hazelton, and 19 mi (31 km) northwest of Mayoworth.

DRAINAGE AREA.--24.5 mi² (63.5 km²).

PERIOD OF RECORD.--September 1946 to current year. Monthly discharge only for some periods, published in WSP 1309.

REVISED RECORDS.--WSP 1279: 1947-48(M), 1949, 1950-51(M), 1952.

GAGE.--Water-stage recorder. Altitude of gage is 8,180 ft (2,493 m), from topographic map. Prior to Oct. 1, 1966, at site 0.8 mi (1.3 km) downstream at different datum.

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

AVERAGE DISCHARGE.--35 years, 14.6 ft³/s (0.413 m³/s), 10,580 acre-ft/yr (13.0 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 886 ft³/s (25.1 m³/s) June 15, 1953, gage height, 4.34 ft (1.323 m), site and datum then in use, from rating curve extended above 110 ft³/s (3.12 m³/s) on basis of slope-area measurement of peak flow; maximum gage height, 6.07 ft (1.850 m) May 17, 1975 (backwater from ice and footbridge); minimum daily discharge, 0.60 ft³/s (0.017 m³/s) Oct. 30, 1960, Apr. 9, 12, 15-17, 1961, but may have been less during winter months of water years 1947-48.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 164 ft³/s (4.64 m³/s) May 17, gage height, 2.77 ft (0.844 m), no peak above base of 190 ft³/s (5.38 m³/s); minimum daily, 1.0 ft³/s (0.028 m³/s) Feb. 10.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.6	1.8	1.7	1.4	1.1	1.3	1.9	30	73	13	5.7	3.4
2	3.6	1.9	1.5	1.5	1.1	1.4	1.9	29	65	14	5.5	3.4
3	3.6	1.9	1.6	1.5	1.2	1.3	1.5	26	61	14	5.2	3.4
4	3.4	1.8	1.6	1.5	1.3	1.4	1.3	17	66	14	5.2	3.4
5	3.4	1.9	1.5	1.5	1.4	1.5	1.4	16	54	13	5.2	3.4
6	3.2	1.9	1.6	1.4	1.3	1.4	1.3	15	52	12	5.5	6.0
7	3.2	1.9	1.5	1.5	1.2	1.4	1.3	15	64	11	4.9	5.5
8	3.2	1.8	1.6	1.5	1.3	1.4	1.4	13	50	10	5.5	4.2
9	3.2	1.8	1.6	1.5	1.2	1.5	1.5	11	52	9.4	9.8	3.6
10	3.2	1.8	1.6	1.5	1.0	1.5	1.5	14	42	9.1	8.1	3.4
11	3.8	1.6	1.7	1.4	1.1	1.5	2.6	13	42	8.7	4.5	3.4
12	3.4	1.5	1.7	1.5	1.2	1.5	2.9	10	39	8.7	5.2	3.2
13	3.2	1.5	1.6	1.6	1.2	1.5	2.6	10	56	9.1	4.9	3.2
14	3.0	1.4	1.6	1.5	1.3	1.6	3.0	11	42	8.1	5.7	3.2
15	3.7	1.5	1.7	1.4	1.3	1.7	3.8	15	41	7.4	5.5	3.2
16	3.7	1.6	1.8	1.3	1.4	1.5	8.0	43	37	7.4	5.2	3.2
17	3.5	1.7	1.9	1.1	1.3	1.4	17	94	32	7.7	4.9	3.0
18	3.5	1.7	1.7	1.2	1.4	1.3	22	52	30	7.7	4.9	3.0
19	4.0	1.7	1.4	1.2	1.4	1.4	21	42	31	7.4	4.9	3.0
20	4.0	1.7	1.3	1.3	1.3	1.5	25	51	30	6.8	4.2	3.0
21	3.7	1.8	1.4	1.4	1.2	1.5	21	52	26	6.5	4.5	3.0
22	3.4	1.8	1.4	1.5	1.2	1.6	14	49	24	6.5	4.2	3.0
23	3.0	1.7	1.5	1.3	1.3	1.6	12	87	22	6.0	4.0	3.0
24	2.9	1.6	1.4	1.2	1.4	1.6	25	72	19	6.0	3.8	3.0
25	3.0	1.5	1.5	1.1	1.2	1.7	45	71	18	13	3.8	3.0
26	2.9	1.6	1.4	1.1	1.1	1.8	36	100	16	13	3.6	3.2
27	2.5	1.6	1.6	1.2	1.1	1.8	27	144	17	10	4.2	3.2
28	2.0	1.6	1.5	1.3	1.3	1.8	25	97	16	7.7	4.2	3.2
29	1.9	1.6	1.4	1.3	---	1.7	25	91	16	6.5	3.8	3.0
30	1.8	1.8	1.4	1.2	---	1.7	28	77	14	6.0	3.8	3.4
31	1.8	---	1.5	1.1	---	1.8	---	77	---	5.7	3.6	---
TOTAL	98.3	51.0	48.2	42.0	34.8	47.6	380.9	1444	1147	285.4	154.0	102.1
MEAN	3.17	1.70	1.55	1.35	1.24	1.54	12.7	46.6	38.2	9.21	4.97	3.40
MAX	4.0	1.9	1.9	1.6	1.4	1.8	45	144	73	14	9.8	6.0
MIN	1.8	1.4	1.3	1.1	1.0	1.3	1.3	10	14	5.7	3.6	3.0
AC-FT	195	101	96	83	69	94	756	2860	2280	566	305	203

CAL YR 1980 TOTAL 3893.6 MEAN 10.6 MAX 78 MIN 1.3 AC-FT 7720
WTR YR 1981 TOTAL 3835.3 MEAN 10.5 MAX 144 MIN 1.0 AC-FT 7610

06311060 NORTH FORK POWDER RIVER BELOW BULL CREEK, NEAR HAZELTON, WY

LOCATION.--Lat 44°00'29", long 107°01'08", in NE¼SE¼SW¼ sec.25, T.47 N., R.85 W., Johnson County, Hydrologic Unit 10090201, on right bank 20 ft (6 m) downstream from Bull Creek, 2.1 mi (3.4 km) downstream from Dullknife Reservoir, and 6.8 mi (10.9 km) southwest of Hazelton.

DRAINAGE AREA.--32.3 mi² (83.7 km²).

PERIOD OF RECORD.--October 1974 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 7,840 ft (2,390 m), from topographic map.

REMARKS.--Records fair except those for winter period, which is fair. Flow regulated by Dullknife Reservoir 2.1 mi (3.4 km) upstream, capacity, 4,350 acre-ft (5.36 hm³).

AVERAGE DISCHARGE.--7 years, 18.3 ft³/s (0.518 m³/s), 13,260 acre-ft/yr (16.3 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 415 ft³/s (11.8 m³/s) May 25, 1976, gage height, 4.17 ft (1.271 m); minimum daily, 0.50 ft³/s (0.014 m³/s) Jan. 24-30, 1977.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 121 ft³/s (3.43 m³/s) May 27, gage height, 3.30 ft (1.006 m); minimum daily, 0.60 ft³/s (0.017 m³/s) Feb. 1.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.85	1.1	1.0	.85	.60	.71	1.1	3.5	72	14	60	13
2	.93	1.0	.90	.85	.66	.71	1.3	3.3	66	14	44	12
3	.85	1.0	1.0	.78	.72	.71	1.3	4.0	64	15	45	12
4	.85	1.0	1.0	.71	.78	.71	1.1	4.0	67	16	45	12
5	.85	1.1	1.0	.64	.78	.71	1.1	3.3	58	14	44	13
6	.85	1.1	1.0	.78	.78	.71	1.1	3.2	56	13	43	13
7	.85	1.1	1.0	.71	.78	.78	1.0	3.5	63	11	33	13
8	.85	1.1	1.0	.71	.71	.78	1.1	3.2	56	9.4	20	13
9	.85	1.1	1.0	.68	.78	.78	1.1	3.2	56	10	20	13
10	.85	1.0	1.0	.68	.78	.78	1.1	3.0	48	11	20	12
11	.93	1.0	.93	.68	.78	.71	1.4	3.0	45	11	19	12
12	.93	1.0	.93	.70	.78	.71	1.9	2.8	41	26	15	13
13	.85	.90	.85	.70	.78	.71	1.9	2.5	56	25	11	17
14	.85	.90	.78	.70	.78	.78	2.2	2.4	48	32	12	17
15	1.2	.90	.85	.66	.78	.85	2.7	2.4	38	43	10	17
16	1.2	.90	.85	.64	.78	.93	4.0	9.0	38	43	8.2	17
17	1.1	.90	.85	.64	.71	.93	7.0	20	34	43	8.6	16
18	1.1	1.0	.85	.66	.71	.93	9.7	14	29	42	8.6	16
19	1.5	1.0	.78	.66	.71	.93	7.6	50	31	46	7.9	16
20	1.4	1.0	.78	.66	.71	.93	7.0	60	33	48	7.6	15
21	1.2	1.1	.71	.70	.71	.93	5.6	67	26	55	8.2	15
22	1.1	1.1	.78	.70	.71	.93	4.5	67	23	58	8.2	16
23	1.1	1.0	.78	.70	.71	.93	6.1	77	20	58	8.6	15
24	1.1	.98	.78	.70	.71	.93	8.2	83	18	58	8.6	15
25	1.1	.98	.78	.68	.71	.93	8.6	80	17	63	8.6	11
26	1.1	1.0	.78	.66	.71	1.0	6.7	87	17	70	8.2	11
27	1.0	1.0	.85	.64	.71	1.1	5.1	108	17	70	8.2	11
28	1.1	1.1	.78	.64	.71	1.0	4.3	87	17	70	8.2	10
29	1.3	1.0	.78	.64	---	1.0	4.0	83	17	70	9.4	9.7
30	1.1	1.1	.71	.64	---	1.1	3.8	75	15	70	13	9.7
31	1.1	---	.85	.62	---	1.0	---	77	---	71	13	---
TOTAL	31.94	30.46	26.93	21.41	20.57	26.64	113.6	1091.3	1186	1199.4	584.1	405.4
MEAN	1.03	1.02	.87	.69	.73	.86	3.79	35.2	39.5	38.7	18.8	13.5
MAX	1.5	1.1	1.0	.85	.78	1.1	9.7	108	72	71	60	17
MIN	.85	.90	.71	.62	.60	.71	1.0	2.4	15	9.4	7.6	9.7
AC-FT	63	60	53	42	41	53	225	2160	2350	2380	1160	804
CAL YR 1980	TOTAL	4587.25	MEAN 12.5	MAX 74	MIN .71	AC-FT 9100						
WTR YR 1981	TOTAL	4737.75	MEAN 13.0	MAX 108	MIN .60	AC-FT 9400						

YELLOWSTONE RIVER BASIN

06311400 NORTH FORK POWDER RIVER BELOW PASS CREEK, NEAR MAYOWORTH, WY

LOCATION.--Lat 43°54'41", long 106°53'20", in NW¼NE¼SE¼ sec.36, T.46 N., R.84 W., Johnson County, Hydrologic Unit 10090201, on left bank 0.8 mi (1.3 km) downstream from Pass Creek, 1.2 mi (1.9 km) upstream from Hat Ranch, 7.2 mi (11.6 km) northwest of Mayoworth, and 13 mi (21 km) downstream from Dullknife Reservoir.

DRAINAGE AREA.--100 mi² (259 km²).

PERIOD OF RECORD.--October 1973 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 5,700 ft (1,737 m), from topographic map.

REMARKS.--Records fair. Some regulation for irrigation by Dullknife Reservoir 13 mi (21 km) upstream, capacity, 4,350 acre-ft (5.36 hm³).

AVERAGE DISCHARGE.--8 years, 33.6 ft³/s (0.952 m³/s), 24,340 acre-ft/yr (30.0 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 890 ft³/s (25.2 m³/s) July 31, 1974, gage height, 7.10 ft (2.164 m), from rating curve extended above 400 ft³/s (11.3 m³/s) on basis of slope-area measurement of peak flow; minimum daily discharge, 13 ft³/s (0.37 m³/s) Feb. 5, 1975.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 138 ft³/s (3.91 m³/s) May 27, gage height, 4.57 ft (1.393 m), minimum daily, 14 ft³/s (0.40 m³/s) Nov. 15.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	21	19	17	19	18	17	17	21	88	26	58	20
2	22	19	17	18	17	17	16	20	83	27	51	20
3	22	20	18	18	17	18	17	22	80	28	49	20
4	22	19	18	18	18	18	17	22	84	28	49	20
5	22	18	18	18	18	18	17	20	72	28	49	20
6	23	19	18	18	19	18	17	22	71	27	49	20
7	24	19	17	18	19	18	17	22	75	26	48	20
8	24	19	18	18	19	18	17	21	69	26	38	20
9	24	18	18	18	19	18	17	21	65	25	35	20
10	24	17	18	18	18	18	17	22	60	25	34	20
11	24	17	18	18	18	18	18	22	56	24	33	20
12	25	17	18	18	18	18	18	21	52	27	33	20
13	24	17	18	18	18	18	18	21	61	32	29	20
14	25	17	18	18	18	18	17	20	57	33	28	21
15	25	14	18	18	17	18	18	22	50	40	27	21
16	23	16	18	17	17	18	20	26	48	42	25	22
17	23	16	18	18	17	18	25	54	47	43	23	22
18	22	16	17	20	17	18	30	39	42	43	23	22
19	22	17	17	20	17	18	36	50	40	46	23	22
20	22	16	19	20	17	18	28	65	42	48	23	22
21	22	16	18	20	17	18	30	84	39	49	22	22
22	21	17	18	19	17	18	26	89	37	52	21	22
23	22	16	18	19	17	18	23	91	35	56	21	22
24	21	17	18	19	17	17	26	94	33	56	21	22
25	20	18	19	19	17	17	29	91	33	58	21	22
26	20	18	19	19	17	17	30	91	31	66	21	21
27	21	18	19	20	17	17	25	129	31	66	21	21
28	20	18	18	20	17	17	22	113	28	65	21	21
29	20	18	18	20	---	17	22	100	28	62	21	20
30	20	18	18	20	---	17	22	93	28	64	21	20
31	20	---	18	20	---	17	---	91	---	60	20	---
TOTAL	690	524	557	581	492	548	652	1619	1565	1298	958	625
MEAN	22.3	17.5	18.0	18.7	17.6	17.7	21.7	52.2	52.2	41.9	30.9	20.8
MAX	25	20	19	20	19	18	36	129	88	66	58	22
MIN	20	14	17	17	17	17	16	20	28	24	20	20
AC-FT	1370	1040	1100	1150	976	1090	1290	3210	3100	2570	1900	1240
CAL YR 1980	TOTAL	10548	MEAN 28.8	MAX 91	MIN 14	AC-FT 20920						
WTR YR 1981	TOTAL	10109	MEAN 27.7	MAX 129	MIN 14	AC-FT 20050						

LOCATION.--Lat 43°41'35", long 106°31'48", in NE¼NW¼SW¼ sec.13, T.43 N., R.81 W., Johnson County, Hydrologic Unit 10090202, at former gaging station at D Ranch, 600 ft (183 m) downstream from headgate of Sussex Irrigation Canal, 2.0 mi (3.2 km) downstream from confluence of North and Middle Forks, and 6.0 mi (9.7 km) east of Kaycee.

PERIOD OF RECORD.--Water years 1946-47, 1949-54, 1968 to current year.

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	TUR- BID- ITY (NTU)	OXYGEN, DIS- SOLVED (MG/L)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	HARD- NESS (MG/L AS CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)
OCT 08...	1500	40	1340	7.6	16.0	85	8.6	K100	540	120	60	100
NOV 12...	1120	128	1200	8.7	4.0	90	10.8	160	490	120	44	80
DEC 09...	1330	100	1310	8.0	.0	750	--	120	540	140	48	100
JAN 05...	1215	102	1180	8.4	2.0	--	11.8	K24	480	110	49	88
FEB 04...	1340	92	1380	7.9	.0	170	12.5	100	570	140	54	98
MAR 03...	1355	94	1210	8.1	6.0	30	11.6	180	490	120	49	92
APR 09...	1325	55	1255	8.1	11.0	25	10.2	K17	480	120	46	110
MAY 07...	1110	25	992	8.1	12.0	65	8.8	K830	380	90	37	68
JUN 11...	1530	80	900	8.0	21.5	70	7.3	270	--	--	--	--
JUL 07...	1125	1.2	1720	7.9	25.0	9.0	7.2	330	570	130	58	130
AUG 14...	1025	.62	1680	7.9	17.0	10	7.0	180	600	140	60	180
SEP 02...	1240	.78	1900	8.3	21.0	15	8.6	K66	--	--	--	--

[illegible]

YELLOWSTONE RIVER BASIN

06313000 SOUTH FORK POWDER RIVER NEAR KAYCEE, WY

LOCATION.--Lat 43°36'27", long 106°34'15", in SE¼SW¼NW¼ sec.15, T.42 N., R.81 W., Johnson County, Hydrologic Unit 10090203, 1.2 mi (1.9 km) upstream from bridge on old U.S. Highway 87, 1.8 mi (2.9 km) upstream from I-25 bridge, 8.5 mi (13.7 km) southeast of Kaycee, and 9.2 mi (14.8 km) upstream from mouth.

DRAINAGE AREA.--1,150 mi² (2,980 km²), approximately.

PERIOD OF RECORD.--Water years 1949-53, 1968 to December 1981 (discontinued).

WATER-QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	TUR- BID- ITY (NTU)	OXYGEN, DIS- SOLVED (MG/L)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	HARD- NESS (MG/L AS CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)
OCT 10...	0850	E.05	6200	7.5	3.5	4.0	7.0	K1400	1800	470	160	870
NOV 12...	1025	4.8	--	--	1.5	--	--	--	1300	360	87	400
DEC 10...	1005	2.3	--	--	.0	--	--	--	1500	410	110	560
JAN 05...	1345	13	3340	8.2	4.5	--	--	--	1200	330	97	480
FEB 06...	1015	1.5	4100	8.0	.5	--	--	--	1600	440	120	580
MAR 06...	1030	5.9	4260	8.3	4.5	--	--	--	1400	370	100	690
APR 09...	0925	8.1	4100	8.4	6.5	--	--	--	1100	300	87	630
MAY 07...	0950	16	--	--	13.0	--	--	--	870	220	75	670
JUN 11...	1630	1.4	--	--	28.5	--	--	--	1400	380	120	720
JUL 07...	1020	E.01	--	--	29.0	--	--	--	1700	470	130	680
AUG 14...	0920	E.02	--	--	17.5	--	--	--	1500	420	110	640
SEP 01...	1330	.01	--	--	23.0	--	--	--	1600	450	100	640

E-Estimate.

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

DATE	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LINITY LAB (MG/L AS CACO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, SUM OF CONSTITU- ENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)	SOLIDS, DIS- SOLVED (TONS PER DAY)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	PHOS- PHORUS, TOTAL (MG/L AS P)
OCT 10...	8.8	12	200	3000	120	1.2	6.2	4800	6.5	--	.00	.010
NOV 12...	4.9	6.4	130	1800	130	1.2	.0	2900	3.9	37.6	.50	.040
DEC 10...	6.3	9.0	210	2100	180	1.3	4.9	3510	4.8	21.8	2.4	.020
JAN 05...	6.0	8.2	160	1800	97	1.1	8.1	2920	4.0	103	2.2	.070
FEB 06...	6.3	9.5	220	2300	110	2.9	8.3	3700	5.0	15.0	2.1	.020
MAR 06...	8.2	11	180	2300	220	2.2	6.1	3810	5.2	60.7	2.3	.470
APR 09...	8.2	9.2	140	1800	170	1.2	--	--	--	67.8	2.0	.070
MAY 07...	10	9.0	180	1900	150	4.6	6.2	3120	4.2	135	2.3	.040
JUN 11...	8.2	14	70	2700	180	1.4	3.1	4200	5.7	15.9	.05	.020
JUL 07...	7.2	12	190	2700	150	2.2	11	4300	5.8	.12	.10	.040
AUG 14...	7.2	14	200	2300	140	1.2	11	3800	5.2	.21	.04	.050
SEP 01...	7.1	13	190	2400	140	3.4	11	3900	5.3	.11	.00	.030

06313180 DUGOUT CREEK TRIBUTARY NEAR MIDWEST, WY

LOCATION.--Lat 43°26'11", long 106°25'11", in SE¼NW¼ sec.14, T.40 N., R.80 W., Natrona County, Hydrologic Unit 10090204, on left bank 1.1 mi (1.8 km) north of Smoky Gap Road, 4.0 mi (6.4 km) upstream from mouth, and 6.5 mi (10.5 km) west of Midwest.

DRAINAGE AREA.--0.8 mi² (2.1 km²).

PERIOD OF RECORD.--Annual maximum, water years 1965-74. October 1974 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 4,930 ft (1,503 m), from topographic map. May 4, 1965, to Sept. 30, 1974, crest-stage gage at present site and datum. Sharp crested weir forms low flow control since June 2, 1980.

AVERAGE DISCHARGE.--7 years, 0.17 ft³/s (0.005 m³/s), 123 acre-ft/yr (151,700 m³/yr).

REMARKS.--Records poor. No gage-height record Apr. 10 to May 14. No diversion above station.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,590 ft³/s (45.0 m³/s) July 15, 1967, gage height, 9.10 ft (2.774 m), from floodmarks, from rating curve extended above 7 ft³/s (0.20 m³/s) on basis of slope-area measurement of peak flow; no flow for many days each year.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 252 ft³/s (7.14 m³/s) July 26, gage height, 4.05 ft (1.234 m), from rating curve based on theoretical weir computations; no other peak above base of 200 ft³/s (5.66 m³/s); no flow for many days.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
2	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
3	.00	.00	.00	.00	.00	.00	.00	.04	.00	.00	.00	.00
4	.00	.00	.00	.00	.00	.00	.00	.08	.00	.00	.00	.00
5	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
6	.00	.00	.00	.00	.00	.00	.00	.20	.00	.00	.00	.00
7	.00	.00	.00	.00	.00	.00	.00	.05	.00	.00	.00	.00
8	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
9	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.02	.00
10	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
11	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
12	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
13	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
14	.00	.00	.00	.00	.15	.00	.00	.00	.00	.00	.00	.00
15	.00	.00	.00	.00	.05	.00	.00	.00	.00	.00	.00	.00
16	.00	.00	.00	.00	.02	.00	.00	.00	.00	.00	.00	.00
17	.00	.00	.00	.00	.00	.00	.00	.10	.00	.00	.00	.00
18	.00	.00	.00	.00	.00	.00	.00	.01	.00	.00	.00	.00
19	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
20	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
21	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
22	.00	.00	.00	.00	.00	.00	.00	.67	.00	.00	.00	.00
23	.00	.00	.00	.00	.00	.00	.00	.33	.00	.00	.00	.00
24	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
25	.00	.00	.00	.00	.00	.00	.00	.00	.00	.05	.00	.00
26	.00	.00	.00	.00	.00	.00	.00	.00	.00	10	.00	.00
27	.00	.00	.00	.00	.00	.00	.00	.09	.00	.03	.00	.00
28	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
29	.00	.00	.00	.00	---	.00	.00	.00	.00	.00	.00	.00
30	.00	.00	.00	.00	---	.00	.00	.00	.00	.00	.00	.00
31	.00	---	.00	.00	---	.00	---	.00	---	.00	.00	---
TOTAL	.00	.00	.00	.00	.22	.00	.00	1.57	.00	10.08	.02	.00
MEAN	.000	.000	.000	.000	.008	.000	.000	.051	.000	.33	.001	.000
MAX	.00	.00	.00	.00	.15	.00	.00	.67	.00	10	.02	.00
MIN	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
AC-FT	.00	.00	.00	.00	.4	.00	.00	3.1	.00	20	.04	.00
CAL YR 1980	TOTAL	7.02	MEAN .019	MAX 2.0	MIN .00	AC-FT 14						
WTR YR 1981	TOTAL	11.89	MEAN .033	MAX 10	MIN .00	AC-FT 24						

YELLOWSTONE RIVER BASIN

06313400 SALT CREEK NEAR SUSSEX, WY

LOCATION.--Lat 43°37'19", long 106°22'04", in NE¼NE¼SE¼ sec.8, T.42 N., R.79 W., Johnson County, Hydrologic Unit 10090204, on left bank 200 ft (61 m) upstream from bridge on West Sussex Dugout oil field road, 6.3 mi (10.1 km) southwest of Sussex, and 12.6 mi (20.3 km) upstream from mouth.

DRAINAGE AREA.--769 mi² (1,992 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--April 1976 to September 1981 (discontinued).

GAGE.--Water-stage recorder. Altitude of gage is 4,480 ft (1,366 m), from topographic map.

REMARKS.--Records poor. Some regulation by Lower Salt Creek Reservoir, capacity, 2,710 acre-ft (3.34 hm³).

AVERAGE DISCHARGE.--5 years, 50.3 ft³/s (1.424 m³/s), 36,440 acre-ft/yr (44.9 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 10,200 ft³/s (289 m³/s) May 18, 1978, gage height, 9.88 ft (3.011 m), from floodmark, from rating curve extended above 2,300 ft³/s (65 m³/s) on basis of slope-area measurement of peak flow; minimum daily discharge, 12 ft³/s (0.34 m³/s) Aug. 21-25, Sept. 5, 6, 17, 18, 1976.

Peak discharges for April 1976 to September above base of 700 ft³/s (19.8 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
May 30, 1976	0900	1,640 46.4	5.0 1.52	Mar. 8, 1978	0200	c2,750 77.9	d8.42 2.566
May 31, 1976	0400	*3,480 98.6	6.43 1.960	May 18, 1978	1230	*10,200 289	9.88 3.011
June 15, 1976	0230	2,000 56.6	5.33 1.625	July 9, 1978	0700	773 21.9	3.97 1.210
July 3, 1976	0500	930 26.3	4.07 1.241	July 21, 1978	a1430	4,750 135	b7.22 2.201
Oct. 3, 1976	a2100	2,330 66.0	b5.60 1.707	1979 - No peak above base.			
May 15, 1977	1700	2,430 68.8	5.68 1.731	Feb. 21, 1980	0200	*a867 24.6	d5.11 1.558
June 12, 1977	2130	*2,620 74.2	5.80 1.768				
July 24, 1977	1200	1,320 37.4	4.66 1.420				
Sep. 30, 1977	1600	853 24.2	4.04 1.231				

a-About.

b-From floodmarks.

c-Estimate of peak caused by sudden release of water from ice dams.

d-Backwater from ice.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 700 ft³/s (19.8 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
July 13	1100	1,240 35.1	4.64 1.414	July 18	0200	*2,090 59.2	5.45 1.661

Minimum daily discharge, 18 ft³/s (0.51 m³/s) Nov. 18.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	85	113	82	78	50	122	154	50	535	297	181	91
2	80	113	83	77	47	120	155	48	505	312	192	88
3	78	114	83	73	45	119	156	52	485	477	188	92
4	80	115	84	70	43	118	155	123	529	573	140	100
5	76	117	86	68	41	114	149	137	605	547	113	102
6	72	120	87	66	41	112	157	112	616	433	100	116
7	69	123	86	63	42	110	166	101	700	351	93	156
8	69	124	85	61	42	109	157	100	1080	295	88	120
9	69	122	84	60	43	107	136	103	1200	251	89	108
10	69	120	83	58	40	105	138	99	1210	246	103	103
11	69	116	83	56	39	108	179	91	1260	234	115	130
12	68	108	83	54	40	109	222	91	1100	218	136	171
13	65	101	84	53	41	111	223	93	796	334	175	146
14	72	96	85	52	43	114	202	82	621	329	187	122
15	87	91	87	52	45	118	165	79	554	289	176	113
16	107	86	87	52	48	119	160	88	476	253	161	113
17	124	79	88	52	51	121	131	131	379	226	148	106
18	137	72	90	52	55	125	116	227	294	284	141	98
19	145	73	92	53	58	129	108	278	249	290	123	88
20	148	75	94	53	63	131	113	221	223	246	108	83
21	148	76	95	53	70	135	116	192	191	205	97	78
22	145	77	96	53	77	140	111	202	180	177	92	73
23	132	78	96	54	86	145	100	337	166	160	89	71
24	120	79	95	54	100	150	93	338	175	166	86	72
25	110	79	95	54	110	153	80	358	181	163	84	67
26	106	80	93	54	120	154	70	339	166	181	93	68
27	105	80	90	55	127	153	64	336	164	215	102	68
28	109	81	86	55	125	153	59	400	251	237	98	68
29	111	81	84	55	---	152	50	560	420	231	98	64
30	112	82	83	55	---	152	50	620	382	205	96	61
31	112	---	81	53	---	153	---	569	---	193	95	---
TOTAL	3079	2871	2710	1798	1732	3961	3935	6557	15693	8618	3787	2936
MEAN	99.3	95.7	87.4	58.0	61.9	128	131	212	523	278	122	97.9
MAX	148	124	96	78	127	154	223	620	1260	573	192	171
MIN	65	72	81	52	39	105	50	48	164	160	84	61
AC-FT	6110	5690	5380	3570	3440	7860	7810	13010	31130	17090	7510	5820
CAL YR 1980	TOTAL	188608	MEAN 515	MAX 4400	MIN 48	AC-FT 374100						
WTR YR 1981	TOTAL	57677	MEAN 158	MAX 1260	MIN 39	AC-FT 114400						

06313400 SALT CREEK NEAR SUSSEX, WY--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1949, 1952, 1968 to September 1981 (discontinued).

WATER-QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	TUR- BID- ITY (NTU)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN DEMAND, BIO- CHEM- ICAL, 5 DAY (MG/L)	HARD- NESS (MG/L AS CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)
OCT										
10...	1055	28	6660	8.4	6.0	--	10.2	4.4	290	53
NOV										
06...	1030	25	5850	8.3	8.0	--	9.2	4.6	310	61
DEC										
09...	0940	23	5510	8.0	.5	--	3.2	4.7	390	89
JAN										
07...	1015	29	5550	8.3	.0	--	11.0	6.4	320	64
FEB										
04...	0930	28	6880	8.1	.0	--	4.6	5.6	350	68
MAR										
03...	0955	39	6000	7.9	3.5	--	10.2	6.5	350	68
11...	1100	--	6600	8.4	5.0	26	11.2	--	--	--
20...	1705	37	--	--	11.0	--	--	--	--	--
APR										
07...	1620	34	6380	8.2	12.5	--	7.8	5.5	380	67
MAY										
04...	1455	58	5810	8.3	18.0	--	6.9	7.0	330	59
27...	1400	62	--	--	17.0	--	--	--	--	--
JUN										
11...	1120	32	6020	8.3	19.5	--	7.6	3.0	270	46
JUL										
06...	1315	26	6020	8.1	29.5	--	6.4	4.2	220	37
18...	0830	659	--	--	16.5	--	--	--	--	--
27...	1645	276	--	--	21.5	--	--	--	--	--
AUG										
12...	0955	33	5140	8.5	17.5	--	7.7	6.0	400	65
SEP										
01...	0930	26	5930	8.0	13.0	--	8.6	4.1	--	--

DATE	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	POTAS- SIUM 40 DIS- SOLVED (PCI/L AS K40)	ALKA- LINITY LAB (MG/L AS CACO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SiO2)
OCT										
10...	37	1400	36	23	17	660	720	1400	1.5	23
NOV										
06...	38	1400	35	14	--	680	790	1300	1.6	27
DEC										
09...	42	1600	35	20	--	770	970	1400	3.7	16
JAN										
07...	39	1400	34	18	--	750	850	1200	3.8	29
FEB										
04...	43	1600	37	20	--	790	910	1400	9.2	24
MAR										
03...	43	1400	33	18	--	740	780	1300	3.1	25
11...	--	--	--	--	--	--	--	--	--	--
20...	--	--	--	--	--	--	--	--	--	--
APR										
07...	50	1400	32	16	--	630	940	1300	2.8	24
MAY										
04...	45	1300	31	15	--	640	900	1100	4.5	18
27...	--	--	--	--	--	--	--	--	--	--
JUN										
11...	37	1500	40	17	--	710	840	1500	3.9	24
JUL										
06...	31	1400	41	14	--	730	660	1200	3.9	33
18...	--	--	--	--	--	--	--	--	--	--
27...	--	--	--	--	--	--	--	--	--	--
AUG										
12...	57	1100	24	12	--	570	700	1000	4.5	20
SEP										
01...	--	--	--	18	--	620	870	1300	4.0	23

YELLOWSTONE RIVER BASIN

06313400 SALT CREEK NEAR SUSSEX, WY--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	SOLIDS, SUM OF CONSTITUENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)	SOLIDS, DIS- SOLVED (TONS PER DAY)	NITRO- GEN, NITRITE TOTAL (MG/L AS N)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N)	NITRO- GEN, AMMONIA TOTAL (MG/L AS NH4)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N)
OCT 10...	4050	5.5	306	--	.00	.00	.030	.04	.97
NOV 06...	4040	5.5	273	--	.00	.13	.210	.25	.99
DEC 09...	4620	6.3	287	--	.00	.01	.850	1.0	.45
JAN 07...	4050	5.5	317	--	.00	.02	.530	.64	.30
FEB 04...	4550	6.2	344	--	.00	.06	.910	1.1	.39
MAR 03...	4080	5.5	430	--	.00	.04	.150	--	1.1
11...	--	--	--	--	--	--	--	--	--
20...	--	--	--	--	--	--	--	--	--
APR 07...	4190	5.7	385	--	.01	.12	.080	--	1.0
MAY 04...	3830	5.2	600	--	.02	.03	.240	--	1.9
27...	--	--	--	--	--	--	--	--	--
JUN 11...	4400	6.0	380	.010	.00	.05	.080	--	.77
JUL 06...	3800	5.2	267	--	.01	.00	.130	--	1.2
18...	--	--	--	--	--	--	--	--	--
27...	--	--	--	--	--	--	--	--	--
AUG 12...	3310	4.5	295	--	.00	.09	.170	--	2.2
SEP 01...	--	5.1	261	--	.16	.00	.130	--	.87

DATE	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO- GEN, TOTAL (MG/L AS N)	NITRO- GEN, TOTAL (MG/L AS NO3)	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHORUS TOTAL (MG/L AS PO4)	CYANIDE TOTAL (MG/L AS CN)	PHENOLS (UG/L)	SEDI- MENT, SUS- PENDE (MG/L)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (T/DAY)
OCT 10...	1.00	1.0	4.4	.110	.34	.00	15	316	24
NOV 06...	1.20	1.2	5.3	.010	.64	--	3	1120	76
DEC 09...	1.30	1.3	5.8	.010	.18	--	--	61	3.8
JAN 07...	.83	.83	3.7	.070	.21	--	--	716	56
FEB 04...	1.30	1.3	5.8	.090	.28	--	--	470	36
MAR 03...	1.20	1.2	5.3	.150	.46	.00	11	1420	150
11...	--	--	--	--	--	--	--	--	--
20...	--	--	--	--	--	--	--	996	100
APR 07...	1.10	1.1	4.9	.150	.46	--	--	790	73
MAY 04...	2.10	2.1	9.4	.360	1.1	--	--	1500	235
27...	--	--	--	--	--	--	--	1720	288
JUN 11...	.85	.85	3.8	.130	.40	--	--	568	49
JUL 06...	1.30	1.3	5.8	.190	.58	--	--	509	36
18...	--	--	--	--	--	--	--	64000	114000
27...	--	--	--	--	--	--	--	28800	21500
AUG 12...	2.40	2.4	11	.430	1.3	--	--	792	71
SEP 01...	1.00	1.2	5.1	.050	.15	--	--	134	9.4

WATER-QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

[illegible][illegible]

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WATER-QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	TIME	GROSS ALPHA, DIS- SOLVED (UG/L AS U-NAT)	GROSS ALPHA, SUSP. TOTAL (UG/L AS U-NAT)	GROSS BETA, DIS- SOLVED (PCI/L AS CS-137)	GROSS BETA, SUSP. TOTAL (PCI/L AS CS-137)	GROSS BETA, DIS- SOLVED (PCI/L AS SR/ YT-90)	GROSS BETA, SUSP. TOTAL (PCI/L AS SR/ YT-90)	RADIUM 226, DIS- SOLVED, RADON METHOD (PCI/L AS U)	URANIUM NATURAL DIS- SOLVED (UG/L AS U)	GROSS ALPHA, DIS- SOLVED (PCI/L AS U-NAT)	GROSS ALPHA, SUSP. TOTAL (PCI/L AS U-NAT)
OCT 10...	1055	<77	6.2	<38	3.8	<37	3.7	.17	2.2	<52	4.2

DATE	TIME	TEMPER- ATURE (DEG C)	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SED. SUSP. FALL DIAM. % FINER THAN .004 MM	SED. SUSP. FALL DIAM. % FINER THAN .016 MM	SED. SUSP. FALL DIAM. % FINER THAN .062 MM	SED. SUSP. FALL DIAM. % FINER THAN .125 MM	SED. SUSP. FALL DIAM. % FINER THAN .250 MM	NUMBER OF SAM- PLING POINTS	BED MAT. FALL DIAM. % FINER THAN .062 MM
NOV 06...	1030	8.0	25	--	--	--	--	--	5	1
MAY 27...	1400	17.0	62	51	75	87	95	100	--	--
JUL 18...	0830	16.5	659	56	84	98	100	--	3	2
27...	1645	21.5	276	63	88	96	98	100	--	--

[illegible]

YELLOWSTONE RIVER BASIN

06313500 POWDER RIVER AT SUSSEX, WY

LOCATION.--Lat 43°41'54", long 106°17'50", in NE¼SE¼NW¼ sec.13, T.43 N., R.79 W., Johnson County, Hydrologic Unit 10090202, on left bank, 10 ft (3.0 m) downstream from bridge on State Highway 192, 0.2 mi (0.3 km) west of Sussex, and 3.2 mi (5.1 km) downstream from Salt Creek.

DRAINAGE AREA.--3,090 mi² (8,000 km²), approximately.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--April 1938 to June 1940, February 1950 to September 1957, October 1977 to current year.

REVISED RECORDS.--WDR WY-80-1: 1979(M), 1979.

GAGE.--Water-stage recorder. Datum of gage is 4,362.95 ft (1,329.827 m), National Geodetic Vertical Datum of 1929. Prior to June 30, 1940, nonrecording gage about 500 ft (152 m) downstream at datum 0.28 ft (0.085 m) higher. Feb. 8, 1950, to Sept. 30, 1957, water-stage recorder about 600 ft (183 m) downstream at datum 0.79 ft (0.241 m) lower.

REMARKS.--Records poor. Numerous small reservoirs and diversions for irrigation of about 17,000 acres (68.8 km²) above station.

AVERAGE DISCHARGE.--12 years (water years 1939, 1951-57, 1978-81), 183 ft³/s (5.183 m³/s), 132,600 acre-ft/yr (163 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 32,500 ft³/s (920 m³/s) May 23, 1952, gage height, 12.6 ft (3.84 m), from floodmarks, site and datum then in use, from rating curve extended above 1,500 ft³/s (42.5 m³/s) on basis of slope-area measurement of peak flow; minimum daily, 1.5 ft³/s (0.042 m³/s) Aug. 25, 1939.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Sept. 30, 1923, reached a stage of 12.8 ft (3.60 m) present datum, at site about 600 ft (183 m) downstream, from information by local resident.

EXTREMES FOR CURRENT YEAR.--Peak discharge above base of 2,000 ft³/s (56.6 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
July 27	1330	*3,720 105	6.20 1.890

Minimum daily discharge, 13 ft³/s (0.37 m³/s) July 24.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	58	140	110	146	107	146	137	93	334	30	56	25
2	61	134	82	149	90	149	123	77	291	29	49	25
3	63	137	108	143	81	149	134	91	280	29	44	25
4	68	137	162	143	111	149	158	182	408	29	42	26
5	66	137	158	143	128	149	161	155	225	31	42	25
6	70	140	145	143	127	143	143	100	193	32	66	29
7	70	143	132	137	119	140	140	137	175	27	43	32
8	64	137	120	112	103	140	134	112	158	25	40	29
9	66	140	110	129	91	140	102	87	149	26	44	27
10	68	143	143	135	75	140	100	75	137	27	117	27
11	87	143	168	117	80	137	107	66	140	27	63	27
12	79	143	172	134	86	137	98	61	117	28	43	27
13	73	161	137	127	102	137	91	70	125	161	39	25
14	75	158	140	122	170	137	98	70	172	110	40	25
15	85	110	158	114	230	137	100	60	130	51	39	25
16	105	100	168	100	280	134	100	56	110	36	37	25
17	123	68	186	95	255	146	115	381	93	32	38	26
18	123	90	155	109	233	179	190	791	81	563	35	27
19	115	108	100	116	215	193	193	491	73	137	33	27
20	107	113	80	115	200	186	291	328	67	75	31	27
21	100	118	90	118	185	225	271	363	58	30	31	27
22	96	124	168	128	170	213	238	413	51	20	31	28
23	93	120	182	147	175	209	193	1040	45	15	31	28
24	96	101	77	160	168	179	146	965	41	13	49	29
25	91	92	120	154	158	152	131	624	38	15	33	31
26	91	99	152	137	158	143	221	624	36	25	29	30
27	105	100	175	130	161	152	230	846	34	1330	28	32
28	143	112	158	130	149	197	175	953	32	400	27	33
29	143	128	143	130	---	182	131	642	32	123	27	36
30	140	133	146	130	---	149	96	462	32	96	27	43
31	143	---	146	126	---	149	---	400	---	68	28	---
TOTAL	2867	3709	4291	4019	4207	4918	4547	10815	3857	3640	1282	848
MEAN	92.5	124	138	130	150	159	152	349	129	117	41.4	28.3
MAX	143	161	186	160	280	225	291	1040	408	1330	117	43
MIN	58	68	77	95	75	134	91	56	32	13	27	25
AC-FT	5690	7360	8510	7970	8340	9750	9020	21450	7650	7220	2540	1680
CAL YR 1980	TOTAL	55691	MEAN 152	MAX 2520	MIN 11	AC-FT 110500						
WTR YR 1981	TOTAL	49000	MEAN 134	MAX 1330	MIN 13	AC-FT 97190						

06313500 POWDER RIVER AT SUSSEX, WY--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1949-53, 1967-68, 1976 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	STREP- TOCOC- CI, FECAL, KF AGAR (COLS. PER 100 ML)	HARD- NESS (MG/L AS CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)
OCT 08...	1100	64	3650	7.8	12.0	9.0	K340	100	420	95	44
NOV 06...	1345	143	2450	8.3	9.5	9.4	K54	K51	500	120	49
DEC 09...	1200	101	2250	7.9	.5	10.8	K13	K17	600	150	55
JAN 07...	1210	126	2680	8.2	.5	11.5	--	--	530	130	51
FEB 04...	1150	88	3290	7.2	.0	10.1	--	--	620	150	60
MAR 03...	1220	142	2660	8.0	5.0	11.2	--	--	540	130	52
APR 07...	1220	158	2580	8.2	8.0	9.7	--	--	530	130	50
MAY 04...	1045	186	2980	8.5	9.0	10.0	--	--	460	110	46
18...	1015	904	1700	7.8	9.5	8.6	--	--	--	--	--
22...	1925	355	--	--	12.0	--	--	--	--	--	--
27...	1600	580	--	--	15.0	--	--	--	--	--	--
JUN 04...	1205	407	--	--	18.0	--	--	--	--	--	--
11...	1400	146	2370	8.2	22.5	7.2	--	--	450	110	43
JUL 06...	1055	35	4800	8.3	22.0	6.9	--	--	470	93	57
27...	1445	3310	--	--	18.5	--	--	--	--	--	--
AUG 12...	1255	45	3900	8.4	22.0	7.0	--	--	480	110	49
SEP 01...	1110	26	5570	8.5	16.0	8.6	--	--	390	73	51

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

DATE	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	POTAS- SIUM 40 DIS- SOLVED (PCI/L AS K40)	ALKA- LINITY LAB (MG/L AS CACO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, SUM OF CONSTITU- ENTS, DIS- SOLVED (MG/L)
OCT 08...	620	14	11	8.2	--	590	630	1.2	13	2350	--
NOV 06...	370	7.2	7.1	5.3	--	570	310	.7	10	1570	--
DEC 09...	350	6.2	10	7.5	--	600	260	.8	12	1760	--
JAN 07...	440	8.3	6.1	4.6	--	570	350	.7	12	1750	--
FEB 04...	550	9.6	7.7	5.7	--	770	490	.8	15	2260	--
MAR 03...	450	8.4	6.3	4.7	--	640	360	.6	11	1770	--
APR 07...	420	7.9	6.3	4.7	280	690	290	.8	9.9	1750	1770
MAY 04...	500	10	7.3	5.4	--	670	450	.9	10	2040	--
18...	--	--	--	--	--	--	--	--	--	--	--
22...	--	--	--	--	--	--	--	--	--	--	--
27...	--	--	--	--	--	--	--	--	--	--	--
JUN 04...	--	--	--	--	--	--	--	--	--	--	--
11...	400	8.2	6.2	4.6	280	530	330	.7	11	1560	1600
JUL 06...	1000	20	18	13	470	1000	840	1.6	16	3430	3310
27...	--	--	--	--	--	--	--	--	--	--	--
AUG 12...	740	15	12	--	350	900	650	1.2	11	2610	2680
SEP 01...	1200	26	19	--	--	870	1200	.0	.6	3680	--

YELLOWSTONE RIVER BASIN

06313500 POWDER RIVER AT SUSSEX, WY--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

[illegible][illegible]

WATER-QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

[illegible]

YELLOWSTONE RIVER BASIN

06313500 POWDER RIVER AT SUSSEX, WY--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	BORON, DIS- SOLVED (UG/L AS B)	CADMIUM TOTAL RECOV- ERABLE (UG/L AS CD)	CADMIUM SUS- PENDE RECOV- ERABLE (UG/L AS CD)	CADMIUM DIS- SOLVED (UG/L AS CD)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR)	CHRO- MIUM, SUS- PENDE RECOV. (UG/L AS CR)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR)	COBALT, TOTAL RECOV- ERABLE (UG/L AS CO)	COBALT, DIS- SOLVED (UG/L AS CO)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU)	COPPER, SUS- PENDE RECOV- ERABLE (UG/L AS CU)
OCT 08...	860	0	0	2	10	10	0	0	<3	11	0
NOV 06...	550	--	--	--	--	--	--	--	--	--	--
DEC 09...	500	--	--	--	--	--	--	--	--	--	--
JAN 07...	520	0	0	0	0	0	10	--	--	10	10
FEB 04...	550	--	--	--	--	--	--	--	--	--	--
MAR 03...	520	--	--	--	--	--	--	--	--	--	--
APR 07...	420	0	0	0	20	10	10	--	--	13	2
MAY 04...	560	--	--	--	--	--	--	--	--	--	--
JUN 11...	520	--	--	--	--	--	--	--	--	--	--
JUL 06...	3400	0	0	0	50	40	10	--	--	60	47
AUG 12...	980	--	--	--	--	--	--	--	--	--	--
SEP 01...	1700	--	--	--	--	--	--	--	--	--	--

DATE	COPPER, DIS- SOLVED (UG/L AS CU)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	IRON, SUS- PENDE RECOV- ERABLE (UG/L AS FE)	IRON, DIS- SOLVED (UG/L AS FE)	LEAD, TOTAL RECOV- ERABLE (UG/L AS PB)	LEAD, SUS- PENDE RECOV- ERABLE (UG/L AS PB)	LEAD, DIS- SOLVED (UG/L AS PB)	LITHIUM TOTAL RECOV- ERABLE (UG/L AS LI)	LITHIUM SUS- PENDE RECOV- ERABLE (UG/L AS LI)	LITHIUM DIS- SOLVED (UG/L AS LI)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)
OCT 08...	15	--	--	27	6	--	<10	180	20	160	140
NOV 06...	--	--	--	10	--	--	--	--	--	--	--
DEC 09...	--	--	--	60	--	--	--	--	--	--	--
JAN 07...	0	5600	5600	50	6	4	2	--	--	--	180
FEB 04...	--	2500	2400	70	--	--	--	--	--	--	140
MAR 03...	--	7700	7700	40	--	--	--	--	--	--	220
APR 07...	11	7600	7600	40	7	4	3	120	0	120	210
MAY 04...	--	31000	31000	40	--	--	--	--	--	--	720
JUN 11...	--	9900	9800	70	--	--	--	--	--	--	210
JUL 06...	13	54000	54000	50	58	58	0	--	--	--	80
AUG 12...	--	59000	59000	90	--	--	--	--	--	--	940
SEP 01...	--	5400	5300	80	--	--	--	--	--	--	140

YELLOWSTONE RIVER BASIN

06313500 POWDER RIVER AT SUSSEX, WY--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

[illegible]

06313500 POWDER RIVER NEAR SUSSEX, WY--Continued

QUALITATIVE AND ASSOCIATED QUANTITATIVE ANALYSES OF BIOLOGICAL DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

PHYTOPLANKTON ANALYSES

DATE	OCT 8,80		NOV 6,80		DEC 9,80		JAN 7,81		FEB 4,81	
TIME	1100		1345		1200		1210		1150	
TOTAL CELLS/ML	4800		2500		1100		6800		710	
DIVERSITY: DIVISION	0.3		1.0		1.1		0.8		1.1	
..CLASS	0.3		1.0		1.1		0.8		1.1	
...ORDER	0.4		1.7		2.5		1.3		2.3	
....FAMILY	0.4		2.0		2.9		1.4		2.3	
....GENUS	0.4		2.6		3.4		1.5		2.4	
ORGANISM	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT
BACILLARIOPHYTA (DIATOMS)										
..BACILLARIOPHYCEAE										
...ACHNANTHALES										
....ACHNANTHACEAE										
....ACHNANTHES	--	-	14	1	55	5	70	1	--	-
....COCCONEIS	*	0	--	-	--	-	--	-	--	-
....RHOICOSPHENIA	--	-	--	-	--	-	52	1	14	2
..BACILLARIALES										
...NITZSCHIA										
....HANTZSCHIA	--	-	--	-	--	-	--	-	14	2
....NITZSCHIA	64	1	220	9	210#	19	330	5	190#	27
...EPITHEMIALES										
....EPITHEMIACEAE										
....EPITHEMIA	--	-	--	-	--	-	--	-	--	-
....RHOPALODIA	--	-	14	1	--	-	--	-	--	-
..EUNOTIALES										
...EUNOTIACEAE										
....EUNOTIA	--	-	--	-	--	-	--	-	--	-
..EUPODISCALES										
...COSCINODISCACEAE										
....CYCLOTELLA	--	-	14	1	--	-	--	-	--	-
....MELOSIRA	--	-	--	-	--	-	--	-	--	-
..FRAGILARIALES										
...FRAGILARIACEAE										
....DIATOMA	--	-	86	4	41	4	170	3	--	-
....FRAGILARIA	--	-	--	-	14	1	--	-	--	-
....SYNEDRA	--	-	--	-	27	3	87	1	27	4
..NAVICULALES										
...CYMBELLACEAE										
....AMPHORA	--	-	--	-	--	-	--	-	14	2
....CYMBELLA	--	-	140	6	41	4	260	4	--	-
...ENTOMONEIDACEAE										
....ENTOMONEIS	--	-	--	-	--	-	--	-	--	-
..GOMPHONEMACEAE										
....GOMPHONEMA	*	0	86	4	110	10	100	2	--	-
...NAVICULACEAE										
....AMPHIPLEURA	--	-	57	2	--	-	--	-	--	-
....CALONEIS	--	-	--	-	14	1	--	-	--	-
....NAVICULA	170	4	230	9	180#	17	310	5	120#	17
..SURIPELLALES										
...SURIPELLACEAE										
....SURIPELLA	--	-	29	1	41	4	100	2	41	6
CHLOROPHYTA (GREEN ALGAE)										
..CHLOROPHYCEAE										
...CHLOROCOCCALES										
....CHLOROCOCCACEAE										
....SCHROEDERIA	--	-	14	1	--	-	--	-	--	-
...OOCYSTACEAE										
....ANKISTRODESMUS	*	0	--	-	27	3	--	-	--	-
...SCENEDESMACEAE										
....SCENEDESMUS	--	-	--	-	--	-	--	-	--	-
....TETRASTRUM	--	-	--	-	--	-	70	1	--	-
..VOLVOCALES										
...CHLAMYDOMONADACEAE										
....CHLAMYDOMONAS	--	-	--	-	14	1	--	-	--	-
CHRYSTOPHYTA										
..CHRYSTOPHYCEAE										
...OCHROMONADALES										
....OCHROMONADACEAE										
....OCHROMONAS	--	-	--	-	--	-	--	-	14	2
CRYPTOPHYTA (CRYPTOMONADS)										
..CRYPTOPHYCEAE										
...CRYPTOMONADALES										
....CRYPTOMONADACEAE										
....CRYPTOMONAS	--	-	--	-	14	1	--	-	--	-

NOTE: # - DOMINANT ORGANISM; EQUAL TO OR GREATER THAN 15%

* - OBSERVED ORGANISM, MAY NOT HAVE BEEN COUNTED; LESS THAN 1/2%

06313500 POWDER RIVER NEAR SUSSEX, WY--Continued

QUALITATIVE AND ASSOCIATED QUANTITATIVE ANALYSES OF BIOLOGICAL DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

PHYTOPLANKTON ANALYSES

DATE TIME	OCT 8,80 1100		NOV 6,80 1345		DEC 9,80 1200		JAN 7,81 1210		FEB 4,81 1150	
ORGANISM	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT
CYANOPHYTA (BLUE-GREEN ALGAE)										
.CYANOPHYCEAE										
..CHROOCOCCALES										
...CHROOCOCCACEAE										
....ANACYSTIS	--	-	--	-	--	-	--	-	260#	37
..OSCILLATORIALES										
...OSCILLATORIACEAE										
....LYNGBYA	--	-	390#	16	140	13	--	-	--	-
....OSCILLATORIA	4500#	94	1100#	47	150	14	5200#	77	--	-
....SPIRULINA	--	-	--	-	--	-	--	-	14	2
EUGLENOPHYTA (EUGLENOIDS)										
.EUGLENOPHYCEAE										
..EUGLENALES										
...EUGLENACEAE										
....EUGLENA	--	-	14	1	--	-	--	-	--	-
....TRACHELOMONAS	--	-	--	-	--	-	--	-	--	-

NOTE: # - DOMINANT ORGANISM; EQUAL TO OR GREATER THAN 15%

* - OBSERVED ORGANISM, MAY NOT HAVE BEEN COUNTED; LESS THAN 1/2%

06313500 POWDER RIVER NEAR SUSSEX, WY--Continued

QUALITATIVE AND ASSOCIATED QUANTITATIVE ANALYSES OF BIOLOGICAL DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

PHYTOPLANKTON ANALYSES

DATE	MAR 3,81		APR 7,81		MAY 4,81		JUN 11,81		SEP 1,81	
TIME	1220		1220		1045		1400		1110	
TOTAL CELLS/ML	4500		4100		3700		3400		1400	
DIVERSITY: DIVISION	1.1		1.3		0.5		1.2		0.8	
..CLASS	1.1		1.3		0.5		1.2		0.8	
...ORDER	2.1		2.3		2.2		2.9		0.9	
....FAMILY	2.6		2.6		3.0		3.1		0.9	
....GENUS	2.7		2.6		3.2		3.2		0.9	
ORGANISM	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT
BACILLARIOPHYTA (DIATOMS)										
..BACILLARIOPHYCEAE										
...ACHNANTHALES										
....ACHNANTHACEAE										
.....ACHNANTHES	120	3	280	7	--	-	240	7	--	-
.....COCCONEIS	--	-	--	-	30	1	--	-	--	-
.....RHOICOSPHENIA	94	2	*	0	30	1	27	1	--	-
..BACILLARIALES										
...NITZSCHIALES										
....HANTZSCHIA	--	-	--	-	--	-	--	-	--	-
.....NITZSCHIA	300	7	320	8	600#	16	620#	18	220#	16
...EPITHEMIALES										
....EPITHEMIALES										
.....EPITHEMIA	--	-	*	0	--	-	--	-	--	-
.....RHOPALODIA	--	-	--	-	--	-	--	-	--	-
..EUNOTIALES										
...EUNOTIACEAE										
.....EUNOTIA	--	-	*	0	--	-	--	-	--	-
..EUPODISCALES										
...COSCINODISCACEAE										
....CYCLOTELLA	23	1	*	0	--	-	1000#	30	--	-
....MELOSIRA	94	2	--	-	--	-	--	-	--	-
..FRAGILARIALES										
...FRAGILARIALES										
....DIATOMA	94	2	*	0	540	15	27	1	--	-
....FRAGILARIA	--	-	--	-	60	2	--	-	--	-
....SYNEDRA	47	1	40	1	60	2	27	1	--	-
..NAVICULALES										
...CYMBELLACEAE										
....AMPHORA	94	2	--	-	60	2	--	-	--	-
....CYMBELLA	370	8	180	4	300	8	110	3	--	-
...ENTOMONEIDACEAE										
....ENTOMONEIS	--	-	--	-	150	4	--	-	--	-
...GOMPHONEMACEAE										
....GOMPHONEMA	190	4	140	3	330	9	53	2	--	-
...NAVICULACEAE										
....AMPHIPLEURA	--	-	--	-	--	-	--	-	--	-
....CALONEIS	--	-	--	-	30	1	--	-	--	-
....NAVICULA	660	14	690#	17	840#	23	240	7	86	6
..SURIPELLALES										
...SURIPELLACEAE										
....SURIPELLA	230	5	240	6	360	10	80	2	--	-
CHLOROPHYTA (GREEN ALGAE)										
..CHLOROPHYCEAE										
...CHLOROCOCCALES										
....CHLOROCOCCACEAE										
.....SCHROEDERIA	--	-	--	-	--	-	--	-	--	-
...OOCYSTACEAE										
.....ANKISTRODESMUS	--	-	*	0	--	-	110	3	--	-
...SCENEDESMACEAE										
....SCENEDESMUS	--	-	160	4	--	-	110	3	--	-
...TETRASTRUM	--	-	--	-	--	-	--	-	--	-
..VOLVOCALES										
...CHLAMYDOMONADACEAE										
....CHLAMYDOMONAS	120	3	--	-	--	-	80	2	--	-
CHRYSTOPHYTA										
..CHRYSTOPHYCEAE										
...OCHROMONADALES										
....OCHROMONADACEAE										
.....OCHROMONAS	--	-	--	-	--	-	--	-	--	-
CRYPTOPHYTA (CRYPTOMONADS)										
..CRYPTOPHYCEAE										
...CRYPTOMONADALES										
....CRYPTOMONADACEAE										
.....CRYPTOMONAS	--	-	--	-	--	-	--	-	--	-

NOTE: # - DOMINANT ORGANISM; EQUAL TO OR GREATER THAN 15%

* - OBSERVED ORGANISM, MAY NOT HAVE BEEN COUNTED; LESS THAN 1/2%

06313500 POWDER RIVER NEAR SUSSEX, WY--Continued

QUALITATIVE AND ASSOCIATED QUANTITATIVE ANALYSES OF BIOLOGICAL DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

PHYTOPLANKTON ANALYSES

DATE TIME	MAR 3,81 1220		APR 7,81 1220		MAY 4,81 1045		JUN 11,81 1400		SEP 1,81 1110	
ORGANISM	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT
CYANOPHYTA (BLUE-GREEN ALGAE)										
.CYANOPHYCEAE										
..CHROOCOCCALES										
...CHROOCOCCACEAE										
....ANACYSTIS	--	-	--	-	--	-	110	3	--	-
..OSCILLATORIALES										
...OSCILLATORIACEAE										
....LYNGBYA	--	-	--	-	--	-	--	-	--	-
....OSCILLATORIA	2100#	46	1900#	47	300	8	510	15	1100#	78
....SPIRULINA	--	-	--	-	--	-	--	-	--	-
EUGLENOPHYTA (EUGLENOIDS)										
.EUGLENOPHYCEAE										
..EUGLENALES										
...EUGLENACEAE										
....EUGLENA	--	-	--	-	30	1	53	2	--	-
....TRACHELOMONAS	--	-	*	0	--	-	--	-	--	-

NOTE: # - DOMINANT ORGANISM; EQUAL TO OR GREATER THAN 15%

* - OBSERVED ORGANISM, MAY NOT HAVE BEEN COUNTED; LESS THAN 1/2%

06313700 DEAD HORSE CREEK NEAR BUFFALO, WY

LOCATION.--Lat 44°12'54", long 106°06'41", in NW¼SE¼SW¼ sec.15, T.49 N., R.77 W., Johnson County, Hydrologic Unit 10090202, on left bank 30 ft (9 m) upstream from bridge on dirt road, 0.8 mi (1.3 km) upstream from Interstate Highway 90, 5.3 mi (8.5 km) upstream from mouth, and 31 mi (50 km) east of Buffalo.

DRAINAGE AREA.--151 mi² (391 km²).

PERIOD OF RECORD.--Annual maximum, water years 1958-71. October 1971 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 3,970 ft (1,210 m), from topographic map. Oct. 1, 1958, to Sept. 30, 1971, crest-stage gage at present site and datum. Nov. 24, 1971, to July 15, 1976, water-stage recorder at site 0.3 mi (0.5 km) upstream at different datum.

REMARKS.--Records poor. No gage-height record Nov. 8 to Apr. 22, May 24-26, May 29 to June 2, June 15, 16.

AVERAGE DISCHARGE.--10 years, 2.91 ft³/s (0.082 m³/s), 2,110 acre-ft/yr (2.60 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,890 ft³/s (81.8 m³/s) June 16, 1979, gage height, 11.73 ft (3.575 m), from floodmarks, from rating curve extended above 1,150 ft³/s (32.6 m³/s) on basis of contracted-opening and flow-over-road measurement of peak flow, present site and datum; no flow for many days each year.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 300 ft³/s (8.50 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
June 13	0300	532 15.1	6.91 2.106	July 27	0030	750 21.2	8.53 2.600
July 25	0230	*822 23.3	8.85 2.697				

No flow for many days.

CORRECTIONS.--Peak discharge above base for June 19, 1980, should have been 1,500 ft³/s (42.5 m³/s).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.01	.02	.01	.00	.01	.02	.02	.01	.00	.00	.00
2	.00	.01	.01	.01	.00	.01	.02	.03	.01	.00	.00	.00
3	.00	.01	.01	.01	.00	.01	.02	.04	.02	.00	.00	.00
4	.00	.01	.01	.01	.00	.01	.02	.06	.02	.00	.00	.00
5	.00	.01	.01	.01	.00	.01	.02	.02	.01	.00	.00	.00
6	.00	.01	.01	.01	.00	.01	.02	.02	.02	.00	.00	.00
7	.00	.01	.01	.01	.00	.01	.02	.02	.02	.00	.00	.00
8	.00	.01	.01	.01	.00	.01	.02	.02	.03	.00	.00	.00
9	.00	.01	.01	.01	.00	.01	.02	.02	.04	.00	.00	.00
10	.00	.01	.01	.01	.00	.01	.02	.02	.02	.00	.00	.00
11	.00	.01	.01	.01	.00	.01	.03	.02	.01	.00	.00	.00
12	.00	.01	.01	.01	.00	.01	.02	.02	.01	.00	.00	.00
13	.00	.01	.01	.01	.00	.01	.02	.02	.02	.00	.00	.00
14	.00	.01	.01	.01	.00	.01	.02	.02	.02	.98	.00	.00
15	34	.01	.01	.01	.00	.01	.02	.02	.02	.00	.00	.00
16	.09	.01	.01	.00	.01	.01	.02	.02	.02	.00	27	.00
17	.04	.01	.01	.00	.01	.01	.02	.02	.02	.00	6.2	.00
18	.02	.01	.01	.00	.01	.01	.02	.02	.02	.00	.00	.00
19	.01	.01	.01	.00	.01	.01	.02	.02	.02	.00	.00	.00
20	.01	.01	.01	.00	.01	.01	.02	.02	.02	.00	.00	.00
21	.01	.01	.01	.00	.01	.02	.02	.02	.01	.00	.00	.00
22	.01	.01	.01	.00	.01	.02	.02	4.1	.02	.00	.00	.00
23	.01	.01	.01	.00	.01	.02	.02	2.2	.01	.00	.00	.00
24	.01	.01	.01	.00	.01	.02	.02	.02	.01	.00	.00	.00
25	.01	.01	.01	.00	.01	.02	.02	.01	.02	107	.00	.00
26	.01	.01	.01	.00	.01	.02	.02	.02	.01	20	.00	.00
27	.01	.01	.01	.00	.01	.02	.02	2.2	.00	119	.00	.00
28	.01	.01	.01	.00	.01	.02	.02	.04	.00	.40	.00	.00
29	.01	.01	.01	.00	---	.02	.02	.01	.00	.01	.00	.00
30	.01	.02	.01	.00	---	.02	.02	.01	.00	.01	.00	.00
31	.01	---	.01	.00	---	.02	---	.02	---	.00	.00	---
TOTAL	34.28	.31	.32	.15	.13	.42	.61	9.12	72.44	247.40	33.20	.00
MEAN	1.11	.010	.010	.005	.005	.014	.020	.29	2.41	7.98	1.07	.000
MAX	34	.02	.02	.01	.01	.02	.03	4.1	72	119	27	.00
MIN	.00	.01	.01	.00	.00	.01	.02	.01	.00	.00	.00	.00
AC-FT	68	.6	.6	.3	.3	.8	1.2	18	144	491	66	.00

CAL YR 1980 TOTAL 494.89 MEAN 1.35 MAX 100 MIN .00 AC-FT 982
WTR YR 1981 TOTAL 398.38 MEAN 1.09 MAX 119 MIN .00 AC-FT 790

YELLOWSTONE RIVER BASIN

06313950 NORTH FORK CRAZY WOMAN CREEK BELOW POLE CREEK, NEAR BUFFALO, WY

LOCATION.--Lat 44°11'11", long 106°51'12", in NW¼NE¼SW¼ sec.28, T.49 N., R.83 W., Johnson County, Hydrologic Unit 10090205, Bighorn National Forest, on right bank 8 ft (2 m) upstream from bridge, 0.7 mi (1.1 km) upstream from forest boundary, 3.4 mi (5.5 km) downstream from Pole Creek, and 13 mi (21 km) southwest of Buffalo.

DRAINAGE AREA.--43.4 mi² (112.4 km²).

PERIOD OF RECORD.--October 1973 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 6,280 ft (1,914 m), from topographic map.

REMARKS.--Records fair. No diversion above station.

AVERAGE DISCHARGE.--8 years, 24.5 ft³/s (0.694 m³/s), 17,750 acre-ft/yr (21.9 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 540 ft³/s (15.3 m³/s) May 17, 1981, gage height, 4.58 ft (1.396 m); maximum gage height, 4.65 ft (1.417 m) May 24, 1978; minimum daily, 1.2 ft³/s (0.034 m³/s) Jan. 16, 1977.

EXTREMES FOR CURRENT YEAR.--Peak discharge above base of 160 ft³/s (4.53 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
May 17	0345	*540 15.3	4.58 1.396

Minimum daily discharge, 2.2 ft³/s (0.06 m³/s) Feb. 6-12.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	8.1	7.0	6.2	5.8	2.9	3.6	5.4	18	92	22	9.8	6.6
2	8.1	7.3	6.6	5.8	2.9	3.4	6.4	21	86	23	9.1	6.2
3	7.8	5.8	6.6	5.7	2.7	3.4	6.4	23	87	25	8.4	6.2
4	7.8	6.6	6.6	5.0	2.3	3.4	5.8	17	99	34	8.1	6.2
5	7.8	6.8	6.6	5.0	2.3	3.4	5.0	19	77	23	7.0	6.2
6	7.8	7.0	6.4	4.9	2.2	3.3	4.7	18	78	19	8.4	10
7	7.5	7.5	6.4	4.9	2.2	3.3	4.8	22	81	18	9.8	10
8	7.5	7.8	6.2	4.5	2.2	3.3	4.5	17	71	16	9.8	8.1
9	7.5	6.0	6.2	4.2	2.2	3.4	4.0	15	83	16	16	7.5
10	7.0	8.4	6.2	3.7	2.2	3.4	4.5	14	59	15	12	5.4
11	7.5	6.6	6.2	3.6	2.2	3.4	7.0	15	53	15	9.8	5.8
12	8.1	7.3	6.0	3.4	2.2	3.4	16	15	54	18	8.4	5.4
13	7.5	5.2	6.0	3.3	2.3	3.4	15	14	72	21	8.4	5.0
14	7.5	5.0	6.0	3.1	2.4	3.4	12	13	49	16	8.4	5.0
15	9.5	5.6	6.0	2.9	2.6	3.4	17	17	46	14	9.1	6.6
16	9.5	5.6	6.0	2.7	2.7	3.4	24	62	43	12	12	5.8
17	7.3	5.4	6.0	2.7	3.0	3.7	25	256	43	13	12	5.4
18	7.8	5.8	6.0	3.3	3.0	3.7	23	99	37	18	9.8	5.2
19	9.1	6.0	5.8	3.0	3.4	3.7	22	69	37	15	8.8	5.2
20	9.5	6.0	5.8	2.6	3.6	3.9	17	89	37	13	7.3	4.8
21	9.8	6.0	5.8	2.6	3.4	3.7	16	95	34	11	7.3	4.8
22	8.1	6.4	5.8	2.7	3.4	3.7	11	107	31	10	7.3	4.8
23	5.8	6.4	6.0	2.9	3.6	3.7	14	113	30	10	7.3	4.8
24	4.7	6.4	5.7	3.0	3.6	3.7	20	96	28	10	7.3	4.8
25	7.5	6.0	5.8	3.0	3.4	3.7	24	98	28	18	7.0	4.8
26	8.4	5.8	5.8	2.9	3.4	4.0	27	113	27	21	7.0	5.6
27	7.8	5.8	6.0	2.7	3.4	4.5	25	143	26	22	7.0	5.6
28	5.6	5.6	6.4	2.7	3.6	4.3	19	117	25	17	11	5.2
29	6.8	6.2	5.9	2.7	---	4.7	17	104	25	13	8.1	5.2
30	8.1	6.2	5.8	2.7	---	5.0	16	95	23	11	7.3	6.4
31	7.8	---	5.8	2.9	---	5.2	---	104	---	11	6.6	---
TOTAL	240.6	189.5	188.6	110.9	79.3	115.5	418.5	2018	1561	520	275.6	178.6
MEAN	7.76	6.32	6.08	3.58	2.83	3.73	14.0	65.1	52.0	16.8	8.89	5.95
MAX	9.8	8.4	6.6	5.8	3.6	5.2	27	256	99	34	16	10
MIN	4.7	5.0	5.7	2.6	2.2	3.3	4.0	13	23	10	6.6	4.8
AC-FT	477	376	374	220	157	229	830	4000	3100	1030	547	354

CAL YR 1980	TOTAL	8241.5	MEAN 22.5	MAX 176	MIN 4.3	AC-FT 16350
WTR YR 1981	TOTAL	5896.1	MEAN 16.2	MAX 256	MIN 2.2	AC-FT 11690

06314000 NORTH FORK CRAZY WOMAN CREEK NEAR BUFFALO, WY

LOCATION.--Lat 44°11'16", long 106°49'48", in SW¼SW¼NE¼ sec.27, T.49 N., R.83 W., Johnson County, Hydrologic Unit 10090205, on left bank, 70 ft (21 m) upstream from bridge on county road, 2.1 mi (3.4 km) upstream from Spring Draw, and 13 mi (21 km) southwest of Buffalo.

DRAINAGE AREA.--44.9 mi² (116.3 km²).

PERIOD OF RECORD.--April 1942 to September 1949, October 1973 to current year. Prior to October 1944, monthly discharge only published in WSP 1309.

GAGE.--Water-stage recorder. Altitude of gage is 5,900 ft (1,798 m), from topographic map. Apr. 1, 1942, to Sept. 23, 1943, nonrecording gage nearby at different datum. Sept. 24, 1943, to Sept. 30, 1949, water-stage recorder at datum 1.33 ft (0.405 m) lower.

REMARKS.--Records good. No diversion above station.

AVERAGE DISCHARGE.--15 years (water years 1943-49, 1974-81), 24.8 ft³/s (0.702 m³/s), 17,970 acre-ft/yr (22.2 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 611 ft³/s (17.3 m³/s) June 6, 1949, gage height, 4.23 ft (1.289 m) from rating curve extended above 150 ft³/s (4.25 m³/s) on basis of slope-area measurement of peak flow at site 3.2 mi (5.1 km) downstream; minimum daily, 1.7 ft³/s (0.048 m³/s) Jan. 17, 18, 1977.

EXTREMES FOR CURRENT YEAR.--Peak discharge above base of 160 ft³/s (4.53 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
May 17	0400	*548 15.5	3.70 1.128

Minimum daily discharge, 2.4 ft³/s (0.07 m³/s) Feb. 13-15.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6.8	7.1	6.0	5.5	3.5	3.2	4.7	18	85	22	9.3	6.2
2	6.3	7.5	6.4	5.5	3.4	3.3	5.1	22	81	23	8.7	5.8
3	6.3	6.1	6.4	5.4	3.4	3.4	5.5	24	83	26	8.3	5.6
4	6.3	6.8	6.4	5.3	3.3	3.4	5.1	17	92	37	8.1	5.5
5	6.3	7.5	6.5	5.3	3.1	3.4	4.6	18	79	24	7.8	5.4
6	6.3	7.5	6.5	4.5	2.9	3.2	4.7	17	79	20	8.2	7.6
7	6.3	7.8	6.3	4.3	2.6	3.2	4.7	21	80	18	9.3	8.9
8	6.5	8.0	5.9	4.3	2.6	3.2	4.1	16	74	17	9.3	7.5
9	6.5	6.0	5.8	4.3	2.6	3.2	3.9	13	78	16	14	6.4
10	6.2	7.7	5.8	4.4	2.6	3.2	4.0	12	67	16	14	6.2
11	6.1	6.3	5.8	4.1	2.6	3.2	5.5	14	62	16	11	6.0
12	6.9	7.7	5.8	3.9	2.5	3.0	14	14	60	20	9.2	6.1
13	6.6	5.6	5.8	3.6	2.4	3.0	14	13	71	21	8.5	5.8
14	6.5	4.9	5.8	3.4	2.4	3.0	12	12	60	16	8.4	5.7
15	7.6	5.3	5.8	3.4	2.4	3.1	19	16	54	13	8.7	6.2
16	8.0	5.3	5.8	3.2	2.5	3.2	28	58	52	13	11	6.4
17	6.5	5.3	5.8	3.2	2.8	3.2	30	258	50	13	13	6.0
18	6.6	5.6	5.9	3.6	2.9	3.2	27	92	46	19	10	6.0
19	8.2	5.8	5.4	3.6	3.0	3.1	24	79	43	14	8.7	5.8
20	9.0	5.8	5.5	3.6	3.2	3.2	19	88	44	12	7.5	5.6
21	9.1	5.8	5.8	3.6	3.2	3.3	17	91	41	11	6.9	5.3
22	8.3	6.2	5.8	3.6	3.2	3.4	12	99	37	11	6.8	5.3
23	5.9	6.2	5.7	3.6	3.2	3.4	14	104	35	10	6.8	5.3
24	4.8	6.2	5.4	3.6	3.2	3.4	23	93	32	9.7	6.8	5.5
25	6.9	5.8	5.3	3.6	3.2	3.6	27	91	30	15	6.8	5.5
26	8.0	5.6	5.3	3.6	3.2	4.0	31	101	28	21	6.6	5.5
27	7.5	5.6	5.6	3.6	3.2	4.4	29	118	27	21	6.5	5.5
28	5.5	5.4	5.8	3.6	3.2	4.7	21	102	26	15	9.3	5.5
29	6.6	6.0	5.6	3.6	---	5.0	17	92	27	12	7.7	5.5
30	7.7	6.0	5.5	3.6	---	4.7	16	86	23	11	7.0	6.2
31	7.6	---	5.5	3.6	---	4.7	---	91	---	10	6.3	---
TOTAL	213.7	188.4	180.7	124.0	82.3	108.5	445.9	1890	1646	522.7	270.5	179.8
MEAN	6.89	6.28	5.83	4.00	2.94	3.50	14.9	61.0	54.9	16.9	8.73	5.99
MAX	9.1	8.0	6.5	5.5	3.5	5.0	31	258	92	37	14	8.9
MIN	4.8	4.9	5.3	3.2	2.4	3.0	3.9	12	23	9.7	6.3	5.3
AC-FT	424	374	358	246	163	215	884	3750	3260	1040	537	357
CAL YR 1980	TOTAL	7985.3	MEAN	21.8	MAX	146	MIN	4.3	AC-FT	15840		
WTR YR 1981	TOTAL	5852.5	MEAN	16.0	MAX	258	MIN	2.4	AC-FT	11610		

YELLOWSTONE RIVER BASIN

06316400 CRAZY WOMAN CREEK AT UPPER STATION, NEAR ARVADA, WY

LOCATION.--Lat 44°29'28", long 106°10'38", in NE¼SW¼SW¼ sec.7, T.52 N., R.77 W., Johnson County, Hydrologic Unit 10090205, on left bank 1.1 mi (1.8 km) upstream from Jewell Draw, 5.0 mi (8.0 km) upstream from mouth, and 11 mi (18 km) south of Arvada.

DRAINAGE AREA.--945 mi² (2,448 km²), approximately.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--April 1963 to September 1970, October 1977 to September 1981 (discontinued).

GAGE.--Water-stage recorder. Altitude of gage is 3,765 ft (1,148 m), from topographic map.

REMARKS.--Records fair except those for winter period, which are poor. Diversions for irrigation of about 12,000 acres (48.6 km²) above station.

AVERAGE DISCHARGE.--11 years, 50.1 ft³/s (1.419 m³/s), 36,300 acre-ft/yr (44.8 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 15,800 ft³/s (447 m³/s) June 15, 1965, gage height, 16.02 ft (4.883 m), from rating curve extended above 1,300 ft³/s (36.8 m³/s) on basis of slope-area measurement of peak flow; no flow Sept. 4-8, 1964, for many days in 1966, and Sept. 20-30, 1981.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 388 ft³/s (11.0 m³/s) May 19, gage height, 5.16 ft (1.573 m); no peak above base of 500 ft³/s (14.2 m³/s); no flow Sept. 20-30.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	7.9	17	17	30	15	17	7.2	5.5	130	24	8.8	2.6
2	7.9	16	15	29	13	18	8.0	5.4	127	27	6.5	2.0
3	7.7	17	17	30	13	17	7.3	5.4	124	23	5.1	1.5
4	7.6	17	18	31	15	17	6.6	4.3	118	20	4.8	1.7
5	7.7	17	17	29	15	18	6.3	3.2	96	17	4.2	2.3
6	8.1	17	17	24	15	17	6.3	2.9	118	16	3.6	4.4
7	8.4	17	16	22	15	17	6.0	2.8	100	15	3.0	2.6
8	8.6	17	17	19	14	16	6.0	5.7	89	15	2.6	1.8
9	8.4	18	19	20	14	14	7.1	7.7	91	14	2.2	1.9
10	8.2	17	21	22	12	14	6.6	7.6	105	11	2.0	1.7
11	8.1	18	22	20	13	12	6.5	7.4	103	11	2.6	1.3
12	8.1	18	24	17	13	12	15	7.1	105	38	2.3	1.0
13	7.9	18	25	17	14	12	16	8.2	85	18	2.2	.91
14	8.4	14	25	18	14	11	12	8.3	105	10	2.4	.57
15	10	12	27	18	14	11	9.5	7.7	86	9.7	2.0	.35
16	12	10	28	18	14	11	8.8	7.9	89	8.2	2.8	.23
17	15	9.0	30	16	14	11	8.1	7.9	73	12	2.1	.15
18	15	10	20	15	17	9.9	8.1	14	63	11	1.5	.12
19	19	10	16	14	24	9.2	7.7	253	59	8.6	1.1	.06
20	19	11	17	14	22	8.8	7.1	221	67	7.9	1.4	.00
21	19	14	20	15	22	8.6	6.4	129	61	7.9	5.2	.00
22	19	14	25	16	23	8.3	7.0	122	56	8.9	7.7	.00
23	18	13	23	18	23	8.0	6.2	130	54	10	6.8	.00
24	18	13	21	19	24	8.0	7.3	132	52	10	5.9	.00
25	18	13	25	19	23	7.6	7.3	151	46	20	4.9	.00
26	18	14	27	19	21	7.4	6.7	122	40	29	4.5	.00
27	17	14	30	19	18	6.9	6.1	99	33	58	4.4	.00
28	17	16	28	18	17	6.9	6.0	92	28	37	4.2	.00
29	18	16	27	16	---	7.1	5.8	132	28	36	4.0	.00
30	19	18	28	17	---	6.9	5.8	178	25	17	3.6	.00
31	18	---	30	18	---	7.0	---	143	---	11	3.0	---
TOTAL	402.0	445.0	692	617	471	355.6	230.8	2023.0	2356	561.2	117.4	27.19
MEAN	13.0	14.8	22.3	19.9	16.8	11.5	7.69	65.3	78.5	18.1	3.79	.91
MAX	19	18	30	31	24	18	16	253	130	58	8.8	4.4
MIN	7.6	9.0	15	14	12	6.9	5.8	2.8	25	7.9	1.1	.00
AC-FT	797	883	1370	1220	934	705	458	4010	4670	1110	233	54
CAL YR 1980	TOTAL	14692.60	MEAN	40.1	MAX	304	MIN	2.9	AC-FT	29140		
WTR YR 1981	TOTAL	8298.19	MEAN	22.7	MAX	253	MIN	.00	AC-FT	16460		

06316400 CRAZY WOMAN CREEK AT UPPER STATION, NEAR ARVADA, WY--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1967 to September 1981 (discontinued).

WATER-QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION)	HARD- NESS (MG/L AS CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)
OCT 08...	1330	8.4	2600	8.3	14.0	9.7	--	990	200	120	170
NOV 12...	1115	17	1975	8.3	4.0	11.3	--	840	170	100	140
DEC 11...	1230	23	1600	8.3	1.0	12.1	--	760	160	88	140
JAN 06...	1015	23	1400	8.4	.5	12.2	--	610	130	70	120
FEB 06...	1030	16	1800	8.2	.0	11.9	--	860	180	100	160
MAR 04...	1015	13	1750	8.0	.0	11.9	--	710	150	81	150
APR 09...	1115	6.8	2800	8.2	6.0	11.0	--	1200	240	140	250
MAY 14...	1415	8.3	2800	8.1	17.0	10.2	--	1200	240	150	230
19...	1300	342	--	--	12.5	--	--	--	--	--	--
JUN 01...	1045	130	700	8.0	15.5	8.1	8	260	56	29	40
JUL 08...	1230	15	1930	8.3	19.0	8.4	--	860	180	100	150
AUG 06...	1230	3.6	1650	8.1	22.0	8.1	--	710	160	76	120
SEP 03...	1700	1.4	2700	8.1	20.0	9.6	--	1300	240	170	220

DATE	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LITY LAB (MG/L AS CACO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)	SOLIDS, DIS- SOLVED (TONS PER DAY)
OCT 08...	2.3	6.5	--	550	12	.3	1.0	1870	--	2.5	42.4
NOV 12...	2.1	6.0	--	800	13	.3	6.0	1580	--	2.2	72.5
DEC 11...	2.2	5.9	--	840	14	.3	11	1390	--	1.9	85.9
JAN 06...	2.1	3.1	--	670	12	.3	7.7	1190	--	1.6	74.5
FEB 06...	2.4	3.8	--	990	12	.3	8.5	1760	--	2.4	76.0
MAR 04...	2.5	3.1	180	810	9.4	.2	5.6	1390	1570	2.1	56.8
APR 09...	3.2	5.5	240	1400	20	.3	1.8	2450	2200	3.0	40.4
MAY 14...	2.9	7.5	210	1500	20	.2	2.6	2420	2280	3.1	50.8
19...	--	--	--	--	--	--	--	--	--	--	--
JUN 01...	1.1	2.6	88	240	3.1	.1	11	458	435	.59	153
JUL 08...	2.5	6.9	230	880	15	.3	13	1600	1480	2.0	59.9
AUG 06...	2.2	7.7	180	730	8.8	.3	3.8	1350	1220	1.7	11.9
SEP 03...	2.7	10	250	1400	24	.0	2.1	2440	2220	3.0	8.4

WATER-QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

[illegible]

WATER-QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

[illegible]

YELLOWSTONE RIVER BASIN

06316400 CRAZY WOMAN CREEK AT UPPER STATION, NEAR ARVADA, WY--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	CADMIUM SUS- PENDE RECov- ERABLE (UG/L AS CD)	CADMIUM DIS- SOLVED (UG/L AS CD)	CHRO- MIUM, TOTAL RECov- ERABLE (UG/L AS CR)	CHRO- MIUM, SUS- PENDE RECov- ERABLE (UG/L AS CR)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR)	COPPER, TOTAL RECov- ERABLE (UG/L AS CU)	COPPER, SUS- PENDE RECov- ERABLE (UG/L AS CU)	COPPER, DIS- SOLVED (UG/L AS CU)	IRON, TOTAL RECov- ERABLE (UG/L AS FE)	IRON, SUS- PENDE RECov- ERABLE (UG/L AS FE)	IRON, DIS- SOLVED (UG/L AS FE)	LEAD, TOTAL RECov- ERABLE (UG/L AS PB)
OCT 08...	--	--	--	--	--	--	--	--	--	--	40	--
NOV 12...	--	--	--	--	--	--	--	--	240	220	20	--
DEC 11...	--	--	--	--	--	--	--	--	260	--	<10	--
JAN 06...	0	1	20	20	0	7	4	3	440	430	10	1
FEB 06...	--	--	--	--	--	--	--	--	400	--	<10	--
MAR 04...	--	--	--	--	--	--	--	--	770	--	<10	--
APR 09...	0	0	10	0	10	0	0	4	510	470	40	7
MAY 14...	--	--	--	--	--	--	--	--	880	830	50	--
JUN 01...	--	--	--	--	--	--	--	--	--	--	30	--
JUL 08...	--	<1	10	10	0	8	0	8	1100	--	<10	8
AUG 06...	--	--	--	--	--	--	--	--	2000	2000	19	--
SEP 03...	--	--	--	--	--	--	--	--	1400	1400	40	--

DATE	LEAD, SUS- PENDE RECov- ERABLE (UG/L AS PB)	LEAD, DIS- SOLVED (UG/L AS PB)	LITHIUM TOTAL RECov- ERABLE (UG/L AS LI)	LITHIUM SUS- PENDE RECov- ERABLE (UG/L AS LI)	LITHIUM DIS- SOLVED (UG/L AS LI)	MANGA- NESE, TOTAL RECov- ERABLE (UG/L AS MN)	MANGA- NESE, SUS- PENDE RECov- ERABLE (UG/L AS MN)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	MERCURY TOTAL RECov- ERABLE (UG/L AS HG)	MERCURY SUS- PENDE RECov- ERABLE (UG/L AS HG)	MERCURY DIS- SOLVED (UG/L AS HG)	NICKEL, TOTAL RECov- ERABLE (UG/L AS NI)
OCT 08...	--	--	--	--	--	--	--	--	--	--	--	--
NOV 12...	--	--	50	0	60	70	10	60	--	--	--	--
DEC 11...	--	--	--	--	--	50	20	30	--	--	--	--
JAN 06...	1	0	--	--	--	50	10	40	.0	.0	.0	1
FEB 06...	--	--	--	--	--	80	10	70	--	--	--	--
MAR 04...	--	--	--	--	--	140	20	120	--	--	--	--
APR 09...	7	0	60	0	60	310	120	190	.1	.0	.1	3
MAY 14...	--	--	--	--	--	250	100	150	--	--	--	--
JUN 01...	--	--	--	--	--	--	--	10	--	--	--	--
JUL 08...	8	0	--	--	--	170	140	35	.1	.0	.1	5
AUG 06...	--	--	--	--	--	300	170	130	--	--	--	--
SEP 03...	--	--	--	--	--	300	110	190	--	--	--	--

06316400 CRAZY WOMAN CREEK AT UPPER STATION, NEAR ARVADA, WY--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	NICKEL, SUS- PENDE RECov- ERABLE (UG/L AS NI)	NICKEL, DIS- SOLVED (UG/L AS NI)	SELE- NIUM, TOTAL (UG/L AS SE)	SELE- NIUM, SUS- PENDE TOTAL (UG/L AS SE)	SELE- NIUM, DIS- SOLVED (UG/L AS SE)	STRON- TIUM, TOTAL RECov- ERABLE (UG/L AS SR)	STRON- TIUM, SUS- PENDE RECov. (UG/L AS SR)	STRON- TIUM, DIS- SOLVED (UG/L AS SR)	ZINC, TOTAL RECov- ERABLE (UG/L AS ZN)	ZINC, SUS- PENDE RECov- ERABLE (UG/L AS ZN)	ZINC, DIS- SOLVED (UG/L AS ZN)
OCT 08...	--	--	--	--	--	--	--	--	--	--	--
NOV 12...	--	--	--	--	--	1000	0	1600	--	--	--
DEC 11...	--	--	--	--	--	--	--	--	--	--	--
JAN 06...	0	2	1	0	1	--	--	--	10	0	20
FEB 06...	--	--	--	--	--	--	--	--	--	--	--
MAR 04...	--	--	--	--	--	--	--	--	--	--	--
APR 09...	2	1	0	0	0	1700	0	2200	10	0	10
MAY 14...	--	--	--	--	--	--	--	--	--	--	--
JUN 01...	--	--	--	--	--	--	--	--	--	--	--
JUL 08...	4	1	1	0	1	--	--	--	20	10	8
AUG 06...	--	--	--	--	--	--	--	--	--	--	--
SEP 03...	--	--	--	--	--	--	--	--	--	--	--

DATE	TIME	2,4-D, TOTAL IN BOT- TOM MA- TERIAL (UG/L)	2,4-D, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	2, 4-DP TOTAL (UG/L)	2, 4-DP, IN BOTTOM MAT. (UG/KG)	2,4,5-T TOTAL (UG/L)	2,4,5-T TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	SILVEX, TOTAL (UG/L)	SILVEX, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)
JUL 08...	1230	.07	0	.00	.00	.00	0	.00	0
AUG 06...	1230	.00	--	.00	--	.00	--	.00	--
SEP 03...	1700	.00	0	.00	.00	.00	0	.00	0

DATE	TOTAL DICAMBA (UG/L)	DICAMBA IN BOTTOM MA- TERIAL (UG/KG)	TOTAL PICLORAM (UG/L)	PICLORAM IN BOTTOM MA- TERIAL (UG/KG)
JUL 08...	.00	.0	.01	.0
AUG 06...	.00	--	.00	--
SEP 03...	.00	.0	.00	.0

YELLOWSTONE RIVER BASIN

06316400 CRAZY WOMAN CREEK AT UPPER STATION, NEAR ARVADA, WY--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	TIME	TEMPER- ATURE (DEG C)	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SED. SUSP. FALL DIAM. % FINER THAN .004 MM	SED. SUSP. FALL DIAM. % FINER THAN .016 MM	SED. SUSP. FALL DIAM. % FINER THAN .062 MM	SED. SUSP. FALL DIAM. % FINER THAN .125 MM	SED. SUSP. FALL DIAM. % FINER THAN .250 MM	SED. SUSP. FALL DIAM. % FINER THAN .500 MM	SED. SUSP. FALL DIAM. % FINER THAN 1.00 MM	BED MAT. FALL DIAM. % FINER THAN .062 MM
MAY											
14...	1415	17.0	8.3	--	--	--	--	--	--	--	3
19...	1300	12.5	342	47	72	90	94	97	99	100	--
JUN											
01...	1045	15.5	130	54	77	92	97	99	100	--	--
SEP											
03...	1700	20.0	1.4	--	--	--	--	--	--	--	7

DATE	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. FALL DIAM. % FINER THAN 1.00 MM	BED MAT. FALL DIAM. % FINER THAN 2.00 MM	BED MAT. FALL DIAM. % FINER THAN 4.00 MM	BED MAT. FALL DIAM. % FINER THAN 8.00 MM	BED MAT. FALL DIAM. % FINER THAN 16.0 MM	BED MAT. FALL DIAM. % FINER THAN 32.0 MM	BED MAT. FALL DIAM. % FINER THAN 64.0 MM
MAY										
14...	4	6	11	14	17	23	33	53	78	100
19...	--	--	--	--	--	--	--	--	--	--
JUN										
01...	--	--	--	--	--	--	--	--	--	--
SEP										
03...	11	15	18	20	22	28	40	75	100	--

06316400 CRAZY WOMAN CREEK AT UPPER STATION, NEAR ARVADA, WY--Continued

QUALITATIVE AND ASSOCIATED QUANTITATIVE ANALYSES OF BIOLOGICAL DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

PHYTOPLANKTON ANALYSES

DATE	DEC 11,80	JAN 6,81	FEB 6,81	MAR 4,81	APR 9,81
TIME	1230	1015	1030	1015	1115
TOTAL CELLS/ML	1700	220	430	230	9700
DIVERSITY: DIVISION	0.2	0.0	0.2	0.9	0.6
...CLASS	0.2	0.0	0.2	0.9	0.6
...ORDER	1.6	1.6	0.8	2.2	0.6
...FAMILY	1.6	1.6	0.8	2.2	0.6
...GENUS	1.6	1.6	0.8	2.5	0.6
ORGANISM	CELLS /ML PER- CENT	CELLS /ML PER- CENT	CELLS /ML PER- CENT	CELLS /ML PER- CENT	CELLS /ML PER- CENT
BACILLARIOPHYTA (DIATOMS)					
.BACILLARIOPHYCEAE					
...ACHNANTHALES					
...ACHNANTHACEAE					
...ACHNANTHES	-- --	-- --	-- --	-- --	-- --
...RHOICOSPHENIA	-- --	-- --	-- --	-- --	-- --
.BACILLARIALES					
...NITZSCHIAEAE					
...NITZSCHIA	950# 57	100# 47	39 9	77# 33	530 6
...EPITHEMIALES					
...EPITHEMIAEAE					
...EPITHEMIA	-- --	-- --	-- --	-- --	-- --
...EUPODISCALES					
...COSCINODISCACEAE					
...CYCLOTELLA	110 7	13 6	-- --	-- --	-- --
...MELOSIRA	-- --	-- --	-- --	-- --	-- --
...STEPHANODISCUS	-- --	-- --	-- --	-- --	180 2
.FRAGILARIALES					
...FRAGILARIAEAE					
...ASTERIONELLA	-- --	-- --	-- --	-- --	-- --
...DIATOMA	520# 31	77# 35	360# 85	13 6	-- --
...FRAGILARIA	-- --	-- --	-- --	26 11	-- --
...SYNEDRA	-- --	-- --	-- --	13 6	-- --
.NAVICULALES					
...CYMBELLACEAE					
...CYMBELLA	-- --	-- --	-- --	-- --	-- --
...GOMPHONEMACEAE					
...GOMPHONEMA	-- --	-- --	13 3	-- --	-- --
...NAVICULACEAE					
...AMPHIPLEURA	27 2	-- --	-- --	-- --	-- --
...NAVICULA	27 2	26 12	-- --	39# 17	-- --
.SURIPELLALES					
...SURIPELLACEAE					
...CYMATOPLEURA	-- --	-- --	-- --	-- --	-- --
...SURIPELLA	-- --	-- --	-- --	-- --	-- --
CHLOROPHYTA (GREEN ALGAE)					
.CHLOROPHYCEAE					
...CHLOROCOCCALES					
...DICTYOSPHAERIAEAE					
...DICTYOSPHAERIUM	-- --	-- --	-- --	-- --	-- --
...OOCYSTACEAE					
...ANKISTRODESMUS	-- --	-- --	-- --	-- --	-- --
...NEPHROCYTIUM	-- --	-- --	-- --	-- --	-- --
...OOCYSTIS	-- --	-- --	-- --	-- --	-- --
...TREUBARIA	-- --	-- --	-- --	-- --	-- --
...SCENEDESMACEAE					
...COELASTRUM	-- --	-- --	-- --	-- --	-- --
...CRUCIGENIA	-- --	-- --	-- --	-- --	-- --
...SCENEDESMUS	-- --	-- --	-- --	52# 22	-- --
.VOLVOCALES					
...CHLAMYDOMONADACEAE					
...CHLAMYDOMONAS	-- --	-- --	13 3	13 6	180 2
CHRYSTOPHYTA					
.CHRYSTOPHYCEAE					
...CHROMULINALES					
...CHRYSOCOCCACEAE					
...CHRYSOCOCCUS	-- --	-- --	-- --	-- --	-- --
...OCHROMONADALES					
...OCHROMONADACEAE					
...OCHROMONAS	14 1	-- --	-- --	-- --	-- --
CRYPTOPHYTA (CRYPTOMONADS)					
.CRYPTOPHYCEAE					
...CRYPTOMONADALES					
...CRYPTOCHRYSIDACEAE					
...CHROOMONAS	-- --	-- --	-- --	-- --	89 1
...CRYPTOMONADACEAE	-- --	-- --	-- --	-- --	-- --
...CRYPTOMONAS	-- --	-- --	-- --	-- --	-- --

NOTE: # - DOMINANT ORGANISM; EQUAL TO OR GREATER THAN 15%

* - OBSERVED ORGANISM, MAY NOT HAVE BEEN COUNTED; LESS THAN 1/2%

YELLOWSTONE RIVER BASIN

06316400 CRAZY WOMAN CREEK AT UPPER STATION, NEAR ARVADA, WY--Continued

QUALITATIVE AND ASSOCIATED QUANTITATIVE ANALYSES OF BIOLOGICAL DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

PHYTOPLANKTON ANALYSES

DATE TIME	DEC 11,80 1230		JAN 6,81 1015		FEB 6,81 1030		MAR 4,81 1015		APR 9,81 1115	
ORGANISM	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT
CYANOPHYTA (BLUE-GREEN ALGAE)										
.CYANOPHYCEAE										
..CHROOCOCCALES										
...CHROOCOCCACEAE										
....ANACYSTIS	--	-	--	-	--	-	--	-	--	-
..OSCILLATORIALES										
...OSCILLATORIACEAE										
....OSCILLATORIA	--	-	--	-	--	-	--	-	--	-
EUGLENOPHYTA (EUGLENOIDS)										
.EUGLENOPHYCEAE										
..EUGLENALES										
...EUGLENACEAE										
....TRACHELOMONAS	27	2	--	-	--	-	--	-	8700#	90

NOTE: # - DOMINANT ORGANISM; EQUAL TO OR GREATER THAN 15%

* - OBSERVED ORGANISM, MAY NOT HAVE BEEN COUNTED; LESS THAN 1/2%

06316400 CRAZY WOMAN CREEK AT UPPER STATION, NEAR ARVADA, WY--Continued

QUALITATIVE AND ASSOCIATED QUANTITATIVE ANALYSES OF BIOLOGICAL DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

PHYTOPLANKTON ANALYSES

DATE	MAY 14,81	JUN 1,81	JUL 8,81	AUG 6,81	SEP 3,81					
TIME	1415	1045	1230	1230	1700					
TOTAL CELLS/ML	4700	2800	11000	9400	15000					
DIVERSITY: DIVISION	1.9	0.4	1.6	1.6	1.0					
..CLASS	1.9	0.4	1.6	1.6	1.0					
..ORDER	2.7	2.6	1.9	2.4	1.0					
...FAMILY	2.9	2.8	2.3	2.5	1.8					
....GENUS	3.0	3.3	2.5	2.6	2.1					
ORGANISM	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT
BACILLARIOPHYTA (DIATOMS)										
.BACILLARIOPHYCEAE										
..ACHNANTHALES										
...ACHNANTHACEAE										
....ACHNANTHES	--	-	52	2	--	-	--	-	--	-
....RHOICOSPHENIA	--	-	100	4	--	-	--	-	--	-
.BACILLARIALES										
...NITZSCHIA										
....NITZSCHIA	260	5	800#	28	690	6	1000	11	260	2
...EPITHEMIALES										
...EPITHEMIA										
....EPITHEMIA	--	-	100	4	--	-	--	-	--	-
...EUPODISCALES										
...COSCINODISCACEAE										
....CYCLOTELLA	320	7	210	7	2800#	26	3700#	40	--	-
....MELOSIRA	--	-	160	6	140	1	150	2	--	-
....STEPHANODISCUS	--	-	--	-	--	-	--	-	--	-
.FRAGILARIALES										
...FRAGILARIACEAE										
....ASTERIONELLA	1800#	37	--	-	--	-	--	-	--	-
....DIATOMA	--	-	--	-	--	-	--	-	--	-
....FRAGILARIA	--	-	--	-	--	-	--	-	87	1
....SYNEDRA	--	-	52	2	--	-	150	2	--	-
.NAVICULALES										
...CYMBELLACEAE										
....CYMBELLA	--	-	26	1	--	-	--	-	--	-
...GOMPHONEMACEAE										
....GOMPHONEMA	--	-	130	5	--	-	75	1	--	-
...NAVICULACEAE										
....AMPHIPLEURA	--	-	100	4	--	-	--	-	--	-
....NAVICULA	43	1	570#	20	--	-	75	1	--	-
.SURIRELLALES										
...SURIRELLACEAE										
....CYMATOPLEURA	--	-	78	3	--	-	--	-	--	-
....SURIRELLA	--	-	290	10	--	-	--	-	--	-
CHLOROPHYTA (GREEN ALGAE)										
.CHLOROPHYCEAE										
..CHLOROCOCCALES										
...DICTYOSPHAERIA										
....DICTYOSPHAERIUM	--	-	--	-	--	-	--	-	2800#	19
...OOCYSTACEAE										
....ANKISTRODESMUS	560	12	78	3	3000#	28	1400#	15	7700#	51
....NEPHROCYTIUM	--	-	--	-	--	-	--	-	350	2
....OOCYSTIS	--	-	--	-	--	-	75	1	350	2
....TREUBARIA	64	1	--	-	69	1	75	1	--	-
...SCENEDESMACEAE										
....COELASTRUM	--	-	--	-	830	8	--	-	--	-
....CRUCIGENIA	86	2	--	-	--	-	--	-	--	-
....SCENEDESMUS	170	4	--	-	690	6	--	-	520	4
...VOLVOCALES										
...CHLAMYDOMONADACEAE										
....CHLAMYDOMONAS	86	2	--	-	140	1	1100	12	--	-
CHRYSOPHYTA										
.CHRYSOPHYCEAE										
..CHROMULINALES										
...CHRYSOCOCCACEAE										
....CHRYSOCOCCUS	--	-	--	-	--	-	--	-	700	5
...OCHROMONADALES										
...OCHROMONADACEAE										
....OCHROMONAS	--	-	--	-	--	-	--	-	--	-
CRYPTOPHYTA (CRYPTOMONADS)										
.CRYPTOPHYCEAE										
...CRYPTOMONADALES										
....CRYPTOCHRYSIDACEAE										
....CHROOMONAS	210	5	--	-	69	1	--	-	--	-
...CRYPTOMONADACEAE										
....CRYPTOMONAS	--	-	--	-	--	-	75	1	--	-

NOTE: # - DOMINANT ORGANISM; EQUAL TO OR GREATER THAN 15%

* - OBSERVED ORGANISM, MAY NOT HAVE BEEN COUNTED; LESS THAN 1/2%

YELLOWSTONE RIVER BASIN

06316400 CRAZY WOMAN CREEK AT UPPER STATION, NEAR ARVADA, WY--Continued

QUALITATIVE AND ASSOCIATED QUANTITATIVE ANALYSES OF BIOLOGICAL DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

PHYTOPLANKTON ANALYSES

DATE TIME	MAY 14, 81 1415		JUN 1, 81 1045		JUL 8, 81 1230		AUG 6, 81 1230		SEP 3, 81 1700	
ORGANISM	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT
CYANOPHYTA (BLUE-GREEN ALGAE)										
.CYANOPHYCEAE										
..CHROOCOCCALES										
...CHROOCOCCACEAE										
....ANACYSTIS	340	7	--	-	2400#	22	1100	12	2200	15
..OSCILLATORIALES										
...OSCILLATORIACEAE										
....OSCILLATORIA	430	9	--	-	--	-	--	-	--	-
EUGLENOPHYTA (EUGLENOIDS)										
.EUGLENOPHYCEAE										
..EUGLENALES										
...EUGLENACEAE										
....TRACHELOMONAS	410	9	78	3	--	-	300	3	--	-

NOTE: # - DOMINANT ORGANISM; EQUAL TO OR GREATER THAN 15%

* - OBSERVED ORGANISM, MAY NOT HAVE BEEN COUNTED; LESS THAN 1/2%

06317000 POWDER RIVER AT ARVADA, WY

LOCATION.--Lat 44°38'45", long 106°08'00", in NE¼NW¼ sec.21, T.54 N., R.77 W., Sheridan County, Hydrologic Unit 10090202, on left bank 0.5 mi (0.8 km) upstream from bridge on county road, 0.5 mi (0.8 km) southwest of Arvada, and 0.8 mi (1.3 km) upstream from Wild Horse Creek.

DRAINAGE AREA.--6,050 mi² (15,670 km²), approximately.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--May 1919 to current year (no winter records in water years 1919-30, 1934). Records for Feb. 16-23, 1930, published in WSP 701 are unreliable and should not be used.

REVISED RECORDS.--WSP 1509: 1921(M), 1923(M), 1924-26, 1927-28(M), 1929, 1930(M), 1931, 1932(M), 1933, 1934(M), 1935-36. See PERIOD OF RECORD.

GAGE.--Water-stage recorder. Datum of gage is 3,622.01 ft (1,103.989 m), National Geodetic Vertical Datum of 1929. Prior to Oct. 24, 1938, nonrecording gage at bridge 0.5 mi (0.8 km) downstream at datum 0.14 ft (0.043 m) lower.

REMARKS.--Records poor. Numerous small reservoirs and diversions for irrigation of about 29,000 acres (117 km²) above station.

AVERAGE DISCHARGE.--50 years (water years 1931-33, 1935-81), 279 ft³/s (7.901 m³/s), 202,100 acre-ft/yr (249 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, about 100,000 ft³/s (2,830 m³/s) Sept. 29, 1923, gage height, 23.7 ft (7.22 m), from floodmarks, site and datum then in use, from rating curve extended above 20,000 ft³/s (566 m³/s); no flow at times most years.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,790 ft³/s (50.7 m³/s) July 28, gage height, 4.81 ft (1.466 m); no peak above base of 2,800 ft³/s (79.3 m³/s); maximum gage height, 8.34 ft (2.542 m) Feb. 23 (backwater from ice jam); minimum daily discharge, 3.6 ft³/s (0.10 m³/s) Sept. 5.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	62	161	150	190	100	203	229	196	532	45	83	12
2	64	153	100	160	86	203	199	159	439	44	68	9.2
3	63	147	140	150	84	180	171	129	400	41	61	7.6
4	66	150	150	180	90	171	153	141	357	39	55	6.0
5	69	150	140	190	84	167	137	135	364	35	46	3.6
6	71	150	130	185	80	191	137	116	431	31	45	20
7	70	156	90	190	76	207	156	229	364	27	41	19
8	72	159	94	180	84	199	164	195	270	23	37	17
9	77	156	96	180	80	191	147	177	265	23	37	13
10	78	161	100	180	70	184	126	188	259	23	38	10
11	82	164	120	170	80	184	129	164	293	22	34	7.6
12	82	161	120	180	88	180	114	131	324	22	30	10
13	80	170	110	170	100	167	116	126	472	49	29	11
14	82	170	120	160	110	171	116	116	373	29	47	10
15	93	170	140	140	150	164	114	114	120	24	41	8.4
16	131	150	150	120	200	159	106	110	102	34	34	8.4
17	134	95	160	110	210	164	100	128	116	65	32	8.4
18	114	140	165	120	240	167	108	123	99	64	39	10
19	126	150	120	130	300	177	104	708	99	70	33	9.2
20	156	150	110	130	310	211	104	1050	98	305	29	7.6
21	164	160	120	140	330	249	159	601	95	164	28	6.8
22	161	170	130	160	350	276	245	480	89	100	25	6.0
23	140	160	120	160	550	270	230	623	84	89	25	6.8
24	134	150	110	170	500	317	265	634	77	73	23	8.4
25	137	150	120	150	460	287	208	1160	71	109	22	13
26	134	150	160	150	305	249	168	763	67	188	19	17
27	131	150	190	160	254	199	126	882	64	860	16	20
28	134	170	220	170	191	191	102	882	61	451	14	21
29	134	160	230	170	---	191	184	897	54	988	18	24
30	147	170	200	150	---	203	212	976	50	265	16	28
31	177	---	195	140	---	259	---	645	---	108	12	---
TOTAL	3365	4653	4300	4935	5562	6331	4629	12978	6489	4410	1077	359.0
MEAN	109	155	139	159	199	204	154	419	216	142	34.7	12.0
MAX	177	170	230	190	550	317	265	1160	532	988	83	28
MIN	62	95	90	110	70	159	100	110	50	22	12	3.6
AC-FT	6670	9230	8530	9790	11030	12560	9180	25740	12870	8750	2140	712
CAL YR 1980 TOTAL	67209.40			184	1450		MIN .00	AC-FT 133300				
WTR YR 1981 TOTAL	59088.00			162	1160		MIN 3.6	AC-FT 117200				

WATER-QUALITY RECORDS

WATER-QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

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

[illegible]

WATER-QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

[illegible]

YELLOWSTONE RIVER BASIN

06318500 CLEAR CREEK NEAR BUFFALO, WY

LOCATION.--Lat 44°19'58", long 106°46'36", in SE¼SW¼NW¼ sec.6, T.50 N., R.82 W., Johnson County, Hydrologic Unit 10090206, on left bank 500 ft (152 m) upstream from abandoned Pacific Power & Light Company powerplant, 2.0 mi (3.2 km) downstream from Mosier Gulch, and 4.0 mi (6.4 km) west of Buffalo.

DRAINAGE AREA.--120 mi² (311 km²).

PERIOD OF RECORD.--April to September 1894, May to September 1896, May 1897 to December 1899, June 1917 to October 1927, April 1938 to current year. Published as "at Buffalo" 1897-98. Monthly discharge only for some periods, published in WSP 1309.

REVISED RECORDS.--WSP 1309: 1896, 1898, 1938, 1939(M), 1945(M). WSP 1729: 1921.

GAGE.--Water-stage recorder. Datum of gage is 5,184.83 ft (1,580.336 m), National Geodetic Vertical Datum of 1929. See WSP 1916 for history of changes prior to 1961.

REMARKS.--Records good, except those for winter period, which are fair. Diversions above station for irrigation of about 330 acres (1.34 km²), of which about 320 acres (1.30 km²) are below station.

AVERAGE DISCHARGE.--55 years (water years 1898-99, 1918-27, 1939-81), 63.3 ft³/s (1.793 m³/s), 45,860 acre-ft/yr (56.5 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 3,420 ft³/s (96.9 m³/s) June 15, 1963, gage height, 6.19 ft (1.887 m), from rating curve extended above 900 ft³/s (25.5 m³/s) on basis of velocity-area study; no flow Feb. 14-16, 1939, Nov. 12, 13, 1940.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 380 ft³/s (10.8 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
May 17	0630	*481 13.6	3.49 1.064	June 9	1000	427 12.1	*3.50 1.067
May 28	0230	440 12.5	3.46 1.055				

Minimum daily discharge, 5.3 ft³/s (0.15 m³/s) Feb. 9.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	21	19	15	13	6.0	9.1	11	59	261	116	43	28
2	21	20	15	13	6.0	8.8	13	70	222	107	39	26
3	21	18	16	11	6.5	9.1	13	79	221	116	35	26
4	20	19	15	13	8.0	7.9	12	64	267	135	34	24
5	20	19	14	13	6.4	8.8	12	61	226	110	33	24
6	20	19	14	15	5.9	9.4	12	64	260	94	34	33
7	20	19	13	12	6.0	9.4	11	67	359	119	36	35
8	19	20	14	14	5.7	9.4	11	56	308	110	34	32
9	19	18	14	11	5.3	9.1	11	46	360	68	43	30
10	19	19	14	10	6.2	8.8	12	42	236	59	42	29
11	19	18	14	10	6.7	9.1	18	44	168	58	36	28
12	19	19	14	8.0	5.9	9.1	34	45	172	61	33	27
13	19	16	14	10	5.5	9.1	37	41	268	67	32	26
14	18	14	13	10	5.9	9.1	21	37	192	59	32	25
15	24	14	14	9.8	6.4	9.1	31	47	130	47	34	27
16	23	14	15	10	6.7	9.4	39	130	105	42	48	27
17	22	15	15	8.0	7.6	9.7	45	360	92	42	49	25
18	21	15	15	8.0	8.2	9.4	40	210	79	68	37	24
19	22	18	12	8.0	8.2	9.1	40	190	71	57	34	23
20	22	16	12	8.0	8.8	9.4	31	221	81	52	34	23
21	22	18	14	7.1	8.5	9.7	32	222	86	46	34	22
22	21	19	14	7.4	8.5	9.4	22	216	77	42	33	22
23	18	19	14	7.9	8.2	9.7	23	237	112	39	32	21
24	13	18	12	8.6	8.5	9.4	33	192	165	37	32	21
25	21	18	14	9.8	8.8	8.8	48	188	145	53	31	21
26	21	16	14	11	9.1	11	65	245	151	72	31	21
27	19	15	15	12	9.1	13	70	375	196	85	30	21
28	13	15	15	10	9.4	11	65	374	189	69	30	21
29	20	15	13	8.6	---	11	53	283	161	57	31	20
30	22	15	14	8.5	---	14	50	261	123	52	29	22
31	19	---	14	9.5	---	11	---	278	---	46	28	---
TOTAL	618	517	435	315.2	202.0	300.3	915	4804	5483	2185	1083	754
MEAN	19.9	17.2	14.0	10.2	7.21	9.69	30.5	155	183	70.5	34.9	25.1
MAX	24	20	16	15	9.4	14	70	375	360	135	49	35
MIN	13	14	12	7.1	5.3	7.9	11	37	71	37	28	20
AC-FT	1230	1030	863	625	401	596	1810	9530	10880	4330	2150	1500
CAL YR 1980	TOTAL	23177.0	MEAN	63.3	MAX	659	MIN	11	AC-FT	45970		
WTR YR 1981	TOTAL	17611.5	MEAN	48.3	MAX	375	MIN	5.3	AC-FT	34930		

06320000 ROCK CREEK NEAR BUFFALO, WY

LOCATION.--Lat 44°27'22", long 106°52'42", in NW¼NW¼NW¼ sec.29, T.52 N., R.83 W., Johnson County, Hydrologic Unit 10090206, on left bank 300 ft (91 m) downstream from confluence of North and South Forks and 11.5 mi (18.5 km) northwest of Buffalo.

DRAINAGE AREA.--60.0 mi² (155.4 km²).

PERIOD OF RECORD.--April to August 1941, April to December 1942, May 1943 to November 1944, April 1945 to current year (no winter records since 1971). Monthly discharge only for some periods, published in WSP 1309.

GAGE.--Water-stage recorder. Altitude of gage is 5,280 ft (1,609 m), from topographic map. Prior to Jan. 8, 1944, nonrecording gages 600 ft (183 m) upstream on North and South Forks at different datums. Jan. 8, 1944, to Sept. 30, 1952, water-stage recorder at present site at datum 0.72 ft (0.219 m) lower.

REMARKS.--Records good. Water is imported into drainage basin above station from South Piney Creek. Diversions for irrigation of about 250 acres (1.01 km²) above station.

COOPERATION.--Records collected and computed by Office of the Wyoming State Engineer and reviewed by Geological Survey.

AVERAGE DISCHARGE.--27 years (water years 1944, 1946-71), 36.4 ft³/s (1.031 m³/s), 26,370 acre-ft/yr (32.5 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,860 ft³/s (52.7 m³/s) June 15, 1963, gage height, 7.98 ft (2.432 m), from rating curve extended above 450 ft³/s (12.7 m³/s) on basis of slope-area measurement of peak flow; minimum daily, 0.50 ft³/s (0.014 m³/s) Sept. 19, 1954.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since at least 1941, about 8.05 ft (2.454 m), probably during 1944.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 615 ft³/s (17.4 m³/s) May 22, gage height, 6.29 ft (1.917 m); minimum daily during period of operation, 2.1 ft³/s (0.059 m³/s) Sept. 20, 21.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1							3.9	15	187	47	35	28
2							4.5	27	161	47	34	28
3							4.2	25	163	47	34	26
4							3.8	13	163	50	31	24
5							3.8	14	143	44	33	24
6							3.9	24	147	41	36	27
7							3.9	28	145	42	37	26
8							3.6	16	139	40	36	25
9							3.5	12	161	36	38	29
10							3.8	11	97	34	38	24
11							4.8	14	82	33	38	4.6
12							6.4	12	94	37	36	3.5
13							7.6	9.4	110	41	33	3.2
14							6.0	8.4	74	36	34	3.0
15							8.1	18	66	32	34	2.8
16							12	81	62	26	36	2.7
17							17	285	58	18	40	2.5
18							16	157	64	22	33	2.4
19							18	134	66	18	31	2.2
20							15	139	75	16	28	2.1
21							15	143	69	27	21	2.1
22							9.8	302	64	35	21	5.4
23							9.6	349	68	35	20	19
24							16	249	65	36	20	22
25							20	225	58	41	21	23
26							21	229	58	52	20	24
27							24	282	57	56	18	24
28							16	235	55	45	18	23
29							13	227	50	39	17	23
30							14	201	47	37	16	24
31							---	203	---	36	17	---
TOTAL							308.2	3687.8	2848	1146	904	479.5
MEAN							10.3	119	94.9	37.0	29.2	16.0
MAX							24	349	187	56	40	29
MIN							3.5	8.4	47	16	16	2.1
AC-FT							611	7310	5650	2270	1790	951

YELLOWSTONE RIVER BASIN

06320200 CLEAR CREEK BELOW ROCK CREEK, NEAR BUFFALO, WY

LOCATION.--Lat 44°21'44", long 106°39'13", in SW¼SE¼NW¼ sec.30, T.51 N., R.81 W., Johnson County, Hydrologic Unit 10090206, on right bank 100 ft (30 m) downstream from bridge on county road, 0.5 mi (0.8 km) downstream from Rock Creek, and 2.5 mi (4.0 km) northeast of Buffalo.

DRAINAGE AREA.--322 mi² (834 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--May 1971 to September 1981 (discontinued). No winter records prior to 1976. Records prior to October 1975 in files of Office of Wyoming State Engineer.

GAGE.--Water-stage recorder. Altitude of gage is 4,480 ft (1,366 m), from topographic map.

REMARKS.--Records good except those for winter period, which are poor. Diversions above station for irrigation of about 13,500 acres (54.6 km²), of which 269 acres (1.09 km²) are below station.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,060 ft³/s (58.3 m³/s) May 30, 1971, gage height, 6.28 ft (1.914 m); minimum daily, 6.4 ft³/s (0.18 m³/s) Apr. 24, 30, May 1, 1981.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 739 ft³/s (20.9 m³/s) May 23, gage height, 4.38 ft (1.335 m); minimum daily, 6.4 ft³/s (0.18 m³/s) Apr. 24, 30, May 1.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	44	50	49	52	33	33	27	6.4	389	104	29	29
2	43	50	52	51	33	33	24	11	305	89	27	29
3	43	49	64	48	35	34	27	23	293	98	23	28
4	42	51	58	48	38	34	25	22	373	111	22	29
5	42	54	53	47	37	35	24	14	293	93	21	26
6	42	53	51	48	35	35	24	13	339	72	27	34
7	42	53	49	52	33	34	25	24	486	76	32	35
8	42	52	47	52	33	34	22	19	443	77	30	33
9	40	53	50	45	32	34	22	14	513	49	36	31
10	43	51	50	44	30	32	22	10	339	32	40	31
11	44	51	52	46	33	30	26	11	218	25	36	30
12	46	51	55	44	36	29	34	17	210	28	33	27
13	46	51	46	50	38	30	46	17	399	35	33	24
14	45	46	44	47	39	30	26	29	275	30	37	23
15	59	47	46	52	40	28	26	31	191	24	34	22
16	60	53	48	43	45	26	28	107	154	20	41	23
17	56	50	50	41	47	27	30	559	133	23	51	23
18	56	52	49	40	45	27	25	300	123	29	43	22
19	55	52	44	40	42	26	24	203	108	23	38	21
20	56	52	44	40	38	26	15	201	117	16	35	21
21	55	52	46	45	37	34	14	219	129	12	36	23
22	53	54	47	46	34	28	11	327	111	11	36	22
23	49	56	47	43	35	28	7.7	606	129	20	35	24
24	43	55	45	38	34	27	6.4	389	177	19	33	25
25	48	54	46	35	35	26	7.3	317	168	46	33	27
26	56	55	48	35	36	25	9.9	345	163	78	32	31
27	53	54	52	36	35	29	14	580	213	94	31	31
28	47	53	52	36	34	30	16	571	212	68	29	31
29	46	52	52	37	---	28	6.7	463	182	42	29	30
30	54	51	50	36	---	26	6.4	394	130	30	28	33
31	52	---	55	35	---	30	---	409	---	27	28	---
TOTAL	1502	1557	1541	1352	1022	928	621.4	6251.4	7315	1501	1018	818
MEAN	48.5	51.9	49.7	43.6	36.5	29.9	20.7	202	244	48.4	32.8	27.3
MAX	60	56	64	52	47	35	46	606	513	111	51	35
MIN	40	46	44	35	30	25	6.4	6.4	108	11	21	21
AC-FT	2980	3090	3060	2680	2030	1840	1230	12400	14510	2980	2020	1620
CAL YR 1980	TOTAL	30303.0	MEAN	82.8	MAX	797	MIN	12	AC-FT	60110		
WTR YR 1981	TOTAL	25426.8	MEAN	69.7	MAX	606	MIN	6.4	AC-FT	50430		

06320200 CLEAR CREEK BELOW ROCK CREEK, NEAR BUFFALO, WY--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water year 1976 to September 1981 (discontinued).

WATER-QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	TUR- BID- ITY (NTU)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN DEMAND, BIO- CHEM- ICAL, 5 DAY (MG/L)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	HARD- NESS (MG/L AS CACO3)
OCT										
06...	1200	44	700	8.4	11.0	1.5	10.8	7.2	150	330
NOV										
13...	1415	51	860	8.5	2.0	1.7	13.4	1.8	220	360
DEC										
03...	1600	69	850	8.3	1.0	11	12.2	3.3	850	360
JAN										
07...	1500	61	900	8.1	.0	3.0	13.0	1.6	260	360
FEB										
03...	1530	36	925	7.8	.0	1.3	12.4	2.4	560	430
MAR										
05...	1415	35	1150	8.4	5.0	.80	15.4	2.4	--	280
APR										
07...	1345	24	1080	8.7	8.0	2.0	17.5	2.8	150	470
MAY										
07...	1530	26	900	8.6	12.0	1.2	12.6	3.5	140	360
18...	1030	306	--	--	5.0	--	--	--	--	--
JUN										
04...	1715	363	245	7.8	14.0	4.9	9.6	4.7	260	87
JUL										
03...	1430	103	--	--	19.5	--	--	--	--	--
15...	1050	26	830	8.2	18.5	2.9	10.4	8.0	500	350
AUG										
05...	1700	23	975	8.9	24.0	2.0	10.2	3.9	93	430
SEP										
01...	1700	31	920	8.6	21.0	1.3	8.7	3.2	230	400

DATE	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	POTAS- SIUM 40 DIS- SOLVED (PCI/L AS K40)	ALKA- LINITY LAB (MG/L AS CACO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)
OCT										
06...	80	32	42	1.0	2.6	1.9	170	260	3.8	.2
NOV										
13...	85	36	45	1.0	2.7	2.0	170	260	3.1	.2
DEC										
03...	85	35	46	1.1	3.3	2.5	140	290	7.6	.2
JAN										
07...	86	36	46	1.1	2.4	1.8	170	310	4.1	.2
FEB										
03...	100	43	51	1.1	2.7	2.0	200	350	4.5	.2
MAR										
05...	66	27	35	.9	2.5	1.9	190	450	4.8	.1
APR										
07...	110	47	61	1.2	3.0	2.2	190	410	5.2	.2
MAY										
07...	81	38	55	1.3	2.7	2.0	140	330	4.6	.1
18...	--	--	--	--	--	--	--	--	--	--
JUN										
04...	21	8.5	12	.6	1.2	.90	42	68	1.0	.1
JUL										
03...	--	--	--	--	--	--	--	--	--	--
15...	84	33	43	1.0	3.2	2.4	170	260	4.2	.1
AUG										
05...	98	44	59	1.4	3.5	--	180	350	5.0	.5
SEP										
01...	92	42	47	1.1	3.2	--	180	310	4.0	.2

YELLOWSTONE RIVER BASIN

06320200 CLEAR CREEK BELOW ROCK CREEK, NEAR BUFFALO, WY--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	SILICA, DIS- SOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTITUENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)	SOLIDS, DIS- SOLVED (TONS PER DAY)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N)	NITRO- GEN, AMMONIA TOTAL (MG/L AS NH4)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N)
OCT 06...	11	534	.73	62.7	.00	.00	.000	.00	.88	.88
NOV 13...	11	545	.74	75.0	.06	--	.940	1.1	.00	.82
DEC 03...	11	563	.77	105	.03	--	.230	.28	.64	.87
JAN 07...	11	598	.81	98.5	.14	--	.260	.31	.56	.82
FEB 03...	12	684	.93	66.5	.12	--	.480	.58	.29	.77
MAR 05...	8.0	708	.96	66.9	.71	--	.110	--	1.9	2.00
APR 07...	9.4	760	1.0	49.7	.13	--	.120	--	.98	1.10
MAY 07...	9.6	605	.82	42.5	.09	--	.190	--	.81	1.00
18...	--	--	--	--	--	--	--	--	--	--
JUN 04...	8.7	146	.20	143	.01	--	.050	--	.95	1.00
JUL 03...	--	--	--	--	--	--	--	--	--	--
15...	10	540	.73	37.9	.12	--	.300	--	1.3	1.60
AUG 05...	7.1	675	.92	41.0	.21	--	.200	--	1.9	2.10
SEP 01...	11	618	.84	51.1	.06	--	.100	--	1.0	1.10

DATE	NITRO- GEN, TOTAL (MG/L AS N)	NITRO- GEN, TOTAL (MG/L AS NO3)	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHORUS TOTAL (MG/L AS PO4)	PHOS- PHORUS, DIS- SOLVED (MG/L AS P)	CYANIDE TOTAL (MG/L AS CN)	PHENOLS (UG/L)	SEDI- MENT, SUS- PENDEDED (MG/L)	SEDI- MENT, DIS- CHARGE, SUS- PENDEDED (T/DAY)
OCT 06...	.88	3.9	.100	.31	.110	.00	6	5	.59
NOV 13...	.88	3.9	.280	.86	--	--	--	3	.41
DEC 03...	.90	4.0	.120	.37	--	--	--	35	6.5
JAN 07...	.96	4.3	.150	.46	--	--	--	9	1.5
FEB 03...	.89	3.9	.170	.52	--	--	--	16	1.6
MAR 05...	2.7	12	.200	.61	--	--	--	6	.57
APR 07...	1.2	5.4	.260	.80	--	.00	4	3	.20
MAY 07...	1.1	4.8	.330	1.0	--	--	--	20	1.4
18...	--	--	--	--	--	.00	8	90	.74
JUN 04...	1.0	4.5	.080	.25	--	.00	1	28	.27
JUL 03...	--	--	--	--	--	--	--	6	1.7
15...	1.7	7.6	.290	.89	--	--	--	--	--
AUG 05...	2.3	10	.260	.80	--	--	--	4	.24
SEP 01...	1.2	5.1	.190	.58	--	--	--	16	1.3

WATER-QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

[illegible]

YELLOWSTONE RIVER BASIN

06320200 CLEAR CREEK BELOW ROCK CREEK, NEAR BUFFALO, WY--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	LEAD, SUS- PENDE RECOV- ERABLE (UG/L AS PB)	LEAD, DIS- SOLVED (UG/L AS PB)	LITHIUM TOTAL RECOV- ERABLE (UG/L AS LI)	LITHIUM SUS- PENDE RECOV- ERABLE (UG/L AS LI)	LITHIUM DIS- SOLVED (UG/L AS LI)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)	MANGA- NESE, SUS- PENDE RECOV. (UG/L AS MN)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	MERCURY TOTAL RECOV- ERABLE (UG/L AS HG)	MERCURY SUS- PENDE RECOV- ERABLE (UG/L AS HG)	MERCURY DIS- SOLVED (UG/L AS HG)
OCT 06...	2	2	0	0	20	40	20	20	.1	.1	.0
NOV 13...	--	--	--	--	--	--	--	--	--	--	--
DEC 03...	--	--	--	--	--	--	--	--	--	--	--
JAN 07...	--	--	10	--	--	40	--	--	.1	--	--
FEB 03...	--	--	--	--	--	--	--	--	--	--	--
MAR 05...	--	--	--	--	--	--	--	--	--	--	--
APR 07...	--	--	10	--	--	50	--	--	1.0	--	--
MAY 07...	--	--	--	--	--	--	--	--	--	--	--
JUN 04...	--	--	--	--	--	--	--	--	--	--	--
JUL 15...	--	--	10	--	--	60	--	--	.1	--	--
AUG 05...	--	--	--	--	--	--	--	--	--	--	--
SEP 01...	--	--	--	--	--	--	--	--	--	--	--

DATE	MOLYB- DENUM, TOTAL RECOV- ERABLE (UG/L AS MO)	MOLYB- DENUM, DIS- SOLVED (UG/L AS MO)	NICKEL, TOTAL RECOV- ERABLE (UG/L AS NI)	NICKEL, SUS- PENDE RECOV- ERABLE (UG/L AS NI)	NICKEL, DIS- SOLVED (UG/L AS NI)	SELE- NIUM, TOTAL (UG/L AS SE)	SELE- NIUM, SUS- PENDE TOTAL (UG/L AS SE)	SELE- NIUM, DIS- SOLVED (UG/L AS SE)	VANA- DIUM, DIS- SOLVED (UG/L AS V)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN)	ZINC, DIS- SOLVED (UG/L AS ZN)
OCT 06...	1	<10	6	2	4	0	0	0	2.0	30	<3
NOV 13...	--	--	--	--	--	--	--	--	--	--	--
DEC 03...	--	--	--	--	--	--	--	--	--	--	--
JAN 07...	0	--	7	--	--	1	--	--	--	20	--
FEB 03...	--	--	--	--	--	--	--	--	--	--	--
MAR 05...	--	--	--	--	--	--	--	--	--	--	--
APR 07...	81	--	4	--	--	0	--	--	--	20	--
MAY 07...	--	--	--	--	--	--	--	--	--	--	--
JUN 04...	--	--	--	--	--	--	--	--	--	--	--
JUL 15...	15	--	3	--	--	0	--	--	--	20	--
AUG 05...	--	--	--	--	--	--	--	--	--	--	--
SEP 01...	--	--	--	--	--	--	--	--	--	--	--

DATE	TIME	GROSS ALPHA, DIS- SOLVED (UG/L AS U-NAT)	GROSS ALPHA, SUSP. TOTAL (UG/L AS U-NAT)	GROSS BETA, DIS- SOLVED (PCI/L AS CS-137)	GROSS BETA, SUSP. TOTAL (PCI/L AS CS-137)	GROSS BETA, DIS- SOLVED (PCI/L AS SR/ YT-90)	GROSS BETA, SUSP. TOTAL (PCI/L AS SR/ YT-90)	RADIUM 226, DIS- SOLVED, RADON METHOD (PCI/L)	URANIUM NATURAL DIS- SOLVED (UG/L AS U)	GROSS ALPHA, DIS- SOLVED (PCI/L AS U-NAT)	GROSS ALPHA, SUSP. TOTAL (PCI/L AS U-NAT)
OCT 06...	1200	9.0	<.4	7.1	.9	6.5	.9	.10	4.3	6.1	<.3

06320200 CLEAR CREEK BELOW ROCK CREEK, NEAR BUFFALO, WY--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	TIME	2,4-D, TOTAL (UG/L)	2,4-D, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	2, 4-DP TOTAL (UG/L)	2,4-DP, IN BOTTOM MAT. (UG/KG)	2,4,5-T TOTAL (UG/L)	2,4,5-T TOM MA- TERIAL (UG/KG)	SILVEX, TOTAL (UG/L)	SILVEX, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)
JUN 04...	1715	.01	0	.00	.00	.01	0	.00	0
JUL 15...	1050	.11	0	.00	.00	.00	0	.00	0
AUG 05...	1700	.03	0	.00	.00	.00	0	.00	0

DATE	TOTAL DICAMBA (UG/L)	DICAMBA IN BOTTOM MA- TERIAL (UG/KG)	TOTAL PICLORAM (UG/L)	PICLORAM IN BOTTOM MA- TERIAL (UG/KG)
JUN 04...	.00	.0	.00	.0
JUL 15...	.03	.0	.03	.0
AUG 05...	.02	.0	.02	.0

DATE	TIME	TEMPER- ATURE (DEG C)	STREAM- FLOW, INSTAN- TANEOUS (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
MAY 07...	1530	12.0	26	1	3	11	38
SEP 01...	1700	21.0	31	1	4	12	21

DATE	BED MAT. FALL DIAM. % FINER THAN 1.00 MM	BED MAT. SIEVE DIAM. % FINER THAN 2.00 MM	BED MAT. SIEVE DIAM. % FINER THAN 4.00 MM	BED MAT. SIEVE DIAM. % FINER THAN 8.00 MM	BED MAT. SIEVE DIAM. % FINER THAN 16.0 MM	BED MAT. SIEVE DIAM. % FINER THAN 32.0 MM	BED MAT. SIEVE DIAM. % FINER THAN 64.0 MM
MAY 07...	51	61	71	81	92	100	--
SEP 01...	27	31	34	40	63	87	100

06320400 CLEAR CREEK AT UCROSS, WY

LOCATION.--Lat 44°33'09", long 106°32'06", in NE¼SW¼NE¼ sec.19, T.53 N., R.80 W., Johnson County, Hydrologic Unit 10090206, on left bank 0.5 mi (0.8 km) upstream from Sheridan-Johnson County line, 0.7 mi (1.1 km) south of Ucross, and 1.6 mi (2.6 km) upstream from Piney Creek.

DRAINAGE AREA.--409 mi² (1,059 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--June 1976 to September 1981 (discontinued).

GAGE.--Water-stage recorder. Altitude of gage is 4,070 ft (1,241 m), from topographic map.

REMARKS.--Records good except those for winter period, which are poor. Diversions above station for irrigation of about 17,700 acres (71.6 km²), of which about 200 acres (0.81 km²) are below station. Water was diverted into Lake De Smet and then released into Piney Creek basin, bypassing the station.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,740 ft³/s (49.3 m³/s) May 19, 1978, gage height, 9.07 ft (2.765 m); minimum daily, 2.0 ft³/s (0.06 m³/s) May 15, 1981.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 640 ft³/s (18.1 m³/s) May 23, gage height, 6.32 ft (1.926 m); minimum daily, 2.0 ft³/s (0.06 m³/s) May 15.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	48	50	45	40	27	40	31	6.4	405	94	28	32
2	46	51	37	42	27	45	26	5.2	337	79	28	27
3	44	51	40	43	28	43	27	5.2	296	64	25	24
4	44	51	55	40	32	42	17	4.9	362	66	22	23
5	44	54	42	40	30	40	9.4	5.2	335	73	17	23
6	44	57	48	37	29	39	8.8	16	318	55	19	23
7	37	57	47	35	28	38	7.0	12	438	42	26	31
8	40	59	48	40	30	37	7.3	9.6	460	33	35	35
9	40	57	49	40	28	37	8.7	7.1	453	34	36	32
10	41	57	50	39	26	37	8.7	6.4	442	21	47	29
11	47	57	52	38	31	34	9.1	3.7	251	21	54	28
12	48	56	54	46	35	32	8.9	3.2	203	25	47	26
13	47	59	50	50	40	32	7.8	2.6	309	22	43	23
14	47	56	48	46	40	32	8.3	2.3	334	18	46	20
15	51	43	57	40	42	31	8.6	2.0	215	19	51	18
16	74	39	54	37	47	24	8.9	2.3	175	16	50	18
17	68	39	55	35	46	22	9.1	174	132	6.5	57	20
18	65	54	48	39	43	29	9.1	153	129	4.8	54	20
19	63	55	39	41	39	29	8.7	166	107	3.9	40	20
20	62	56	46	43	36	28	9.9	132	99	3.4	35	18
21	62	57	47	44	34	33	10	151	123	3.6	44	19
22	63	62	47	42	38	36	10	209	120	3.2	33	19
23	61	63	47	40	42	29	9.1	491	105	3.4	38	19
24	56	56	37	36	45	28	8.7	414	144	4.3	36	20
25	47	50	46	35	43	28	9.7	310	160	14	32	24
26	51	48	51	36	40	27	8.3	301	146	62	34	27
27	54	46	48	37	37	25	7.1	483	175	122	38	31
28	46	50	52	37	40	32	7.8	581	194	111	35	30
29	49	50	52	37	---	30	7.9	477	182	77	33	30
30	56	55	45	35	---	28	8.3	420	121	46	33	31
31	52	---	48	30	---	29	---	384	---	35	32	---
TOTAL	1597	1595	1484	1220	1003	1016	326.2	4940.1	7270	1182.1	1148	740
MEAN	51.5	53.2	47.9	39.4	35.8	32.8	10.9	159	242	38.1	37.0	24.7
MAX	74	63	57	50	47	45	31	581	460	122	57	35
MIN	37	39	37	30	26	22	7.0	2.0	99	3.2	17	18
AC-FT	3170	3160	2940	2420	1990	2020	647	9800	14420	2340	2280	1470
CAL YR 1980	TOTAL	16599.7	MEAN 45.4	MAX 363	MIN 5.6	AC-FT 32930						
WTR YR 1981	TOTAL	23521.4	MEAN 64.4	MAX 581	MIN 2.0	AC-FT 46650						

YELLOWSTONE RIVER BASIN

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06320400 CLEAR CREEK AT UCROSS, WY--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water year 1976 to September 1981 (discontinued).

WATER-QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	TUR- BID- ITY (NTU)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN DEMAND, BIO- CHEM- ICAL, 5 DAY (MG/L)	HARD- NESS (MG/L AS CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)
OCT 03...	1700	44	1020	8.5	14.0	21	8.2	2.2	440	100
NOV 05...	1200	52	1100	8.6	7.0	--	11.4	1.6	420	95
DEC 03...	1115	34	1090	9.2	.0	8.2	12.2	2.5	450	100
JAN 07...	1130	26	1100	8.3	.0	3.2	--	1.4	480	110
FEB 03...	1200	28	1240	8.0	.0	2.5	--	1.6	530	120
MAR 05...	1330	40	1150	8.3	6.0	2.7	12.0	--	520	120
APR 01...	1300	32	1200	8.2	10.0	3.4	10.6	1.8	580	130
MAY 08...	1730	8.7	1300	8.3	9.0	3.2	10.6	3.2	580	130
18...	1315	137	--	--	12.0	--	--	--	--	--
JUN 12...	1200	190	430	8.0	15.0	7.3	9.1	1.6	170	42
JUL 03...	1200	69	--	--	21.5	--	--	--	--	--
15...	1400	22	1090	8.2	24.0	1.3	9.2	3.8	460	110
AUG 06...	2000	21	1300	8.3	24.0	5.0	8.2	--	560	127
SEP 03...	1200	25	1160	8.1	16.0	14	9.4	2.8	520	116

DATE	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	POTAS- SIUM 40 DIS- SOLVED (PCI/L AS K40)	ALKA- LINITY LAB (MG/L AS CACO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)
OCT 03...	46	60	1.2	3.8	2.8	210	370	4.2	.2
NOV 05...	45	58	1.2	3.7	2.8	200	320	3.6	.2
DEC 03...	48	62	1.3	4.7	3.5	210	370	4.2	.3
JAN 07...	51	70	1.4	4.5	3.4	220	420	5.8	.2
FEB 03...	57	70	1.3	3.4	2.5	240	450	5.0	.2
MAR 05...	54	68	1.3	3.1	2.3	200	440	4.8	.1
APR 01...	62	77	1.4	4.1	3.1	210	550	5.5	.2
MAY 08...	62	83	1.5	6.0	4.5	250	490	6.1	.1
18...	--	--	--	--	--	--	--	--	--
JUN 12...	16	20	.7	1.8	1.3	90	130	1.4	.1
JUL 03...	--	--	--	--	--	--	--	--	--
15...	46	58	1.2	5.0	3.7	220	350	3.7	.2
AUG 06...	60	80	1.6	6.0	--	260	440	4.1	.2
SEP 03...	55	68	1.4	4.3	--	230	440	4.7	.5

YELLOWSTONE RIVER BASIN

06320400 CLEAR CREEK AT UCROSS, WY--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	SILICA, DIS- SOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTITUENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)	SOLIDS, DIS- SOLVED (TONS PER DAY)	NITRO- GEN, NITRITE TOTAL (MG/L AS N)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N)	NITRO- GEN, AMMONIA TOTAL (MG/L AS NH4)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N)
OCT 03...	8.1	719	.98	85.4	--	--	--	--	--
NOV 05...	8.1	654	.89	91.8	--	.01	.120	.15	.88
DEC 03...	10	726	.99	66.6	--	.07	.060	.07	.42
JAN 07...	9.7	804	1.1	56.0	--	.17	.090	.11	.65
FEB 03...	7.7	858	1.2	64.9	--	.04	.060	.07	.44
MAR 05...	4.2	815	1.1	88.9	--	.00	.010	--	.99
APR 01...	6.4	962	1.3	82.6	--	.02	.050	--	.77
MAY 08...	7.5	935	1.3	22.0	--	.03	.130	--	1.2
18...	--	--	--	--	--	--	--	--	--
JUN 12...	7.6	265	.36	136	.010	.00	.090	--	.61
JUL 03...	--	--	--	--	--	--	--	--	--
15...	3.3	709	.96	42.1	--	.01	.070	--	1.0
AUG 06...	9.1	883	1.2	50.1	--	.01	.110	--	1.1
SEP 03...	2.6	830	1.1	56.5	--	<.10	.150	--	.54

DATE	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO- GEN, TOTAL (MG/L AS N)	NITRO- GEN, TOTAL (MG/L AS NO3)	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHORUS TOTAL (MG/L AS PO4)	CYANIDE TOTAL (MG/L AS CN)	PHENOLS (UG/L)	SEDI- MENT, SUS- PENDE (MG/L)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (T/DAY)
OCT 03...	--	--	--	--	--	.00	80	42	5.0
NOV 05...	1.00	1.0	4.5	.220	.67	--	--	14	2.0
DEC 03...	.48	.55	2.4	.050	.15	--	--	32	2.9
JAN 07...	.74	.91	4.0	.090	.28	--	--	14	.98
FEB 03...	.50	.54	2.4	.080	.25	--	--	34	2.6
MAR 05...	1.00	1.0	4.4	.070	.21	--	--	12	1.3
APR 01...	.82	.84	3.7	.110	.34	.00	3	38	3.3
MAY 08...	1.30	1.3	5.9	.220	.67	--	--	11	.26
18...	--	--	--	--	--	.00	12	170	63
JUN 12...	.70	.70	3.1	.090	.28	.00	4	47	24
JUL 03...	--	--	--	--	--	--	--	10	1.9
15...	1.10	1.1	4.9	.050	.15	--	--	--	--
AUG 06...	1.20	1.2	5.4	.070	.21	--	--	56	3.2
SEP 03...	.69	--	--	.070	.21	--	--	88	6.0

06320400 CLEAR CREEK AT UCROSS, WY--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

[illegible][illegible]

YELLOWSTONE RIVER BASIN

06320400 CLEAR CREEK AT UCROSS, WY--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	LEAD, SUS- PENDE RECOV- ERABLE (UG/L AS PB)	LEAD, DIS- SOLVED (UG/L AS PB)	LITHIUM TOTAL RECOV- ERABLE (UG/L AS LI)	LITHIUM SUS- PENDE RECOV- ERABLE (UG/L AS LI)	LITHIUM DIS- SOLVED (UG/L AS LI)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)	MANGA- NESE, SUS- PENDE RECOV- ERABLE (UG/L AS MN)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	MERCURY TOTAL RECOV- ERABLE (UG/L AS HG)	MERCURY SUS- PENDE RECOV- ERABLE (UG/L AS HG)	MERCURY DIS- SOLVED (UG/L AS HG)
OCT 03...	5	4	10	0	30	90	60	30	.1	.1	.0
NOV 05...	--	--	--	--	--	--	--	--	--	--	--
DEC 03...	--	--	--	--	--	--	--	--	--	--	--
JAN 07...	--	--	20	--	--	40	--	--	.4	--	--
FEB 03...	--	--	--	--	--	--	--	--	--	--	--
MAR 05...	--	--	--	--	--	--	--	--	--	--	--
APR 01...	--	--	20	--	--	90	--	--	.0	--	--
MAY 08...	--	--	--	--	--	--	--	--	--	--	--
JUN 12...	--	--	--	--	--	--	--	--	--	--	--
JUL 15...	--	--	20	--	--	30	--	--	.1	--	--
AUG 06...	--	--	--	--	--	--	--	--	--	--	--
SEP 03...	--	--	--	--	--	--	--	--	--	--	--

DATE	MOLYB- DENUM, TOTAL RECOV- ERABLE (UG/L AS MO)	MOLYB- DENUM, DIS- SOLVED (UG/L AS MO)	NICKEL, TOTAL RECOV- ERABLE (UG/L AS NI)	NICKEL, SUS- PENDE RECOV- ERABLE (UG/L AS NI)	NICKEL, DIS- SOLVED (UG/L AS NI)	SELE- NIUM, TOTAL (UG/L AS SE)	SELE- NIUM, SUS- PENDE TOTAL (UG/L AS SE)	SELE- NIUM, DIS- SOLVED (UG/L AS SE)	VANA- DIUM, DIS- SOLVED (UG/L AS V)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN)	ZINC, DIS- SOLVED (UG/L AS ZN)
OCT 03...	1	<10	10	7	3	0	0	0	2.0	60	<3
NOV 05...	--	--	--	--	--	--	--	--	--	--	--
DEC 03...	--	--	--	--	--	--	--	--	--	--	--
JAN 07...	0	--	5	--	--	1	--	--	--	20	--
FEB 03...	--	--	--	--	--	--	--	--	--	--	--
MAR 05...	--	--	--	--	--	--	--	--	--	--	--
APR 01...	0	--	3	--	--	0	--	--	--	10	--
MAY 08...	--	--	--	--	--	--	--	--	--	--	--
JUN 12...	--	--	--	--	--	--	--	--	--	--	--
JUL 15...	26	--	3	--	--	0	--	--	--	40	--
AUG 06...	--	--	--	--	--	--	--	--	--	--	--
SEP 03...	--	--	--	--	--	--	--	--	--	--	--

DATE	TIME	GROSS ALPHA, DIS- SOLVED (UG/L AS U-NAT)	GROSS ALPHA, SUSP. TOTAL (UG/L AS U-NAT)	GROSS BETA, DIS- SOLVED (PCI/L AS CS-137)	GROSS BETA, SUSP. TOTAL (PCI/L AS CS-137)	GROSS BETA, DIS- SOLVED (PCI/L AS SR/ YT-90)	GROSS BETA, SUSP. TOTAL (PCI/L AS SR/ YT-90)	RADIUM 226, DIS- SOLVED, RADON METHOD (PCI/L)	URANIUM NATURAL DIS- SOLVED (UG/L AS U)	GROSS ALPHA, DIS- SOLVED (PCI/L AS U-NAT)	GROSS ALPHA, SUSP. TOTAL (PCI/L AS U-NAT)
OCT 03...	1700	<10	1.3	<5.4	2.3	<5.2	2.3	.16	6.9	<6.8	.9

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WATER-QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

	BED MAT. FALL DIAM. % FINER THAN	BED MAT. FALL DIAM. % FINER THAN	BED MAT. FALL DIAM. % FINER THAN	BED MAT. FALL DIAM. % FINER THAN	BED MAT. FALL DIAM. % FINER THAN	BED MAT. FALL DIAM. % FINER THAN	BED MAT. FALL DIAM. % FINER THAN	BED MAT. FALL DIAM. % FINER THAN	BED MAT. FALL DIAM. % FINER THAN	BED MAT. FALL DIAM. % FINER THAN	BED MAT. FALL DIAM. % FINER THAN
DATE	.062 MM	.125 MM	.250 MM	.500 MM	1.00 MM	2.00 MM	4.00 MM	8.00 MM	16.0 MM	32.0 MM	64.0 MM
MAY											
08...	0	2	9	63	82	96	99	100	--	--	--
18...	3	7	17	55	70	84	94	98	99	100	--
27...	--	--	--	--	--	--	--	--	--	--	--
SEP											
03...	2	6	16	32	37	41	44	49	58	94	100

YELLOWSTONE RIVER BASIN

06320500 SOUTH PINEY CREEK AT WILLOW PARK, WY

LOCATION.--Lat 44°27'59", long 107°02'03", in NW¼ sec.24, T.52 N., R.85 W., Johnson County, Hydrologic Unit 10090206, Bighorn National Forest, on left bank about 300 ft (91 m) downstream from Willow Park Dam, 1.4 mi (2.3 km) upstream from Kearny Creek, and 10 mi (16 km) southwest of Story.

DRAINAGE AREA.--33.6 mi² (87.0 km²).

PERIOD OF RECORD.--September 1945 to September 1957 (no winter records prior to 1948), October 1959 to current year (no winter records since 1971).

REVISED RECORDS.--WSP 1309: 1949(M). WSP 1709: Drainage area.

GAGE.--Water-stage recorder. Altitude of gage is 8,540 ft (2,603 m), from topographic map. Prior to Oct. 1, 1957, at site about 600 ft (183 m) upstream at different datum. Oct. 1, 1959, to Sept. 30, 1965, at present site at datum 1.00 ft (0.305 m) higher.

REMARKS.--Records good. No gage-height record Apr. 1 to May 31. Some regulation by Cloud Peak Reservoir, capacity, 3,385 acre-ft (4.17 hm³), and Willow Park Reservoir, capacity, 4,457 acre-ft (5.50 hm³). Storage began in Willow Park Reservoir in April 1959. Cloud Peak Reservoir enlarged December 1958. Water released from storage in Cloud Peak Reservoir is diverted just below station into Rock Creek basin.

COOPERATION.--Records collected and computed by Office of the Wyoming State Engineer and reviewed by Geological Survey.

AVERAGE DISCHARGE.--22 years (water years 1948-57, 1960-71), 42.4 ft³/s (1.201 m³/s), 30,720 acre-ft/yr (37.9 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,620 ft³/s (45.9 m³/s) June 15, 1963, gage height, 5.68 ft (1.731 m), present datum, from rating curve extended above 360 ft³/s (10.2 m³/s) on basis of slope-area measurement of peak flow; minimum daily, 0.30 ft³/s (0.008 m³/s) Nov. 19-21, 1966, but may have been less on individual days of no gage-height record; minimum daily determined prior to construction of Willow Park Reservoir, 4.5 ft³/s (0.13 m³/s) Mar. 1 to Apr. 5, 1955, but may have been less during years of no winter records.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 567 ft³/s (16.1 m³/s) June 9, gage height, 4.37 ft (1.332 m); minimum daily during period of operation, 16 ft³/s (0.453 m³/s) Sept. 16, 17.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1									185	132	81	62
2									134	128	78	62
3									164	132	74	60
4									249	146	69	58
5									245	142	72	57
6									281	125	78	57
7									338	128	82	56
8									371	139	81	56
9									499	126	81	58
10									317	89	81	38
11									184	78	83	19
12									162	81	83	19
13									253	103	82	19
14									225	99	82	19
15									154	85	81	18
16									105	73	80	16
17									85	64	79	16
18									68	68	76	18
19									61	67	78	18
20									72	69	69	18
21									82	74	62	19
22									80	76	63	28
23									95	79	60	38
24									119	81	57	40
25									136	81	57	40
26									156	85	57	40
27									200	89	56	40
28									209	91	56	39
29									189	94	55	39
30									156	87	52	38
31									---	84	56	---
TOTAL									5574	2995	2201	1105
MEAN									186	96.6	71.0	36.8
MAX									499	146	83	62
MIN									61	64	52	16
AC-FT									11060	5940	4370	2190

06321500 NORTH PINEY CREEK NEAR STORY, WY

LOCATION.--Lat 44°34'50", long 106°55'55", in NW¼SW¼ sec.12, T.53 N., R.84 W., Sheridan County, Hydrologic Unit 10090206, on left bank 2.1 mi (3.4 km) west of Story and 3.2 mi (5.1 km) upstream from confluence with South Piney Creek.

DRAINAGE AREA.--36.8 mi² (95.3 km²).

PERIOD OF RECORD.--June 1951 to current year.

REVISED RECORDS.--WSP 1916: Drainage area.

GAGE.--Water-stage recorder. Altitude of gage is 5,290 ft (1,612 m), from topographic map. Prior to Sept. 14, 1951, nonrecording gage at present site and datum.

REMARKS.--Records good. No diversion above station.

AVERAGE DISCHARGE.--30 years, 38.6 ft³/s (1.093 m³/s), 27,970 acre-ft/yr (34.5 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,820 ft³/s (51.5 m³/s) June 15, 1963, gage height, 5.04 ft (1.536 m), from rating curve extended above 1,000 ft³/s (28.3 m³/s); minimum daily discharge, 2.1 ft³/s (0.059 m³/s) Jan. 11, 1981.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 200 ft³/s (5.66 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)		Gage height (ft) (m)	
May 17	0400	544	15.4	3.17	0.966
May 22	1830	*598	16.9	3.28	1.000

Minimum daily discharge, 2.1 ft³/s (0.059 m³/s) Jan. 11.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	8.9	9.4	6.4	8.9	3.4	5.2	7.7	63	215	31	15	9.1
2	8.8	10	7.2	7.9	3.4	5.0	8.9	76	189	31	15	8.6
3	8.8	9.0	6.6	4.7	3.5	4.4	7.8	75	191	30	14	8.7
4	8.6	9.8	6.6	9.5	3.6	5.1	7.2	52	181	29	14	8.5
5	8.5	12	6.7	7.6	3.7	4.6	7.6	52	163	26	14	8.4
6	8.4	11	6.4	5.5	3.5	4.6	7.6	66	165	25	14	16
7	8.3	11	5.9	7.5	3.5	4.5	6.9	66	152	23	13	12
8	8.3	12	6.4	4.2	3.7	4.7	6.9	53	152	22	13	9.5
9	7.8	9.5	6.8	6.6	3.7	4.4	7.1	55	160	22	15	8.8
10	8.0	9.3	6.7	5.4	3.7	4.3	7.8	59	104	21	15	8.5
11	8.0	8.9	6.8	2.1	3.7	4.7	10	69	89	21	13	8.3
12	8.0	8.2	6.6	5.6	3.7	4.8	13	61	89	26	12	8.0
13	7.9	5.6	6.3	7.5	3.8	4.8	14	61	121	38	12	7.9
14	8.0	6.2	6.6	5.4	3.9	4.5	12	66	84	23	13	7.8
15	13	6.8	7.8	4.5	4.3	4.7	16	80	73	20	12	7.7
16	9.1	6.5	8.6	4.0	4.2	4.8	24	200	69	19	13	7.7
17	9.6	6.4	9.0	3.0	4.5	5.1	33	415	70	20	14	7.7
18	11	6.3	6.3	3.6	4.2	5.3	39	314	60	24	12	7.5
19	11	6.6	5.6	3.9	4.4	5.1	43	267	57	20	11	7.2
20	11	7.1	9.5	4.0	5.2	5.1	42	250	59	18	11	7.1
21	11	7.2	7.9	4.3	4.6	5.7	35	287	54	17	10	7.2
22	11	7.7	7.4	4.4	4.5	5.4	29	404	49	17	10	7.1
23	7.3	7.0	7.0	4.5	4.6	5.3	39	463	46	16	10	7.2
24	8.4	7.0	7.4	4.5	4.7	5.5	50	362	42	16	9.9	7.2
25	10	6.2	7.9	4.9	4.7	5.6	57	322	40	24	9.7	8.3
26	9.6	6.0	8.9	4.9	4.8	6.8	58	309	38	32	9.3	12
27	8.2	6.0	11	4.8	4.9	8.4	61	347	36	30	9.3	8.9
28	7.5	6.5	11	4.3	5.0	7.5	55	302	38	20	9.2	7.9
29	9.5	6.3	7.6	4.2	---	7.4	57	305	35	18	8.9	7.3
30	9.6	6.5	9.0	4.1	---	8.2	62	243	33	17	9.5	8.7
31	9.2	---	9.9	3.6	---	7.4	---	240	---	16	8.8	---
TOTAL	282.3	238.0	233.8	159.9	115.4	168.9	824.5	5984	2854	712	369.6	256.8
MEAN	9.11	7.93	7.54	5.16	4.12	5.45	27.5	193	95.1	23.0	11.9	8.56
MAX	13	12	11	9.5	5.2	8.4	62	463	215	38	15	16
MIN	7.3	5.6	5.6	2.1	3.4	4.3	6.9	52	33	16	8.8	7.1
AC-FT	560	472	464	317	229	335	1640	11870	5660	1410	733	509
CAL YR 1980	TOTAL	9923.9	MEAN	27.1	MAX	216	MIN	5.3	AC-FT	19680		
WTR YR 1981	TOTAL	12199.2	MEAN	33.4	MAX	463	MIN	2.1	AC-FT	24200		

YELLOWSTONE RIVER BASIN

06323000 PINEY CREEK AT KEARNY, WY

LOCATION.--Lat 44°32'08", long 106°49'18", in NE¼NE¼SW¼ sec.26, T.53 N., R.83 W., Johnson County, Hydrologic Unit 10090206, on right bank at Kearny, 300 ft (91 m) northeast of Historical Monument and 2.0 mi (3.2 km) upstream from Little Piney Creek.

DRAINAGE AREA.--118 mi² (306 km²).

PERIOD OF RECORD.--September 1902 to June 1906, June to August 1910, May 1911 to July 1917, May 1919 to September 1923 (no winter records), October 1940 to current year. Monthly discharge only for some periods, published in WSP 1309.

REVISED RECORDS.--WSP 1176: 1944. WSP 1309: 1913(M). WSP 1509: 1906, 1920(M), 1941(M), 1942, 1943(M). WSP 1916: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 4,655.11 ft (1,418.878 m), National Geodetic Vertical Datum of 1929. Sept. 6, 1902, to June 30, 1906, nonrecording gage at site 50 ft (15 m) upstream at different datum. May 14, 1911, to July 31, 1917, and May 1, 1919, to Sept. 30, 1923, nonrecording gage at site 50 ft (15 m) upstream at present datum.

REMARKS.--Records good except those for winter period, which are fair. Some regulation by Cloud Peak Reservoir, capacity, 3,385 acre-ft (4.17 hm³), Willow Park Reservoir, capacity, 4,457 acre-ft (55.0 hm³), and Kearny Lake, capacity, 1,860 acre-ft (2.29 hm³). Diversion above station from South Piney Creek into Rock Creek basin for irrigation. Diversions above station for irrigation of about 240 acres (97 hm²), of which about 90 acres (36 hm²) are below station. Record includes flow in bypass channel (Spring Creek), 300 ft (91 m) left of main channel.

COOPERATION.--Records collected and computed by Office of the Wyoming State Engineer and reviewed by Geological Survey.

AVERAGE DISCHARGE.--41 years (water years 1941-81), 87.2 ft³/s (2.470 m³/s), 63,180 acre-ft/yr (77.9 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 3,410 ft³/s (96.6 m³/s) June 15, 1963, gage height, 6.05 ft (1.844 m), from rating curve extended above 1,800 ft³/s (51.0 m³/s); minimum daily, 2.0 ft³/s (0.057 m³/s) Oct. 10, 1922.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,000 ft³/s (28.3 m³/s) June 9, gage height, 4.07 ft (1.241 m); minimum daily, 2.0 ft³/s (0.057 m³/s) Sept. 22.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.5	32	33	35	23	23	26	5.6	574	110	14	5.0
2	4.5	32	31	33	22	23	28	5.6	515	99	13	4.2
3	4.2	32	34	31	23	23	27	7.4	526	97	13	3.8
4	3.8	32	33	35	24	23	25	5.0	604	99	13	3.5
5	3.1	35	31	33	25	23	24	4.2	500	97	12	3.5
6	3.1	34	31	31	24	23	26	4.5	544	90	12	6.4
7	3.1	35	28	32	22	22	23	8.0	742	67	11	5.4
8	3.2	38	29	30	23	22	23	6.2	814	58	9.8	4.8
9	5.9	34	31	30	21	23	24	7.4	953	48	10	4.2
10	6.4	34	31	30	19	22	25	6.2	754	35	13	3.5
11	7.0	33	32	26	21	21	26	8.4	384	24	10	3.3
12	7.0	33	31	28	24	22	30	7.0	268	22	8.8	3.1
13	7.0	31	29	29	26	22	22	6.7	408	41	9.8	2.9
14	7.0	29	31	27	27	22	8.0	5.9	440	23	9.8	2.7
15	9.8	38	34	24	26	21	6.4	7.4	336	23	8.4	3.1
16	14	38	37	22	26	22	7.4	121	212	18	8.0	3.3
17	30	35	36	20	27	23	10	561	165	18	8.4	3.3
18	32	33	32	22	26	23	14	368	116	13	7.4	2.7
19	33	34	27	23	28	22	14	282	92	25	7.4	3.3
20	33	36	30	24	24	23	13	243	68	24	7.4	3.1
21	32	34	40	25	23	25	7.4	292	64	19	7.4	2.4
22	32	35	38	27	23	24	5.9	550	62	17	8.4	2.0
23	28	35	32	27	24	24	5.3	700	95	15	9.1	2.2
24	25	33	32	26	24	23	8.8	500	132	15	7.7	2.2
25	32	31	38	25	24	23	9.4	420	168	28	7.4	2.7
26	34	31	41	27	23	23	7.7	384	170	49	8.4	5.0
27	33	31	33	28	23	26	8.8	404	197	49	8.8	3.3
28	32	34	27	28	24	26	8.4	475	262	20	8.0	2.9
29	35	36	27	28	---	25	5.6	580	221	15	6.2	2.9
30	35	35	35	27	---	28	5.3	470	148	14	5.3	3.3
31	32	---	35	25	---	23	---	538	---	16	5.0	---
TOTAL	571.6	1013	1009	858	669	718	474.4	6983.5	10534	1288	287.9	104.0
MEAN	18.4	33.8	32.5	27.7	23.9	23.2	15.8	225	351	41.5	9.29	3.47
MAX	35	38	41	35	28	28	30	700	953	110	14	6.4
MIN	3.1	29	27	20	19	21	5.3	4.2	62	13	5.0	2.0
AC-FT	1130	2010	2000	1700	1330	1420	941	13850	20890	2550	571	206
CAL YR 1980	TOTAL	19960.7	MEAN	54.5	MAX	352	MIN	2.2	AC-FT	39590		
WTR YR 1981	TOTAL	24510.4	MEAN	67.2	MAX	953	MIN	2.0	AC-FT	48620		

06323500 PINEY CREEK AT UCROSS, WY

LOCATION.--Lat 44°33'45", long 106°32'25", in SW¼NW¼SE¼ sec.18, T.53 N., R.80 W., Sheridan County, Hydrologic Unit 10090206, on left bank at Ucross, 140 ft (43 m) upstream from bridge on U.S. Highways 14 and 16, and 1.0 mi (1.6 km) upstream from mouth.

DRAINAGE AREA.--267 mi² (692 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--May 1917 to September 1923 (no winter record), January 1950 to current year.

REVISED RECORDS.--WSP 1176: Drainage area. WSP 1439: 1952.

GAGE.--Water-stage recorder. Datum of gage is 4,066.83 ft (1,239.570 m), National Geodetic Vertical Datum of 1929. May 1917 to Sept. 29, 1923, nonrecording gage and Sept. 30, 1923 to May 5, 1976, water-stage recorder, at site 140 ft (43 m) upstream at present datum.

REMARKS.--Records good except those for January and February, which are poor. Some regulation by Cloud Peak Reservoir, capacity, 3,385 acre-ft (4.17 hm³), Willow Park Reservoir, capacity, 4,457 acre-ft (5.50 hm³), Kearny Lake, capacity, 1,860 acre-ft (2.29 hm³), and Lake De Smet, capacity, 135,500 acre-ft (167 hm³). Diversions above station from South Piney Creek into Rock Creek basin for irrigation. Diversions for irrigation of about 9,800 acre (39.7 km²) above station.

AVERAGE DISCHARGE.--31 years (water years 1951-81), 89.7 ft³/s (2.540 m³/s), 64,990 acre-ft/yr (80.1 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 3,570 ft³/s (101 m³/s) June 16, 1963, gage height, 7.33 ft (2.234 m); minimum daily, 0.60 ft³/s (0.017 m³/s) Oct. 12-26, 1955, Sept. 28, Oct. 1, 2, 1956.

EXTREMES OUTSIDE OF PERIOD OF RECORD.--Flood of June 1, 1929, reached a stage of 10.9 ft (3.32 m) present datum, from information by local resident. Stage may have been affected by backwater from bridge.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,220 ft³/s (34.6 m³/s) May 23, gage height, 5.30 ft (1.615 m); minimum daily, 8.5 ft³/s (0.24 m³/s) Apr. 25.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	96	222	156	210	225	74	36	77	499	94	79	37
2	96	222	115	208	100	73	33	76	480	65	87	38
3	96	220	273	203	25	75	36	80	459	59	79	36
4	95	215	261	200	25	73	33	80	529	58	60	34
5	93	222	246	202	25	74	31	91	452	59	57	34
6	93	237	240	200	27	74	30	96	449	57	62	35
7	92	236	236	220	27	73	31	106	591	57	59	36
8	93	243	245	234	25	67	29	97	694	35	58	34
9	94	235	253	236	25	64	29	91	803	44	56	33
10	102	236	237	236	25	64	30	81	808	47	60	31
11	212	245	233	228	30	63	30	79	441	93	63	29
12	211	247	229	248	30	64	31	77	285	88	59	27
13	208	246	227	232	45	63	35	63	343	108	52	27
14	154	233	225	231	60	38	29	51	471	108	57	26
15	217	231	230	232	60	27	19	48	412	89	56	23
16	218	224	236	224	70	26	17	84	387	89	58	23
17	226	217	241	220	80	27	16	169	307	90	63	23
18	232	220	248	225	80	29	19	56	258	104	67	24
19	236	216	248	225	80	27	21	35	208	92	46	22
20	228	213	248	225	95	27	21	29	114	95	39	19
21	221	206	244	225	105	30	20	25	94	90	42	18
22	221	201	240	230	104	29	15	70	80	85	56	14
23	221	188	227	230	97	28	13	972	63	84	55	11
24	235	166	227	225	98	27	11	614	105	82	55	10
25	238	165	225	225	98	26	8.5	464	125	105	56	9.8
26	237	171	220	230	95	44	12	394	148	129	59	12
27	236	158	208	230	94	37	10	365	157	171	54	11
28	227	164	205	230	74	37	11	416	225	103	52	9.9
29	230	157	203	230	---	36	62	490	215	82	43	9.4
30	226	159	208	230	---	35	77	419	153	59	37	11
31	221	---	210	225	---	37	---	455	---	57	35	---
TOTAL	5605	6315	7044	6949	1924	1468	795.5	6250	10355	2578	1761	707.1
MEAN	181	211	227	224	68.7	47.4	26.5	202	345	83.2	56.8	23.6
MAX	238	247	273	248	225	75	77	972	808	171	87	38
MIN	92	157	115	200	25	26	8.5	25	63	35	35	9.4
AC-FT	11120	12530	13970	13780	3820	2910	1580	12400	20540	5110	3490	1400
CAL YR 1980	TOTAL	45936.0	MEAN	126	MAX	485	MIN	3.8	AC-FT	91110		
WTR YR 1981	TOTAL	51751.6	MEAN	142	MAX	972	MIN	8.5	AC-FT	102600		

YELLOWSTONE RIVER BASIN

06323500 PINEY CREEK AT UCROSS, WY--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1975 to September 1981.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	TEMPER- ATURE (DEG C)	2,4-D, TOTAL IN BOT- TOM MA- TERIAL (UG/L)	2,4-D, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	2, 4-DP TOTAL (UG/L)	2,4-DP, IN BOTTOM MAT. (UG/KG)	2,4,5-T TOTAL (UG/L)	2,4,5-T TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	SILVEX, TOTAL IN BOT- TOM MA- TERIAL (UG/L)	SILVEX, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)
JUN 04...	1330	574	--	.00	0	.00	.00	.01	0	.00	0
JUL 15...	1500	93	--	--	0	--	.00	--	0	--	0
AUG 04...	1215	62	22.0	.00	0	.00	.00	.00	0	.00	0

DATE	TOTAL DICAMBA (UG/L)	DICAMBA IN BOTTOM MA- TERIAL (UG/KG)	TOTAL PICLORAM (UG/L)	PICLORAM IN BOTTOM MA- TERIAL (UG/KG)
JUN 04...	.00	.0	.01	.0
JUL 15...	--	.0	--	.0
AUG 04...	.00	.0	.02	.0

06324000 CLEAR CREEK NEAR ARVADA, WY

LOCATION.--Lat 44°52'18", long 106°04'56", in SE¼ sec.36, T.57 N., R.77 W., Sheridan County, Hydrologic Unit 10090206, on right bank 600 ft (183 m) downstream from Cabin Creek, 1.8 mi (2.9 km) upstream from mouth, and 16 mi (26 km) north of Arvada.

DRAINAGE AREA.--1,110 mi² (2,875 km²), approximately.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--August 1915 to April 1919 and April 1928 to May 1929 (no winter records), September 1939 to current year.

REVISED RECORDS.--WSP 1309: 1928(M).

GAGE.--Water-stage recorder. Datum of gage is 3,506.51 ft (1,068.784 m), National Geodetic Vertical Datum of 1929. July 21, 1915, to Apr. 30, 1919, nonrecording gage at same site at different datum. Apr. 15, 1928, to May 26, 1929, nonrecording gage at site 0.2 mi (0.3 km) upstream at different datum. Sept. 13, 1939, to Jan. 14, 1951, nonrecording gage at present site and datum.

REMARKS.--Records good except those for winter period, which are poor. Some regulation by Cloud Peak Reservoir, capacity, 3,385 acre-ft (4.17 hm³), Willow Park Reservoir, capacity, 4,457 acre-ft (5.50 hm³), Kearny Lake, capacity, 1,860 acre-ft (2.29 hm³) and Lake De Smet, capacity, 135,500 acre-ft (167 hm³). Diversions for irrigation of about 35,000 acres (142 km²) above station. Diversion to Kendrick canal about 4.5 mi (7.2 km) upstream.

AVERAGE DISCHARGE.--42 years (water years 1940-81), 182 ft³/s (5.154 m³/s), 131,900 acre-ft/yr (163 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 9,600 ft³/s (272 m³/s) Aug. 5, 1954, gage height, 10.45 ft (3.185 m), from rating curve extended above 2,500 ft³/s (70.8 m³/s) on basis of slope-area measurement at gage height 10.17 ft (3.100 m); no flow July 22, 1954, May 8-29, Sept. 6-9, 1960, July 5, Aug. 26-28, Aug. 31 to Sept. 6, 1961, Aug. 7-10, 1969.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,200 ft³/s (34.0 m³/s) May 24, gage height, 4.40 ft (1.341 m); minimum daily, 0.43 ft³/s (0.012 m³/s) May 6-7.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	148	311	209	290	260	163	85	1.8	826	210	98	43
2	145	308	140	300	250	153	85	.62	836	150	96	36
3	144	302	156	310	130	152	84	.81	729	110	100	35
4	148	299	350	320	100	151	80	1.8	711	90	92	37
5	145	295	345	331	80	149	82	1.0	836	80	79	33
6	143	300	330	320	85	130	68	.43	711	75	62	36
7	144	312	315	315	85	129	62	.43	758	61	50	39
8	140	315	300	310	80	129	60	.62	880	39	45	37
9	137	324	277	300	80	124	58	12	1040	31	55	43
10	139	321	320	300	75	119	58	6.0	1120	21	61	53
11	146	314	320	300	75	119	60	3.1	980	19	62	48
12	252	315	310	289	90	117	60	2.6	540	15	72	44
13	267	317	310	300	100	115	59	3.4	450	31	69	42
14	266	318	310	310	115	113	58	2.5	530	37	57	41
15	233	305	315	310	130	102	61	1.4	660	52	52	37
16	296	283	315	300	135	83	57	1.6	540	42	58	35
17	316	284	320	286	145	78	51	4.9	420	79	55	32
18	321	291	320	277	160	74	46	227	330	94	57	33
19	330	296	320	280	155	74	43	162	280	38	52	36
20	330	290	306	290	150	78	44	147	230	43	48	35
21	322	280	299	285	165	78	47	118	190	36	29	32
22	312	267	320	280	165	79	48	125	195	66	34	28
23	308	273	320	280	170	83	49	384	175	48	53	23
24	305	262	300	280	165	80	44	1100	150	48	39	21
25	311	249	255	275	180	76	41	805	190	121	40	19
26	312	232	300	270	170	81	38	699	220	214	47	16
27	315	234	305	270	165	80	36	653	240	247	42	20
28	316	236	305	265	175	88	34	825	250	287	40	40
29	312	230	300	260	---	85	29	908	270	220	47	46
30	311	220	290	270	---	85	16	871	290	170	53	45
31	309	---	285	270	---	85	---	852	---	123	50	---
TOTAL	7623	8583	9167	9043	3835	3252	1643	7921.01	15577	2897	1794	1065
MEAN	246	286	296	292	137	105	54.8	256	519	93.5	57.9	35.5
MAX	330	324	350	331	260	163	85	1100	1120	287	100	53
MIN	137	220	140	260	75	74	16	.43	150	15	29	16
AC-FT	15120	17020	18180	17940	7610	6450	3260	15710	30900	5750	3560	2110
CAL YR 1980	TOTAL	56284.10	MEAN	154	MAX	379	MIN	2.5	AC-FT	111600		
WTR YR 1981	TOTAL	72400.01	MEAN	198	MAX	1120	MIN	.43	AC-FT	143600		

WATER-QUALITY RECORDS

WATER-QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

[illegible]

YELLOWSTONE RIVER BASIN

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06324000 CLEAR CREEK NEAR ARVADA, WY--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	SOLIDS, SUM OF CONSTITUENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)	SOLIDS, DIS- SOLVED (TONS PER DAY)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	PHOS- PHORUS, TOTAL (MG/L AS P)	CYANIDE TOTAL (MG/L AS CN)	PHENOLS (UG/L)	SEDI- MENT, SUS- PENDEDED (MG/L)	SEDI- MENT, DIS- CHARGE, SUS- PENDEDED (T/DAY)
OCT 07...	720	.98	284	.00	.020	--	--	20	7.9
NOV 06...	610	.83	486	.12	.060	--	--	38	30
DEC 10...	628	.85	458	.02	.140	--	--	10	7.3
JAN 05...	623	.85	540	.06	.050	--	--	168	146
FEB 04...	710	.97	201	.06	.010	--	--	29	8.2
MAR 03...	786	1.1	346	.12	.060	--	--	97	43
APR 02...	960	1.3	220	.03	.030	--	--	60	14
MAY 13...	1560	2.1	18.5	.36	.330	.00	5	64	.76
19...	--	--	--	--	--	.00	2	87	38
25...	--	--	--	--	--	--	--	487	1040
JUN 02...	--	--	--	--	--	.00	2	529	1240
JUL 06...	750	1.0	152	.00	.060	--	--	38	7.7
AUG 04...	--	--	--	--	--	--	--	108	26
SEP 02...	--	--	--	--	--	--	--	136	13

DATE	TIME	2,4-D, TOTAL (UG/L)	2,4-D, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	2, 4-DP TOTAL (UG/L)	2,4-DP, IN BOTTOM MAT. (UG/KG)	2,4,5-T TOTAL (UG/L)	2,4,5-T TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	SILVEX, TOTAL (UG/L)	SILVEX, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)
JUL 06...	1615	.04	0	.00	.00	.00	0	.00	0
AUG 04...	1615	.00	0	.00	.00	.00	0	.00	0
SEP 02...	1415	.00	0	.00	.00	.00	0	.00	0

DATE	TOTAL DICAMBA (UG/L)	DICAMBA IN BOTTOM MA- TERIAL (UG/KG)	TOTAL PICLORAM (UG/L)	PICLORAM IN BOTTOM MA- TERIAL (UG/KG)
JUL 06...	.00	.0	.20	.0
AUG 04...	.00	.0	.25	.0
SEP 02...	.00	.0	.11	.0

YELLOWSTONE RIVER BASIN

06324000 CLEAR CREEK NEAR ARVADA, WY--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	TIME	TEMPER- ATURE (DEG C)	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SED. SUSP. FALL DIAM. % FINER THAN .004 MM	SED. SUSP. FALL DIAM. % FINER THAN .016 MM	SED. SUSP. FALL DIAM. % FINER THAN .062 MM	SED. SUSP. FALL DIAM. % FINER THAN .125 MM	SED. SUSP. FALL DIAM. % FINER THAN .250 MM	SED. SUSP. FALL DIAM. % FINER THAN .500 MM	BED MAT. FALL DIAM. % FINER THAN .062 MM
MAY										
13...	1630	15.0	4.4	--	--	--	--	--	--	1
25...	1100	13.0	792	36	58	82	89	98	100	--
JUN										
02...	1145	14.0	866	31	48	75	93	99	100	--
SEP										
02...	1415	21.0	36	--	--	--	--	--	--	4

DATE	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. FALL DIAM. % FINER THAN 1.00 MM	BED MAT. FALL DIAM. % FINER THAN 2.00 MM	BED MAT. FALL DIAM. % FINER THAN 4.00 MM	BED MAT. FALL DIAM. % FINER THAN 8.00 MM	BED MAT. FALL DIAM. % FINER THAN 16.0 MM	BED MAT. FALL DIAM. % FINER THAN 32.0 MM	BED MAT. FALL DIAM. % FINER THAN 64.0 MM
MAY										
13...	1	2	3	5	6	8	12	34	100	--
25...	--	--	--	--	--	--	--	--	--	--
JUN										
02...	--	--	--	--	--	--	--	--	--	--
SEP										
02...	6	16	26	30	34	41	52	74	93	100

06324500 POWDER RIVER AT MOORHEAD, MT

LOCATION.--Lat 45°04'04", long 105°52'10", in NW¼SE¼NW¼ sec.8, T.9 S., R.48 E., Powder River County, Hydrologic Unit 10090207, on left bank 500 ft (152 m) downstream from discontinued post office at Moorhead, 6.2 mi (10.0 km) upstream from Buffalo Creek, and at mile 184.8 (297.3 km).

DRAINAGE AREA.--8,088 mi² (20,948 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--May 1929 to September 1972, October 1974 to current year. Monthly discharge only for some periods, published in WSP 1309.

REVISED RECORDS.--WSP 1309: 1932(M). WSP 1729: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 3,334.6 ft (1,016.39 m) National Geodetic Vertical Datum of 1929 (levels by U.S. Army Corps of Engineers). Prior to Aug. 28, 1931, nonrecording gage at site 0.3 mi (0.5 km) upstream at different datum. Aug. 28, 1931, to Mar. 21, 1956, water-stage recorder at site 1.2 mi (1.9 km) upstream at different datum. Mar. 22 to July 24, 1956, nonrecording gage at site 0.3 mi (0.5 km) downstream at different datum. July 25 to Sept. 12, 1956, nonrecording gage at present site and datum.

REMARKS.--Records good except those for winter period, which are poor. Some regulation by three reservoirs in Wyoming with combined usable capacity of 36,800 acre-ft (45.4 hm³). Diversions for irrigation of about 66,300 acres (268 km²) above station.

AVERAGE DISCHARGE.--50 years, 461 ft³/s (13.06 m³/s), 334,000 acre-ft/yr (412 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 33,000 ft³/s (935 m³/s) May 20, 1978, gage height, 15.24 ft (4.645 m); maximum gage height, 17.7 ft (5.39 m) Mar. 21, 1956, site and datum then in use (ice jam); no flow at times.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Sept. 30, 1923, reached a stage of 19 ft (5.8 m), site and datum used 1931-56, from information by local residents.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 2,160 ft³/s (61.2 m³/s) May 31, gage height, 4.16 ft (1.268 m); maximum gage height, 4.96 ft (1.512 m) Dec. 8 (backwater from ice); no peaks above base of 3,700 ft³/s (105 m³/s); minimum daily discharge, 34 ft³/s (0.96 m³/s) Sept. 27.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	206	462	363	430	260	470	266	204	1590	330	283	54
2	200	469	78	550	240	540	271	193	1450	233	226	47
3	200	459	130	540	280	580	276	181	1290	174	200	40
4	200	454	300	520	310	590	270	162	1220	139	179	36
5	206	451	250	500	320	483	260	145	1280	112	154	36
6	206	446	250	470	270	443	246	139	1260	101	126	44
7	213	456	220	450	250	378	222	137	1250	100	102	47
8	213	468	250	450	260	325	213	151	1410	79	89	53
9	213	474	280	450	240	310	213	187	1530	59	80	47
10	220	475	320	450	200	296	213	193	1580	49	85	50
11	226	470	400	440	220	289	213	181	1520	41	88	58
12	270	470	370	470	260	288	212	175	1010	41	90	51
13	330	473	340	450	300	283	199	157	980	39	92	49
14	330	486	340	420	370	280	192	137	1320	49	85	48
15	338	477	370	400	390	270	187	125	1200	68	78	48
16	366	480	430	370	420	252	187	131	852	64	96	45
17	439	437	430	350	400	238	182	139	772	50	90	43
18	431	382	300	400	400	239	167	210	633	161	76	40
19	431	380	280	410	440	240	157	344	556	122	74	42
20	431	380	300	430	420	246	154	969	516	110	79	45
21	454	380	320	470	410	253	150	883	431	301	68	44
22	446	380	360	500	440	258	151	660	367	216	59	42
23	431	380	320	470	460	268	191	669	352	223	74	39
24	431	380	270	450	480	281	248	1630	310	150	72	37
25	431	380	310	430	450	295	242	1830	289	210	55	36
26	440	380	350	440	420	293	237	1680	323	307	55	36
27	438	370	460	450	400	285	201	1620	330	744	57	34
28	439	390	440	450	440	276	175	1610	338	1060	52	42
29	446	397	430	460	---	276	150	1870	387	1000	46	56
30	446	400	400	400	---	262	159	1860	409	763	52	63
31	454	---	430	320	---	262	---	1790	---	416	60	---
TOTAL	10525	12886	10091	13790	9750	10049	6204	20362	26755	7511	3022	1352
MEAN	340	430	326	445	348	324	207	657	892	242	97.5	45.1
MAX	454	486	460	550	480	590	276	1870	1590	1060	283	63
MIN	200	370	78	320	200	238	150	125	289	39	46	34
AC-FT	20880	25560	20020	27350	19340	19930	12310	40390	53070	14900	5990	2680
CAL YR 1980	TOTAL	120471	MEAN	329	MAX	1750	MIN	78	AC-FT	239000		
WTR YR 1981	TOTAL	132297	MEAN	362	MAX	1870	MIN	34	AC-FT	262400		

YELLOWSTONE RIVER BASIN

06324500 POWDER RIVER AT MOORHEAD, MT--Continued

WATER-QUALITY RECORDS

LOCATION.--Samples collected at bridge on county road, 1.1 mi (1.8 km) upstream from discontinued post office at Moorhead, 1.2 mi (1.9 km) upstream from discharge station.

PERIOD OF RECORD.--Water years 1951-53, 1956-57, 1969-72, 1975 to current year.

PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: February 1951 to September 1953, October 1955 to September 1957, October 1974-77, March to September 1978, March to September 1979, April to September 1980, March to September 1981.

SUSPENDED SEDIMENT DISCHARGE: October 1974-77, March to September 1978, March to September 1979, April to September 1980, March to September 1981.

REMARKS.--Flow regulated by reservoirs and diversions for irrigation upstream from station. Flow affected by ice during most of winter months.

EXTREMES FOR PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: Maximum daily, 33.0°C July 13, 1981; minimum daily, 0.0°C on many days during winter periods most years.

SEDIMENT CONCENTRATIONS: Maximum daily, 53,500 mg/L May 27, 1980; minimum daily, 5 mg/L Sept. 15, 1975.

SEDIMENT LOADS: Maximum daily, 2,230,000 tons (2,023,000 tonnes) May 20, 1978; minimum daily, 0.24 ton (0.22 tonne) Sept. 15, 1975.

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURES: Maximum daily, 33.0°C July 13.

SEDIMENT CONCENTRATIONS: Maximum daily mean, 51,500 mg/L July 30; minimum daily mean, 26 mg/L Sept. 26.

SEDIMENT LOADS: Maximum daily, 116,000 tons (105,000 tonnes) July 29; minimum daily, 2.5 tons (2.3 tonnes) Sept. 26, 27.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION)	HARD- NESS (MG/L AS CaCO3)	CALCIUM DIS- SOLVED (MG/L AS Ca)	MAGNE- SIUM, DIS- SOLVED (MG/L AS Mg)
OCT										
07...	1200	213	2200	8.5	14.0	9.5	--	530	120	56
NOV										
06...	1100	446	1700	8.6	7.0	10.8	--	420	97	44
DEC										
09...	1515	298	2300	7.6	.0	13.2	--	580	140	57
JAN										
05...	1200	506	1350	8.2	.0	12.0	--	420	99	43
FEB										
04...	1300	354	1550	8.2	.5	12.0	--	520	130	48
MAR										
03...	1300	578	1950	8.4	1.0	12.0	--	490	120	47
APR										
02...	1130	270	2450	8.5	9.0	10.1	--	570	130	60
MAY										
13...	1150	156	3150	8.5	10.0	9.6	--	580	130	61
19...	1600	316	--	--	19.0	--	--	--	--	--
20...	1215	1170	--	--	17.0	--	--	--	--	--
25...	1455	2010	--	--	18.0	--	--	--	--	--
JUN										
02...	1700	1440	900	8.1	19.0	7.8	8	250	61	23
JUL										
06...	1200	105	1950	8.4	26.0	9.1	--	520	120	54
AUG										
04...	1250	180	2300	8.2	24.0	7.3	--	660	160	64
SEP										
02...	1100	48	2200	8.1	18.0	8.8	--	700	140	84

YELLOWSTONE RIVER BASIN

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06324500 POWDER RIVER AT MOORHEAD, MT--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LINITY LAB (MG/L AS CACO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	BROMIDE DIS- SOLVED (MG/L AS BR)	IODIDE, DIS- SOLVED (MG/L AS I)	SILICA, DIS- SOLVED (MG/L AS SIO2)
OCT 07...	240	4.5	7.3	210	610	180	.4	.30	.040	4.2
NOV 06...	190	4.0	7.3	200	410	120	.4	--	--	3.9
DEC 09...	270	4.9	9.9	250	630	200	.5	--	--	5.0
JAN 05...	180	3.8	5.2	200	440	100	.4	--	--	4.7
FEB 04...	170	3.2	6.0	220	500	110	.4	--	--	5.0
MAR 03...	260	5.1	5.1	210	620	180	.3	--	--	6.3
APR 02...	340	6.2	6.4	230	730	220	.6	--	--	6.5
MAY 13...	490	8.9	7.6	240	950	350	.7	--	--	7.9
19...	--	--	--	--	--	--	--	--	--	--
20...	--	--	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--	--	--
JUN 02...	89	2.5	4.0	84	300	33	.3	--	--	8.6
JUL 06...	240	4.6	6.4	190	650	150	.4	--	--	6.8
AUG 04...	270	4.6	9.0	170	900	100	.5	--	--	8.1
SEP 02...	270	4.5	9.5	200	800	150	.3	--	--	4.5

DATE	SOLIDS, SUM OF CONSTITUENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)	SOLIDS, DIS- SOLVED (TONS PER DAY)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N)	NITRO- GEN, AMMONIA TOTAL (MG/L AS NH4)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N)
OCT 07...	1340	1.8	771	.00	--	.000	.00	1.1	1.10
NOV 06...	993	1.4	1200	.15	--	.070	.08	.84	.91
DEC 09...	1460	2.0	1170	.29	--	.040	.05	.87	.91
JAN 05...	993	1.4	1360	.30	--	.100	.12	.61	.71
FEB 04...	1100	1.5	1050	.19	--	.110	.13	.52	.63
MAR 03...	1370	1.9	2140	2.2	--	.050	--	.77	.82
APR 02...	1630	2.2	1190	.38	--	.050	--	1.7	1.70
MAY 13...	2140	2.9	901	--	--	--	--	--	2.80
19...	--	--	--	--	--	--	--	--	--
20...	--	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--	--
JUN 02...	570	.78	2220	--	.02	--	--	--	12.0
JUL 06...	1340	1.8	380	.10	--	.150	--	.95	1.10
AUG 04...	1610	2.2	782	.44	--	.120	--	12	12.0
SEP 02...	1580	2.1	205	.01	--	.100	--	.86	.96

WATER-QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

[illegible]

06324500 POWDER RIVER AT MOORHEAD, MT--Continued

DATE	CADMIUM DIS- SOLVED (UG/L AS CD)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR)	CHRO- MIUM, SUS- PENDE D RECOV. (UG/L AS CR)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU)	COPPER, SUS- PENDE D RECOV- ERABLE (UG/L AS CU)	COPPER, DIS- SOLVED (UG/L AS CU)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	IRON, DIS- SOLVED (UG/L AS FE)	LEAD, TOTAL RECOV- ERABLE (UG/L AS PB)	LEAD, SUS- PENDE D RECOV- ERABLE (UG/L AS PB)
OCT 07...	--	--	--	--	--	--	--	--	<10	--	--
NOV 06...	--	--	--	--	--	--	--	--	<10	--	--
DEC 09...	--	--	--	--	--	--	--	--	50	--	--
JAN 05...	--	--	--	--	--	--	--	--	<10	--	--
FEB 04...	--	--	--	--	--	--	--	--	<10	--	--
MAR 03...	--	--	--	--	--	--	--	--	<10	--	--
APR 02...	--	--	--	--	--	--	--	--	20	--	--
MAY 13...	--	--	--	--	--	--	--	--	30	--	--
JUN 02...	--	--	--	--	--	--	--	--	40	--	--
JUL 06...	<1	0	0	10	9	0	10	680	<10	4	4
AUG 04...	--	--	--	--	--	--	--	--	0	--	--
SEP 02...	--	--	--	--	--	--	--	--	40	--	--

[illegible]

YELLOWSTONE RIVER BASIN

06324500 POWDER RIVER AT MOORHEAD, MT--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	MOLYB- DENUM, DIS- SOLVED (UG/L AS MO)	NICKEL, TOTAL RECOV- ERABLE (UG/L AS NI)	NICKEL, SUS- PENDE RECOV- ERABLE (UG/L AS NI)	NICKEL, DIS- SOLVED (UG/L AS NI)	SELE- NIUM, TOTAL (UG/L AS SE)	SELE- NIUM, SUS- PENDE TOTAL (UG/L AS SE)	SELE- NIUM, DIS- SOLVED (UG/L AS SE)	VANA- DIUM, DIS- SOLVED (UG/L AS V)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN)	ZINC, SUS- PENDE RECOV- ERABLE (UG/L AS ZN)	ZINC, DIS- SOLVED (UG/L AS ZN)
OCT 07...	--	--	--	--	--	--	--	--	--	--	--
NOV 06...	--	--	--	--	--	--	--	--	--	--	--
DEC 09...	--	--	--	--	--	--	--	--	--	--	--
JAN 05...	--	--	--	--	--	--	--	--	--	--	--
FEB 04...	--	--	--	--	--	--	--	--	--	--	--
MAR 03...	--	--	--	--	--	--	--	--	--	--	--
APR 02...	--	--	--	--	--	--	--	--	--	--	--
MAY 13...	--	--	--	--	--	--	--	--	--	--	--
JUN 02...	--	--	--	--	--	--	--	--	--	--	--
JUL 06...	<10	4	2	2	0	0	0	1.0	20	10	10
AUG 04...	--	--	--	--	--	--	--	--	--	--	--
SEP 02...	--	--	--	--	--	--	--	--	--	--	--

DATE	TIME	PCB, TOTAL (UG/L)	NAPH- THA- LENES, POLY- CHLOR. TOTAL (UG/L)	ALDRIN, TOTAL (UG/L)	CHLOR- DANE, TOTAL (UG/L)	DDD, TOTAL (UG/L)	DDE, TOTAL (UG/L)	DDT, TOTAL (UG/L)	DI- AZINON, TOTAL (UG/L)	DI- ELDRIN TOTAL (UG/L)	ENDO- SULFAN, TOTAL (UG/L)
OCT 07...	1200	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00

DATE	ENDRIN, TOTAL (UG/L)	ETHION, TOTAL (UG/L)	HEPTA- CHLOR, TOTAL (UG/L)	HEPTA- CHLOR EPOXIDE TOTAL (UG/L)	LINDANE TOTAL (UG/L)	MALA- THION, TOTAL (UG/L)	METH- OXY- CHLOR, TOTAL (UG/L)	METHYL PARA- THION, TOTAL (UG/L)	METHYL TRI- THION, TOTAL (UG/L)	MIREX, TOTAL (UG/L)	PARA- THION, TOTAL (UG/L)
OCT 07...	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00

DATE	PER- THANE TOTAL (UG/L)	TOX- APHENE, TOTAL (UG/L)	TOTAL TRI- THION (UG/L)	2,4-D, TOTAL (UG/L)	2,4-D, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	2,4-DP TOTAL (UG/L)	2,4-DP, IN BOTTOM MAT. (UG/KG)	2,4,5-T TOTAL (UG/L)	2,4,5-T TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	SILVEX, TOTAL (UG/L)	SILVEX, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)
OCT 07...	.00	.00	.00	.00	0	.00	.00	.00	0	.00	0

DATE	TOTAL DICAMBA (UG/L)	TOTAL BOTTOM MA- TERIAL (UG/KG)	TOTAL PICLORAM (UG/L)	PICLORAM IN BOTTOM MA- TERIAL (UG/KG)
OCT 07...	.00	.0	.01	.0

06324500 POWDER RIVER AT MOORHEAD, MT--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	TIME	TEMPER- ATURE (DEG C)	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SED. SUSP. FALL DIAM. % FINER THAN .004 MM	SED. SUSP. FALL DIAM. % FINER THAN .016 MM	SED. SUSP. FALL DIAM. % FINER THAN .062 MM	SED. SUSP. FALL DIAM. % FINER THAN .125 MM
MAR							
03...	1300	1.0	578	39	56	66	89
APR							
02...	1130	9.0	270	44	61	--	--
MAY							
13...	1150	10.0	156	84	99	99	100
20...	1215	17.0	1170	37	66	86	98
25...	1455	18.0	2010	35	55	72	94
JUN							
02...	1700	19.0	1440	47	62	75	94
AUG							
04...	1250	24.0	180	88	100	--	--

DATE	SED. SUSP. FALL DIAM. % FINER THAN .250 MM	SED. SUSP. FALL DIAM. % FINER THAN .500 MM	SED. SUSP. SIEVE DIAM. % FINER THAN .125 MM	SED. SUSP. SIEVE DIAM. % FINER THAN .250 MM	SED. SUSP. SIEVE DIAM. % FINER THAN .500 MM	SED. SUSP. SIEVE DIAM. % FINER THAN 1.00 MM	SED. SUSP. SIEVE DIAM. % FINER THAN 2.00 MM
MAR							
03...	100	--	--	--	--	--	--
APR							
02...	--	--	71	75	86	96	100
MAY							
13...	--	--	--	--	--	--	--
20...	100	--	--	--	--	--	--
25...	99	100	--	--	--	--	--
JUN							
02...	99	100	--	--	--	--	--
AUG							
04...	--	--	--	--	--	--	--

YELLOWSTONE RIVER BASIN

06324500 POWDER RIVER AT MOORHEAD, MT--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1						---	14.0	24.0	17.0	27.0	29.0	24.0
2						---	10.0	18.0	19.0	28.0	29.0	23.0
3						1.0	10.0	13.0	20.0	29.0	24.0	23.0
4						4.0	8.0	7.0	21.0	25.0	28.0	28.0
5						3.0	14.0	21.0	24.0	32.0	26.0	21.0
6						1.0	12.0	11.0	25.0	32.0	26.0	22.0
7						6.0	10.0	12.0	20.0	32.0	26.0	25.0
8						8.0	11.0	11.0	---	27.0	23.0	26.0
9						8.0	12.0	18.0	---	29.0	23.0	28.0
10						9.0	13.0	18.0	---	31.0	27.0	22.0
11						10.0	18.0	10.0	---	30.0	29.0	27.0
12						11.0	17.0	13.0	---	24.0	24.0	27.0
13						10.0	11.0	15.0	---	33.0	25.0	24.0
14						7.0	14.0	9.0	---	29.0	28.0	21.0
15						9.0	19.0	21.0	---	31.0	29.0	21.0
16						11.0	17.0	14.0	---	29.0	24.0	10.0
17						8.0	20.0	12.0	18.0	25.0	27.0	23.0
18						7.0	18.0	15.0	20.0	28.0	25.0	23.0
19						8.0	16.0	19.0	21.0	28.0	29.0	25.0
20						9.0	17.0	19.0	23.0	28.0	29.0	17.0
21						8.0	13.0	18.0	20.0	26.0	27.0	12.0
22						5.0	15.0	15.0	23.0	---	27.0	19.0
23						8.0	19.0	16.0	25.0	28.0	25.0	19.0
24						10.0	21.0	17.0	20.0	23.0	28.0	19.0
25						11.0	21.0	17.0	26.0	19.0	29.0	17.0
26						12.0	22.0	19.0	29.0	18.0	26.0	9.0
27						7.0	15.0	19.0	28.0	22.0	26.0	18.0
28						10.0	18.0	22.0	22.0	26.0	29.0	10.0
29						13.0	19.0	19.0	27.0	26.0	29.0	18.0
30						8.0	22.0	21.0	27.0	27.0	27.0	16.0
31						10.0	---	20.0	---	26.0	23.0	---
MEAN						8.0	15.5	16.0	22.5	27.5	26.5	20.5
WTR YR 1981	MEAN	19.5		MAX	33.0	MIN	1.0					

06324500 POWDER RIVER AT MOORHEAD, MT--Continued

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

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)
OCTOBER			NOVEMBER			DECEMBER			
1	206			462			363		
2	200			469			78		
3	200			459			130		
4	200			454			300		
5	206			451			250		
6	206			446			250		
7	213			456			220		
8	213			468			250		
9	213			474			280		
10	220			475			320		
11	226			470			400		
12	270			470			370		
13	330			473			340		
14	330			486			340		
15	338			477			370		
16	366			480			430		
17	439			437			430		
18	431			382			300		
19	431			380			280		
20	431			380			300		
21	454			380			320		
22	446			380			360		
23	431			380			320		
24	431			380			270		
25	431			380			310		
26	440			380			350		
27	438			370			460		
28	439			390			440		
29	446			397			430		
30	446			400			400		
31	454			---			430		
TOTAL	10525			12886			10091		
JANUARY			FEBRUARY			MARCH			
1	430			260			470	---	2000
2	550			240			540	---	4000
3	540			280			580	4380	6860
4	520			310			590	5120	8160
5	500			320			483	5190	6770
6	470			270			443	2760	3320
7	450			250			378	3010	3070
8	450			260			325	1900	1670
9	450			240			310	1550	1300
10	450			200			296	1420	1130
11	440			220			289	1210	944
12	470			260			288	1200	933
13	450			300			283	1110	848
14	420			370			280	1150	869
15	400			390			270	1020	744
16	370			420			252	920	626
17	350			400			238	860	553
18	400			400			239	830	536
19	410			440			240	880	570
20	430			420			246	940	624
21	470			410			253	990	676
22	500			440			258	1200	836
23	470			460			268	1470	1060
24	450			480			281	1620	1230
25	430			450			295	2100	1670
26	440			420			293	2020	1600
27	450			400			285	1880	1450
28	450			440			276	2140	1590
29	460			---			276	1720	1280
30	400			---			262	1690	1200
31	320			---			262	1730	1220
TOTAL	13790			9750			10049	---	59339

YELLOWSTONE RIVER BASIN

06324500 POWDER RIVER AT MOORHEAD, MT--Continued

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

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)
APRIL			MAY			JUNE			
1	266	2060	1480	204	1470	810	1590	12200	52400
2	271	1740	1270	193	1490	776	1450	8200	32100
3	276	1140	850	181	1340	655	1290	5650	19700
4	270	1190	868	162	1070	468	1220	4780	15700
5	260	1380	969	145	950	372	1280	4080	14100
6	246	1080	717	139	1000	375	1260	4420	15000
7	222	960	575	137	980	363	1250	4450	15000
8	213	960	552	151	1330	562	1410	4820	18300
9	213	1040	598	187	1530	772	1530	4600	19000
10	213	980	564	193	1340	698	1580	5200	22200
11	213	915	526	181	2160	1040	1520	4400	18100
12	212	910	521	175	3100	1460	1010	2400	6540
13	199	750	403	157	1820	771	980	5370	14200
14	192	725	376	137	1160	429	1320	11400	46100
15	187	750	379	125	1320	445	1200	10400	33700
16	187	670	338	131	1050	371	852	6000	13800
17	182	625	307	139	960	360	772	2630	5480
18	167	565	255	210	2750	2800	633	2260	3860
19	157	550	233	344	4180	4130	556	1730	2600
20	154	590	245	969	19100	55800	516	1630	2270
21	150	600	243	883	18600	44300	431	1420	1650
22	151	851	348	660	13500	24100	367	1250	1240
23	191	1640	935	669	11000	19900	352	1050	998
24	248	1910	1280	1630	13100	57700	310	740	619
25	242	1820	1190	1830	12000	59300	289	595	464
26	237	1710	1090	1680	13700	62100	323	522	455
27	201	1350	733	1620	17200	75200	330	462	412
28	175	1040	491	1610	12600	54800	338	490	447
29	150	750	304	1870	10600	53500	387	582	608
30	159	1080	499	1860	13800	69300	409	618	682
31	---	---	---	1790	11500	55600	---	---	---
TOTAL	6204	---	19139	20362	---	649257	26755	---	377725
JULY			AUGUST			SEPTEMBER			
1	330	540	481	283	23000	17600	54	135	20
2	233	212	133	226	16000	9760	47	124	16
3	174	115	54	200	10500	5670	40	107	12
4	139	81	30	179	6000	2900	36	123	12
5	112	85	26	154	3570	1480	36	115	11
6	101	88	24	126	2150	731	44	95	11
7	100	92	25	102	890	245	47	113	14
8	79	94	20	89	670	161	53	127	18
9	59	82	13	80	558	121	47	101	13
10	49	116	15	85	476	109	50	94	13
11	41	100	11	88	435	103	58	96	15
12	41	75	8.3	90	460	112	51	81	11
13	39	82	8.6	92	448	111	49	65	8.6
14	49	130	17	85	370	85	48	44	5.7
15	68	150	28	78	325	68	48	44	5.7
16	64	108	19	96	1070	277	45	51	6.2
17	50	90	12	90	750	182	43	47	5.5
18	161	1180	685	76	552	113	40	38	4.1
19	122	1140	376	74	395	79	42	35	4.0
20	110	3290	2590	79	380	81	45	36	4.4
21	301	30100	24600	68	395	73	44	35	4.2
22	216	20600	12000	59	315	50	42	33	3.7
23	223	19800	11900	74	322	64	39	37	3.9
24	150	18200	7370	72	370	72	37	36	3.6
25	210	19600	11100	55	246	37	36	28	2.7
26	307	14400	11900	55	189	28	36	26	2.5
27	744	20100	43600	57	160	25	34	27	2.5
28	1060	31000	91000	52	122	17	42	32	3.6
29	1000	38900	116000	46	120	15	56	48	7.3
30	763	51500	106000	52	115	16	63	58	9.9
31	416	32800	36800	60	133	22	---	---	---
TOTAL	7511	---	476845.9	3022	---	40407	1352	---	254.1
YEAR	132297		1622967.0						

06324890 LITTLE POWDER RIVER BELOW CORRAL CREEK, NEAR WESTON, WY

LOCATION.--Lat 44°30'20", long 105°27'12", in NW¼SW¼NE¼ sec.12, T.52 N., R.72 W., Campbell County, Hydrologic Unit 10090208, on right bank 0.3 mi (0.5 km) upstream from Bull Creek, 3.0 mi (4.8 km) downstream from Corral Creek, 11 mi (18 km) southwest of Weston, and 15 mi (24 km) north of Gillette.

DRAINAGE AREA.--204 mi² (528 km²), of which 3.69 mi² (9.56 km²) is noncontributing.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--June 1975, October 1977 to current year. Prior to October 1977, published as Little Powder River below Corral Creek, near Gillette.

GAGE.--Water-stage recorder. Altitude of gage is 3,980 ft (1,213 km), from topographic map.

REMARKS.--Records fair. Small diversions for irrigation of hay meadows above station. Flow occasionally affected by contributions from mine dewatering.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,410 ft³/s (68.3 m³/s) May 18, 1978, gage height, 9.61 ft (2.929 m), from rating curve extended above 410 ft³/s (11.6 m³/s) on basis of slope area measurement at gage height 9.08 ft (2.768 m); no flow at times each year.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 22 ft³/s (0.62 m³/s) July 15, gage height, 2.54 ft (0.774 m); no flow for many days.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.40	.32	.53	.07	.07	.05	.00	.27	.00
2	.00	.00	.00	.40	.28	.53	.07	.12	.03	.00	.37	.00
3	.00	.00	.00	.37	.27	.51	.92	.15	.02	.00	.06	.00
4	.00	.00	.00	.40	.24	.45	.70	.27	.02	.00	.01	.00
5	.00	.00	.00	.40	.23	.40	.44	.37	.01	.00	.00	.00
6	.00	.00	.40	.37	.22	.37	.27	.34	.01	.00	.00	.00
7	.00	.00	.27	.40	.21	.27	.21	.27	.00	.00	.00	.00
8	.00	.00	.25	.40	.21	.29	.17	.23	.00	.00	.00	.00
9	.00	.00	.06	.37	.20	.25	.14	.25	.00	.00	.05	.00
10	.00	.00	.09	.40	.19	.27	.15	.23	.00	.00	.00	.00
11	.00	.00	.21	.45	.17	.29	.20	.19	.00	.00	.00	.00
12	.00	.00	.29	.31	.14	.32	.12	.15	.02	.00	.00	.00
13	.00	.00	.29	.32	.13	.37	.10	.14	.06	.00	.00	.00
14	.00	.00	.34	.50	.51	.37	.08	.10	.07	.00	.00	.00
15	.00	.00	.37	.29	.61	.37	.07	.08	.05	.29	.00	.00
16	.00	.00	.51	.23	.51	.37	.07	.06	.03	.00	.00	.00
17	.00	.00	.51	.21	.56	.37	.05	.05	.02	.00	.00	.00
18	.00	.00	.37	.23	.45	.27	.05	.03	.01	.00	.00	.00
19	.00	.00	.39	.26	.56	.23	.04	.03	.00	.00	.00	.00
20	.00	.00	.29	.28	.63	.27	.04	.02	.00	.00	.00	.00
21	.00	.00	.32	.31	.56	.32	.04	.02	.00	.00	.00	.00
22	.00	.00	.35	.34	.51	.32	.04	.02	.00	.00	.00	.00
23	.00	.00	.37	.36	.51	.34	.09	.02	.00	.00	.00	.00
24	.00	.00	.34	.39	.56	.32	.08	.01	.00	.00	.00	.00
25	.00	.00	.29	.40	.56	.29	.10	.01	.00	.05	.00	.00
26	.00	.00	.34	.40	.56	.34	.09	.34	.00	.32	.00	.00
27	.00	.00	.51	.40	.45	.34	.06	1.5	.00	.37	.00	.00
28	.00	.00	.51	.37	.46	.34	.05	.61	.00	.37	.00	.00
29	.00	.00	.45	.35	---	.34	.05	.34	.00	.08	.00	.00
30	.00	.00	.37	.34	---	.19	.04	.18	.00	.01	.00	.00
31	.00	---	.40	.34	---	.09	---	.09	---	.00	.00	---
TOTAL	.00	.00	8.89	10.99	10.81	10.33	4.60	6.29	.40	1.49	.76	.00
MEAN	.000	.000	.29	.35	.39	.33	.15	.20	.013	.048	.025	.000
MAX	.00	.00	.51	.50	.63	.53	.92	1.5	.07	.37	.37	.00
MIN	.00	.00	.00	.21	.13	.09	.04	.01	.00	.00	.00	.00
AC-FT	.00	.00	18	22	21	20	9.1	12	.8	3.0	1.5	.00

CAL YR 1980 TOTAL 377.50 MEAN 1.03 MAX 32 MIN .00 AC-FT 749
WTR YR 1981 TOTAL 54.56 MEAN .15 MAX 1.5 MIN .00 AC-FT 108

YELLOWSTONE RIVER BASIN

06324890 LITTLE POWDER RIVER BELOW CORRAL CREEK, NEAR WESTON, WY--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--June 1975, May-August, November 1976, October 1977 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	COLOR (PLAT- INUM- COBALT UNITS)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED SATUR- ATION	HARD- NESS (MG/L AS CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)
DEC 19...	0835	.39	2100	7.8	.0	--	8.8	69	1100	270	100
JAN 12...	1515	.31	2275	7.4	.0	--	7.9	62	670	130	83
FEB 10...	1625	.19	2470	7.5	.0	--	--	--	1300	310	120
18...	1655	.49	2020	7.9	.1	--	11.9	96	--	--	--
24...	1600	.60	1700	--	.0	--	--	--	--	--	--
MAR 16...	1130	.36	1950	7.5	3.0	--	10.0	84	970	230	97
APR 14...	0925	.08	2600	7.9	4.0	9	8.8	77	1300	300	140
MAY 20...	1530	.02	2910	7.8	17.0	27	8.0	96	1500	320	160
JUN 18...	0900	.01	3080	7.9	13.0	--	8.3	89	1500	320	170

DATE	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	POTAS- SIUM 40 DIS- SOLVED (PCI/L AS K40)	ALKA- LINITY LAB (MG/L AS CACO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)
DEC 19...	100	1.3	3.0	--	250	990	7.0	.7	20	1820
JAN 12...	430	7.3	15	11	300	1300	8.0	.8	16	1970
FEB 10...	130	1.6	34	25	330	1300	8.9	.8	20	2170
18...	--	--	--	--	--	--	--	--	--	--
24...	--	--	--	--	210	--	--	--	--	--
MAR 16...	110	1.5	26	19	250	980	6.8	.7	11	1680
APR 14...	170	2.0	35	26	320	690	17	.8	14	2380
MAY 20...	210	2.4	33	25	360	1500	15	.7	12	2630
JUN 18...	220	2.5	37	28	340	1500	26	.6	8.7	2630

DATE	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)	SOLIDS, DIS- SOLVED (TONS PER DAY)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N)	NITRO- GEN, AMMONIA TOTAL (MG/L AS NH4)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N)	NITRO- GEN, ORGANIC DIS- SOLVED (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO- GEN,NH4 + ORG. SUSP. TOTAL (MG/L AS N)
DEC 19...	1650	2.2	1.7	.05	.070	.08	.56	--	.63	.14
JAN 12...	2170	3.0	1.8	.00	.120	.15	.57	--	.69	.03
FEB 10...	2120	2.9	1.1	--	--	--	--	--	--	--
18...	--	--	--	--	--	--	--	--	--	--
24...	--	--	--	--	--	--	--	--	--	--
MAR 16...	1620	2.2	1.6	--	--	--	--	--	--	--
APR 14...	1570	2.1	.34	.00	.080	--	.67	.50	.75	.18
MAY 20...	2470	3.4	.13	--	--	--	--	--	--	--
JUN 18...	2490	3.4	.07	--	--	--	--	--	--	--

WATER-QUALITY DATA. WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	COAL IN BOTTOM MATE- RIAL (GM/KG)	H-2/ H-1/ STABLE ISOTOPE RATIO PER MILL	PHYTO- PLANK- TON, TOTAL (CELLS PER ML)	PERI- PHYTON BIOMASS ASH WEIGHT G/SQ M	PERI- PHYTON BIOMASS TOTAL DRY WEIGHT G/SQ M	BIOMASS CHLORO- PHYLL RATIO PERI- PHYTON (UNITS)	CHLOR-A PERI- PHYTON CHROMO- FLUOROM (MG/M2)	CHLOR-B PERI- PHYTON CHROMO- FLUOROM (MG/M2)	SEDI- MENT, SUS- PENDED (MG/L)	SEDI- MENT, DIS- CHARGE SUS- PENDED (T/DAY)
DEC 19...	--	--	90	--	--	--	--	--	14	.01
JAN 12...	--	--	52	--	--	--	--	--	62	.05
FEB 10...	--	--	64	--	--	--	--	--	52	.03
18...	--	--	--	--	--	--	--	--	20	.03
24...	--	--	--	--	--	--	--	--	9	.01
MAR 16...	--	--	77	--	--	--	--	--	9	.01
APR 14...	4.00	8.8	930	--	--	--	--	--	68	.01
MAY 20...	--	8.0	310	3.86	4.65	687	1.15	.210	124	.01
JUN 18...	--	--	260	10.3	11.1	296	2.70	.240	63	.00

[illegible]

YELLOWSTONE RIVER BASIN

06324890 LITTLE POWDER RIVER BELOW CORRAL CREEK, NEAR WESTON, WY--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	CADMIUM TOTAL RECOV- ERABLE (UG/L AS CD)	CADMIUM SUS- PENDE RECOV- ERABLE (UG/L AS CD)	CADMIUM DIS- SOLVED (UG/L AS CD)	CADMIUM RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CD)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR)	CHRO- MIUM, SUS- PENDE RECOV. (UG/L AS CR)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR)	CHRO- MIUM, RECOV. FM BOT- TOM MA- TERIAL (UG/G)	COBALT, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CO)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU)	COPPER, SUS- PENDE RECOV- ERABLE (UG/L AS CU)	COPPER, DIS- SOLVED (UG/L AS CU)
DEC 19...	0	0	0	--	0	0	0	--	--	3	3	0
JAN 12...	0	0	0	--	20	20	0	--	--	2	1	1
FEB 10...	--	--	--	--	--	--	--	--	--	--	--	--
MAR 16...	--	--	--	--	--	--	--	--	--	--	--	--
APR 14...	0	0	0	1	30	20	10	3	10	5	4	1
MAY 20...	--	--	--	--	--	--	--	--	--	--	--	36
JUN 18...	--	--	--	--	--	--	--	--	--	--	--	--

DATE	COPPER, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CU)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	IRON, SUS- PENDE RECOV- ERABLE (UG/L AS FE)	IRON, DIS- SOLVED (UG/L AS FE)	IRON, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS FE)	LEAD, TOTAL RECOV- ERABLE (UG/L AS PB)	LEAD, SUS- PENDE RECOV- ERABLE (UG/L AS PB)	LEAD, DIS- SOLVED (UG/L AS PB)	LEAD, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS PB)	LITHIUM TOTAL RECOV- ERABLE (UG/L AS LI)	LITHIUM SUS- PENDE RECOV- ERABLE (UG/L AS LI)	LITHIUM DIS- SOLVED (UG/L AS LI)
DEC 19...	--	130	100	30	--	3	3	0	--	110	10	100
JAN 12...	--	130	100	30	--	4	4	0	--	--	--	--
FEB 10...	--	110	60	50	--	--	--	--	--	--	--	--
MAR 16...	--	170	140	30	--	--	--	--	--	--	--	--
APR 14...	12	180	130	50	2900	5	5	0	10	100	0	110
MAY 20...	--	120	70	50	--	--	--	--	--	--	--	--
JUN 18...	--	140	100	40	--	--	--	--	--	--	--	--

DATE	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)	MANGA- NESE, SUS- PENDE RECOV. (UG/L AS MN)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	MANGA- NESE, RECOV. FM BOT- TOM MA- TERIAL (UG/G)	MERCURY TOTAL RECOV- ERABLE (UG/L AS HG)	MERCURY SUS- PENDE RECOV- ERABLE (UG/L AS HG)	MERCURY DIS- SOLVED (UG/L AS HG)	MERCURY RECOV. FM BOT- TOM MA- TERIAL (UG/G AS HG)	NICKEL, TOTAL RECOV- ERABLE (UG/L AS NI)	NICKEL, SUS- PENDE RECOV- ERABLE (UG/L AS NI)	NICKEL, DIS- SOLVED (UG/L AS NI)
DEC 19...	60	0	60	--	.1	.1	.0	--	3	3	0
JAN 12...	30	0	30	--	.4	.4	.0	--	0	0	3
FEB 10...	70	0	70	--	--	--	--	--	--	--	--
MAR 16...	60	10	50	--	--	--	--	--	--	--	--
APR 14...	100	10	90	750	.1	.0	.1	.40	3	0	3
MAY 20...	240	20	220	--	--	--	--	--	--	--	--
JUN 18...	360	0	360	--	--	--	--	--	--	--	--

06324890 LITTLE POWDER RIVER BELOW CORRAL CREEK, NEAR WESTON, WY--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	SELE- NIUM, TOTAL (UG/L AS SE)	SELE- NIUM, SUS- PENDED TOTAL (UG/L AS SE)	SELE- NIUM, DIS- SOLVED (UG/L AS SE)	SELE- NIUM, TOTAL IN BOT- TOM MA- TERIAL (UG/G)	STRON- TIUM, TOTAL, RECOV- ERABLE (UG/L AS SR)	STRON- TIUM, SUS- PENDED RECOV. (UG/L AS SR)	STRON- TIUM, DIS- SOLVED (UG/L AS SR)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN)	ZINC, SUS- PENDED RECOV- ERABLE (UG/L AS ZN)	ZINC, DIS- SOLVED (UG/L AS ZN)	ZINC, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS ZN)
DEC 19...	2	0	2	--	3800	100	3700	20	10	10	--
JAN 12...	2	0	2	--	--	--	--	30	20	10	--
FEB 10...	--	--	--	--	--	--	--	--	--	--	--
MAR 16...	--	--	--	--	--	--	--	--	--	--	--
APR 14...	0	0	1	0	3300	200	3100	50	40	10	15
MAY 20...	--	--	--	--	--	--	--	--	--	--	--
JUN 18...	--	--	--	--	--	--	--	--	--	--	--

DATE	TIME	GROSS ALPHA, DIS- SOLVED (UG/L AS U-NAT)	GROSS ALPHA, SUSP. TOTAL (UG/L AS U-NAT)	GROSS BETA, DIS- SOLVED (PCI/L AS CS-137)	GROSS BETA, SUSP. TOTAL (PCI/L AS CS-137)	GROSS BETA, DIS- SOLVED (PCI/L AS SR/ YT-90)	GROSS BETA, SUSP. TOTAL (PCI/L AS SR/ YT-90)	GROSS ALPHA, DIS- SOLVED (PCI/L AS U-NAT)	GROSS ALPHA, SUSP. TOTAL (PCI/L AS U-NAT)
APR 14...	0925	<56	<.4	43	.8	40	.8	38	.3

06324890 LITTLE POWDER RIVER BELOW CORRAL CREEK, NEAR WESTON, WY--Continued

QUALITATIVE AND ASSOCIATED QUANTITATIVE ANALYSES OF BIOLOGICAL DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

PHYTOPLANKTON ANALYSES

DATE TIME	DEC 19,80 0835		JAN 12,81 1515		MAR 16,81 1130		APR 14,81 0925		MAY 20,81 1530		JUN 18,81 0900	
TOTAL CELLS/ML	90		52		77		930		310		260	
DIVERSITY: DIVISION	1.0		1.0		1.5		2.1		1.5		1.7	
..CLASS	1.0		1.0		1.5		2.1		1.5		1.7	
...ORDER	1.0		1.0		1.9		2.7		2.0		1.8	
...FAMILY	1.0		1.0		1.9		2.8		2.0		2.2	
....GENUS	1.0		1.0		1.9		2.9		2.2		2.2	
ORGANISM	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT
BACILLARIOPHYTA (DIATOMS)												
.BACILLARIOPHYCEAE												
..BACILLARIALES												
...NITZSCHIAEAE												
....NITZSCHIA	--	-	--	-	--	-	90	10	130#	42	100#	40
..EUPODISCALES												
...COSCINODISCACEAE												
...CYCLOTELLA	--	-	--	-	--	-	52	6	--	-	--	-
..FRAGILARIALES												
...FRAGILARIAEAE												
....FRAGILARIA	--	-	--	-	--	-	--	-	13	4	--	-
....SYNEDRA	--	-	--	-	--	-	--	-	39	13	--	-
..NAVICULES												
...NAVICULACEAE												
....NAVICULA	--	-	--	-	13#	17	13	1	--	-	--	-
CHLOROPHYTA (GREEN ALGAE)												
.CHLOROPHYCEAE												
..CHLOROCOCCALES												
...OOCYSTACEAE												
....ANKISTRODESMUS	--	-	--	-	13#	17	52	6	39	13	26	10
...VOLVOCALES												
..CHLAMYDOMONADACEAE												
....CARTERIA	--	-	--	-	--	-	13	1	--	-	--	-
....CHLAMYDOMONAS	39#	43	26#	50	26#	33	120	13	--	-	13	5
CRYPTOPHYTA (CRYPTOMONADS)												
.CRYPTOPHYCEAE												
..CRYPTOMONADALES												
...CRYPTOCHRYSIDACEAE												
....CHROOMONAS	--	-	--	-	--	-	130	14	--	-	39	15
...CRYPTOMONADACEAE												
....CRYPTOMONAS	--	-	--	-	26#	33	26	3	77#	25	65#	25
CYANOPHYTA (BLUE-GREEN ALGAE)												
.CYANOPHYCEAE												
..CHROOCOCCALES												
...CHROOCOCCACEAE												
....ANACYSTIS	--	-	--	-	--	-	39	4	13	4	--	-
...OSCILLATORIALES												
...OSCILLATORIAEAE												
....OSCILLATORIA	--	-	--	-	--	-	340#	36	--	-	--	-
EUGLENOPHYTA (EUGLENOIDS)												
.EUGLENOPHYCEAE												
..EUGLENALES												
...EUGLENACEAE												
....TRACHELOMONAS	--	-	--	-	--	-	65	7	--	-	13	5
PYRRHOPHYTA (FIRE ALGAE)												
.DINOPHYCEAE												
..DINOKONTAE												
...GLENODINIACEAE												
....GLENODINIUM	52#	57	26#	50	--	-	--	-	--	-	--	-

NOTE: # - DOMINANT ORGANISM; EQUAL TO OR GREATER THAN 15%

* - OBSERVED ORGANISM, MAY NOT HAVE BEEN COUNTED; LESS THAN 1/2%

06324925 LITTLE POWDER RIVER NEAR WESTON, WY

LOCATION.--Lat 44°38'51", long 105°18'37", in NE¼NE¼SE¼ sec.19, T.54 N., R.70 W., Campbell County, Hydrologic Unit 10090208, on left bank 100 ft (30 m) downstream from bridge on county road, 1.5 mi (2.4 km) northeast of Weston, and 2.0 mi (3.2 km) downstream from Spring Creek.

DRAINAGE AREA.--540 mi² (1,399 km²), of which 3.69 mi² (9.56 km²) is noncontributing.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1977 to September 1981 (discontinued).

GAGE.--Water-stage recorder. Altitude of gage is 3,680 ft (1,122 m), from topographic map.

REMARKS.--Records good. Small diversions for irrigation of hay meadows above station. Flow occasionally affected by contributions from mine dewatering.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 4,460 ft³/s (126 m³/s) May 19, 1978, gage height, 13.32 ft (4.060 m); no flow for several days in 1979, 1980, 1981.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 954 ft³/s (27.0 m³/s) July 16, gage height, 8.94 ft (2.725 m); no flow for several days.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.12	.27	.27	.83	.90	.00	3.0	.00	276	.00
2	.00	.00	.10	.33	.16	.62	.62	.05	1.7	.94	78	.00
3	.00	.00	.21	.80	.16	.44	.80	.17	1.3	6.1	27	.00
4	.00	.00	.40	1.5	.12	.51	.80	.46	.82	3.9	13	.00
5	.00	.00	.33	.71	.10	.51	.80	.41	.54	1.7	38	.00
6	.00	.00	.12	.62	.07	.40	.80	.36	.26	.63	24	.00
7	.00	.00	.12	.54	.12	.33	.66	.19	.26	.16	16	.00
8	.00	.00	.05	.47	.07	.16	.57	.23	.36	.00	10	.00
9	.00	.00	.10	.33	.08	.22	.46	.53	.29	.00	6.5	.00
10	.00	.00	.07	.27	.09	.27	.52	.33	.11	.00	3.1	.00
11	.00	.00	.16	.22	.10	.40	.61	.19	.05	.00	1.8	.00
12	.00	.00	.21	.27	.12	.27	.42	.35	.23	.00	1.0	.00
13	.00	.00	.16	.22	.27	.16	.28	.25	6.7	33	.60	.00
14	.00	.00	.10	.15	.54	.22	.30	.17	32	21	.47	.00
15	.00	.00	.33	.10	.71	.16	.33	.16	22	124	.36	.00
16	.00	.00	.71	.14	.71	.50	.24	.28	6.4	416	.24	.00
17	.00	.02	.47	.13	.71	.40	.21	.29	2.7	49	.96	.00
18	.00	.00	.22	.17	1.1	.47	.16	.17	1.5	21	1.5	.00
19	.00	.02	.12	.24	1.5	.54	.12	.14	.50	10	.40	.00
20	.00	.12	.07	.25	7.7	.71	.12	.09	.14	9.0	.16	.00
21	.02	.05	.07	.25	4.9	.54	.27	.04	1.1	5.3	.07	.00
22	.00	.12	.10	.34	4.2	.47	.28	.03	.15	8.2	.07	.00
23	.02	.07	.16	.47	3.7	1.0	.17	.10	.00	61	.04	.00
24	.03	.12	.07	.47	2.8	.64	.09	.03	.01	38	.04	.00
25	.00	.16	.12	.40	1.8	.64	.09	.00	.00	53	.03	.00
26	.00	.12	.40	.40	1.6	.73	.03	.00	.00	230	.03	.00
27	.00	.07	.40	.33	1.2	.62	.01	322	.00	126	.00	.00
28	.02	.07	.62	.27	1.0	.90	.04	180	.00	118	.00	.00
29	.00	.07	.47	.27	---	1.1	.02	27	.00	45	.00	.00
30	.00	.10	.22	.27	---	.62	.00	8.3	.00	24	.00	.00
31	.00	---	.16	.27	---	.90	---	4.0	---	15	.00	---
TOTAL	.09	1.11	6.96	11.47	35.90	16.28	10.72	546.32	82.12	1419.93	499.37	.00
MEAN	.003	.037	.22	.37	1.28	.53	.36	17.6	2.74	45.8	16.1	.000
MAX	.03	.16	.71	1.5	7.7	1.1	.90	322	32	416	276	.00
MIN	.00	.00	.05	.10	.07	.16	.00	.00	.00	.00	.00	.00
AC-FT	.2	2.2	14	23	71	32	21	1080	163	2820	990	.00
CAL YR 1980	TOTAL	1639.88	MEAN	4.48	MAX	220	MIN	.00	AC-FT	3250		
WTR YR 1981	TOTAL	2630.27	MEAN	7.21	MAX	416	MIN	.00	AC-FT	5220		

YELLOWSTONE RIVER BASIN

06324925 LITTLE POWDER RIVER NEAR WESTON, WY--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1969, 1975 to September 1981 (discontinued).

WATER-QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	COLOR (PLAT- INUM- COBALT UNITS)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION)	HARD- NESS (MG/L AS CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)
OCT										
24...	1715	.02	2750	8.3	6.5	--	12.2	112	620	130
NOV										
17...	1445	.06	2750	7.7	5.0	--	11.1	97	640	130
DEC										
15...	1215	.56	3580	--	1.5	--	--	--	860	180
JAN										
12...	1245	.29	--	7.8	1.0	--	12.0	95	790	150
FEB										
10...	1305	.13	4140	8.0	.0	--	10.9	84	790	150
18...	1545	1.6	3890	--	.5	--	--	--	--	--
21...	1425	4.1	3780	--	1.0	--	--	--	--	--
24...	1420	3.2	3220	8.3	2.5	--	13.3	113	--	--
MAR										
16...	1400	.30	2850	7.5	9.0	--	9.8	96	580	110
APR										
29...	1630	.01	3700	8.3	18.5	20	10.6	126	790	150
MAY										
20...	1745	.10	3970	8.3	19.5	22	10.9	136	780	130
29...	1510	20	1240	8.0	18.0	17	6.6	80	260	52
JUN										
15...	1350	19	610	7.8	14.5	--	8.6	95	110	25
JUL										
07...	1315	.09	3000	8.3	27.0	--	7.2	101	510	80
AUG										
13...	0830	.52	1370	8.1	20.0	21	5.0	63	320	70

DATE	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	POTAS- SIUM 40 DIS- SOLVED (PCI/L AS K40)	ALKA- LINITY LAB (MG/L AS CACO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SiO2)
OCT										
24...	71	440	7.7	17	--	390	1100	9.5	.6	5.1
NOV										
17...	76	450	7.8	20	--	410	1200	9.8	.6	4.2
DEC										
15...	100	590	8.8	15	--	--	1600	13	.5	7.7
JAN										
12...	100	790	12	18	--	640	1700	64	.9	6.7
FEB										
10...	100	840	13	13	9.7	760	1900	24	.7	7.7
18...	--	--	--	--	--	--	--	--	--	--
21...	--	--	--	--	--	--	--	--	--	--
24...	--	--	--	--	--	520	--	--	--	--
MAR										
16...	75	480	8.6	12	9.0	410	1200	37	.5	6.0
APR										
29...	100	580	9.0	17	13	500	670	30	.7	3.8
MAY										
20...	110	690	11	14	10	500	1800	7.5	.6	3.7
29...	32	190	5.1	9.8	7.3	150	500	4.9	.3	7.0
JUN										
15...	12	84	3.5	6.2	4.6	85	210	2.9	.2	7.3
JUL										
07...	76	550	11	11	8.2	490	1200	12	.4	4.1
AUG										
13...	36	210	5.6	11	--	260	490	7.3	.3	13

WATER-QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

[illegible]

WATER-QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

[illegible]

06324925 LITTLE POWDER RIVER NEAR WESTON, WY--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	CADMIUM TOTAL RECOV- ERABLE (UG/L AS CD)	CADMIUM SUS- PENDE RECOV- ERABLE (UG/L AS CD)	CADMIUM DIS- SOLVED (UG/L AS CD)	CADMIUM RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CD)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR)	CHRO- MIUM, SUS- PENDE RECOV. (UG/L AS CR)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR)	CHRO- MIUM, RECOV. FM BOT- TOM MA- TERIAL (UG/G)	COBALT, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CO)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU)	COPPER, SUS- PENDE RECOV- ERABLE (UG/L AS CU)	COPPER, DIS- SOLVED (UG/L AS CU)
OCT												
24...	--	--	--	--	--	--	--	--	--	--	--	--
NOV												
17...	--	--	--	--	--	--	--	--	--	--	--	--
DEC												
15...	0	0	0	--	20	20	0	--	--	3	3	0
JAN												
12...	0	0	0	--	0	0	0	--	--	5	4	1
FEB												
10...	--	--	--	--	--	--	--	--	--	--	--	--
MAR												
16...	--	--	--	--	--	--	--	--	--	--	--	--
APR												
29...	0	0	1	1	20	10	10	2	10	5	3	2
MAY												
20...	--	--	--	--	--	--	--	--	--	--	--	21
29...	0	0	0	--	40	40	0	--	--	50	48	2
JUN												
15...	--	--	--	--	--	--	--	--	--	--	--	--
JUL												
07...	0	0	0	--	10	0	10	--	--	7	5	2
AUG												
13...	--	--	--	--	--	--	--	--	--	--	--	--

DATE	COPPER, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CU)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	IRON, SUS- PENDE RECOV- ERABLE (UG/L AS FE)	IRON, DIS- SOLVED (UG/L AS FE)	IRON, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS FE)	LEAD, TOTAL RECOV- ERABLE (UG/L AS PB)	LEAD, SUS- PENDE RECOV- ERABLE (UG/L AS PB)	LEAD, DIS- SOLVED (UG/L AS PB)	LEAD, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS PB)	LITHIUM TOTAL RECOV- ERABLE (UG/L AS LI)	LITHIUM SUS- PENDE RECOV- ERABLE (UG/L AS LI)	LITHIUM DIS- SOLVED (UG/L AS LI)
OCT												
24...	--	230	190	40	--	--	--	--	--	40	0	40
NOV												
17...	--	290	260	30	--	--	--	--	--	--	--	--
DEC												
15...	--	290	250	40	--	2	2	0	--	--	--	--
JAN												
12...	--	340	320	20	--	5	5	0	--	--	--	--
FEB												
10...	--	240	190	50	--	--	--	--	--	--	--	--
MAR												
16...	--	570	570	0	--	--	--	--	--	--	--	--
APR												
29...	12	700	670	30	5000	3	3	0	20	50	0	50
MAY												
20...	--	460	420	40	--	--	--	--	--	--	--	--
29...	--	20000	20000	70	--	35	34	1	--	--	--	--
JUN												
15...	--	54000	54000	60	--	--	--	--	--	--	--	--
JUL												
07...	--	1600	1600	30	--	6	6	0	--	--	--	--
AUG												
13...	--	2900	2900	31	--	--	--	--	--	--	--	--

WATER-QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

[illegible]

06324925 LITTLE POWDER RIVER NEAR WESTON, WY--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	TIME	GROSS ALPHA, DIS- SOLVED (UG/L AS U-NAT)	GROSS ALPHA, SUSP. TOTAL (UG/L AS U-NAT)	GROSS BETA, DIS- SOLVED (PCI/L AS CS-137)	GROSS BETA, SUSP. TOTAL (PCI/L AS CS-137)	GROSS BETA, DIS- SOLVED (PCI/L AS YT-90)	GROSS BETA, SUSP. TOTAL (PCI/L AS YT-90)	GROSS ALPHA, DIS- SOLVED (PCI/L AS U-NAT)	GROSS ALPHA, SUSP. TOTAL (PCI/L AS U-NAT)
APR 29...	1630	<68	2.3	<32	4.4	<31	4.3	46	1.6

DATE	TIME	TEMPER- ATURE (DEG C)	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SED. SUSP. FALL DIAM. % FINER THAN .004 MM	SED. SUSP. FALL DIAM. % FINER THAN .016 MM	SED. SUSP. FALL DIAM. % FINER THAN .062 MM	BED MAT. FALL DIAM. % FINER THAN .062 MM	BED MAT. FALL DIAM. % FINER THAN .125 MM
MAY 29...	1510	18.0	20	98	99	100	4	13
JUN 15...	1350	14.5	19	97	99	100	9	12

DATE	BED MAT. FALL DIAM. % FINER THAN .250 MM	BED MAT. FALL DIAM. % FINER THAN .500 MM	BED MAT. FALL DIAM. % FINER THAN 1.00 MM	BED MAT. FALL DIAM. % FINER THAN 2.00 MM	BED MAT. FALL DIAM. % FINER THAN 4.00 MM	BED MAT. FALL DIAM. % FINER THAN 8.00 MM	BED MAT. FALL DIAM. % FINER THAN 16.0 MM	BED MAT. FALL DIAM. % FINER THAN 32.0 MM
MAY 29...	19	22	30	39	57	77	90	100
JUN 15...	14	17	21	28	46	72	91	100

06324925 LITTLE POWDER RIVER NEAR WESTON, WY--Continued

QUALITATIVE AND ASSOCIATED QUANTITATIVE ANALYSES OF BIOLOGICAL DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

PHYTOPLANKTON ANALYSES

DATE TIME	OCT 24,80	NOV 17,80	DEC 15,80	JAN 12,81	FEB 10,81	MAR 16,81
TOTAL CELLS/ML	1715	1445	1215	1245	1305	1400
DIVERSITY: DIVISION	670	240	300	340	160	77
..CLASS	2.0	1.9	1.3	1.4	0.7	1.5
..ORDER	2.0	1.9	1.3	1.4	0.7	1.5
..FAMILY	2.8	2.0	1.4	1.4	0.7	1.9
....GENUS	2.8	2.0	1.5	1.4	0.7	1.9
	3.0	2.2	1.5	1.4	0.7	2.3
ORGANISM	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT
BACILLARIOPHYTA (DIATOMS)						
..BACILLARIOPHYCEAE						
...BACILLARIALES						
...NITZSCHIA						
....NITZSCHIA	64	10	13	5	--	13# 17
...EPITHEMIALES						
...EPITHEMIALEAE						
...RHOPALODIA	--	--	--	--	--	--
...EUPODISCALES						
...COSCINODISCALEAE						
...CYCLOTELLA	52	8	13	5	26# 17	26# 33
...FRAGILARIALES						
...FRAGILARIALEAE						
...DIATOMA	--	--	--	--	--	--
...NAVICULALES						
...CYMBELLACEAE	--	--	--	--	--	--
...CYMBELLA	--	--	--	--	--	--
...NAVICULACEAE						
...NAVICULA	26	4	--	--	--	--
CHLOROPHYTA (GREEN ALGAE)						
..CHLOROPHYCEAE						
...CHLOROCOCCALES						
...CHLOROCOCCACEAE						
...POLYEDRIOPSIS	--	--	--	--	--	--
...DICTYOSPHAERIALEAE						
...DICTYOSPHAERIUM	--	--	--	--	--	--
...OOCYSTACEAE						
...ANKISTRODESMUS	120# 17	77# 32	13	4	--	13# 17
...KIRCHNERIELLA	--	--	--	--	--	--
...OOCYSTIS	--	--	--	--	--	--
...SELENASTRUM	13	2	--	--	--	--
...SCENEDESMACEAE						
...CRUCIGENIA	--	--	--	--	--	--
...SCENEDESMUS	--	--	--	--	--	--
...VOLVOCALES						
...CHLAMYDOMONADACEAE						
...CHLAMYDOMONAS	13	2	--	13	4	180# 54
CRYPTOPHYTA (CRYPTOMONADS)						
..CRYPTOPHYCEAE						
...CRYPTOMONADALES						
...CRYPTOCHRYSIDACEAE						
...CHROOMONAS	--	--	13	4	--	--
...CRYPTOMONADACEAE						
...CRYPTOMONAS	--	--	77# 26	--	--	--
CYANOPHYTA (BLUE-GREEN ALGAE)						
..CYANOPHYCEAE						
...CHROOCOCCALES						
...CHROOCOCCACEAE						
...ANACYSTIS	120# 17	64# 26	--	--	--	--
...NOSTOCALES						
...HAMMATOIDEACEAE						
...RAPHIDIOPSIS	180# 27	--	--	--	--	--
...OSCILLATORIALES						
...OSCILLATORIALEAE						
...OSCILLATORIA	--	--	--	--	--	--
EUGLENOPHYTA (EUGLENOIDS)						
..EUGLENOPHYCEAE						
...EUGLENALES						
...EUGLENACEAE						
...EUGLENA	26	4	13	5	--	13# 17
...LEPOCINCLIS	--	--	--	--	--	--
...TRACHELOMONAS	13	2	64# 26	180# 61	100# 31	130# 83
PYRRHOPHYTA (FIRE ALGAE)						
..DINOPHYCEAE						
...DINOKONTAE						
...GLENODINIACEAE						
...GLENODINIUM	52	8	--	--	52# 15	--

NOTE: # - DOMINANT ORGANISM; EQUAL TO OR GREATER THAN 15%

* - OBSERVED ORGANISM, MAY NOT HAVE BEEN COUNTED; LESS THAN 1/2%

06324925 LITTLE POWDER RIVER NEAR WESTON, WY--Continued

QUALITATIVE AND ASSOCIATED QUANTITATIVE ANALYSES OF BIOLOGICAL DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

PHYTOPLANKTON ANALYSES

DATE	APR 29,81		MAY 20,81		JUN 15,81		JUL 7,81		AUG 13,81	
TIME	1630		1745		1350		1315		0830	
TOTAL CELLS/ML	1200		1300		320		5100		8800	
DIVERSITY: DIVISION	1.8		1.2		0.9		1.9		1.6	
..CLASS	1.8		1.2		0.9		1.9		1.6	
..ORDER	2.0		1.3		1.4		2.6		2.0	
...FAMILY	2.5		1.4		1.4		3.0		2.0	
....GENUS	2.7		1.4		1.4		3.5		2.3	
ORGANISM	CELLS	PER-	CELLS	PER-	CELLS	PER-	CELLS	PER-	CELLS	PER-
	/ML	CENT	/ML	CENT	/ML	CENT	/ML	CENT	/ML	CENT
BACILLARIOPHYTA (DIATOMS)										
.BACILLARIOPHYCEAE										
..BACILLARIALES										
...NITZSCHIA	91	8	13	1	41	13	110	2	220	2
....EPITHEMIALES										
...EPITHEMIALES										
....RHODALODIA	--	-	--	-	--	-	27	1	--	-
...EUPODISCALES										
....COSCINODISCALES										
...CYCLOTELLA	13	1	--	-	14	4	53	1	--	-
..FRAGILARIALES										
...FRAGILARIALES										
....DIATOMA	--	-	--	-	14	4	--	-	--	-
..NAVICULALES										
...CYMBELLACEAE										
....CYMBELLA	13	1	--	-	--	-	27	1	--	-
...NAVICULACEAE										
....NAVICULA	65	6	26	2	28	9	130	3	--	-
CHLOROPHYTA (GREEN ALGAE)										
.CHLOROPHYCEAE										
..CHLOROCOCCALES										
...CHLOROCOCCACEAE										
....POLYEDRIOPSIS	--	-	--	-	--	-	27	1	--	-
...DICTYOSPHAERIALES										
....DICTYOSPHAERIUM	52	4	--	-	--	-	110	2	--	-
...OOCYSTACEAE										
....ANKISTRODESMUS	440#	38	140	11	--	-	670	13	1100	12
....KIRCHNERIELLA	--	-	--	-	--	-	53	1	--	-
....OOCYSTIS	--	-	--	-	--	-	110	2	110	1
...SELENASTRUM	--	-	--	-	--	-	53	1	220	2
...SCENEDESMACEAE										
....CRUCIGENIA	52	4	--	-	--	-	190	4	--	-
...SCENEDESMUS	26	2	26	2	--	-	110	2	--	-
..VOLVOCALES										
...CHLAMYDOMONADACEAE										
....CHLAMYDOMONAS	--	-	52	4	--	-	110	2	3700#	42
CRYPTOPHYTA (CRYPTOMONADS)										
.CRYPTOPHYCEAE										
..CRYPTOMONADALES										
...CRYPTOCHRYSIDACEAE										
....CHROOMONAS	--	-	--	-	--	-	--	-	--	-
...CRYPTOMONADACEAE										
....CRYPTOMONAS	--	-	--	-	--	-	53	1	110	1
CYANOPHYTA (BLUE-GREEN ALGAE)										
.CYANOPHYCEAE										
..CHROOCOCCALES										
...CHROOCOCCACEAE										
....ANACYSTIS	250#	21	940#	74	--	-	350	7	2200#	25
...NOSTOCALES										
....HAMMATOIDEACEAE										
....RAPHIDIOPSIS	--	-	--	-	220#	70	400	8	--	-
...OSCILLATORIALES										
....OSCILLATORIALES										
....OSCILLATORIA	--	-	--	-	--	-	1600#	31	--	-
EUGLENOPHYTA (EUGLENOIDS)										
.EUGLENOPHYCEAE										
..EUGLENALES										
...EUGLENACEAE										
....EUGLENA	65	6	13	1	--	-	450	9	110	1
....LEPOCINCLIS	--	-	--	-	--	-	27	1	--	-
....TRACHELOMONAS	91	8	64	5	--	-	480	9	1100	12
PYRRHOPHYTA (FIRE ALGAE)										
.DINOPHYCEAE										
..DINOKONTAE										
...GLENODINIACEAE										
....GLENODINIUM	--	-	--	-	--	-	27	1	--	-

NOTE: # - DOMINANT ORGANISM; EQUAL TO OR GREATER THAN 15%

* - OBSERVED ORGANISM, MAY NOT HAVE BEEN COUNTED; LESS THAN 1/2%

06324970 LITTLE POWDER RIVER ABOVE DRY CREEK, NEAR WESTON, WY

LOCATION.--Lat 44°55'45", long 105°21'06", in NW¼SW¼ sec.13, T.57 N., R.71 W., Campbell County, Hydrologic Unit 10090208, on left bank 3.1 mi (5.0 km) upstream from Dry Creek, 5.0 mi (8.0 km) south of the Wyoming-Montana State line, and 20 mi (32 km) north of Weston.

DRAINAGE AREA.--1,235 mi² (3,199 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1972 to current year.

REVISED RECORDS.--WDR WY-77-1: Drainage area. WDR WY-78-1: 1976(M).

GAGE.--Water-stage recorder. Altitude of gage is 3,410 ft (1,039 m), from topographic map.

REMARKS.--Records good except those for December thru August, which are poor. Diversion above station for irrigation of about 80 acres (32 hm²) are below station. Since August 1976, the Rawhide Mine has intermittently pumped water into the river in T.52 N., R.71 W., about 45 mi (72 km) upstream.

AVERAGE DISCHARGE.--9 years, 23.1 ft³/s (0.654 m³/s), 16,740 acre-ft/yr (20.6 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 5,300 ft³/s (150 m³/s) May 19, 1978, gage height, 11.62 ft (3.542 m); maximum gage height, 11.63 ft (3.545 m) Mar. 20, 1978 (backwater from ice); no flow at times some years.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 130 ft³/s (3.68 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
May 28	1645	*424 12.0	5.83 1.777	July 27	1230	211 6.0	4.83 1.472
July 17	0430	396 11.2	5.72 1.743	Aug. 2	1430	281 8.0	5.19 1.582

No flow for several days.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.01	.02	.07	1.1	1.2	2.9	1.4	.16	30	1.4	31	.03
2	.01	.02	.21	1.0	1.2	2.6	1.4	.16	26	1.8	158	.02
3	.01	.02	.24	1.0	1.1	2.4	1.4	.16	22	2.1	65	.02
4	.01	.03	.41	1.0	1.1	2.3	1.4	.16	16	2.0	39	.02
5	.01	.03	.54	1.0	1.1	2.1	1.4	.18	14	2.0	39	.01
6	.01	.03	.54	1.1	1.0	1.9	1.3	.22	9.7	1.9	55	.01
7	.02	.03	.54	1.4	1.0	1.7	1.3	.25	6.0	1.7	33	.01
8	.02	.04	.54	3.0	1.0	1.6	1.2	.33	2.1	1.5	22	.01
9	.02	.04	.52	2.0	1.0	1.6	1.2	.39	2.5	1.7	18	.01
10	.02	.04	.52	1.4	1.0	1.4	1.1	.44	2.3	1.8	10	.01
11	.02	.04	.52	1.0	1.3	1.5	1.0	.48	2.2	2.0	5.7	.01
12	.02	.04	.60	.99	1.8	1.3	.90	.50	3.1	2.0	1.7	.01
13	.02	.03	.68	1.1	2.1	1.2	.80	.50	11	2.1	.60	.02
14	.02	.02	.73	1.1	2.8	1.2	.80	.45	8.9	4.2	1.2	.02
15	.02	.02	.82	1.1	3.2	1.0	.70	.35	11	11	4.0	.02
16	.02	.02	1.1	1.1	2.9	.84	.60	.26	12	61	1.3	.02
17	.02	.02	1.2	1.1	3.0	.84	.60	.20	8.0	207	1.1	.02
18	.02	.02	1.2	1.1	2.6	.54	.50	.10	5.8	38	.64	.02
19	.02	.02	1.2	1.1	2.6	.61	.45	.08	4.5	14	.37	.02
20	.02	.02	.91	1.2	2.4	.75	.42	.07	2.5	10	.24	.02
21	.02	.02	.84	1.1	1.1	.84	.40	.07	.21	7.7	.10	.02
22	.02	.02	.84	1.3	.72	.84	.35	.31	3.6	7.2	.08	.03
23	.02	.02	.86	1.3	.61	1.0	.32	.19	2.8	6.4	.08	.03
24	.02	.02	.93	1.3	.48	1.2	.28	.10	1.1	26	.08	.04
25	.02	.02	1.0	1.4	.48	.93	.25	.06	1.0	44	.06	.04
26	.02	.03	1.1	1.5	.38	.93	.22	.02	1.2	62	.04	.05
27	.02	.03	1.4	1.5	4.0	.93	.20	6.1	1.9	183	.02	.05
28	.02	.04	1.6	1.4	3.0	1.1	.19	148	2.2	104	.01	.05
29	.02	.04	1.6	1.4	---	1.0	.18	112	2.0	90	.03	.05
30	.02	.04	1.6	1.3	---	1.2	.17	49	1.7	44	.03	.06
31	.02	---	1.5	1.3	---	1.4	---	37	---	38	.36	---
TOTAL	.56	.83	26.36	39.69	46.17	41.65	22.43	358.29	217.31	981.5	487.74	.75
MEAN	.018	.028	.85	1.28	1.65	1.34	.75	11.6	7.24	31.7	15.7	.025
MAX	.02	.04	1.6	3.0	4.0	2.9	1.4	148	30	207	158	.06
MIN	.01	.02	.07	.99	.38	.54	.17	.02	.21	1.4	.01	.01
AC-FT	1.1	1.6	52	79	92	83	44	711	431	1950	967	1.5
CAL YR 1980	TOTAL	2084.54	MEAN	5.70	MAX	210	MIN	.01	AC-FT	4130		
WTR YR 1981	TOTAL	2223.28	MEAN	6.09	MAX	207	MIN	.01	AC-FT	4410		

06324970 LITTLE POWDER RIVER ABOVE DRY CREEK, NEAR WESTON, WY--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1975 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	COLOR (PLAT- INUM- COBALT UNITS)	TUR- BID- ITY (NTU)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION)	HARD- NESS (MG/L AS CaCO3)	CALCIUM DIS- SOLVED (MG/L AS Ca)
OCT											
27...	1445	.02	2550	7.9	4.5	--	--	11.8	98	740	140
NOV											
20...	0900	.02	2640	7.9	2.0	--	--	10.0	80	780	150
DEC											
11...	1130	.52	3680	7.9	1.0	--	--	10.6	83	1100	220
12...	0915	--	--	--	--	--	15	--	--	--	--
JAN											
19...	1250	1.1	3600	8.1	1.0	--	--	14.2	114	990	200
FEB											
18...	1315	2.5	3620	--	.5	--	--	--	--	--	--
24...	1120	.50	2850	8.2	3.0	12	--	13.9	119	810	160
MAR											
09...	1230	--	1300	8.4	5.0	--	2.0	12.4	--	--	--
11...	1335	1.5	2880	8.3	6.5	--	--	12.7	114	700	140
APR											
27...	1700	.20	3700	8.3	16.0	13	15	10.0	101	1300	230
MAY											
18...	1300	.10	3720	8.3	13.5	17	15	8.6	93	960	170
29...	1300	101	900	8.0	12.0	17	--	8.3	86	180	40
JUN											
08...	1245	2.2	2220	8.2	20.5	23	75	7.4	90	570	120
JUL											
22...	1135	7.4	1040	8.2	21.5	--	1500	6.5	81	280	65
AUG											
28...	1045	.01	1920	8.3	20.0	--	35	7.7	94	500	109
SEP											
10...	1245	.10	2350	8.3	21.0	--	--	11.0	138	580	110

DATE	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	POTAS- SIUM 40 DIS- SOLVED (PCI/L AS K40)	ALKA- LINITY LAB (MG/L AS CaCO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SiO2)
OCT										
27...	94	370	5.9	12	9.0	380	1100	11	.9	9.6
NOV										
20...	99	370	5.8	15	11	370	1100	11	.8	9.3
DEC										
11...	140	520	6.7	27	20	450	1700	18	.8	9.2
12...	--	--	--	--	--	--	--	--	--	--
JAN										
19...	120	540	7.5	16	12	430	1700	16	.6	8.1
FEB										
18...	--	--	--	--	--	--	--	--	--	--
24...	99	420	6.4	13	9.7	--	1400	17	.4	7.4
MAR										
09...	--	--	--	--	--	--	--	--	--	--
11...	85	410	6.7	11	8.2	340	1200	16	.5	5.1
APR										
27...	170	540	6.6	21	16	370	730	25	.7	2.0
MAY										
18...	130	590	8.3	21	16	340	2000	26	.6	3.6
29...	19	130	4.2	8.1	6.0	130	340	4.0	.4	6.5
JUN										
08...	66	300	5.5	13	9.7	260	950	8.9	.5	8.6
JUL										
22...	28	120	3.1	11	8.2	140	380	4.5	.4	9.2
AUG										
28...	56	240	5.1	15	--	290	730	8.3	.5	10
SEP										
10...	73	350	6.4	14	--	400	840	15	1.0	12

YELLOWSTONE RIVER BASIN

06324970 LITTLE POWDER RIVER ABOVE DRY CREEK, NEAR WESTON, WY--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)	SOLIDS, DIS- SOLVED (TONS PER DAY)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N)	NITRO- GEN, AMMONIA TOTAL (MG/L AS NH4)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO- GEN,NH4 + ORG. SUSP. TOTAL (MG/L AS N)
OCT 27...	1930	1970	2.7	.11	--	--	--	--	--	--
NOV 20...	2000	1980	2.7	.11	.09	.020	.02	.41	.43	.03
DEC 11...	2900	2910	4.0	4.1	--	--	--	--	--	--
12...	--	--	--	--	--	--	--	--	--	--
JAN 19...	3020	2860	3.9	8.3	.02	.090	.11	.58	.67	.05
FEB 18...	--	--	--	--	--	--	--	--	--	--
24...	2340	2320	3.2	3.1	--	--	--	--	--	--
MAR 09...	--	--	--	--	--	--	--	--	--	--
11...	2190	2070	2.8	8.4	--	--	--	--	--	--
APR 27...	3050	1940	2.6	1.0	.04	.030	--	1.3	1.30	.45
MAY 18...	3200	3150	4.3	.85	--	--	--	--	--	--
29...	635	622	.85	170	--	--	--	--	--	--
JUN 08...	1720	1620	2.2	9.6	--	--	--	--	--	--
JUL 22...	718	703	.96	14.0	.19	.200	--	1.3	1.50	.50
AUG 28...	1390	1340	1.8	.04	--	--	--	--	--	--
SEP 10...	1760	1660	2.3	.45	--	--	--	--	--	--

[illegible]

WATER-QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	COAL IN BOTTOM MATE- RIAL (GM/KG)	H-2/ H-1/ STABLE ISOTOPE RATIO PER MILL	PHYTO- PLANK- TON, TOTAL (CELLS PER ML)	PERI- PHYTON BIOMASS ASH WEIGHT G/SQ M	PERI- PHYTON BIOMASS TOTAL DRY WEIGHT G/SQ M	BIOMASS CHLORO- PHYLL RATIO PERI- PHYTON (UNITS)	CHLOR-A PERI- PHYTON CHROMO- FLUOROM (MG/M2)	CHLOR-B PERI- PHYTON CHROMO- FLUOROM (MG/M2)	SEDI- MENT, SUS- PENDED (MG/L)	SEDI- MENT, DIS- CHARGE, SUS- PENDED (T/DAY)
OCT 27...	--	--	1200	9.92	11.3	1290	1.07	.000	84	.00
NOV 20...	--	--	1500	--	--	--	--	--	52	.00
DEC 11...	--	--	850	--	--	--	--	--	103	.14
12...	--	--	--	--	--	--	--	--	--	--
JAN 19...	--	--	210	--	--	--	--	--	97	.28
FEB 18...	--	--	--	--	--	--	--	--	52	.35
24...	--	13.9	310	--	--	--	--	--	67	.09
MAR 09...	--	--	--	--	--	--	--	--	--	--
11...	--	--	440	--	--	--	--	--	115	.47
APR 27...	2.00	10.0	2700	--	--	--	--	--	108	.06
MAY 18...	--	8.6	2200	--	--	--	--	--	159	.04
29...	--	8.3	660	--	--	--	--	--	8780	2390
JUN 08...	--	7.4	15000	--	--	--	--	--	185	1.1
JUL 22...	--	--	4000	7.24	9.76	36000	.070	.000	411	8.2
AUG 28...	--	--	1800	--	--	--	--	--	166	.00
SEP 10...	--	--	4500	--	--	--	--	--	150	.04

[illegible]

YELLOWSTONE RIVER BASIN

06324970 LITTLE POWDER RIVER ABOVE DRY CREEK, NEAR WESTON, WY--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	CADMIUM TOTAL RECOV- ERABLE (UG/L AS CD)	CADMIUM SUS- PENDE RECOV- ERABLE (UG/L AS CD)	CADMIUM DIS- SOLVED (UG/L AS CD)	CADMIUM RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CD)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR)	CHRO- MIUM, SUS- PENDE RECOV. (UG/L AS CR)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR)	CHRO- MIUM, RECOV. FM BOT- TOM MA- TERIAL (UG/G)	COBALT, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CO)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU)	COPPER, SUS- PENDE RECOV- ERABLE (UG/L AS CU)	COPPER, DIS- SOLVED (UG/L AS CU)
OCT 27...	--	--	--	--	--	--	--	--	--	--	--	34
NOV 20...	--	--	--	--	--	--	--	--	--	--	--	--
DEC 11...	0	0	0	--	0	0	0	--	--	3	3	0
JAN 19...	0	0	0	--	10	10	0	--	--	5	5	0
FEB 24...	--	--	--	--	--	--	--	--	--	--	--	--
MAR 11...	--	--	--	--	--	--	--	--	--	--	--	--
APR 27...	0	0	1	0	20	10	10	1	10	5	4	1
MAY 18...	--	--	--	--	--	--	--	--	--	--	--	--
29...	1	0	2	--	100	90	10	--	--	150	150	4
JUN 08...	--	--	--	--	--	--	--	--	--	--	--	--
JUL 22...	0	--	<1	--	10	0	10	--	--	9	3	6
AUG 28...	--	--	--	--	--	--	--	--	--	--	--	--
SEP 10...	--	--	--	--	--	--	--	--	--	--	--	--

DATE	COPPER, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CU)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	IRON, SUS- PENDE RECOV- ERABLE (UG/L AS FE)	IRON, DIS- SOLVED (UG/L AS FE)	IRON, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS FE)	LEAD, TOTAL RECOV- ERABLE (UG/L AS PB)	LEAD, SUS- PENDE RECOV- ERABLE (UG/L AS PB)	LEAD, DIS- SOLVED (UG/L AS PB)	LEAD, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS PB)	LITHIUM TOTAL RECOV- ERABLE (UG/L AS LI)	LITHIUM SUS- PENDE RECOV- ERABLE (UG/L AS LI)	LITHIUM DIS- SOLVED (UG/L AS LI)
OCT 27...	--	470	110	360	--	--	--	--	--	40	0	40
NOV 20...	--	420	390	30	--	--	--	--	--	--	--	--
DEC 11...	--	280	240	40	--	2	2	0	--	--	--	--
JAN 19...	--	290	240	50	--	6	4	2	--	--	--	--
FEB 24...	--	360	330	30	--	--	--	--	--	--	--	--
MAR 11...	--	410	360	50	--	--	--	--	--	--	--	--
APR 27...	12	670	630	40	3400	3	3	0	10	60	0	60
MAY 18...	--	370	320	50	--	--	--	--	--	--	--	--
29...	--	67000	67000	130	--	140	140	0	--	--	--	--
JUN 08...	--	1000	910	90	--	--	--	--	--	--	--	--
JUL 22...	--	4200	4200	10	--	7	5	2	--	--	--	--
AUG 28...	--	1100	--	<10	--	--	--	--	--	--	--	--
SEP 10...	--	1300	1300	30	--	--	--	--	--	--	--	--

WATER-QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

[illegible]

YELLOWSTONE RIVER BASIN

06324970 LITTLE POWDER RIVER ABOVE DRY CREEK, NEAR WESTON, WY--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	TIME	GROSS ALPHA, DIS- SOLVED (UG/L AS U-NAT)	GROSS ALPHA, SUSP. TOTAL (UG/L AS U-NAT)	GROSS BETA, DIS- SOLVED (PCI/L AS CS-137)	GROSS BETA, SUSP. TOTAL (PCI/L AS CS-137)	GROSS BETA, DIS- SOLVED (PCI/L AS SR/ YT-90)	GROSS BETA, SUSP. TOTAL (PCI/L AS SR/ YT-90)	GROSS ALPHA, DIS- SOLVED (PCI/L AS U-NAT)	GROSS ALPHA, SUSP. TOTAL (PCI/L AS U-NAT)
APR 27...	1700	<68	3.1	<34	4.7	<32	4.6	46	2.1

DATE	TIME	TEMPER- ATURE (DEG C)	S'TREAM- FLOW, INSTAN- TANEOUS (CFS)	SED. SUSP. FALL DIAM. % FINER THAN .004 MM	SED. SUSP. FALL DIAM. % FINER THAN .016 MM	SED. SUSP. FALL DIAM. % FINER THAN .062 MM	BED MAT. FALL DIAM. % FINER THAN .062 MM	BED MAT. FALL DIAM. % FINER THAN .125 MM
FEB 24...	1120	3.0	.50	--	--	--	3	5
MAY 29...	1300	12.0	101	96	98	100	0	0
JUL 22...	1135	21.5	7.4	--	--	--	3	4

DATE	BED MAT. FALL DIAM. % FINER THAN .250 MM	BED MAT. FALL DIAM. % FINER THAN .500 MM	BED MAT. FALL DIAM. % FINER THAN 1.00 MM	BED MAT. FALL DIAM. % FINER THAN 2.00 MM	BED MAT. FALL DIAM. % FINER THAN 4.00 MM	BED MAT. FALL DIAM. % FINER THAN 8.00 MM	BED MAT. FALL DIAM. % FINER THAN 16.0 MM	BED MAT. FALL DIAM. % FINER THAN 32.0 MM
FEB 24...	9	16	25	34	50	73	88	100
MAY 29...	1	4	8	18	42	68	88	100
JUL 22...	12	18	25	32	47	68	94	100

06324970 LITTLE POWDER RIVER ABOVE DRY CREEK, NEAR WESTON, WY--Continued

QUALITATIVE AND ASSOCIATED QUANTITATIVE ANALYSES OF BIOLOGICAL DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

PHYTOPLANKTON ANALYSES

DATE	OCT 27,80		NOV 20,80		DEC 11,80		JAN 19,81		FEB 24,81	
TIME	1445		0900		1130		1250		1120	
TOTAL CELLS/ML	1200		1500		850		210		310	
DIVERSITY: DIVISION	1.6		0.6		2.0		1.5		1.1	
..CLASS	1.6		0.6		2.0		1.5		1.1	
...ORDER	1.9		0.6		2.4		2.1		1.6	
...FAMILY	1.9		0.6		2.7		2.1		1.8	
....GENUS	1.9		1.3		2.8		2.1		1.8	
ORGANISM	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT
BACILLARIOPHYTA (DIATOMS)										
.BACILLARIOPHYCEAE										
..ACHNANTHALES										
...ACHNANTHACEAE										
....ACHNANTHES	--	-	--	-	--	-	--	-	--	-
....COCCONEIS	--	-	--	-	--	-	--	-	--	-
..BACILLARIALES										
...NITZSCHIAEAE										
....NITZSCHIA	130	11	39	2	13	2	--	-	26	8
..EPITHEMIALES										
...EPITHEMIAEAE										
....RHOPALODIA	--	-	--	-	--	-	--	-	--	-
...EUPODISCALES										
...COSCINODISCACEAE										
....CYCLOTELLA	39	3	39	2	64	8	26	13	--	-
....STEPHANODISCUS	--	-	--	-	--	-	--	-	--	-
..FRAGILARIALES										
...FRAGILARIAEAE										
....SYNEDRA	--	-	--	-	--	-	--	-	--	-
..NAVICULALES										
...CYMBELLACEAE										
....CYMBELLA	--	-	--	-	--	-	--	-	--	-
...ENTOMONEIDACEAE										
....ENTOMONEIS	--	-	--	-	--	-	13	6	13	4
...NAVICULACEAE										
....DIPLONEIS	--	-	--	-	--	-	--	-	--	-
....GYROSIGMA	13	1	--	-	--	-	--	-	--	-
....MASTOGLIOIA	--	-	--	-	--	-	--	-	--	-
....NAVICULA	39	3	--	-	--	-	--	-	64#	21
..SURIRELLALES										
...SURIRELLACEAE										
....SURIRELLA	--	-	--	-	--	-	--	-	--	-
CHLOROPHYTA (GREEN ALGAE)										
.CHLOROPHYCEAE										
..CHLOROCOCCALES										
...DICTYOSPHAERIAEAE										
....DICTYOSPHAERIUM	--	-	--	-	--	-	--	-	--	-
...MICRACTINIAEAE										
....MICRACTINIUM	--	-	--	-	--	-	--	-	--	-
...OOCYSTACEAE										
....ANKISTRODESMUS	13	1	13	1	--	-	26	13	--	-
....KIRCHNERIELLA	--	-	--	-	--	-	--	-	--	-
....OOCYSTIS	--	-	--	-	--	-	--	-	--	-
....SELENASTRUM	--	-	--	-	26	3	--	-	--	-
....TREUBARIA	--	-	--	-	--	-	--	-	--	-
...PALMELLACEAE										
....SPHAEROCYSTIS	--	-	--	-	--	-	--	-	--	-
...SCENEDESMACEAE										
....ACTINASTRUM	--	-	--	-	--	-	--	-	--	-
....CRUCIGENIA	--	-	--	-	--	-	--	-	--	-
....SCENEDESMUS	51	4	--	-	130#	15	--	-	--	-
....TETRASTRUM	--	-	--	-	--	-	--	-	--	-
...VOLVOCALES										
...CHLAMYDOMONADACEAE										
....CHLAMYDOMONAS	--	-	--	-	140#	17	100#	50	--	-
CHRYSTOPHYTA										
.CHRYSTOPHYCEAE										
..OCHROMONADALES										
...DINOBYRACEAE										
....DINOBYRON	--	-	--	-	--	-	--	-	--	-
CRYPTOPHYTA (CRYPTOMONADS)										
.CRYPTOPHYCEAE										
..CRYPTOMONADALES										
...CRYPTOCHRYSIDACEAE										
....CHROOMONAS	--	-	--	-	77	9	--	-	--	-
...CRYPTOMONADACEAE										
....CRYPTOMONAS	--	-	--	-	90	11	13	6	--	-

NOTE: # - DOMINANT ORGANISM; EQUAL TO OR GREATER THAN 15%

* - OBSERVED ORGANISM, MAY NOT HAVE BEEN COUNTED; LESS THAN 1/2%

06324970 LITTLE POWDER RIVER ABOVE DRY CREEK, NEAR WESTON, WY--Continued

QUALITATIVE AND ASSOCIATED QUANTITATIVE ANALYSES OF BIOLOGICAL DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

PHYTOPLANKTON ANALYSES

DATE TIME	OCT 27,80 1445		NOV 20,80 0900		DEC 11,80 1130		JAN 19,81 1250		FEB 24,81 1120	
ORGANISM	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT
CYANOPHYTA (BLUE-GREEN ALGAE)										
.CYANOPHYCEAE										
..CHROOCOCCALES										
...CHROOCOCCACEAE										
....ANACYSTIS	--	-	--	-	13	2	--	-	13	4
..NOSTOCALES										
...NOSTOCACEAE										
....ANABAENA	--	-	--	-	--	-	--	-	--	-
..OSCILLATORIALES										
...OSCILLATORIACEAE										
....LYNGBYA	--	-	1100#	71	--	-	--	-	--	-
....OSCILLATORIA	230#	20	310#	20	--	-	--	-	180#	58
EUGLENOPHYTA (EUGLENOIDS)										
.EUGLENOPHYCEAE										
..EUGLENALES										
...EUGLENACEAE										
....EUGLENA	--	-	--	-	13	2	--	-	--	-
....LEPOCINCLIS	--	-	--	-	--	-	--	-	--	-
....PHACUS	--	-	--	-	--	-	--	-	--	-
....TRACHELOMONAS	670#	57	52	3	270#	32	26	13	--	-
PYRRHOPHYTA (FIRE ALGAE)										
.DINOPHYCEAE										
..DINOKONTAE										
...GLENODINIACEAE										
....GLENODINIUM	--	-	--	-	13	2	--	-	13	4

NOTE: # - DOMINANT ORGANISM; EQUAL TO OR GREATER THAN 15%

* - OBSERVED ORGANISM, MAY NOT HAVE BEEN COUNTED; LESS THAN 1/2%

06324970 LITTLE POWDER RIVER ABOVE DRY CREEK, NEAR WESTON, WY--Continued

QUALITATIVE AND ASSOCIATED QUANTITATIVE ANALYSES OF BIOLOGICAL DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

PHYTOPLANKTON ANALYSES

DATE	MAR 11,81		APR 27,81		MAY 18,81		MAY 29,81	
TIME	1335		1700		1300		1300	
TOTAL CELLS/ML	440		2700		2200		660	
DIVERSITY: DIVISION	1.9		1.7		1.2		0.0	
..CLASS	1.9		1.7		1.2		0.0	
..ORDER	2.4		2.0		1.7		1.9	
...FAMILY	2.5		2.2		2.4		2.2	
....GENUS	2.5		2.5		3.1		2.6	
ORGANISM	CELLS /ML	PER-CENT	CELLS /ML	PER-CENT	CELLS /ML	PER-CENT	CELLS /ML	PER-CENT
BACILLARIOPHYTA (DIATOMS)								
..BACILLARIOPHYCEAE								
...ACHNANTHALES								
...ACHNANTHACEAE								
....ACHNANTHES	13	3	--	-	--	-	--	-
....COCCONEIS	--	-	50	2	29	1	--	-
..BACILLARIALES								
...NITZSCHIA	--	-	25	1	57	3	170#	25
...EPITHEMIALES								
...EPITHEMIAEAE								
...RHOPALODIA	--	-	--	-	--	-	28	4
...EUPODISCALES								
...COSCINODISCAEAE								
...CYCLOTELLA	52	12	--	-	72	3	28	4
...STEPHANODISCUS	--	-	100	4	--	-	--	-
..FRAGILARIALES								
...FRAGILARIAEAE								
....SYNEDRA	--	-	--	-	14	1	28	4
..NAVICULALES								
...CYMBELLACEAE								
...CYMBELLA	--	-	--	-	--	-	55	8
...ENTOMONEIDACEAE								
....ENTOMONEIS	13	3	--	-	--	-	--	-
...NAVICULACEAE								
....DIPLONEIS	--	-	--	-	--	-	--	-
....GYROSIGMA	--	-	25	1	14	1	170#	25
....MASTOGLIOIA	--	-	--	-	--	-	--	-
...NAVICULA	39	9	25	1	57	3	140#	21
..SURIPELLALES								
...SURIPELLACEAE								
....SURIPELLA	--	-	--	-	--	-	55	8
CHLOROPHYTA (GREEN ALGAE)								
..CHLOROPHYCEAE								
...CHLOROCOCCALES								
...DICTYOSPHAERIACEAE								
...DICTYOSPHAERIUM	--	-	--	-	14	1	--	-
...MICRACTINIACEAE								
...MICRACTINIUM	--	-	25	1	--	-	--	-
...OOCYSTACEAE								
...ANKISTRODESMUS	--	-	380	14	850#	38	--	-
...KIRCHNERIELLA	--	-	--	-	--	-	--	-
...OOCYSTIS	--	-	--	-	--	-	--	-
...SELENASTRUM	--	-	25	1	29	1	--	-
...TREUBARIA	--	-	25	1	29	1	--	-
...PALMELLACEAE								
...SPHAEROCYSTIS	--	-	--	-	--	-	--	-
...SCENEDESMACEAE								
...ACTINASTRUM	--	-	--	-	--	-	--	-
...CRUCIGENIA	13	3	--	-	290	13	--	-
...SCENEDESMUS	--	-	100	4	230	10	--	-
...TETRASTRUM	--	-	--	-	110	5	--	-
..VOLVOCALES								
...CHLAMYDOMONADACEAE								
...CHLAMYDOMONAS	100#	24	100	4	100	5	--	-
CHRYSTOPHYTA								
..CHRYSTOPHYCEAE								
...OCHROMONADALES								
...DINOBYACEAE								
...DINOBYRON	--	-	--	-	--	-	--	-
CRYPTOPHYTA (CRYPTOMONADS)								
..CRYPTOPHYCEAE								
...CRYPTOMONADALES								
...CRYPTOCHRYSIDACEAE								
....CHROOMONAS	150#	35	--	-	--	-	--	-
...CRYPTOMONADACEAE								
....CRYPTOMONAS	--	-	--	-	--	-	--	-

NOTE: # - DOMINANT ORGANISM; EQUAL TO OR GREATER THAN 15%

* - OBSERVED ORGANISM, MAY NOT HAVE BEEN COUNTED; LESS THAN 1/2%

YELLOWSTONE RIVER BASIN

06324970 LITTLE POWDER RIVER ABOVE DRY CREEK, NEAR WESTON, WY--Continued

QUALITATIVE AND ASSOCIATED QUANTITATIVE ANALYSES OF BIOLOGICAL DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

PHYTOPLANKTON ANALYSES

DATE TIME	MAR 11,81 1335		APR 27,81 1700		MAY 18,81 1300		MAY 29,81 1300	
ORGANISM	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT
CYANOPHYTA (BLUE-GREEN ALGAE)								
.CYANOPHYCEAE								
..CHROOCOCCALES								
...CHROOCOCCACEAE								
....ANACYSTIS	--	-	400#	15	200	9	--	-
..NOSTOCALES								
...NOSTOCACEAE								
....ANABAENA	--	-	--	-	--	-	--	-
..OSCILLATORIALES								
...OSCILLATORIACEAE								
....LYNGBYA	--	-	--	-	--	-	--	-
....OSCILLATORIA	--	-	--	-	--	-	--	-
EUGLENOPHYTA (EUGLENOIDS)								
.EUGLENOPHYCEAE								
..EUGLENALES								
...EUGLENACEAE								
....EUGLENA	--	-	75	3	14	1	--	-
....LEPOCINCLIS	--	-	--	-	--	-	--	-
....PHACUS	--	-	--	-	--	-	--	-
....TRACHELOMONAS	52	12	1300#	49	110	5	--	-
PYRRHOPHYTA (FIRE ALGAE)								
.DINOPHYCEAE								
..DINOKONTAE								
...GLENODINIACEAE								
....GLENODINIUM	--	-	--	-	--	-	--	-

NOTE: # - DOMINANT ORGANISM; EQUAL TO OR GREATER THAN 15%

* - OBSERVED ORGANISM, MAY NOT HAVE BEEN COUNTED; LESS THAN 1/2%

06324970 LITTLE POWDER RIVER ABOVE DRY CREEK, NEAR WESTON, WY--Continued

QUALITATIVE AND ASSOCIATED QUANTITATIVE ANALYSES OF BIOLOGICAL DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

PHYTOPLANKTON ANALYSES

PHYTOPLANKTON ANALYSES, OCTOBER 1980 TO SEPTEMBER 1981								
DATE	JUN 8,81		JUL 22,81		AUG 28,81		SEP 10,81	
TIME	1245		1135		1045		1245	
TOTAL CELLS/ML	15000		4000		1800		4500	
DIVERSITY: DIVISION	1.0		1.8		1.5		1.8	
...CLASS	1.0		1.8		1.5		1.8	
...ORDER	1.5		2.5		1.6		1.9	
...FAMILY	2.1		2.7		2.1		2.5	
...GENUS	2.4		3.7		2.3		2.7	
ORGANISM	CELLS	PER-	CELLS	PER-	CELLS	PER-	CELLS	PER-
	/ML	CENT	/ML	CENT	/ML	CENT	/ML	CENT
BACILLARIOPHYTA (DIATOMS)								
..BACILLARIOPHYCEAE								
...ACHNANTHALES								
...ACHNANTHACEAE								
...ACHNANTHES	*	0	--	-	--	-	--	-
...COCCONEIS	--	-	--	-	--	-	--	-
...BACILLARIALES								
...NITZSCHIA	210	1	630#	16	22	1	160	3
...NITZSCHIA								
...EPITHEMIALES								
...EPITHEMIALES								
...RHOPODIA	--	-	--	-	--	-	--	-
...EUPODISCALES								
...COSCONODISCACEAE								
...CYCLOTELLA	1600	11	240	6	--	-	--	-
...STEPHANODISCUS	--	-	--	-	--	-	--	-
...FRAGILARIALES								
...FRAGILARIALES								
...SYNEDRA	--	-	--	-	--	-	--	-
...NAVICULALES								
...CYMBELLACEAE								
...CYMBELLA	--	-	--	-	--	-	--	-
...ENTOMONEIDACEAE								
...ENTOMONEIS	--	-	--	-	--	-	--	-
...NAVICULACEAE								
...DIPLONEIS	--	-	280	7	--	-	--	-
...GYROSIGMA	*	0	35	1	--	-	--	-
...MASTOGLOIA	--	-	35	1	--	-	--	-
...NAVICULA	*	0	310	8	22	1	--	-
...SURIPELLALES								
...SURIPELLACEAE								
...SURIPELLA	--	-	--	-	--	-	--	-
CHLOROPHYTA (GREEN ALGAE)								
..CHLOROPHYCEAE								
...CHLOROCOCCALES								
...DICTYOSPHAERIA	8900#	58	--	-	280#	16	410	9
...DICTYOSPHAERIUM								
...MICRACTINIA	--	-	--	-	--	-	--	-
...MICRACTINIUM								
...OOCYSTACEAE								
...ANKISTRODESMUS	640	4	380	10	220	12	1400#	30
...KIRCHNERIELLA	*	0	35	1	22	1	--	-
...OOCYSTIS	430	3	--	-	--	-	--	-
...SELENASTRUM	430	3	--	-	--	-	--	-
...TREUBARIA	210	1	35	1	22	1	--	-
...PALMELLACEAE								
...SPHAEROCYSTIS	--	-	--	-	43	2	--	-
...SCENEDESMACEAE								
...ACTINASTRUM	--	-	--	-	--	-	120	3
...CRUCIGENIA	--	-	140	3	--	-	--	-
...SCENEDESMUS	290	2	280	7	43	2	310	7
...TETRASTRUM	--	-	--	-	--	-	--	-
...VOLVOCALES								
...CHLAMYDOMONADACEAE								
...CHLAMYDOMONAS	1100	7	100	3	22	1	31	1
CHRYSTOPHYTA								
..CHRYSTOPHYCEAE								
...OCHROMONADALES								
...DINOBYRACEAE								
...DINOBYRION	--	-	--	-	--	-	1300#	29
CRYPTOPHYTA (CRYPTOMONADS)								
..CRYPTOPHYCEAE								
...CRYPTOMONADALES								
...CRYPTOCHRYSIDACEAE								
...CHROOMONAS	--	-	--	-	--	-	--	-
...CRYPTOMONADACEAE								
...CRYPTOMONAS	*	0	--	-	--	-	--	-

NOTE: # - DOMINANT ORGANISM; EQUAL TO OR GREATER THAN 15%

* - OBSERVED ORGANISM, MAY NOT HAVE BEEN COUNTED; LESS THAN 1/2%

YELLOWSTONE RIVER BASIN

06324970 LITTLE POWDER RIVER ABOVE DRY CREEK, NEAR WESTON, WY--Continued

QUALITATIVE AND ASSOCIATED QUANTITATIVE ANALYSES OF BIOLOGICAL DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

PHYTOPLANKTON ANALYSES

DATE TIME	JUN 8,81 1245		JUL 22,81 1135		AUG 28,81 1045		SEP 10,81 1245	
ORGANISM	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT
CYANOPHYTA (BLUE-GREEN ALGAE)								
..CYANOPHYCEAE								
...CHROOCOCCALES								
....CHROOCOCCACEAE								
....ANACYSTIS	210	1	280	7	--	-	250	5
..NOSTOCALES								
...NOSTOCACEAE								
....ANABAENA	--	-	--	-	--	-	31	1
..OSCILLATORIALES								
...OSCILLATORIACEAE								
....LYNGBYA	--	-	--	-	--	-	--	-
....OSCILLATORIA	290	2	--	-	970#	54	--	-
EUGLENOPHYTA (EUGLENOIDS)								
..EUGLENOPHYCEAE								
...EUGLENALES								
....EUGLENACEAE								
....EUGLENA	*	0	590	15	22	1	470	10
....LEPOCINCLIS	--	-	170	4	22	1	--	-
....PHACUS	--	-	100	3	22	1	--	-
....TRACHELOMONAS	430	3	350	9	--	-	93	2
PYRRHOPHYTA (FIRE ALGAE)								
..DINOPHYCEAE								
...DINOKONTAE								
...GLENODINIACEAE								
....GLENODINIUM	--	-	--	-	65	4	--	-

NOTE: # - DOMINANT ORGANISM; EQUAL TO OR GREATER THAN 15%

* - OBSERVED ORGANISM, MAY NOT HAVE BEEN COUNTED; LESS THAN 1/2%

Reservoirs in Yellowstone River basin in Wyoming

- 06224500 BULL LAKE.--Lat 43°12'35", long 109°02'30", in E½NW¼ sec.30, T.3 N., R.2 W., Fremont County, Hydrologic Unit 10080001, Wind River Indian Reservation, at dam on Bull Lake Creek, 2.8 mi (4.5 km) upstream from mouth of Bull Lake Creek, and 9.8 mi (15.8 km) south of Lenore. DRAINAGE AREA, 210 mi² (544 km²) of which 12 mi² (31.1 km²) is probably noncontributing. PERIOD OF RECORD, April 1938 to current year. Monthend contents only for some periods, published in WSP 1309. Published as Bull Lake Reservoir near Lenore 1938-50. GAGE, water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929 (Bureau of Reclamation datum). REMARKS, reservoir is formed by rockfill dam completed by Bureau of Reclamation July 22, 1938. Capacity, 152,500 acre-ft (188 hm³) below elevation 5,805.00 ft (1,769.364 m), top of spillway gates. Dead storage, 722 acre-ft (0.890 hm³). Figures given herein represent total contents. Water used for irrigation near Riverton. COOPERATION, records furnished by Bureau of Reclamation. EXTREMES FOR PERIOD OF RECORD: Maximum daily contents, 154,200 acre-ft (190 hm³) Aug. 10, 1965, elevation, 5,805.70 ft (1,769.577 m); minimum daily (since appreciable storage was attained), 5,540 acre-ft (6.83 hm³) Mar. 15, 1950, elevation, 5,742.56 ft (1,750.332 m). EXTREMES FOR CURRENT YEAR: Maximum daily contents, 150,100 acre-ft (185 hm³) June 30, elevation, 5,804.24 ft (1,769.132 m); minimum daily, 47,500 acre-ft (58.6 hm³) Sept. 30, elevation, 5,765.34 ft (1,757.276 m).
- 06258900 BOYSEN RESERVOIR.--Lat 43°25'00", long 108°10'37", in NW¼NW¼ sec.16, T.5 N., R.6 E., Fremont County, Hydrologic Unit 10080005, at dam on Wind River and 13 mi (21 km) north of Shoshoni. DRAINAGE AREA, 7,700 mi² (19,943 km²). PERIOD OF RECORD, October 1951 to current year. GAGE, water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929 (Bureau of Reclamation datum of 1933). REMARKS, reservoir is formed by rockfill dam completed by Bureau of Reclamation in October 1951. Capacity, 802,000 acre-ft (989 hm³) below elevation 4,725.00 ft (1,440.180 m), top of spillway gate. Includes 59,880 acre-ft (73.8 hm³) dead storage below elevation 4,657.00 ft (1,419.454 m), invert of penstock pipe. Figures given herein represent total contents. Water used for irrigation, flood control, and power development. COOPERATION, records furnished by Bureau of Reclamation. EXTREMES FOR PERIOD OF RECORD: Maximum daily contents, 922,400 acre-ft (1,140 hm³) July 6, 7, 1967, elevation, 4,730.83 ft (1,441.957 m); minimum daily (since normal use of water started), 251,800 acre-ft (310 hm³) Mar. 18, 19, 1956, elevation, 4,684.18 ft (1,427.738 m). EXTREMES FOR CURRENT YEAR: Maximum contents, 747,100 acre-ft (921 hm³) July 6, elevation, 4,722.12 ft (1,439.302 m); minimum daily, 561,300 acre-ft (692 hm³) Apr. 26, elevation, 4,711.10 ft (1,435.943 m).
- 06260300 ANCHOR RESERVOIR.--Lat 43°39'50", long 108°49'27", in sec.26, T.43 N., R.100 W., Hot Springs County, Hydrologic Unit 10080007, at dam on South Fork Owl Creek, 2.0 mi (3.2 km) downstream from Middle Fork, 3.0 mi (4.8 km) southeast of Anchor, and 32 mi (51 km) west of Thermopolis. DRAINAGE AREA, 131 mi² (339 km²). PERIOD OF RECORD, November 1960 to current year. GAGE, water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929 (Bureau of Reclamation datum). REMARKS, reservoir is formed by concrete arch dam completed by Bureau of Reclamation in 1960. Capacity, 17,230 acre-ft (21.2 hm³), below elevation 6,441.00 ft (1,963.217 m), crest of spillway. Includes 68 acre-ft (0.0838 hm³) below elevation 6,343.75 ft (1,933.575 m), invert of river outlet. Figures given herein represent total contents. Water used for irrigation of lands in Owl Creek basin. COOPERATION, records furnished by Bureau of Reclamation. EXTREMES FOR PERIOD OF RECORD: Maximum daily contents, 9,250 acre-ft (11.4 hm³) July 4, 1967, elevation, 6,418.52 ft (1,956.365 m); no storage on many days each year. EXTREMES FOR CURRENT YEAR: Maximum daily contents, 5,950 acre-ft (7.34 hm³) June 13, elevation, 6,407.55 ft (1,953.021 m); no storage on many days.
- 06281500 BUFFALO BILL RESERVOIR.--Lat 44°30'05", long 109°11'00", in NE¼ sec.12, T.52 N., R.103 W., Park County, Hydrologic Unit 10080013, at dam on Shoshone River, 5.0 mi (8.0 km) upstream from Trail Creek, and 6.0 mi (9.7 km) southwest of Cody. DRAINAGE AREA, 1,498 mi² (3,880 km²). PERIOD OF RECORD, May to July 1909, January 1910 to current year. Monthend contents only prior to October 1938, published in WSP 1309. Prior to October 1944, published as Shoshone Reservoir near Cody. GAGE, water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929 (Bureau of Reclamation datum). Prior to July 8, 1959, nonrecording gage at same datum. REMARKS, reservoir is formed by masonry dam completed by Bureau of Reclamation in 1909. Capacity, 424,000 acre-ft (523 hm³) between elevations 5,140.00 ft (1,566.672 m), gate sill, and 5,360.00 ft (1,633.728 m), crest of spillway. Dead storage negligible. Figures given herein represent total contents. Water used for power development and irrigation of lands east of Cody. COOPERATION, records furnished by Bureau of Reclamation. EXTREMES FOR PERIOD OF RECORD: Maximum daily contents, 507,000 acre-ft (625 hm³) June 15, 1918, elevation, 5,367.3 ft (1,635.95 m); minimum daily, 19,000 acre-ft (23.4 hm³) Jan. 23-25, 1941, elevation, 5,225.3 ft (1,592.67 m). EXTREMES FOR CURRENT YEAR: Maximum contents, 470,600 acre-ft (580 hm³) June 9, elevation, 5,366.70 ft (1,635.770 m); minimum daily, 249,500 acre-ft (308 hm³) Sept. 30, elevation, 5,329.85 ft (1,624.538 m).

YELLOWSTONE RIVER BASIN

Reservoirs in Yellowstone River basin in Wyoming--Continued

MONTHEND ELEVATION AND CONTENTS, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981			
Date	Elevation (feet)	Contents (acre-feet)	Change in contents (acre-feet)
06224500 BULL LAKE			
Sept. 30	5,774.10	66,990	-
Oct. 31	5,774.14	67,090	+100
Nov. 30	5,774.45	67,820	+730
Dec. 31	5,774.80	68,650	+830
CAL YR 1980	-	-	-8,100
Jan. 31	5,774.88	68,840	+190
Feb. 28	5,775.04	69,220	+380
Mar. 31	5,775.28	69,790	+570
Apr. 30	5,775.76	70,940	+1,150
May 31	5,783.50	90,340	+19,400
June 30	5,803.99	149,300	+58,960
July 31	5,796.59	126,800	-22,500
Aug. 31	5,781.80	85,940	-40,860
Sept. 30	5,765.34	47,500	-38,440
WTR YR 1981	-	-	-19,490
06258900 BOYSEN RESERVOIR			
Sept. 30	4,717.68	667,600	-
Oct. 31	4,717.23	659,900	-7,700
Nov. 30	4,716.20	642,400	-17,500
Dec. 31	4,715.08	623,900	-18,500
CAL YR 1980	-	-	+18,300
Jan. 31	4,713.89	604,600	-19,300
Feb. 28	4,713.01	590,700	-13,900
Mar. 31	4,711.96	574,400	-16,300
Apr. 30	4,711.20	562,800	-11,600
May 31	4,714.76	618,700	+55,900
June 30	4,721.89	742,800	+124,100
July 31	4,721.87	742,400	-400
Aug. 31	4,720.98	726,100	-16,300
Sept. 30	4,720.25	712,900	-13,200
WTR YR 1981	-	-	+45,300
06260300 ANCHOR RESERVOIR			
Sept. 30	DRY	0	-
Oct. 31	DRY	0	0
Nov. 30	DRY	0	0
Dec. 31	DRY	0	0
CAL YR 1980	-	-	0
Jan. 31	DRY	0	0
Feb. 28	DRY	0	0
Mar. 31	DRY	0	0
Apr. 30	6,345.00	77	+77
May 31	6,389.45	2,810	+2,733
June 30	6,399.68	4,410	+1,600
July 31	DRY	0	-4,410
Aug. 31	DRY	0	0
Sept. 30	DRY	0	0
WTR YR 1981	-	-	0
06281500 BUFFALO BILL RESERVOIR			
Sept. 30	5,342.18	313,600	-
Oct. 31	5,341.36	309,000	-4,600
Nov. 30	5,342.47	315,200	+6,200
Dec. 31	5,342.91	317,700	+2,500
CAL YR 1980	-	-	+106,600
Jan. 31	5,343.24	319,600	+1,900
Feb. 28	5,343.84	323,000	+3,400
Mar. 31	5,344.79	328,500	+5,500
Apr. 30	5,343.24	319,600	-8,900
May 31	5,361.19	432,000	+112,400
June 30	5,362.64	442,000	+10,000
July 31	5,355.28	392,900	-49,100
Aug. 31	5,341.59	310,300	-82,600
Sept. 30	5,329.85	249,500	-60,800
WTR YR 1981	-	-	-64,100

06364700 ANTELOPE CREEK NEAR TECKLA, WY

LOCATION.--Lat 43°29'08", long 105°13'39", in SW¼NE¼ sec.35, T.41 N., R.70 W., Converse County, Hydrologic Unit 10120101, on left bank 0.4 mi (0.6 km) downstream from Porcupine Creek, 9 mi (14 km) southeast of Teckla, and 18 mi (29 km) north of Bill.

DRAINAGE AREA.--959 mi² (2,484 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1977 to September 1981 (discontinued).

GAGE.--Water-stage recorder. Altitude of gage is 4,450 ft (1,356 m), from topographic map.

REMARKS.--Records poor. Numerous small stockwater reservoirs above station.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 6,600 ft³/s (187 m³/s) May 18, 1978, gage height, 8.83 ft (2.691 m), from floodmark, from rating curve extended above 80 ft³/s (2.26 m³/s) on basis of slope-area measurement of peak flow and step-backwater method; no flow for several days in 1980, 1981.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 677 ft³/s (19.2 m³/s) Aug. 5, gage height, 5.36 ft (1.634 m); no flow for several days.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.04	.15	.19	.28	.20	.22	.25	.32	.20	.75	19	.00
2	.04	.15	.18	.29	.21	.22	.25	.32	.20	1.2	4.3	.00
3	.04	.15	.22	.29	.23	.22	.25	.40	20	1.2	1.6	.00
4	.04	.15	.25	.27	.22	.22	.25	.40	28	.99	.80	.00
5	.04	.15	.21	.25	.21	.22	.20	.32	2.2	.51	59	.00
6	.04	.17	.20	.26	.20	.22	.20	.40	.80	.13	79	.01
7	.04	.15	.20	.25	.17	.22	.20	.32	.22	.05	18	.01
8	.04	.15	.19	.26	.15	.22	.20	.40	.15	.00	6.2	.00
9	.04	.15	.22	.25	.13	.22	.20	.22	.12	.04	4.0	.00
10	.04	.15	.22	.25	.10	.22	.20	.22	.12	.09	11	.01
11	.07	.15	.22	.27	.13	.22	.17	.22	.12	.03	4.7	.01
12	.07	.20	.22	.26	.17	.20	.17	.22	.12	.20	2.0	.01
13	.09	.20	.20	.26	.20	.20	.15	.22	.12	2.2	1.3	.01
14	.09	.20	.20	.26	.22	.20	.12	.22	.12	2.0	17	.01
15	.15	.20	.22	.25	.24	.22	.15	.22	.12	2.2	2.4	.01
16	.15	.20	.22	.24	.24	.22	.17	.25	.12	1.9	.28	.01
17	.15	.20	.22	.23	.25	.32	.17	.25	.17	2.4	.11	.01
18	.15	.20	.20	.25	.25	.25	.17	.25	.23	117	.04	.01
19	.15	.20	.20	.25	.25	.25	.17	.22	.21	53	.01	.01
20	.12	.20	.22	.28	.25	.25	.20	.22	.52	25	.00	.01
21	.12	.20	.25	.26	.22	.40	.20	.24	.76	13	.00	.01
22	.12	.20	.28	.26	.22	.25	.20	.37	.90	7.7	2.2	.02
23	.12	.20	.30	.26	.22	.25	.20	.27	.88	15	.90	.02
24	.15	.17	.30	.23	.22	.25	.22	.32	1.2	3.4	.01	.03
25	.15	.20	.30	.22	.22	.25	.22	.55	1.3	20	.00	.04
26	.15	.20	.30	.24	.22	.22	.22	1.1	1.3	23	.00	.04
27	.15	.20	.31	.24	.22	.25	.25	1.0	1.3	3.4	.00	.05
28	.15	.20	.25	.24	.22	.32	.25	.97	1.7	1.7	.00	.04
29	.15	.20	.24	.23	---	.25	.25	.75	1.4	.80	.00	.04
30	.15	.20	.22	.22	---	.25	.32	.55	1.1	.40	.00	.06
31	.15	---	.22	.21	---	.32	---	.25	---	.80	.00	---
TOTAL	3.15	5.44	7.17	7.81	5.78	7.54	6.17	11.98	65.70	300.09	233.85	.48
MEAN	.10	.18	.23	.25	.21	.24	.21	.39	2.19	9.68	7.54	.016
MAX	.15	.20	.31	.29	.25	.40	.32	1.1	.28	117	79	.06
MIN	.04	.15	.18	.21	.10	.20	.12	.22	.12	.00	.00	.00
AC-FT	6.2	11	14	15	11	15	12	24	130	595	464	1.0

CAL YR 1980 TOTAL 728.84 MEAN 1.99 MAX 19 MIN .00 AC-FT 1450
WTR YR 1981 TOTAL 655.16 MEAN 1.79 MAX 117 MIN .00 AC-FT 1300

CHEYENNE RIVER BASIN

06364700 ANTELOPE CREEK NEAR TECKLA, WY--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--October 1977 to September 1981 (discontinued).

WATER-QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	COLOR (PLAT- INUM- COBALT UNITS)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION)	HARD- NESS (MG/L AS CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)
OCT 24...	0955	.11	2120	8.0	3.5	--	10.8	94	930	220
NOV 18...	1100	.20	2120	7.4	3.0	--	7.6	81	1000	240
DEC 18...	0910	.20	2380	7.9	1.5	--	11.5	97	1100	270
JAN 13...	1215	.26	2350	7.3	2.0	--	10.9	90	1000	240
FEB 11...	1055	.13	2240	7.6	.0	--	8.3	67	1000	250
FEB 19...	1145	.26	--	--	11.0	--	--	--	--	--
MAR 15...	1600	.23	2360	7.5	14.0	--	9.2	100	1100	270
APR 14...	1515	.16	2310	8.0	21.0	20	--	--	1100	260
MAY 20...	1015	.22	2440	7.9	13.5	15	7.2	82	1100	270
JUN 16...	1410	.11	2260	8.0	26.0	--	8.6	123	1000	250
AUG 11...	1130	5.4	1360	8.2	24.5	24	6.2	86	520	140

DATE	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	POTAS- SIUM 40 DIS- SOLVED (PCI/L AS K40)	ALKA- LINITY LAB (MG/L AS CACO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SIO2)
OCT 24...	92	160	2.3	18	13	360	840	10	.8	23
NOV 18...	97	170	2.3	16	12	400	890	10	.7	20
DEC 18...	100	200	2.6	15	11	400	1100	13	.5	20
JAN 13...	100	200	2.7	14	10	410	1000	14	.7	17
FEB 11...	97	180	2.4	14	10	350	1000	11	.6	20
FEB 19...	--	--	--	--	--	--	--	--	--	--
MAR 15...	100	190	2.5	16	12	400	1100	24	.7	18
APR 14...	99	200	2.7	18	13	390	1000	30	.7	19
MAY 20...	100	200	2.6	17	13	380	1100	12	.6	19
JUN 16...	97	180	2.4	18	13	390	960	11	.7	20
AUG 11...	42	130	2.7	10	--	170	600	11	.4	11

06364700 ANTELOPE CREEK NEAR TECKLA, WY--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, SUM OF CONSTITUENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)	SOLIDS, DIS- SOLVED (TONS PER DAY)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N)	NITRO- GEN, AMMONIA TOTAL (MG/L AS NH4)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO- GEN,NH4 + ORG. SUSP. TOTAL (MG/L AS N)
OCT 24...	1620	1580	2.1	.47	--	--	--	--	--	--
NOV 18...	1770	1690	2.3	.91	.09	.020	.02	.29	.31	.00
DEC 18...	2080	2000	2.7	1.1	--	--	--	--	--	--
JAN 13...	2030	1830	2.5	1.3	.00	.130	.16	.60	.73	.00
FEB 11...	1830	1790	2.4	.63	--	--	--	--	--	--
19...	--	--	--	--	--	--	--	--	--	--
MAR 15...	2050	1960	2.7	1.2	--	--	--	--	--	--
APR 14...	2040	1870	2.5	.81	.00	.080	--	1.1	1.20	.10
MAY 20...	2080	1950	2.7	1.2	--	--	--	--	--	--
JUN 16...	1860	1770	2.4	.53	--	--	--	--	--	--
AUG 11...	1070	1050	1.4	15.4	.11	.080	--	.69	.77	--

DATE	NITRO- GEN,AM- MONIA + ORGANIC DIS. (MG/L AS N)	NITRO- GEN DIS- SOLVED (MG/L AS N)	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHORUS TOTAL (MG/L AS PO4)	PHOS- PHORUS, DIS- SOLVED (MG/L AS P)	CARBON, ORGANIC DIS- SOLVED (MG/L AS C)	CARBON, ORGANIC SUS- PENDE TOTAL (MG/L AS C)	CYANIDE TOTAL (MG/L AS CN)	PHENOLS (UG/L)	HEPTA- CHLOR, SUS- PENDE TOTAL (UG/L)
OCT 24...	--	--	--	--	--	--	--	--	--	--
NOV 18...	.38	.47	.010	.03	.010	7.3	.1	--	--	--
DEC 18...	--	--	--	--	--	--	--	--	--	--
JAN 13...	.86	.86	.010	.03	.030	38	.2	--	--	--
FEB 11...	--	--	--	--	--	--	--	--	--	--
19...	--	--	--	--	--	--	--	--	--	--
MAR 15...	--	--	--	--	--	--	--	--	--	--
APR 14...	1.1	1.1	.030	.09	.010	11	.2	.00	20	390
MAY 20...	--	--	--	--	--	--	--	--	--	380
JUN 16...	--	--	--	--	--	--	--	--	--	--
AUG 11...	--	--	.060	.18	.020	32	.1	.00	15	204

CHEYENNE RIVER BASIN

06364700 ANTELOPE CREEK NEAR TECKLA, WY--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	COAL IN BOTTOM MATE- RIAL (GM/KG)	H-2/ H-1/ STABLE ISOTOPE RATIO PER MILL	PHYTO- PLANK- TON, TOTAL (CELLS PER ML)	PERI- PHYTON BIOMASS ASH WEIGHT G/SQ M	PERI- PHYTON BIOMASS TOTAL DRY WEIGHT G/SQ M	BIOMASS CHLORO- PHYLL RATIO PERI- PHYTON (UNITS)	CHLOR-A PERI- PHYTON CHROMO- GRAPHIC FLUOROM (MG/M2)	CHLOR-B PERI- PHYTON CHROMO- GRAPHIC FLUOROM (MG/M2)	SEDI- MENT, DIS- CHARGE, SUS- PENDED (T/DAY)	SEDI- MENT, DIS- CHARGE, SUS- PENDED (T/DAY)
OCT 24...	--	--	120	6.30	8.03	1200	1.44	.410	118	.04
NOV 18...	--	--	270	--	--	--	--	--	111	.06
DEC 18...	--	--	39	--	--	--	--	--	62	.03
JAN 13...	--	--	52	--	--	--	--	--	55	.04
FEB 11...	--	--	100	--	--	--	--	--	75	.03
FEB 19...	--	--	--	--	--	--	--	--	54	.04
MAR 15...	--	--	860	--	--	--	--	--	141	.09
APR 14...	17.0	--	630	--	--	--	--	--	36	.02
MAY 20...	--	7.2	870	2.76	3.47	2220	.320	.000	60	.04
JUN 16...	--	--	4100	--	--	--	--	--	32	.01
AUG 11...	--	6.2	1000	--	--	--	--	--	35	.51

DATE	TIME	ARSENIC TOTAL (UG/L AS AS)	ARSENIC SUS- PENDED TOTAL (UG/L AS AS)	ARSENIC DIS- SOLVED (UG/L AS AS)	ARSENIC TOTAL IN BOT- TOM MA- TERIAL (UG/G AS AS)	BARIUM, TOTAL RECOV- ERABLE (UG/L AS BA)	BARIUM, SUS- PENDED RECOV- ERABLE (UG/L AS BA)	BARIUM, DIS- SOLVED (UG/L AS BA)	BERYL- LIUM, TOTAL RECOV- ERABLE (UG/L AS BE)	BERYL- LIUM, SUS- PENDED RECOV. (UG/L AS BE)	BERYL- LIUM, DIS- SOLVED (UG/L AS BE)	BORON, DIS- SOLVED (UG/L AS B)
OCT 24...	0955	--	--	--	--	100	0	200	--	--	--	290
NOV 18...	1100	--	--	--	--	--	--	--	--	--	--	260
DEC 18...	0910	1	0	1	--	--	--	--	10	10	0	220
JAN 13...	1215	1	0	1	--	--	--	--	0	0	0	230
FEB 11...	1055	--	--	--	--	--	--	--	--	--	--	230
MAR 15...	1600	--	--	--	--	--	--	--	--	--	--	230
APR 14...	1515	0	0	1	0	100	0	100	0	0	0	220
MAY 20...	1015	--	--	--	--	--	--	--	--	--	--	230
JUN 16...	1410	--	--	--	--	--	--	--	--	--	--	290
AUG 11...	1130	1	1	0	--	--	--	--	0	--	<1	80

06364700 ANTELOPE CREEK NEAR TECKLA, WY--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	CADMIUM TOTAL RECOV- ERABLE (UG/L AS CD)	CADMIUM SUS- PENDE D RECOV- ERABLE (UG/L AS CD)	CADMIUM DIS- SOLVED (UG/L AS CD)	CADMIUM RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CD)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR)	CHRO- MIUM, SUS- PENDE D RECOV. (UG/L AS CR)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR)	CHRO- MIUM, RECOV. FM BOT- TOM MA- TERIAL (UG/G)	COBALT, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CO)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU)	COPPER, SUS- PENDE D RECOV- ERABLE (UG/L AS CU)	COPPER, DIS- SOLVED (UG/L AS CU)
OCT 24...	--	--	--	--	--	--	--	--	--	--	--	--
NOV 18...	--	--	--	--	--	--	--	--	--	--	--	--
DEC 18...	0	0	0	--	0	0	0	--	--	2	2	0
JAN 13...	0	0	0	--	0	0	0	--	--	3	2	1
FEB 11...	--	--	--	--	--	--	--	--	--	--	--	--
MAR 15...	--	--	--	--	--	--	--	--	--	--	--	--
APR 14...	0	0	0	1	10	0	10	9	0	4	3	1
MAY 20...	--	--	--	--	--	--	--	--	--	--	--	35
JUN 16...	--	--	--	--	--	--	--	--	--	--	--	--
AUG 11...	0	--	<1	--	10	0	20	--	--	5	3	2

DATE	COPPER, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CU)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	IRON, SUS- PENDE D RECOV- ERABLE (UG/L AS FE)	IRON, DIS- SOLVED (UG/L AS FE)	IRON, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS FE)	LEAD, TOTAL RECOV- ERABLE (UG/L AS PB)	LEAD, SUS- PENDE D RECOV- ERABLE (UG/L AS PB)	LEAD, DIS- SOLVED (UG/L AS PB)	LEAD, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS PB)	LITHIUM TOTAL RECOV- ERABLE (UG/L AS LI)	LITHIUM SUS- PENDE D RECOV- ERABLE (UG/L AS LI)	LITHIUM DIS- SOLVED (UG/L AS LI)
OCT 24...	--	330	290	40	--	--	--	--	--	50	0	60
NOV 18...	--	360	310	50	--	--	--	--	--	--	--	--
DEC 18...	--	300	230	70	--	2	2	0	--	--	--	--
JAN 13...	--	390	360	30	--	3	2	1	--	--	--	--
FEB 11...	--	350	220	130	--	--	--	--	--	--	--	--
MAR 15...	--	450	420	30	--	--	--	--	--	--	--	--
APR 14...	6	530	490	40	1100	0	0	0	10	50	0	50
MAY 20...	--	300	260	40	--	--	--	--	--	--	--	--
JUN 16...	--	120	90	30	--	--	--	--	--	--	--	--
AUG 11...	--	500	--	<10	--	2	1	1	--	--	--	--

CHEYENNE RIVER BASIN

06364700 ANTELOPE CREEK NEAR TECKLA, WY--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)	MANGA- NESE, SUS- PENDE RECOV. (UG/L AS MN)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	MANGA- NESE, RECOV. FM BOT- TOM MA- TERIAL (UG/G)	MERCURY TOTAL RECOV- ERABLE (UG/L AS HG)	MERCURY SUS- PENDE RECOV- ERABLE (UG/L AS HG)	MERCURY DIS- SOLVED (UG/L AS HG)	MERCURY RECOV. FM BOT- TOM MA- TERIAL (UG/G AS HG)	NICKEL, TOTAL RECOV- ERABLE (UG/L AS NI)	NICKEL, SUS- PENDE RECOV- ERABLE (UG/L AS NI)	NICKEL, DIS- SOLVED (UG/L AS NI)
OCT 24...	740	0	740	--	--	--	--	--	--	--	--
NOV 18...	650	30	620	--	--	--	--	--	--	--	--
DEC 18...	680	0	680	--	.1	.1	.0	--	3	3	0
JAN 13...	680	0	680	--	.2	.2	.0	--	0	0	3
FEB 11...	780	0	790	--	--	--	--	--	--	--	--
MAR 15...	470	50	420	--	--	--	--	--	--	--	--
APR 14...	460	50	410	150	.1	.1	.0	.10	2	0	3
MAY 20...	710	0	710	--	--	--	--	--	--	--	--
JUN 16...	180	0	200	--	--	--	--	--	--	--	--
AUG 11...	30	10	17	--	.1	.0	.1	--	2	0	2

DATE	SELE- NIUM, TOTAL (UG/L AS SE)	SELE- NIUM, SUS- PENDE TOTAL (UG/L AS SE)	SELE- NIUM, DIS- SOLVED (UG/L AS SE)	SELE- NIUM, TOTAL IN BOT- TOM MA- TERIAL (UG/G)	STRON- TIUM, TOTAL RECOV- ERABLE (UG/L AS SR)	STRON- TIUM, SUS- PENDE RECOV. (UG/L AS SR)	STRON- TIUM, DIS- SOLVED (UG/L AS SR)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN)	ZINC, SUS- PENDE RECOV- ERABLE (UG/L AS ZN)	ZINC, DIS- SOLVED (UG/L AS ZN)	ZINC, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS ZN)
OCT 24...	--	--	--	--	1800	0	2000	--	--	--	--
NOV 18...	--	--	--	--	--	--	--	--	--	--	--
DEC 18...	0	0	0	--	--	--	--	20	0	30	--
JAN 13...	0	0	0	--	--	--	--	20	10	10	--
FEB 11...	--	--	--	--	--	--	--	--	--	--	--
MAR 15...	--	--	--	--	--	--	--	--	--	--	--
APR 14...	0	0	0	0	2100	100	2000	10	0	10	2
MAY 20...	--	--	--	--	--	--	--	--	--	--	--
JUN 16...	--	--	--	--	--	--	--	--	--	--	--
AUG 11...	0	0	0	--	--	--	--	20	8	12	--

06364700 ANTELOPE CREEK NEAR TECKLA, WY--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

			GROSS ALPHA, DIS- SOLVED (UG/L AS U-NAT)	GROSS ALPHA, SUSP. TOTAL (UG/L AS U-NAT)	GROSS BETA, DIS- SOLVED (PCI/L AS CS-137)	GROSS BETA, SUSP. TOTAL (PCI/L AS CS-137)	GROSS BETA, DIS- SOLVED (PCI/L AS SR/ YT-90)	GROSS BETA, SUSP. TOTAL (PCI/L AS SR/ YT-90)	GROSS ALPHA, DIS- SOLVED (PCI/L AS U-NAT)	GROSS ALPHA, SUSP. TOTAL (PCI/L AS U-NAT)		
DATE		TIME	<51	<.4	<21	1.5	<20	1.6	35	.3		
DATE	TIME	TEMPER- ATURE (DEG C)	STREAM- FLOW, INSTAN- TANEOUS (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. FALL DIAM. % FINER THAN 1.00 MM	BED MAT. FALL DIAM. % FINER THAN 2.00 MM	BED MAT. FALL DIAM. % FINER THAN 4.00 MM	BED MAT. FALL DIAM. % FINER THAN 8.00 MM	BED MAT. FALL DIAM. % FINER THAN 16.0 MM
AUG 11...	1130	24.5	5.4	0	0	2	41	70	86	93	96	100

QUALITATIVE AND ASSOCIATED QUANTITATIVE ANALYSES OF BIOLOGICAL DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

PHYTOPLANKTON ANALYSES

DATE	OCT 24,80	NOV 18,80	DEC 18,80	JAN 13,81	FEB 11,81
TIME	0955	1100	0910	1215	1055
TOTAL CELLS/ML	120	270	39	52	100
DIVERSITY: DIVISION	0.5	0.5	0.9	0.0	0.5
..CLASS	0.5	0.5	0.9	0.0	0.5
..ORDER	1.7	1.9	1.6	2.0	1.4
...FAMILY	1.7	2.2	1.6	2.0	1.4
....GENUS	1.7	2.2	1.6	2.0	1.8

ORGANISM	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT
BACILLARIOPHYTA (DIATOMS)										
..BACILLARIOPHYCEAE										
...ACHNANTHALES										
....ACHNANTHACEAE										
....ACHNANTHES	--	-	--	-	--	-	13#	25	--	-
..BACILLARIALES										
...NITZSCHIAEAE										
....NITZSCHIA	64#	56	120#	43	13#	33	13#	25	--	-
..EUPODISCALES										
...COSCIDISCAEAE										
...CYCLOTELLA	--	-	--	-	--	-	--	-	--	-
...MELOSIRA	26#	22	--	-	--	-	--	-	--	-
..FRAGILARIALES										
...FRAGILARIAEAE										
....FRAGILARIA	--	-	--	-	13#	33	--	-	26#	25
....SYNEDRA	--	-	64#	24	--	-	13#	25	13	13
..NAVICULALES										
...CYMBELLACEAE										
....CYMBELLA	--	-	26	10	--	-	--	-	--	-
..ENTOMONEIDACEAE										
...ENTOMONEIS	--	-	--	-	--	-	--	-	--	-
...NAVICULACEAE										
....CALONEIS	--	-	--	-	--	-	--	-	--	-
....NAVICULA	13	11	39	14	--	-	--	-	52#	50
..SURIRELLALES										
...SURIRELLACEAE										
....CYMATOPLEURA	--	-	--	-	--	-	13#	25	--	-
....SURIRELLA	--	-	--	-	--	-	--	-	--	-
CHLOROPHYTA (GREEN ALGAE)										
..CHLOROPHYCEAE										
...CHLOROCOCCALES										
...OOCYSTACEAE										
...ANKISTRODESMUS	--	-	--	-	--	-	--	-	--	-
...SELENASTRUM	--	-	--	-	--	-	--	-	--	-
...TREUBARIA	--	-	--	-	--	-	--	-	--	-
...VOLVOCALES										
...CHLAMYDOMONADACEAE										
...CHLAMYDOMONAS	--	-	13	5	13#	33	--	-	--	-
CHRYSOPHYTA										
..CHRYSOPHYCEAE										
...CHROMULINALES										
...CHRYSOCCACEAE										
...CHRYSOCCOCUS	--	-	--	-	--	-	--	-	--	-
CRYPTOPHYTA (CRYPTOMONADS)										
..CRYPTOPHYCEAE										
...CRYPTOMONADALES										
...CRYPTOMONADACEAE										
...CRYPTOMONAS	--	-	--	-	--	-	--	-	13	13
CYANOPHYTA (BLUE-GREEN ALGAE)										
..CYANOPHYCEAE										
...CHROOCOCCALES										
...CHROOCOCCACEAE										
...ANACYSTIS	--	-	13	5	--	-	--	-	--	-
..NOSTOCALES										
...NOSTOCAEAE										
...ANABAENA	--	-	--	-	--	-	--	-	--	-
..OSCILLATORIALES										
...OSCILLATORIAEAE										
...OSCILLATORIA	--	-	--	-	--	-	--	-	--	-
EUGLENOPHYTA (EUGLENOIDS)										
..EUGLENOPHYCEAE										
...EUGLENALES										
...EUGLENACEAE										
...EUGLENA	13	11	--	-	--	-	--	-	--	-

NOTE: # - DOMINANT ORGANISM; EQUAL TO OR GREATER THAN 15%

* - OBSERVED ORGANISM, MAY NOT HAVE BEEN COUNTED; LESS THAN 1/2%

06364700 ANTELOPE CREEK NEAR TECKLA, WY--Continued

QUALITATIVE AND ASSOCIATED QUANTITATIVE ANALYSES OF BIOLOGICAL DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

PHYTOPLANKTON ANALYSES

DATE	MAR 15, 81	APR 14, 81	MAY 20, 81	JUN 16, 81	AUG 11, 81
TIME	1600	1515	1015	1310	1130
TOTAL CELLS/ML	860	630	870	4100	1000
DIVERSITY: DIVISION	0.6	1.2	1.1	1.0	1.2
..CLASS	0.6	1.2	1.1	1.0	1.2
..ORDER	2.1	2.3	1.6	1.4	1.9
...FAMILY	2.5	2.5	1.6	1.4	1.9
....GENUS	2.5	2.5	1.6	1.4	2.1

ORGANISM	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT
BACILLARIOPHYTA (DIATOMS)										
..BACILLARIOPHYCEAE										
...ACHNANTHALES										
...ACHNANTHACEAE										
....ACHNANTHES	120	13	13	2	56	6	25	1	--	-
...BACILLARIALES										
...NITZSCHIA	310#	36	120#	18	42	5	2500#	60	650#	63
...EUPODISCALES										
...COSCINODISCAEAE										
...CYCLOTELLA	--	-	--	-	--	-	25	1	87	8
...MELOSIRA	--	-	--	-	--	-	--	-	--	-
...FRAGILARIALES										
...FRAGILARIACEAE										
....FRAGILARIA	--	-	--	-	--	-	50	1	--	-
....SYNEDRA	--	-	--	-	--	-	50	1	--	-
...NAVICULALES										
...CYMBELLACEAE										
....CYMBELLA	130	15	150#	24	--	-	--	-	--	-
...ENTOMONEIDACEAE										
....ENTOMONEIS	13	1	--	-	--	-	--	-	--	-
...NAVICULACEAE										
....CALONEIS	--	-	--	-	--	-	--	-	22	2
....NAVICULA	170#	19	52	8	84	10	50	1	43	4
...SURIRELLALES										
...SURIRELLACEAE										
....CYMATOPLEURA	--	-	--	-	--	-	--	-	--	-
....SURIRELLA	13	1	--	-	--	-	--	-	--	-
CHLOROPHYTA (GREEN ALGAE)										
..CHLOROPHYCEAE										
...CHLOROCOCCALES										
...OOCYSTACEAE										
....ANKISTRODESMUS	--	-	--	-	--	-	--	-	22	2
....SELENASTRUM	--	-	--	-	--	-	--	-	22	2
....TREUBARIA	--	-	--	-	--	-	--	-	22	2
...VOLVOCALES										
...CHLAMYDOMONADACEAE										
....CHLAMYDOMONAS	13	1	13	2	56	6	25	1	43	4
CHRYSOPHYTA										
..CHRYSOPHYCEAE										
...CHROMULINALES										
...CHRYSOCOCCACEAE										
....CHRYSOCOCCUS	--	-	--	-	--	-	--	-	22	2
CRYPTOPHYTA (CRYPTOMONADS)										
..CRYPTOPHYCEAE										
...CRYPTOMONADALES										
...CRYPTOMONADACEAE										
....CRYPTOMONAS	--	-	13	2	--	-	--	-	22	2
CYANOPHYTA (BLUE-GREEN ALGAE)										
..CYANOPHYCEAE										
...CHROOCOCCALES										
...CHROOCOCCACEAE										
....ANACYSTIS	26	3	150#	24	28	3	50	1	--	-
...NOSTOCALES										
...NOSTOCACEAE										
....ANABAENA	77	9	120#	18	--	-	--	-	--	-
...OSCILLATORIALES										
...OSCILLATORIAEAE										
....OSCILLATORIA	--	-	--	-	600#	69	1400#	33	--	-
EUGLENOPHYTA (EUGLENOIDS)										
..EUGLENOPHYCEAE										
...EUGLENALES										
...EUGLENACEAE										
....EUGLENA	--	-	--	-	--	-	--	-	87	8

NOTE: # - DOMINANT ORGANISM; EQUAL TO OR GREATER THAN 15%

* - OBSERVED ORGANISM, MAY NOT HAVE BEEN COUNTED; LESS THAN 1/2%

CHEYENNE RIVER BASIN

06365300 DRY FORK CHEYENNE RIVER NEAR BILL, WY

LOCATION.--Lat 43°13'21", long 105°40'00", in NE¼NW¼SE¼, sec.31, T.38 N., R.73 W., Converse County, Hydrologic Unit 10120102, 800 ft (244 m) downstream from Cheyenne River Draw and 21 mi (34 km) west of Bill.

DRAINAGE AREA.--128 mi² (332 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--November 1976 to September 1981 (discontinued).

GAGE.--Water-stage recorder. Concrete low-flow control since Sept. 15, 1977. Altitude of gage is 5,060 ft (1,542 m), from topographic map. Prior to Sept. 15, 1977, at site 700 ft (213 m) upstream at datum 4.1 ft (1.25 m) higher.

REMARKS.--Records fair except those for winter period, which are poor. Numerous small stockwater reservoirs above station.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,010 ft³/s (28.6 m³/s) May 18, 1978, gage height, 4.01 ft (1.222 m); no flow for several days each year.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 9.6 ft³/s (0.272 m³/s) May 27, gage height, 1.41 ft (0.430 m); maximum gage height may have exceeded 1.41 ft (0.430 m) during missing record, Dec. 20 or Feb. 1-8, when backwater from ice occurred; no flow for many days.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.02	.08	.16	.18	.04	.18	.33	.15	.15	.00	.01	.00
2	.03	.08	.24	.19	.01	.16	.27	.13	.08	.00	.00	.00
3	.03	.08	.30	.18	.02	.17	.30	.17	.07	.00	.00	.00
4	.04	.09	.37	.19	.03	.16	.41	.53	.09	.00	.00	.00
5	.03	.09	.25	.19	.05	.16	.64	.33	.08	.00	.00	.00
6	.03	.08	.18	.19	.05	.15	.66	.21	.07	.00	.00	.00
7	.03	.08	.14	.19	.04	.14	.42	.29	.05	.00	.00	.00
8	.03	.08	.09	.16	.02	.13	.35	.21	.04	.00	.00	.00
9	.03	.08	.10	.15	.00	.13	.29	.17	.03	.00	.00	.00
10	.02	.08	.11	.14	.00	.13	.24	.16	.03	.00	.00	.00
11	.03	.09	.15	.12	.00	.13	.27	.15	.03	.00	.00	.00
12	.03	.09	.20	.13	.02	.13	.24	.15	.03	.00	.00	.00
13	.03	.11	.18	.12	.10	.13	.21	.13	.03	.00	.00	.00
14	.03	.12	.20	.11	.40	.14	.20	.14	.03	.00	.00	.00
15	.04	.11	.25	.09	.60	.14	.19	.11	.03	.00	.00	.00
16	.05	.11	.29	.06	.44	.16	.20	.12	.03	.00	.00	.00
17	.06	.09	.26	.04	.31	.23	.18	.50	.01	.00	.00	.00
18	.08	.09	.20	.05	.26	.21	.20	.64	.00	.00	.00	.00
19	.07	.10	.16	.07	.23	.19	.18	.32	.00	.00	.00	.00
20	.07	.10	.10	.08	.20	.25	.25	.18	.00	.00	.00	.00
21	.07	.11	.12	.10	.16	.30	.24	.19	.00	.00	.00	.00
22	.06	.15	.18	.14	.18	.41	.29	1.2	.00	.00	.00	.00
23	.07	.13	.16	.17	.20	.35	.24	1.7	.00	.00	.00	.00
24	.08	.11	.10	.19	.21	.28	.20	5.3	.00	.00	.00	.01
25	.07	.09	.12	.17	.22	.24	.17	2.1	.00	.03	.00	.01
26	.08	.10	.19	.13	.22	.22	.16	.77	.00	.05	.00	.00
27	.09	.10	.22	.13	.21	.29	.13	2.4	.00	.03	.00	.01
28	.11	.17	.21	.14	.19	.39	.18	5.4	.00	.01	.00	.01
29	.12	.24	.19	.15	---	.31	.17	1.8	.00	.00	.00	.01
30	.10	.26	.18	.14	---	.27	.16	.61	.00	.00	.00	.01
31	.09	---	.17	.08	---	.34	---	.27	---	.00	.00	---
TOTAL	1.72	3.29	5.77	4.17	4.41	6.62	7.97	26.53	.88	.12	.01	.06
MEAN	.055	.11	.19	.13	.16	.21	.27	.86	.029	.004	.000	.002
MAX	.12	.26	.37	.19	.60	.41	.66	5.4	.15	.05	.01	.01
MIN	.02	.08	.09	.04	.00	.13	.13	.11	.00	.00	.00	.00
AC-FT	3.4	6.5	11	8.3	8.7	13	16	53	1.7	.2	.02	.1

CAL YR 1980 TOTAL 127.03 MEAN .35 MAX 10 MIN .00 AC-FT 252
WTR YR 1981 TOTAL 61.55 MEAN .17 MAX 5.4 MIN .00 AC-FT 122

06365300 DRY FORK CHEYENNE RIVER NEAR BILL, WY--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--February 1977 to September 1981 (discontinued).

REMARKS.--No flow observed July 14, Aug. 6, Sept. 2.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	TUR- BID- ITY (NTU)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN DEMAND, BIO- CHEM- ICAL, 5 DAY (MG/L)	HARD- NESS (MG/L AS CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)
OCT 09...	1100	.03	1950	6.8	10.0	1.0	7.6	1.0	940	210	100	69
NOV 05...	1400	.10	1740	8.0	10.0	1.0	8.2	1.6	1000	230	110	80
DEC 04...	1200	.44	2140	7.8	.0	1.0	8.6	1.2	1300	270	140	94
JAN 08...	1115	.16	1990	7.8	1.5	1.0	8.4	1.0	1100	260	120	85
FEB 05...	1005	.05	1840	7.4	.0	2.0	--	.9	990	240	96	64
MAR 04...	0940	.19	1770	7.7	1.0	2.0	8.9	1.2	1100	240	110	73
APR 06...	1100	.71	1920	8.2	8.5	3.0	9.8	1.6	990	200	120	95
MAY 05...	0925	.36	2240	7.9	9.5	3.0	9.8	1.2	1200	230	140	100
23...	1700	1.2	--	--	18.5	--	--	--	--	--	--	--
JUN 04...	1015	.12	1320	7.6	15.0	9.0	7.5	--	670	150	71	42

DATE	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	POTAS- SIUM 40 DIS- SOLVED (PCI/L AS K40)	ALKA- LINITY LAB (MG/L AS CACO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)	SOLIDS, DIS- SOLVED (TONS PER DAY)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N)
OCT 09...	1.0	21	16	360	660	16	.5	21	1310	1.8	.11	.00
NOV 05...	1.1	16	12	350	780	17	.5	19	1460	2.0	.39	.00
DEC 04...	1.2	20	15	340	970	28	.5	16	1740	2.4	2.1	.00
JAN 08...	1.1	13	9.7	420	790	24	.5	17	1560	2.1	.67	.00
FEB 05...	.9	13	9.7	460	680	13	.5	17	1400	1.9	.19	.00
MAR 04...	1.0	12	9.0	370	790	13	.5	13	1470	2.0	.75	.00
APR 06...	1.3	13	9.7	120	1000	37	.1	12	1550	2.1	3.0	.41
MAY 05...	1.3	16	12	340	1000	12	.6	14	1720	2.3	1.7	.00
23...	--	--	--	--	--	--	--	--	--	--	--	--
JUN 04...	.7	10	7.5	330	460	5.3	.5	16	953	1.3	.31	.01

CHEYENNE RIVER BASIN

06365300 DRY FORK CHEYENNE RIVER NEAR BILL, WY--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	NITRO- GEN, AMMONIA TOTAL (MG/L AS N)	NITRO- GEN, AMMONIA TOTAL (MG/L AS NH4)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO- GEN, TOTAL (MG/L AS N)	NITRO- GEN, TOTAL (MG/L AS NO3)	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHORUS TOTAL (MG/L AS PO4)	CYANIDE TOTAL (MG/L AS CN)	PHENOLS (UG/L)	SEDI- MENT, SUS- PENDED (MG/L)	SEDI- MENT, DIS- CHARGE, SUS- PENDED (T/DAY)
OCT 09...	.080	.10	.92	1.00	1.0	4.4	.030	.09	.00	2	22	.00
NOV 05...	.070	.08	.38	.45	.45	2.0	.060	.18	--	3	58	.02
DEC 04...	.050	.06	.83	.88	.88	3.9	.060	.18	--	--	9	.01
JAN 08...	.060	.07	.51	.57	.57	2.5	.030	.09	--	--	93	.04
FEB 05...	.050	.06	.77	.82	.82	3.6	.080	.25	--	--	--	--
MAR 04...	.040	--	.56	.60	.60	2.7	.040	.12	--	--	44	.02
APR 06...	.060	--	.89	.95	1.4	6.0	.040	.12	.00	7	28	.05
MAY 05...	.080	--	.92	1.00	1.0	4.4	.050	.15	--	--	53	.05
23...	--	--	--	--	--	--	--	--	--	--	107	.35
JUN 04...	.200	--	1.1	1.30	1.3	5.8	.050	.15	--	--	17	.01

DATE	TIME	ALUM- INUM, TOTAL RECOV- ERABLE (UG/L AS AL)	ALUM- INUM, SUS- PENDE D RECOV. (UG/L AS AL)	ALUM- INUM, DIS- SOLVED (UG/L AS AL)	ARSENIC TOTAL (UG/L AS AS)	ARSENIC SUS- PENDE D TOTAL (UG/L AS AS)	ARSENIC DIS- SOLVED (UG/L AS AS)	BERYL- LIUM, TOTAL RECOV- ERABLE (UG/L AS BE)	BERYL- LIUM, DIS- SOLVED (UG/L AS BE)	BORON, DIS- SOLVED (UG/L AS B)	CADMIUM TOTAL RECOV- ERABLE (UG/L AS CD)	CADMIUM SUS- PENDE D RECOV- ERABLE (UG/L AS CD)
OCT 09...	1100	30	0	40	2	0	2	0	<4	170	1	0
NOV 05...	1400	--	--	--	--	--	--	--	--	170	--	--
DEC 04...	1200	--	--	--	--	--	--	--	--	170	--	--
JAN 08...	1115	30	--	--	1	--	--	0	--	130	0	--
FEB 05...	1005	--	--	--	--	--	--	--	--	110	--	--
MAR 04...	0940	--	--	--	--	--	--	--	--	100	--	--
APR 06...	1100	40	--	--	1	--	--	0	--	120	0	--
MAY 05...	0925	--	--	--	--	--	--	--	--	200	--	--
JUN 04...	1015	--	--	--	--	--	--	--	--	150	--	--

[illegible]

06365300 DRY FORK CHEYENNE RIVER NEAR BILL, WY--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	LEAD, DIS- SOLVED (UG/L AS PB)	LITHIUM TOTAL RECOV- ERABLE (UG/L AS LI)	LITHIUM SUS- PENDE D RECOV- ERABLE (UG/L AS LI)	LITHIUM DIS- SOLVED (UG/L AS LI)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)	MANGA- NESE, SUS- PENDE D RECOV. (UG/L AS MN)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	MERCURY TOTAL RECOV- ERABLE (UG/L AS HG)	MERCURY SUS- PENDE D RECOV- ERABLE (UG/L AS HG)	MERCURY DIS- SOLVED (UG/L AS HG)	MOLYB- DENUM, TOTAL RECOV- ERABLE (UG/L AS MO)
OCT 09...	7	50	0	50	30	20	9	.1	.0	1.5	1
NOV 05...	--	--	--	--	--	--	--	--	--	--	--
DEC 04...	--	--	--	--	--	--	--	--	--	--	--
JAN 08...	--	40	--	--	40	--	--	.3	--	--	0
FEB 05...	--	--	--	--	--	--	--	--	--	--	--
MAR 04...	--	--	--	--	--	--	--	--	--	--	--
APR 06...	--	40	--	--	40	--	--	1.3	--	--	0
MAY 05...	--	--	--	--	--	--	--	--	--	--	--
JUN 04...	--	--	--	--	--	--	--	--	--	--	--

DATE	MOLYB- DENUM, DIS- SOLVED (UG/L AS MO)	NICKEL, TOTAL RECOV- ERABLE (UG/L AS NI)	NICKEL, SUS- PENDE D RECOV- ERABLE (UG/L AS NI)	NICKEL, DIS- SOLVED (UG/L AS NI)	SELE- NIUM, TOTAL (UG/L AS SE)	SELE- NIUM, SUS- PENDE D RECOV- ERABLE (UG/L AS SE)	SELE- NIUM, DIS- SOLVED (UG/L AS SE)	VANA- DIUM, DIS- SOLVED (UG/L AS V)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN)	ZINC, SUS- PENDE D RECOV- ERABLE (UG/L AS ZN)	ZINC, DIS- SOLVED (UG/L AS ZN)
OCT 09...	<10	7	4	3	0	0	0	.0	20	0	30
NOV 05...	--	--	--	--	--	--	--	--	--	--	--
DEC 04...	--	--	--	--	--	--	--	--	--	--	--
JAN 08...	--	1	--	--	0	--	--	--	20	--	--
FEB 05...	--	--	--	--	--	--	--	--	--	--	--
MAR 04...	--	--	--	--	--	--	--	--	--	--	--
APR 06...	--	1	--	--	0	--	--	--	100	--	--
MAY 05...	--	--	--	--	--	--	--	--	40	--	--
JUN 04...	--	--	--	--	--	--	--	--	--	--	--

DATE	TIME	GROSS ALPHA, DIS- SOLVED (UG/L AS U-NAT)	GROSS ALPHA, SUSP. TOTAL (UG/L AS U-NAT)	GROSS BETA, DIS- SOLVED (PCI/L AS CS-137)	GROSS BETA, SUSP. TOTAL (PCI/L AS CS-137)	GROSS BETA, DIS- SOLVED (PCI/L AS SR/ YT-90)	GROSS BETA, SUSP. TOTAL (PCI/L AS SR/ YT-90)	RADIUM 226, DIS- SOLVED, RADON METHOD (PCI/L)	URANIUM NATURAL DIS- SOLVED (UG/L AS U)	GROSS ALPHA, DIS- SOLVED (PCI/L AS U-NAT)	GROSS ALPHA, SUSP. TOTAL (PCI/L AS U-NAT)
NOV 05...	1400	<22	<.4	23	.7	22	.7	.13	14	<15	<.3

CHEYENNE RIVER BASIN

06365900 CHEYENNE RIVER NEAR DULL CENTER, WY

LOCATION.--Lat 43°25'45", long 105°02'43", in SE¼SW¼NE¼ sec.20, T.40 N., R.68 W., Converse County, Hydrologic Unit 10120103, Thunder Basin National Grassland, on right bank at the Fiddleback Ranch, 1.2 mi (1.9 km) downstream from confluence of Antelope Creek and Dry Fork Cheyenne River, and 3.0 mi (4.8 km) west of Dull Center.

DRAINAGE AREA.--1,527 mi² (3,955 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--April 1976 to September 1981 (discontinued).

GAGE.--Water-stage recorder. Altitude of gage is 4,310 ft (1,314 m), from topographic map. Prior to June 16, 1978, at datum 2.00 ft (0.610 m) higher.

REMARKS.--Records fair except those for winter period, which are poor.

AVERAGE DISCHARGE.--5 years (water years 1977-81), 20.1 ft³/s (0.569 m³/s), 14,560 acre-ft/yr (18.0 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 11,800 ft³/s (334 m³/s) May 18, 1978, gage height, 14.0 ft (4.27 m), present datum, from rating curve extended above 1,700 ft³/s (48.1 m³/s) on basis of slope-area measurement of peak flow; no flow for several days each year.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 322 ft³/s (9.12 m³/s) July 26, gage height, 3.33 ft (1.015 m); no flow for several days.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.18	.40	.15	.15	.05	.15	.18	.23	.18	.07	9.4	.07
2	.15	.40	.13	.15	.05	.15	.12	.29	.15	.08	2.7	.07
3	.16	.47	.14	.15	.05	.12	.21	.34	.25	.06	.25	.07
4	.21	.47	.16	.16	.05	.15	.12	.40	46	.06	.18	.07
5	.21	.47	.14	.16	.05	.15	.12	.41	17	.07	8.5	.07
6	.24	.54	.12	.16	.04	.12	.12	1.7	4.0	.06	161	.06
7	.56	.47	.12	.16	.03	.12	.12	8.4	1.6	.04	48	.07
8	.49	.47	.12	.15	.01	.15	.10	1.3	1.1	.02	18	.08
9	.45	.40	.13	.15	.00	.15	.12	1.2	.72	.03	30	.10
10	.47	.54	.15	.14	.00	.12	.12	1.1	.62	.04	15	.06
11	.45	.62	.17	.13	.00	.15	.12	.83	.47	.02	15	.06
12	.48	.47	.17	.12	.00	.15	.15	.95	.25	.06	5.4	.07
13	.53	.54	.16	.11	.01	.12	.12	.72	.18	.08	2.1	.06
14	.47	.47	.15	.10	.03	.12	.12	.62	.15	.02	2.1	.04
15	.62	.35	.16	.09	.10	.15	.12	.34	.12	.02	18	.05
16	.25	.28	.17	.08	.22	.15	.10	.62	.12	.01	12	.04
17	.25	.20	.17	.09	.32	.15	.12	1.2	.10	.02	6.2	.05
18	.18	.18	.15	.12	.36	.15	.10	1.1	.08	22	1.9	.06
19	.23	.19	.13	.16	.38	.15	.10	.54	.08	117	.83	.07
20	.28	.20	.14	.18	.39	.15	.10	.34	.10	24	.40	.05
21	.24	.21	.15	.21	.35	.15	.12	.29	.07	6.6	.18	.05
22	.21	.21	.16	.23	.29	.12	.12	5.8	.07	1.7	.12	.05
23	.23	.20	.15	.24	.25	.10	.12	7.4	.08	2.5	.12	.06
24	.20	.16	.14	.24	.21	.12	.15	.62	.07	.83	.10	.07
25	.23	.15	.15	.22	.12	.12	.18	.54	.06	14	.10	.09
26	.21	.16	.17	.18	.12	.12	.25	.34	.07	117	.08	.10
27	.21	.17	.20	.14	.18	.18	.18	3.5	.07	6.2	.07	.11
28	.21	.18	.19	.10	.12	.15	.18	1.1	.06	.83	.08	.11
29	.23	.19	.18	.08	---	.10	.18	.83	.06	.12	.07	.14
30	.26	.16	.17	.08	---	.10	.18	.62	.06	.02	.07	.18
31	.30	---	.16	.07	---	.12	---	.40	---	.04	.06	---
TOTAL	9.39	9.92	4.75	4.50	3.78	4.20	4.14	44.07	73.94	313.60	358.01	2.23
MEAN	.30	.33	.15	.15	.14	.14	.14	1.42	2.46	10.1	11.5	.074
MAX	.62	.62	.20	.24	.39	.18	.25	8.4	.46	117	161	.18
MIN	.15	.15	.12	.07	.00	.10	.10	.23	.06	.01	.06	.04
AC-FT	19	20	9.4	8.9	7.5	8.3	8.2	87	147	622	710	4.4

CAL YR 1980 TOTAL 1562.50 MEAN 4.27 MAX 198 MIN .00 AC-FT 3100
WTR YR 1981 TOTAL 832.53 MEAN 2.28 MAX 161 MIN .00 AC-FT 1650

06365900 CHEYENNE RIVER NEAR DULL CENTER, WY--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water year 1976 to September 1981 (discontinued).

WATER-QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	COLOR (PLAT- INUM- COBALT UNITS)	TUR- BID- ITY (NTU)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION)	HARD- NESS (MG/L AS CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)
OCT											
23...	1130	.23	3120	8.3	3.0	--	--	11.7	100	1300	300
NOV											
18...	0800	.18	3575	7.3	.0	--	--	7.1	55	1500	370
DEC											
13...	1615	--	--	--	--	--	2.0	--	--	--	--
17...	1035	.17	3030	8.2	5.0	--	--	11.7	110	1200	290
JAN											
13...	0930	.11	3225	7.3	.0	--	--	8.6	67	1300	300
FEB											
19...	1455	.56	2140	8.2	1.0	--	--	--	--	860	210
26...	1525	.12	2900	8.2	8.5	--	--	10.3	104	--	--
MAR											
11...	1530	--	3200	8.4	14.5	--	2.0	9.9	--	--	--
15...	1215	.18	3100	7.6	13.0	--	--	10.5	114	1300	290
APR											
15...	0945	.12	3190	8.2	14.0	15	--	--	--	1400	310
MAY											
19...	1800	.66	3000	8.4	20.5	19	--	8.0	104	1200	270
JUN											
17...	1045	.16	3130	8.2	20.5	--	--	8.2	105	1200	290
JUL											
08...	1045	.04	3420	8.1	22.0	--	--	8.2	106	1400	330
AUG											
11...	1605	19	840	8.3	27.0	29	--	6.2	90	280	71
SEP											
09...	1100	.10	2650	8.2	18.0	--	--	9.6	116	990	230

DATE	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	POTAS- SIUM 40 DIS- SOLVED (PCI/L AS K40)	ALKA- LITY LAB (MG/L AS CACO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SiO2)
OCT										
23...	130	320	3.9	1.7	1.3	310	1600	30	.6	15
NOV										
18...	150	400	4.4	23	17	390	1800	32	.6	18
DEC										
13...	--	--	--	--	--	--	--	--	--	--
17...	120	310	3.9	14	10	310	1500	25	.4	13
JAN										
13...	140	340	4.1	14	10	360	1600	31	.6	14
FEB										
19...	80	200	3.0	9.8	7.3	210	1100	15	.4	9.5
26...	--	--	--	--	--	280	--	--	--	--
MAR										
11...	--	--	--	--	--	--	--	--	--	--
15...	130	330	4.0	14	10	300	1600	39	.5	12
APR										
15...	140	330	3.9	17	13	320	870	22	.6	13
MAY										
19...	120	300	3.8	16	12	240	1500	20	.5	12
JUN										
17...	120	310	3.9	17	13	300	1500	26	.5	15
JUL										
08...	140	360	4.2	19	14	310	1700	35	.5	16
AUG										
11...	26	72	2.0	9.7	--	100	330	7.0	.3	11
SEP										
09...	100	280	3.9	18	--	280	1300	28	.5	17

WATER-QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

[illegible]

WATER-QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	COAL IN BOTTOM MATE- RIAL (GM/KG)	H-2/ H-1/ STABLE ISOTOPE RATIO PER MILL	PHYTO- PLANK- TON, TOTAL (CELLS PER ML)	PERI- PHYTON BIOMASS ASH WEIGHT G/SQ M	PERI- PHYTON BIOMASS TOTAL DRY WEIGHT G/SQ M	BIOMASS CHLORO- PHYLL RATIO PERI- PHYTON (UNITS)	CHLOR-A PERI- PHYTON CHROMO- FLUOROM (MG/M2)	CHLOR-B PERI- PHYTON CHROMO- FLUOROM (MG/M2)	SEDI- MENT, SUS- PENDED (MG/L)	SEDI- MENT, DIS- CHARGE, SUS- PENDED (T/DAY)
OCT 23...	--	--	460	3.31	4.33	1060	.960	.120	39	.02
NOV 18...	--	--	51	--	--	--	--	--	80	.04
DEC 13...	--	--	--	--	--	--	--	--	--	--
17...	--	--	240	--	--	--	--	--	31	.01
JAN 13...	--	--	140	--	--	--	--	--	--	--
FEB 19...	--	--	430	--	--	--	--	--	16	.02
26...	--	--	--	--	--	--	--	--	13	.00
MAR 11...	--	--	--	--	--	--	--	--	--	--
15...	--	--	950	--	--	--	--	--	50	.02
APR 15...	1.00	--	310	--	--	--	--	--	40	.01
MAY 19...	--	8.0	6900	8.50	10.1	1600	1.00	.190	62	.11
JUN 17...	--	--	800	--	--	--	--	--	34	.01
JUL 08...	--	--	5800	8.74	9.69	1230	.770	.160	78	.01
AUG 11...	--	6.2	--	--	--	--	--	--	1060	54
SEP 09...	--	--	3400	--	--	--	--	--	13	.00

[illegible]

CHEYENNE RIVER BASIN

06365900 CHEYENNE RIVER NEAR DULL CENTER, WY--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	CADMIUM TOTAL RECOV- ERABLE (UG/L AS CD)	CADMIUM SUS- PENDE RECOV- ERABLE (UG/L AS CD)	CADMIUM DIS- SOLVED (UG/L AS CD)	CADMIUM RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CD)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR)	CHRO- MIUM, SUS- PENDE RECOV. (UG/L AS CR)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR)	CHRO- MIUM, RECOV. FM BOT- TOM MA- TERIAL (UG/G)	COBALT, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CO)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU)	COPPER, SUS- PENDE RECOV- ERABLE (UG/L AS CU)	COPPER, DIS- SOLVED (UG/L AS CU)
OCT 23...	--	--	--	--	--	--	--	--	--	--	--	--
NOV 18...	--	--	--	--	--	--	--	--	--	--	--	--
DEC 17...	0	0	0	--	0	0	20	--	--	3	3	0
JAN 13...	0	0	0	--	0	0	0	--	--	3	2	1
FEB 19...	--	--	0	--	--	--	0	--	--	--	--	3
MAR 15...	--	--	--	--	--	--	--	--	--	--	--	--
APR 15...	0	0	0	0	10	0	10	3	0	4	3	1
MAY 19...	--	--	--	--	--	--	--	--	--	--	--	34
JUN 17...	--	--	--	--	--	--	--	--	--	--	--	--
JUL 08...	1	0	1	--	10	0	10	--	--	4	2	2
AUG 11...	0	--	<1	--	30	20	10	--	--	27	23	4
SEP 09...	--	--	--	--	--	--	--	--	--	--	--	--

DATE	COPPER, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CU)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	IRON, SUS- PENDE RECOV- ERABLE (UG/L AS FE)	IRON, DIS- SOLVED (UG/L AS FE)	IRON, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS FE)	LEAD, TOTAL RECOV- ERABLE (UG/L AS PB)	LEAD, SUS- PENDE RECOV- ERABLE (UG/L AS PB)	LEAD, DIS- SOLVED (UG/L AS PB)	LEAD, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS PB)	LITHIUM TOTAL RECOV- ERABLE (UG/L AS LI)	LITHIUM SUS- PENDE RECOV- ERABLE (UG/L AS LI)	LITHIUM DIS- SOLVED (UG/L AS LI)
OCT 23...	--	160	90	70	--	--	--	--	--	40	0	40
NOV 18...	--	210	170	40	--	--	--	--	--	--	--	--
DEC 17...	--	410	360	50	--	2	2	0	--	--	--	--
JAN 13...	--	260	220	40	--	14	14	0	--	--	--	--
FEB 19...	--	210	180	30	--	--	--	2	--	20	0	20
MAR 15...	--	260	210	50	--	--	--	--	--	--	--	--
APR 15...	6	320	270	50	1200	3	0	5	10	40	0	40
MAY 19...	--	240	210	30	--	--	--	--	--	--	--	--
JUN 17...	--	80	30	50	--	--	--	--	--	--	--	--
JUL 08...	--	140	120	20	--	5	4	1	--	--	--	--
AUG 11...	--	12000	12000	32	--	27	26	1	--	--	--	--
SEP 09...	--	810	770	40	--	--	--	--	--	--	--	--

WATER-QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

[illegible]

CHEYENNE RIVER BASIN

06365900 CHEYENNE RIVER NEAR DULL CENTER, WY--Continued
 WATER-QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	TIME	GROSS ALPHA, DIS- SOLVED (UG/L AS U-NAT)	GROSS ALPHA, SUSP. TOTAL (UG/L AS U-NAT)	GROSS BETA, DIS- SOLVED (PCI/L AS CS-137)	GROSS BETA, SUSP. TOTAL (PCI/L AS CS-137)	GROSS BETA, DIS- SOLVED (PCI/L AS SR/ YT-90)	GROSS BETA, SUSP. TOTAL (PCI/L AS SR/ YT-90)	GROSS ALPHA, DIS- SOLVED (PCI/L AS U-NAT)	GROSS ALPHA, SUSP. TOTAL (PCI/L AS U-NAT)
APR 15...	0945	<80	<.4	<30	2.0	<29	2.1	54	.3

DATE	TIME	TEMPER- ATURE (DEG C)	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SED. SUSP. FALL DIAM. % FINER THAN .004 MM	SED. SUSP. FALL DIAM. % FINER THAN .016 MM	SED. SUSP. FALL DIAM. % FINER THAN .062 MM	BED MAT. FALL DIAM. % FINER THAN .062 MM
FEB 19...	1455	1.0	.56	--	--	--	1
AUG 11...	1605	27.0	19	94	98	100	54

DATE	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. FALL DIAM. % FINER THAN 1.00 MM	BED MAT. FALL DIAM. % FINER THAN 2.00 MM	BED MAT. FALL DIAM. % FINER THAN 4.00 MM
FEB 19...	3	27	85	96	99	100
AUG 11...	73	97	100	--	--	--

06365900 CHEYENNE RIVER NEAR DULL CENTER, WY--Continued

QUALITATIVE AND ASSOCIATED QUANTITATIVE ANALYSES OF BIOLOGICAL DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

PHYTOPLANKTON ANALYSES

DATE TIME	OCT 23,80 1130	NOV 18,80 0800	DEC 17,80 1035	JAN 13,81 0930	FEB 19,81 1455	MAR 15,81 1215
TOTAL CELLS/ML	460	51	240	140	430	950
DIVERSITY: DIVISION	1.2	0.0	0.0	1.0	1.2	1.0
..CLASS	1.2	0.0	0.0	1.0	1.2	1.0
...ORDER	1.5	1.5	1.0	1.8	1.3	1.8
...FAMILY	1.5	1.5	1.4	2.2	1.3	1.8
....GENUS	1.5	1.5	1.4	2.2	1.3	1.8

ORGANISM	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT
BACILLARIOPHYTA (DIATOMS)												
..BACILLARIOPHYCEAE												
...ACHNANTHALES												
...ACHNANTHACEAE												
....ACHNANTHES	--	-	--	-	--	-	--	-	--	-	--	-
..BACILLARIALES												
...NITZSCHIA	90#	19	13#	25	130#	53	26#	18	180#	42	64	7
...EUPODISCALES												
...COSCINODISCACEAE												
...CYCLOTELLA	--	-	--	-	--	-	--	-	--	-	--	-
..FRAGILARIALES												
...FRAGILARIACEAE												
....FRAGILARIA	--	-	--	-	--	-	--	-	--	-	--	-
....SYNEDRA	13	3	26#	50	--	-	--	-	--	-	--	-
...NAVICULALES												
...CYMBELLACEAE												
....CYMBELLA	--	-	13#	25	26	11	26#	18	13	3	430#	45
...ENTOMONEIDACEAE												
....ENTOMONEIS	--	-	--	-	--	-	--	-	--	-	--	-
...NAVICULACEAE												
....CALONEIS	--	-	--	-	--	-	--	-	--	-	--	-
....NAVICULA	26	6	--	-	90#	37	26#	18	--	-	--	-
CHLOROPHYTA (GREEN ALGAE)												
..CHLOROPHYCEAE												
...CHLOROCOCCALES												
...OOCYSTACEAE												
....ANKISTRODESMUS	--	-	--	-	--	-	--	-	13	3	--	-
....SELENASTRUM	--	-	--	-	--	-	--	-	--	-	--	-
...SCENEDESMACEAE												
....SCENEDESMUS	--	-	--	-	--	-	52#	36	--	-	--	-
...VOLVOCALES												
...CHLAMYDOMONADACEAE												
....CHLAMYDOMONAS	13	3	--	-	--	-	13	9	--	-	--	-
CYANOPHYTA (BLUE-GREEN ALGAE)												
..CYANOPHYCEAE												
...CHROOCOCCALES												
...CHROOCOCCACEAE												
....ANACYSTIS	--	-	--	-	--	-	--	-	--	-	--	-
...NOSTOCALES												
...NOSTOCACEAE												
....ANABAENA	--	-	--	-	--	-	--	-	--	-	230#	24
....APHANIZOMENON	--	-	--	-	--	-	--	-	220#	52	--	-
...OSCILLATORIALES												
...OSCILLATORIACEAE												
....LYNGBYA	--	-	--	-	--	-	--	-	--	-	--	-
....OSCILLATORIA	310#	67	--	-	--	-	--	-	--	-	230#	24
EUGLENOPHYTA (EUGLENOIDS)												
..EUGLENOPHYCEAE												
...EUGLENALES												
...EUGLENACEAE												
....TRACHELOMONAS	13	3	--	-	--	-	--	-	--	-	--	-

NOTE: # - DOMINANT ORGANISM; EQUAL TO OR GREATER THAN 15%

* - OBSERVED ORGANISM, MAY NOT HAVE BEEN COUNTED; LESS THAN 1/2%

CHEYENNE RIVER BASIN

06365900 CHEYENNE RIVER NEAR DULL CENTER, WY--Continued

QUALITATIVE AND ASSOCIATED QUANTITATIVE ANALYSES OF BIOLOGICAL DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

PHYTOPLANKTON ANALYSES

DATE TIME	APR 15,81 0945	MAY 19,81 1800	JUN 17,81 1045	JUL 8,81 1045	SEP 9,81 1100
TOTAL CELLS/ML	310	6900	800	5800	3400
DIVERSITY: DIVISION	0.4	1.0	0.0	0.2	0.4
..CLASS	0.4	1.0	0.0	0.2	0.4
..ORDER	0.8	1.4	0.2	0.5	1.3
...FAMILY	1.2	1.5	0.2	0.5	1.3
....GENUS	1.2	1.6	0.2	0.5	1.3

ORGANISM	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT
BACILLARIOPHYTA (DIATOMS)										
.BACILLARIOPHYCEAE										
..ACHNANTHALES										
...ACHNANTHACEAE										
....ACHNANTHES	--	-	120	2	--	-	--	-	--	-
..BACILLARIALES										
...NITZSCHIA	26	8	510	7	780#	97	90	2	220	7
...EUPODISCALES										
...COSCIINODISCACEAE										
....CYCLOTELLA	--	-	*	0	--	-	--	-	--	-
..FRAGILARIALES										
...FRAGILARIA	--	-	--	-	--	-	*	0	--	-
....SYNEDRA	--	-	--	-	--	-	*	0	28	1
..NAVICULALES										
...CYMBELLACEAE										
....CYMBELLA	230#	75	260	4	--	-	*	0	--	-
...ENTOMONEIDACEAE										
....ENTOMONEIS	--	-	47	1	13	2	--	-	--	-
...NAVICULACEAE										
....CALONEIS	--	-	140	2	--	-	--	-	--	-
....NAVICULA	26	8	47	1	13	2	39	1	*	0
CHLOROPHYTA (GREEN ALGAE)										
.CHLOROPHYCEAE										
..CHLOROCOCCALES										
...OOCYSTACEAE										
....ANKISTRODESMUS	--	-	160	2	--	-	*	0	--	-
....SELENASTRUM	--	-	--	-	--	-	--	-	--	-
...SCENEDESMACEAE										
....SCENEDESMUS	--	-	--	-	--	-	--	-	--	-
..VOLVOCALES										
...CHLAMYDOMONADACEAE										
....CHLAMYDOMONAS	26	8	300	4	--	-	--	-	--	-
CYANOPHYTA (BLUE-GREEN ALGAE)										
.CYANOPHYCEAE										
..CHROOCOCCALES										
...CHROOCOCCACEAE										
....ANACYSTIS	--	-	70	1	--	-	--	-	--	-
..NOSTOCALES										
...NOSTOCACEAE										
....ANABAENA	--	-	--	-	--	-	210	4	1100#	31
....APHANIZOMENON	--	-	--	-	--	-	--	-	--	-
..OSCILLATORIALES										
...OSCILLATORIA										
....LYNGBYA	--	-	--	-	--	-	--	-	2100#	61
....OSCILLATORIA	--	-	5100#	75	--	-	5400#	93	--	-
EUGLENOPHYTA (EUGLENOIDS)										
.EUGLENOPHYCEAE										
..EUGLENALES										
...EUGLENACEAE										
....TRACHELONAS	--	-	47	1	--	-	--	-	--	-

NOTE: # - DOMINANT ORGANISM; EQUAL TO OR GREATER THAN 15%

* - OBSERVED ORGANISM, MAY NOT HAVE BEEN COUNTED; LESS THAN 1/2%

06375600 LITTLE THUNDER CREEK NEAR HAMPSHIRE, WY

LOCATION.--Lat 43°39'20", long 104°54'20", in SW¼SE¼ sec.33, T.43 N., R.67 W., Weston County, Hydrologic Unit 10120103, Thunder Basin National Grassland, on left bank 1.2 mi (1.9 km) downstream from county bridge, 2.7 mi (4.3 km) upstream from mouth, 12 mi (19 km) northwest of Hampshire, and 38 mi (61 km) southwest of Newcastle.

DRAINAGE AREA.--234 mi² (606 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1977 to September 1981 (discontinued).

GAGE.--Water-stage recorder. Altitude of gage is 4,400 ft (1,341 m), from topographic map.

REMARKS.--Records good except those for winter period, which are poor. Numerous small stockwater reservoirs above station.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 3,030 ft³/s (85.8 m³/s) May 18, 1978, gage height, 9.02 ft (2.749 m), from rating curve extended above 180 ft³/s (5.10 m³/s) on basis of slope-area measurements at gage heights 7.67 ft (2.338 m) and 9.02 ft (2.749 m); no flow for many days each year.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 114 ft³/s (3.23 m³/s) July 26, gage height, 4.15 ft (1.265 m); no flow for many days.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.01	.02	.04	.11	.03	.11	.02	.01	.00	.00	.18	.00
2	.01	.02	.02	.08	.00	.09	.02	.01	.00	.00	.06	.00
3	.01	.02	.10	.06	.00	.11	.02	.02	.00	.00	.01	.00
4	.01	.02	.21	.04	.00	.11	.02	.02	.00	.00	.00	.00
5	.01	.02	.24	.06	.00	.06	.02	.04	.00	.00	.00	.00
6	.01	.02	.18	.06	.00	.13	.02	.02	.00	.00	.00	.00
7	.01	.02	.08	.08	.00	.08	.02	.11	.00	.00	.00	.00
8	.01	.02	.08	.06	.00	.06	.02	.31	.00	.00	.00	.00
9	.01	.02	.08	.06	.00	.08	.02	.27	.00	.00	.00	.00
10	.01	.02	.06	.06	.00	.08	.02	.31	.00	.00	1.0	.00
11	.01	.02	.08	.06	.00	.06	.02	.15	.00	.00	3.7	.00
12	.01	.02	.13	.03	.03	.04	.02	.08	.00	.00	.81	.00
13	.01	.02	.08	.03	.05	.04	.01	.06	.00	.00	.32	.00
14	.01	.02	.06	.03	.06	.03	.01	.04	.00	.00	.14	.00
15	.25	.02	.08	.02	.07	.02	.01	.02	.00	.00	.04	.00
16	.20	.03	.12	.01	.09	.02	.00	.02	.00	.00	.02	.00
17	.18	.03	.13	.01	.21	.02	.00	.02	.00	.00	.00	.00
18	.16	.03	.11	.02	.40	.02	.00	.02	.00	.00	.00	.00
19	.14	.03	.04	.02	.27	.02	.00	.02	.00	.00	.00	.00
20	.12	.03	.02	.02	.33	.02	.01	.02	.00	.00	.00	.00
21	.10	.04	.02	.01	.18	.03	.01	.02	.00	.00	.00	.00
22	.08	.03	.02	.02	.21	.03	.01	.01	.00	.00	.00	.00
23	.04	.03	.13	.04	.15	.02	.01	.02	.00	.00	18	.00
24	.02	.02	.06	.07	.15	.02	.01	.02	.00	.00	.97	.00
25	.02	.04	.04	.09	.15	.02	.01	.01	.00	.00	.21	.00
26	.02	.04	.18	.06	.13	.02	.01	.01	.00	36	.06	.00
27	.02	.04	.18	.07	.13	.02	.01	.01	.00	16	.02	.00
28	.02	.04	.18	.07	.11	.02	.01	.01	.00	5.5	.00	.00
29	.02	.06	.13	.07	---	.02	.01	.01	.00	2.5	.00	.00
30	.02	.06	.11	.07	---	.02	.01	.00	.00	.95	.00	.00
31	.02	---	.11	.06	---	.02	---	.00	---	.45	.00	---
TOTAL	1.57	.85	3.10	1.55	2.75	1.44	.38	1.69	.00	61.40	25.54	.00
MEAN	.051	.028	.10	.050	.098	.046	.013	.055	.000	1.98	.82	.000
MAX	.25	.06	.24	.11	.40	.13	.02	.31	.00	36	18	.00
MIN	.01	.02	.02	.01	.00	.02	.00	.00	.00	.00	.00	.00
AC-FT	3.1	1.7	6.1	3.1	5.5	2.9	.8	3.4	.00	122	51	.00

CAL YR 1980 TOTAL 567.49 MEAN 1.55 MAX 112 MIN .00 AC-FT 1130
WTR YR 1981 TOTAL 100.27 MEAN .27 MAX 36 MIN .00 AC-FT 199

CHEYENNE RIVER BASIN

06375600 LITTLE THUNDER CREEK NEAR HAMPSHIRE, WY--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--September 1977 to September 1981 (discontinued).

WATER-QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	COLOR (PLAT- INUM- COBALT UNITS)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION)	HARD- NESS (MG/L AS CaCO3)	CALCIUM DIS- SOLVED (MG/L AS Ca)
OCT										
22...	1445	.08	640	7.8	8.0	--	7.7	75	160	35
NOV										
18...	1345	.04	1180	7.4	3.0	--	11.6	97	270	58
DEC										
16...	0945	.12	2130	8.1	2.0	--	13.0	109	510	100
JAN										
13...	1530	.04	2690	7.5	3.0	--	--	--	670	130
FEB										
20...	1245	.24	2930	8.3	2.0	--	--	--	680	120
26...	1335	.13	2820	8.3	5.0	--	12.2	103	--	--
MAR										
14...	1500	.03	2900	7.9	12.0	--	10.6	105	670	120
APR										
15...	1325	.01	3200	8.4	18.0	21	--	--	760	140
MAY										
19...	1345	.02	3360	8.5	14.5	17	10.3	112	710	120
AUG										
12...	1025	.80	840	8.4	19.0	27	6.3	80	240	53

DATE	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	POTAS- SIUM 40 DIS- SOLVED (PCI/L AS K40)	ALKA- LITY LAB (MG/L AS CaCO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SiO2)
OCT										
22...	17	75	2.6	9.5	7.1	100	210	5.3	.4	3.4
NOV										
18...	30	160	4.3	10	7.5	200	400	7.5	.4	4.0
DEC										
16...	63	320	6.2	14	10	250	920	12	.4	1.8
JAN										
13...	83	410	6.9	14	10	340	1200	18	.6	1.5
FEB										
20...	93	490	8.2	13	9.7	380	1300	17	.5	2.6
26...	--	--	--	--	--	310	--	--	--	--
MAR										
14...	91	490	8.2	14	10	350	1400	25	.6	2.4
APR										
15...	99	520	8.2	16	12	390	710	44	.7	2.3
MAY										
19...	100	560	9.1	15	11	350	1600	12	.6	1.6
AUG										
12...	27	95	2.9	12	--	190	250	7.0	.4	10

06375600 LITTLE THUNDER CREEK NEAR HAMPSHIRE, WY--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)	SOLIDS, DIS- SOLVED (TONS PER DAY)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N)	NITRO- GEN, AMMONIA TOTAL (MG/L AS NH4)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO- GEN,NH4 + ORG. SUSP. TOTAL (MG/L AS N)
OCT 22...	430	420	.57	.09	--	--	--	--	--	--
NOV 18...	811	789	1.1	.09	.13	.020	.02	.77	.79	.24
DEC 16...	1630	1580	2.1	.51	--	--	--	--	--	--
JAN 13...	2070	2060	2.8	.22	.00	.070	.08	.86	.93	.00
FEB 20...	2240	2270	3.1	1.5	.00	.040	--	.79	.83	.11
26...	--	--	--	--	--	--	--	--	--	--
MAR 14...	2190	2360	3.2	.19	--	--	--	--	--	--
APR 15...	2590	1770	2.4	.05	.01	.110	--	.76	.87	.26
MAY 19...	2600	2620	3.6	.14	--	--	--	--	--	--
AUG 12...	589	567	.77	1.2	.11	.110	--	1.6	1.70	.96

DATE	NITRO- GEN,AM- MONIA + ORGANIC DIS. (MG/L AS N)	NITRO- GEN DIS- SOLVED (MG/L AS N)	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHORUS TOTAL (MG/L AS PO4)	PHOS- PHORUS, DIS- SOLVED (MG/L AS P)	CARBON, ORGANIC DIS- SOLVED (MG/L AS C)	CARBON, ORGANIC SUS- PENDED TOTAL (MG/L AS C)	CYANIDE TOTAL (MG/L AS CN)	PHENOLS (UG/L)	HEPTA- CHLOR, SUS- PENDED TOTAL (UG/L)
OCT 22...	--	--	--	--	--	--	--	--	--	--
NOV 18...	.55	.68	.040	.12	.020	15	.2	--	--	--
DEC 16...	--	--	--	--	--	--	--	--	--	--
JAN 13...	.93	.93	.030	.09	.030	15	.2	--	--	--
FEB 20...	.72	.72	.010	.03	.000	15	.2	.00	4	--
26...	--	--	--	--	--	--	--	--	--	--
MAR 14...	--	--	--	--	--	--	--	--	--	--
APR 15...	.61	.62	.080	.25	.020	8.6	--	.00	2	390
MAY 19...	--	--	--	--	--	--	--	--	--	346
AUG 12...	.74	.85	.170	.52	.030	14	1.6	.00	5	185

DATE	COAL IN BOTTOM MATE- RIAL (GM/KG)	H-2/ H-1/ STABLE ISOTOPE RATIO PER MILL	PHYTO- PLANK- TON, TOTAL (CELLS PER ML)	PERI- PHYTON BIOMASS ASH WEIGHT G/SQ M	PERI- PHYTON BIOMASS TOTAL DRY WEIGHT G/SQ M	BIOMASS CHLORO- PHYLL RATIO PERI- PHYTON (UNITS)	CHLOR-A PERI- PHYTON CHROMO- GRAPHIC FLUOROM (MG/M2)	CHLOR-B PERI- PHYTON CHROMO- GRAPHIC FLUOROM (MG/M2)	SEDI- MENT, SUS- PENDED (MG/L)	SEDI- MENT, DIS- CHARGE, SUS- PENDED (T/DAY)
OCT 22...	--	--	2000	--	--	--	--	--	658	.14
NOV 18...	--	--	3600	--	--	--	--	--	63	.01
DEC 16...	--	--	170	--	--	--	--	--	36	.01
JAN 13...	--	--	800	--	--	--	--	--	77	.01
FEB 20...	--	--	170	--	--	--	--	--	32	.02
26...	--	--	--	--	--	--	--	--	27	.01
MAR 14...	--	--	750	--	--	--	--	--	75	.01
APR 15...	11.0	--	410	--	--	--	--	--	101	.00
MAY 19...	--	10.3	2100	8.11	9.76	1920	.860	.000	160	.01
AUG 12...	--	6.3	9600	--	--	--	--	--	148	.32

CHEYENNE RIVER BASIN

06375600 LITTLE THUNDER CREEK NEAR HAMPSHIRE, WY--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	TIME	ARSENIC TOTAL (UG/L AS AS)	ARSENIC SUS- PENDE TOTAL (UG/L AS AS)	ARSENIC DIS- SOLVED (UG/L AS AS)	ARSENIC TOTAL IN BOT- TOM MA- TERIAL (UG/G AS AS)	BARIUM, TOTAL RECOV- ERABLE (UG/L AS BA)	BARIUM, SUS- PENDE RECOV- ERABLE (UG/L AS BA)	BARIUM, DIS- SOLVED (UG/L AS BA)	BERYL- LIUM, TOTAL RECOV- ERABLE (UG/L AS BE)	BERYL- LIUM, SUS- PENDE RECOV. (UG/L AS BE)	BERYL- LIUM, DIS- SOLVED (UG/L AS BE)	BORON, DIS- SOLVED (UG/L AS B)
OCT 22...	1445	--	--	--	--	100	50	50	--	--	--	50
NOV 18...	1345	--	--	--	--	--	--	--	--	--	--	90
DEC 16...	0945	1	0	1	--	--	--	--	0	0	0	70
JAN 13...	1530	2	1	1	--	--	--	--	0	0	0	90
FEB 20...	1245	--	--	1	--	100	100	0	--	--	0	80
MAR 14...	1500	--	--	--	--	--	--	--	--	--	--	90
APR 15...	1325	1	0	1	10	100	0	100	0	0	0	100
MAY 19...	1345	--	--	--	--	--	--	--	--	--	--	120
AUG 12...	1025	4	2	2	--	--	--	--	0	0	1	100

DATE	CADMIUM TOTAL RECOV- ERABLE (UG/L AS CD)	CADMIUM SUS- PENDE RECOV- ERABLE (UG/L AS CD)	CADMIUM DIS- SOLVED (UG/L AS CD)	CADMIUM RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CD)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR)	CHRO- MIUM, SUS- PENDE RECOV. (UG/L AS CR)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR)	CHRO- MIUM, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CO)	COBALT, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CO)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU)	COPPER, SUS- PENDE RECOV- ERABLE (UG/L AS CU)	COPPER, DIS- SOLVED (UG/L AS CU)
OCT 22...	--	--	--	--	--	--	--	--	--	--	--	--
NOV 18...	--	--	--	--	--	--	--	--	--	--	--	--
DEC 16...	0	0	0	--	10	10	0	--	--	4	2	2
JAN 13...	0	0	0	--	0	0	0	--	--	4	3	1
FEB 20...	--	--	0	--	--	--	0	--	--	--	--	3
MAR 14...	--	--	--	--	--	--	--	--	--	--	--	--
APR 15...	0	0	0	1	30	20	10	3	0	6	5	1
MAY 19...	--	--	--	--	--	--	--	--	--	--	--	33
AUG 12...	0	--	<1	--	20	0	20	--	--	7	5	2

DATE	COPPER, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CU)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	IRON, SUS- PENDE RECOV- ERABLE (UG/L AS FE)	IRON, DIS- SOLVED (UG/L AS FE)	IRON, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS FE)	LEAD, TOTAL RECOV- ERABLE (UG/L AS PB)	LEAD, SUS- PENDE RECOV- ERABLE (UG/L AS PB)	LEAD, DIS- SOLVED (UG/L AS PB)	LEAD, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS PB)	LITHIUM TOTAL RECOV- ERABLE (UG/L AS LI)	LITHIUM SUS- PENDE RECOV- ERABLE (UG/L AS LI)	LITHIUM DIS- SOLVED (UG/L AS LI)
OCT 22...	--	5900	5800	80	--	--	--	--	--	20	10	10
NOV 18...	--	920	900	20	--	--	--	--	--	--	--	--
DEC 16...	--	400	360	40	--	3	3	0	--	--	--	--
JAN 13...	--	310	290	20	--	4	4	0	--	--	--	--
FEB 20...	--	630	610	20	--	--	--	0	--	30	0	30
MAR 14...	--	410	360	50	--	--	--	--	--	--	--	--
APR 15...	10	2500	2500	40	2800	3	3	0	10	30	0	40
MAY 19...	--	1400	1400	30	--	--	--	--	--	--	--	--
AUG 12...	--	1800	1800	46	--	4	4	0	--	--	--	--

06375600 LITTLE THUNDER CREEK NEAR HAMPSHIRE, WY--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	MANGA-NESE, TOTAL RECOVERABLE (UG/L AS MN)	MANGA-NESE, SUS-PENDED RECOV. (UG/L AS MN)	MANGA-NESE, DIS-SOLVED (UG/L AS MN)	MANGA-NESE, RECOV. FM BOT-TOM MATERIAL (UG/G)	MERCURY TOTAL RECOVERABLE (UG/L AS HG)	MERCURY SUS-PENDED RECOVERABLE (UG/L AS HG)	MERCURY DIS-SOLVED (UG/L AS HG)	MERCURY RECOV. FM BOT-TOM MATERIAL (UG/G AS HG)	NICKEL, TOTAL RECOVERABLE (UG/L AS NI)	NICKEL, SUS-PENDED RECOVERABLE (UG/L AS NI)	NICKEL, DIS-SOLVED (UG/L AS NI)
OCT 22...	120	60	60	--	--	--	--	--	--	--	--
NOV 18...	140	30	110	--	--	--	--	--	--	--	--
DEC 16...	80	30	50	--	.1	.1	.0	--	7	6	1
JAN 13...	100	20	80	--	.2	.2	.0	--	1	0	3
FEB 20...	100	10	90	--	--	--	.1	--	--	--	3
MAR 14...	170	20	150	--	--	--	--	--	--	--	--
APR 15...	220	50	170	100	.1	.1	.0	.30	5	3	2
MAY 19...	170	80	90	--	--	--	--	--	--	--	--
AUG 12...	150	140	7	--	.2	.0	.2	--	8	3	5

DATE	SELENIUM, TOTAL (UG/L AS SE)	SELENIUM, SUS-PENDED TOTAL (UG/L AS SE)	SELENIUM, DIS-SOLVED (UG/L AS SE)	SELENIUM, TOTAL IN BOT-TOM MATERIAL (UG/G)	STRONTIUM, TOTAL RECOVERABLE (UG/L AS SR)	STRONTIUM, SUS-PENDED RECOV. (UG/L AS SR)	STRONTIUM, DIS-SOLVED (UG/L AS SR)	ZINC, TOTAL RECOVERABLE (UG/L AS ZN)	ZINC, SUS-PENDED RECOVERABLE (UG/L AS ZN)	ZINC, DIS-SOLVED (UG/L AS ZN)	ZINC, RECOV. FM BOT-TOM MATERIAL (UG/G AS ZN)
OCT 22...	--	--	--	--	310	0	320	--	--	--	--
NOV 18...	--	--	--	--	--	--	--	--	--	--	--
DEC 16...	1	0	1	--	--	--	--	20	10	10	--
JAN 13...	0	0	0	--	--	--	--	10	0	20	--
FEB 20...	--	--	0	--	1400	0	1400	--	--	30	--
MAR 14...	--	--	--	--	--	--	--	--	--	--	--
APR 15...	1	1	0	0	1300	0	1300	40	20	20	9
MAY 19...	--	--	--	--	--	--	--	--	--	--	--
AUG 12...	0	0	1	--	--	--	--	20	0	23	--

DATE	TIME	GROSS ALPHA, DIS-SOLVED (UG/L AS U-NAT)	GROSS ALPHA, SUSP. TOTAL (UG/L AS U-NAT)	GROSS BETA, DIS-SOLVED (PCI/L AS CS-137)	GROSS BETA, SUSP. TOTAL (PCI/L AS CS-137)	GROSS BETA, DIS-SOLVED (PCI/L AS SR/YT-90)	GROSS BETA, SUSP. TOTAL (PCI/L AS SR/YT-90)	GROSS ALPHA, DIS-SOLVED (PCI/L AS U-NAT)	GROSS ALPHA, SUSP. TOTAL (PCI/L AS U-NAT)
APR 15...	1325	<63	1.6	<27	2.9	<26	2.8	43	1.1

CHEYENNE RIVER BASIN

06375600 LITTLE THUNDER CREEK NEAR HAMPSHIRE, WY--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	TIME	TEMPER- ATURE (DEG C)	STREAM- FLOW, INSTAN- TANEOUS (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
FEB 20...	1245	2.0	.24	5	7	10	12
AUG 12...	1025	19.0	.80	41	56	75	86

DATE	BED MAT. FALL DIAM. % FINER THAN 1.00 MM	BED MAT. SIEVE DIAM. % FINER THAN 2.00 MM	BED MAT. SIEVE DIAM. % FINER THAN 4.00 MM	BED MAT. SIEVE DIAM. % FINER THAN 8.00 MM	BED MAT. SIEVE DIAM. % FINER THAN 16.0 MM	BED MAT. SIEVE DIAM. % FINER THAN 32.0 MM
FEB 20...	17	24	38	62	85	100
AUG 12...	89	91	93	95	95	100

06375600 LITTLE THUNDER CREEK NEAR HAMPSHIRE, WY--Continued

QUALITATIVE AND ASSOCIATED QUANTITATIVE ANALYSES OF BIOLOGICAL DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

PHYTOPLANKTON ANALYSES					
DATE TIME	OCT 22,80 1445	NOV 18,80 1345	DEC 16,80 0945	JAN 13,81 1530	FEB 20,81 1245
TOTAL CELLS/ML	2000	3600	170	800	170
DIVERSITY: DIVISION	1.3	1.9	1.3	0.6	1.0
..CLASS	1.3	1.9	1.3	0.6	1.0
..ORDER	1.5	2.2	1.9	0.8	1.3
...FAMILY	1.5	2.6	2.2	0.8	1.3
....GENUS	1.6	2.6	2.4	0.8	1.3

ORGANISM	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT
BACILLARIOPHYTA (DIATOMS)										
.BACILLARIOPHYCEAE										
..ACHNANTHALES										
...ACHNANTHACEAE										
....ACHNANTHES	--	-	--	-	--	-	--	-	--	-
..BACILLARIALES										
...NITZSCHIAEAE										
....NITZSCHIA	1300#	66	120	3	26#	15	13	2	90#	54
..EUPODISCALES										
...COSCIINODISCACEAE										
....CYCLOTELLA	18	1	390	11	--	-	--	-	--	-
..FRAGILARIALES										
...FRAGILARIACEAE										
....ASTERIONELLA	--	-	--	-	--	-	--	-	--	-
....SYNEDRA	--	-	150	4	--	-	--	-	--	-
..NAVICULALES										
...CYMBELLACEAE										
....CYMBELLA	18	1	--	-	--	-	13	2	--	-
...ENTOMONEIDACEAE										
....ENTOMONEIS	--	-	--	-	--	-	--	-	--	-
..NAVICULACEAE										
....AMPHIPLEURA	--	-	--	-	--	-	--	-	--	-
....NAVICULA	18	1	60	2	--	-	--	-	--	-
..RHIZOSOLENIALES										
...RHIZOSOLENIACEAE										
....RHIZOSOLENIA	--	-	--	-	--	-	--	-	--	-
CHLOROPHYTA (GREEN ALGAE)										
.CHLOROPHYCEAE										
..CHLOROCOCCALES										
...CHLOROCOCCACEAE										
....SCHROEDERIA	--	-	--	-	--	-	--	-	13	8
...DICTYOSPHAERIACEAE										
....DICTYOSPHAERIUM	--	-	--	-	--	-	--	-	--	-
...MICRACTINIACEAE										
....GOLENKINIA	--	-	--	-	--	-	--	-	--	-
...MICRACTINIUM	--	-	210	6	52#	31	--	-	--	-
...OOCYSTACEAE										
....ANKISTRODESMUS	36	2	1600#	46	13	8	26	3	--	-
...CHLORELLA	--	-	--	-	--	-	--	-	--	-
...CHODATELLA	--	-	--	-	--	-	--	-	--	-
...OOCYSTIS	18	1	--	-	--	-	--	-	--	-
...TREUBARIA	18	1	--	-	--	-	--	-	--	-
...SCENEDESMACEAE										
...CRUCIGENIA	--	-	--	-	--	-	--	-	--	-
..VOLVOCALES										
...CHLAMYDOMONADACEAE										
....CHLAMYDOMONAS	--	-	--	-	39#	23	690#	87	65#	38
...VOLVOCAEAE										
....GONIUM	--	-	--	-	--	-	--	-	--	-
CHRYSTOPHYTA										
.CHRYSTOPHYCEAE										
..CHROMULINALES										
...CHRYSOCOCCACEAE										
....CHRYSOCOCCUS	--	-	300	8	--	-	--	-	--	-
...OCHROMONADALES										
...DINOBRYACEAE										
....PSEUDOKEPHYRION	--	-	--	-	--	-	--	-	--	-
CRYPTOPHYTA (CRYPTOMONADS)										
.CRYPTOPHYCEAE										
..CRYPTOMONADALES										
...CRYPTOCHRYSIDACEAE										
....CHROOMONAS	--	-	330	9	--	-	26	3	--	-
...CRYPTOMONADACEAE										
....CRYPTOMONAS	--	-	180	5	--	-	--	-	--	-

NOTE: # - DOMINANT ORGANISM; EQUAL TO OR GREATER THAN 15%

* - OBSERVED ORGANISM, MAY NOT HAVE BEEN COUNTED; LESS THAN 1/2%

06375600 LITTLE THUNDER CREEK NEAR HAMPSHIRE, WY--Continued

QUALITATIVE AND ASSOCIATED QUANTITATIVE ANALYSES OF BIOLOGICAL DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

PHYTOPLANKTON ANALYSES

DATE TIME	OCT 22,80 1445		NOV 18,80 1345		DEC 16,80 0945		JAN 13,81 1530		FEB 20,81 1245	
ORGANISM	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT
CYANOPHYTA (BLUE-GREEN ALGAE)										
.CYANOPHYCEAE										
..CHROOCOCCALES										
...CHROOCOCCACEAE										
....ANACYSTIS	--	-	150	4	--	-	--	-	--	-
....COCCOCHLORIS	--	-	--	-	--	-	--	-	--	-
..OSCILLATORIALES										
...OSCILLATORIACEAE										
....OSCILLATORIA	160	8	--	-	--	-	--	-	--	-
EUGLENOPHYTA (EUGLENOIDS)										
.EUGLENOPHYCEAE										
..EUGLENALES										
...EUGLENACEAE										
....EUGLENA	360#	18	--	-	13	8	--	-	--	-
....LEPOCINCLIS	--	-	--	-	--	-	--	-	--	-
....TRACHELOMONAS	18	1	30	1	26#	15	26	3	--	-

NOTE: # - DOMINANT ORGANISM; EQUAL TO OR GREATER THAN 15%

* - OBSERVED ORGANISM, MAY NOT HAVE BEEN COUNTED; LESS THAN 1/2%

06375600 LITTLE THUNDER CREEK NEAR HAMPSHIRE, WY--Continued

QUALITATIVE AND ASSOCIATED QUANTITATIVE ANALYSES OF BIOLOGICAL DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

PHYTOPLANKTON ANALYSES

DATE TIME	MAR 14,81 1500	APR 15,81 1325	MAY 19,81 1345	AUG 12,81 1025
TOTAL CELLS/ML	750	410	2100	9600
DIVERSITY: DIVISION	1.3	1.9	1.8	1.8
..CLASS	1.3	1.9	1.8	1.8
..ORDER	1.6	2.1	2.8	2.5
...FAMILY	1.6	2.4	2.9	3.2
....GENUS	1.6	2.4	3.0	3.6

ORGANISM	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT
BACILLARIOPHYTA (DIATOMS)								
.BACILLARIOPHYCEAE								
..ACHNANTHALES								
...ACHNANTHACEAE								
....ACHNANTHES	--	-	--	-	42	2	--	-
..BACILLARIALES								
...NITZSCHIA								
....NITZSCHIA	130#	17	26	6	390#	19	410	4
..EUPODISCALES								
...COSCINODISCACEAE								
....CYCLOTELLA	13	2	--	-	42	2	610	6
..FRAGILARIALES								
...FRAGILARIACEAE								
....ASTERIONELLA	51	7	--	-	--	-	--	-
....SYNEDRA	--	-	--	-	28	1	--	-
..NAVICULALES								
...CYMBELLACEAE								
....CYMBELLA	--	-	--	-	14	1	--	-
..ENTOMONEIDACEAE								
....ENTOMONEIS	--	-	--	-	28	1	--	-
..NAVICULACEAE								
....AMPHIPLEURA	--	-	--	-	14	1	--	-
....NAVICULA	--	-	39	9	290	14	68	1
..RHIZOSOLENIALES								
...RHIZOSOLENIA	--	-	--	-	--	-	68	1
CHLOROPHYTA (GREEN ALGAE)								
.CHLOROPHYCEAE								
..CHLOROCOCCALES								
...CHLOROCOCCACEAE								
....SCHROEDERIA	--	-	--	-	--	-	--	-
...DICTYOSPHAERIACEAE								
....DICTYOSPHAERIUM	--	-	52	13	--	-	270	3
...MICRACTINIA								
....MICRACTINIUM	--	-	--	-	--	-	410	4
..OOCYSTACEAE								
...ANKISTRODESMUS	26	3	120#	28	170	8	1700#	18
....CHLORELLA	--	-	--	-	--	-	200	2
....CHODATELLA	--	-	--	-	--	-	68	1
....OOCYSTIS	--	-	--	-	--	-	--	-
....TREUBARIA	--	-	--	-	--	-	--	-
..SCENEDESMACEAE								
....CRUCIGENIA	--	-	--	-	--	-	550	6
..VOLVOCALES								
...CHLAMYDOMONADACEAE								
....CHLAMYDOMONAS	13	2	--	-	14	1	1400	15
..VOLVOCACEAE								
....GONIUM	--	-	--	-	--	-	550	6
CHRYSTOPHYTA								
.CHRYSTOPHYCEAE								
..CHROMULINALES								
...CHRYSOCOCCACEAE								
....CHRYSOCOCCUS	--	-	--	-	--	-	68	1
..OCHROMONADALES								
...DINOBYRACEAE								
....PSEUDOKEPHYRION	--	-	--	-	110	5	--	-
CRYPTOPHYTA (CRYPTOMONADS)								
.CRYPTOPHYCEAE								
..CRYPTOMONADALES								
...CRYPTOCHRYSIDACEAE								
....CHROOMONAS	--	-	--	-	--	-	68	1
...CRYPTOMONADACEAE								
....CRYPTOMONAS	--	-	--	-	--	-	--	-

NOTE: # - DOMINANT ORGANISM; EQUAL TO OR GREATER THAN 15%

* - OBSERVED ORGANISM, MAY NOT HAVE BEEN COUNTED; LESS THAN 1/2%

06375600 LITTLE THUNDER CREEK NEAR HAMPSHIRE, WY--Continued

QUALITATIVE AND ASSOCIATED QUANTITATIVE ANALYSES OF BIOLOGICAL DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

PHYTOPLANKTON ANALYSES

DATE TIME	MAR 14,81 1500		APR 15,81 1325		MAY 19,81 1345		AUG 12,81 1025	
ORGANISM	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT
CYANOPHYTA (BLUE-GREEN ALGAE)								
.CYANOPHYCEAE								
..CHROOCOCCALES								
...CHROOCOCCACEAE								
....ANACYSTIS	--	-	77#	19	170	8	680	7
....COCCOCHLORIS	--	-	--	-	--	-	270	3
..OSCILLATORIALES								
...OSCILLATORIACEAE								
....OSCILLATORIA	490#	66	--	-	660#	32	--	-
EUGLENOPHYTA (EUGLENOIDS)								
.EUGLENOPHYCEAE								
..EUGLENALES								
...EUGLENACEAE								
....EUGLENA	--	-	--	-	14	1	480	5
....LEPOCINCLIS	--	-	--	-	--	-	68	1
....TRACHELOMONAS	26	3	100#	25	84	4	1600#	16

NOTE: # - DOMINANT ORGANISM; EQUAL TO OR GREATER THAN 15%

* - OBSERVED ORGANISM, MAY NOT HAVE BEEN COUNTED; LESS THAN 1/2%

06376300 BLACK THUNDER CREEK NEAR HAMPSHIRE, WY

LOCATION (REVISED).--Lat 43°34'54", long 104°43'11", in SW¼SW¼SW¼ sec.30, T.42 N., R.65 W., Weston County, Hydrologic Unit 10120103, on right bank 20 ft (6.1 m) downstream from bridge on county road, 1.3 mi (2.1 km) west of Hampshire, and 4.0 mi (6.4 km) upstream from mouth.

DRAINAGE AREA.--535 mi² (1,386 km²), approximately.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1972 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 4,060 ft (1,237 m), from map prepared by Army Map Service, Corps of Engineers.

REMARKS.--Records good except those for August, which are poor. There are many small stock ponds above station. No diversion above station.

AVERAGE DISCHARGE.--9 years, 8.39 ft³/s (0.238 m³/s), 6,080 acre-ft/yr (7.50 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 5,050 ft³/s (143 m³/s) May 18, 1978, gage height, 14.13 ft (4.307 m), from floodmark; no flow for many days each year.

EXTREMES FOR CURRENT YEAR.--Peak discharge above base of 250 ft³/s (7.080 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
July 26	2000	*678 19.2	10.25 3.124

No flow for many days.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.00	.00	.00	.00	.00	.31	.00	1.8	.00
2	.00	.00	.00	.00	.00	.00	.00	.00	.05	.00	1.7	.00
3	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.54	.00
4	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.27	.00
5	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.15	.00
6	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	15	.00
7	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	2.8	.00
8	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	1.6	.00
9	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.72	.00
10	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.31	.00
11	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.01	.00
12	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
13	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	8.2	.00
14	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	9.4	.00
15	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	1.5	.00
16	.26	.00	.00	.00	.00	.00	.00	.00	.00	.00	1.2	.00
17	3.6	.00	.00	.00	.00	.00	.00	.00	.00	.00	.24	.00
18	2.0	.00	.00	.00	.00	.00	.00	.00	.00	.00	.08	.00
19	.72	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
20	.38	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
21	.08	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
22	.02	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
23	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
24	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
25	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	2.6	.00
26	.00	.00	.00	.00	.00	.00	.00	.00	.00	237	1.6	.00
27	.00	.00	.00	.00	.00	.00	.00	.00	.00	82	.72	.00
28	.00	.00	.00	.00	.00	.00	.00	5.0	.00	18	.34	.00
29	.00	.00	.00	.00	---	.00	.00	3.2	.00	8.7	.15	.00
30	.00	.00	.00	.00	---	.00	.00	1.3	.00	4.0	.03	.00
31	.00	---	.00	.00	---	.00	---	1.1	---	1.9	.00	---
TOTAL	7.06	.00	.00	.00	.00	.00	.00	10.60	.36	351.60	50.96	.00
MEAN	.23	.000	.000	.000	.000	.000	.000	.34	.012	11.3	1.64	.000
MAX	3.6	.00	.00	.00	.00	.00	.00	5.0	.31	237	15	.00
MIN	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
AC-FT	14	.00	.00	.00	.00	.00	.00	21	.7	697	101	.00
CAL YR 1980	TOTAL	1472.13	MEAN	4.02	MAX	324	MIN	.00	AC-FT	2920		
WTR YR 1981	TOTAL	420.58	MEAN	1.15	MAX	237	MIN	.00	AC-FT	834		

CHEYENNE RIVER BASIN

06376300 BLACK THUNDER CREEK NEAR HAMPSHIRE, WY--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--October 1979 to September 1981 (discontinued).

WATER-QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION)	HARD- NESS (MG/L AS CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)
OCT 22...	1030	.02	986	7.9	7.0	8.4	80	210	50	21
JAN 13...	0930	--	--	--	.0	--	--	--	--	--
MAY 30...	0900	2.0	1710	8.0	17.0	6.1	73	360	78	39

DATE	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	POTAS- SIUM 40 DIS- SOLVED (PCI/L AS K40)	ALKA- LINITY LAB (MG/L AS CACO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)
OCT 22...	130	3.9	11	8.2	140	350	7.5	.5	3.3	666
JAN 13...	--	--	--	--	--	--	--	--	--	--
MAY 30...	250	5.8	10	7.5	160	730	8.1	.6	4.1	1230

DATE	SOLIDS, SUM OF CONSTITUENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)	SOLIDS, DIS- SOLVED (TONS PER DAY)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO- GEN,NH4 + ORG. SUSP. TOTAL (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC DIS. (MG/L AS N)	NITRO- GEN DIS- SOLVED (MG/L AS N)
OCT 22...	--	.91	.04	--	--	--	--	--	--	--
JAN 13...	--	--	--	--	--	--	--	--	--	--
MAY 30...	1220	1.7	6.6	.50	.120	1.4	1.50	.55	.95	1.5

DATE	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHORUS TOTAL (MG/L AS PO4)	PHOS- PHORUS, DIS- SOLVED (MG/L AS P)	CARBON, ORGANIC DIS- SOLVED (MG/L AS C)	CYANIDE TOTAL (MG/L AS CN)	PHENOLS (UG/L)	PHYTO- PLANK- TON, TOTAL (CELLS PER ML)	SEDI- MENT, SUS- PENDE (MG/L)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (T/DAY)
OCT 22...	--	--	--	--	--	--	3400	67	.00
JAN 13...	--	--	--	--	--	--	--	88	--
MAY 30...	.180	.55	.030	24	.00	6	11000	382	2.1

06376300 BLACK THUNDER CREEK NEAR HAMPSHIRE, WY--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	TIME	ARSENIC TOTAL (UG/L AS AS)	ARSENIC SUS- PENDE TOTAL (UG/L AS AS)	ARSENIC DIS- SOLVED (UG/L AS AS)	ARSENIC TOTAL IN BOT- TOM MA- TERIAL (UG/G AS AS)	BARIUM, TOTAL RECOV- ERABLE (UG/L AS BA)	BARIUM, SUS- PENDE RECOV- ERABLE (UG/L AS BA)	BARIUM, DIS- SOLVED (UG/L AS BA)	BERYL- LIUM, TOTAL RECOV- ERABLE (UG/L AS BE)	BERYL- LIUM, SUS- PENDE RECOV. (UG/L AS BE)	BERYL- LIUM, DIS- SOLVED (UG/L AS BE)	BORON, DIS- SOLVED (UG/L AS B)
OCT 22...	1030	--	--	--	--	200	100	70	--	--	--	60
MAY 30...	0900	10	9	1	20	--	--	--	0	0	0	320

DATE	CADMIUM TOTAL RECOV- ERABLE (UG/L AS CD)	CADMIUM SUS- PENDE RECOV- ERABLE (UG/L AS CD)	CADMIUM DIS- SOLVED (UG/L AS CD)	CADMIUM FM BOT- TOM MA- TERIAL (UG/G AS CD)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR)	CHRO- MIUM, SUS- PENDE RECOV. (UG/L AS CR)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR)	CHRO- MIUM, FM BOT- TOM MA- TERIAL (UG/G AS CO)	COBALT, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CO)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU)	COPPER, SUS- PENDE RECOV- ERABLE (UG/L AS CU)	COPPER, DIS- SOLVED (UG/L AS CU)
OCT 22...	--	--	--	--	--	--	--	--	--	--	--	--
MAY 30...	0	0	0	0	30	10	20	2	10	15	12	3

DATE	COPPER, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CU)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	IRON, SUS- PENDE RECOV- ERABLE (UG/L AS FE)	IRON, DIS- SOLVED (UG/L AS FE)	IRON, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS FE)	LEAD, TOTAL RECOV- ERABLE (UG/L AS PB)	LEAD, SUS- PENDE RECOV- ERABLE (UG/L AS PB)	LEAD, DIS- SOLVED (UG/L AS PB)	LEAD, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS PB)	LITHIUM TOTAL RECOV- ERABLE (UG/L AS LI)	LITHIUM SUS- PENDE RECOV- ERABLE (UG/L AS LI)	LITHIUM DIS- SOLVED (UG/L AS LI)
OCT 22...	--	760	710	50	--	--	--	--	--	20	0	20
MAY 30...	5	4100	4100	20	1500	0	0	0	10	--	--	--

DATE	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)	MANGA- NESE, SUS- PENDE RECOV. (UG/L AS MN)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	MANGA- NESE, RECOV. FM BOT- TOM MA- TERIAL (UG/G)	MERCURY TOTAL RECOV- ERABLE (UG/L AS HG)	MERCURY SUS- PENDE RECOV- ERABLE (UG/L AS HG)	MERCURY DIS- SOLVED (UG/L AS HG)	MERCURY RECOV. FM BOT- TOM MA- TERIAL (UG/G AS HG)	NICKEL, TOTAL RECOV- ERABLE (UG/L AS NI)	NICKEL, SUS- PENDE RECOV- ERABLE (UG/L AS NI)	NICKEL, DIS- SOLVED (UG/L AS NI)
OCT 22...	50	10	40	--	--	--	--	--	--	--	--
MAY 30...	60	50	10	190	.3	.3	.0	.02	8	3	5

DATE	SELE- NIUM, TOTAL (UG/L AS SE)	SELE- NIUM, SUS- PENDE TOTAL (UG/L AS SE)	SELE- NIUM, DIS- SOLVED (UG/L AS SE)	SELE- NIUM, TOTAL IN BOT- TOM MA- TERIAL (UG/G)	STRON- TIUM, TOTAL RECOV- ERABLE (UG/L AS SR)	STRON- TIUM, SUS- PENDE RECOV. (UG/L AS SR)	STRON- TIUM, DIS- SOLVED (UG/L AS SR)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN)	ZINC, SUS- PENDE RECOV- ERABLE (UG/L AS ZN)	ZINC, DIS- SOLVED (UG/L AS ZN)	ZINC, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS ZN)
OCT 22...	--	--	--	--	420	0	500	--	--	--	--
MAY 30...	3	0	3	0	--	--	--	80	70	10	8

WATER-QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

	BED MAT. FALL DIAM.	BED MAT. FALL DIAM.	BED MAT. FALL DIAM.	BED MAT. SIEVE DIAM.	BED MAT. SIEVE DIAM.	BED MAT. SIEVE DIAM.	BED MAT. SIEVE DIAM.	BED MAT. SIEVE DIAM.
	% FINER THAN	% FINER THAN	% FINER THAN	% FINER THAN	% FINER THAN	% FINER THAN	% FINER THAN	% FINER THAN
DATE	.250 MM	.500 MM	1.00 MM	2.00 MM	4.00 MM	8.00 MM	16.0 MM	32.0 MM
MAY								
03...	7	16	26	33	44	63	85	100
30...	--	--	--	--	--	--	--	--

06376300 BLACK THUNDER CREEK NEAR HAMPSHIRE, WY--Continued

QUALITATIVE AND ASSOCIATED QUANTITATIVE ANALYSES OF BIOLOGICAL DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

PHYTOPLANKTON ANALYSES

DATE TIME	OCT 22, 80 1030	MAY 30, 81 0900
TOTAL CELLS/ML	3400	11000
DIVERSITY: DIVISION	1.2	1.3
.CLASS	1.2	1.3
..ORDER	1.9	2.6
...FAMILY	2.2	3.0
....GENUS	2.3	3.2

ORGANISM	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT
BACILLARIOPHYTA (DIATOMS)				
.BACILLARIOPHYCEAE				
..ACHNANTHALES				
...ACHNANTHACEAE				
....ACHNANTHES	--	-	2200#	20
..BACILLARIALES				
...NITZSCHIA				
....NITZSCHIA	120	3	2100#	19
...EUPODISCALES				
...COSCINODISCACEAE				
....CYCLOTELLA	77	2	1400	13
...NAVICULALES				
...NAVICULACEAE				
....NAVICULA	--	-	760	7
CHLOROPHYTA (GREEN ALGAE)				
.CHLOROPHYCEAE				
..CHLOROCOCCALES				
...DICTYOSPHAERIA				
....DICTYOSPHAERIUM	100	3	950	9
...MICRACTINIA				
....MICRACTINIUM	26	1	--	-
...OOCYSTACEAE				
...ANKISTRODESMUS	430	13	1200	11
...SELENASTRUM	26	1	--	-
...SCENEDESMACEAE				
....ACTINASTRUM	--	-	380	3
....CRUCIGENIA	100	3	380	3
...SCENEDESMUS	--	-	380	3
....TETRASTRUM	52	2	--	-
...VOLVOCALES				
...CHLAMYDOMONADACEAE				
....CHLAMYDOMONAS	*	0	470	4
CYANOPHYTA (BLUE-GREEN ALGAE)				
.CYANOPHYCEAE				
..CHROOCOCCALES				
...CHROOCOCCACEAE				
....ANACYSTIS	820#	25	--	-
...OSCILLATORIALES				
...OSCILLATORIA				
....LYNGBYA	1500#	46	--	-
EUGLENOPHYTA (EUGLENOIDS)				
.EUGLENOPHYCEAE				
..EUGLENALES				
...EUGLENACEAE				
....EUGLENA	*	0	--	-
....PHACUS	--	-	95	1
...TRACHELOMONAS	26	1	760	7
PYRRHOPHYTA (FIRE ALGAE)				
.DINOPHYCEAE				
..DINOKONTAE				
...GLENODINIACEAE				
....GLENODINIUM	*	0	--	-

NOTE: # - DOMINANT ORGANISM; EQUAL TO OR GREATER THAN 15%

* - OBSERVED ORGANISM, MAY NOT HAVE BEEN COUNTED; LESS THAN 1/2%

CHEYENNE RIVER BASIN

06378300 LODGEPOLE CREEK NEAR HAMPSHIRE, WY

LOCATION.--Lat 43°33'40", long 104°33'40", in SE¼NE¼ sec.5, T.41 N., R.64 W., Weston County, Hydrologic Unit 10120103, on right bank 300 ft (91 m) downstream from bridge on county road, 3.4 mi (5.5 km) downstream from Wildcat Creek, 6.7 mi (10.8 km) east of Hampshire, 8.8 mi (14.2 km) upstream from mouth, and 27 mi (43 km) southwest of Newcastle.

DRAINAGE AREA.--354 mi² (917 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1977 to September 1981 (discontinued).

GAGE.--Water-stage recorder and sharp-crested weir. Altitude of gage is 3,950 ft (1,200 m), from topographic map.

REMARKS.--Records good except those for winter period, which are poor. Numerous small stock ponds above station. Diversions for irrigation of about 300 acres (1.21 km²) above station.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 500 ft³/s (14.2 m³/s) June 16, 1980, gage height, 5.78 ft (1.762 m); no flow for many days each year.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 42 ft³/s (1.19 m³/s) Aug. 16, gage height, 2.78 ft (0.847 m); no flow for many days.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.14	.03	.21	.13	.02	.01	.00	.00	.00
2	.00	.00	.00	.14	.02	.17	.10	.02	.00	.00	.00	.00
3	.00	.00	.00	.12	.02	.17	.13	.03	.02	.00	.00	.00
4	.00	.00	.01	.10	.02	.17	.13	.11	.07	.00	.00	.00
5	.00	.00	.12	.07	.01	.17	.13	.17	.06	.00	.00	.00
6	.00	.00	.10	.06	.01	.21	.13	.20	.02	.00	.00	.00
7	.00	.00	.06	.06	.00	.21	.13	.77	.00	.00	.00	.00
8	.00	.00	.03	.05	.00	.21	.13	.80	.00	.00	.00	.00
9	.00	.00	.04	.05	.00	.21	.13	.51	.00	.00	.00	.00
10	.00	.00	.04	.05	.00	.17	.08	.49	.00	.00	.00	.00
11	.00	.00	.05	.05	.00	.10	.06	.49	.00	.00	.00	.00
12	.00	.00	.06	.06	.00	.10	.05	.49	.00	.00	.00	.00
13	.00	.00	.08	.05	.04	.10	.04	.40	.00	.00	.00	.00
14	.00	.00	.10	.05	.07	.10	.02	.27	.00	.00	.00	.00
15	.00	.00	.10	.04	.16	.07	.02	.27	.00	.00	.00	.00
16	.00	.00	.10	.02	.34	.06	.02	.27	.00	.00	18	.00
17	.00	.00	.17	.03	.50	.07	.02	.21	.00	.00	14	.00
18	.00	.00	.17	.05	.35	.08	.02	.17	.00	.00	19	.00
19	.00	.00	.10	.05	.23	.11	.02	.14	.00	.00	15	.00
20	.00	.00	.07	.04	.10	.13	.02	.10	.00	.00	8.3	.00
21	.00	.00	.05	.05	.36	.50	.04	.28	.00	.00	3.9	.00
22	.00	.00	.04	.06	.21	.41	.06	.28	.00	.00	1.3	.00
23	.00	.00	.04	.07	.49	.38	.06	.36	.00	.00	.22	.00
24	.00	.00	.03	.07	.49	.27	.06	.20	.00	.00	.08	.00
25	.00	.00	.07	.06	.40	.27	.05	.09	.00	.00	.04	.00
26	.00	.00	.12	.05	.33	.23	.04	.09	.00	.00	.03	.00
27	.00	.00	.14	.05	.33	.09	.03	.08	.00	.00	.00	.00
28	.00	.00	.14	.05	.21	.07	.03	.07	.00	.00	.00	.00
29	.00	.00	.14	.05	---	.07	.03	.06	.00	.00	.00	.00
30	.00	.00	.14	.05	---	.08	.02	.03	.00	.00	.00	.00
31	.00	---	.14	.04	---	.13	---	.02	---	.00	.00	---
TOTAL	.00	.00	2.45	1.88	4.72	5.32	1.93	7.49	.18	.00	79.87	.00
MEAN	.000	.000	.079	.061	.17	.17	.064	.24	.006	.000	2.58	.000
MAX	.00	.00	.17	.14	.50	.50	.13	.80	.07	.00	19	.00
MIN	.00	.00	.00	.02	.00	.06	.02	.02	.00	.00	.00	.00
AC-FT	.00	.00	4.9	3.7	9.4	11	3.8	15	.4	.00	158	.00
CAL YR 1980	TOTAL	141.60	MEAN	.39	MAX	57	MIN	.00	AC-FT	281		
WTR YR 1981	TOTAL	103.84	MEAN	.28	MAX	19	MIN	.00	AC-FT	206		

06378300 LODGEPOLE CREEK NEAR HAMPSHIRE, WY--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--October 1977 to September 1981 (discontinued).

WATER-QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	COLOR (PLAT- INUM- COBALT UNITS)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION)	HARD- NESS (MG/L AS CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)
DEC 16...	1245	.10	4280	8.8	3.0	--	12.0	103	160	23
JAN 14...	0815	.05	3900	8.4	.0	--	11.6	89	170	27
FEB 20...	0915	.21	2455	9.0	1.0	--	--	--	91	15
MAR 14...	1115	.10	2800	8.5	10.0	--	10.6	108	120	20
APR 16...	0955	.02	3380	8.9	16.0	21	--	--	150	25
MAY 19...	1000	.10	3630	8.6	11.0	15	9.3	97	150	25

DATE	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	POTAS- SIUM 40 DIS- SOLVED (PCI/L AS K40)	ALKA- LINITY LAB (MG/L AS CACO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SiO2)
DEC 16...	25	1100	38	8.3	6.2	940	1600	30	.7	4.9
JAN 14...	24	940	32	6.1	4.6	880	1200	25	.7	2.9
FEB 20...	13	580	26	3.7	2.8	540	730	15	.4	3.0
MAR 14...	16	660	27	4.5	3.4	680	850	25	.5	1.2
APR 16...	21	830	30	6.1	4.6	830	450	26	.7	.5
MAY 19...	21	810	29	6.3	4.7	880	1200	12	.6	3.1

DATE	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)	SOLIDS, DIS- SOLVED (TONS PER DAY)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N)	NITRO- GEN, AMMONIA TOTAL (MG/L AS NH4)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO- GEN,NH4 + ORG. SUSP. TOTAL (MG/L AS N)
DEC 16...	3160	3360	4.6	.91	.08	.060	.07	1.8	1.90	1.7
JAN 14...	2870	2760	3.8	.37	.00	.090	.11	1.5	1.60	.10
FEB 20...	1690	1690	2.3	.96	.01	.060	--	1.0	1.10	.00
MAR 14...	1950	1990	2.7	.54	--	--	--	--	--	--
APR 16...	2470	1860	2.5	.10	.00	.090	--	1.5	1.60	.40
MAY 19...	2610	2610	3.6	.70	--	--	--	--	--	--

WATER-QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	COAL IN BOTTOM MATERIAL (GM/KG)	H-2/ H-1/ STABLE ISOTOPE RATIO PER MILL	PHYTO- PLANK- TON, TOTAL (CELLS PER ML)	PERI- PHYTON BIOMASS ASH WEIGHT G/SQ M	PERI- PHYTON BIOMASS TOTAL DRY WEIGHT G/SQ M	BIOMASS CHLORO- PHYLL RATIO PERI- PHYTON (UNITS)	CHLOR-A PERI- PHYTON CHROMO- GRAPHIC FLUOROM (MG/M2)	CHLOR-B PERI- PHYTON CHROMO- GRAPHIC FLUOROM (MG/M2)	SEDI- MENT, SUS- PENDED (MG/L)	SEDI- MENT, DIS- CHARGE, SUS- PENDED (T/DAY)
DEC 16...	--	--	4400	--	--	--	--	--	114	.03
JAN 14...	--	--	1200	--	--	--	--	--	57	.01
FEB 20...	--	--	1600	--	--	--	--	--	28	.02
MAR 14...	--	--	4500	--	--	--	--	--	112	.03
APR 16...	17.0	--	24000	--	--	--	--	--	131	.01
MAY 19...	--	9.3	2900	1.18	1.73	251	2.19	.650	209	.06

[illegible]

WATER-QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

[illegible]

CHEYENNE RIVER BASIN

06378300 LODGEPOLE CREEK NEAR HAMPSHIRE, WY--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	TIME	GROSS ALPHA, DIS- SOLVED (UG/L AS U-NAT)	GROSS ALPHA, SUSP. TOTAL (UG/L AS U-NAT)	GROSS BETA, DIS- SOLVED (PCI/L AS CS-137)	GROSS BETA, SUSP. TOTAL (PCI/L AS CS-137)	GROSS BETA, DIS- SOLVED (PCI/L AS SR/ YT-90)	GROSS BETA, SUSP. TOTAL (PCI/L AS SR/ YT-90)	GROSS ALPHA, DIS- SOLVED (PCI/L AS U-NAT)	GROSS ALPHA, SUSP. TOTAL (PCI/L AS U-NAT)
APR 16...	0955	<54	<4.4	<26	6.3	<25	6.2	37	3.0

DATE	TIME	TEMPER- ATURE (DEG C)	STREAM- FLOW, INSTAN- TANEOUS (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
FEB 20...	0915	1.0	.21	3	6	12	14

DATE	BED MAT. FALL DIAM. % FINER THAN 1.00 MM	BED MAT. SIEVE DIAM. % FINER THAN 2.00 MM	BED MAT. SIEVE DIAM. % FINER THAN 4.00 MM	BED MAT. SIEVE DIAM. % FINER THAN 8.00 MM	BED MAT. SIEVE DIAM. % FINER THAN 16.0 MM	BED MAT. SIEVE DIAM. % FINER THAN 32.0 MM
FEB 20...	15	20	33	52	73	100

06378300 LODGEPOLE CREEK NEAR HAMPSHIRE, WY--Continued

QUALITATIVE AND ASSOCIATED QUANTITATIVE ANALYSES OF BIOLOGICAL DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
PHYTOPLANKTON ANALYSES

DATE TIME	DEC 16,80 1245		JAN 14,81 0815		FEB 20,81 0915		MAR 14,81 1115		APR 16,81 0955		MAY 19,81 1000	
TOTAL CELLS/ML	4400		1200		1600		4500		24000		2900	
DIVERSITY: DIVISION	0.7		1.5		0.5		1.8		1.6		1.7	
...CLASS	0.7		1.5		0.5		1.8		1.6		1.7	
...ORDER	1.1		2.3		0.8		2.1		2.0		2.6	
...FAMILY	1.1		2.3		0.8		2.5		2.7		3.0	
...GENUS	1.1		2.4		0.8		2.7		3.0		3.3	
ORGANISM	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT
BACILLARIOPHYTA (DIATOMS)												
.BACILLARIOPHYCEAE												
..ACHNANTHALES												
...ACHNANTHACEAE												
....ACHNANTHES												
..BACILLARIALES												
...NITZSCHIA												
....NITZSCHIA												
...EUPODISCALES												
...COSCINODISCACEAE												
....CYCLOTELLA												
..FRAGILARIALES												
...FRAGILARIACEAE												
....DIATOMA												
....FRAGILARIA												
..NAVICULALES												
...ENTOMONEIDACEAE												
....ENTOMONEIS												
...NAVICULACEAE												
....NAVICULA												
..SURIRELLALES												
...SURIRELLACEAE												
....SURIRELLA												
CHLOROPHYTA (GREEN ALGAE)												
.CHLOROPHYCEAE												
..CHLOROCOCCALES												
...DICTYOSPHAERIACEAE												
....DICTYOSPHAERIUM												
...OOCYSTACEAE												
....ANKISTRODESMUS												
....KIRCHNERIELLA												
...OOCYSTIS												
...SELENASTRUM												
..SCENEDESMACEAE												
....SCENEDESMUS												
....TETRASTRUM												
..VOLVOCALES												
...CHLAMYDOMONADACEAE												
....CHLAMYDOMONAS												
CRYPTOPHYTA (CRYPTOMONADS)												
.CRYPTOPHYCEAE												
...CRYPTOMONADALES												
...CRYPTOCHRYSIDACEAE												
....CHROOMONAS												
CYANOPHYTA (BLUE-GREEN ALGAE)												
.CYANOPHYCEAE												
...CHROOCOCCALES												
...CHROOCOCCACEAE												
....ANACYSTIS												
...NOSTOCALES												
...NOSTOCACEAE												
....ANABAENA												
...OSCILLATORIALES												
...OSCILLATORIACEAE												
....OSCILLATORIA												
EUGLENOPHYTA (EUGLENIDS)												
.EUGLENOPHYCEAE												
...EUGLENALES												
...EUGLENACEAE												
....EUGLENA												
....PHACUS												
....TRACHELOMONAS												
PYRRHOPHYTA (FIRE ALGAE)												
.DINOPHYCEAE												
...DINOKONTAE												
...GYMNODINIACEAE												
....GYMNODINIUM												
...PERIDINIACEAE												
....PERIDINIUM												

NOTE: # - DOMINANT ORGANISM; EQUAL TO OR GREATER THAN 15%

* - OBSERVED ORGANISM, MAY NOT HAVE BEEN COUNTED; LESS THAN 1/2%

06386000 LANCE CREEK NEAR RIVERVIEW, WY

LOCATION.--Lat 43°21'20", long 104°16'13", in NW¼SE¼, sec.14, T.39 N., R.62 W., Niobrara County, Hydrologic Unit 10120104, on right bank 0.4 mi (0.6 km) north of former Spencer post office, 1.0 mi (1.6 km) upstream from mouth, 5.7 mi (9.2 km) southwest of Riverview, and 35 mi (56 km) south of Newcastle. Prior to Apr. 23, 1981, site 1.0 mi (1.6 km) upstream.

DRAINAGE AREA.--2,070 mi² (5,360 km²), approximately.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--April 1948 to September 1954, August 1956 to current year. Prior to October 1976, published as "at Spencer."

REVISED RECORDS.--WSP 1209: 1948(P), 1950.

GAGE.--Water-stage recorder. Altitude of gage is 3,750 ft (1,143 m), from map prepared by Army Map Service, Corps of Engineers. April to Aug. 14, 1948, nonrecording gage, Aug. 23, 1948 to Apr. 22, 1981, recording gage at site 1.0 mi (1.6 km) upstream at different datum.

REMARKS.--Records fair except those prior to April, which are poor. There are many small reservoirs above station used for storage of stock and irrigation water, total capacity, about 12,800 acre-ft (15.8 hm³). Diversions for irrigation of about 3,500 acres (14.2 km²) above station.

AVERAGE DISCHARGE.--31 years, 25.9 ft³/s (0.733 m³/s), 18,760 acre-ft/yr (23.1 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 7,410 ft³/s (210 m³/s) May 24, 1971, gage height, 9.67 ft (2.947 m) site and datum then in use; no flow for many days most years.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 750 ft³/s (21.2 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)		Gage height (ft) (m)	
July 14	1430	*2,270	64.3	7.41	2.259
July 18	2200	2,120	60.0	7.21	2.198
July 26	1800	1,220	34.6	5.85	1.783

Minimum daily discharge, 0.03 ft³/s (0.001 m³/s) July 10-12.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.41	1.7	1.7	3.4	2.6	1.0	1.1	.91	12	.57	38	3.7
2	.43	1.9	1.4	3.1	2.3	.92	.98	.91	11	1.3	32	3.1
3	.48	1.9	1.7	3.0	2.3	.92	1.5	1.7	9.0	.91	28	2.4
4	.54	1.9	2.1	3.0	2.2	.92	1.7	3.7	11	.57	25	2.4
5	.59	1.5	2.0	2.9	2.4	.92	.98	1.9	110	.18	50	1.9
6	.66	1.3	1.8	2.8	2.2	1.0	.98	3.1	92	.06	230	2.6
7	.71	1.3	1.7	2.8	2.0	1.0	.87	5.5	41	.08	122	2.6
8	.75	1.5	1.6	2.7	1.9	1.0	.87	2.9	25	.08	50	1.9
9	.80	1.3	1.7	2.7	1.7	1.0	.98	1.2	20	.04	34	1.9
10	.86	1.3	1.8	2.6	1.4	1.0	.98	1.5	16	.03	53	1.3
11	.91	1.3	2.1	2.5	1.4	1.2	.98	1.3	13	.03	28	.91
12	.95	1.5	2.3	2.6	1.6	1.3	.98	2.9	12	.03	23	.57
13	1.0	2.5	2.5	2.7	2.1	1.3	.98	2.6	337	.90	18	.33
14	1.0	2.8	2.8	2.6	4.2	1.3	1.0	1.2	162	1670	23	.22
15	2.5	2.2	3.6	2.5	8.6	1.3	1.0	1.0	57	329	32	.18
16	22	1.9	5.1	2.2	25	1.3	1.0	15	34	127	63	.14
17	14	1.7	6.2	2.2	18	1.3	1.0	3.9	16	53	66	.11
18	9.0	1.8	5.2	2.4	15	1.3	1.1	3.4	8.1	920	25	.08
19	7.2	1.9	3.4	2.6	13	1.3	1.1	2.4	6.6	524	33	.08
20	6.2	2.0	2.6	2.8	12	1.2	1.3	1.9	5.2	139	21	.08
21	5.2	2.1	2.7	3.0	9.6	1.7	1.5	3.9	4.2	68	16	.08
22	4.7	2.3	3.4	3.2	7.7	1.3	1.7	4.5	3.7	49	13	.06
23	3.8	2.2	3.1	3.6	6.1	1.5	1.1	3.9	2.9	41	11	.06
24	3.0	2.0	2.1	4.0	4.7	1.2	.91	2.4	2.6	64	10	.06
25	2.5	1.9	2.3	3.8	4.4	1.2	.91	2.6	2.1	61	9.4	.06
26	2.3	2.0	2.6	3.6	3.5	1.0	.91	3.4	1.9	491	8.1	.06
27	2.5	1.9	2.9	3.4	2.1	1.1	.91	7.0	1.5	642	7.0	.06
28	2.5	2.0	3.2	3.2	1.2	1.5	1.5	129	1.3	212	6.2	.06
29	2.3	2.1	3.6	3.0	---	1.3	1.0	50	1.0	110	5.5	.04
30	2.1	2.0	4.1	3.1	---	1.1	.91	18	.67	68	4.9	.06
31	1.9	---	3.8	2.9	---	1.3	---	25	---	48	3.9	---
TOTAL	103.79	55.7	87.1	90.9	161.2	36.68	32.73	308.62	1019.77	5709.88	1089.0	27.10
MEAN	3.35	1.86	2.81	2.93	5.76	1.18	1.09	9.96	34.0	184	35.1	.90
MAX	22	2.8	6.2	4.0	25	1.7	1.7	129	337	1670	230	3.7
MIN	.41	1.3	1.4	2.2	1.2	.92	.87	.91	.67	.03	3.9	.04
AC-FT	206	110	173	180	320	73	65	612	2020	11330	2160	54
CAL YR 1980	TOTAL	8791.96	MEAN	24.0	MAX	1110	MIN	.03	AC-FT	17440		
WTR YR 1981	TOTAL	8722.47	MEAN	23.9	MAX	1670	MIN	.03	AC-FT	17300		

06386000 LANCE CREEK NEAR RIVERVIEW, WY--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1950-54, 1957-59, 1976 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	TUR- BID- ITY (NTU)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN DEMAND, BIO- CHEM- ICAL, 5 DAY (MG/L)	HARD- NESS (MG/L AS CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)
OCT										
22...	1200	4.7	2510	8.0	12.5	--	9.8	2.8	650	160
NOV										
18...	1200	1.9	3330	7.9	1.5	75	11.4	1.0	860	210
DEC										
16...	1345	5.5	2640	7.9	2.0	100	12.0	2.4	670	170
JAN										
20...	1245	3.1	3360	8.0	.5	1.0	12.3	1.2	850	210
FEB										
19...	1500	7.8	2460	8.0	2.5	7.9	12.0	1.2	630	160
MAR										
18...	1240	1.6	3400	8.1	10.0	11	11.5	--	850	210
APR										
22...	1700	1.3	3630	8.1	15.0	18	8.9	1.7	870	210
MAY										
21...	1210	3.7	3250	8.1	19.0	37	9.3	1.7	810	200
28...	1245	129	540	7.6	17.5	--	6.8	--	--	--
JUN										
18...	1945	7.0	2240	7.9	22.5	89	6.6	1.6	620	160
JUL										
15...	1120	325	--	--	24.0	--	--	--	--	--
18...	1815	1170	540	7.4	17.5	6000	--	6.7	160	45
19...	0830	500	--	--	19.0	--	--	--	--	--
AUG										
19...	1545	29	1840	8.2	28.5	150	7.1	2.1	480	131
SEP										
22...	1525	.04	2650	8.2	20.5	2.2	8.7	1.1	1400	350

DATE	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	POTAS- SIUM 40 DIS- SOLVED (PCI/L AS K40)	ALKA- LITY LAB (MG/L AS CACO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)
OCT									
22...	61	360	6.1	12	9.0	260	1000	88	.6
NOV									
18...	81	540	8.0	12	9.0	360	1500	110	.5
DEC									
16...	60	430	7.2	13	9.7	280	1100	120	.5
JAN									
20...	78	480	7.2	11	8.2	160	1500	110	.6
FEB									
19...	57	380	6.6	8.5	6.3	250	990	120	.5
MAR									
18...	80	560	8.3	11	8.2	300	1600	130	.5
APR									
22...	84	600	8.9	12	9.0	290	1600	120	.5
MAY									
21...	75	530	8.1	12	9.0	290	1500	110	.5
28...	--	--	--	--	--	--	--	--	--
JUN									
18...	54	310	5.4	11	8.2	250	920	78	.5
JUL									
15...	--	--	--	--	--	--	--	--	--
18...	12	43	1.5	7.3	5.4	68	180	12	.4
19...	--	--	--	--	--	--	--	--	--
AUG									
19...	38	260	5.5	11	--	200	660	110	.5
SEP									
22...	130	750	8.7	14	--	340	2500	34	.5

CHEYENNE RIVER BASIN

06386000 LANCE CREEK NEAR RIVERVIEW, WY--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	SILICA, DIS- SOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)	SOLIDS, DIS- SOLVED (TONS PER DAY)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N)	NITRO- GEN, AMMONIA TOTAL (MG/L AS NH4)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N)
OCT 22...	10	1850	2.5	23.5	.10	.050	.06	.95	1.00
NOV 18...	13	2680	3.6	13.7	.00	.120	.15	.43	.55
DEC 16...	9.8	2070	2.8	30.7	.15	.050	.06	.50	.55
JAN 20...	12	2500	3.4	20.9	.09	.080	.10	.44	.52
FEB 19...	11	1880	2.6	39.6	.01	.050	--	.74	.79
MAR 18...	9.7	2780	3.8	12.0	.02	.080	--	.78	.86
APR 22...	10	2810	3.8	9.9	.01	.090	--	.91	1.00
MAY 21...	12	2610	3.6	26.1	.02	.090	--	.81	.90
28...	--	--	--	--	--	--	--	--	--
JUN 18...	13	1700	2.3	32.1	.12	.070	--	1.0	1.10
JUL 15...	--	--	--	--	--	--	--	--	--
18...	5.9	347	.47	1100	3.3	.130	--	7.3	7.40
19...	--	--	--	--	--	--	--	--	--
AUG 19...	12	1340	1.8	105	.15	.090	--	1.3	1.40
SEP 22...	16	4000	5.4	.43	>.10	.190	--	.51	.70

DATE	NITRO- GEN, TOTAL (MG/L AS N)	NITRO- GEN, TOTAL (MG/L AS NO3)	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHORUS, TOTAL (MG/L AS PO4)	CYANIDE TOTAL (MG/L AS CN)	PHENOLS (UG/L)	SEDI- MENT, SUS- PENDEED (MG/L)	SEDI- MENT, DIS- CHARGE, SUS- PENDEED (T/DAY)
OCT 22...	1.1	4.9	.050	.15	.00	0	137	1.7
NOV 18...	.55	2.4	.030	.09	--	--	--	--
DEC 16...	.70	3.1	.020	.06	--	--	126	1.9
JAN 20...	.61	2.7	.010	.03	--	--	20	.17
FEB 19...	.80	3.5	.040	.12	.00	11	117	2.5
MAR 18...	.88	3.9	.030	.09	--	--	98	.42
APR 22...	1.0	4.5	.040	.12	--	--	107	.38
MAY 21...	.92	4.1	.050	.15	--	--	166	1.7
28...	--	--	--	--	.00	6	9250	3220
JUN 18...	1.2	5.4	.080	.25	--	--	316	6.0
JUL 15...	--	--	--	--	--	--	4630	4060
18...	11	47	3.30	10	--	--	14800	46800
19...	--	--	--	--	--	--	6050	8170
AUG 19...	1.6	6.9	.110	.34	--	--	409	32
SEP 22...	--	--	.030	.09	--	--	66	.01

WATER-QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

[illegible]

CHEYENNE RIVER BASIN

06386000 LANCE CREEK NEAR RIVERVIEW, WY--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

[illegible][illegible]

06386000 LANCE CREEK NEAR RIVERVIEW, WY--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

		GROSS ALPHA, DIS- SOLVED (UG/L AS U-NAT)	GROSS ALPHA, SUSP. TOTAL (UG/L AS U-NAT)	GROSS BETA, DIS- SOLVED (PCI/L AS CS-137)	GROSS BETA, SUSP. TOTAL (PCI/L AS CS-137)	GROSS BETA, DIS- SOLVED (PCI/L AS SR/ YT-90)	GROSS BETA, SUSP. TOTAL (PCI/L AS SR/ YT-90)	RADIUM 226, DIS- SOLVED, RADON METHOD (PCI/L)	URANIUM NATURAL DIS- SOLVED (UG/L AS U)	GROSS ALPHA, DIS- SOLVED (PCI/L AS U-NAT)	GROSS ALPHA, SUSP. TOTAL (PCI/L AS U-NAT)	
OCT 22...	1200	31	5.3	<13	6.4	<12	6.3	.13	16	21	3.6	
JAN 20...	1245	<50	.6	<19	2.5	<18	2.4	.10	18	34	.4	
APR 22...	1700	<72	<.8	<29	2.0	<28	2.0	.24	21	49	.5	
JUL 18...	1815	<8.9	480	9.9	410	9.6	400	.62	3.6	--	330	
DATE	TIME	TEMPER- ATURE (DEG C)	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SED. SUSP. FALL DIAM. % FINER THAN .004 MM	SED. SUSP. FALL DIAM. % FINER THAN .016 MM	SED. SUSP. FALL DIAM. % FINER THAN .062 MM	SED. SUSP. FALL DIAM. % FINER THAN .062 MM	SED. SUSP. FALL DIAM. % FINER THAN .125 MM	SED. SUSP. FALL DIAM. % FINER THAN .250 MM	SED. SUSP. FALL DIAM. % FINER THAN .500 MM	SED. SUSP. FALL DIAM. % FINER THAN 1.00 MM	SED. SUSP. FALL DIAM. % FINER THAN 2.00 MM
FEB 19...	1500	2.5	7.8	--	--	--	--	--	--	--	--	--
MAY 28...	1245	17.5	129	79	98	100	--	--	--	--	--	--
JUL 15...	1120	24.0	325	83	96	100	--	--	--	--	--	--
18...	1815	17.5	1170	73	91	--	96	96	97	98	99	100
19...	0830	19.0	500	76	94	100	--	--	--	--	--	--
SEP 22...	1525	20.5	.04	--	--	--	--	--	--	--	--	--
DATE	NUMBER OF SAM- PLING POINTS	BED MAT. FALL DIAM. % FINER THAN .062 MM	BED MAT. FALL DIAM. % FINER THAN .125 MM	BED MAT. FALL DIAM. % FINER THAN .250 MM	BED MAT. FALL DIAM. % FINER THAN .500 MM	BED MAT. FALL DIAM. % FINER THAN 1.00 MM	BED MAT. FALL DIAM. % FINER THAN 2.00 MM	BED MAT. FALL DIAM. % FINER THAN 4.00 MM	BED MAT. FALL DIAM. % FINER THAN 8.00 MM	BED MAT. FALL DIAM. % FINER THAN 16.0 MM	BED MAT. FALL DIAM. % FINER THAN 32.0 MM	
FEB 19...	2	1	2	6	16	36	54	70	83	96	100	
MAY 28...	--	--	--	--	--	--	--	--	--	--	--	
JUL 15...	--	0	0	2	34	57	78	95	98	100	--	
18...	--	--	--	--	--	--	--	--	--	--	--	
19...	--	0	1	2	34	64	86	95	99	100	--	
SEP 22...	--	0	0	2	11	68	92	100	--	--	--	

CHEYENNE RIVER BASIN

06386400 CHEYENNE RIVER AT RIVERVIEW, WY

LOCATION.--Lat 43°25'41", long 104°11'45", in NW¼NE¼SW¼ sec.21, T.40 N., R.61 W., Niobrara County, Hydrologic Unit 10120106, at bridge on U.S. Highway 85, 0.5 mi (0.8 km) north of Riverview, 0.9 mi (1.4 km) upstream from Bobcat Creek, 4.7 mi (7.6 km) upstream from former gaging station, and 30 mi (48 km) south of Newcastle.

DRAINAGE AREA.--5,160 mi² (13,360 km²), approximately.

PERIOD OF RECORD.--Water years 1951-54, 1969-70, 1972 to current year.

REMARKS.--Published as South Fork Cheyenne River near Spencer prior to October 1951, as Cheyenne River near Spencer 1952-76, and as Cheyenne River near Riverview 1977-79.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	TUR- BID- ITY (NTU)	OXYGEN, DIS- SOLVED (MG/L)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	HARD- NESS (MG/L AS CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)
OCT										
22...	0900	5.8	2800	8.2	5.5	330	10.1	84	710	170
NOV										
18...	1330	2.3	3560	7.9	.5	4.0	11.2	K1	970	230
DEC										
16...	1130	6.0	3230	8.1	.0	5.0	12.4	K2	860	210
JAN										
20...	0945	E4.0	3960	7.8	.0	2.0	11.4	K1	1000	250
FEB										
19...	1020	10	2590	7.9	.5	7.0	12.0	K1	680	170
MAR										
18...	1415	1.6	3820	8.2	11.0	2.0	11.2	K1	1000	240
APR										
22...	1350	1.9	4040	8.2	16.5	4.0	9.0	830	1000	250
MAY										
21...	1345	4.6	3500	7.9	19.0	6.0	8.4	53	800	190
28...	1440	177	940	7.5	22.5	--	5.7	--	--	--
JUN										
18...	1630	4.4	2280	8.2	25.5	110	7.5	180	630	160
JUL										
18...	1330	43	1170	7.9	28.5	270	--	K540	300	79
AUG										
19...	1730	38	1350	8.3	29.0	240	7.2	490	340	89
SEP										
22...	1630	E.10	4910	8.1	19.0	3.0	8.2	K1	1400	330

E-Estimate.

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

DATE	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	POTAS- SIUM 40 DIS- SOLVED (PCI/L AS K40)	ALKA- LINITY LAB (MG/L AS CACO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SiO2)
OCT										
22...	69	390	6.4	12	9.0	180	1300	74	.6	8.8
NOV										
18...	96	590	8.2	19	14	300	1900	88	.4	9.7
DEC										
16...	82	510	7.6	14	10	290	1500	100	.5	9.2
JAN										
20...	100	640	8.7	11	--	360	1800	110	.6	11
FEB										
19...	62	400	6.7	7.6	5.7	240	1100	83	.4	9.1
MAR										
18...	97	630	8.7	12	9.0	270	1900	110	.5	7.1
APR										
22...	100	690	9.3	14	10	250	2000	130	.5	8.3
MAY										
21...	80	580	8.9	11	8.2	250	1700	72	.5	7.1
28...	--	--	--	7.6	5.7	--	--	--	--	--
JUN										
18...	55	330	5.7	12	9.0	230	990	73	.6	11
JUL										
18...	26	150	3.7	9.5	7.1	150	430	34	.5	11
AUG										
19...	28	180	4.6	8.9	--	160	470	58	.4	11
SEP										
22...	140	790	9.2	15	--	260	2600	160	.5	8.8

06386400 CHEYENNE RIVER AT RIVERVIEW, WY

WATER-QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	SOLIDS, SUM OF CONSTITUENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)	SOLIDS, DIS- SOLVED (TONS PER DAY)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N)	NITRO- GEN, AMMONIA TOTAL (MG/L AS NH4)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO- GEN, TOTAL (MG/L AS N)
OCT 22...	2130	2.9	33.4	.00	.050	.06	.89	.94	.94
NOV 18...	3110	4.2	19.3	.00	.170	.21	.36	.53	.53
DEC 16...	2600	3.5	42.1	.07	.060	.07	.42	.48	.55
JAN 20...	3140	4.3	33.9	.09	.090	.11	.46	.55	.64
FEB 19...	1980	2.7	53.5	.00	.030	--	.96	.99	.99
MAR 18...	3160	4.3	13.7	.00	.100	--	.46	.56	.56
APR 22...	3340	4.5	17.1	.01	.070	--	.69	.76	.77
MAY 21...	2790	3.8	34.7	.02	.140	--	.86	1.00	1.0
28...	--	--	--	--	--	--	--	--	--
JUN 18...	1770	2.4	21.0	.12	.060	--	1.0	1.10	1.2
JUL 18...	830	1.1	96.4	.10	.070	--	1.3	1.40	1.5
AUG 19...	942	1.3	96.7	.11	.090	--	1.3	1.40	1.5
SEP 22...	4200	5.7	1.1	>.10	.200	--	.63	.83	--

DATE	NITRO- GEN, TOTAL (MG/L AS NO3)	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHORUS TOTAL (MG/L AS PO4)	CARBON, ORGANIC DIS- SOLVED (MG/L AS C)	CARBON, ORGANIC SUS- PENDEED TOTAL (MG/L AS C)	CYANIDE TOTAL (MG/L AS CN)	PHENOLS (UG/L)	SEDI- MENT, SUS- PENDEED (MG/L)	SEDI- MENT, DIS- CHARGE, SUS- PENDEED (T/DAY)
OCT 22...	4.2	.120	.37	15	.7	.00	0	--	--
NOV 18...	2.3	.020	.06	--	--	--	--	--	--
DEC 16...	2.4	.020	.06	--	--	--	--	--	--
JAN 20...	2.8	.020	.06	23	.1	--	--	28	.30
FEB 19...	4.4	.040	.12	--	--	.00	--	54	1.5
MAR 18...	2.5	.010	.03	--	--	--	--	34	.15
APR 22...	3.4	.030	.09	5.9	.4	--	--	20	.10
MAY 21...	4.5	.020	.06	--	--	--	--	68	.84
28...	--	--	--	--	--	.00	4	18000	8600
JUN 18...	5.4	.090	.28	--	--	--	--	322	3.8
JUL 18...	6.6	.180	.55	6.8	--	--	--	444	52
AUG 19...	6.7	.170	.52	--	--	--	--	463	48
SEP 22...	--	.010	.03	--	--	--	--	16	.00

WATER-QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

[illegible]

WATER-QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

[illegible]

CHEYENNE RIVER BASIN

06386400 CHEYENNE RIVER AT RIVERVIEW, WY

WATER-QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	TIME	GROSS ALPHA, DIS- SOLVED (UG/L AS U-NAT)	GROSS ALPHA, SUSP. TOTAL (UG/L AS U-NAT)	GROSS BETA, DIS- SOLVED (PCI/L AS CS-137)	GROSS BETA, SUSP. TOTAL (PCI/L AS CS-137)	GROSS BETA, DIS- SOLVED (PCI/L AS SR/ YT-90)	GROSS BETA, SUSP. TOTAL (PCI/L AS SR/ YT-90)	RADIUM 226, DIS- SOLVED, RADON METHOD (PCI/L)	URANIUM NATURAL DIS- SOLVED (UG/L AS U)	GROSS ALPHA, DIS- SOLVED (PCI/L AS U-NAT)	GROSS ALPHA, SUSP. TOTAL (PCI/L AS U-NAT)
OCT 22...	0900	<34	6.1	<16	5.8	<15	5.7	.16	18	<23	4.1
MAY 28...	1440	<16	<650	13	540	12	520	.18	7.1	11	440

DATE	TIME	2,4-D, TOTAL (UG/L)	2,4-D, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	2, 4-DP TOTAL (UG/L)	2,4-DP, IN BOTTOM MAT. (UG/KG)	2,4,5-T TOTAL (UG/L)	2,4,5-T TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	SILVEX, TOTAL (UG/L)	SILVEX, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)
JUN 18...	1630	.02	0	.00	.00	.00	0	.01	0
JUL 18...	1330	.01	0	.00	.00	.00	0	.00	0
SEP 22...	1630	.00	0	.00	.00	.00	0	.00	0

DATE	TOTAL DICAMBA (UG/L)	DICAMBA IN BOTTOM MA- TERIAL (UG/KG)	TOTAL PICLORAM (UG/L)	PICLORAM IN BOTTOM MA- TERIAL (UG/KG)
JUN 18...	.00	.0	.02	.0
JUL 18...	.00	.0	.02	.0
SEP 22...	.00	.0	.03	.0

DATE	TIME	TEMPER- ATURE (DEG C)	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SED. SUSP. FALL DIAM. % FINER THAN .0004 MM	SED. SUSP. FALL DIAM. % FINER THAN .016 MM	BED MAT. FALL DIAM. % FINER THAN .062 MM	BED MAT. FALL DIAM. % FINER THAN .125 MM	BED MAT. FALL DIAM. % FINER THAN .250 MM
FEB 19...	1020	.5	10	--	--	1	1	3
MAY 28...	1440	22.5	177	80	100	2	3	8

DATE	BED MAT. FALL DIAM. % FINER THAN .500 MM	BED MAT. FALL DIAM. % FINER THAN 1.00 MM	BED MAT. SIEVE DIAM. % FINER THAN 2.00 MM	BED MAT. SIEVE DIAM. % FINER THAN 4.00 MM	BED MAT. SIEVE DIAM. % FINER THAN 8.00 MM	BED MAT. SIEVE DIAM. % FINER THAN 16.0 MM	BED MAT. SIEVE DIAM. % FINER THAN 32.0 MM
FEB 19...	20	31	46	66	88	99	100
MAY 28...	38	47	68	88	97	100	--

06392900 BEAVER CREEK AT MALLO CAMP, NEAR FOUR CORNERS, WY

LOCATION.--Lat 44°05'04", long 104°03'41", in NE¼NE¼ sec.4, T.47 N., R.60 W., Weston County, Hydrologic Unit 10120107, between Forest Service Road 811 and right bank in Mallo Campgrounds, 300 ft (91 m) upstream from mouth, 800 ft (244 m) upstream from dam on Stockade Beaver Creek, and 3.8 mi (6.1 km) east of Four Corners.

DRAINAGE AREA.--10.3 mi² (26.7 km²).

PERIOD OF RECORD.--October 1974 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 6,030 ft (1,840 m), from topographic map.

REMARKS.--Records fair except those for winter periods, which are poor.

AVERAGE DISCHARGE.--7 years, 1.92 ft³/s (0.054 m³/s), 1,390 acre-ft/yr (1.71 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 21 ft³/s (0.59 m³/s) Apr. 26, 1975, gage height, 5.40 ft (1.646 m); minimum daily, 0.23 ft³/s (0.007 m³/s) Oct. 14, 1977.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 3.3 ft³/s (0.093 m³/s) Sept. 5, gage height, 4.46 ft (1.359 m), no peak above base of 10 ft³/s (0.28 m³/s); maximum gage height, 5.67 ft (1.728 m) Nov. 19 (backwater from ice); minimum discharge, 1.2 ft³/s (0.034 m³/s) Feb. 10.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	10	11	12	12	12	12	11	8.0	7.8	9.8	7.3	10
2	11	11	12	12	11	12	12	8.0	6.7	9.6	7.3	10
3	11	11	12	12	11	12	12	8.7	6.7	9.6	7.3	10
4	11	11	12	12	11	12	12	8.9	7.1	9.6	6.9	11
5	10	11	12	12	11	12	11	8.0	8.0	9.4	6.9	10
6	10	11	12	12	10	11	11	8.0	8.2	9.4	8.7	11
7	9.8	11	12	12	10	12	11	8.0	8.4	9.1	10	11
8	9.6	11	12	12	10	12	9.8	7.6	9.8	8.9	9.8	11
9	2.3	11	12	12	10	12	10	7.6	11	8.9	10	11
10	2.3	11	12	11	9.0	12	9.8	7.3	12	8.0	10	11
11	2.3	11	12	11	9.5	12	9.8	7.3	11	6.9	9.8	10
12	2.3	11	12	12	9.5	12	10	7.3	11	6.7	9.6	10
13	2.3	11	12	12	10	12	9.6	7.3	11	8.4	10	10
14	2.3	11	12	12	10	12	11	7.1	11	7.3	10	10
15	2.6	11	12	12	11	12	10	6.9	11	7.1	11	10
16	2.5	11	12	12	11	12	8.8	6.9	11	6.9	11	10
17	12	11	12	12	11	12	8.7	6.9	11	6.9	11	10
18	12	11	12	12	12	12	9.1	6.9	11	7.1	11	10
19	12	11	11	12	12	12	8.7	6.9	11	6.7	10	10
20	11	11	10	12	12	12	8.7	7.1	11	7.8	10	10
21	11	11	10	12	12	12	8.4	7.1	11	9.4	10	10
22	11	11	11	12	12	12	8.4	7.8	11	9.4	10	9.2
23	11	11	11	12	12	12	8.2	7.6	11	9.8	10	7.8
24	11	11	11	12	12	12	8.2	7.3	10	8.2	10	7.8
25	11	11	11	12	12	12	8.4	7.3	10	8.2	10	7.8
26	11	11	12	12	12	12	8.4	7.3	10	8.4	10	7.3
27	11	11	12	12	12	13	7.8	7.6	10	8.0	10	7.6
28	11	11	12	12	12	12	8.0	7.8	10	8.0	10	7.6
29	11	11	12	12	---	12	8.0	7.8	10	7.8	10	7.6
30	11	11	12	12	---	11	8.0	7.8	10	7.6	10	7.8
31	11	---	12	12	---	11	---	7.8	---	7.3	10	---
TOTAL	269.3	330	363	370	309.0	370	285.8	233.9	298.7	248.01	297.6	286.5
MEAN	8.69	11.0	11.7	11.9	11.0	11.9	9.53	7.55	9.96	8.00	9.60	9.55
MAX	12	11	12	12	12	13	12	8.9	12	9.8	11	11
MIN	2.3	11	10	11	9.0	11	7.8	6.9	6.7	.91	6.9	7.3
AC-FT	534	655	720	734	613	734	567	464	592	492	590	568
CAL YR 1980	TOTAL	1676.70	MEAN	4.58	MAX	12	MIN	1.1	AC-FT	3330		
WTR YR 1981	TOTAL	3661.81	MEAN	10.0	MAX	13	MIN	.91	AC-FT	7260		

06392950 STOCKADE BEAVER CREEK NEAR NEWCASTLE, WY

LOCATION.--Lat 43°51'30", long 104°06'23", in SW¼SE¼ sec.19, T.45 N., R.60 W., Weston County, Hydrologic Unit 10120107, on left bank at downstream side of bridge on county highway, 0.6 mi (1.0 km) upstream from South Draw, 2.5 mi (4.0 km) upstream from LAK Reservoir Dam, and 4.7 mi (7.6 km) east of Newcastle.

DRAINAGE AREA.--107 mi² (277 km²).

PERIOD OF RECORD.--October 1974 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 4,455 ft (1,358 m), from topographic map.

REMARKS.--Records good except those for winter periods, which are poor. A few small diversions above station for irrigation.

AVERAGE DISCHARGE.--7 years, 12.2 ft³/s (0.346 m³/s), 8,840 acre-ft/yr (10.9 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 107 ft³/s (3.03 m³/s) June 16, 1977, gage height, 7.54 ft (2.298 m); maximum gage height, 7.91 ft (2.411 m) Jan. 12, 1975 (backwater from ice); minimum daily discharge, 6.0 ft³/s (0.17 m³/s) July 17, 1981.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 18.8 ft³/s (0.53 m³/s) Mar. 27, gage height, 6.57 ft (2.298 m); no peak above base of 50 ft³/s (1.42 m³/s); minimum daily discharge, 6.0 ft³/s (0.17 m³/s) July 17.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	10	11	12	12	12	12	11	8.0	7.8	9.8	7.3	10
2	11	11	12	12	11	12	12	8.0	6.7	9.6	7.3	10
3	11	11	12	12	11	12	12	8.7	6.7	9.6	7.3	10
4	11	11	12	12	11	12	12	8.9	7.1	9.6	6.9	11
5	10	11	12	12	11	12	11	8.0	8.0	9.4	6.9	10
6	10	11	12	12	10	11	11	8.0	8.2	9.4	8.7	11
7	9.8	11	12	12	10	12	11	8.0	8.4	9.1	10	11
8	9.6	11	12	12	10	12	9.8	7.6	9.8	8.9	9.8	11
9	9.6	11	12	12	10	12	10	7.6	11	8.9	10	11
10	9.4	11	12	11	9.0	12	9.8	7.3	12	8.0	10	11
11	10	11	12	11	9.5	12	9.8	7.3	11	6.9	9.8	10
12	11	11	12	12	9.5	12	10	7.3	11	6.7	9.6	10
13	11	11	12	12	10	12	9.6	7.3	11	8.4	10	10
14	11	11	12	12	10	12	11	7.1	11	7.3	10	10
15	13	11	12	12	11	12	10	6.9	11	7.1	11	10
16	12	11	12	12	11	12	8.8	6.9	11	6.9	11	10
17	12	11	12	12	11	12	8.7	6.9	11	6.0	11	10
18	12	11	12	12	12	12	9.1	6.9	11	7.1	11	10
19	12	11	11	12	12	12	8.7	6.9	11	6.7	10	10
20	11	11	10	12	12	12	8.7	7.1	11	7.8	10	10
21	11	11	10	12	12	12	8.4	7.1	11	9.4	10	10
22	11	11	11	12	12	12	8.4	7.8	11	9.4	10	9.2
23	11	11	11	12	12	12	8.2	7.6	11	9.8	10	7.8
24	11	11	11	12	12	12	8.2	7.3	10	8.2	10	7.8
25	11	11	11	12	12	12	8.4	7.3	10	8.2	10	7.8
26	11	11	12	12	12	12	8.4	7.3	10	8.4	10	7.3
27	11	11	12	12	12	13	7.8	7.6	10	8.0	10	7.6
28	11	11	12	12	12	12	8.0	7.8	10	8.0	10	7.6
29	11	11	12	12	---	12	8.0	7.8	10	7.8	10	7.6
30	11	11	12	12	---	11	8.0	7.8	10	7.6	10	7.8
31	11	---	12	12	---	11	---	7.8	---	7.3	10	---
TOTAL	337.4	330	363	370	309.0	370	285.8	233.9	298.7	255.3	297.6	286.5
MEAN	10.9	11.0	11.7	11.9	11.0	11.9	9.53	7.55	9.96	8.24	9.60	9.55
MAX	13	11	12	12	12	13	12	8.9	12	9.8	11	11
MIN	9.4	11	10	11	9.0	11	7.8	6.9	6.7	6.0	6.9	7.3
AC-FT	669	655	720	734	613	734	567	464	592	506	590	568

CAL YR 1980 TOTAL 4110.3 MEAN 11.2 MAX 19 MIN 7.1 AC-FT 8150
WTR YR 1981 TOTAL 3737.2 MEAN 10.2 MAX 13 MIN 6.0 AC-FT 7410

06394000 BEAVER CREEK NEAR NEWCASTLE, WY

LOCATION.--Lat 43°32'07", long 104°07'02", in NW¼ sec.18, T.41 N., R.60 W., Weston County, Hydrologic Unit 10120107, at highway bridge, 2.2 mi (3.5 km) downstream from Sheep Creek, and 23 mi (37 km) south of Newcastle.

DRAINAGE AREA.--1,320 mi² (3,420 km²), approximately.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--February to September 1943, October 1944 to current year.

REVISED RECORDS.--WSP 1209: 1943, 1946, 1948-49.

GAGE.--Water-stage recorder. Altitude of gage is 3,660 ft (1,116 m), from topographic map. Prior to Nov. 1, 1945, nonrecording gage at present site and datum.

REMARKS.--Records fair except those for winter period, which are poor. There are many small reservoirs above station used for storage of stock and irrigation water, total capacity, about 11,000 acre-ft (13.6 hm³). Diversions for irrigation of about 4,900 acres (19.8 km²) above station.

AVERAGE DISCHARGE.--37 years (water years 1945-81), 31.5 ft³/s (0.892 m³/s), 22,820 acre-ft/yr (28.1 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 11,900 ft³/s (337 m³/s) June 16, 1962, gage height, 19.98 ft (6.090 m); no flow at times in several years.

EXTREMES FOR CURRENT YEAR.--Peak discharge above base of 500 ft³/s (14.2 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
July 28	1100	*630 17.8	7.96 2.426

Minimum daily discharge, 0.07 ft³/s (0.002 m³/s) July 12.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.36	8.7	11	20	11	20	3.9	.50	.51	.33	33	4.1
2	.30	8.7	9.6	19	8.1	20	4.5	.56	.41	1.4	19	4.7
3	.30	8.7	11	18	6.0	19	5.3	2.0	.38	.75	13	5.5
4	.36	9.0	16	17	8.1	19	4.7	14	.37	.27	7.8	5.8
5	.24	9.7	15	16	10	19	2.0	4.4	.42	.20	6.6	6.3
6	.19	9.7	14	15	12	19	3.2	5.6	.36	.12	68	6.9
7	.19	9.7	13	14	13	19	3.7	17	.26	.25	32	3.3
8	.19	9.7	12	14	11	18	4.1	5.0	.23	2.5	14	1.4
9	.15	9.4	12	13	9.8	18	3.0	2.3	.30	.29	9.7	1.0
10	.24	10	10	13	8.2	13	1.6	1.3	.33	.13	8.7	1.0
11	.19	9.4	12	13	6.3	12	1.2	.73	.40	.08	9.0	.92
12	.24	7.8	14	13	8.0	12	.88	.86	.48	.07	6.9	.95
13	.24	14	15	14	12	16	.78	.63	.25	11	4.1	.88
14	.30	16	15	15	16	17	.85	.63	.31	2.9	2.6	.91
15	2.8	15	16	14	17	9.7	.77	.62	.26	.74	2.6	.84
16	4.4	13	19	14	17	6.3	.77	.55	.32	.36	2.6	.83
17	1.6	12	24	14	19	2.1	.81	.63	.22	.25	18	.88
18	1.4	13	28	13	21	6.1	.72	.63	.20	.55	75	.92
19	2.6	14	22	14	21	7.6	.77	.58	.20	1.2	353	.93
20	1.8	14	18	15	20	2.6	1.1	.50	.24	98	130	.90
21	1.8	15	14	16	20	1.7	1.5	.54	.15	82	35	.85
22	2.6	17	16	17	19	.88	1.4	.75	.14	14	22	.96
23	6.1	14	19	18	20	2.2	.97	.66	.10	5.0	15	.81
24	1.4	14	18	19	20	3.9	.73	.43	.11	2.8	12	1.2
25	2.8	13	14	20	20	3.8	.69	.36	.13	31	11	1.3
26	3.8	15	17	18	19	4.0	.73	.31	.11	33	10	1.2
27	5.0	14	20	17	19	3.6	.73	1.9	.09	211	6.9	1.2
28	11	15	27	15	20	3.7	1.1	.87	.11	534	5.8	1.3
29	11	16	32	14	---	3.8	.84	.52	.11	281	3.8	1.4
30	9.4	14	28	14	---	4.6	.66	.49	.08	302	3.3	1.6
31	8.1	---	22	14	---	4.3	---	.62	---	82	3.3	---
TOTAL	81.09	368.5	533.6	480	411.5	311.88	54.00	66.47	7.58	1699.19	943.7	60.78
MEAN	2.62	12.3	17.2	15.5	14.7	10.1	1.80	2.14	.25	54.8	30.4	2.03
MAX	11	17	32	20	21	20	5.3	17	.51	534	353	6.9
MIN	.15	7.8	9.6	13	6.0	.88	.66	.31	.08	.07	2.6	.81
AC-FT	161	731	1060	952	816	619	107	132	15	3370	1870	121

CAL YR 1980	TOTAL	3545.43	MEAN	9.69	MAX	253	MIN	.09	AC-FT	7030
WTR YR 1981	TOTAL	5018.29	MEAN	13.7	MAX	534	MIN	.07	AC-FT	9950

CHEYENNE RIVER BASIN

06394000 BEAVER CREEK NEAR NEWCASTLE, WY--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1946-47, 1950-57, 1968 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	HARD- NESS (MG/L AS CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)
OCT 21...	1630	1.9	--	--	10.5	2100	450	240	1100	10	11
NOV 18...	1530	13	--	--	.5	1800	510	130	360	3.7	5.0
DEC 16...	1015	17	--	--	.0	1600	480	110	260	2.8	4.1
JAN 20...	0800	13	3750	7.9	.0	1700	490	120	360	3.8	4.3
FEB 19...	0800	24	2920	7.9	.0	1500	430	94	200	2.3	3.9
MAR 18...	1630	7.6	4140	8.3	7.5	1600	440	130	480	5.2	4.6
APR 22...	1210	1.2	--	--	13.5	2400	580	240	940	8.3	8.2
MAY 21...	1630	.62	--	--	18.5	2000	450	220	1400	14	9.6
JUN 18...	1445	.18	--	--	24.0	2100	430	250	1300	12	9.4
JUL 20...	0900	.64	--	--	22.0	2100	440	240	1100	10	9.3
AUG 20...	0900	121	--	--	22.0	290	78	24	180	4.6	6.9
SEP 23...	0830	.85	--	--	14.0	1900	440	200	930	9.2	9.9

DATE	ALKA- LINITY LAB (MG/L AS CACO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, SUM OF CONSTITUENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)	SOLIDS, DIS- SOLVED (TONS PER DAY)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	PHOS- PHORUS, TOTAL (MG/L AS P)
OCT 21...	130	2600	1100	1.1	1.5	5580	7.6	28.6	.00	.030
NOV 18...	160	1700	510	1.1	8.7	3300	4.5	116	.00	.070
DEC 16...	170	1300	460	1.0	9.0	2750	3.7	126	.16	.040
JAN 20...	200	1700	420	1.0	13	3230	4.4	113	.43	.000
FEB 19...	200	1400	200	.9	.0	2450	3.3	159	.34	.020
MAR 18...	170	1700	530	1.1	3.5	3400	4.6	69.8	.12	.000
APR 22...	200	2800	930	1.4	4.7	5650	7.7	18.3	.02	.070
MAY 21...	150	2900	1300	1.3	.0	6370	8.7	10.7	.01	.130
JUN 18...	98	3200	1100	1.4	.0	6300	8.6	3.1	.00	.070
JUL 20...	120	2600	1100	1.4	.7	5600	7.6	9.7	.10	.100
AUG 20...	130	360	130	.0	7.8	870	1.2	284	2.2	1.04
SEP 23...	--	2300	840	1.7	.8	4830	6.6	11.1	.02	.280

06395000 CHEYENNE RIVER AT EDMONT, SD

LOCATION.--Lat 43°18'20", long 103°49'14", in SW¼SE¼SE¼ sec.36, T.8 S., R.2 E., Fall River County, Hydrologic Unit 10120106, on right bank at downstream side of bridge on U.S. Highway 18, at Edgemont, 300 ft (91 m) downstream from Burlington Northern Railroad bridge, and 600 ft (183 m) upstream from Cottonwood Creek.

DRAINAGE AREA.--7,143 mi² (18,500 km²).

PERIOD OF RECORD.--June 1903 to November 1906 (no winter records), April 1928 to February 1933, October 1946 to current year.

REVISED RECORDS.--WSP 1086: Drainage area. WSP 1116: 1947.

GAGE.--Water-stage recorder. Datum of gage is 3,414.56 ft (1,040.758 m), National Geodetic Vertical Datum of 1929. Prior to Dec. 1, 1906, nonrecording gage 20 ft (6 m) upstream at datum 0.7 ft (0.21 m) lower. Apr. 11, 1928, to Feb. 28, 1933, Oct. 4, 1946, to Oct. 23, 1947, and Jan. 11, 1961, to Apr. 24, 1963, nonrecording gage, and Oct. 24, 1947, to Jan. 10, 1961, and Apr. 25, 1963, to Sept. 30, 1972, water-stage recorder all at present site at datum 2.00 ft (0.610 m) higher.

REMARKS.--Records good except those for winter periods, which are poor. Many small reservoirs above station used for stock and irrigation water, total capacity, about 45,000 acre-ft (55.5 hm³).

AVERAGE DISCHARGE.--39 years, 99.7 ft³/s (2.824 m³/s), 72,230 acre-ft/yr (89.1 hm³/yr); median of yearly mean discharges, 72 ft³/s (2.04 m³/s), 52,000 acre-ft/yr (64 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 28,000 ft³/s (793 m³/s) May 20, 1978, gage height, 13.65 ft (4.161 m), present datum; no flow at times most years.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of May 12, 1920, reached a stage of 13.0 ft (3.96 m) and May 1, 1922, 14.0 ft (4.27 m), present datum, from floodmarks at railroad bridge.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 1,500 ft³/s (42.5 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
July 15	0310	*3,010 85.2	5.04 1.536
July 19	1030	2,570 72.8	4.70 1.433

No flow for many days.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.03	11	7.0	23	34	48	5.1	.95	16	3.3	121	7.3
2	.00	8.5	7.6	23	34	44	4.2	.94	15	4.4	68	6.8
3	.31	7.4	8.0	24	34	41	5.3	2.4	10	2.4	47	5.4
4	.19	9.3	8.6	25	33	36	6.4	8.1	8.5	.96	40	5.3
5	.14	10	9.0	27	32	34	4.6	9.7	7.2	.27	36	5.6
6	.32	10	8.6	28	32	32	5.3	18	44	.07	278	6.4
7	.23	8.2	8.2	27	32	30	4.5	24	48	.07	298	7.6
8	.02	8.0	8.2	28	32	30	3.3	19	25	.05	119	7.0
9	.25	6.7	8.2	29	30	28	3.1	17	16	.03	66	5.7
10	.10	6.4	8.6	27	27	24	2.9	11	10	.03	55	4.1
11	.00	6.2	9.0	28	29	22	2.8	8.5	7.1	.03	52	3.1
12	.11	6.0	9.4	28	32	18	2.8	7.8	6.4	.07	42	2.5
13	.38	5.8	9.4	30	34	17	2.2	6.5	55	4.3	36	1.9
14	.36	5.8	10	30	36	16	1.8	6.0	197	682	31	1.4
15	6.2	5.8	11	31	38	17	2.7	11	87	1070	29	1.1
16	6.7	6.0	12	30	38	17	2.1	17	38	164	30	.83
17	4.1	6.2	13	29	38	14	1.8	21	24	47	31	.60
18	13	6.2	13	29	38	13	1.6	12	19	25	49	.60
19	28	6.4	12	29	39	12	1.4	6.5	14	1250	88	.30
20	21	6.4	11	29	40	11	3.0	4.3	11	263	386	.15
21	17	6.6	10	29	40	15	3.3	3.3	9.1	127	111	.00
22	14	8.0	10	30	40	12	3.2	3.0	7.2	71	40	.00
23	11	8.0	11	31	43	9.0	2.4	3.0	5.8	38	28	.00
24	8.9	7.0	12	32	45	8.3	2.2	3.0	5.1	29	22	.00
25	9.3	7.2	13	33	47	7.1	1.8	2.7	3.9	28	18	.00
26	11	7.4	15	34	49	7.7	2.0	3.0	2.5	36	15	.00
27	8.6	7.2	17	34	50	7.4	1.7	4.0	2.1	871	15	.00
28	9.1	7.0	20	35	50	5.8	3.1	14	2.3	861	13	.00
29	10	7.2	22	35	---	5.7	2.3	25	1.5	883	11	.00
30	10	7.4	23	35	---	4.8	1.4	24	1.2	478	9.4	.00
31	11	---	23	35	---	4.8	---	19	---	389	7.6	---
TOTAL	201.34	219.3	367.8	917	1046	591.6	90.3	315.69	698.9	7327.98	2192.0	73.68
MEAN	6.49	7.31	11.9	29.6	37.4	19.1	3.01	10.2	23.3	236	70.7	2.46
MAX	28	11	23	35	50	48	6.4	25	197	1250	386	7.6
MIN	.00	5.8	7.0	23	27	4.8	1.4	.94	1.2	.03	7.6	.00
AC-FT	399	435	730	1820	2070	1170	179	626	1390	14540	4350	146
CAL YR 1980	TOTAL	16346.38	MEAN	44.7	MAX	1760	MIN	.00	AC-FT	32420		
WTR YR 1981	TOTAL	14041.59	MEAN	38.5	MAX	1250	MIN	.00	AC-FT	27850		

06425720 BELLE FOURCHE RIVER BELOW RATTLESNAKE CREEK, NEAR PINEY, WY

LOCATION.--Lat 43°59'04", long 105°23'16", in NW¼NE¼NE¼ sec.9, T.46 N., R.71 W., Campbell County, Hydrologic Unit 10120201, on right bank 200 ft (61 m) downstream from bridge on county road, 1.2 mi (1.9 km) downstream from Rattlesnake Creek, 10.0 mi (16.1 km) southwest of Piney, 15.5 mi (24.9 km) north of Reno Junction, and 22 mi (35 km) south of Gillette.

DRAINAGE AREA.--495 mi² (1,282 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1975 to current year.

REVISED RECORD.--WDR WY-78-1.

GAGE.--Water-stage recorder and concrete control. Altitude of gage is 4,540 ft (1,384 m), from topographic map.

REMARKS.--Records good except those for winter period, which are poor. No diversions above station. Several small stockwater reservoirs above station.

AVERAGE DISCHARGE.--6 years, 2.21 ft³/s (0.063 m³/s), 1,600 acre-ft/yr (1.97 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 4,100 ft³/s (116 m³/s) May 18, 1978, gage height, 11.33 ft (3.453 m), caused by dam failure upstream, from rating curve extended above 1,200 ft³/s (34.0 m³/s) on basis of flow over road and culverts computation of peak flow; no flow for many days each year.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 92 ft³/s (2.61 m³/s) Aug. 4, gage height, 3.32 ft (1.012 m); no flow for many days during year.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.01	.00	.00	.08	.00	.00	.00	.27	.00
2	.00	.00	.00	.01	.00	.00	.05	.00	.00	.00	.10	.00
3	.00	.00	.00	.02	.00	.00	.04	.00	.00	.00	.04	.00
4	.00	.00	.00	.02	.00	.00	.04	.00	.00	.00	51	.00
5	.00	.00	.00	.02	.00	.00	.02	.00	.00	.00	20	.00
6	.00	.00	.00	.02	.00	.00	.03	.00	.00	.00	8.1	.00
7	.00	.00	.00	.02	.00	.00	.02	.00	.00	.00	3.2	.00
8	.00	.00	.00	.02	.00	.00	.01	.00	.00	.00	1.4	.00
9	.00	.00	.00	.02	.00	.00	.00	.00	.00	.00	.83	.00
10	.00	.00	.01	.01	.00	.00	.00	.00	.00	.00	.65	.00
11	.00	.00	.05	.01	.00	.00	.00	.00	.00	.00	.43	.00
12	.00	.00	.03	.01	.00	.00	.00	.00	.00	.00	.32	.00
13	.00	.00	.02	.01	.00	.00	.00	.00	.00	.00	.23	.00
14	.00	.00	.02	.01	.00	.00	.00	.00	.00	.00	.16	.00
15	.00	.00	.02	.00	.00	.00	.00	.00	.00	.00	.06	.00
16	.00	.00	.01	.00	.00	.00	.00	.00	.00	.00	2.9	.00
17	.00	.00	.01	.00	.00	.00	.00	.00	.00	.00	18	.00
18	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	2.5	.00
19	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.93	.00
20	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.37	.00
21	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.19	.00
22	.00	.00	.00	.00	.00	.02	.00	.00	.00	.00	.08	.00
23	.00	.00	.00	.00	.00	.23	.00	.00	.00	.00	.03	.00
24	.00	.00	.00	.00	.00	.23	.00	.00	.00	.00	.03	.00
25	.00	.00	.00	.00	.00	.19	.00	.00	.00	3.0	.00	.00
26	.00	.00	.05	.00	.00	.19	.00	.00	.00	24	.00	.00
27	.00	.00	.02	.00	.00	.19	.00	.00	.00	5.6	.00	.00
28	.00	.00	.02	.00	.00	.16	.00	.00	.00	3.7	.00	.00
29	.00	.00	.02	.00	---	.13	.00	.00	.00	1.6	.00	.00
30	.00	.00	.02	.00	---	.13	.00	.00	.00	.74	.00	.00
31	.00	---	.02	.00	---	.10	---	.00	---	.50	.00	---
TOTAL	.00	.00	.32	.21	.00	1.57	.29	.00	.00	39.14	111.82	.00
MEAN	.000	.000	.010	.007	.000	.051	.010	.000	.000	1.26	3.61	.000
MAX	.00	.00	.05	.02	.00	.23	.08	.00	.00	24	51	.00
MIN	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
AC-FT	.00	.00	.6	.4	.00	3.1	.6	.00	.00	78	222	.00
CAL YR 1980	TOTAL	70.77	MEAN	.19	MAX	2.3	MIN	.00	AC-FT	140		
WTR YR 1981	TOTAL	153.35	MEAN	.42	MAX	51	MIN	.00	AC-FT	304		

WATER-QUALITY RECORDS

SEDIMENT LOAD: Maximum daily, 24 tons (22 tonnes) Aug. 4; minimum daily, 0 tons on many days.

[illegible][illegible][illegible]

CHEYENNE RIVER BASIN

06425720 BELLE FOURCHE RIVER BELOW RATTLESNAKE CREEK, NEAR PINEY, WY--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

		ARSENIC		ARSENIC		ARSENIC		BARIUM,		BERYL-		BERYL-		BARIUM,		BARIUM,		BARIUM,		BARIUM,		BARIUM,		BARIUM,		BARIUM,		BARIUM,		BARIUM,		BARIUM,		BARIUM,		BARIUM,		BARIUM,		BARIUM,		BARIUM,		BARIUM,		BARIUM,		BARIUM,		BARIUM,		BARIUM,		BARIUM,		BARIUM,		BARIUM,		BARIUM,		BARIUM,		BARIUM,		BARIUM,		BARIUM,		BARIUM,		BARIUM,		BARIUM,		BARIUM,		BARIUM,		BARIUM,		BARIUM,		BARIUM,		BARIUM,		BARIUM,		BARIUM,		BARIUM,		BARIUM,		BARIUM,		BARIUM,		BARIUM,		BARIUM,		BARIUM,		BARIUM,		BARIUM,		BARIUM,		BARIUM,		BARIUM,		BARIUM,		BARIUM,		BARIUM,		BARIUM,		BARIUM,		BARIUM,		BARIUM,		BARIUM,		BARIUM,		BARIUM,		BARIUM,		BARIUM,		BARIUM,		BARIUM,		BARIUM,		BARIUM,		BARIUM,		BARIUM,		BARIUM,		BARIUM,		BARIUM,		BARIUM,		BARIUM,		BARIUM,		BARIUM,		BARIUM,		BARIUM,		BARIUM,		BARIUM,		BARIUM,		BARIUM,		BARIUM,		BARIUM,		BARIUM,		BARIUM,		BARIUM,		BARIUM,		BARIUM,		BARIUM,		BARIUM,		BARIUM,		BARIUM,		BARIUM,		BARIUM,		BARIUM,		BARIUM,		BARIUM,		BARIUM,		BARIUM,		BARIUM,		BARIUM,		BARIUM,		BARIUM,		BARIUM,		BARIUM,		BARIUM,		BARIUM,		BARIUM,		BARIUM,		BARIUM,		BARIUM,		BARIUM,		BARIUM,		BARIUM,		BARIUM,		BARIUM,		BARIUM,		BARIUM,		BARIUM,		BARIUM,		BARIUM,		BARIUM,		BARIUM,		BARIUM,		BARIUM,		BARIUM,		BARIUM,		BARIUM,		BARIUM,		BARIUM,		BARIUM,		BARIUM,		BARIUM,		BARIUM,		BARIUM,		BARIUM,		BARIUM,		BARIUM,		BARIUM,		BARIUM,		BARIUM,		BARIUM,		BARIUM,		BARIUM,		BARIUM,		BARIUM,		BARIUM,		BARIUM,		BARIUM,		BARIUM,		BARIUM,		BARIUM,		BARIUM,		BARIUM,		BARIUM,		BARIUM,		BARIUM,		BARIUM,		BARIUM,		BARIUM,		BARIUM,		BARIUM,		BARIUM,		BARIUM,		BARIUM,		BARIUM,		BARIUM,		BARIUM,		BARIUM,		BARIUM,		BARIUM,		BARIUM,		BARIUM,		BARIUM,		BARIUM,		BARIUM,		BARIUM,		BARIUM,		BARIUM,		BARIUM,		BARIUM,		BARIUM,		BARIUM,		BARIUM,		BARIUM,		BARIUM,		BARIUM,		BARIUM,		BARIUM,		BARIUM,		BARIUM,		BARIUM,		BARIUM,		BARIUM,		BARIUM,		BARIUM,		BARIUM,		BARIUM,		BARIUM,		BARIUM,		BARIUM,		BARIUM,		BARIUM,		BARIUM,		BARIUM,		BARIUM,		BARIUM,		BARIUM,		BARIUM,		BARIUM,		BARIUM,		BARIUM,		BARIUM,		BARIUM,		BARIUM,		BARIUM,		BARIUM,		BARIUM,		BARIUM,		BARIUM,		BARIUM,		BARIUM,		BARIUM,		BARIUM,		BARIUM,		BARIUM,		BARIUM,		BARIUM,		BARIUM,		BARIUM,		BARIUM,		BARIUM,		BARIUM,		BARIUM,		BARIUM,		BARIUM,		BARIUM,		BARIUM,		BARIUM,		BARIUM,		BARIUM,		BARIUM,		BARIUM,		BARIUM,		BARIUM,		BARIUM,		BARIUM,		BARIUM,		BARIUM,		BARIUM,		BARIUM,		BARIUM,		BARIUM,		BARIUM,		BARIUM,		BARIUM,		BARIUM,		BARIUM,		BARIUM,		BARIUM,		BARIUM,		BARIUM,		BARIUM,		BARIUM,		BARIUM,		BARIUM,		BARIUM,		BARIUM,		BARIUM,		BARIUM,		BARIUM,		BARIUM,		BARIUM,		BARIUM,		BARIUM,		BARIUM,		BARIUM,		BARIUM,		BARIUM,		BARIUM,		BARIUM,		BARIUM,		BARIUM,		BARIUM,		BARIUM,		BARIUM,		BARIUM,		BARIUM,		BARIUM,		BARIUM,		BARIUM,		BARIUM,		BARIUM,		BARIUM,		BARIUM,		BARIUM,		BARIUM,		BARIUM,		BARIUM,		BARIUM,		BARIUM,		BARIUM,		BARIUM,		BARIUM,		BARIUM,		BARIUM,		BARIUM,		BARIUM,		BARIUM,		BARIUM,		BARIUM,		BARIUM,		BARIUM,		BARIUM,		BARIUM,		BARIUM,		BARIUM,		BARIUM,		BARIUM,		BARIUM,		BARIUM,		BARIUM,		BARIUM,		BARIUM,		BARIUM,		BARIUM,		BARIUM,		BARIUM,		BARIUM,		BARIUM,		BARIUM,		BARIUM,		BARIUM,		BARIUM,		BARIUM,		BARIUM,		BARIUM,		BARIUM,		BARIUM,		BARIUM,		BARIUM,		BARIUM,		BARIUM,		BARIUM,		BARIUM,		BARIUM,		BARIUM,		BARIUM,		BARIUM,		BARIUM,		BARIUM,		BARIUM,		BARIUM,		BARIUM,		BARIUM,		BARIUM,		BARIUM,		BARIUM,		BARIUM,		BARIUM,		BARIUM,		BARIUM,		BARIUM,		BARIUM,		BARIUM,		BARIUM,		BARIUM,		BARIUM,		BARIUM,		BARIUM,		BARIUM,		BARIUM,		BARIUM,		BARIUM,		BARIUM,		BARIUM,		BARIUM,		BARIUM,		BARIUM,		BARIUM,		BARIUM,		BARIUM,		BARIUM,		BARIUM,		BARIUM,		BARIUM,		BARIUM,		BARIUM,		BARIUM,		BARIUM,		BARIUM,		BARIUM,		BARIUM,		BARIUM,		BARIUM,		BARIUM,		BARIUM,		BARIUM,		BARIUM,		BARIUM,		BARIUM,		BARIUM,		BARIUM,		BARIUM,		BARIUM,		BARIUM,		BARIUM,		BARIUM,		BARIUM,		BARIUM,		BARIUM,		BARIUM,		BARIUM,		BARIUM,		BARIUM,		BARIUM,		BARIUM,		BARIUM,		BARIUM,		BARIUM,		BARIUM,		BARIUM,		BARIUM,		BARIUM,		BARIUM,		BARIUM,		BARIUM,		BARIUM,		BARIUM,		BARIUM,		BARIUM,	
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06425720 BELLE FOURCHE RIVER BELOW RATTLESNAKE CREEK, NEAR PINEY, WY--Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1										---	1750	
2										---	1700	
3										---	1660	
4										---	1550	
5										---	1420	
6										---	1540	
7										---	1640	
8										---	1670	
9										---	1690	
10										---	1710	
11										---	---	
12										---	---	
13										---	---	
14										---	---	
15										---	---	
16										---	---	
17										---	---	
18										---	---	
19										---	---	
20										---	---	
21										---	---	
22										---	---	
23										---	---	
24										---	---	
25										3750	---	
26										3310	---	
27										2800	---	
28										2540	---	
29										2260	---	
30										2000	---	
31										1820	---	
MEAN										2640	1630	
WTR YR 1981	MEAN	2050		MAX	3750	MIN	1420					

CHEYENNE RIVER BASIN

06425720 BELLE FOURCHE RIVER BELOW RATTLESNAKE CREEK, NEAR PINEY, WY--Continued

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

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)
OCTOBER			NOVEMBER			DECEMBER			
1	.00		.00	.00		.00	.00	---	.00
2	.00		.00	.00		.00	.00	---	.00
3	.00		.00	.00		.00	.00	---	.00
4	.00		.00	.00		.00	.00	---	.00
5	.00		.00	.00		.00	.00	---	.00
6	.00		.00	.00		.00	.00	---	.00
7	.00		.00	.00		.00	.00	---	.00
8	.00		.00	.00		.00	.00	---	.00
9	.00		.00	.00		.00	.00	---	.00
10	.00		.00	.00		.00	.01	13	.00
11	.00		.00	.00		.00	.05	19	.00
12	.00		.00	.00		.00	.03	17	.00
13	.00		.00	.00		.00	.02	15	.00
14	.00		.00	.00		.00	.02	15	.00
15	.00		.00	.00		.00	.02	15	.00
16	.00		.00	.00		.00	.01	13	.00
17	.00		.00	.00		.00	.01	13	.00
18	.00		.00	.00		.00	.00	---	.00
19	.00		.00	.00		.00	.00	---	.00
20	.00		.00	.00		.00	.00	---	.00
21	.00		.00	.00		.00	.00	---	.00
22	.00		.00	.00		.00	.00	---	.00
23	.00		.00	.00		.00	.00	---	.00
24	.00		.00	.00		.00	.00	---	.00
25	.00		.00	.00		.00	.00	---	.00
26	.00		.00	.00		.00	.05	19	.00
27	.00		.00	.00		.00	.02	15	.00
28	.00		.00	.00		.00	.02	15	.00
29	.00		.00	.00		.00	.02	15	.00
30	.00		.00	.00		.00	.02	15	.00
31	.00		.00	---			.02	15	.00
TOTAL	0.00		0.00	0.00		0.00	0.32	---	0.00
JANUARY			FEBRUARY			MARCH			
1	.01	13	.00	.00		.00	.00	---	.00
2	.01	13	.00	.00		.00	.00	---	.00
3	.02	15	.00	.00		.00	.00	---	.00
4	.02	15	.00	.00		.00	.00	---	.00
5	.02	15	.00	.00		.00	.00	---	.00
6	.02	15	.00	.00		.00	.00	---	.00
7	.02	15	.00	.00		.00	.00	---	.00
8	.02	15	.00	.00		.00	.00	---	.00
9	.02	15	.00	.00		.00	.00	---	.00
10	.01	13	.00	.00		.00	.00	---	.00
11	.01	13	.00	.00		.00	.00	---	.00
12	.01	13	.00	.00		.00	.00	---	.00
13	.01	13	.00	.00		.00	.00	---	.00
14	.01	13	.00	.00		.00	.00	---	.00
15	.00	---	.00	.00		.00	.00	---	.00
16	.00	---	.00	.00		.00	.00	---	.00
17	.00	---	.00	.00		.00	.00	---	.00
18	.00	---	.00	.00		.00	.00	---	.00
19	.00	---	.00	.00		.00	.00	---	.00
20	.00	---	.00	.00		.00	.00	---	.00
21	.00	---	.00	.00		.00	.00	---	.00
22	.00	---	.00	.00		.00	.02	15	.00
23	.00	---	.00	.00		.00	.23	27	.02
24	.00	---	.00	.00		.00	.23	27	.02
25	.00	---	.00	.00		.00	.19	26	.02
26	.00	---	.00	.00		.00	.19	26	.02
27	.00	---	.00	.00		.00	.19	26	.02
28	.00	---	.00	.00		.00	.16	25	.01
29	.00	---	.00	---			.13	24	.01
30	.00	---	.00	---			.13	24	.01
31	.00	---	.00	---			.10	22	.01
TOTAL	0.21	---	0.00	0.00		0.00	1.57	---	0.14

06425720 BELLE FOURCHE RIVER BELOW RATTLESNAKE CREEK, NEAR PINEY, WY--Continued

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

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)
APRIL				MAY				JUNE	
1	.08	21	.01	.00		.00	.00		.00
2	.05	19	.00	.00		.00	.00		.00
3	.04	18	.00	.00		.00	.00		.00
4	.04	18	.00	.00		.00	.00		.00
5	.02	15	.00	.00		.00	.00		.00
6	.03	17	.00	.00		.00	.00		.00
7	.02	15	.00	.00		.00	.00		.00
8	.01	13	.00	.00		.00	.00		.00
9	.00	---	.00	.00		.00	.00		.00
10	.00	---	.00	.00		.00	.00		.00
11	.00	---	.00	.00		.00	.00		.00
12	.00	---	.00	.00		.00	.00		.00
13	.00	---	.00	.00		.00	.00		.00
14	.00	---	.00	.00		.00	.00		.00
15	.00	---	.00	.00		.00	.00		.00
16	.00	---	.00	.00		.00	.00		.00
17	.00	---	.00	.00		.00	.00		.00
18	.00	---	.00	.00		.00	.00		.00
19	.00	---	.00	.00		.00	.00		.00
20	.00	---	.00	.00		.00	.00		.00
21	.00	---	.00	.00		.00	.00		.00
22	.00	---	.00	.00		.00	.00		.00
23	.00	---	.00	.00		.00	.00		.00
24	.00	---	.00	.00		.00	.00		.00
25	.00	---	.00	.00		.00	.00		.00
26	.00	---	.00	.00		.00	.00		.00
27	.00	---	.00	.00		.00	.00		.00
28	.00	---	.00	.00		.00	.00		.00
29	.00	---	.00	.00		.00	.00		.00
30	.00	---	.00	.00		.00	.00		.00
31	---	---	---	.00		.00	---		.00
TOTAL	0.29	---	0.01	0.00		0.00	0.00		0.00
JULY				AUGUST				SEPTEMBER	
1	.00	0	.00	.27	15	.01	.00		.00
2	.00	0	.00	.10	38	.01	.00		.00
3	.00	0	.00	.04	22	.00	.00		.00
4	.00	0	.00	51	155	24	.00		.00
5	.00	0	.00	20	75	4.1	.00		.00
6	.00	0	.00	8.1	50	1.1	.00		.00
7	.00	0	.00	3.2	41	.35	.00		.00
8	.00	0	.00	1.4	25	.09	.00		.00
9	.00	0	.00	.83	26	.06	.00		.00
10	.00	0	.00	.65	28	.05	.00		.00
11	.00	0	.00	.43	19	.02	.00		.00
12	.00	0	.00	.32	20	.02	.00		.00
13	.00	0	.00	.23	18	.01	.00		.00
14	.00	0	.00	.16	11	.00	.00		.00
15	.00	0	.00	.06	12	.00	.00		.00
16	.00	0	.00	2.9	58	.45	.00		.00
17	.00	0	.00	18	80	3.9	.00		.00
18	.00	0	.00	2.5	75	.51	.00		.00
19	.00	0	.00	.93	78	.20	.00		.00
20	.00	0	.00	.37	68	.07	.00		.00
21	.00	0	.00	.19	52	.03	.00		.00
22	.00	0	.00	.08	55	.01	.00		.00
23	.00	0	.00	.03	25	.00	.00		.00
24	.00	0	.00	.03	30	.00	.00		.00
25	3.0	31	2.6	.00	0	.00	.00		.00
26	24	149	9.7	.00	0	.00	.00		.00
27	5.6	86	1.3	.00	0	.00	.00		.00
28	3.7	49	.49	.00	0	.00	.00		.00
29	1.6	22	.10	.00	0	.00	.00		.00
30	.74	21	.04	.00	0	.00	.00		.00
31	.50	18	.02	.00	0	.00	---		.00
TOTAL	39.14	---	14.25	111.82	---	34.99	0.00		0.00
YEAR	153.35		49.39						

06425720 BELLE FOURCHE RIVER BELOW RATTLESNAKE CREEK, NEAR PINEY, WY--Continued
 QUALITATIVE AND ASSOCIATED QUANTITATIVE ANALYSES OF BIOLOGICAL DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
 PHYTOPLANKTON ANALYSES

DATE	JUL 30, 81	
TIME	1730	
TOTAL CELLS/ML	49000	
DIVERSITY: DIVISION	1.6	
..CLASS	1.6	
..ORDER	2.6	
...FAMILY	3.1	
....GENUS	3.5	
ORGANISM	CELLS /ML	PER- CENT
BACILLARIOPHYTA (DIATOMS)		
..BACILLARIOPHYCEAE		
...BACILLARIALES		
....NITZSCHIA	960	2
...EUPODISCALES		
....COSCIDISCAEAE		
...CYCLOTELLA	2800	6
...FRAGILARIALES		
...FRAGILARIAEAE		
....SYNEDRA	*	0
...NAVICULALES		
...ENTOMONEIDACEAE		
....ENTOMONEIS	*	0
...NAVICULACEAE		
...NAVICULA	550	1
CHLOROPHYTA (GREEN ALGAE)		
..CHLOROPHYCEAE		
...CHLOROCOCCALES		
....CHLOROCOCCACEAE	*	0
...SCHROEDERIA		
...DICTYOSPHAERIACEAE		
....DICTYOSPHAERIUM	8300#	17
...OOCYSTACEAE		
....ANKISTRODESMUS	4000	8
....OOCYSTIS	410	1
...SELENASTRUM	690	1
...TREUBARIA	*	0
...SCENEDESMACEAE		
....ACTINASTRUM	1700	3
...SCENEDESMUS	550	1
...VOLVOCALES		
...CHLAMYDOMONADACEAE		
...CHLAMYDOMONAS	1100	2
CHRYSTOPHYTA		
..CHRYSTOPHYCEAE		
...OCHROMONADALES		
...OCHROMONADACEAE		
....OCHROMONAS	410	1
...XANTHOPHYCEAE		
...MISCHOCOCCALES		
...SCIADACEAE		
...CENTRITRACTUS	*	0
CRYPTOPHYTA (CRYPTOMONADS)		
..CRYPTOPHYCEAE		
...CRYPTOMONADALES		
...CRYPTOMONADACEAE		
...CRYPTOMONAS	550	1
CYANOPHYTA (BLUE-GREEN ALGAE)		
..CYANOPHYCEAE		
...CHROOCOCCALES		
...CHROOCOCCACEAE		
....ANACYSTIS	5800	12
...NOSTOCALES		
...NOSTOCACEAE		
....ANABAENA	6300	13
....ANABAENOPSIS	6700	14
...OSCILLATORIALES		
...OSCILLATORIAEAE		
...OSCILLATORIA	6900	14
EUGLENOPHYTA (EUGLENOIDS)		
..EUGLENOPHYCEAE		
...EUGLENALES		
...EUGLENACEAE		
....EUGLENA	280	1
...TRACHELOMONAS	*	0
PYRRHOPHYTA (FIRE ALGAE)		
..DINOPHYCEAE		
...DINOKONTAE		
...GLENODINIACEAE		
...GLENODINIUM	*	0

NOTE: # - DOMINANT ORGANISM; EQUAL TO OR GREATER THAN 15%

* - OBSERVED ORGANISM, MAY NOT HAVE BEEN COUNTED; LESS THAN 1/2%

06425750 COAL CREEK NEAR PINEY, WY

LOCATION.--Lat 43°58'22", long 105°19'52", in SW¼SW¼SE¼ sec.12, T.46 N., R.71 W., Campbell County, Hydrologic Unit 10120201, on right bank 4.4 mi (7.1 km) upstream from mouth, 10 mi (16 km) southwest of Piney, and 23 mi (37 km) southeast of Gillette.

DRAINAGE AREA.--71.8 mi² (186.0 km²), of which 3.45 mi² (8.94 km²) is probably noncontributing.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1980 to September 1981.

GAGE.--Water-stage recorder and concrete control. Altitude of gage is 4,540 ft (1,384 m), from topographic map.

REMARKS.--Records good except those above 40 ft³/s, which are poor.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,170 ft³/s (33.1 m³.s) May 27, gage height, 11.00 ft (3.353 m); no flow for many days.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.00	.00	.00	.00	.00	.11	.00	.17	.00
2	.00	.00	.00	.00	.00	.00	.00	.00	.01	.00	.01	.00
3	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
4	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	46	.00
5	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	2.6	.00
6	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	1.1	.00
7	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.53	.00
8	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.29	.00
9	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.13	.00
10	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.03	.00
11	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
12	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
13	.00	.00	.00	.00	.00	.00	.00	.00	.00	.83	.00	.00
14	.00	.00	.00	.00	.00	.00	.00	.00	.00	18	.00	.00
15	.00	.00	.00	.00	.00	.00	.00	.00	.00	1.5	.00	.00
16	.00	.00	.00	.00	.00	.00	.00	.00	.00	.55	4.6	.00
17	.00	.00	.00	.00	.00	.00	.00	.00	.00	.21	3.0	.00
18	.00	.00	.00	.00	.00	.00	.00	.00	.00	3.0	1.1	.00
19	.00	.00	.00	.00	.00	.00	.00	.00	.00	18	.47	.00
20	.00	.00	.00	.00	.00	.00	.00	.00	.00	1.5	.23	.00
21	.00	.00	.00	.00	.00	.00	.00	.00	.00	.57	.05	.00
22	.00	.00	.00	.00	.00	.00	.00	.00	.00	.21	.00	.00
23	.00	.00	.00	.00	.00	.00	.00	.00	.00	.05	.00	.00
24	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
25	.00	.00	.00	.00	.00	.00	.00	.00	.00	108	.00	.00
26	.00	.00	.00	.00	.00	.00	.00	.00	.00	37	.00	.00
27	.00	.00	.00	.00	.00	.00	.00	251	.00	5.5	.00	.00
28	.00	.00	.00	.00	.00	.00	.00	6.0	.00	2.4	.00	.00
29	.00	.00	.00	.00	---	.00	.00	1.7	.00	1.3	.00	.00
30	.00	.00	.00	.00	---	.00	.00	.67	.00	.67	.00	.00
31	.00	---	.00	.00	---	.00	---	.33	---	.39	.00	---
TOTAL	.00	.00	.00	.00	.00	.00	.00	259.70	.12	199.68	60.31	.00
MEAN	.000	.000	.000	.000	.000	.000	.000	8.38	.004	6.44	1.95	.000
MAX	.00	.00	.00	.00	.00	.00	.00	251	.11	108	46	.00
MIN	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
AC-FT	.00	.00	.00	.00	.00	.00	.00	515	.2	396	120	.00
WTR YR 1981	TOTAL	519.81	MEAN	1.42	MAX	251	MIN	.00	AC-FT	1030		

CHEYENNE RIVER BASIN

06425750 COAL CREEK NEAR PINEY, WY--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--October 1980 to September 1981.

PERIOD OF DAILY RECORD.--

SUSPENDED-SEDIMENT DISCHARGE: October 1980 to September 1981.

INSTRUMENTATION.--Sediment pumping sampler since October 1980.

REMARKS.--No flow observed Nov. 7, Dec. 11, Jan. 19, Feb. 18, Mar. 20, Apr. 27, May 21, June 3, 10, 17, Aug. 12, Sept. 9.

EXTREMES FOR CURRENT YEAR.--

SEDIMENT CONCENTRATIONS: Maximum daily mean observed, 4,400 mg/L July 25; minimum daily mean, 0.0 mg/L on many days.

SEDIMENT LOAD: Maximum daily, 2,720 tons (2,468 tonnes) May 27, minimum daily, 0 tons on many days during year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	HARD- NESS (MG/L AS CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM AD- SORP- TION RATIO
JUL 14...	1315	7.8	440	7.8	19.0	6.5	63	16	5.5	66	3.6

DATE	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	POTAS- SIUM 40 DIS- SOLVED (PCI/L AS K40)	ALKA- LINITY LAB (MG/L AS CACO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)	SOLIDS, DIS- SOLVED (TONS PER DAY)
JUL 14...	7.8	5.8	120	22	45	.5	6.9	268	244	.33	5.1

DATE	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO- GEN,NH4 + ORG. SUSP. TOTAL (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC DIS. TOTAL (MG/L AS N)	NITRO- GEN, TOTAL (MG/L AS N)	NITRO- GEN DIS- SOLVED (MG/L AS N)	NITRO- GEN, TOTAL (MG/L AS NO3)	PHOS- PHORUS, TOTAL (MG/L AS P)
JUL 14...	.61	.29	1.80	8.2	10.0	8.4	1.6	11	1.9	47	1.00

DATE	PHOS- PHORUS TOTAL (MG/L AS PO4)	PHOS- PHORUS, DIS- SOLVED (MG/L AS P)	CARBON, ORGANIC DIS- SOLVED (MG/L AS C)	CARBON, ORGANIC SUS- PENDE TOTAL (MG/L AS C)	CYANIDE TOTAL (MG/L AS CN)	PHENOLS (UG/L)	PHYTO- PLANK- TON, TOTAL (CELLS PER ML)	SEDI- MENT, SUS- PENDE (MG/L)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
JUL 14...	3.1	.100	4.4	1.9	.00	11	890	2380	50	100

06425750 COAL CREEK NEAR PINEY, WY--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	TIME	ARSENIC TOTAL (UG/L AS AS)	ARSENIC SUS- PENDE TOTAL (UG/L AS AS)	ARSENIC DIS- SOLVED (UG/L AS AS)	BARIUM, TOTAL RECOV- ERABLE (UG/L AS BA)	BARIUM, SUS- PENDE RECOV- ERABLE (UG/L AS BA)	BARIUM, DIS- SOLVED (UG/L AS BA)	BERYL- LIUM, TOTAL RECOV- ERABLE (UG/L AS BE)	BERYL- LIUM, SUS- PENDE RECOV. (UG/L AS BE)	BERYL- LIUM, DIS- SOLVED (UG/L AS BE)	BORON, DIS- SOLVED (UG/L AS B)	CADMIUM TOTAL RECOV- ERABLE (UG/L AS CD)
JUL 14...	1315	9	7	2	600	600	0	0	0	0	360	1

DATE	CADMIUM SUS- PENDE RECOV- ERABLE (UG/L AS CD)	CADMIUM DIS- SOLVED (UG/L AS CD)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR)	CHRO- MIUM, SUS- PENDE RECOV. (UG/L AS CR)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU)	COPPER, SUS- PENDE RECOV- ERABLE (UG/L AS CU)	COPPER, DIS- SOLVED (UG/L AS CU)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	IRON, SUS- PENDE RECOV- ERABLE (UG/L AS FE)	IRON, DIS- SOLVED (UG/L AS FE)	LEAD, TOTAL RECOV- ERABLE (UG/L AS PB)
JUL 14...	0	1	40	30	10	43	19	24	21000	21000	140	27

DATE	LEAD, SUS- PENDE RECOV- ERABLE (UG/L AS PB)	LEAD, DIS- SOLVED (UG/L AS PB)	LITHIUM TOTAL RECOV- ERABLE (UG/L AS LI)	LITHIUM SUS- PENDE RECOV- ERABLE (UG/L AS LI)	LITHIUM DIS- SOLVED (UG/L AS LI)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)	MANGA- NESE, SUS- PENDE RECOV. (UG/L AS MN)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	MERCURY TOTAL RECOV- ERABLE (UG/L AS HG)	MERCURY SUS- PENDE RECOV- ERABLE (UG/L AS HG)	MERCURY DIS- SOLVED (UG/L AS HG)	NICKEL, TOTAL RECOV- ERABLE (UG/L AS NI)
JUL 14...	16	11	50	30	20	240	230	10	.4	.2	.2	23

	NICKEL, SUS- PENDE RECOV- ERABLE (UG/L AS NI)	NICKEL, DIS- SOLVED (UG/L AS NI)	SELE- NIUM, TOTAL (UG/L AS SE)	SELE- NIUM, SUS- PENDE TOTAL (UG/L AS SE)	SELE- NIUM, DIS- SOLVED (UG/L AS SE)	STRON- TIUM, TOTAL RECOV- ERABLE (UG/L AS SR)	STRON- TIUM, SUS- PENDE RECOV. (UG/L AS SR)	STRON- TIUM, DIS- SOLVED (UG/L AS SR)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN)	ZINC, SUS- PENDE RECOV- ERABLE (UG/L AS ZN)	ZINC, DIS- SOLVED (UG/L AS ZN)
JUL 14...	16	7	0	0	1	410	210	200	180	150	30

DATE	TIME	GROSS ALPHA, DIS- SOLVED (UG/L AS U-NAT)	GROSS ALPHA, SUSP. TOTAL (UG/L AS U-NAT)	GROSS BETA, DIS- SOLVED (PCI/L AS CS-137)	GROSS BETA, SUSP. TOTAL (PCI/L AS CS-137)	GROSS BETA, DIS- SOLVED (PCI/L AS YT-90)	GROSS BETA, SUSP. TOTAL (PCI/L AS YT-90)	GROSS ALPHA, DIS- SOLVED (PCI/L AS U-NAT)	GROSS ALPHA, SUSP. TOTAL (PCI/L AS U-NAT)
JUL 14...	1315	<5.2	180	9.9	110	9.6	100	3.5	120

CHEYENNE RIVER BASIN

06425750 COAL CREEK NEAR PINEY, WY--Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1								---		---	287	
2								---		---	301	
3								---		---	---	
4								---		---	235	
5								---		---	288	
6								---		---	---	
7								---		---	---	
8								---		---	---	
9								---		---	---	
10								---		---	---	
11								---		---	---	
12								---		---	---	
13								---		225	---	
14								---		402	---	
15								---		511	---	
16								---		511	---	
17								---		---	---	
18								---		392	---	
19								---		325	---	
20								---		357	---	
21								---		---	---	
22								---		---	---	
23								---		---	---	
24								---		---	---	
25								---		---	---	
26								---		235	---	
27								214		224	---	
28								223		234	---	
29								---		---	---	
30								---		268	---	
31								---		283	---	
MEAN								219		331	278	
WTR YR 1981	MEAN	306		MAX	511		MIN	214				

06425750 COAL CREEK NEAR PINEY, WY--Continued

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

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)
OCTOBER			NOVEMBER			DECEMBER			
1	.00		.00	.00		.00	.00		.00
2	.00		.00	.00		.00	.00		.00
3	.00		.00	.00		.00	.00		.00
4	.00		.00	.00		.00	.00		.00
5	.00		.00	.00		.00	.00		.00
6	.00		.00	.00		.00	.00		.00
7	.00		.00	.00		.00	.00		.00
8	.00		.00	.00		.00	.00		.00
9	.00		.00	.00		.00	.00		.00
10	.00		.00	.00		.00	.00		.00
11	.00		.00	.00		.00	.00		.00
12	.00		.00	.00		.00	.00		.00
13	.00		.00	.00		.00	.00		.00
14	.00		.00	.00		.00	.00		.00
15	.00		.00	.00		.00	.00		.00
16	.00		.00	.00		.00	.00		.00
17	.00		.00	.00		.00	.00		.00
18	.00		.00	.00		.00	.00		.00
19	.00		.00	.00		.00	.00		.00
20	.00		.00	.00		.00	.00		.00
21	.00		.00	.00		.00	.00		.00
22	.00		.00	.00		.00	.00		.00
23	.00		.00	.00		.00	.00		.00
24	.00		.00	.00		.00	.00		.00
25	.00		.00	.00		.00	.00		.00
26	.00		.00	.00		.00	.00		.00
27	.00		.00	.00		.00	.00		.00
28	.00		.00	.00		.00	.00		.00
29	.00		.00	.00		.00	.00		.00
30	.00		.00	.00		.00	.00		.00
31	.00		.00	---		.00	.00		.00
TOTAL	0.00		0.00	0.00		0.00	0.00		0.00
JANUARY			FEBRUARY			MARCH			
1	.00		.00	.00		.00	.00		.00
2	.00		.00	.00		.00	.00		.00
3	.00		.00	.00		.00	.00		.00
4	.00		.00	.00		.00	.00		.00
5	.00		.00	.00		.00	.00		.00
6	.00		.00	.00		.00	.00		.00
7	.00		.00	.00		.00	.00		.00
8	.00		.00	.00		.00	.00		.00
9	.00		.00	.00		.00	.00		.00
10	.00		.00	.00		.00	.00		.00
11	.00		.00	.00		.00	.00		.00
12	.00		.00	.00		.00	.00		.00
13	.00		.00	.00		.00	.00		.00
14	.00		.00	.00		.00	.00		.00
15	.00		.00	.00		.00	.00		.00
16	.00		.00	.00		.00	.00		.00
17	.00		.00	.00		.00	.00		.00
18	.00		.00	.00		.00	.00		.00
19	.00		.00	.00		.00	.00		.00
20	.00		.00	.00		.00	.00		.00
21	.00		.00	.00		.00	.00		.00
22	.00		.00	.00		.00	.00		.00
23	.00		.00	.00		.00	.00		.00
24	.00		.00	.00		.00	.00		.00
25	.00		.00	.00		.00	.00		.00
26	.00		.00	.00		.00	.00		.00
27	.00		.00	.00		.00	.00		.00
28	.00		.00	.00		.00	.00		.00
29	.00		.00	---		.00	.00		.00
30	.00		.00	---		.00	.00		.00
31	.00		.00	---		.00	.00		.00
TOTAL	0.00		0.00	0.00		0.00	0.00		0.00

CHEYENNE RIVER BASIN

06425750 COAL CREEK NEAR PINEY, WY--Continued

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

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)
APRIL				MAY				JUNE	
1	.00		.00	.00	---	.00	.11	1000	.30
2	.00		.00	.00	---	.00	.01	980	.03
3	.00		.00	.00	---	.00	.00	---	.00
4	.00		.00	.00	---	.00	.00	---	.00
5	.00		.00	.00	---	.00	.00	---	.00
6	.00		.00	.00	---	.00	.00	---	.00
7	.00		.00	.00	---	.00	.00	---	.00
8	.00		.00	.00	---	.00	.00	---	.00
9	.00		.00	.00	---	.00	.00	---	.00
10	.00		.00	.00	---	.00	.00	---	.00
11	.00		.00	.00	---	.00	.00	---	.00
12	.00		.00	.00	---	.00	.00	---	.00
13	.00		.00	.00	---	.00	.00	---	.00
14	.00		.00	.00	---	.00	.00	---	.00
15	.00		.00	.00	---	.00	.00	---	.00
16	.00		.00	.00	---	.00	.00	---	.00
17	.00		.00	.00	---	.00	.00	---	.00
18	.00		.00	.00	---	.00	.00	---	.00
19	.00		.00	.00	---	.00	.00	---	.00
20	.00		.00	.00	---	.00	.00	---	.00
21	.00		.00	.00	---	.00	.00	---	.00
22	.00		.00	.00	---	.00	.00	---	.00
23	.00		.00	.00	---	.00	.00	---	.00
24	.00		.00	.00	---	.00	.00	---	.00
25	.00		.00	.00	---	.00	.00	---	.00
26	.00		.00	.00	---	.00	.00	---	.00
27	.00		.00	251	4010	2720	.00	---	.00
28	.00		.00	6.0	1680	27	.00	---	.00
29	.00		.00	1.7	1250	5.7	.00	---	.00
30	.00		.00	.67	1110	2.0	.00	---	.00
31	---		.00	.33	1050	.94	---	---	---
TOTAL	0.00		0.00	259.70	---	2755.64	0.12	---	0.33
JULY				AUGUST				SEPTEMBER	
1	.00	---	.00	.17	638	.29	.00		.00
2	.00	---	.00	.01	583	.02	.00		.00
3	.00	---	.00	.00	---	.00	.00		.00
4	.00	---	.00	46	2480	308	.00		.00
5	.00	---	.00	2.6	1570	11	.00		.00
6	.00	---	.00	1.1	1100	3.3	.00		.00
7	.00	---	.00	.53	880	1.3	.00		.00
8	.00	---	.00	.29	750	.59	.00		.00
9	.00	---	.00	.13	660	.23	.00		.00
10	.00	---	.00	.03	600	.05	.00		.00
11	.00	---	.00	.00	---	.00	.00		.00
12	.00	---	.00	.00	---	.00	.00		.00
13	.83	119	.27	.00	---	.00	.00		.00
14	18	2710	132	.00	---	.00	.00		.00
15	1.5	1720	7.0	.00	---	.00	.00		.00
16	.55	1320	2.0	4.6	852	11	.00		.00
17	.21	1080	.61	3.0	680	5.5	.00		.00
18	3.0	1440	12	1.1	650	1.9	.00		.00
19	18	2830	138	.47	630	.80	.00		.00
20	1.5	2480	10	.23	590	.37	.00		.00
21	.57	1700	2.6	.05	550	.07	.00		.00
22	.21	1160	.66	.00	---	.00	.00		.00
23	.05	990	.13	.00	---	.00	.00		.00
24	.00	---	.00	.00	---	.00	.00		.00
25	108	4400	1280	.00	---	.00	.00		.00
26	37	3120	312	.00	---	.00	.00		.00
27	5.5	1480	22	.00	---	.00	.00		.00
28	2.4	1100	7.1	.00	---	.00	.00		.00
29	1.3	880	3.1	.00	---	.00	.00		.00
30	.67	759	1.4	.00	---	.00	.00		.00
31	.39	704	.74	.00	---	.00	---		.00
TOTAL	199.68	---	1931.61	60.31	---	344.42	0.00		0.00
YEAR	519.81		5032.00						

06425750 COAL CREEK NEAR PINEY, WY--Continued

QUALITATIVE AND ASSOCIATED QUANTITATIVE ANALYSES OF BIOLOGICAL DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

PHYTOPLANKTON ANALYSES

DATE	JUL 14, 81
TIME	1315
TOTAL CELLS/ML	890
DIVERSITY: DIVISION	1.0
..CLASS	1.0
..ORDER	1.3
...FAMILY	1.4
....GENUS	1.5

ORGANISM	CELLS /ML	PER- CENT
BACILLARIOPHYTA (DIATOMS)		
..BACILLARIOPHYCEAE		
...BACILLARIALES		
....NITZSCHIA	55	6
...NAVICULALES		
....GOMPHONEMACEAE	14	2
...GOMPHONEMA		
....NAVICULACEAE		
...NAVICULA	83	9
....PINNULARIA	28	3
...SURIRELLALES		
....SURIRELLACEAE		
...SURIRELLA	28	3
CHLOROPHYTA (GREEN ALGAE)		
..CHLOROPHYCEAE		
...VOLVOCALES		
....CHLAMYDOMONADACEAE		
...CHLAMYDOMONAS	14	2
CYANOPHYTA (BLUE-GREEN ALGAE)		
..CYANOPHYCEAE		
...OSCILLATORIALES		
....OSCILLATORIA	660#	74
EUGLENOPHYTA (EUGLENOIDS)		
..EUGLENOPHYCEAE		
...EUGLENALES		
....EUGLENACEAE		
...TRACHELOMONAS	14	2

NOTE: # - DOMINANT ORGANISM; EQUAL TO OR GREATER THAN 15%

* - OBSERVED ORGANISM, MAY NOT HAVE BEEN COUNTED; LESS THAN 1/2%

CHEYENNE RIVER BASIN

06425780 BELLE FOURCHE RIVER ABOVE DRY CREEK, NEAR PINEY, WY

LOCATION.--Lat 44°01'30", long 105°19'35", in NW¼SE¼NE¼ sec.25, T.47 N., R.71 W., Campbell County, Hydrologic Unit 10120201, on left bank 4.1 mi (6.6 km) upstream from Dry Creek, 4.8 mi (7.7 km) downstream from Coal Creek, 6.0 mi (9.7 km) southwest of Piney, and 20 mi (32 km) southeast of Gillette.

DRAINAGE AREA.--594 mi² (1,538 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1975 to current year.

GAGE.--Water-stage recorder and concrete control. Altitude of gage is 4,460 ft (1,359 m), from topographic map.

REMARKS.--Records fair. Several small stockwater and soil conservation reservoirs above station.

AVERAGE DISCHARGE.--6 years, 4.64 ft³/s (0.131 m³/s), 3,360 acre-ft/yr (4.14 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, about 5,630 ft³/s (159 m³/s) May 18, 1978, gage height, about 16.3 ft (4.97 m), from floodmarks caused by dam failure; no flow at times each year.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 838 ft³/s (23.7 m³/s) May 27, gage height, 9.59 ft (2.923 m); no flow for many days.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.02	.00	.01	.00	.02	.02	.00	.17	.00	.65	.00
2	.00	.02	.00	.01	.00	.02	.01	.00	.07	.00	.36	.00
3	.00	.02	.02	.00	.00	.02	.02	.04	.03	.00	.20	.00
4	.00	.02	.02	.00	.00	.02	.02	.05	.02	.00	53	.00
5	.00	.02	.01	.01	.00	.02	.01	.01	.01	.00	18	.00
6	.00	.02	.01	.00	.00	.02	.01	.01	.01	.00	5.3	.00
7	.00	.02	.00	.00	.00	.02	.01	.01	.01	.00	2.4	.00
8	.00	.02	.00	.00	.00	.02	.01	.01	.01	.00	1.8	.00
9	.00	.01	.00	.00	.00	.02	.01	.02	.02	.00	1.3	.00
10	.00	.01	.00	.00	.00	.02	.01	.01	.01	.00	.88	.00
11	.00	.01	.00	.00	.00	.01	.01	.01	.01	.00	.52	.00
12	.01	.01	.01	.00	.00	.01	.01	.01	.01	.00	.36	.00
13	.02	.00	.01	.00	.00	.01	.00	.01	.02	.00	.28	.00
14	.02	.00	.01	.00	.03	.02	.00	.00	.01	6.9	.20	.00
15	.04	.00	.02	.00	.02	.01	.00	.00	.01	2.4	.12	.00
16	.04	.00	.02	.00	.02	.01	.00	.00	.01	.65	4.3	.00
17	.03	.00	.02	.00	.04	.02	.00	.00	.01	.14	5.0	.00
18	.03	.00	.01	.00	.02	.02	.00	.00	.00	.07	3.7	.00
19	.03	.00	.01	.00	.03	.02	.00	.00	.00	15	2.3	.00
20	.02	.00	.01	.00	.03	.02	.00	.00	.00	2.5	1.2	.00
21	.02	.00	.01	.00	.02	.04	.01	.00	.00	.05	.65	.00
22	.02	.01	.01	.00	.02	.02	.00	.02	.00	.01	.41	.00
23	.01	.01	.01	.00	.03	.02	.00	.02	.00	.01	.32	.00
24	.02	.00	.01	.00	.03	.02	.00	.00	.00	.00	.17	.00
25	.02	.00	.01	.00	.02	.02	.00	.00	.00	97	.12	.00
26	.02	.00	.02	.00	.02	.02	.00	.00	.00	159	.07	.00
27	.02	.00	.03	.00	.02	.02	.00	199	.00	8.6	.04	.00
28	.02	.00	.02	.00	.02	.02	.00	12	.00	3.9	.02	.00
29	.02	.01	.01	.00	---	.02	.00	2.6	.00	2.1	.01	.00
30	.02	.01	.01	.00	---	.02	.00	.97	.00	1.6	.00	.00
31	.02	---	.02	.00	---	.02	---	.32	---	1.2	.00	---
TOTAL	.45	.24	.34	.03	.37	.59	.16	215.12	.44	301.13	103.68	.00
MEAN	.015	.008	.011	.001	.013	.019	.005	6.94	.015	9.71	3.34	.000
MAX	.04	.02	.03	.01	.04	.04	.02	199	.17	159	53	.00
MIN	.00	.00	.00	.00	.00	.01	.00	.00	.00	.00	.00	.00
AC-FT	.9	.5	.7	.06	.7	1.2	.3	427	.9	597	206	.00

CAL YR 1980 TOTAL 102.33 MEAN .28 MAX 11 MIN .00 AC-FT 203
WTR YR 1981 TOTAL 622.55 MEAN 1.71 MAX 199 MIN .00 AC-FT 1230

06425780 BELLE FOURCHE RIVER ABOVE DRY CREEK, NEAR PINEY, WY--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water year 1976 to current year.

PERIOD OF DAILY RECORD.--

SUSPENDED-SEDIMENT DISCHARGE: October 1976 to current year.

INSTRUMENTATION.--Sediment pumping sampler since April 1977.

REVISED RECORDS.--WDR WY-79-1: 1978.

EXTREMES FOR PERIOD OF RECORD.--

SEDIMENT CONCENTRATIONS: Maximum daily mean observed, 3,200 mg/L May 27, 1980 (possibly higher in May of 1978); minimum daily mean, 0.0 mg/L some days most years.

SEDIMENT LOAD: Maximum daily, 40,100 tons (36,400 tonnes) May 18, 1978; minimum daily, 0 tons on many days each year.

EXTREMES FOR CURRENT YEAR.--

SEDIMENT CONCENTRATIONS: Maximum daily mean observed, 3,280 mg/L May 27; minimum daily mean, 0.0 mg/L on many days.

SEDIMENT LOAD: Maximum daily, 1,760 tons (1,597 tonnes) May 27; minimum daily, 0 tons on many days.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	COLOR (PLAT- INUM- COBALT UNITS)	TUR- BID- ITY (NTU)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION)	HARD- NESS (MG/L AS CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)
OCT 28...	1500	.02	4300	7.9	6.0	--	--	14.7	134	2100	440
DEC 11...	1100	--	--	--	--	--	3.0	--	--	--	--
FEB 19...	0825	.02	3400	--	.0	--	--	--	--	--	--
26...	0800	<.01	3120	8.0	1.5	510	--	10.5	91	1500	340
MAR 10...	0930	.02	3620	7.9	5.0	--	--	19.0	171	1800	400
10...	1015	--	3700	8.0	5.0	--	12	17.8	--	--	--
MAY 08...	0945	.01	4380	8.1	13.0	13	--	9.9	111	2100	430
27...	1630	114	270	8.0	12.0	19	--	--	--	72	19
JUN 08...	1800	.01	2450	8.4	23.0	23	--	14.0	194	1000	230
JUL 20...	1735	.97	403	7.7	26.0	--	--	4.6	65	120	31
30...	1330	--	--	--	--	--	--	--	--	--	--
AUG 10...	0800	--	--	--	--	--	--	--	--	--	--
26...	1530	.04	2020	8.2	25.5	--	--	7.7	108	750	180

DATE	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	POTAS- SIUM 40 DIS- SOLVED (PCI/L AS K40)	ALKA- LINITY LAB (MG/L AS CACO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)
OCT 28...	240	370	3.5	26	19	250	2600	17	.3	3.6	4220
DEC 11...	--	--	--	--	--	--	--	--	--	--	--
FEB 19...	--	--	--	--	9.7	--	--	--	--	--	--
26...	150	280	3.2	14	10	280	1800	11	.2	5.8	2930
MAR 10...	190	310	3.2	13	9.7	300	2100	12	.3	.4	3470
10...	--	--	--	--	--	--	--	--	--	--	--
MAY 08...	240	390	3.7	30	22	230	2700	18	.3	1.8	4440
27...	6.0	36	1.8	5.8	4.3	60	77	6.5	.3	3.2	186
JUN 08...	110	200	2.7	16	--	200	1200	15	.4	5.7	2040
JUL 20...	9.3	36	1.5	8.2	6.1	94	91	14	.3	7.2	261
30...	--	--	--	--	--	--	--	--	--	--	--
AUG 10...	--	--	--	--	--	--	--	--	--	--	--
26...	74	180	3.1	15	--	200	870	10	.3	4.0	1630

WATER-QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

[illegible]

WATER-QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	COAL IN BOTTOM MATE- RIAL (GM/KG)	H-2/ H-1/ STABLE ISOTOPE RATIO PER MILL	PHYTO- PLANK- TON, TOTAL (CELLS PER ML)	PERI- PHYTON BIOMASS ASH WEIGHT G/SQ M	PERI- PHYTON BIOMASS TOTAL DRY WEIGHT G/SQ M	BIOMASS CHLORO- PHYLL RATIO PERI- PHYTON (UNITS)	CHLOR-A PERI- PHYTON CHROMO- FLUOROM (MG/M2)	CHLOR-B PERI- PHYTON CHROMO- FLUOROM (MG/M2)	SEDI- MENT, DIS- CHARGE, SUS- PENDED (MG/L)	SEDI- MENT, DIS- CHARGE, SUS- PENDED (T/DAY)
OCT 28...	--	--	550	--	--	--	--	--	27	.00
DEC 11...	--	--	--	--	--	--	--	--	--	--
FEB 19...	--	--	--	--	--	--	--	--	68	.00
26...	--	10.5	8000	--	--	--	--	--	20	.00
MAR 10...	--	--	2300	--	--	--	--	--	90	.00
10...	--	--	--	--	--	--	--	--	--	--
MAY 08...	43.0	9.9	660	--	--	--	--	--	--	--
27...	--	--	--	--	--	--	--	--	4020	1240
JUN 08...	--	14.0	7000	2.30	2.44	800	.200	.020	--	--
JUL 20...	--	--	550	--	--	--	--	--	1450	3.8
30...	--	--	--	--	--	--	--	--	146	--
AUG 10...	--	--	--	--	--	--	--	--	73	--
26...	--	--	2600	4.96	5.59	1190	.530	.050	--	--

[illegible][illegible]

WATER-QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

[illegible]

06425780 BELLE FOURCHE RIVER ABOVE DRY CREEK, NEAR PINEY, WY--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	TIME	GROSS ALPHA, DIS- SOLVED (UG/L AS U-NAT)	GROSS ALPHA, SUSP. TOTAL (UG/L AS U-NAT)	GROSS BETA, DIS- SOLVED (PCI/L AS CS-137)	GROSS BETA, SUSP. TOTAL (PCI/L AS CS-137)	GROSS BETA, DIS- SOLVED (PCI/L AS SR/ YT-90)	GROSS BETA, SUSP. TOTAL (PCI/L AS SR/ YT-90)	GROSS ALPHA, DIS- SOLVED (PCI/L AS U-NAT)	GROSS ALPHA, SUSP. TOTAL (PCI/L AS U-NAT)
MAY 08...	0945	<98	<.4	<43	2.0	<39	2.0	67	.3

DATE	TIME	TEMPER- ATURE (DEG C)	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SED. SUSP. FALL DIAM. % FINER THAN .004 MM	SED. SUSP. FALL DIAM. % FINER THAN .016 MM	SED. SUSP. FALL DIAM. % FINER THAN .062 MM	BED MAT. FALL DIAM. % FINER THAN .062 MM	BED MAT. FALL DIAM. % FINER THAN .125 MM
FEB 26...	0800	1.5	<.01	--	--	--	5	8
MAY 27...	1630	12.0	114	90	98	100	--	--
JUL 20...	1735	26.0	.97	98	99	100	9	12

DATE	BED MAT. FALL DIAM. % FINER THAN .250 MM	BED MAT. FALL DIAM. % FINER THAN .500 MM	BED MAT. FALL DIAM. % FINER THAN 1.00 MM	BED MAT. FALL DIAM. % FINER THAN 2.00 MM	BED MAT. FALL DIAM. % FINER THAN 4.00 MM	BED MAT. FALL DIAM. % FINER THAN 8.00 MM	BED MAT. FALL DIAM. % FINER THAN 16.0 MM	BED MAT. FALL DIAM. % FINER THAN 32.0 MM
FEB 26...	13	23	31	40	51	66	81	100
MAY 27...	--	--	--	--	--	--	--	--
JUL 20...	20	26	40	49	62	81	99	100

CHEYENNE RIVER BASIN

06425780 BELLE FOURCHE RIVER ABOVE DRY CREEK, NEAR PINEY, WY--Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1							---	4950	1440	---	---	
2							---	4950	1600	---	---	
3							---	4970	1750	---	---	
4							---	4870	1880	---	---	
5							---	4630	2010	---	---	
6							---	4520	2030	---	---	
7							---	4520	2120	3760	---	
8							---	4500	2280	---	---	
9							---	4480	2460	---	---	
10							---	4430	2630	---	1280	
11							---	4460	2780	---	---	
12							---	4460	2900	---	---	
13							---	4480	2930	---	---	
14							---	4460	---	3370	---	
15							---	4500	---	1620	---	
16							---	4560	---	---	---	
17							---	4520	3310	---	---	
18							---	4490	3380	---	---	
19							---	4520	3420	---	---	
20							---	4510	3460	592	---	
21							---	4570	3480	517	---	
22							---	4500	3490	---	---	
23							---	4410	3540	---	---	
24							---	4480	---	---	---	
25							---	4520	---	---	---	
26							---	1500	---	---	---	
27							---	399	---	---	---	
28							4760	648	---	---	---	
29							4860	874	3580	---	---	
30							4910	1120	---	886	---	
31							---	1260	---	1210	---	
MEAN							4840	3870	2690	1710	1280	
WTR YR 1981	MEAN	3240		MAX	4970	MIN	399					

06425780 BELLE FOURCHE RIVER ABOVE DRY CREEK, NEAR PINEY, WY--Continued

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

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)
OCTOBER			NOVEMBER			DECEMBER			
1	.00	---	.00	.02	92	.00	.00	---	.00
2	.00	---	.00	.02	92	.00	.00	---	.00
3	.00	---	.00	.02	92	.00	.02	92	.00
4	.00	---	.00	.02	92	.00	.02	92	.00
5	.00	---	.00	.02	92	.00	.01	71	.00
6	.00	---	.00	.02	92	.00	.01	71	.00
7	.00	---	.00	.02	92	.00	.00	---	.00
8	.00	---	.00	.02	92	.00	.00	---	.00
9	.00	---	.00	.01	71	.00	.00	---	.00
10	.00	---	.00	.01	71	.00	.00	---	.00
11	.00	---	.00	.01	71	.00	.00	---	.00
12	.01	71	.00	.01	71	.00	.01	71	.00
13	.02	92	.00	.00	---	.00	.01	71	.00
14	.02	92	.00	.00	---	.00	.01	71	.00
15	.04	119	.01	.00	---	.00	.02	92	.00
16	.04	119	.01	.00	---	.00	.02	92	.00
17	.03	107	.00	.00	---	.00	.02	92	.00
18	.03	107	.00	.00	---	.00	.01	71	.00
19	.03	107	.00	.00	---	.00	.01	71	.00
20	.02	92	.00	.00	---	.00	.01	71	.00
21	.02	92	.00	.00	---	.00	.01	71	.00
22	.02	92	.00	.01	71	.00	.01	71	.00
23	.01	71	.00	.01	71	.00	.01	71	.00
24	.02	92	.00	.00	---	.00	.01	71	.00
25	.02	92	.00	.00	---	.00	.01	71	.00
26	.02	92	.00	.00	---	.00	.02	92	.00
27	.02	92	.00	.00	---	.00	.03	107	.00
28	.02	92	.00	.00	---	.00	.02	92	.00
29	.02	92	.00	.01	71	.00	.01	71	.00
30	.02	92	.00	.01	71	.00	.01	71	.00
31	.02	92	.00	---	---	---	.02	92	.00
TOTAL	0.45	---	0.02	0.24	---	0.00	0.34	---	0.00
JANUARY			FEBRUARY			MARCH			
1	.01	71	.00	.00	---	.00	.02	92	.00
2	.01	71	.00	.00	---	.00	.02	92	.00
3	.00	---	.00	.00	---	.00	.02	92	.00
4	.00	---	.00	.00	---	.00	.02	92	.00
5	.01	71	.00	.00	---	.00	.02	92	.00
6	.00	---	.00	.00	---	.00	.02	92	.00
7	.00	---	.00	.00	---	.00	.02	92	.00
8	.00	---	.00	.00	---	.00	.02	92	.00
9	.00	---	.00	.00	---	.00	.02	92	.00
10	.00	---	.00	.00	---	.00	.02	92	.00
11	.00	---	.00	.00	---	.00	.01	71	.00
12	.00	---	.00	.00	---	.00	.01	71	.00
13	.00	---	.00	.00	---	.00	.01	71	.00
14	.00	---	.00	.03	107	.00	.02	92	.00
15	.00	---	.00	.02	92	.00	.01	71	.00
16	.00	---	.00	.02	92	.00	.01	92	.00
17	.00	---	.00	.04	119	.01	.02	92	.00
18	.00	---	.00	.02	92	.00	.02	92	.00
19	.00	---	.00	.03	107	.00	.02	92	.00
20	.00	---	.00	.03	107	.00	.02	92	.00
21	.00	---	.00	.02	92	.00	.04	119	.01
22	.00	---	.00	.02	92	.00	.02	92	.00
23	.00	---	.00	.03	107	.00	.02	92	.00
24	.00	---	.00	.03	107	.00	.02	92	.00
25	.00	---	.00	.02	92	.00	.02	92	.00
26	.00	---	.00	.02	92	.00	.02	92	.00
27	.00	---	.00	.02	92	.00	.02	92	.00
28	.00	---	.00	.02	92	.00	.02	92	.00
29	.00	---	.00	---	---	---	.02	92	.00
30	.00	---	.00	---	---	---	.02	92	.00
31	.00	---	.00	---	---	---	.02	92	.00
TOTAL	0.03	---	0.00	0.37	---	0.01	0.59	---	0.01

CHEYENNE RIVER BASIN

06425780 BELLE FOURCHE RIVER ABOVE DRY CREEK, NEAR PINEY, WY--Continued

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

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)
APRIL			MAY			JUNE			
1	.02	92	.00	.00	---	.00	.17	79	.04
2	.01	71	.00	.00	---	.00	.07	90	.02
3	.02	92	.00	.04	30	.00	.03	85	.00
4	.02	92	.00	.05	35	.00	.02	86	.00
5	.01	71	.00	.01	77	.00	.01	70	.00
6	.01	71	.00	.01	71	.00	.01	43	.00
7	.01	71	.00	.01	96	.00	.01	34	.00
8	.01	71	.00	.01	62	.00	.01	42	.00
9	.01	71	.00	.02	55	.00	.02	50	.00
10	.01	71	.00	.01	70	.00	.01	62	.00
11	.01	71	.00	.01	66	.00	.01	50	.00
12	.01	71	.00	.01	84	.00	.01	46	.00
13	.00	---	.00	.01	54	.00	.02	41	.00
14	.00	---	.00	.00	---	.00	.01	40	.00
15	.00	---	.00	.00	---	.00	.01	40	.00
16	.00	---	.00	.00	---	.00	.01	40	.00
17	.00	---	.00	.00	---	.00	.01	40	.00
18	.00	---	.00	.00	---	.00	.00	---	.00
19	.00	---	.00	.00	---	.00	.00	---	.00
20	.00	---	.00	.00	---	.00	.00	---	.00
21	.01	71	.00	.00	---	.00	.00	---	.00
22	.00	---	.00	.02	32	.00	.00	---	.00
23	.00	---	.00	.02	54	.00	.00	---	.00
24	.00	---	.00	.00	---	.00	.00	---	.00
25	.00	---	.00	.00	---	.00	.00	---	.00
26	.00	---	.00	.00	---	.00	.00	---	.00
27	.00	---	.00	199	3280	1760	.00	---	.00
28	.00	---	.00	12	444	14	.00	---	.00
29	.00	---	.00	2.6	162	1.1	.00	---	.00
30	.00	---	.00	.97	120	.31	.00	---	.00
31	---	---	---	.32	113	.10	---	---	---
TOTAL	0.16	---	0.00	215.12	---	1775.51	0.44	---	0.06
JULY			AUGUST			SEPTEMBER			
1	.00	---	.00	.65	230	.40	.00		.00
2	.00	---	.00	.36	220	.21	.00		.00
3	.00	---	.00	.20	210	.11	.00		.00
4	.00	---	.00	53	1660	238	.00		.00
5	.00	---	.00	18	1340	65	.00		.00
6	.00	---	.00	5.3	240	3.4	.00		.00
7	.00	---	.00	2.4	160	1.0	.00		.00
8	.00	---	.00	1.8	130	.63	.00		.00
9	.00	---	.00	1.3	110	.39	.00		.00
10	.00	---	.00	.88	100	.24	.00		.00
11	.00	---	.00	.52	72	.10	.00		.00
12	.00	---	.00	.36	90	.09	.00		.00
13	.00	---	.00	.28	84	.06	.00		.00
14	6.9	583	11	.20	74	.04	.00		.00
15	2.4	1160	7.5	.12	60	.02	.00		.00
16	.65	900	1.6	4.3	84	.98	.00		.00
17	.14	770	.29	5.0	98	1.3	.00		.00
18	.07	740	.14	3.7	94	.94	.00		.00
19	15	1000	40	2.3	100	.62	.00		.00
20	2.5	1600	11	1.2	100	.32	.00		.00
21	.05	972	.13	.65	100	.18	.00		.00
22	.01	420	.01	.41	100	.11	.00		.00
23	.01	90	.00	.32	100	.09	.00		.00
24	.00	---	.00	.17	80	.04	.00		.00
25	97	1840	482	.12	80	.03	.00		.00
26	159	2750	1180	.07	120	.02	.00		.00
27	8.6	1050	24	.04	130	.01	.00		.00
28	3.9	240	2.5	.02	138	.00	.00		.00
29	2.1	200	1.1	.01	134	.00	.00		.00
30	1.6	156	.67	.00	---	.00	.00		.00
31	1.2	130	.42	.00	---	.00	---		.00
TOTAL	301.13	---	1762.36	103.68	---	314.33	0.00		0.00
YEAR	622.55		3852.30						

06425780 BELLE FOURCHE RIVER ABOVE DRY CREEK, NEAR PINEY, WY--Continued

QUALITATIVE AND ASSOCIATED QUANTITATIVE ANALYSES OF BIOLOGICAL DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

PHYTOPLANKTON ANALYSES

DATE	OCT 28,80	FEB 26,81	MAR 10,81	MAY 8,81	JUL 20,81	AUG 26,81
TIME	1500	0800	0930	0945	1735	1530
TOTAL CELLS/ML	550	8000	2300	660	550	2600
DIVERSITY: DIVISION	1.7	0.2	0.8	1.1	0.7	1.9
..CLASS	1.7	0.2	0.8	1.1	0.7	1.9
..ORDER	1.9	0.3	1.8	2.6	1.7	2.5
...FAMILY	2.0	0.3	1.8	2.6	1.7	3.2
....GENUS	2.1	0.3	1.9	2.9	1.8	3.6

ORGANISM	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT
BACILLARIOPHYTA (DIATOMS)												
..BACILLARIOPHYCEAE												
...ACHNANTHALES												
...ACHNANTHACEAE												
....ACHNANTHES	--	-	* 0		1400# 62		170# 25		--	-	--	-
..BACILLARIALES												
...NITZSCHIA												
...NITZSCHIA	26	5	90	1	52	2	39	6	290# 52		87	3
...EUPODISCALES												
...COSCINODISCACEAE												
...CYCLOTETRA	--	-	* 0		--	-	--	-	27	5	130	5
..FRAGILARIALES												
...FRAGILARIA												
...FRAGILARIA												
....ASTERIONELLA	--	-	* 0		--	-	39	6	--	-	--	-
....DIATOMA	--	-	* 0		310	13	26	4	--	-	--	-
....SYNEDRA	--	-	--	-	13	1	64	10	--	-	--	-
...NAVICULALES												
...CYMBELLACEAE												
....CYMBELLA	--	-	--	-	--	-	--	-	--	-	22	1
...NAVICULACEAE												
....GYROSIGMA	--	-	--	-	13	1	13	2	--	-	--	-
....NAVICULA	26	5	51	1	130	6	77	12	150# 27		--	-
CHLOROPHYTA (GREEN ALGAE)												
..CHLOROPHYCEAE												
...CHLOROCOCCALES												
...DICTYOSPHAERIA												
....DICTYOSPHAERIUM	--	-	--	-	--	-	--	-	--	-	560# 22	
...OOCYSTACEAE												
....ANKISTRODESMUS	13	2	--	-	--	-	--	-	14	2	240	9
....CHODATELLA	--	-	--	-	--	-	--	-	--	-	22	1
....OOCYSTIS	--	-	--	-	--	-	--	-	--	-	110	4
....SELENASTRUM	--	-	--	-	--	-	--	-	--	-	87	3
...PALMELLACEAE												
...SPHAEROCYSTIS	--	-	--	-	--	-	--	-	--	-	43	2
...SCENEDESMACEAE												
....ACTINASTRUM	--	-	--	-	--	-	--	-	--	-	130	5
...SCENEDESMUS	--	-	--	-	--	-	52	8	--	-	--	-
...TETRASTRUM	--	-	--	-	52	2	--	-	--	-	--	-
...VOLVOCALES												
...CHLAMYDOMONADACEAE												
....CARTERIA	39	7	--	-	--	-	--	-	--	-	--	-
....CHLAMYDOMONAS	26	5	* 0		240	11	150# 24		--	-	43	2
CHRYSTOPHYTA												
..CHRYSTOPHYCEAE												
...CHROMULINALES												
...CHRYSOCOCCACEAE												
....CHRYSOCOCCUS	--	-	--	-	--	-	--	-	--	-	22	1
CRYPTOPHYTA (CRYPTOMONADS)												
..CRYPTOPHYCEAE												
...CRYPTOMONADALES												
...CRYPTOCHRYSIDACEAE												
....CHROOMONAS	51	9	--	-	--	-	--	-	--	-	--	-
...CRYPTOMONADACEAE												
....CRYPTOMONAS	13	2	--	-	--	-	--	-	--	-	130	5
CYANOPHYTA (BLUE-GREEN ALGAE)												
..CYANOPHYCEAE												
...CHROOCOCCALES												
...CHROOCOCCACEAE												
....ANACYSTIS	--	-	--	-	--	-	--	-	--	-	260	10
...NOSTOCALES												
...NOSTOCACEAE												
....ANABAENA	--	-	--	-	--	-	--	-	--	-	22	1
...OSCILLATORIALES												
...OSCILLATORIA												
....LYNGBYA	--	-	--	-	--	-	--	-	--	-	22	1
....OSCILLATORIA	330# 60		7700# 97		--	-	--	-	--	-	480# 18	

NOTE: # - DOMINANT ORGANISM; EQUAL TO OR GREATER THAN 15%

* - OBSERVED ORGANISM, MAY NOT HAVE BEEN COUNTED; LESS THAN 1/2%

CHEYENNE RIVER BASIN

06425780 BELLE FOURCHE RIVER ABOVE DRY CREEK, NEAR PINEY, WY--Continued

QUALITATIVE AND ASSOCIATED QUANTITATIVE ANALYSES OF BIOLOGICAL DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

PHYTOPLANKTON ANALYSES

DATE TIME	OCT 28,80 1500		FEB 26,81 0800		MAR 10,81 0930		MAY 8,81 0945		JUL 20,81 1735		AUG 26,81 1530	
ORGANISM	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT
EUGLENOPHYTA (EUGLENOIDS)												
.EUGLENOPHYCEAE												
..EUGLENALES												
...EUGLENACEAE												
....EUGLENA	--	-	--	-	--	-	--	-	41	7	43	2
....PHACUS	--	-	--	-	--	-	--	-	27	5	--	-
....TRACHELOMONAS	26	5	--	-	77	3	--	-	--	-	87	3
PYRRHOPHYTA (FIRE ALGAE)												
.DINOPHYCEAE												
..DINOKONTAE												
...GLENODINIACEAE												
....GLENODINIUM	--	-	--	-	--	-	26	4	--	-	43	2

NOTE: # - DOMINANT ORGANISM; EQUAL TO OR GREATER THAN 15%

* - OBSERVED ORGANISM, MAY NOT HAVE BEEN COUNTED; LESS THAN 1/2%

06425900 CABALLO CREEK AT MOUTH, NEAR PINEY, WY

LOCATION.--Lat 44°04'48", long 105°15'59", in NW¼NE¼SE¼ sec.4, T.47 N., R.70 W., Campbell County, Hydrologic Unit 10120201, on left bank 0.1 mi (0.2 km) downstream from bridge on county road, 0.7 mi (1.1 km) southwest of Piney (discontinued post office), 1.3 mi (2.1 km) upstream from mouth, and 18 mi (29 km) southeast of Gillette.

DRAINAGE AREA.--260 mi² (673 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1977 to current year.

GAGE.--Water-stage recorder and V-notch sharp-crested weir. Altitude of gage is 4,370 ft (1,332 km) from topographic map.

REMARKS.--Records good. Numerous small reservoirs above station. Flow occasionally affected by contributions from mine dewatering.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,170 ft³/s (61.5 m³/s) May 19, 1978, gage height, 8.66 ft (2.640 m); no flow for many days each year.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 296 ft³/s (8.38 m³/s) July 25, gage height, 5.35 ft (1.631 m); no flow for many days.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
2	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
3	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
4	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
5	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
6	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
7	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
8	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
9	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
10	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
11	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
12	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
13	.00	.00	.00	.00	.00	.00	.00	.00	.00	.19	.00	.00
14	.00	.00	.00	.00	.00	.00	.00	.00	.00	.10	.00	.00
15	.00	.00	.00	.00	.00	.00	.00	.00	.00	.05	.00	.00
16	.01	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
17	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
18	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
19	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
20	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
21	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
22	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
23	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
24	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
25	.00	.00	.00	.00	.00	.00	.00	.00	.00	.108	.00	.00
26	.00	.00	.03	.00	.00	.00	.00	.00	.00	.26	.00	.00
27	.00	.00	.09	.00	.00	.00	.00	.00	.00	.14	.00	.00
28	.00	.00	.01	.00	.00	.00	.00	.00	.00	1.2	.00	.00
29	.00	.00	.00	.00	---	.00	.00	.00	.00	.41	.00	.00
30	.00	.00	.00	.00	---	.00	.00	.00	.00	.08	.00	.00
31	.00	---	.00	.00	---	.00	---	.00	---	.02	.00	---
TOTAL	.01	.00	.13	.00	.00	.00	.00	.00	.00	178.76	.00	.00
MEAN	.000	.000	.004	.000	.000	.000	.000	.000	.000	5.77	.000	.000
MAX	.01	.00	.09	.00	.00	.00	.00	.00	.00	108	.00	.00
MIN	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
AC-FT	.02	.00	.3	.00	.00	.00	.00	.00	.00	355	.00	.00
CAL YR 1980	TOTAL	64.90	MEAN .18	MAX 13	MIN .00	AC-FT 129						
WTR YR 1981	TOTAL	178.90	MEAN .49	MAX 108	MIN .00	AC-FT 355						

CHEYENNE RIVER BASIN

06425900 CABALLO CREEK AT MOUTH, NEAR PINEY, WY--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--October 1977 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	STREAM- FLOW, INSTAN- TANEOUS (CFS)
OCT	
28...	.00
NOV	
18...	.00
19...	.00
DEC	
08...	.00
JAN	
20...	.00
FEB	
21...	.00
MAR	
10...	.00
APR	
28...	.00
MAY	
07...	.00
19...	.00
JUN	
08...	.00
JUL	
21...	.00
AUG	
27...	.00
SEP	
09...	.00

06425950 RAVEN CREEK NEAR MOORCROFT, WY

LOCATION.--Lat 44°10'04", long 105°05'11", in NW¼SE¼ sec.1, T.48 N., R.69 W., Campbell County, Hydrologic Unit 10120201, on left bank 1.4 mi (2.3 km) upstream from mouth, 9.3 mi (15.0 km) southwest of Moorcroft, and 9.5 mi (15.3 km) southeast of Rozet.

DRAINAGE AREA.--76 mi² (197 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1977 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 4,234 ft (1,290 m), from topographic map.

REMARKS.--Records good.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 293 ft³/s (8.30 m³/s) Mar. 20, 1978, gage height, 5.88 ft (1.792 m); no flow for many days each year.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 173 ft³/s (4.90 m³/s) Aug. 9, gage height, 5.12 ft (1.561 m); no flow for many days.

REVISIONS.--The maximum discharge for the water year 1980 has been revised to 9.9 ft³/s (0.28 m³/s) Feb. 23, 1980, gage height, 3.37 ft (1.027 m) backwater from ice, superceding figure published in the report for 1980.

Revised daily discharges, monthly and yearly figures, in cubic feet per second, for the 1980 water year are given below.

	Feb. 20	0.18		Feb. 24	4.0		Feb. 28	1.0	
	21	.43		25	2.8		29	.41	
	22	1.8		26	1.9		Mar. 1	.09	
	23	4.6		27	1.4		2	.01	
February 1980	TOTAL	18.52	MEAN	0.64	MAX	4.6	MIN	.00	AC-FT 37
March 1980	TOTAL	0.10	MEAN	0.003	MAX	0.09	MIN	.00	AC-FT .2
WTR YR 1980	TOTAL	18.62	MEAN	0.051	MAX	4.6	MIN	.00	AC-FT 37

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
2	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
3	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
4	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
5	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
6	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
7	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
8	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
9	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	19	.00
10	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	3.9	.00
11	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.70	.00
12	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
13	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
14	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
15	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
16	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
17	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
18	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
19	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
20	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
21	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
22	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
23	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
24	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
25	.00	.00	.00	.00	.00	.00	.00	.00	.00	.04	.00	.00
26	.00	.00	.00	.00	.00	.00	.00	.00	.00	.03	.00	.00
27	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
28	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
29	.00	.00	.00	.00	---	.00	.00	.00	.00	.00	.00	.00
30	.00	.00	.00	.00	---	.00	.00	.00	.00	.00	.00	.00
31	.00	---	.00	.00	---	.00	---	.00	---	.00	.00	---
TOTAL	.00	.00	.00	.00	.00	.00	.00	.00	.00	.07	23.60	.00
MEAN	.000	.000	.000	.000	.000	.000	.000	.000	.000	.002	.76	.000
MAX	.00	.00	.00	.00	.00	.00	.00	.00	.00	.04	19	.00
MIN	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
AC-FT	.00	.00	.00	.00	.00	.00	.00	.00	.00	.1	47	.00
CAL YR 1980	TOTAL	18.62	MEAN	.051	MAX	4.6	MIN	.00	AC-FT	37		
WTR YR 1981	TOTAL	23.67	MEAN	.065	MAX	19	MIN	.00	AC-FT	47		

CHEYENNE RIVER BASIN

06425950 RAVEN CREEK NEAR MOORCROFT, WY--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--October 1977 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	STREAM- FLOW, INSTAN- TANEOUS (CFS)
OCT	
28...	.00
NOV	
18...	.00
DEC	
09...	.00
JAN	
20...	.00
FEB	
21...	.00
MAR	
10...	.00
APR	
28...	.00
MAY	
07...	.00
19...	.00
JUN	
09...	.00
JUL	
21...	.00
AUG	
27...	.00
SEP	
09...	.00

06426400 DONKEY CREEK NEAR MOORCROFT, WY

LOCATION.--Lat 44°16'58", long 105°03'48", in SE¼NE¼SE¼ sec.30, T.50 N., R.68 W., Crook County, Hydrologic Unit 10120201, on left bank 25 ft (8 m) upstream from county bridge, 1.2 mi (1.9 km) downstream from Well Creek, and 6.0 mi (9.7 km) west of Moorcroft.

DRAINAGE AREA.--246 mi² (637 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1977 to September 1981 (discontinued).

GAGE.--Water-stage recorder and sharp-crested weir. Altitude of gage is 4,200 ft (1,280 m), from topographic map.

REMARKS.--Records poor. Numerous small reservoirs and diversions for irrigation of hay meadows above station. Flow occasionally affected by contributions from mine dewatering.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 3,950 ft³/s (112 m³/s) May 19, 1978, gage height, 14.60 ft (4.450 m); no flow for many days in 1980, 1981.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 18 ft³/s (0.510 m³/s) Nov. 6, gage height, 2.23 ft (0.680 m); maximum gage height, 2.30 ft (0.701 m) Feb. 21 (backwater from ice); no flow for many days.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.16	.03	.67	2.2	.78	.75	.48	.30	.95	.01	.30	.00
2	.13	.01	.70	2.0	.72	.65	.37	.26	.80	.01	.20	.00
3	.13	.00	.95	1.7	.70	.60	.30	.26	.50	.01	.08	.00
4	.11	.00	1.1	1.6	.70	.55	.35	.38	.44	.01	.02	.00
5	.10	.00	1.2	1.6	.68	.38	.30	.76	.33	.01	.00	.00
6	.10	6.8	1.3	1.5	.65	.14	.22	.80	.15	.00	.20	.00
7	.09	2.0	1.4	1.5	.62	.09	.13	.89	.10	.00	.10	.00
8	.09	.91	1.7	1.4	.58	.03	.04	.80	.09	.00	.00	.00
9	.07	1.6	2.5	1.3	.53	.02	.00	1.0	.08	.00	.25	.00
10	.06	1.5	3.2	1.2	.50	.07	.00	1.4	.08	.00	.10	.00
11	.10	1.0	3.5	1.1	.60	.06	.00	.76	.08	.00	.06	.00
12	.10	1.1	4.0	1.0	.70	.04	.00	.66	1.0	.00	.02	.00
13	.10	1.0	4.0	1.0	.78	.04	.00	.58	.24	.02	.00	.00
14	.06	.95	3.1	.92	.82	.04	.00	.44	.08	.02	.00	.00
15	.06	.90	2.3	.85	.87	.08	.00	.30	.10	.58	.00	.00
16	.14	.80	1.1	.80	.90	.10	.00	.26	.11	.08	1.5	.00
17	.14	.76	.75	.84	.96	.13	.00	.24	.08	.02	1.0	.00
18	.10	.53	.60	.90	1.1	.10	.00	.28	.06	.02	.60	.00
19	.05	.35	.70	.93	1.4	.11	.00	.24	.04	.01	.35	.00
20	.05	.25	.85	.94	2.3	.12	.00	.26	.04	.01	.25	.00
21	.10	.18	1.0	.96	3.5	.13	.00	.48	.04	.00	.06	.00
22	.10	.28	1.1	1.0	6.6	.46	.02	.50	.04	.00	.00	.00
23	.10	.40	1.0	1.1	7.6	.68	.03	.58	.03	.04	.00	.00
24	.09	.34	.75	1.0	8.0	.73	.04	.53	.01	.04	.00	.00
25	.06	.30	.55	1.0	2.9	.55	.07	.38	.01	.13	.00	.00
26	.03	.60	.80	.92	1.6	.46	.12	.40	.01	2.4	.00	.00
27	.01	1.2	1.1	.85	1.1	.44	.20	.53	.01	.54	.00	.00
28	.02	1.1	1.5	.90	.85	.42	.25	.48	.02	.41	.00	.00
29	.02	.85	1.7	.95	---	.40	.33	.46	.01	.58	.00	.00
30	.02	.72	2.4	1.0	---	.38	.30	.48	.00	.55	.00	.00
31	.01	---	2.3	.93	---	.38	---	.95	---	.48	.00	---
TOTAL	2.50	26.46	49.82	35.89	49.04	9.13	3.55	16.64	5.53	5.98	5.09	.00
MEAN	.081	.88	1.61	1.16	1.75	.29	.12	.54	.18	.19	.16	.000
MAX	.16	6.8	4.0	2.2	8.0	.75	.48	1.4	1.0	2.4	1.5	.00
MIN	.01	.00	.55	.80	.50	.02	.00	.24	.00	.00	.00	.00
AC-FT	5.0	52	99	71	97	18	7.0	33	11	12	10	.00
CAL YR 1980	TOTAL 363.37		MEAN .99	MAX 9.0	MIN .00	AC-FT 721						
WTR YR 1981	TOTAL 209.63		MEAN .57	MAX 8.0	MIN .00	AC-FT 416						

CHEYENNE RIVER BASIN

06426400 DONKEY CREEK NEAR MOORCROFT, WY--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--September 1977 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	COLOR (PLAT- INUM- COBALT UNITS)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION)	HARD- NESS (MG/L AS CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)
OCT 28...	0845	.01	4000	7.9	2.0	--	11.4	93	1000	150	150
NOV 18...	0925	.53	3560	8.3	1.0	--	9.7	78	900	180	110
DEC 09...	0930	2.8	3450	7.8	.0	--	10.2	80	1000	240	100
JAN 20...	1135	.94	3480	8.2	.5	--	18.6	151	990	230	100
FEB 21...	0815	3.8	3280	--	1.0	--	--	--	--	--	--
25...	0920	2.9	2470	8.3	.5	4	13.5	111	770	190	71
MAR 10...	1400	.07	2680	8.8	8.0	--	>20.0	>192	700	150	80
APR 29...	1200	.34	4200	8.2	13.5	16	8.9	97	1100	200	150
MAY 19...	0950	.25	3910	8.3	10.0	13	10.4	108	1100	200	140
JUN 02...	1330	--	--	--	--	--	--	--	--	--	--
09...	0915	.08	3580	8.0	14.0	11	4.9	56	1000	160	150

DATE	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	POTAS- SIUM 40 DIS- SOLVED (PCI/L AS K40)	ALKA- LITY LAB (MG/L AS CACO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)
OCT 28...	640	8.8	21	16	460	1700	160	.9	2.2	3100
NOV 18...	520	7.5	24	18	380	1300	190	1.1	4.6	2700
DEC 09...	460	6.3	28	21	510	1200	230	1.8	4.7	2590
JAN 20...	520	7.2	19	14	390	1400	180	1.4	1.9	2810
FEB 21...	--	--	--	--	--	--	--	--	--	--
25...	330	5.2	13	9.7	240	1000	150	.9	12	1930
MAR 10...	380	6.2	11	8.2	200	1200	120	.7	1.6	2000
APR 29...	560	7.3	17	13	530	370	140	1.2	5.7	3360
MAY 19...	590	7.8	19	14	350	1700	250	1.2	5.7	3190
JUN 02...	--	--	--	--	--	--	--	--	--	--
09...	530	7.2	17	13	380	1400	220	1.2	.9	2720

WATER-QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

[illegible]

06426400 DONKEY CREEK NEAR MOORCROFT, WY--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	COAL IN BOTTOM MATE- RIAL (GM/KG)	H-2/ H-1/ STABLE ISOTOPE RATIO PER MILL	PHYTO- PLANK- TON, TOTAL (CELLS PER ML)	PERI- PHYTON BIOMASS ASH WEIGHT G/SQ M	PERI- PHYTON BIOMASS TOTAL DRY WEIGHT G/SQ M	BIOMASS CHLORO- PHYLL RATIO PERI- PHYTON (UNITS)	CHLOR-A PERI- PHYTON CHROMO- FLUOROM (MG/M2)	CHLOR-B PERI- PHYTON CHROMO- FLUOROM (MG/M2)	SEDI- MENT, SUS- PENDED (MG/L)	SEDI- MENT, DIS- CHARGE, SUS- PENDED (T/DAY)
OCT 28...	--	--	4400	--	--	--	--	--	117	.00
NOV 18...	--	--	19000	--	--	--	--	--	93	.13
DEC 09...	--	--	21000	--	--	--	--	--	184	1.4
JAN 20...	--	--	13000	--	--	--	--	--	119	.30
FEB 21...	--	--	--	--	--	--	--	--	18	.18
25...	--	13.5	6100	--	--	--	--	--	17	.13
MAR 10...	--	--	36000	--	--	--	--	--	89	.02
APR 29...	2.00	8.9	65000	--	--	--	--	--	170	.16
MAY 19...	--	10.4	36000	--	--	--	--	--	181	.12
JUN 02...	--	--	--	--	--	--	--	--	11	--
09...	--	4.9	1400	67.4	69.1	91.9	18.5	3.19	145	.03

[illegible][illegible]

WATER-QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

[illegible]

CHEYENNE RIVER BASIN

06426400 DONKEY CREEK NEAR MOORCROFT, WY--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	TIME	GROSS ALPHA, DIS- SOLVED (UG/L AS U-NAT)	GROSS ALPHA, SUSP. TOTAL (UG/L AS U-NAT)	GROSS BETA, DIS- SOLVED (PCI/L AS CS-137)	GROSS BETA, SUSP. TOTAL (PCI/L AS CS-137)	GROSS BETA, DIS- SOLVED (PCI/L AS YT-90)	GROSS BETA, SUSP. TOTAL (PCI/L AS YT-90)	GROSS ALPHA, DIS- SOLVED (PCI/L AS U-NAT)	GROSS ALPHA, SUSP. TOTAL (PCI/L AS U-NAT)
APR 29...	1200	<85	4.5	<37	7.0	<36	6.8	58	3.1

DATE	TIME	TEMPER- ATURE (DEG C)	STREAM- FLOW, INSTAN- TANEOUS (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
FEB 25...	0920	.5	2.9	41	65	80	82

DATE	BED MAT. FALL DIAM. % FINER THAN 1.00 MM	BED MAT. SIEVE DIAM. % FINER THAN 2.00 MM	BED MAT. SIEVE DIAM. % FINER THAN 4.00 MM	BED MAT. SIEVE DIAM. % FINER THAN 8.00 MM	BED MAT. SIEVE DIAM. % FINER THAN 16.0 MM	BED MAT. SIEVE DIAM. % FINER THAN 32.0 MM
FEB 25...	85	87	89	92	97	100

06426400 DONKEY CREEK NEAR MOORCROFT, WY--Continued

QUALITATIVE AND ASSOCIATED QUANTITATIVE ANALYSES OF BIOLOGICAL DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

PHYTOPLANKTON ANALYSES

DATE	OCT 28,80	NOV 18,80	DEC 9,80	JAN 20,81	FEB 25,81					
TIME	0845	0925	0930	1135	0920					
TOTAL CELLS/ML	4400	19000	21000	13000	6100					
DIVERSITY: DIVISION	1.8	1.7	0.8	1.0	1.6					
..CLASS	1.8	1.7	0.8	1.0	1.6					
..ORDER	2.9	1.8	0.8	1.5	2.0					
...FAMILY	2.9	2.0	0.8	1.5	2.0					
....GENUS	3.1	2.4	0.8	1.5	2.1					
ORGANISM	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT
BACILLARIOPHYTA (DIATOMS)										
..BACILLARIOPHYCEAE										
...BACILLARIALES										
....NITZSCHIAEAE										
....NITZSCHIA	160	4	--	-	--	-	200	2	--	-
...EUPODISCALES										
...COSCINODISCACEAE										
....CYCLOTELLA	200	5	--	-	2300	11	8700#	66	1900#	31
....MELOSIRA	--	-	--	-	--	-	--	-	100	2
..FRAGILARIALES										
...FRAGILARIAEAE										
....DIATOMA	--	-	--	-	--	-	--	-	500	8
....SYNEDRA	--	-	--	-	--	-	--	-	50	1
..NAVICULEALES										
...CYMBELLACEAE										
....CYMBELLA	*	0	--	-	--	-	--	-	--	-
...NAVICULACEAE										
....GYROSIGMA	--	-	--	-	--	-	--	-	--	-
....NAVICULA	160	4	--	-	--	-	410	3	--	-
..SURIRELLALES										
...SURIRELLACEAE										
....SURIRELLA	--	-	--	-	--	-	--	-	--	-
CHLOROPHYTA (GREEN ALGAE)										
..CHLOROPHYCEAE										
...CHLOROCOCCALES										
....DICTYOSPHAERIAEAE										
....DICTYOSPHAERIUM	--	-	--	-	--	-	--	-	--	-
...HYDRODICTYACEAE										
....PEDIASTRUM	--	-	--	-	--	-	1200	9	--	-
...OOCYSTACEAE										
....ANKISTRODESMUS	260	6	3800#	20	--	-	--	-	50	1
....CHODATELLA	--	-	--	-	--	-	--	-	--	-
....KIRCHNERIELLA	--	-	--	-	--	-	--	-	--	-
....OOCYSTIS	--	-	140	1	--	-	--	-	--	-
....SELENASTRUM	360	8	2100	11	180	1	--	-	--	-
...SCENEDESMACEAE										
....COELASTRUM	--	-	--	-	--	-	--	-	--	-
....CRUCIGENIA	--	-	560	3	--	-	--	-	--	-
....SCENEDESMUS	--	-	560	3	--	-	--	-	--	-
..VOLVOCALES										
...CHLAMYDOMONADACEAE										
....CHLAMYDOMONAS	180	4	420	2	180	1	2300#	18	750	12
CHRYSTOPHYTA										
..CHRYSTOPHYCEAE										
...OCHROMONADALES										
....DINOBRYACEAE										
....STENOCALYX	--	-	--	-	--	-	--	-	--	-
CRYPTOPHYTA (CRYPTOMONADS)										
..CRYPTOPHYCEAE										
...CRYPTOMONADALES										
....CRYPTOCHRYSIDACEAE										
....CHROOMONAS	--	-	--	-	--	-	--	-	--	-
...CRYPTOMONADACEAE										
....CRYPTOMONAS	--	-	--	-	180	1	--	-	--	-
CYANOPHYTA (BLUE-GREEN ALGAE)										
..CYANOPHYCEAE										
...CHROOCOCCALES										
....CHROOCOCCACEAE										
....ANACYSTIS	1000#	23	5200#	28	17000#	84	100	1	2600#	42
...NOSTOCALES										
....HAMMATOIDEACEAE										
....RAPHIDIOPSIS	900#	21	--	-	--	-	--	-	--	-
...OSCILLATORIALES										
...OSCILLATORIAEAE										
....OSCILLATORIA	360	8	--	-	--	-	--	-	--	-

NOTE: # - DOMINANT ORGANISM; EQUAL TO OR GREATER THAN 15%

* - OBSERVED ORGANISM, MAY NOT HAVE BEEN COUNTED; LESS THAN 1/2%

CHEYENNE RIVER BASIN

06426400 DONKEY CREEK NEAR MOORCROFT, WY--Continued

QUALITATIVE AND ASSOCIATED QUANTITATIVE ANALYSES OF BIOLOGICAL DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

PHYTOPLANKTON ANALYSES

DATE TIME	OCT 28,80 0845		NOV 18,80 0925		DEC 9,80 0930		JAN 20,81 1135		FEB 25,81 0920	
ORGANISM	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT
EUGLENOPHYTA (EUGLENOIDS)										
.EUGLENOPHYCEAE										
..EUGLENALES										
...EUGLENACEAE										
....EUGLENA	--	-	--	-	--	-	--	-	100	2
....PHACUS	--	-	--	-	--	-	--	-	--	-
....TRACHELOMONAS	720#	16	5700#	31	360	2	--	-	--	-
PYRRHOPHYTA (FIRE ALGAE)										
.DINOPHYCEAE										
..DINOKONTAE										
...GLENODINIACEAE										
....GLENODINIUM	40	1	280	1	--	-	200	2	100	2

NOTE: # - DOMINANT ORGANISM; EQUAL TO OR GREATER THAN 15%

* - OBSERVED ORGANISM, MAY NOT HAVE BEEN COUNTED; LESS THAN 1/2%

06426400 DONKEY CREEK NEAR MOORCROFT, WY--Continued

QUALITATIVE AND ASSOCIATED QUANTITATIVE ANALYSES OF BIOLOGICAL DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

PHYTOPLANKTON ANALYSES

DATE	MAR 10,81	APR 29,81	MAY 19,81	JUN 9,81
TIME	1400	1200	0950	0915
TOTAL CELLS/ML	36000	65000	36000	1400
DIVERSITY: DIVISION	0.4	1.5	1.8	1.5
..CLASS	0.4	1.5	1.8	1.5
..ORDER	1.4	2.1	2.1	2.3
...FAMILY	1.4	2.7	2.3	2.7
....GENUS	1.5	2.9	2.8	3.2

ORGANISM	CELLS /ML	PER-CENT	CELLS /ML	PER-CENT	CELLS /ML	PER-CENT	CELLS /ML	PER-CENT
BACILLARIOPHYTA (DIATOMS)								
..BACILLARIOPHYCEAE								
..BACILLARIALES								
...NITZSCHIA								
....NITZSCHIA	--	-	3500	5	220	1	170	12
..EUPODISCALES								
...COSCIDINODISCACEAE								
....CYCLOTELLA	20000#	54	16000#	25	14000#	39	190	14
...MELOSIRA	--	-	--	-	--	-	1800	5
..FRAGILARIALES								
...FRAGILARIAEAE								
....DIATOMA	--	-	350	1	--	-	--	-
...SYNEDRA	--	-	--	-	--	-	--	-
..NAVICULALES								
...CYMBELLACEAE								
....CYMBELLA	--	-	--	-	--	-	--	-
..NAVICULACEAE								
....GYROSIGMA	260	1	--	-	--	-	--	-
...NAVICULA	14000#	38	1400	2	220	1	280#	20
..SURIPELLALES								
...SURIPELLACEAE								
....SURIPELLA	--	-	350	1	--	-	--	-
CHLOROPHYTA (GREEN ALGAE)								
..CHLOROPHYCEAE								
..CHLOROCOCCALES								
...DICTYOSPHAERIACEAE								
....DICTYOSPHAERIUM	--	-	18000#	27	2000	6	39	3
...HYDRODICTYACEAE								
....PEDIASTRUM	--	-	--	-	--	-	--	-
...OOCYSTACEAE								
....ANKISTRODESMUS	260	1	11000#	17	4400	12	90	6
...CHODATELLA	--	-	--	-	220	1	--	-
....KIRCHNERIELLA	--	-	4200	6	220	1	--	-
...OOCYSTIS	--	-	--	-	880	2	--	-
...SELENASTRUM	--	-	--	-	--	-	26	2
...SCENEDESMACEAE								
....COELASTRUM	--	-	--	-	--	-	130	9
...CRUCIGENIA	--	-	--	-	--	-	52	4
...SCENEDESMUS	--	-	--	-	--	-	52	4
..VOLVOCEAE								
...CHLAMYDOMONADACEAE								
....CHLAMYDOMONAS	1000	3	1800	3	3700	10	13	1
CHRYSOPHYTA								
..CHRYSOPHYCEAE								
..OCHROMONADALES								
...DINOBRYACEAE								
....STENOCALYX	--	-	--	-	--	-	--	-
CRYPTOPHYTA (CRYPTOMONADS)								
..CRYPTOPHYCEAE								
..CRYPTOMONADALES								
...CRYPTOCHRYSIDACEAE								
....CHROOMONAS	--	-	350	1	--	-	--	-
...CRYPTOMONADACEAE								
....CRYPTOMONAS	--	-	350	1	--	-	--	-
CYANOPHYTA (BLUE-GREEN ALGAE)								
..CYANOPHYCEAE								
..CHROOCOCCALES								
...CHROOCOCCACEAE								
....ANACYSTIS	--	-	1400	2	4600	13	--	-
..NOSTOCALES								
...HAMMATOIDEACEAE								
....RAPHIDIOPSIS	--	-	--	-	--	-	--	-
...OSCILLATORIALES								
...OSCILLATORIAEAE								
....OSCILLATORIA	--	-	5300	8	--	-	--	-

NOTE: # - DOMINANT ORGANISM; EQUAL TO OR GREATER THAN 15%

* - OBSERVED ORGANISM, MAY NOT HAVE BEEN COUNTED; LESS THAN 1/2%

06426400 DONKEY CREEK NEAR MOORCROFT, WY--Continued

QUALITATIVE AND ASSOCIATED QUANTITATIVE ANALYSES OF BIOLOGICAL DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

PHYTOPLANKTON ANALYSES

DATE TIME	MAR 10,81 1400		APR 29,81 1200		MAY 19,81 0950		JUN 9,81 0915	
ORGANISM	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT
EUGLENOPHYTA (EUGLENOIDS)								
.EUGLENOPHYCEAE								
..EUGLENALES								
...EUGLENACEAE								
....EUGLENA	1000	3	700	1	660	2	270#	19
....PHACUS	--	-	350	1	--	-	13	1
....TRACHELOMONAS	260	1	--	-	2800	8	65	5
PYRRHOPHYTA (FIRE ALGAE)								
.DINOPHYCEAE								
..DINOKONTAE								
...GLENODINIACEAE								
....GLENODINIUM	--	-	--	-	--	-	--	-

NOTE: # - DOMINANT ORGANISM; EQUAL TO OR GREATER THAN 15%

* - OBSERVED ORGANISM, MAY NOT HAVE BEEN COUNTED; LESS THAN 1/2%

06426500 BELLE FOURCHE RIVER BELOW MOORCROFT, WY

LOCATION.--Lat 44°17'44", long 104°58'35", in SE¼SW¼ sec.24, T.50 N., R.68 W., Crook County, Hydrologic Unit 10120201, on left bank 150 ft (46 m) upstream from Trail Creek, 1.9 mi (3.1 km) downstream from Donkey Creek, and 2.6 mi (4.2 km) northwest of Moorcroft.

DRAINAGE AREA.--1,670 mi² (4,325 km²), approximately.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--May 1943 to September 1970, October 1975 to current year.

GAGE.--Water-stage recorder. Datum of gage is 4,119.2 ft (1,255.53 m), National Geodetic Vertical Datum of 1929 (Bureau of Reclamation bench mark). Prior to Mar. 28, 1947, nonrecording gage, and Mar. 28, 1947, to Jan. 16, 1951, water-stage recorder at site 12 mi (19 km) downstream at different datum. Jan. 17, 1951, to September 1970, at site 50 ft (15 m) downstream at datum 0.8 ft (0.24 m) lower.

REMARKS.--Records fair except those for the winter period, which are poor. Numerous small stockwater and soil conservation reservoirs above station. Diversions for irrigation of about 660 acres (267 hm²) above station.

AVERAGE DISCHARGE.--33 years, 23.0 ft³/s (0.651 m³/s), 16,660 acre-ft/yr (20.5 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 15,300 ft³/s (433 m³/s) May 19, 1978, gage height, 14.60 ft (4.450 m), from floodmark in gage shelter, from rating curve extended above 11,000 ft³/s (312 m³/s); no flow at times most years.

EXTREMES FOR CURRENT YEAR.--Peak discharge above base of 360 ft³/s (10.2 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
July 27	0500	*952 27.0	9.63 2.935

No flow for many days.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.30	.00	.50	2.8	.65	3.5	.00	.24	5.2	1.9	13	.24
2	.36	.00	.55	2.7	.60	3.2	.00	.43	5.2	1.6	8.4	.24
3	.24	.00	.60	2.6	.55	2.8	.00	.58	3.1	1.1	4.2	.24
4	.19	.00	.70	2.3	.50	2.5	.00	1.0	2.2	.93	3.3	.24
5	.14	.00	.80	2.0	.45	2.2	.00	1.0	1.4	.75	7.5	.24
6	.14	.00	.90	2.0	.40	1.7	.00	1.0	.84	.58	126	.24
7	.09	.00	1.0	2.1	.35	1.2	.00	1.9	.84	.43	53	.19
8	.09	2.0	1.2	2.2	.32	1.1	.00	1.9	.66	.30	22	.14
9	.05	1.4	1.4	1.9	.28	.93	.00	2.0	.50	.19	10	.14
10	.05	1.1	1.7	1.8	.25	.84	.00	2.0	.36	.19	37	.05
11	.09	1.9	3.1	1.8	.30	.75	.00	4.6	.50	.09	9.2	.00
12	.09	1.0	4.4	1.8	.40	.75	.00	3.3	1.2	.05	3.0	.02
13	.09	.93	4.6	1.7	.50	.66	.00	2.3	18	.14	3.0	.05
14	.05	.84	4.0	1.7	.60	.58	.00	1.7	3.0	.30	4.8	.05
15	.05	.93	4.4	1.6	.80	.50	.02	1.6	.50	51	6.3	.02
16	.14	1.0	4.4	1.2	1.0	.50	.05	1.1	2.2	37	7.4	.02
17	.14	.58	3.3	1.2	1.5	.43	.05	.93	3.3	9.7	7.2	.00
18	.09	.84	2.2	1.3	2.6	.30	.05	.66	3.3	3.2	26	.00
19	.05	.30	1.6	1.4	4.5	.43	.05	.36	3.3	8.5	16	.00
20	.09	.14	1.6	1.4	5.7	.50	.05	.43	3.6	1.5	7.2	.02
21	.09	.02	2.0	1.4	5.0	.66	.05	.58	3.8	1.5	4.8	.09
22	.14	.02	2.3	1.5	5.5	.58	.05	.84	4.0	4.6	2.8	.09
23	.14	.02	2.8	1.6	6.0	.50	.05	1.7	4.4	5.2	1.7	.02
24	.14	1.1	1.0	1.5	5.4	.43	.05	2.5	4.2	3.3	1.1	.02
25	.09	.66	1.1	1.3	4.8	.36	.05	1.5	3.8	7.9	1.1	.05
26	.05	3.6	1.4	1.2	4.5	.36	.05	1.0	3.6	334	1.1	.05
27	.05	1.0	1.7	1.1	4.2	.19	.09	1.2	3.5	682	.66	.05
28	.05	3.0	1.7	1.0	4.0	.09	.09	.93	3.3	186	.36	.00
29	.05	3.0	1.6	.90	---	.02	.24	60	2.8	92	.14	.00
30	.05	1.7	2.0	.80	---	.02	.36	24	2.2	33	.19	.00
31	.02	---	3.0	.75	---	.02	---	9.7	---	19	.19	---
TOTAL	3.40	27.08	63.55	50.55	61.65	28.60	1.35	132.98	94.80	1487.95	388.64	2.51
MEAN	.11	.90	2.05	1.63	2.20	.92	.045	4.29	3.16	48.0	12.5	.084
MAX	.36	3.6	4.6	2.8	6.0	3.5	.36	60	18	682	126	.24
MIN	.02	.00	.50	.75	.25	.02	.00	.24	.36	.05	.14	.00
AC-FT	6.7	54	126	100	122	57	2.7	264	188	2950	771	5.0

CAL YR 1980	TOTAL	1831.52	MEAN 5.00	MAX 85	MIN .00	AC-FT 3630
WTR YR 1981	TOTAL	2343.06	MEAN 6.42	MAX 682	MIN .00	AC-FT 4650

WATER-QUALITY RECORDS

WATER-QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

[illegible]

06426500 BELLE FOURCHE RIVER BELOW MOORCROFT, WY--Continued
WATER-QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

[illegible][illegible]

06426500 BELLE FOURCHE RIVER BELOW MOORCROFT, WY--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	CADMIUM TOTAL RECOV- ERABLE (UG/L AS CD)	CADMIUM SUS- PENDED RECOV- ERABLE (UG/L AS CD)	CADMIUM DIS- SOLVED (UG/L AS CD)	CADMIUM RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CD)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR)	CHRO- MIUM, SUS- PENDED RECOV. (UG/L AS CR)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR)	CHRO- MIUM, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CO)	COBALT, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CO)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU)	COPPER, SUS- PENDED RECOV- ERABLE (UG/L AS CU)	COPPER, DIS- SOLVED (UG/L AS CU)
OCT 29...	--	--	--	--	--	--	--	--	--	--	--	--
NOV 18...	--	--	--	--	--	--	--	--	--	--	--	--
DEC 09...	0	0	0	--	0	0	10	--	--	4	4	0
JAN 21...	0	0	0	--	0	0	0	--	--	6	5	1
FEB 25...	--	--	--	--	--	--	--	--	--	--	--	--
MAR 11...	--	--	--	--	--	--	--	--	--	--	--	--
APR 28...	0	0	0	1	20	10	10	2	10	8	7	1
MAY 19...	--	--	--	--	--	--	--	--	--	--	--	21
MAY 29...	0	0	0	--	60	40	20	--	--	50	48	2
JUN 09...	--	--	--	--	--	--	--	--	--	--	--	--
JUL 21...	1	--	<1	--	10	0	10	--	--	13	8	5
AUG 27...	--	--	--	--	--	--	--	--	--	--	--	--
SEP 10...	--	--	--	--	--	--	--	--	--	--	--	--

DATE	COPPER, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CU)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	IRON, SUS- PENDED RECOV- ERABLE (UG/L AS FE)	IRON, DIS- SOLVED (UG/L AS FE)	IRON, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS FE)	LEAD, TOTAL RECOV- ERABLE (UG/L AS PB)	LEAD, SUS- PENDED RECOV- ERABLE (UG/L AS PB)	LEAD, DIS- SOLVED (UG/L AS PB)	LEAD, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS PB)	LITHIUM TOTAL RECOV- ERABLE (UG/L AS LI)	LITHIUM SUS- PENDED RECOV- ERABLE (UG/L AS LI)	LITHIUM DIS- SOLVED (UG/L AS LI)
OCT 29...	--	630	180	450	--	--	--	--	--	30	0	30
NOV 18...	--	700	670	30	--	--	--	--	--	--	--	--
DEC 09...	--	450	400	50	--	2	2	0	--	--	--	--
JAN 21...	--	390	350	40	--	9	8	1	--	--	--	--
FEB 25...	--	270	260	10	--	--	--	--	--	--	--	--
MAR 11...	--	370	310	60	--	--	--	--	--	--	--	--
APR 28...	10	2400	2400	30	2900	7	6	1	10	40	0	40
MAY 19...	--	1100	1100	40	--	--	--	--	--	--	--	--
MAY 29...	--	26000	26000	60	--	26	26	0	--	--	--	--
JUN 09...	--	1000	960	40	--	--	--	--	--	--	--	--
JUL 21...	--	4900	4900	40	--	12	10	2	--	--	--	--
AUG 27...	--	1500	--	<10	--	--	--	--	--	--	--	--
SEP 10...	--	920	900	20	--	--	--	--	--	--	--	--

WATER-QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

WATER-QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

[illegible]

06426500 BELLE FOURCHE RIVER BELOW MOORCROFT, WY--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	TIME	GROSS ALPHA, DIS- SOLVED (UG/L AS U-NAT)	GROSS ALPHA, SUSP. TOTAL (UG/L AS U-NAT)	GROSS BETA, DIS- SOLVED (PCI/L AS CS-137)	GROSS BETA, SUSP. TOTAL (PCI/L AS CS-137)	GROSS BETA, DIS- SOLVED (PCI/L AS SR/ YT-90)	GROSS BETA, SUSP. TOTAL (PCI/L AS SR/ YT-90)	GROSS ALPHA, DIS- SOLVED (PCI/L AS U-NAT)	GROSS ALPHA, SUSP. TOTAL (PCI/L AS U-NAT)
APR 28...	1700	<51	<7.0	<25	8.8	<24	8.4	35	4.8
DATE	TIME	TEMPER- ATURE (DEG C)	2,4-D, TOTAL (UG/L)	2,4-D, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	2,4-DP TOTAL (UG/L)	2,4-DP, IN BOTTOM MAT. (UG/KG)	2,4,5-T TOTAL (UG/L)	2,4,5-T TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	SILVEX, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)
JUN 17...	1210	14.0	.04	0	.00	.00	.00	0	.00
JUL 21...	1400	26.0	.01	0	.00	.00	.00	0	.00
SEP 24...	1015	14.0	.00	0	.00	.00	.00	0	.00
DATE	TIME	TEMPER- ATURE (DEG C)	TOTAL DICAMBA (UG/L)	DICAMBA IN BOTTOM MA- TERIAL (UG/KG)	TOTAL PICLORAM (UG/L)	PICLORAM IN BOTTOM MA- TERIAL (UG/KG)			
JUN 17...			.00	.0	.00	.0			
JUL 21...			.03	.0	.01	.0			
SEP 24...			.00	.0	.00	.0			
DATE	TIME	TEMPER- ATURE (DEG C)	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SED. SUSP. FALL DIAM. % FINER THAN .004 MM	SED. SUSP. FALL DIAM. % FINER THAN .016 MM	SED. SUSP. FALL DIAM. % FINER THAN .062 MM	BED MAT. FALL DIAM. % FINER THAN .062 MM	BED MAT. FALL DIAM. % FINER THAN .125 MM	
FEB 25...	1245	.5	4.8	--	--	--	10	13	
MAY 29...	1625	18.5	58	91	98	100	36	46	
DATE	TIME	BED MAT. FALL DIAM. % FINER THAN .250 MM	BED MAT. FALL DIAM. % FINER THAN .500 MM	BED MAT. FALL DIAM. % FINER THAN 1.00 MM	BED MAT. SIEVE DIAM. % FINER THAN 2.00 MM	BED MAT. SIEVE DIAM. % FINER THAN 4.00 MM	BED MAT. SIEVE DIAM. % FINER THAN 8.00 MM	BED MAT. SIEVE DIAM. % FINER THAN 16.0 MM	BED MAT. SIEVE DIAM. % FINER THAN 32.0 MM
FEB 25...		19	38	49	58	70	87	98	100
MAY 29...		64	76	80	86	93	98	100	--

06426500 BELLE FOURCHE RIVER BELOW MOORCROFT, WY--Continued

QUALITATIVE AND ASSOCIATED QUANTITATIVE ANALYSES OF BIOLOGICAL DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

PHYTOPLANKTON ANALYSES

DATE	OCT 29,80	NOV 18,80	DEC 9,80	FEB 25,81	MAR 11,81	MAY 19,81
TIME	1200	1420	1200	1245	0845	1205
TOTAL CELLS/ML	2900	32000	3700	28000	18000	64000
DIVERSITY: DIVISION	1.7	1.5	1.5	0.8	1.2	1.5
..CLASS	1.7	1.5	1.5	0.8	1.2	1.5
..ORDER	2.0	1.7	2.0	0.9	1.7	1.9
...FAMILY	2.5	1.7	2.5	0.9	1.7	2.6
....GENUS	3.3	1.9	2.7	0.9	1.8	3.1

ORGANISM	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT
BACILLARIOPHYTA (DIATOMS)												
..BACILLARIOPHYCEAE												
...ACHNANTHALES												
...ACHNANTHACEAE												
....COCCONEIS	--	-	--	-	--	-	--	-	--	-	*	0
..BACILLARIALES												
...NITZSCHACEAE												
...NITZSCHIA	96	3	290	1	--	-	*	0	140	1	1500	2
...EUPODISCALES												
...COSCINODISCAEAE												
....CYCLOTELLA	520#	18	290	1	190	5	2300	8	12000#	65	5000	8
....MELOSIRA	--	-	--	-	--	-	--	-	--	-	--	-
...FRAGILARIALES												
...FRAGILARIACEAE												
....DIATOMA	--	-	--	-	--	-	*	0	860	5	--	-
...NAVICULALES												
...CYMBELLACEAE												
....CYMBELLA	--	-	--	-	--	-	--	-	--	-	--	-
...ENTOMONEIDACEAE												
....ENTOMONEIS	--	-	--	-	32	1	--	-	--	-	--	-
...NAVICULACEAE												
....GYROSIGMA	--	-	--	-	--	-	--	-	--	-	--	-
....NAVICULA	--	-	--	-	--	-	180	1	140	1	590	1
..SURIPELLALES												
...SURIPELLACEAE												
....SURIPELLA	--	-	--	-	--	-	--	-	--	-	--	-
CHLOROPHYTA (GREEN ALGAE)												
..CHLOROPHYCEAE												
...CHLOROCOCCALES												
...CHLOROCOCCACEAE												
....SCHROEDERIA	--	-	--	-	--	-	--	-	--	-	--	-
...TETRAEDRON	--	-	--	-	--	-	--	-	--	-	--	-
...DICTYOSPHAERIACEAE												
...DICTYOSPHAERIUM	--	-	--	-	--	-	--	-	--	-	2400	4
...MICRACTINIACEAE												
....MICRACTINIUM	--	-	--	-	--	-	--	-	--	-	1200	2
...OOCYSTACEAE												
...ANKISTRODESMUS	420	14	2000	6	130	3	--	-	140	1	10000#	16
...CHODATELLA	--	-	--	-	--	-	--	-	--	-	--	-
...CLOSTERIOPSIS	--	-	--	-	--	-	--	-	--	-	--	-
...KIRCHNERIELLA	--	-	4600	15	--	-	--	-	--	-	--	-
...OOCYSTIS	110	4	--	-	--	-	--	-	--	-	1200	2
...SELENASTRUM	76	3	--	-	570#	15	--	-	720	4	3000	5
...TREUBARIA	19	1	--	-	--	-	--	-	--	-	--	-
...SCENEDESMACEAE												
....ACTINASTRUM	--	-	--	-	--	-	--	-	--	-	4700	7
...COELASTRUM	--	-	--	-	--	-	--	-	--	-	--	-
...CRUCIGENIA	530#	18	--	-	--	-	--	-	--	-	2400	4
...SCENEDESMUS	270	9	--	-	890#	24	--	-	--	-	5300	8
...TETRASTRUM	76	3	--	-	--	-	--	-	--	-	--	-
..VOLVOCALES												
...CHLAMYDOMONADACEAE												
....CHLAMYDOMONAS	38	1	860	3	540	15	760	3	3300#	19	3000	5
CHRYSTOPHYTA												
..CHRYSTOPHYCEAE												
...CHROMULINALES												
...CHRYSOCOCCACEAE												
....CHRYSOCOCCUS	--	-	--	-	--	-	--	-	--	-	--	-
...OCHROMONADALES												
...DINOBRYPACEAE												
....STENOALYX	--	-	570	2	--	-	--	-	--	-	--	-
CRYPTOPHYTA (CRYPTOMONADS)												
..CRYPTOPHYCEAE												
...CRYPTOMONADALES												
...CRYPTOMONADACEAE												
....CRYPTOMONAS	--	-	290	1	32	1	--	-	--	-	--	-

NOTE: # - DOMINANT ORGANISM; EQUAL TO OR GREATER THAN 15%

* - OBSERVED ORGANISM, MAY NOT HAVE BEEN COUNTED; LESS THAN 1/2%

06426500 BELLE FOURCHE RIVER BELOW MOORCROFT, WY--Continued

QUALITATIVE AND ASSOCIATED QUANTITATIVE ANALYSES OF BIOLOGICAL DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

PHYTOPLANKTON ANALYSES

DATE TIME	OCT 29,80 1200		NOV 18,80 1420		DEC 9,80 1200		FEB 25,81 1245		MAR 11,81 0845		MAY 19,81 1205	
ORGANISM	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT
CYANOPHYTA (BLUE-GREEN ALGAE)												
.CYANOPHYCEAE												
..CHROOCOCCALES												
...CHROOCOCCACEAE												
....ANACYSTIS	19	1	2300	7	250	7	360	1	290	2	23000#	35
...NOSTOCALES												
...HAMMATOIDEACEAE												
....RAPHIDIOPSIS	--	-	290	1	--	-	--	-	--	-	--	-
...NOSTOCACEAE												
....ANABAENA	--	-	--	-	--	-	--	-	--	-	--	-
...OSCILLATORIALES												
...OSCILLATORIACEAE												
....LYNGBYA	--	-	--	-	--	-	--	-	--	-	--	-
....OSCILLATORIA	310	10	--	-	--	-	24000#	84	--	-	--	-
EUGLENOPHYTA (EUGLENOIDS)												
.EUGLENOPHYCEAE												
..EUGLENALES												
...EUGLENACEAE												
....EUGLENA	96	3	290	1	95	3	--	-	140	1	--	-
....LEPOCINCLIS	--	-	--	-	--	-	--	-	--	-	--	-
....PHACUS	--	-	--	-	--	-	--	-	--	-	--	-
....TRACHELOMONAS	340	12	20000#	63	980#	26	--	-	430	2	1200	2
PYRRHOPHYTA (FIRE ALGAE)												
.DINOPHYCEAE												
..DINOKONTAE												
...GLENODINIACEAE												
....GLENODINIUM	--	-	--	-	--	-	540	2	140	1	--	-

NOTE: # - DOMINANT ORGANISM; EQUAL TO OR GREATER THAN 15%

* - OBSERVED ORGANISM, MAY NOT HAVE BEEN COUNTED; LESS THAN 1/2%

06426500 BELLE FOURCHE RIVER BELOW MOORCROFT, WY--Continued

QUALITATIVE AND ASSOCIATED QUANTITATIVE ANALYSES OF BIOLOGICAL DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

PHYTOPLANKTON ANALYSES

DATE	MAY 29,81	JUN 9,81	JUL 21,81	AUG 27,81	SEP 10,81
TIME	1625	1345	1010	0835	1030
TOTAL CELLS/ML	29000	55000	15000	12000	2200
DIVERSITY: DIVISION	1.6	1.2	1.6	1.5	1.6
...CLASS	1.6	1.2	1.6	1.5	1.6
...ORDER	2.1	1.9	1.9	1.7	1.6
...FAMILY	2.2	2.8	2.0	2.4	1.6
...GENUS	2.3	3.3	2.9	3.1	2.0

ORGANISM	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT
BACILLARIOPHYTA (DIATOMS)										
.BACILLARIOPHYCEAE										
..ACHNANTHALES										
...ACHNANTHACEAE										
....COCCONEIS	--	-	--	-	--	-	--	-	--	-
..BACILLARIALES										
...NITZSCHIA	3200	11	7200	13	1000	7	73	1	83	4
...EUPODISCALES										
...COSCINODISCAEAE										
....CYCLOTELLA	--	-	5200	10	550	4	110	1	--	-
....MELOSIRA	--	-	--	-	--	-	*	0	--	-
..FRAGILARIALES										
...FRAGILARIACEAE										
....DIATOMA	280	1	--	-	--	-	--	-	--	-
..NAVICULALES										
...CYMBELLACEAE										
....CYMBELLA	*	0	--	-	--	-	--	-	--	-
...ENTOMONEIDACEAE										
....ENTOMONEIS	--	-	--	-	--	-	--	-	--	-
..NAVICULACEAE										
...GYROSIGMA	280	1	--	-	--	-	--	-	--	-
....NAVICULA	1800	6	*	0	140	1	--	-	--	-
..SURIPELLALES										
...SURIPELLACEAE										
....SURIPELLA	560	2	--	-	--	-	--	-	--	-
CHLOROPHYTA (GREEN ALGAE)										
.CHLOROPHYCEAE										
..CHLOROCOCCALES										
...CHLOROCOCCACEAE										
....SCHROEDERIA	--	-	--	-	--	-	180	2	--	-
....TETRAEDRON	--	-	--	-	*	0	--	-	--	-
...DICTYOSPHAERIACEAE										
....DICTYOSPHAERIUM	--	-	9500#	17	--	-	1500	12	--	-
...MICRACTINIACEAE										
....MICRACTINIUM	--	-	500	1	--	-	360	3	--	-
...OOCYSTACEAE										
....ANKISTRODESMUS	700	2	3200	6	550	4	1200	10	42	2
...CHODATELLA	--	-	750	1	--	-	--	-	--	-
....CLOSTERIOPSIS	--	-	--	-	*	0	--	-	--	-
...KIRCHNERIELLA	280	1	500	1	--	-	--	-	--	-
....OOCYSTIS	--	-	1000	2	*	0	--	-	--	-
...SELENASTRUM	--	-	--	-	--	-	150	1	--	-
...TREUBARIA	--	-	--	-	--	-	--	-	--	-
...SCENEDESMACEAE										
....ACTINASTRUM	--	-	--	-	--	-	580	5	--	-
...COELASTRUM	--	-	--	-	370	3	--	-	--	-
...CRUCIGENIA	--	-	--	-	--	-	--	-	--	-
...SCENEDESMUS	1700	6	12000#	23	1900	13	--	-	--	-
...TETRASTRUM	--	-	4000	7	320	2	--	-	--	-
..VOLVOCALES										
...CHLAMYDOMONADACEAE										
....CHLAMYDOMONAS	1400	5	6200	11	230	2	650	5	--	-
CHRYSTOPHYTA										
.CHRYSTOPHYCEAE										
..CHROMULINALES										
...CHRYSOCOCCACEAE										
....CHRYSOCOCCUS	--	-	--	-	--	-	110	1	170	8
...OCHROMONADALES										
...DINOBYACEAE										
....STENOCALYX	--	-	--	-	--	-	--	-	--	-
CRYPTOPHYTA (CRYPTOMONADS)										
.CRYPTOPHYCEAE										
..CRYPTOMONADALES										
...CRYPTOMONADACEAE										
....CRYPTOMONAS	--	-	*	0	--	-	--	-	--	-

NOTE: # - DOMINANT ORGANISM; EQUAL TO OR GREATER THAN 15%

* - OBSERVED ORGANISM, MAY NOT HAVE BEEN COUNTED; LESS THAN 1/2%

06426500 BELLE FOURCHE RIVER BELOW MOORCROFT, WY--Continued

QUALITATIVE AND ASSOCIATED QUANTITATIVE ANALYSES OF BIOLOGICAL DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

PHYTOPLANKTON ANALYSES

DATE TIME	MAY 29, 81 1625		JUN 9, 81 1345		JUL 21, 81 1010		AUG 27, 81 0835		SEP 10, 81 1030	
ORGANISM	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT
CYANOPHYTA (BLUE-GREEN ALGAE)										
.CYANOPHYCEAE										
..CHROOCOCCALES										
...CHROOCOCCACEAE										
....ANACYSTIS	*	0	500	1	--	-	*	0	--	-
...NOSTOCALES										
...HAMMATOIDEACEAE										
....RAPHIDIOPSIS	--	-	--	-	--	-	--	-	--	-
...NOSTOCACEAE										
....ANABAENA	--	-	--	-	--	-	--	-	1000#	48
..OSCILLATORIALES										
...OSCILLATORIACEAE										
....LYNGBYA	--	-	--	-	2200	15	3600#	30	--	-
....OSCILLATORIA	17000#	58	1200	2	6000#	41	2600#	22	--	-
EUGLENOPHYTA (EUGLENOIDS)										
.EUGLENOPHYCEAE										
..EUGLENALES										
...EUGLENACEAE										
....EUGLENA	*	0	1000	2	550	4	360	3	420#	19
....LEPOCINCLIS	--	-	--	-	180	1	*	0	--	-
....PHACUS	--	-	--	-	92	1	*	0	--	-
....TRACHELOMONAS	1400	5	750	1	460	3	290	2	420#	19
PYRRHOPHYTA (FIRE ALGAE)										
.DINOPHYCEAE										
..DINOKONTAE										
...GLENODINIACEAE										
....GLENODINIUM	--	-	--	-	--	-	73	1	--	-

NOTE: # - DOMINANT ORGANISM; EQUAL TO OR GREATER THAN 15%

* - OBSERVED ORGANISM, MAY NOT HAVE BEEN COUNTED; LESS THAN 1/2%

06427000 KEYHOLE RESERVOIR NEAR MOORCROFT, WY

LOCATION.--Lat 44°22'55", long 104°46'45", in NW¼NW¼ sec.27, T.51 N., R.66 W., Crook County, Hydrologic Unit 10120201, at reservoir dam on Belle Fourche River 12 mi (19 km) northeast of Moorcroft.

DRAINAGE AREA.--2,000 mi² (5,180 km²), approximately.

PERIOD OF RECORD.--March 1952 to current year.

GAGE.--Water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929 (Bureau of Reclamation datum). Prior to May 15, 1958, and Oct. 1, 1968 to Mar. 13, 1970, nonrecording gages; May 15, 1958 to Sept. 30, 1968, water-stage recorder; all at present site and datum.

REMARKS.--Reservoir is formed by a zoned earthfill dam completed by the Bureau of Reclamation Oct. 25, 1952. Storage began Feb. 12, 1952. Dead storage, below elevation 4,036.0 ft (1,230.17 m), 1,170 acre-ft (1.44 hm³). Inactive storage, between elevations 4,036.0 ft (1,230.17 m) and 4,051.0 ft (1,234.74 m), 8,310 acre-ft (10.2 hm³). Total capacity below elevation 4,099.3 ft (1,249.47 m), crest of spillway, 199,900 acre-ft (246 hm³). From capacity table put into use May 1, 1981: Inactive storage, 7,950 acre-ft (9.80 hm³). Total capacity, 185,800 acre-ft (229 hm³). Siltation has eliminated dead storage. Figures given herein represent total contents. The reservoir provides flood control and water for irrigation in Wyoming and near Belle Fourche, SD.

COOPERATION.--Records furnished by Bureau of Reclamation.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 210,200 acre-ft (259 hm³) May 21, 1978, elevation, 4,100.38 ft (1,249.796 m); minimum daily (since appreciable storage was attained), 6,030 acre-ft (7.43 hm³) Mar. 8, 9, 1955, elevation, 4,046.35 ft (1,233.327 m).

EXTREMES FOR CURRENT YEAR.--Maximum daily contents, 105,900 acre-ft (131 hm³) Oct. 1, elevation, 4,086.56 ft (1,245.584 m); minimum daily, 42,660 acre-ft (52.6 hm³) Sept. 30, elevation, 4,071.92 ft (1,241.121 m).

MONTHEND ELEVATION AND CONTENTS, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

Date	Elevation (feet)	Contents (acre-feet)	Change in contents (acre-feet)
Sept. 30	4,086.59	106,000	-
Oct. 31	4,086.04	103,000	-3,000
Nov. 30	4,085.79	101,600	-1,400
Dec. 31	4,085.86	102,000	+400
CAL YR 1980	-	-	-41,500
Jan. 31	4,085.89	102,200	+200
Feb. 28	4,085.89	102,200	0
Mar. 31	4,086.15	103,600	+1,400
Apr. 30	4,084.48	94,800	-8,800
May 31	4,081.20	*74,770	-20,030
June 30	4,078.08	62,470	-12,300
July 31	4,076.02	55,190	-7,280
Aug. 31	4,073.51	47,190	-8,000
Sept. 30	4,071.92	42,660	-4,530
WTR YR 1981	-	-	-63,340

*From capacity table put into use May 1, 1981.

06427500 BELLE FOURCHE RIVER BELOW KEYHOLE RESERVOIR, WY

LOCATION.--Lat 44°23'18", long 104°46'12", in SE¼NE¼SW¼ sec.22, T.51 N., R.66 W., Crook County, Hydrologic Unit 10120201, on right bank 0.9 mi (1.4 km) downstream from Keyhole Dam, 1.7 mi (2.7 km) downstream from Mule Creek, 2.9 mi (4.7 km) upstream from Spring Creek, and 12 mi (19 km) northeast of Moorcroft.

DRAINAGE AREA.--2,000 mi² (5,180 km²), approximately.

PERIOD OF RECORD.--April 1951 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 4,020 ft (1,225 m), from topographic map. Prior to Aug. 30, 1979, at site 0.7 mi (1.1 km) upstream at different datum.

REMARKS.--Records food except those for May 28 to Aug. 10, which are poor. Flow completely regulated by Keyhole Reservoir, 0.9 mi (1.4 km) upstream, since February 1952. (See sta 06427000.) Diversions for irrigation of about 820 acres (3.32 km²) above station.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,410 ft³/s (39.9 m³/s) May 23, 1978, gage height, 10.65 ft (3.246 m) at present datum; maximum gage height, 6.30 ft (1.920 m) Sept. 5, 1951, site and datum in use; minimum daily discharge since appreciable storage in Keyhole Reservoir, 0.30 ft³/s (0.008 m³/s) Feb. 6-20, 1960; no flow at times in 1951-52.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 312 ft³/s (8.84 m³/s) May 20 to June 3; maximum gage height, 7.68 ft (2.341 m) June 3; minimum daily discharge, 1.7 ft³/s (0.048 m³/s) on several days.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.2	2.0	1.8	2.0	2.0	3.0	2.0	218	312	181	8.3	182
2	2.2	2.0	1.8	2.0	2.0	2.1	2.0	217	312	181	8.3	180
3	2.1	1.8	1.8	2.0	2.0	1.8	2.0	216	312	181	8.3	180
4	2.1	1.8	2.0	2.0	2.0	1.8	1.8	216	246	181	8.0	182
5	2.0	2.0	2.0	2.0	2.0	1.8	1.8	216	181	181	8.0	180
6	2.0	2.0	1.8	2.0	2.0	2.0	2.0	216	181	181	8.3	179
7	2.0	2.0	1.8	2.0	2.0	1.8	2.0	217	181	181	8.3	179
8	2.0	2.0	1.8	2.0	2.0	1.8	2.0	217	181	181	8.0	182
9	2.0	1.8	1.8	2.0	2.0	1.8	2.0	217	181	219	8.0	182
10	1.8	2.4	1.8	2.0	2.0	2.0	2.0	217	181	250	8.0	83
11	1.8	1.7	2.0	2.7	2.0	2.0	2.0	217	181	251	99	1.8
12	1.8	1.8	2.0	2.0	2.0	2.0	2.0	216	181	251	187	1.8
13	2.0	1.7	2.0	2.0	2.1	2.0	127	216	181	250	184	1.8
14	1.8	1.7	2.0	2.0	2.1	2.0	221	217	181	248	183	1.8
15	2.1	1.7	2.0	2.0	2.1	2.0	221	218	181	250	184	1.7
16	2.0	1.8	2.0	2.0	2.1	2.0	221	217	181	277	184	1.8
17	1.8	1.8	2.0	2.0	2.1	2.0	220	217	181	300	183	1.7
18	1.8	1.8	1.8	2.0	2.0	2.0	220	159	181	298	183	1.8
19	1.8	1.8	1.8	2.0	2.0	1.8	218	83	181	298	183	1.7
20	1.8	1.8	1.8	1.8	2.0	2.0	217	312	181	300	184	1.8
21	2.0	1.8	1.8	2.0	2.0	1.8	218	312	181	302	183	1.7
22	1.7	1.8	2.0	2.0	2.0	2.0	218	312	181	300	183	1.7
23	1.7	1.8	2.0	2.0	2.0	1.7	220	312	181	298	183	1.7
24	1.8	1.7	1.8	2.0	2.0	1.8	218	312	181	296	182	1.8
25	1.8	1.8	1.8	2.1	1.8	2.0	218	312	181	201	180	1.8
26	1.8	1.8	2.0	2.1	2.0	2.0	218	312	181	2.7	182	1.7
27	1.8	1.8	2.0	2.0	2.0	2.0	217	312	181	2.5	182	1.8
28	1.8	1.8	2.0	2.0	1.8	1.8	217	312	181	2.2	182	1.8
29	1.8	1.8	2.0	2.0	---	1.8	217	312	181	2.1	180	1.8
30	1.8	1.8	2.0	2.0	---	2.0	217	312	181	4.8	182	1.8
31	2.0	---	2.0	2.0	---	2.0	---	312	---	8.3	180	---
TOTAL	59.1	55.3	59.2	62.7	56.1	60.6	3866.6	7671	5888	6059.6	3834.5	1744.3
MEAN	1.91	1.84	1.91	2.02	2.00	1.95	129	247	196	195	124	58.1
MAX	2.2	2.4	2.0	2.7	2.1	3.0	221	312	312	302	187	182
MIN	1.7	1.7	1.8	1.8	1.8	1.7	1.8	83	181	2.1	8.0	1.7
AC-FT	117	110	117	124	111	120	7670	15220	11680	12020	7610	3460
CAL YR 1980	TOTAL	17287.8	MEAN	47.2	MAX	452	MIN	1.6	AC-FT	34290		
WTR YR 1981	TOTAL	29417.0	MEAN	80.6	MAX	312	MIN	1.7	AC-FT	58350		

CHEYENNE RIVER BASIN

06427850 BELLE FOURCHE RIVER AT DEVILS TOWER, WY

LOCATION.--Lat 44°35'22", long 104°42'12", in NW¼SE¼ sec.7, T.53 N., R.65 W., Crook County, Hydrologic Unit 10120201, at bridge 0.2 mi (0.3 km) west of entrance to Devils Tower National Monument.

PERIOD OF RECORD.--Water years 1968 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	TUR- BID- ITY (NTU)	OXYGEN, DIS- SOLVED (MG/L)	HARD- NESS (MG/L AS CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM AD- SORP- TION RATIO
OCT 20...	1745	3.9	1560	7.9	11.5	2.0	--	670	170	61	120	2.0
NOV 19...	1500	E3.0	1750	7.9	2.0	1.0	--	820	220	66	130	2.0
DEC 15...	1430	6.2	1720	8.1	.5	2.0	--	740	200	61	150	2.4
JAN 19...	1415	4.5	1810	8.0	.5	3.0	--	720	180	62	190	3.1
FEB 18...	1230	9.4	1330	7.9	1.0	7.0	--	510	130	43	120	2.3
MAR 20...	0840	6.6	1650	8.0	4.5	3.0	--	720	190	57	130	2.1
APR 21...	1315	203	1160	8.2	11.5	25	--	320	72	35	130	3.1
MAY 22...	0940	297	1220	8.2	13.0	25	--	330	72	36	140	3.4
JUN 17...	1600	193	1170	8.4	20.0	10	--	330	74	34	140	3.4
JUL 21...	0930	294	1210	7.8	23.0	45	--	330	76	34	140	3.4
AUG 21...	0835	189	1180	8.3	21.0	30	7.4	320	71	34	120	2.9
SEP 23...	1730	5.3	1640	7.9	18.0	7.0	--	550	130	54	160	3.0

E-Estimate.

DATE	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LITY LAB (MG/L AS CAO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)	SOLIDS, DIS- SOLVED (TONS PER DAY)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	PHOS- PHORUS, TOTAL (MG/L AS P)
OCT 20...	7.2	200	690	10	.7	6.3	1200	1.6	12.6	.00	.020
NOV 19...	8.4	200	840	8.4	.7	6.1	1200	1.6	9.7	.15	.000
DEC 15...	7.0	250	770	12	.8	7.6	1360	1.9	22.8	.00	.040
JAN 19...	7.8	270	850	11	.8	8.3	1470	2.0	17.9	.00	.000
FEB 18...	7.2	220	540	14	.6	.0	1100	1.5	27.9	.02	.020
MAR 20...	7.2	190	760	9.2	.8	.3	1300	1.8	23.2	.04	.000
APR 21...	8.6	180	410	18	.7	3.6	790	1.1	433	.00	.040
MAY 22...	8.3	180	410	24	.8	.0	798	1.1	640	.02	.090
JUN 17...	9.1	170	420	41	.8	.2	820	1.1	427	.00	.040
JUL 21...	8.3	180	420	22	.9	.3	810	1.1	643	.15	.160
AUG 21...	9.4	170	360	18	.6	1.9	720	.98	367	.03	.120
SEP 23...	7.5	200	680	14	1.0	4.2	1170	1.6	16.7	.00	.010

06427850 BELLE FOURCHE RIVER AT DEVILS TOWER, WY--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	TIME	2,4-D, TOTAL (UG/L)	2,4-D, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	2, 4-DP TOTAL (UG/L)	2,4-DP, IN BOTTOM MAT. (UG/KG)	2,4,5-T TOTAL (UG/L)	2,4,5-T TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	SILVEX, TOTAL (UG/L)	SILVEX, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)
OCT 20...	1745	.00	0	.00	.00	.00	0	.00	0
JUN 17...	1600	.02	0	.00	.00	.00	0	.00	0
JUL 21...	0930	.06	0	.00	.00	.00	0	.00	0
AUG 21...	0835	.00	0	.00	.00	.00	0	.00	0
SEP 23...	1730	.00	0	.00	.00	.00	0	.00	0

DATE	TOTAL DICAMBA (UG/L)	DICAMBA IN BOTTOM MA- TERIAL (UG/KG)	TOTAL PICLORAM (UG/L)	PICLORAM IN BOTTOM MA- TERIAL (UG/KG)
OCT 20...	.00	.0	.69	.0
JUN 17...	.00	.0	.02	.0
JUL 21...	1.9	.0	.00	.0
AUG 21...	.00	.0	.01	.0
SEP 23...	.00	.0	.71	.0

CHEYENNE RIVER BASIN

06428050 BELLE FOURCHE RIVER BELOW HULETT, WY

LOCATION.--Lat 44°42'04", long 104°35'07", in SW¼NE¼ sec.6, T.54 N., R.64 W., Crook County, Hydrologic Unit 10120201, at bridge, 1.3 mi (2.1 km) northeast of Hulett, and 4.7 mi (7.6 km) downstream from Blacktail Creek.

PERIOD OF RECORD.--February to September 1981.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	TUR- BID- ITY (NTU)	OXYGEN, DIS- SOLVED (MG/L)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	NITRO- GEN, NITRATE TOTAL (MG/L AS N)
MAR 19...	1730	11	1810	8.4	8.5	2.0	15.6	21	--
APR 21...	1455	201	1180	8.3	12.0	35	9.1	150	--
MAY 22...	1045	310	1200	8.0	13.0	35	8.6	170	--
JUN 17...	1740	200	1190	8.1	19.0	25	8.2	55	.02
JUL 21...	0830	277	1230	7.9	21.5	80	--	440	--
AUG 20...	1940	190	1170	8.4	25.0	50	5.9	120	--
SEP 23...	1600	7.7	1760	8.0	19.0	3.0	10.6	17	--

DATE	NITRO- GEN, NITRITE TOTAL (MG/L AS N)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO- GEN, TOTAL (MG/L AS N)	NITRO- GEN, TOTAL (MG/L AS NO3)	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHORUS TOTAL (MG/L AS PO4)
MAR 19...	--	.00	.090	.40	.49	.49	2.2	.050	.15
APR 21...	--	.04	.030	1.2	1.20	1.2	5.5	.100	.31
MAY 22...	--	.02	.090	1.4	1.50	1.5	6.7	.090	.28
JUN 17...	.010	.03	.050	1.2	1.20	1.2	5.4	.120	.37
JUL 21...	--	.09	.120	1.1	1.20	1.3	5.7	.180	.55
AUG 20...	--	.11	.130	1.3	1.40	1.5	6.7	.110	.34
SEP 23...	--	<.10	.170	.53	.70	--	--	.020	.06

06428500 BELLE FOURCHE RIVER AT WYOMING-SOUTH DAKOTA STATE LINE

LOCATION.--Lat 44°44'59", long 104°02'49", in NE¼NW¼NW¼ sec.18, T.9 N., R.1 E., Butte County, Hydrologic Unit 10120202, on left bank 0.3 mi (0.5 km) downstream from State line, 3.7 mi (6.0 km) downstream from Oak Creek, and 11 mi (18 km) northwest of Belle Fourche, SD.

DRAINAGE AREA.--3,280 mi² (8,500 km²), approximately.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--December 1946 to current year. Records for water year 1947 incomplete, yearly estimate published in WSP 1729.

GAGE.--Water-stage recorder. Datum of gage is 3,095.7 ft (943.57 m), National Geodetic Vertical Datum of 1929.

REMARKS.--Records good except those for winter periods and period of no gage-height record, July 25 to Aug. 5, which are poor. Diversions above station for irrigation of about 5,400 acres (2,200 hm²). Flow regulated by Keyhole Reservoir, usable contents, 191,600 acre-ft (236 hm³), 143 mi (230 km) upstream since Oct. 25, 1952.

AVERAGE DISCHARGE.--35 years, 90.6 ft³/s (2.566 m³/s), 65,640 acre-ft/yr (80.9 hm³/yr); median of yearly mean discharges, 91 ft³/s (2.58 m³/s), 65,900 acre-ft/yr (81 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 4,400 ft³/s (125 m³/s) June 18, 1962, gage height, 15.59 ft (4.752 m); no flow at times most years.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 3,180 ft³/s (90.1 m³/s) July 25, gage height, 12.90 ft (3.932 m); minimum daily, 7.0 ft³/s (0.20 m³/s) Feb. 10.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	21	14	8.0	9.0	8.0	24	12	191	280	158	290	147
2	20	13	9.0	9.0	8.0	22	12	192	275	171	290	150
3	19	13	10	9.0	8.4	24	15	197	275	160	280	148
4	18	13	11	9.0	8.8	21	14	201	312	162	270	150
5	17	13	11	9.0	8.8	19	13	209	277	162	226	150
6	16	13	11	8.5	8.4	18	13	209	264	158	90	157
7	15	12	12	8.0	8.0	18	12	203	236	151	46	168
8	14	12	12	8.0	8.0	18	12	206	191	143	46	160
9	14	12	13	8.0	7.5	17	11	214	181	139	46	154
10	14	12	13	8.0	7.0	16	10	211	176	138	47	153
11	14	12	14	8.0	7.6	16	10	208	168	138	47	148
12	14	12	14	8.4	8.5	16	9.3	211	174	164	48	148
13	14	14	14	9.0	9.4	15	8.5	209	209	189	48	104
14	14	14	15	8.5	10	15	8.5	208	188	202	54	58
15	22	14	16	8.0	12	14	7.8	205	171	248	106	41
16	53	12	17	7.6	11	14	7.8	202	171	309	121	33
17	30	12	14	8.0	12	13	103	205	182	243	129	28
18	32	17	12	8.0	14	13	154	205	170	305	126	26
19	25	15	12	9.0	16	14	165	202	165	265	122	24
20	21	12	12	9.0	22	14	168	198	164	271	120	22
21	19	12	13	9.4	28	14	174	168	170	261	122	20
22	17	15	13	9.8	27	14	179	121	174	263	125	18
23	17	12	12	10	34	14	211	241	164	263	125	17
24	15	12	10	9.5	36	14	192	282	160	273	143	17
25	15	12	11	9.0	28	13	191	285	157	1000	138	17
26	15	13	12	9.0	23	13	194	278	153	950	144	16
27	14	13	12	8.5	24	13	191	302	156	800	142	16
28	15	13	12	8.0	23	13	194	307	158	640	143	15
29	14	12	11	8.0	---	13	195	285	158	480	144	15
30	14	11	10	8.0	---	12	195	278	160	320	147	15
31	14	---	9.5	8.0	---	12	---	280	---	260	144	---
TOTAL	576	386	375.5	266.2	426.4	486	2681.9	6913	5839	9386	4069	2335
MEAN	18.6	12.9	12.1	8.59	15.2	15.7	89.4	223	195	303	131	77.8
MAX	53	17	17	10	36	24	211	307	312	1000	290	168
MIN	14	11	8.0	7.6	7.0	12	7.8	121	153	138	46	15
AC-FT	1140	766	745	528	846	964	5320	13710	11580	18620	8070	4630
CAL YR 1980	TOTAL	19698.3	MEAN	53.8	MAX	386	MIN	4.0	AC-FT	39070		
WTR YR 1981	TOTAL	33740.0	MEAN	92.4	MAX	1000	MIN	7.0	AC-FT	66920		

CHEYENNE RIVER BASIN

06428500 BELLE FOURCHE RIVER AT WYOMING-SOUTH DAKOTA STATE LINE--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1966 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	TIME	DIS- CHARGE, IN CUBIC FEET PER SECOND	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	TUR- BID- ITY (NTU)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN DEMAND, BIO- CHEM- ICAL, 5 DAY (MG/L)
OCT								
07...	1620	15	2200	--	17.5	--	--	--
21...	1145	19	1690	8.0	10.0	650	9.6	2.3
NOV								
03...	1635	13	2100	--	8.5	--	--	--
19...	1200	15	2130	8.2	1.5	9.0	11.9	--
DEC								
15...	1615	16	2170	7.8	1.0	3.0	12.8	--
JAN								
12...	1630	8.4	2140	--	.0	--	--	--
19...	1630	9.0	2240	8.0	.5	3.0	12.8	--
FEB								
18...	1445	14	1790	7.8	1.0	7.0	13.3	--
MAR								
02...	1545	24	1720	--	7.0	--	--	--
19...	1500	14	2070	8.2	10.0	4.0	11.3	--
APR								
06...	1600	13	2160	--	12.0	--	--	--
21...	1745	174	1300	7.9	13.5	330	8.5	--
MAY								
12...	1200	211	1220	--	11.0	--	--	--
22...	1345	121	1290	8.0	16.5	90	8.4	--
JUN								
01...	1710	280	1150	--	22.0	--	--	--
18...	0845	170	1280	7.9	16.0	130	8.3	--
JUL								
08...	1730	140	1300	--	25.0	--	--	--
20...	1845	271	1200	7.9	27.0	450	--	--
AUG								
05...	1730	226	750	--	22.5	--	--	--
20...	1725	120	1190	8.0	27.0	350	7.1	--
SEP								
08...	1730	160	1020	--	20.5	--	--	--
23...	1400	17	1840	8.3	19.0	15	8.9	--

06428500 BELLE FOURCHE RIVER AT WYOMING-SOUTH DAKOTA STATE LINE--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	COLI-FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	HARD- NESS (MG/L AS CAC03)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LITY LAB (MG/L AS CAC03)	SULFATE DIS- SOLVED (MG/L AS SO4)
OCT 07...	--	--	--	--	--	--	--	--	--
21...	140	700	180	58	120	2.0	8.0	80	850
NOV 03...	--	--	--	--	--	--	--	--	--
19...	K19	1100	300	88	72	.9	8.1	180	1200
DEC 15...	K6	1200	340	88	140	1.8	9.0	190	1300
JAN 12...	--	--	--	--	--	--	--	--	--
19...	K1	1100	310	90	160	2.1	9.8	210	1300
FEB 18...	K1	870	140	130	120	1.8	7.7	160	960
MAR 02...	--	--	--	--	--	--	--	--	--
19...	K1	1000	280	79	140	1.9	8.4	160	1100
APR 06...	--	--	--	--	--	--	--	--	--
21...	710	400	100	36	140	3.1	9.0	170	490
MAY 12...	--	--	--	--	--	--	--	--	--
22...	130	390	93	39	150	3.3	8.3	190	490
JUN 01...	--	--	--	--	--	--	--	--	--
18...	440	390	90	39	140	3.1	8.4	170	480
JUL 08...	--	--	--	--	--	--	--	--	--
20...	400	370	92	34	130	2.9	9.0	170	460
AUG 05...	--	--	--	--	--	--	--	--	--
20...	220	420	95	44	140	3.0	9.4	170	530
SEP 08...	--	--	--	--	--	--	--	--	--
23...	110	670	170	60	170	2.9	11	190	830

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

DATE	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)	SOLIDS, DIS- SOLVED (TONS PER DAY)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	PHOS- PHORUS, TOTAL (MG/L AS P)
OCT 07...	--	--	--	--	--	--	--	--
21...	9.4	.8	6.2	1280	1.7	65.7	.85	.120
NOV 03...	--	--	--	--	--	--	--	--
19...	10	.9	5.9	1800	2.4	72.9	.01	.080
DEC 15...	13	1.0	5.6	1960	2.7	84.7	.00	.040
JAN 12...	--	--	--	--	--	--	--	--
19...	10	.9	7.2	2020	2.7	49.1	.00	.000
FEB 18...	8.2	.8	.0	1460	2.0	55.2	.00	.010
MAR 02...	--	--	--	--	--	--	--	--
19...	12	1.0	1.0	1700	2.3	64.3	.02	.000
APR 06...	--	--	--	--	--	--	--	--
21...	17	.8	7.9	910	1.2	428	.01	.060
MAY 12...	--	--	--	--	--	--	--	--
22...	30	.9	.0	919	1.3	300	.03	.270
JUN 01...	--	--	--	--	--	--	--	--
18...	36	.9	1.9	900	1.2	413	.00	.020
JUL 08...	--	--	--	--	--	--	--	--
20...	21	1.0	3.0	850	1.2	--	.32	.000
AUG 05...	--	--	--	--	--	--	--	--
20...	18	.7	4.5	950	1.3	308	.42	1.47
SEP 08...	--	--	--	--	--	--	--	--
23...	17	1.2	5.4	1400	1.9	64.3	.00	.020

06429500 COLD SPRINGS CREEK AT BUCKHORN, WY

LOCATION.--Lat 44°09'14", long 104°04'39", in NW¼ sec.9, T.48 N., R.60 W., Weston County, Hydrologic Unit 10120303, on right shoulder of Cold Springs Creek road, 155 ft (47 m) upstream from centerline of U.S. Highway 85, and 0.5 mi (0.8 km) northeast of Buckhorn.

DRAINAGE AREA.--19.0 mi² (49.2 km²).

PERIOD OF RECORD.--October 1974 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 6,090 ft (1,855 m), from topographic map.

REMARKS.--Records good except those for winter periods, which are poor.

AVERAGE DISCHARGE.--7 years, 4.73 ft³/s (0.134 m³/s), 3,430 acre-ft/yr (4.23 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 13 ft³/s (0.37 m³/s) Apr. 1, 1981, gage height, 4.98 ft (1.518 m); maximum gage height, 8.61 ft (2.624 m) Jan. 12, 1978 (backwater from ice); minimum daily discharge, 2.0 ft³/s (0.057 m³/s) Mar. 28, 1975.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 13 ft³/s (0.37 m³/s) Apr. 1, gage height, 4.98 ft (1.518 m); maximum gage height, 6.21 ft (1.893 m) Jan. 3 (backwater from ice); minimum daily discharge, 3.6 ft³/s (0.10 m³/s) Feb. 10.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.4	5.0	4.5	5.4	4.2	4.4	6.3	4.4	4.4	4.6	4.1	4.3
2	4.4	5.0	4.0	5.6	4.2	4.4	5.0	4.4	4.4	4.6	4.1	4.3
3	4.5	5.0	4.1	5.4	4.2	4.4	5.0	4.6	4.3	4.3	4.3	4.3
4	4.5	5.0	4.4	5.4	4.2	4.6	4.8	4.4	4.3	4.3	4.3	4.3
5	4.5	5.0	4.4	5.6	4.2	4.6	5.6	4.4	4.3	4.3	4.3	4.6
6	4.6	5.0	4.3	5.4	4.2	4.4	5.0	4.4	4.3	4.3	4.3	5.0
7	4.6	5.0	4.2	5.6	4.1	4.4	5.0	4.3	4.3	4.3	4.1	4.0
8	4.6	5.0	4.3	5.2	4.0	4.4	5.2	4.4	4.3	4.3	4.4	4.1
9	4.4	4.8	4.3	5.0	3.8	4.4	4.8	4.6	4.8	4.3	4.3	4.0
10	4.3	4.8	4.3	5.2	3.6	4.6	4.8	4.4	4.4	4.4	4.4	4.1
11	5.0	5.0	4.9	5.4	3.7	4.6	4.6	4.6	4.4	4.3	4.6	4.1
12	4.3	5.0	4.8	5.8	3.9	4.8	4.8	4.6	4.6	4.3	4.6	4.1
13	4.3	5.2	4.8	5.8	4.0	4.6	4.4	4.6	4.4	4.6	4.6	4.1
14	4.3	5.0	4.9	5.8	4.0	4.5	4.8	4.6	4.6	4.3	4.4	4.1
15	5.2	4.8	5.0	5.4	4.2	4.6	4.8	4.6	4.4	4.3	4.4	4.3
16	4.4	4.5	4.9	5.0	4.4	5.0	4.8	4.6	4.4	4.0	4.4	4.1
17	5.0	4.3	4.8	4.7	4.4	5.4	4.8	4.8	4.3	4.1	4.6	4.1
18	5.0	4.3	4.4	4.9	4.4	5.2	4.8	4.4	4.4	4.1	4.4	4.3
19	5.0	4.5	4.2	5.0	4.4	5.2	4.6	4.4	4.4	4.0	4.4	4.3
20	4.6	4.7	4.2	5.0	4.4	5.2	4.8	4.3	4.6	4.0	4.4	4.3
21	4.6	4.9	4.3	5.0	4.4	5.0	4.8	4.3	4.6	4.1	4.4	4.3
22	4.6	5.0	4.6	5.0	4.2	5.2	4.8	4.4	4.4	4.8	4.3	4.3
23	4.7	4.9	4.3	5.0	4.2	5.2	4.6	4.6	4.4	4.3	4.4	4.3
24	4.7	4.7	4.2	4.8	4.2	5.2	4.6	4.3	4.4	4.1	4.3	4.3
25	4.8	4.6	4.4	4.7	4.0	5.4	4.6	4.4	4.4	5.2	4.3	4.3
26	5.0	4.6	4.6	4.5	4.2	5.2	4.6	4.4	4.4	4.4	4.3	4.3
27	5.0	4.6	4.9	4.5	4.4	5.2	4.6	4.4	4.4	4.6	4.3	4.3
28	5.0	4.6	5.2	4.5	4.4	5.2	4.6	4.3	4.4	4.1	4.3	4.3
29	5.0	4.8	5.4	4.6	---	5.2	4.4	4.3	4.4	4.3	4.3	4.3
30	5.0	5.0	5.6	4.4	---	5.2	4.4	4.4	4.4	4.3	4.1	4.4
31	5.2	---	5.6	4.1	---	5.0	---	4.4	---	4.3	4.1	---
TOTAL	145.5	144.6	142.8	157.7	116.5	150.7	144.7	138.0	132.5	134.2	134.5	127.9
MEAN	4.69	4.82	4.61	5.09	4.16	4.86	4.82	4.45	4.42	4.33	4.34	4.26
MAX	5.2	5.2	5.6	5.8	4.4	5.4	6.3	4.8	4.8	5.2	4.6	5.0
MIN	4.3	4.3	4.0	4.1	3.6	4.4	4.4	4.3	4.3	4.0	4.1	4.0
AC-FT	289	287	283	313	231	299	287	274	263	266	267	254

CAL YR 1980 TOTAL 1730.3 MEAN 4.73 MAX 9.5 MIN 3.0 AC-FT 3430
WTR YR 1981 TOTAL 1669.6 MEAN 4.57 MAX 6.3 MIN 3.6 AC-FT 3310

06429905 SAND CREEK NEAR RANCH A, NEAR BEULAH, WY

LOCATION.--Lat 44°31'13", long 104°05'00", in SE¼SW¼ sec.5, T.52 N., R.60 W., Crook County, Hydrologic Unit 10120303, on left bank 1.0 mi (1.6 km) upstream from Bear Gulch, and 1.6 mi (2.6 km) south of Beulah.

DRAINAGE AREA.--267 mi² (692 km²).

PERIOD OF RECORD.--October 1976 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 3,600 ft (1,100 m), from topographic map.

REMARKS.--Records good except for period of no gage-height record, May 30 to Aug. 4, which are fair.

AVERAGE DISCHARGE.--5 years, 24.4 ft³/s (0.691 m³/s), 17,680 acre-ft/yr (21.8 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 96 ft³/s (2.72 m³/s) Apr. 29, 1978, gage height, 5.73 ft (1.747 m); minimum daily, 16 ft³/s (0.45 m³/s) Apr. 15-21, 1979, many days in 1981.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum discharge, 700 ft³/s (19.8 m³/s) June 15, 1976, gage height, 7.77 ft (2.368 m), from slope-area measurement of peak flow at site 3 mi (4.8 km) upstream.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 26 ft³/s (0.74 m³/s) Apr. 1, gage height, 5.05 ft (1.539 m); minimum daily, 16 ft³/s (0.45 m³/s) many days.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	21	21	19	19	17	17	24	19	20	16	17	16
2	21	21	19	19	17	17	21	20	20	16	17	17
3	21	21	20	19	17	17	19	20	20	16	17	17
4	21	21	20	19	17	17	19	19	20	16	17	17
5	20	21	19	18	17	17	19	19	20	16	17	17
6	20	21	19	18	17	17	16	19	20	16	17	18
7	20	21	19	18	17	17	17	20	20	16	17	17
8	21	21	19	18	17	17	18	19	20	16	17	17
9	21	21	19	18	17	17	19	19	20	16	17	17
10	21	21	19	18	17	17	19	19	20	16	17	17
11	21	21	19	18	17	17	19	19	19	16	17	17
12	21	21	19	18	17	17	19	19	19	16	17	17
13	21	21	19	18	17	18	19	18	21	16	17	17
14	22	21	19	18	17	18	19	18	21	16	17	17
15	22	21	19	18	17	18	19	18	19	16	17	16
16	22	21	19	18	17	18	19	19	19	16	17	16
17	21	21	19	17	17	18	18	19	19	16	17	16
18	21	20	19	17	17	18	18	19	18	16	17	16
19	21	20	19	17	17	18	18	19	18	16	17	17
20	21	20	19	17	17	18	18	19	18	16	17	17
21	21	20	18	17	17	18	19	17	18	16	17	17
22	21	20	18	17	17	18	20	17	18	17	17	17
23	21	20	18	17	17	18	19	19	18	17	16	16
24	21	20	18	17	17	18	19	19	17	18	16	16
25	21	20	18	17	17	18	19	19	17	18	16	16
26	21	19	18	17	17	18	19	19	17	19	16	16
27	21	19	18	17	17	18	19	20	17	20	16	16
28	21	19	19	17	17	18	19	20	17	19	16	16
29	21	19	19	17	---	19	19	20	16	18	16	16
30	21	19	19	17	---	21	19	21	16	17	16	16
31	21	---	19	17	---	20	---	21	---	17	16	---
TOTAL	651	612	584	547	476	552	568	592	562	516	518	498
MEAN	21.0	20.4	18.8	17.6	17.0	17.8	18.9	19.1	18.7	16.6	16.7	16.6
MAX	22	21	20	19	17	21	24	21	21	20	17	18
MIN	20	19	18	17	17	17	16	17	16	16	16	16
AC-FT	1290	1210	1160	1080	944	1090	1130	1170	1110	1020	1030	988
CAL YR 1980	TOTAL	7745	MEAN 21.2	MAX 26	MIN 18	AC-FT	15360					
WTR YR 1981	TOTAL	6676	MEAN 18.3	MAX 24	MIN 16	AC-FT	13240					

CHEYENNE RIVER BASIN

06430000 MURRAY DITCH AT WYOMING-SOUTH DAKOTA STATE LINE

LOCATION.--Lat 44°34'35", long 104°02'58", in SW¼SW¼ sec.7, T.7 N., R.1 E., Butte County, SD, Hydrologic Unit 10120203, on right bank 15 ft (5 m) downstream from State line and 12 mi (19 km) southwest of Belle Fourche, SD.

PERIOD OF RECORD.--June 1954 to current year (irrigation seasons only prior to October 1959).

GAGE.--Water-stage recorder. Altitude of gage is 3,440 ft (1,050 m), from topographic map.

REMARKS.--Records fair. Ditch diverts water from left bank of Redwater Creek, 2.0 mi (3.2 km) upstream, for irrigation of about 700 acres (283 hm²). Flow maintained during irrigation season only.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 37 ft³/s (1.05 m³/s) July 17, 1973; no flow for long periods in each year.

EXTREMES FOR CURRENT YEAR.--Maximum daily discharge, 25 ft³/s (0.71 m³/s) May 3, gage height, 2.36 ft (0.719 m); no flow for long periods.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	6.1	.00	.00	.00	.00	.00	16	2.1	15	9.2	7.8
2	.00	6.6	.00	.00	.00	.00	.00	18	.00	13	9.2	8.1
3	.00	6.4	.00	.00	.00	.00	.00	25	9.8	13	9.2	8.4
4	.00	6.4	.00	.00	.00	.00	.00	18	8.5	12	9.4	8.4
5	.00	6.3	.00	.00	.00	.00	.00	16	8.0	11	8.8	8.1
6	.00	6.3	.00	.00	.00	.00	.00	16	4.8	10	7.2	7.8
7	2.1	4.7	.00	.00	.00	.00	.00	15	12	10	8.7	7.5
8	5.7	3.7	.00	.00	.00	.00	.00	14	15	12	6.5	7.3
9	7.5	3.7	.00	.00	.00	.00	.00	12	15	15	4.0	6.9
10	19	3.7	.00	.00	.00	.00	.00	9.7	15	14	5.2	6.6
11	20	3.6	.00	.00	.00	.00	.00	8.7	11	15	7.2	6.4
12	11	3.4	.00	.00	.00	.00	.00	8.4	6.4	16	9.6	6.4
13	11	2.1	.00	.00	.00	.00	.00	7.9	9.6	18	12	6.2
14	9.8	.27	.00	.00	.00	.00	.00	7.2	7.8	19	12	2.7
15	10	.30	.00	.00	.00	.00	.00	8.1	8.3	19	12	2.4
16	11	.30	.00	.00	.00	.00	.00	8.7	9.2	14	12	2.4
17	11	.20	.00	.00	.00	.00	.00	8.7	8.8	9.5	12	2.4
18	11	.15	.00	.00	.00	.00	.00	8.7	3.3	10	12	2.3
19	11	.10	.00	.00	.00	.00	.00	3.6	.29	13	13	1.9
20	11	.00	.00	.00	.00	.00	.00	3.9	.00	13	12	1.4
21	11	.09	.00	.00	.00	.00	.00	4.0	.00	13	13	1.6
22	10	.00	.00	.00	.00	.00	.00	4.0	.00	13	12	8.2
23	6.3	.50	.00	.00	.00	.00	.00	4.3	.00	13	12	7.6
24	6.4	.15	.00	.00	.00	.00	10	4.3	.00	15	12	6.3
25	5.8	.09	.00	.00	.00	.00	10	4.3	.00	14	12	6.3
26	2.6	.09	.00	.00	.00	.00	10	4.3	.00	4.8	12	7.6
27	2.5	.00	.00	.00	.00	.00	12	4.3	.00	4.7	13	8.2
28	2.5	.00	.00	.00	.00	.00	14	3.6	.00	4.9	9.1	8.6
29	2.4	.00	.00	.00	---	.00	16	.92	.42	9.1	6.8	9.2
30	2.3	.00	.00	.00	---	.00	16	1.9	11	9.1	6.9	9.6
31	2.9	---	.00	.00	---	.00	---	7.1	---	9.1	7.3	---
TOTAL	205.80	65.24	.00	.00	.00	.00	88.00	276.62	166.31	381.2	307.3	184.6
MEAN	6.64	2.17	.000	.000	.000	.000	2.93	8.92	5.54	12.3	9.91	6.15
MAX	20	6.6	.00	.00	.00	.00	16	25	15	19	13	9.6
MIN	.00	.00	.00	.00	.00	.00	.00	.92	.00	4.7	4.0	1.4
AC-FT	408	129	.00	.00	.00	.00	175	549	330	756	610	366
CAL YR 1980	TOTAL	1421.20	MEAN	3.88	MAX	26	MIN	.00	AC-FT	2820		
WTR YR 1981	TOTAL	1675.07	MEAN	4.59	MAX	25	MIN	.00	AC-FT	3320		

06430500 REDWATER CREEK AT WYOMING-SOUTH DAKOTA STATE LINE

LOCATION.--Lat 44°34'26", long 104°02'54", in NW¼NW¼ sec.18, T.7 N., R.1 E., Butte County, SD, Hydrologic Unit 10120203, on left bank 800 ft (244 m) downstream from State line, 5.7 mi (9.2 km) upstream from Crow Creek, and 12 mi (19 km) southwest of Belle Fourche, SD.

DRAINAGE AREA.--471 mi² (1,220 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--April 1929 to September 1931 and February 1936 to July 1937 (published as "near Beulah, WY"), June 1954 to current year.

REVISED RECORDS.--WSP 1309: 1931(M), 1936-37(M).

GAGE.--Water-stage recorder. Altitude of gage is 3,410 ft (1,040 m), from topographic map. Apr. 25, 1929, to Sept. 30, 1931, and Feb. 28, 1936, to July 31, 1937, nonrecording gage at site 2 mi (3 km) upstream at different datum.

REMARKS.--Records good. Large diversions for irrigation above station. Total flow passing State line may be obtained by adding flow of Murray ditch (see sta 06430000).

AVERAGE DISCHARGE.--29 years, 36.1 ft³/s (1.022 m³/s), 26,150 acre-ft/yr (32.2 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,440 ft³/s (69.1 m³/s) Aug. 22, 1973, gage height, 12.19 ft (3.716 m), from rating curve extended above 1,000 ft³/s (27 m³/s) on basis of slope-area measurement at gage height 11.95 ft (3.462 m); no flow Aug. 13-15, 1929.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 72 ft³/s (2.03 m³/s) July 16, gage height, 3.00 ft (0.914 m), no other peak above base of 150 ft³/s (4.25 m³/s); minimum daily discharge, 3.1 ft³/s (0.09 m³/s) July 12.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	25	20	33	29	32	29	28	4.4	18	13	16	19
2	25	30	32	29	30	29	28	4.8	21	13	16	18
3	25	24	32	29	27	30	31	4.6	16	13	15	17
4	27	24	32	29	27	30	30	6.3	18	14	15	15
5	27	24	30	29	27	30	30	5.8	16	14	15	15
6	26	25	30	29	27	30	29	5.2	12	6.2	11	21
7	24	25	29	29	28	30	27	7.5	14	5.3	12	21
8	20	24	29	29	28	30	27	8.8	13	5.1	13	20
9	20	24	28	29	28	29	28	11	17	3.1	15	19
10	18	23	28	29	27	29	30	16	14	3.4	19	19
11	15	24	28	28	27	29	30	18	16	3.3	14	18
12	12	24	28	29	26	29	26	20	20	3.1	13	18
13	11	27	28	29	26	30	25	23	30	3.3	13	17
14	11	27	28	29	27	29	17	23	29	3.2	12	20
15	15	27	28	29	26	30	14	23	29	3.4	11	21
16	15	27	28	30	27	30	16	22	29	20	12	22
17	16	28	28	30	27	30	16	20	26	17	13	20
18	16	28	29	30	26	29	16	20	24	15	13	16
19	16	29	28	30	27	29	16	26	25	10	12	15
20	16	29	30	30	27	30	17	24	25	9.7	9.3	19
21	17	30	29	30	27	29	16	23	26	10	9.7	15
22	17	30	29	30	27	29	12	23	30	10	9.7	9.3
23	14	31	29	30	28	29	12	25	34	11	9.3	12
24	14	31	30	30	28	29	12	23	34	15	9.3	13
25	11	30	29	31	28	27	8.9	23	33	12	9.3	15
26	16	31	29	31	28	26	5.3	23	31	28	9.3	16
27	18	30	29	31	28	28	4.6	23	31	29	12	15
28	23	30	29	32	29	29	4.1	23	33	28	14	10
29	23	31	29	32	---	29	3.8	23	25	19	14	10
30	23	32	29	32	---	29	4.4	22	17	17	17	11
31	24	---	29	32	---	26	---	20	---	16	18	---
TOTAL	580	819	906	925	770	901	564.1	544.4	706	373.1	400.9	496.3
MEAN	18.7	27.3	29.2	29.8	27.5	29.1	18.8	17.6	23.5	12.0	12.9	16.5
MAX	27	32	33	32	32	30	31	26	34	29	19	22
MIN	11	20	28	28	26	26	3.8	4.4	12	3.1	9.3	9.3
AC-FT	1150	1620	1800	1830	1530	1790	1120	1080	1400	740	795	984
CAL YR 1980	TOTAL	9644.5	MEAN 26.4	MAX 166	MIN 2.0	AC-FT 19130						
WTR YR 1981	TOTAL	7985.8	MEAN 21.9	MAX 34	MIN 3.1	AC-FT 15840						

CHEYENNE RIVER BASIN

06430500 REDWATER CREEK AT WYOMING-SOUTH DAKOTA STATE LINE--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1969-70, 1972 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	TEMPER- ATURE (DEG C)	SEDI- MENT, SUS- PENDED (MG/L)	SEDI- MENT, DIS- CHARGE, SUS- PENDED (T/DAY)
OCT						
08...	1345	21	1500	14.0	64	3.6
NOV						
05...	0915	26	--	8.0	52	3.7
JAN						
14...	1130	28	1490	5.0	41	3.1
MAR						
04...	1100	30	--	6.5	31	2.5
APR						
08...	1030	26	880	8.0	18	1.3
MAY						
12...	1130	19	1520	10.0	78	4.0
JUN						
01...	1410	20	1440	19.5	14	.76
JUL						
09...	1100	2.9	1950	18.5	22	.17
AUG						
04...	1600	16	1260	21.5	4	.17
SEP						
10...	1045	19	1190	15.5	6	.31

06454000 NIOBRARA RIVER AT WYOMING-NEBRASKA STATE LINE

LOCATION.--Lat 42°39'33", long 104°03'54", in SE¼SW¼ sec.15, T.31 N., R.60 W., Niobrara County, WY, Hydrologic Unit 10150002, on left bank 0.2 mi (0.3 km) downstream from Van Tassel Creek, 0.3 mi (0.5 km) upstream from Wyoming-Nebraska State line, and 3 mi (5 km) east of Van Tassel, WY.

DRAINAGE AREA.--450 mi² (1,170 km²), approximately.

PERIOD OF RECORD.--October 1955 to current year.

GAGE.--Water-stage recorder. Datum of gage is 4,687.70 ft (1,428.811 m), National Geodetic Vertical Datum of 1929.

REMARKS.--Records good. Diversions for irrigation of about 4,700 acres (19.0 km²) above station.

AVERAGE DISCHARGE.--26 years, 3.99 ft³/s (0.113 m³/s), 2,890 acre-ft/yr (3.56 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,120 ft³/s (60.0 m³/s) Aug. 16, 1977, gage height, 8.28 ft (2.524 m) in gage well, from rating curve extended above 800 ft³/s (22.7 m³/s) on basis of computation of peak flow from slope-area measurement; minimum daily, 0.54 ft³/s (0.015 m³/s) Aug. 9, 10, 12, 1975.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 20 ft³/s (0.57 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)		Gage height (ft) (m)	
July 21	1830	57	1.6	a3.20	0.975
Aug. 6	0600	*155	4.4	a3.83	1.167

a-Highwater mark.

Minimum daily discharge, 1.1 ft³/s (0.031 m³/s) July 7.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.8	2.2	2.4	2.8	2.5	3.3	3.0	2.4	2.3	1.2	1.7	1.6
2	1.9	2.3	2.4	2.8	2.4	3.2	2.9	2.3	2.1	1.4	1.7	1.6
3	2.0	2.3	2.5	2.8	2.1	3.1	2.9	2.3	2.1	1.9	1.7	1.5
4	2.0	2.4	2.6	2.8	2.0	3.2	3.1	2.9	2.4	1.8	1.6	1.6
5	1.9	2.4	2.6	2.8	2.0	3.2	3.0	2.7	2.2	1.4	2.0	1.6
6	2.0	2.4	2.4	2.8	2.1	3.2	3.0	2.8	2.0	1.2	20	1.8
7	2.1	2.4	2.4	2.8	2.1	3.1	3.0	3.2	2.1	1.1	5.3	1.8
8	2.0	2.4	2.4	2.7	1.9	3.1	3.1	3.0	2.1	1.2	2.4	1.8
9	2.0	2.5	2.5	2.6	1.7	2.9	2.9	2.9	2.2	1.2	2.5	1.8
10	2.2	2.3	2.4	2.6	1.8	2.9	2.7	2.9	2.3	1.2	2.7	1.7
11	2.2	2.2	2.5	2.6	2.2	2.9	2.7	3.1	2.5	1.2	2.2	1.7
12	2.2	2.1	2.5	2.6	2.5	3.1	2.8	3.1	2.5	1.4	2.0	1.7
13	2.0	2.2	2.5	2.6	2.5	3.0	2.7	3.1	2.6	2.7	1.9	1.8
14	1.9	2.3	2.5	2.6	2.4	3.2	2.7	3.0	2.8	1.6	1.9	1.8
15	2.0	2.2	2.6	2.6	2.5	3.1	2.7	2.9	2.7	1.2	1.9	1.9
16	2.1	2.2	2.7	2.6	2.7	3.1	2.6	2.9	2.5	1.4	1.9	2.0
17	2.1	2.2	2.7	2.5	3.0	3.2	2.5	3.3	2.4	2.0	1.8	2.0
18	2.0	2.2	2.5	2.6	2.9	3.3	2.5	3.3	2.4	2.3	1.9	2.0
19	1.9	2.2	2.6	2.5	3.1	3.4	2.4	3.2	2.4	2.0	1.7	2.1
20	1.9	2.4	2.6	2.5	3.3	3.5	2.8	2.9	2.4	1.4	1.7	2.0
21	1.9	2.4	2.6	2.5	3.1	3.5	2.8	2.8	2.4	6.8	2.0	2.0
22	1.9	2.4	2.6	2.5	3.1	3.3	2.9	3.0	2.4	7.6	1.8	2.1
23	1.9	2.4	2.6	2.6	3.1	3.3	2.7	3.0	2.4	2.5	1.9	2.1
24	2.0	2.4	2.6	2.7	3.3	3.3	2.6	2.9	2.4	2.4	1.8	2.0
25	2.0	2.4	2.7	2.7	3.3	3.3	2.6	2.8	2.2	2.8	1.7	2.0
26	2.0	2.4	2.7	2.6	3.1	3.1	2.6	2.8	2.2	3.5	1.6	2.0
27	2.0	2.4	2.7	2.6	3.3	3.1	2.6	2.7	2.2	2.1	1.6	2.0
28	2.0	2.5	2.7	2.6	3.3	3.1	2.6	2.8	2.2	1.9	1.6	1.9
29	2.0	2.4	2.7	2.6	---	3.0	2.4	2.6	2.1	1.7	1.6	2.0
30	2.0	2.4	2.8	2.5	---	2.9	2.5	2.5	1.6	1.7	1.5	2.1
31	2.1	---	2.7	2.5	---	3.0	---	2.3	---	1.7	1.5	---
TOTAL	62.0	69.9	79.7	81.6	73.3	97.9	82.3	88.4	69.1	65.5	79.1	56.0
MEAN	2.00	2.33	2.57	2.63	2.62	3.16	2.74	2.85	2.30	2.11	2.55	1.87
MAX	2.2	2.5	2.8	2.8	3.3	3.5	3.1	3.3	2.8	7.6	20	2.1
MIN	1.8	2.1	2.4	2.5	1.7	2.9	2.4	2.3	1.6	1.1	1.5	1.5
AC-FT	123	139	158	162	145	194	163	175	137	130	157	111
CAL YR 1980	TOTAL	1213.61	MEAN	3.32	MAX	20	MIN	.92	AC-FT	2410		
WTR YR 1981	TOTAL	904.80	MEAN	2.48	MAX	20	MIN	1.1	AC-FT	1790		

PLATTE RIVER BASIN

06620000 NORTH PLATTE RIVER NEAR NORTHGATE, CO

LOCATION.--Lat 40°56'10", long 106°20'21", in SW¼SE¼ sec.11, T.11 N., R.80 W., Jackson County, Hydrologic Unit 10180001, on right bank 350 ft (110 m) downstream from bridge on State Highway 125, 0.8 mi (1.3 km) upstream from Camp Creek, 4.2 mi (6.8 km) northwest of Northgate, and 4.4 mi (7.1 km) south of Colorado-Wyoming State line.

DRAINAGE AREA.--1,431 mi² (3,706 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--May to November 1904 (published as "near Pinkhampton"), May 1915 to current year. Monthly discharge only for some periods, published in WSP 1310.

REVISED RECORDS.--WSP 1310: 1916-21, 1929(M), 1930-32. WSP 1730: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 7,810.39 ft (2,380.607 m), National Geodetic Vertical Datum of 1929. See WSP 1730 for history of changes prior to Apr. 8, 1918. Apr. 8, 1918, to Aug. 21, 1961, water-stage recorder at site 0.8 mi (1.3 km) downstream at datum 3.36 ft (1.024 m) lower.

REMARKS.--Records good except those for winter period, which are poor. Diversions for irrigation of about 130,000 acres (526 km²) of hay meadows above station. Transbasin diversions above Cache la Poudre River basin.

AVERAGE DISCHARGE.--66 years, 428 ft³/s (12.12 m³/s), 310,100 acre-ft/yr (382 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 6,720 ft³/s (190 m³/s) June 11, 1923, gage height, 6.24 ft (1.902 m), site and datum then in use; maximum gage height recorded, 9.65 ft (2.941 m) Apr. 25, 1980, ice jam; minimum daily discharge, 19 ft³/s (0.54 m³/s) July 17-19, 1934.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,280 ft³/s (36.2 m³/s) June 11, gage height, 4.18 ft (1.274 m); minimum daily, 39 ft³/s (1.104 m³/s) Feb. 11.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	85	113	82	78	50	122	154	50	535	297	181	91
2	80	113	83	77	47	120	155	48	505	312	192	88
3	78	114	83	73	45	119	156	52	485	477	188	92
4	80	115	84	70	43	118	155	123	529	573	140	100
5	76	117	86	68	41	114	149	137	605	547	113	102
6	72	120	87	66	41	112	157	112	616	433	100	116
7	69	123	86	63	42	110	166	101	700	351	93	156
8	69	124	85	61	42	109	157	100	1080	295	88	120
9	69	122	84	60	43	107	136	103	1200	251	89	108
10	69	120	83	58	40	105	138	99	1210	246	103	103
11	69	116	83	56	39	108	179	91	1260	234	115	130
12	68	108	83	54	40	109	222	91	1100	218	136	171
13	65	101	84	53	41	111	223	93	796	334	175	146
14	72	96	85	52	43	114	202	82	621	329	187	122
15	87	91	87	52	45	118	165	79	554	289	176	113
16	107	86	87	52	48	119	160	88	476	253	161	113
17	124	79	88	52	51	121	131	131	379	226	148	106
18	137	72	90	52	55	125	116	227	294	284	141	98
19	145	73	92	53	58	129	108	278	249	290	123	88
20	148	75	94	53	63	131	113	221	223	246	108	83
21	148	76	95	53	70	135	116	192	191	205	97	78
22	145	77	96	53	77	140	111	202	180	177	92	73
23	132	78	96	54	86	145	100	337	166	160	89	71
24	120	79	95	54	100	150	93	338	175	166	86	72
25	110	79	95	54	110	153	80	358	181	163	84	67
26	106	80	93	54	120	154	70	339	166	181	93	68
27	105	80	90	55	127	153	64	336	164	215	102	68
28	109	81	86	55	125	153	59	400	251	237	98	68
29	111	81	84	55	---	152	50	560	420	231	98	64
30	112	82	83	55	---	152	50	620	382	205	96	61
31	112	---	81	53	---	153	---	569	---	193	95	---
TOTAL	3079	2871	2710	1798	1732	3961	3935	6557	15693	8618	3787	2936
MEAN	99.3	95.7	87.4	58.0	61.9	128	131	212	523	278	122	97.9
MAX	148	124	96	78	127	154	223	620	1260	573	192	171
MIN	65	72	81	52	39	105	50	48	164	160	84	61
AC-FT	6110	5690	5380	3570	3440	7860	7810	13010	31130	17090	7510	5820

CAL YR 1980 TOTAL 188608 MEAN 515 MAX 4400 MIN 48 AC-FT 374100
WTR YR 1981 TOTAL 57677 MEAN 158 MAX 1260 MIN 39 AC-FT 114400

06620000 NORTH PLATTE RIVER NEAR NORTHGATE, CO--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1966 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	TIME	DIS- CHARGE, IN CUBIC FEET PER SECOND	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	TUR- BID- ITY (NTU)	OXYGEN, DIS- SOLVED (MG/L)
OCT								
22...	1000	--	145	345	8.0	4.0	2.0	10.2
NOV								
18...	1100	72	--	380	7.9	.0	4.0	9.8
DEC								
15...	1530	87	--	270	7.7	.5	3.0	11.0
JAN								
13...	1030	53	--	275	7.5	.0	3.0	12.8
FEB								
27...	1520	127	--	290	7.4	.5	2.0	11.7
MAR								
10...	1100	105	--	145	8.1	.0	2.0	12.0
APR								
21...	1020	--	118	350	8.0	7.5	3.0	9.3
MAY								
20...	1500	--	216	457	8.2	13.0	7.0	10.2
JUN								
09...	1720	--	1210	235	7.6	17.5	20	8.5
JUL								
13...	1430	--	407	449	7.9	20.5	7.0	6.1
AUG								
17...	1610	--	148	305	8.4	21.0	2.0	9.2
SEP								
14...	1540	--	122	340	8.4	16.0	4.0	9.1

DATE	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	HARD- NESS (MG/L AS CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LINITY LAB (MG/L AS CACO3)	SULFATE DIS- SOLVED (MG/L AS SO4)
OCT									
22...	39	130	32	11	14	.5	2.4	120	34
NOV									
18...	K10	150	43	10	17	.6	3.0	140	36
DEC									
15...	5	120	32	9.4	15	.6	1.2	120	28
JAN									
13...	1	130	34	11	18	.7	1.7	130	36
FEB									
27...	K2	110	28	9.4	14	.6	1.8	110	30
MAR									
10...	2	100	24	10	15	.6	1.8	110	18
APR									
21...	K1	130	34	11	16	.6	3.0	120	33
MAY									
20...	39	180	45	15	36	1.2	2.5	150	84
JUN									
09...	160	110	29	9.0	11	.5	2.0	98	25
JUL									
13...	K560	170	45	14	22	.7	1.8	170	35
AUG									
17...	96	120	34	9.4	14	.5	1.6	110	44
SEP									
14...	40	120	34	9.3	13	.5	2.0	120	30

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

WATER-QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

WATER-QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

[illegible]

06620000 NORTH PLATTE RIVER NEAR NORTHGATE, CO--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	ENDRIN, TOTAL (UG/L)	ENDRIN, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	ETHION, TOTAL (UG/L)	HEPTA- CHLOR, TOTAL (UG/L)	HEPTA- CHLOR, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	HEPTA- CHLOR EPOXIDE TOTAL (UG/L)	HEPTA- CHLOR EPOXIDE TOT. IN BOTTOM MATL. (UG/KG)	LINDANE TOTAL (UG/L)	LINDANE TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	MALA- THION, TOTAL (UG/L)
OCT 22...	.00	.0	.00	.00	.0	.00	.0	.00	.0	.00
JUN 09...	--	--	--	--	--	--	--	--	--	--
JUL 13...	--	--	--	--	--	--	--	--	--	--
SEP 14...	--	--	--	--	--	--	--	--	--	--

DATE	METH- OXY- CHLOR, TOTAL (UG/L)	METH- OXY- CHLOR, TOT. IN BOTTOM MATL. (UG/KG)	METHYL PARA- THION, TOTAL (UG/L)	METHYL TRI- THION, TOTAL (UG/L)	MIREX, TOTAL (UG/L)	MIREX, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	PARA- THION, TOTAL (UG/L)	PER- THANE TOTAL (UG/L)	PER- THANE IN BOTTOM MATERIL (UG/KG)	TOX- APHENE, TOTAL (UG/L)
OCT 22...	.00	.0	.00	.00	.00	.0	.00	.00	.00	.00
JUN 09...	--	--	--	--	--	--	--	--	--	--
JUL 13...	--	--	--	--	--	--	--	--	--	--
SEP 14...	--	--	--	--	--	--	--	--	--	--

DATE	TOXA- PHENE, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	TOTAL TRI- THION (UG/L)	2,4-D, TOTAL (UG/L)	2,4-D, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	2, 4-DP TOTAL (UG/L)	2,4-DP, IN BOTTOM MAT. (UG/KG)	2,4,5-T TOTAL (UG/L)	2,4,5-T TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	SILVEX, TOTAL (UG/L)	SILVEX, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)
OCT 22...	.0	.00	.00	0	.00	--	.00	0	.00	0
JUN 09...	--	--	.00	0	.00	.00	.00	0	.00	0
JUL 13...	--	--	<.01	0	.00	.00	.00	0	.00	0
SEP 14...	--	--	.00	0	.00	.00	.00	0	.00	0

DATE	TOTAL DICAMBA (UG/L)	DICAMBA IN BOTTOM MA- TERIAL (UG/KG)	TOTAL PICLORAM (UG/L)	PICLORAM IN BOTTOM MA- TERIAL (UG/KG)
OCT 22...	.00	.0	.01	.0
JUN 09...	.00	.0	.00	.0
JUL 13...	.00	.0	.00	.0
SEP 14...	.00	.0	.00	.0

PLATTE RIVER BASIN

06622700 NORTH BRUSH CREEK NEAR SARATOGA, WY

LOCATION.--Lat 41°22'10", long 106°31'22", in NE¼SE¼NW¼ sec.8, T.16 N., R.81 W., Carbon County, Hydrologic Unit 10180002, Medicine Bow National Forest, on left bank 10 ft (3 m) downstream from logging road bridge, 0.7 mi (1.1 km) downstream from Lincoln Creek, 1.6 mi (2.6 km) upstream from South Brush Creek, and 16 mi (26 km) southeast of Saratoga.

DRAINAGE AREA.--37.4 mi² (96.9 km²).

PERIOD OF RECORD.--May 1960 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 8,020 ft (2,444 m), from topographic map. Prior to June 17, 1971, at site 110 ft (34 m) downstream at different datum. June 17 to Sept. 21, 1971, at site 10 ft (3 m) downstream at present datum.

REMARKS.--Records good except those for winter period and periods of no gage-height record, Nov. 16 to Apr. 24, Apr. 29 to May 14, which are poor. No diversion above station.

AVERAGE DISCHARGE.--21 years, 49.1 ft³/s (1.391 m³/s), 35,570 acre-ft/yr (43.9 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,120 ft³/s (31.7 m³/s) June 7, 1964, gage height, 5.75 ft (1.753 m), site and datum then in use, from rating curve extended above 480 ft³/s (13.6 m³/s); minimum daily, 4.7 ft³/s (0.13 m³/s) Oct. 27-29, 1976.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 350 ft³/s (9.91 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
May 27	1700	390 11.0	2.92 0.890	June 8	1900	*405 11.5	2.96 0.902
June 3	2000	376 10.6	2.90 .884				

Minimum daily discharge, 5.3 ft³/s (0.15 m³/s) Feb. 10.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	8.5	12	11	9.5	7.0	7.4	12	103	263	29	11	8.3
2	8.5	12	11	9.1	6.2	7.3	13	106	248	34	10	7.8
3	8.5	11	11	8.8	5.4	7.3	13	120	259	59	9.7	7.8
4	8.5	11	11	8.5	5.5	7.3	14	130	291	38	9.7	7.4
5	8.3	11	11	8.2	5.8	7.3	15	123	263	25	8.8	7.8
6	8.3	11	11	7.9	6.1	7.2	17	112	267	21	8.8	19
7	8.3	13	11	7.6	6.2	7.2	18	99	291	18	8.8	10
8	8.3	14	11	7.4	6.1	7.1	19	82	299	16	8.5	8.5
9	8.3	12	10	7.1	5.7	7.1	21	74	238	15	12	7.8
10	8.3	11	10	6.9	5.3	7.1	22	74	172	15	12	7.6
11	8.3	11	10	6.7	5.5	7.3	23	70	174	15	10	7.8
12	8.0	11	11	6.6	5.8	7.5	24	60	155	34	12	7.4
13	8.8	11	11	6.7	6.1	7.7	25	59	126	44	19	7.6
14	10	11	11	6.8	6.3	8.0	27	69	104	23	11	8.3
15	12	7.7	11	7.0	6.5	8.2	28	75	85	16	10	8.0
16	13	6.7	12	7.2	6.7	8.3	30	78	77	14	10	7.6
17	14	6.2	12	7.4	6.9	8.5	32	79	74	15	10	7.0
18	13	6.4	12	7.6	7.1	8.7	33	82	70	17	8.8	7.0
19	14	6.7	12	7.7	7.3	8.9	35	89	66	16	8.3	6.8
20	15	6.9	12	7.9	7.4	9.0	37	104	67	13	8.0	6.6
21	14	7.2	12	8.1	7.5	9.2	39	118	65	12	8.0	6.6
22	13	7.5	12	8.5	7.6	9.4	44	99	60	11	7.8	7.0
23	12	7.9	12	8.8	7.8	9.6	50	141	53	10	7.6	7.0
24	12	8.2	12	9.0	7.6	10	58	145	44	13	7.4	7.0
25	11	8.6	12	8.9	7.5	11	69	149	40	19	7.6	8.0
26	11	9.2	12	8.4	7.5	11	85	234	45	31	7.2	10
27	11	9.7	11	8.5	7.4	12	86	325	42	35	7.2	8.5
28	11	10	11	8.6	7.4	12	89	295	55	17	7.6	7.4
29	11	11	10	8.6	---	12	94	263	48	13	7.4	7.0
30	11	11	10	8.4	---	12	100	252	34	12	8.5	7.0
31	11	---	9.8	7.7	---	12	---	283	---	11	13	---
TOTAL	327.9	292.9	345.8	246.1	185.2	274.6	1172	4092	4075	661	295.7	241.6
MEAN	10.6	9.76	11.2	7.94	6.61	8.86	39.1	132	136	21.3	9.54	8.05
MAX	15	14	12	9.5	7.8	12	100	325	299	59	19	19
MIN	8.0	6.2	9.8	6.6	5.3	7.1	12	59	34	10	7.2	6.6
AC-FT	650	581	686	488	367	545	2320	8120	8080	1310	587	479

CAL YR 1980	TOTAL	16916.0	MEAN	46.2	MAX	415	MIN	5.4	AC-FT	33550
WTR YR 1981	TOTAL	12209.8	MEAN	33.5	MAX	325	MIN	5.3	AC-FT	24220

06622900 SOUTH BRUSH CREEK NEAR SARATOGA, WY

LOCATION.--Lat 41°20'38", long 106°31'33", in NE¼NW¼ sec.20, T.16 N., R.81 W., Carbon County, Hydrologic Unit 10180002, Medicine Bow National Forest, on left bank 300 ft (91 m) upstream from culvert on State Highway 130, 1.6 mi (2.6 km) upstream from North Brush Creek, and 17 mi (27.4 km) southeast of Saratoga.

DRAINAGE AREA.--22.8 mi² (59.1 km²).

PERIOD OF RECORD.--May 1960 to September 1974, May 1976 to September 1977, May 1979 to current year (no winter records since 1972).

GAGE.--Water-stage recorder. Altitude of gage is 8,100 ft (2,469 m), from topographic map.

REMARKS.--Records fair. Transbasin diversion 0.3 mi (0.5 km) above station for irrigation in North Brush Creek basin.

COOPERATION.--Records collected and computed by Office of the Wyoming State Engineer and reviewed by Geological Survey.

AVERAGE DISCHARGE.--12 years (water years 1961-72), 31.8 ft³/s (0.901 m³/s), 23,040 acre-ft/yr (28.4 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 559 ft³/s (15.8 m³/s) June 10, 1965, gage height, 4.09 ft (1.247 m); minimum daily, 0.80 ft³/s (0.023 m³/s) Aug. 15-20, 28, 29, 1963.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 289 ft³/s (8.18 m³/s) June 8, gage height, 3.43 ft (1.045 m); minimum daily during period of operation, 6.0 ft³/s (0.17 m³/s) Sept. 20.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1							---	52	76	40	12	7.9
2							---	66	79	48	9.5	7.5
3							---	116	107	70	11	9.5
4							---	77	125	53	11	8.2
5							---	65	133	46	9.8	8.9
6							---	63	155	42	9.8	17
7							---	54	181	40	9.8	11
8							---	44	218	37	10	9.2
9							---	41	231	35	13	8.5
10							---	38	192	35	12	8.5
11							---	39	184	31	12	9.8
12							---	35	152	42	16	7.9
13							---	35	121	43	19	7.5
14							---	36	97	34	14	7.9
15							---	38	80	29	14	7.5
16							---	39	66	27	13	7.2
17							---	39	63	28	14	6.7
18							---	40	62	27	11	6.5
19							---	45	60	24	9.5	6.2
20							---	55	65	23	9.5	6.0
21							---	65	62	20	8.9	6.5
22							---	59	57	23	8.5	6.7
23							---	76	51	21	8.2	6.7
24							---	40	51	20	7.9	7.0
25							---	31	45	19	7.5	8.9
26							---	62	43	24	7.5	11
27							---	84	42	23	7.2	9.2
28							---	70	54	15	7.5	8.2
29							---	39	67	46	13	7.5
30							---	44	69	37	13	7.5
31							---	76	---	12	8.5	---
TOTAL							---	1716	2935	957	326.6	248.0
MEAN							---	55.4	97.8	30.9	10.5	8.27
MAX							---	116	231	70	19	17
MIN							---	31	37	12	7.2	6.0
AC-FT							---	3400	5820	1900	648	492

PLATTE RIVER BASIN

06623800 ENCAMPMENT RIVER ABOVE HOG PARK CREEK, NEAR ENCAMPMENT, WY
(Hydrologic bench-mark station)

LOCATION.--Lat 41°01'25", long 106°49'27", in NE¼SW¼ sec.10, T.12 N., R.84 W., Carbon County, Hydrologic Unit 10180002, Medicine Bow National Forest, on left bank 0.6 mi (1.0 km) upstream from Hog Park Creek and 13 mi (21 km) south of Encampment.

DRAINAGE AREA.--72.7 mi² (188.3 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1964 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 8,270 ft (2,521 m), from topographic map.

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

AVERAGE DISCHARGE.--17 years, 111 ft³/s (3.144 m³/s), 80,420 acre-ft/yr (99.2 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,680 ft³/s (47.6 m³/s) about June 13, 1965 (gage height not determined), from slope-area measurement of peak flow; minimum daily, 9.5 ft³/s (0.27 m³/s) Dec. 31, 1968.

EXTREMES FOR CURRENT YEAR.--Maximum daily discharge, 722 ft³/s (20.4 m³/s) June 8, gage height, 4.05 ft (1.234 m), no peak above base of 750 ft³/s (21.2 m³/s); minimum daily discharge, 15 ft³/s (0.42 m³/s) Mar. 31.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	20	23	23	19	18	17	18	166	381	92	31	20
2	20	24	22	19	18	17	18	218	385	153	29	23
3	21	24	22	19	18	17	18	360	414	167	27	31
4	20	24	22	19	18	17	17	213	445	129	26	24
5	20	24	22	19	17	17	18	166	433	95	25	25
6	20	26	23	18	17	17	18	157	453	78	24	44
7	20	27	22	18	17	17	19	137	543	69	23	29
8	20	28	21	17	17	17	18	111	575	66	23	24
9	20	25	21	17	17	16	19	108	585	61	26	23
10	20	26	21	17	17	17	21	99	507	63	28	25
11	19	25	21	17	17	17	23	103	494	57	29	33
12	20	27	21	16	17	17	26	92	406	58	33	25
13	25	28	20	16	17	17	30	89	347	64	39	23
14	31	26	20	16	17	17	36	97	294	57	29	25
15	37	24	20	17	17	17	43	105	247	52	34	26
16	35	21	20	17	17	17	54	109	213	50	45	22
17	31	20	20	17	17	17	75	115	200	56	31	20
18	30	20	20	18	17	17	78	109	188	56	26	20
19	33	21	20	18	17	17	79	109	176	48	23	19
20	29	21	20	17	17	17	78	123	166	43	23	18
21	30	22	20	17	17	17	66	150	170	40	23	24
22	30	22	20	16	17	16	50	163	157	39	23	24
23	24	22	20	16	17	17	47	188	143	36	23	21
24	21	22	20	17	18	16	75	188	129	37	24	21
25	23	21	20	17	18	17	117	194	118	47	33	24
26	24	20	20	18	17	18	145	232	109	71	27	27
27	25	20	20	18	17	19	142	300	109	68	23	22
28	24	21	20	18	17	17	135	315	132	43	21	19
29	23	22	19	18	---	17	145	331	129	36	21	18
30	22	23	19	18	---	17	161	350	96	35	23	18
31	22	---	19	19	---	15	---	377	---	35	21	---
TOTAL	759	699	638	543	482	525	1789	5574	8744	2001	836	717
MEAN	24.5	23.3	20.6	17.5	17.2	16.9	59.6	180	291	64.5	27.0	23.9
MAX	37	28	23	19	18	19	161	377	585	167	45	44
MIN	19	20	19	16	17	15	17	89	96	35	21	18
AC-FT	1510	1390	1270	1080	956	1040	3550	11060	17340	3970	1660	1420
CAL YR 1980	TOTAL	47548	MEAN	130	MAX	1050	MIN	17	AC-FT	94310		
WTR YR 1981	TOTAL	23307	MEAN	63.9	MAX	585	MIN	15	AC-FT	46230		

06623800 ENCAMPMENT RIVER ABOVE HOG PARK CREEK, NEAR ENCAMPMENT, WY--Continued
(Hydrologic bench-mark station)

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1967 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	TIME	DIS- CHARGE, IN CUBIC FEET PER SECOND	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	STREP- TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)	HARD- NESS (MG/L AS CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)
OCT 23...	1215	--	21	85	7.7	1.0	11.6	1	<1	26	7.8	1.6
NOV 19...	1200	21	--	85	8.7	.0	11.7	0	1	30	8.9	2.0
JAN 15...	1200	17	--	100	7.5	.0	12.0	<1	1	30	8.6	2.0
MAR 23...	1200	--	24	40	7.2	1.0	10.6	K1	K3	32	9.3	2.1
MAY 15...	1415	--	99	55	7.2	9.0	--	0	2	21	6.3	1.3
JUN 10...	1400	--	429	45	7.2	11.0	8.1	--	--	13	4.1	.7
JUL 14...	1100	--	61	75	7.5	17.5	6.8	K11	--	20	6.2	1.2
AUG 20...	1130	--	23	65	7.8	11.0	8.2	K5	K10	25	7.5	1.5
SEP 15...	1200	--	26	80	7.4	9.0	8.7	K6	K14	26	7.7	1.6

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

DATE	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LITY LAB (MG/L AS CACO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, SUM OF CONSTITUENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)	SOLIDS, DIS- SOLVED (TONS PER DAY)
OCT 23...	2.0	.2	.5	30	4.9	.7	.2	12	45	48	.07	2.7
NOV 19...	2.7	.2	.9	28	6.4	.4	.1	13	54	51	.07	2.9
JAN 15...	2.8	.2	.8	26	4.9	.1	.2	13	33	48	.07	2.2
MAR 23...	3.3	.3	.9	28	5.6	.3	.1	13	53	52	.07	3.4
MAY 15...	2.0	.2	.8	22	1.6	.4	.1	9.4	39	36	.05	9.6
JUN 10...	1.6	.2	.6	20	2.5	.3	.1	6.6	25	29	.04	33.6
JUL 14...	2.5	.2	.8	21	1.0	.4	.1	10	39	35	.05	5.8
AUG 20...	2.4	.2	.7	21	<1.0	2.6	.1	11	42	--	.06	2.6
SEP 15...	3.0	.3	.8	31	<5.0	.3	.1	11	47	--	.06	3.3

PLATTE RIVER BASIN

06623800 ENCAMPMENT RIVER ABOVE HOG PARK CREEK, NEAR ENCAMPMENT, WY--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N)	NITRO- GEN, AMMONIA TOTAL (MG/L AS NH4)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS NH4)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N)	NITRO- GEN, ORGANIC DIS- SOLVED (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO- GEN,NH4 + ORG. SUSP. TOTAL (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC DIS- SOLVED (MG/L AS N)	NITRO- GEN, TOTAL (MG/L AS N)
OCT 23...	.00	.00	.000	.000	.00	.00	.15	.28	.15	.00	.28	.15
NOV 19...	.00	.00	.090	.110	.11	.14	.14	.25	.23	.00	.36	.23
JAN 15...	.01	.00	.050	.050	.06	.06	.34	.36	.39	.00	.41	.40
MAR 23...	.03	.03	.060	.010	--	.01	.71	.75	.77	.01	.76	.80
MAY 15...	.05	.10	.040	.150	--	.19	--	.34	--	--	.49	--
JUN 10...	.00	.00	.030	.100	--	.13	.42	.18	.45	.17	.28	.45
JUL 14...	.01	.01	.020	.020	--	.03	.52	.46	.54	.06	.48	.55
AUG 20...	<.10	.11	.080	.090	--	.12	.25	.30	.33	.00	.39	--
SEP 15...	.00	.01	<.060	<.060	--	.08	.52	.43	.52	.01	.51	.52

DATE	NITRO- GEN DIS- SOLVED (MG/L AS N)	NITRO- GEN, TOTAL (MG/L AS NO3)	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHORUS TOTAL (MG/L AS PO4)	PHOS- PHORUS, DIS- SOLVED (MG/L AS P)	CARBON, ORGANIC TOTAL (MG/L AS C)	CARBON, ORGANIC DIS- SOLVED (MG/L AS C)	CARBON, ORGANIC SUS- PENDE TOTAL (MG/L AS C)	CYANIDE TOTAL (MG/L AS CN)	SEDI- MENT, SUS- PENDE (MG/L)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (T/DAY)
OCT 23...	.28	.66	.010	.03	.040	--	--	--	--	2	.11
NOV 19...	.36	1.0	.010	.03	.070	.9	--	--	--	7	.40
JAN 15...	.41	1.8	.040	.12	.010	--	--	--	--	9	.41
MAR 23...	.79	3.5	.010	.03	.020	1.3	--	--	--	5	.32
MAY 15...	.59	--	.040	.12	.050	4.5	--	--	--	4	1.1
JUN 10...	.28	2.0	.020	.06	.010	--	6.2	.3	.00	10	12
JUL 14...	.49	2.4	.020	.06	.020	2.4	--	--	--	5	.82
AUG 20...	.50	--	.010	.03	.030	1.2	--	--	--	2	.13
SEP 15...	.52	2.3	.010	.03	.020	1.9	--	--	--	4	.28

DATE	TIME	ARSENIC TOTAL (UG/L AS AS)	ARSENIC SUS- PENDE TOTAL (UG/L AS AS)	ARSENIC DIS- SOLVED (UG/L AS AS)	BARIUM, TOTAL RECOV- ERABLE (UG/L AS BA)	BARIUM, SUS- PENDE RECOV- ERABLE (UG/L AS BA)	BARIUM, DIS- SOLVED (UG/L AS BA)	BERYL- LIUM, DIS- SOLVED (UG/L AS BE)	CADMIUM TOTAL RECOV- ERABLE (UG/L AS CD)	CADMIUM DIS- SOLVED (UG/L AS CD)
JUN 10...	1400	1	1	0	0	0	0	<1	0	<1

DATE	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR)	CHRO- MIUM, SUS- PENDE RECOV. (UG/L AS CR)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR)	COBALT, DIS- SOLVED (UG/L AS CO)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU)	COPPER, DIS- SOLVED (UG/L AS CU)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	IRON, SUS- PENDE RECOV- ERABLE (UG/L AS FE)	IRON, DIS- SOLVED (UG/L AS FE)	LEAD, TOTAL RECOV- ERABLE (UG/L AS PB)
JUN 10...	10	10	0	<3	5	<10	370	310	63	11

PLATTE RIVER BASIN

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06623800 ENCAMPMENT RIVER ABOVE HOG PARK CREEK, NEAR ENCAMPMENT, WY--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	LEAD, DIS- SOLVED (UG/L AS PB)	LITHIUM DIS- SOLVED (UG/L AS LI)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)	MANGA- NESE, SUS- PENDE RECOV. (UG/L AS MN)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	MERCURY TOTAL RECOV- ERABLE (UG/L AS HG)	MERCURY SUS- PENDE RECOV- ERABLE (UG/L AS HG)	MERCURY DIS- SOLVED (UG/L AS HG)	MOLYB- DENUM, DIS- SOLVED (UG/L AS MO)	SELE- NIUM, TOTAL (UG/L AS SE)
JUN 10...	<10	6	10	10	0	.0	.0	.0	<10	0

DATE	SELE- NIUM, SUS- PENDE TOTAL (UG/L AS SE)	SELE- NIUM, DIS- SOLVED (UG/L AS SE)	SILVER, TOTAL RECOV- ERABLE (UG/L AS AG)	SILVER, SUS- PENDE RECOV- ERABLE (UG/L AS AG)	SILVER, DIS- SOLVED (UG/L AS AG)	STRON- TIUM, DIS- SOLVED (UG/L AS SR)	VANA- DIUM, DIS- SOLVED (UG/L AS V)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN)	ZINC, SUS- PENDE RECOV- ERABLE (UG/L AS ZN)	ZINC, DIS- SOLVED (UG/L AS ZN)
JUN 10...	0	0	0	0	0	19	<6.0	30	20	9

DATE	TIME	PCB, TOTAL (UG/L)	NAPH- THA- LENES, POLY- CHLOR. TOTAL (UG/L)	ALDRIN, TOTAL (UG/L)	CHLOR- DANE, TOTAL (UG/L)	DDD, TOTAL (UG/L)	DDE, TOTAL (UG/L)	DDT, TOTAL (UG/L)	DI- AZINON, TOTAL (UG/L)	DI- ELDRIN TOTAL (UG/L)
JUL 14...	1100	.00	.00	.00	.00	.00	.00	.00	.00	.00
AUG 20...	1130	.00	.00	.00	.00	.00	.00	.00	.00	.00

DATE	ENDO- SULFAN, TOTAL (UG/L)	ENDRIN, TOTAL (UG/L)	ETHION, TOTAL (UG/L)	HEPTA- CHLOR, TOTAL (UG/L)	HEPTA- CHLOR EPOXIDE TOTAL (UG/L)	LINDANE TOTAL (UG/L)	MALA- THION, TOTAL (UG/L)	METH- OXY- CHLOR, TOTAL (UG/L)	METHYL PARA- THION, TOTAL (UG/L)	METHYL TRI- THION, TOTAL (UG/L)
JUL 14...	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
AUG 20...	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00

DATE	MIREX, TOTAL (UG/L)	PARA- THION, TOTAL (UG/L)	PER- THANE TOTAL (UG/L)	TOX- APHENE, TOTAL (UG/L)	TOTAL TRI- THION (UG/L)	2,4-D, TOTAL (UG/L)	2, 4-DP TOTAL (UG/L)	2,4,5-T TOTAL (UG/L)	SILVEX, TOTAL (UG/L)
JUL 14...	.00	.00	.00	.00	.00	.00	.00	.00	.00
AUG 20...	.00	.00	.00	.00	.00	.00	.00	.00	.00

DATE	TOTAL DICAMBA (UG/L)	DICAMBA IN BOTTOM MA- TERIAL (UG/KG)	TOTAL PICLORAM (UG/L)	PICLORAM IN BOTTOM MA- TERIAL (UG/KG)
AUG 20...	.00	--	.00	--

PLATTE RIVER BASIN

06625000 ENCAMPMENT RIVER AT MOUTH, NEAR ENCAMPMENT, WY

LOCATION.--Lat 41°18'12", long 106°42'53", in NE¼NW¼ sec.3, T.15 N., R.83 W., Carbon County, Hydrologic Unit 10180002, on left bank 0.5 mi (0.8 km) upstream from mouth and 8.0 mi (12.9 km) northeast of Encampment.

DRAINAGE AREA.--265 mi² (686 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--April 1940 to current year. Monthly discharge only for some periods, published in WSP 1310.

REVISED RECORDS.--WSP 1710: Drainage area.

GAGE.--Water-stage recorder. Altitude of gage is 6,970 ft (2,124 m), from topographic map. Prior to June 28, 1961, water-stage recorder at site 660 ft (201 m) upstream at datum 2.00 ft (0.610 m) higher.

REMARKS.--Records good except those for winter period, which are poor. Five small reservoirs above station for irrigation, total capacity, about 400 acre-ft (0.493 hm³). Slight regulation by Hog Park Creek Reservoir, capacity, about 2,970 acre-ft (3.66 hm³). Diversions for irrigation of about 8,800 acres (35.6 km²) above station. Transbasin diversion above station into Hog Park Creek (tributary to Encampment River) from North Fork Little Snake River for municipal, industrial, and irrigation uses began September 1964.

AVERAGE DISCHARGE.--41 years, 238 ft³/s (6.74 m³/s), 172,400 acre-ft/yr (213 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 4,510 ft³/s (128 m³/s) June 1, 1943, gage height, 10.25 ft (3.124 m), present datum; maximum gage height, 10.33 ft (3.149 m) June 4, 1952, present datum; minimum daily discharge, 5.2 ft³/s (0.15 m³/s) Aug. 15, 16, 1940.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,580 ft³/s (44.7 m³/s) June 9, gage height, 4.84 ft (1.475 m), no peak above base of 1,700 ft³/s (48.1 m³/s); minimum daily discharge, 27 ft³/s (0.76 m³/s) Sept. 21, 24.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	32	50	69	62	73	58	52	288	910	86	56	36
2	32	51	69	64	70	57	61	314	875	98	53	34
3	32	49	67	62	65	57	65	792	896	266	51	36
4	30	49	67	59	59	57	59	604	987	266	54	35
5	30	47	67	61	55	57	55	426	938	148	48	33
6	29	47	68	65	56	58	59	369	945	109	48	46
7	29	49	70	69	60	57	68	332	1080	92	43	46
8	29	63	72	73	64	57	64	266	1140	82	42	42
9	28	72	90	78	66	55	68	237	1180	76	42	40
10	28	74	114	83	55	55	78	210	994	72	43	36
11	28	72	125	89	60	55	88	191	931	69	45	37
12	28	75	128	91	63	57	92	171	786	81	49	37
13	31	82	117	94	67	55	89	148	682	92	58	35
14	46	76	101	91	71	54	59	134	577	74	58	34
15	61	78	87	89	75	54	69	148	520	70	50	35
16	67	67	82	69	77	56	82	145	412	66	63	34
17	56	78	66	88	79	58	101	184	369	70	61	32
18	55	89	63	76	80	57	135	177	314	79	52	31
19	52	99	64	82	79	54	139	142	262	82	47	30
20	54	102	60	75	68	58	146	154	241	70	48	28
21	50	79	60	81	68	57	132	237	233	61	51	27
22	49	67	61	74	79	56	104	310	195	55	46	28
23	45	62	62	72	68	57	80	407	154	52	46	28
24	35	60	62	66	63	58	86	426	131	53	43	27
25	38	60	63	68	59	54	152	460	114	62	41	30
26	42	61	65	71	57	60	225	555	102	82	42	33
27	48	63	66	69	57	65	296	726	90	119	41	32
28	38	65	65	68	58	59	288	829	118	81	40	30
29	35	67	63	69	---	58	254	786	137	65	37	30
30	50	69	72	70	---	59	279	822	98	57	36	29
31	53	---	64	74	---	58	---	903	---	57	37	---
TOTAL	1260	2022	2349	2302	1851	1767	3525	11893	16411	2792	1471	1011
MEAN	40.6	67.4	75.8	74.3	66.1	57.0	118	384	547	90.1	47.5	33.7
MAX	67	102	128	94	80	65	296	903	1180	266	63	46
MIN	28	47	60	59	55	54	52	134	90	52	36	27
AC-FT	2500	4010	4660	4570	3670	3500	6990	23590	32550	5540	2920	2010
CAL YR 1980	TOTAL	103415	MEAN 283	MAX 2160	MIN 28	AC-FT 205100						
WTR YR 1981	TOTAL	48654	MEAN 133	MAX 1180	MIN 27	AC-FT 96510						

06625000 ENCAMPMENT RIVER AT MOUTH, NEAR ENCAMPMENT, WY--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1965 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	TIME	DIS- CHARGE, IN CUBIC FEET PER SECOND	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	HARD- NESS (MG/L AS CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM AD- SORP- TION RATIO
OCT 21...	1200	--	56	370	8.9	4.5	160	49	9.7	20	.7
NOV 18...	1450	89	--	472	8.2	.5	200	60	11	25	.8
DEC 10...	1600	114	--	325	8.0	.5	150	55	4.0	22	.8
JAN 13...	1330	--	94	365	7.9	1.0	160	47	9.8	24	.8
FEB 27...	1100	--	59	410	7.9	2.0	140	43	7.8	20	.7
MAR 10...	1330	--	56	230	8.3	5.0	140	46	6.1	21	.8
APR 21...	1330	--	128	155	7.8	6.0	60	18	3.7	5.0	.3
MAY 20...	1145	--	157	203	--	8.0	66	20	4.0	10	.5
JUN 17...	1545	--	402	167	--	15.5	70	23	3.1	10	.5
JUL 16...	1230	--	69	520	--	17.0	180	61	7.8	26	.8
AUG 18...	1040	--	53	500	8.0	15.0	180	59	8.4	27	.9
SEP 21...	1200	--	28	560	--	12.0	220	70	10	33	1.0

DATE	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LINITY LAB (MG/L AS CACO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTITUENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)	SOLIDS, DIS- SOLVED (TONS PER DAY)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	PHOS- PHORUS, TOTAL (MG/L AS P)
OCT 21...	3.3	130	57	12	.5	26	256	.35	38.7	.12	.000
NOV 18...	4.1	140	84	14	.5	28	310	.42	74.5	1.3	.010
DEC 10...	3.5	120	64	9.6	.4	22	250	.34	77.0	.96	.010
JAN 13...	3.0	120	79	14	.5	31	280	.38	71.1	.26	.010
FEB 27...	2.2	120	45	12	.4	24	227	.31	36.2	.14	.020
MAR 10...	2.8	120	53	14	.7	25	240	.33	36.3	.14	.020
APR 21...	1.4	47	12	7.2	.4	13	89	.12	30.8	.06	.020
MAY 20...	1.3	59	14	9.8	.3	7.3	102	.14	43.2	.06	.160
JUN 17...	1.8	54	18	12	.2	13	110	.15	119	.00	.010
JUL 16...	3.4	170	53	12	.6	31	290	.39	54.0	.07	.020
AUG 18...	3.5	160	58	12	.4	25	290	.39	41.5	.15	.070
SEP 21...	4.1	180	97	15	1.1	38	380	.52	28.8	.00	.020

PLATTE RIVER BASIN

06625000 ENCAMPMENT RIVER AT MOUTH, NEAR ENCAMPMENT, WY--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	TIME	2,4-D, TOTAL (UG/L)	2,4-D, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	2,4-DP, TOTAL (UG/L)	2,4-DP, IN BOTTOM MAT. (UG/KG)	2,4,5-T TOTAL (UG/L)	2,4,5-T TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	SILVEX, TOTAL (UG/L)	SILVEX, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)
OCT 21...	1200	.00	0	.00	--	.00	0	.00	0
JUN 17...	1545	.00	0	.00	.00	.00	0	.00	0
JUL 16...	1230	.00	0	.00	.00	.00	0	.00	0
AUG 18...	1040	.00	0	.00	.00	.00	0	.00	0
SEP 21...	1200	.00	0	.00	.00	.00	0	.00	0

DATE	TOTAL DICAMBA (UG/L)	DICAMBA IN BOTTOM MA- TERIAL (UG/KG)	TOTAL PICLORAM (UG/L)	PICLORAM IN BOTTOM MA- TERIAL (UG/KG)
OCT 21...	.00	.0	.00	.0
JUN 17...	.00	.0	.00	.0
JUL 16...	.00	.0	.00	.0
AUG 18...	.00	.0	.00	.0
SEP 21...	.00	.0	.00	.0

06628800 SAGE CREEK NEAR SARATOGA, WY

LOCATION.--Lat 41°34'53", long 106°59'17", in SE¼NE¼NW¼ sec.32, T.19 N., R.85 W., Carbon County, Hydrologic Unit 10180002, on right bank 300 ft (91 m) upstream from private farm bridge, 1.1 mi (1.8 km) downstream from Little Sage Creek, 3.6 mi (5.8 km) upstream from mouth, and 13 mi (21 km) northwest of Saratoga.

DRAINAGE AREA.--263 mi² (681 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--May 1973 to September 1981 (no winter records), discontinued.

GAGE.--Water-stage recorder. Altitude of gage is 6,650 ft (2,027 m), from topographic map.

REMARKS.--Records poor. Several small reservoirs above station, total capacity, about 3,000 acre-ft (3.70 hm³). Diversions for irrigation of about 1,560 acres (6.31 km²) above station.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,970 ft³/s (84.1 m³/s) May 4, 1980, gage height, 12.03 ft (3.667 m); no flow some days most years.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 424 ft³/s (12.0 m³/s) about July 12, gage height, 9.61 ft (2.929 m); no flow for many days.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.2						8.0	1.0	1.4	.67	.30	.00
2	1.5						9.0	1.1	1.0	.81	.22	.00
3	1.9						10	4.2	.81	1.7	.16	.00
4	2.0						6.0	13	.60	192	.13	.00
5	2.1						7.0	5.5	.48	56	.10	.00
6	2.2						11	3.0	.48	16	.07	10
7	2.2						13	2.2	.42	6.0	.04	50
8	2.3						10	2.1	.54	3.9	.01	10
9	2.5						11	2.2	.48	2.4	.00	.00
10	2.5						14	1.8	.36	1.5	.00	.00
11	2.3						15	1.7	.17	1.1	.00	.00
12	2.5						15	1.7	.10	300	.00	.00
13	2.7						13	1.8	.13	72	.00	.00
14	4.0						9.9	1.8	.11	17	.00	.00
15	46						5.2	2.8	.10	4.2	.00	.00
16	15						3.4	2.4	.10	1.4	.00	.00
17	5.1						3.0	2.6	.13	2.7	.00	.00
18	4.7						3.0	5.5	2.2	2.1	.00	.00
19	5.0						3.3	4.7	4.2	.81	.00	.00
20	4.8						2.5	3.3	4.0	.67	.00	.00
21	4.7						2.3	2.6	3.5	.42	.00	.00
22	4.0						2.5	14	3.3	.22	.00	.00
23	3.2						2.3	55	3.2	.17	.00	.00
24	2.4						2.0	15	2.9	.31	.00	.00
25	1.8						1.7	5.9	2.7	8.5	.00	.00
26	1.4						1.4	3.5	2.7	100	.00	.00
27	1.2						1.2	2.9	2.7	8.2	.00	.00
28	1.0						1.2	5.2	2.5	2.7	.00	.00
29	.93						1.1	4.6	1.2	1.4	.00	.00
30	.86						1.0	3.2	1.0	.74	.00	.00
31	.80						---	2.1	---	.45	.00	---
TOTAL	134.79						189.0	178.4	43.51	806.07	1.03	70.00
MEAN	4.35						6.30	5.75	1.45	26.0	.033	2.33
MAX	46						15	55	4.2	300	.30	50
MIN	.80						1.0	1.0	.10	.17	.00	.00
AC-FT	267						375	354	86	1600	2.0	139

PLATTE RIVER BASIN

06628800 SAGE CREEK NEAR SARATOGA, WY--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1973 to September 1981 (discontinued).

REMARKS.--No flow observed Aug. 17, Sept. 21.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	HARD- NESS (MG/L AS CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LINITY LAB (MG/L AS CACO3)
OCT 21...	1700	4.1	2050	8.3	5.5	760	140	100	190	3.0	6.9	160
MAR 11...	1750	6.7	2450	8.4	1.0	1100	200	140	220	2.9	4.9	210
APR 22...	1020	2.6	2850	8.4	7.0	1200	210	160	290	3.7	7.1	210
MAY 12...	1100	1.8	3850	--	7.0	1700	270	240	470	5.0	8.7	220
JUN 17...	1030	.26	3300	--	14.0	1500	270	200	380	4.3	6.0	180
JUL 15...	1745	2.6	1850	--	22.5	860	230	69	120	1.8	11	90

DATE	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)	SOLIDS, DIS- SOLVED (TONS PER DAY)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHORUS TOTAL (MG/L AS PO4)	SEDI- MENT, SUS- PENDE (MG/L)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (T/DAY)
OCT 21...	950	36	.7	15	1500	2.0	16.6	2.9	.240	--	244	2.7
MAR 11...	1200	34	.3	9.5	1950	2.7	35.3	3.0	.310	.95	380	6.9
APR 22...	1500	44	.3	5.7	2350	3.2	16.5	1.7	.150	.46	88	.62
MAY 12...	2300	86	.3	2.5	3510	4.8	16.9	.04	.160	.49	50	.24
JUN 17...	2000	76	.4	1.7	3040	4.1	2.1	.01	.060	.18	36	.03
JUL 15...	1000	24	.3	8.4	1520	2.1	10.7	.68	.370	1.1	590	4.2

DATE	TIME	TEMPER- ATURE (DEG C)	STREAM- FLOW, INSTAN- TANEOUS (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
MAY 12...	1100	7.0	1.8	4	8	13	27

DATE	BED MAT. FALL DIAM. % FINER THAN 1.00 MM	BED MAT. SIEVE DIAM. % FINER THAN 2.00 MM	BED MAT. SIEVE DIAM. % FINER THAN 4.00 MM	BED MAT. SIEVE DIAM. % FINER THAN 8.00 MM	BED MAT. SIEVE DIAM. % FINER THAN 16.0 MM	BED MAT. SIEVE DIAM. % FINER THAN 32.0 MM
MAY 12...	31	40	52	69	88	100

06628900 PASS CREEK NEAR ELK MOUNTAIN, WY

LOCATION.--Lat 41°35'10", long 106°36'37", in SW¼SW¼ sec.27, T.19 N., R.82 W., Carbon County, Hydrologic Unit 10180002, on right bank 235 ft (72 m) downstream from Lone Tree Creek, 1,000 ft (305 m) upstream from Brush Creek, 12 mi (19 km) southwest of Elk Mountain, and 14 mi (23 km) northeast of Saratoga.

DRAINAGE AREA.--91.5 mi² (237.0 km²). Area at mouth, 279 mi² (723 km²).

PERIOD OF RECORD.--April 1957 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 7,230 ft (2,204 m), from topographic map. Prior to Oct. 6, 1966, 15 ft (5 m) downstream at present datum.

REMARKS.--Records good except those for winter period and periods of no gage-height record, Mar. 4-10, May 23 to June 15, which are poor. Diversions for irrigation of about 6,300 acres (25.5 km²) above station. Diversion to Kerr ditch 7.5 mi (12.1 km) upstream.

AVERAGE DISCHARGE.--24 years, 39.7 ft³/s (1.124 m³/s), 28,760 acre-ft/yr (35.5 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,180 ft³/s (33.4 m³/s) May 9, 1973, gage height, 6.27 ft (1.91 m); minimum daily, 1.5 ft³/s (0.042 m³/s) Sept. 11, 12, 1959.

EXTREMES FOR CURRENT YEAR.--Peak discharge above base of 300 ft³/s (8.50 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
aMay 22	2230	*712 20.2	b4.80 1.463

a-about.

b-from floodmark.

Minimum daily discharge, 3.9 ft³/s (0.110 m³/s) Sept. 21.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	8.7	15	8.5	7.8	5.7	9.6	14	51	118	18	16	11
2	7.5	14	9.0	7.6	5.4	8.9	14	63	100	22	13	6.6
3	8.7	13	9.8	7.2	5.2	8.3	13	165	140	31	13	5.7
4	7.0	14	10	6.9	4.9	8.2	12	113	194	24	12	6.1
5	6.0	15	11	6.5	5.0	8.4	13	57	145	16	11	6.1
6	6.0	15	11	6.2	5.4	8.8	14	57	102	14	12	13
7	6.0	16	11	5.8	5.5	9.2	16	69	98	11	13	13
8	6.5	17	11	5.4	5.4	10	19	56	96	9.3	13	9.3
9	6.5	14	11	5.2	5.4	11	59	45	96	7.5	18	8.0
10	6.1	13	11	5.0	5.0	11	142	41	96	7.1	21	7.5
11	5.7	12	11	4.7	4.6	12	105	43	95	5.7	18	7.5
12	6.1	12	11	4.5	4.6	13	71	49	80	8.9	18	7.5
13	6.6	12	12	4.3	4.8	13	56	41	68	29	28	7.1
14	8.6	11	12	4.3	5.0	13	45	36	53	20	21	6.6
15	11	10	11	4.2	5.3	13	43	41	44	16	16	6.6
16	18	9.2	11	4.3	5.5	13	45	59	33	14	9.3	6.6
17	13	8.6	10	4.4	5.9	12	45	148	23	16	8.0	6.1
18	14	8.6	9.7	4.4	6.3	11	40	153	23	17	7.5	6.1
19	18	9.3	9.3	4.6	6.8	10	33	107	35	15	6.1	5.7
20	19	8.6	9.0	4.6	7.3	9.8	36	113	32	12	5.7	4.8
21	23	8.6	8.8	4.7	7.9	10	34	203	28	8.7	5.2	3.9
22	23	6.6	8.6	4.9	8.5	11	31	320	26	8.7	5.2	4.4
23	13	6.2	8.7	5.2	9.5	11	24	230	24	8.0	5.2	4.8
24	12	5.9	8.8	5.3	10	13	25	160	22	7.0	4.8	4.4
25	13	5.7	9.0	5.5	11	16	41	190	21	18	4.8	4.8
26	14	5.9	9.2	5.6	11	18	53	250	19	17	5.2	7.1
27	12	6.3	9.2	5.7	10	18	50	260	18	27	5.2	7.1
28	12	6.7	9.1	5.8	10	18	41	220	18	19	6.1	5.7
29	12	7.3	8.8	5.9	---	16	41	186	22	17	6.1	4.8
30	13	7.9	8.5	5.9	---	14	50	160	20	14	6.1	4.8
31	15	---	8.1	5.9	---	14	---	135	---	14	11	---
TOTAL	351.0	314.4	306.1	168.3	186.9	372.2	1225	3821	1889	471.9	344.5	202.7
MEAN	11.3	10.5	9.87	5.43	6.68	12.0	40.8	123	63.0	15.2	11.1	6.76
MAX	23	17	12	7.8	11	18	142	320	194	31	28	13
MIN	5.7	5.7	8.1	4.2	4.6	8.2	12	36	18	5.7	4.8	3.9
AC-FT	696	624	607	334	371	738	2430	7580	3750	936	683	402
CAL YR 1980	TOTAL	17542.0	MEAN	47.9	MAX	420	MIN	3.2	AC-FT	34790		
WTR YR 1981	TOTAL	9653.0	MEAN	26.4	MAX	320	MIN	3.9	AC-FT	19150		

PLATTE RIVER BASIN

06630000 NORTH PLATTE RIVER ABOVE SEMINOE RESERVOIR, NEAR SINCLAIR, WY

LOCATION.--Lat 41°52'20", long 107°03'25", in SW¼SW¼ sec.13, T.22 N., R.86 W., Carbon County, Hydrologic Unit 10180002, on left bank 6.5 mi (10.5 km) northeast of Sinclair and 14 mi (22.5 km) upstream from high-water line of Seminoe Reservoir at elevation 6,357 ft (1,938 m).

DRAINAGE AREA.--4,175 mi² (10,813 km²), of which 114 mi² (295 km²) is probably noncontributing.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--July 1939 to current year. Prior to October 1943, published as "near Parco."

REVISED RECORDS.--WDR-76-1: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 6,400.75 ft (1,950.949 m), National Geodetic Vertical Datum of 1929.

REMARKS.--Records good except those for winter period, which are poor. Diversions for irrigation of about 215,000 acres (870 km²) above station. Transbasin diversions above station.

COOPERATION.--Six discharge measurements furnished by Bureau of Reclamation, and eight measurements furnished by Wyoming State Engineer's office.

AVERAGE DISCHARGE.--42 years, 1,099 ft³/s (31.12 m³/s), 796,200 acre-ft/yr (982 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 14,500 ft³/s (411 m³/s) June 15, 1957, gage height, 9.72 ft (2.963 m); minimum daily, 70 ft³/s (1.98 m³/s) Sept. 17, 1944.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 4,170 ft³/s (118 m³/s) June 9, gage height, 5.24 ft (1.597 m); minimum daily, 140 ft³/s (3.96 m³/s) Sept. 30.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	227	430	350	365	265	345	345	567	2700	720	390	197
2	227	438	365	360	235	340	338	619	2590	619	360	191
3	234	438	375	355	220	335	353	730	2670	610	345	180
4	234	438	380	350	220	330	398	1790	3010	1120	338	180
5	234	430	380	345	225	330	390	1420	3030	1270	331	191
6	234	421	375	340	240	331	353	1180	2980	986	303	221
7	234	398	360	335	255	345	367	1020	3010	811	260	253
8	240	406	340	330	265	331	438	940	3230	655	234	295
9	234	422	335	325	265	324	414	811	3640	567	253	288
10	228	430	335	320	230	317	406	720	3620	497	215	281
11	227	406	340	320	240	324	471	674	3280	454	209	253
12	234	414	340	315	250	324	514	655	3110	446	215	203
13	234	438	345	315	260	334	584	610	2640	619	247	186
14	247	446	350	310	270	338	655	558	2210	780	281	221
15	295	360	355	310	280	334	602	505	1870	619	317	227
16	421	265	360	305	290	334	602	505	1600	550	353	209
17	438	245	360	305	300	338	567	610	1370	497	338	191
18	438	236	360	305	310	353	619	929	1170	505	338	176
19	446	240	360	302	320	331	683	896	1010	497	310	172
20	471	250	360	302	330	334	692	864	885	523	288	164
21	488	260	360	302	335	353	655	940	801	488	253	156
22	497	265	360	305	340	338	593	1150	720	421	247	148
23	505	270	360	310	345	338	497	1390	646	367	227	144
24	488	265	365	315	350	345	414	1920	567	338	203	148
25	421	260	365	315	350	353	390	1960	532	331	191	152
26	382	265	370	320	350	338	479	1860	479	360	186	156
27	414	270	370	320	350	360	558	1990	446	430	191	168
28	421	285	370	320	350	390	646	2360	430	619	180	156
29	421	305	370	320	---	421	628	2460	488	523	186	148
30	382	330	370	315	---	382	602	2460	655	446	197	140
31	367	---	370	300	---	375	---	2470	---	414	191	---
TOTAL	10563	10326	11155	9956	8040	10665	15253	37563	55389	18082	8177	5795
MEAN	341	344	360	321	287	344	508	1212	1846	583	264	193
MAX	505	446	380	365	350	421	692	2470	3640	1270	390	295
MIN	227	236	335	300	220	317	338	505	430	331	180	140
AC-FT	20950	20480	22130	19750	15950	21150	30250	74510	109900	35870	16220	11490
CAL YR 1980	TOTAL	503628	MEAN	1376	MAX	8090	MIN	174	AC-FT	998900		
WTR YR 1981	TOTAL	200964	MEAN	551	MAX	3640	MIN	140	AC-FT	398600		

06630000 NORTH PLATTE RIVER ABOVE SEMINOE RESERVOIR, NEAR SINCLAIR, WY--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1961 to current year.

PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: March 1978 to October 1978.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	TIME	DIS- CHARGE, IN CUBIC FEET PER SECOND	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	TUR- BID- ITY (NTU)	OXYGEN, DIS- SOLVED (MG/L)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	HARD- NESS (MG/L AS CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)
OCT 22...	1700	--	510	590	8.3	7.0	7.0	11.2	4	240	61
NOV 18...	1515	--	236	635	8.4	.0	5.0	10.8	2	--	--
DEC 15...	1030	360	--	525	7.9	.5	3.0	10.8	3	240	64
JAN 19...	1500	--	302	640	8.5	.0	3.0	11.5	0	280	67
FEB 24...	1500	350	--	440	8.3	1.0	4.0	--	<1	200	54
MAR 24...	1430	--	350	545	8.4	6.5	3.0	10.2	0	210	54
APR 22...	1130	--	631	298	8.3	9.0	7.0	9.7	--	100	30
MAY 12...	1430	--	684	367	8.4	10.0	4.0	9.5	3	120	31
JUN 16...	1700	--	1490	315	8.4	15.5	5.0	8.4	12	130	36
JUL 15...	1300	--	649	555	8.0	21.5	--	6.1	K240	220	61
AUG 19...	1430	--	295	420	8.4	24.0	25	9.0	10	150	40
SEP 22...	1300	--	153	558	8.1	14.0	20	8.1	8	190	50

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

DATE	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LITY LAB (MG/L AS CACO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)
OCT 22...	21	38	1.1	3.6	140	180	15	.6	15	411	.56
NOV 18...	--	--	--	--	150	--	--	--	--	--	--
DEC 15...	18	38	1.1	3.1	160	130	15	.6	17	377	.51
JAN 19...	26	45	1.2	3.5	180	180	6.6	.6	20	459	.62
FEB 24...	17	33	1.0	2.5	140	120	12	.5	.0	318	.43
MAR 24...	18	36	1.1	2.8	120	130	14	.5	14	343	.47
APR 22...	7.2	18	.8	1.6	82	149	5.7	.4	10	170	.23
MAY 12...	9.0	20	.8	1.7	82	56	10	.5	5.5	185	.25
JUN 16...	9.3	17	.7	1.9	98	41	17	.3	12	200	.27
JUL 15...	16	32	.9	3.3	160	110	14	.7	12	340	.46
AUG 19...	13	25	.9	2.0	120	64	9.8	.5	12	240	.33
SEP 22...	16	34	1.1	2.5	130	110	12	.7	9.3	310	.42

PLATTE RIVER BASIN

06630000 NORTH PLATTE RIVER ABOVE SEMINOLE RESERVOIR, NEAR SINCLAIR, WY--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	SOLIDS, DIS- SOLVED (TONS PER DAY)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N)	NITRO- GEN, AMMONIA TOTAL (MG/L AS NH4)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO- GEN, TOTAL (MG/L AS N)	NITRO- GEN, TOTAL (MG/L AS NO3)	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHORUS TOTAL (MG/L AS PO4)
OCT 22...	566	--	.03	--	--	--	--	--	--	.000	--
NOV 18...	--	.00	--	.080	.10	.29	.37	.37	1.6	.020	.06
DEC 15...	366	--	2.2	--	--	--	--	--	--	.090	--
JAN 19...	374	.04	.00	.090	.11	.65	.74	.78	3.5	.020	.06
FEB 24...	301	.00	.00	.050	--	.65	.70	.70	3.1	.030	.18
MAR 24...	324	--	.00	--	--	--	--	--	--	.020	--
APR 22...	290	.02	.00	.090	--	.72	.81	.83	3.7	.040	.15
MAY 12...	342	.00	.00	.080	--	1.0	1.10	1.1	4.9	.200	.49
JUN 16...	805	.03	.00	.190	--	.51	.70	.73	3.2	.080	.31
JUL 15...	596	.10	.22	.550	--	1.7	2.20	2.3	10	.190	1.4
AUG 19...	191	.18	.11	.240	--	1.4	1.60	1.8	7.9	.110	.15
SEP 22...	128	<.10	.00	.180	--	.58	.76	--	--	.040	.12

DATE	TIME	PCB, TOTAL (UG/L)	PCB, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	NAPH- THA- LENES, POLY- CHLOR. TOTAL (UG/L)	PCN, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	ALDRIN, TOTAL (UG/L)	ALDRIN, TOTAL (UG/KG)	CHLOR- DANE, TOTAL IN BOT- TOM MA- TERIAL (UG/L)	CHLOR- DANE, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	DDD, TOTAL (UG/L)
OCT 22...	1700	.00	0	.00	.0	.00	.0	.00	.0	.00

DATE	DDD, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	DDE, TOTAL (UG/L)	DDE, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	DDT, TOTAL (UG/L)	DDT, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	DI- AZINON, TOTAL (UG/L)	DI- ELDRIN TOTAL (UG/L)	DI- ELDRIN, TOTAL (UG/KG)	ENDO- SULFAN, TOTAL (UG/L)	ENDO- SULFAN, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)
OCT 22...	.2	.00	.3	.00	.4	.00	.00	.1	.00	.0

DATE	ENDRIN, TOTAL (UG/L)	ENDRIN, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	ETHION, TOTAL (UG/L)	HEPTA- CHLOR, TOTAL (UG/L)	HEPTA- CHLOR, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	HEPTA- CHLOR EPOXIDE TOTAL (UG/L)	HEPTA- CHLOR EPOXIDE TOT. IN BOTTOM MATL. (UG/KG)	LINDANE TOTAL (UG/L)	LINDANE TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	MALA- THION, TOTAL (UG/L)
OCT 22...	.00	.0	.00	.00	.0	.00	.0	.00	.0	.00

06630000 NORTH PLATTE RIVER ABOVE SEMINOLE RESERVOIR, NEAR SINCLAIR, WY--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	METH- OXY- CHLOR, TOTAL (UG/L)	METH- OXY- CHLOR, TOT. IN BOTTOM MATL. (UG/KG)	METHYL PARA- THION, TOTAL (UG/L)	METHYL TRI- THION, TOTAL (UG/L)	MIREX, TOTAL (UG/L)	MIREX, IN BOT- TOM MA- TERIAL (UG/KG)	PARA- THION, TOTAL (UG/L)	PER- THANE TOTAL (UG/L)	PER- THANE IN BOTTOM MATERIAL (UG/KG)	TOX- APHENE, TOTAL (UG/L)
OCT 22...	.00	.0	.00	.00	.00	.0	.00	.00	.00	.00

DATE	TOXA- PHENE, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	TOTAL TRI- THION (UG/L)	2,4-D, TOTAL (UG/L)	2,4-D, IN BOT- TOM MA- TERIAL (UG/KG)	2, 4-DP TOTAL (UG/L)	2,4-DP, IN BOTTOM MAT. (UG/KG)	2,4,5-T TOTAL (UG/L)	2,4,5-T IN BOT- TOM MA- TERIAL (UG/KG)	SILVEX, TOTAL (UG/L)	SILVEX, IN BOT- TOM MA- TERIAL (UG/KG)
OCT 22...	.0	.00	.06	0	.00	.00	.00	0	.00	0

DATE	TOTAL DICAMBA (UG/L)	DICAMBA IN BOTTOM MA- TERIAL (UG/KG)	TOTAL PICLORAM (UG/L)	PICLORAM IN BOTTOM MA- TERIAL (UG/KG)
OCT 22...	.00	.0	.02	.0

PLATTE RIVER BASIN

06630300 BIG DITCH NEAR COYOTE SPRINGS, WY

LOCATION.--Lat 41°56'07", long 106°48'01", in SE $\frac{1}{4}$ SE $\frac{1}{4}$ NW $\frac{1}{4}$ sec.30, T.23 N., R.83 W., Carbon County, Hydrologic Unit 10180003, on right bank 140 ft (43 m) downstream from Medicine Bow Mine Company road, 1.2 mi (1.9 km) upstream from high-water line of Seminole Reservoir at elevation 6,358 ft (1,938 m), 11 mi (18 km) north of Coyote Springs, and 14 mi (23 km) west of Hanna.

DRAINAGE AREA.--110 mi² (285 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--February 1975 to September 1981 (discontinued).

GAGE.--Water-stage recorder. Altitude of gage is 6,380 ft (1,945 m), from topographic map.

REMARKS.--Records poor. Strip mining operation 2 mi (3 km) upstream pumps water into a stilling pond which empties into Big Ditch. This pumping occurs at irregular intervals, depending on dewatering needs of the mine.

AVERAGE DISCHARGE.--6 years, 0.97 ft³/s (0.027 m³/s), 703 acre-ft/yr (0.867 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 396 ft³/s (11.2 m³/s) July 16, 1975, gage height, 7.37 ft (2.246 m), on basis of flow-through-culverts measurement of peak flow; no flow for most of each year.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 107 ft³/s (3.03 m³/s) July 25, gage height, 4.42 ft (1.347 m), from floodmarks, from rating curve extended above 14 ft³/s (0.40 m³/s) on basis of flow-through-culverts measurement at gage height 7.37 ft (2.246 m) and step-backwater analysis; no flow most of year.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.00	.00	2.0	.00	.00	.44	.00	.00	.00
2	.00	.00	.00	.00	.00	4.4	.00	.34	.22	.00	.00	.00
3	.00	.00	.00	.00	.00	4.7	.00	1.3	.00	.00	.00	.00
4	.00	.00	.00	.00	.00	4.6	.00	1.0	.00	.00	.00	.00
5	.00	.00	.00	.00	.00	3.6	.00	.98	.00	.00	.00	.00
6	.00	2.3	.00	.00	.00	3.9	.00	1.0	.00	.00	.00	.00
7	.00	3.9	.00	.00	.00	3.5	.00	.52	.00	.00	.00	.00
8	.00	2.9	.00	.00	.00	2.9	.00	.00	.00	.00	.00	.00
9	.00	.00	.00	.00	.00	2.3	.00	.00	.00	.00	.00	.00
10	.00	.23	.00	.00	.00	1.9	.00	.00	.00	.00	.00	.00
11	.00	.00	.00	.00	.00	1.5	.00	.26	.00	.00	.00	.00
12	.00	.00	.00	.00	.00	1.6	.00	.00	.00	.00	.00	.00
13	.00	.00	.00	.00	.00	1.3	.00	.00	.00	.00	.00	.00
14	2.2	.00	.00	.00	.00	1.3	.00	.00	.00	.00	.00	.00
15	6.6	.00	1.6	.00	.00	.99	.00	.00	.00	.00	.00	.00
16	4.2	.00	.00	.00	.00	.99	.00	1.1	.00	.00	.00	.00
17	1.6	.00	.00	.00	.00	.77	.00	2.8	.00	.00	.00	.00
18	4.1	.00	.00	.00	.00	.60	.00	2.1	.00	.00	.00	.00
19	4.3	.00	.00	.00	.00	.54	.23	2.7	.00	.00	.00	.00
20	4.3	.00	.00	.00	.00	1.5	.70	1.9	.00	.00	.00	.00
21	3.9	.00	.00	.00	.00	.00	.32	1.8	.00	.00	.00	.00
22	3.6	.00	.00	.00	.00	.00	.00	2.0	.00	.00	.00	.00
23	.49	1.6	.00	.00	.00	.00	.00	1.8	.00	.00	.00	.00
24	.00	.00	.00	.00	.00	.00	.00	2.3	.00	.00	.00	.00
25	.00	.00	.00	.00	.00	.00	.00	1.7	.00	9.1	.00	.00
26	.00	.00	.00	.00	.00	.00	.00	.98	.00	3.7	.00	.00
27	.00	.00	.00	.00	.54	.00	.00	2.8	.00	.43	.00	.00
28	.00	.28	.00	.00	1.1	.00	.00	2.7	.00	.00	.00	.00
29	.00	.07	.07	.00	---	.00	.00	.86	.00	.00	.00	.00
30	.00	.00	.00	.00	---	.00	.00	.75	.00	.00	.00	.00
31	.00	---	.00	.00	---	.00	---	.61	---	.00	.00	---
TOTAL	35.29	11.28	1.67	.00	1.64	44.89	1.25	34.30	.66	13.23	.00	.00
MEAN	1.14	.38	.054	.000	.059	1.45	.042	1.11	.022	.43	.000	.000
MAX	6.6	3.9	1.6	.00	1.1	4.7	.70	2.8	.44	9.1	.00	.00
MIN	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
AC-FT	70	22	3.3	.00	3.3	89	2.5	68	1.3	26	.00	.00

CAL YR 1980	TOTAL	1502.52	MEAN	4.11	MAX	100	MIN	.00	AC-FT 1980	
WTR YR 1981	TOTAL	144.21	MEAN	.40	MAX	9.1	MIN	.00	AC-FT 1981	286

06630300 BIG DITCH NEAR COYOTE SPRINGS, WY--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1976 to September 1981 (discontinued).

REMARKS.--No flow observed Apr. 8, 12, 18, May 16, June 13.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	TUR- BID- ITY (NTU)	OXYGEN, DIS- SOLVED (MG/L)	HARD- NESS (MG/L AS CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	
APR 21...	1615	.02	5500	8.5	10.0	170	8.5	1800	290	270	850	
MAY 04...	1515	1.4	5000	8.5	19.0	400	7.9	770	110	120	780	
17...	1100	5.0	1500	8.0	12.0	4000	9.6	490	84	69	180	
24...	1500	3.2	6500	8.2	20.0	550	9.2	1600	230	240	650	
JUL 25...	1850	1.5	1000	8.2	13.5	15000	9.2	300	70	31	100	
DATE		SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	POTAS- SIUM 40 DIS- SOLVED (PCI/L AS K40)	ALKA- LINITY LAB (MG/L AS CACO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)	SOLIDS, DIS- SOLVED (TONS PER DAY)
APR 21...	8.6	10	7.5	440	3000	50	1.0	4.5	4740	6.4	.26	
MAY 04...	12	6.9	5.1	490	1800	10	1.8	4.5	3130	4.3	11.8	
17...	3.5	5.7	4.3	110	760	18	.4	2.3	1190	1.6	16.1	
24...	7.2	12	9.0	420	2400	83	.6	2.2	3870	5.3	33.4	
JUL 25...	2.5	9.8	7.3	78	390	23	.4	2.8	674	.92	2.6	
DATE		NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO- GEN, TOTAL (MG/L AS NO3)	NITRO- GEN, TOTAL (MG/L AS NO3)	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHORUS TOTAL (MG/L AS PO4)	PHOS- PHORUS, DIS- SOLVED (MG/L AS P)	SEDI- MENT, SUS- PENDE (MG/L)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (T/DAY)
APR 21...	6.8	.120	1.7	1.80	8.6	38	.210	.64	.210	--	--	
MAY 04...	2.0	.180	2.4	2.60	4.6	20	.470	1.4	--	811	3.1	
17...	3.0	.330	13	13.0	16	71	5.40	17	--	6210	84	
24...	1.4	.170	5.4	5.60	7.0	31	.950	2.9	--	1570	14	
JUL 25...	3.0	.990	2.4	3.40	6.4	28	12.0	37	--	27300	107	
DATE	TIME	ALUM- INUM, TOTAL RECOV- ERABLE (UG/L AS AL)	ALUM- INUM, SUS- PENDE RECOV. (UG/L AS AL)	ALUM- INUM, DIS- SOLVED (UG/L AS AL)	ARSENIC TOTAL (UG/L AS AS)	ARSENIC SUS- PENDE TOTAL (UG/L AS AS)	ARSENIC DIS- SOLVED (UG/L AS AS)	BERYL- LIUM, TOTAL RECOV- ERABLE (UG/L AS BE)	BERYL- LIUM, SUS- PENDE RECOV. (UG/L AS BE)	BERYL- LIUM, DIS- SOLVED (UG/L AS BE)	BORON, DIS- SOLVED (UG/L AS B)	CADMIUM TOTAL RECOV- ERABLE (UG/L AS CD)
APR 21...	1615	3200	3200	0	2	1	1	0	0	0	180	0
MAY 04...	1515	8900	8900	20	3	2	1	10	0	10	360	0
17...	1100	44000	44000	5	10	8	2	10	10	0	3100	2
24...	1500	16000	16000	50	10	9	1	0	0	0	350	0
JUL 25...	1850	250000	250000	30	40	39	1	10	10	0	220	7

PLATTE RIVER BASIN

06630300 BIG DITCH NEAR COYOTE SPRINGS, WY--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	CADMIUM SUS- PENDE RECov- ERABLE (UG/L AS CD)	CADMIUM DIS- SOLVED (UG/L AS CD)	CHRO- MIUM, TOTAL RECov- ERABLE (UG/L AS CR)	CHRO- MIUM, SUS- PENDE RECov- ERABLE (UG/L AS CR)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR)	COPPER, TOTAL RECov- ERABLE (UG/L AS CU)	COPPER, SUS- PENDE RECov- ERABLE (UG/L AS CU)	COPPER, DIS- SOLVED (UG/L AS CU)	IRON, TOTAL RECov- ERABLE (UG/L AS FE)	IRON, SUS- PENDE RECov- ERABLE (UG/L AS FE)	IRON, DIS- SOLVED (UG/L AS FE)	LEAD, TOTAL RECov- ERABLE (UG/L AS PB)
APR 21...	0	1	30	20	10	14	9	5	3400	3400	40	8
MAY 04...	0	0	10	0	10	26	23	3	13000	13000	40	14
17...	2	0	140	130	10	210	200	9	130000	130000	590	55
24...	0	1	40	30	10	37	32	5	27000	27000	330	17
JUL 25...	6	1	400	400	0	700	680	19	420000	420000	80	400

DATE	LEAD, SUS- PENDE RECov- ERABLE (UG/L AS PB)	LEAD, DIS- SOLVED (UG/L AS PB)	LITHIUM TOTAL RECov- ERABLE (UG/L AS LI)	LITHIUM SUS- PENDE RECov- ERABLE (UG/L AS LI)	LITHIUM DIS- SOLVED (UG/L AS LI)	MANGA- NESE, TOTAL RECov- ERABLE (UG/L AS MN)	MANGA- NESE, SUS- PENDE RECov- ERABLE (UG/L AS MN)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	MERCURY TOTAL RECov- ERABLE (UG/L AS HG)	MERCURY SUS- PENDE RECov- ERABLE (UG/L AS HG)	MERCURY DIS- SOLVED (UG/L AS HG)	MOLYB- DENUM, TOTAL RECov- ERABLE (UG/L AS MO)
APR 21...	8	0	60	0	60	130	80	50	.1	.1	.0	56
MAY 04...	13	1	80	20	60	360	340	20	.4	.4	.0	58
17...	54	1	130	110	20	3000	3000	50	.4	.4	.0	3
24...	14	3	80	20	60	780	740	40	.1	.1	.0	4
JUL 25...	400	0	400	390	10	8900	8900	40	1.2	1.1	.1	10

DATE	MOLYB- DENUM, SUS- PENDE RECov- ERABLE (UG/L AS MO)	MOLYB- DENUM, DIS- SOLVED (UG/L AS MO)	NICKEL, TOTAL RECov- ERABLE (UG/L AS NI)	NICKEL, SUS- PENDE RECov- ERABLE (UG/L AS NI)	NICKEL, DIS- SOLVED (UG/L AS NI)	SELE- NIUM, TOTAL RECov- ERABLE (UG/L AS SE)	SELE- NIUM, SUS- PENDE RECov- ERABLE (UG/L AS SE)	SELE- NIUM, DIS- SOLVED (UG/L AS SE)	VANA- DIUM, DIS- SOLVED (UG/L AS V)	ZINC, TOTAL RECov- ERABLE (UG/L AS ZN)	ZINC, SUS- PENDE RECov- ERABLE (UG/L AS ZN)	ZINC, DIS- SOLVED (UG/L AS ZN)
APR 21...	52	4	11	7	4	2	1	1	4.0	90	70	20
MAY 04...	46	12	20	18	2	1	0	1	5.0	80	70	10
17...	0	3	70	63	7	3	1	2	4.0	700	680	20
24...	0	4	31	26	5	3	2	1	1.0	250	220	30
JUL 25...	0	10	450	450	4	10	9	1	1.0	2300	2300	30

DATE	TIME	GROSS ALPHA, DIS- SOLVED (UG/L AS U-NAT)	GROSS ALPHA, SUSP. TOTAL (UG/L AS U-NAT)	GROSS BETA, DIS- SOLVED (PCI/L AS CS-137)	GROSS BETA, SUSP. TOTAL (PCI/L AS CS-137)	GROSS BETA, DIS- SOLVED (PCI/L AS SR/ YT-90)	GROSS BETA, SUSP. TOTAL (PCI/L AS SR/ YT-90)	RADIUM 226, DIS- SOLVED, RADON METHOD (PCI/L)	URANIUM NATURAL DIS- SOLVED (UG/L AS U)	GROSS ALPHA, DIS- SOLVED (PCI/L AS U-NAT)	GROSS ALPHA, SUSP. TOTAL (PCI/L AS U-NAT)
APR 21...	1615	<110	11	<55	11	<52	10	.26	20	75	7.5

DATE	TIME	TEMPER- ATURE (DEG C)	STREAM- FLOW, INSTAN- TANEOUS (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. FALL DIAM. % FINER THAN 1.00 MM	BED MAT. FALL DIAM. % FINER THAN 2.00 MM	BED MAT. FALL DIAM. % FINER THAN 4.00 MM
MAY 17...	1100	12.0	5.0	14	23	83	96	98	99	100

06630330 NORTH DITCH NEAR COYOTE SPRINGS, WY

LOCATION.--Lat 41°56'44", long 106°48'06", in NE¼SE¼SW¼ sec.19, T.23 N., R.83 W., Carbon County, Hydrologic Unit 10180003, on right bank 0.8 mi (1.3 km) upstream from high-water line of Seminole Reservoir at elevation 6,358 ft (1,938 m) and 11 mi (18 km) north of Coyote Springs.

DRAINAGE AREA.--22.6 mi² (58.5 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--July 1976 to September 1981 (discontinued).

REVISED RECORDS.--WDR WY-78-1: 1976, 1977.

GAGE.--Water-stage recorder. Altitude of gage is 6,380 ft (1,945 m), from topographic map.

REMARKS.--Records poor.

AVERAGE DISCHARGE.--5 years, 0.55 ft³/s (0.016 m³/s), 396 acre-ft/yr (0.488 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 97 ft³/s (2.75 m³/s) July 25, 1981, gage height, 3.14 ft (0.957 m), from rating curve extended above 15 ft³/s (0.42 m³/s) on basis of step-backwater analysis; no flow most of each year.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 97 ft³/s (2.75 m³/s) July 25, gage height, 3.14 ft (0.957 m); from rating curve extended as explained above; no flow most of year.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
2	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
3	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
4	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
5	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
6	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
7	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
8	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
9	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
10	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
11	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
12	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
13	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
14	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
15	2.8	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
16	1.4	.00	.00	.00	.00	.00	.00	3.9	.00	.00	.00	.00
17	.60	.00	.00	.00	.00	.00	.00	2.1	.00	.00	.00	.00
18	2.0	.00	.00	.00	.00	.00	.00	.35	.00	.00	.00	.00
19	2.2	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
20	2.2	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
21	2.0	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
22	1.8	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
23	.11	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
24	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
25	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
26	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
27	.00	.00	.00	.00	.00	.00	.00	3.5	.00	.67	.00	.00
28	.00	.00	.00	.00	.00	.00	.00	2.6	.00	.00	1.8	.00
29	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
30	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
31	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
TOTAL	15.11	.00	.00	.00	.00	.00	.00	12.45	.00	81.67	1.80	.00
MEAN	.49	.000	.000	.000	.000	.000	.000	.40	.000	2.63	.058	.000
MAX	2.8	.00	.00	.00	.00	.00	.00	3.9	.00	52	1.8	.00
MIN	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
AC-FT	30	.00	.00	.00	.00	.00	.00	25	.00	162	3.6	.00

CAL YR 1980 TOTAL 795.42 MEAN 2.17 MAX 35 MIN .00 AC-FT 1580
WTR YR 1981 TOTAL 111.03 MEAN .30 MAX 52 MIN .00 AC-FT 220

PLATTE RIVER BASIN

06630330 NORTH DITCH NEAR COYOTE SPRINGS, WY--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1976 to September 1981 (discontinued).

REMARKS.--No flow observed Apr. 8, 12, 18, 21, May 4, 16, 24, June 13.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	TUR- BID- ITY (NTU)	OXYGEN, DIS- SOLVED (MG/L)	HARD- NESS (MG/L AS CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)
MAY 17...	0930	.20	725	7.7	11.0	400	10.6	230	51	24	82
JUL 25...	1710	1.6	380	8.6	12.0	6400	1.4	92	24	7.9	63

DATE	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	POTAS- SIUM 40 DIS- SOLVED (PCI/L AS K40)	ALKA- LITY LAB (MG/L AS CACO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)	SOLIDS, DIS- SOLVED (TONS PER DAY)
MAY 17...	2.4	3.0	2.2	49	310	9.8	.3	2.0	516	.70	.28
JUL 25...	2.9	5.0	3.7	52	140	17	.2	1.4	291	.40	1.3

DATE	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO- GEN, TOTAL (MG/L AS N)	NITRO- GEN, TOTAL (MG/L AS NO3)	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHORUS TOTAL (MG/L AS PO4)	SEDI- MENT, SUS- PENDE (MG/L)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (T/DAY)
MAY 17...	3.4	.350	1.7	2.00	5.4	24	.560	1.7	829	.45
JUL 25...	1.0	.850	1.9	2.70	3.7	16	9.50	29	20500	89

DATE	TIME	ALUM- INUM, TOTAL RECOV- ERABLE (UG/L AS AL)	ALUM- INUM, SUS- PENDE RECOV. (UG/L AS AL)	ALUM- INUM, DIS- SOLVED (UG/L AS AL)	ARSENIC TOTAL (UG/L AS AS)	ARSENIC SUS- PENDE TOTAL (UG/L AS AS)	ARSENIC DIS- SOLVED (UG/L AS AS)	BERYL- LIUM, TOTAL RECOV- ERABLE (UG/L AS BE)	BERYL- LIUM, SUS- PENDE RECOV. (UG/L AS BE)	BERYL- LIUM, DIS- SOLVED (UG/L AS BE)	BORON, DIS- SOLVED (UG/L AS B)	CADMIUM TOTAL RECOV- ERABLE (UG/L AS CD)
MAY 17...	0930	7200	7100	110	0	0	1	0	0	0	3100	1
JUL 25...	1710	92000	92000	120	15	13	2	10	10	0	190	9

DATE	CADMIUM SUS- PENDE RECOV- ERABLE (UG/L AS CD)	CADMIUM DIS- SOLVED (UG/L AS CD)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR)	CHRO- MIUM, SUS- PENDE RECOV. (UG/L AS CR)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU)	COPPER, SUS- PENDE RECOV- ERABLE (UG/L AS CU)	COPPER, DIS- SOLVED (UG/L AS CU)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	IRON, SUS- PENDE RECOV- ERABLE (UG/L AS FE)	IRON, DIS- SOLVED (UG/L AS FE)	LEAD, TOTAL RECOV- ERABLE (UG/L AS PB)
MAY 17...	1	0	20	20	0	25	18	7	20000	20000	460	17
JUL 25...	7	2	290	280	10	420	410	9	300000	300000	640	250

06630330 NORTH DITCH NEAR COYOTE SPRINGS, WY--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	LEAD, SUS- PENDE RECov- ERABLE (UG/L AS PB)	LEAD, DIS- SOLVED (UG/L AS PB)	LITHIUM TOTAL RECov- ERABLE (UG/L AS LI)	LITHIUM SUS- PENDE RECov- ERABLE (UG/L AS LI)	LITHIUM DIS- SOLVED (UG/L AS LI)	MANGA- NESE, TOTAL RECov- ERABLE (UG/L AS MN)	MANGA- NESE, SUS- PENDE RECov- ERABLE (UG/L AS MN)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	MERCURY TOTAL RECov- ERABLE (UG/L AS HG)	MERCURY SUS- PENDE RECov- ERABLE (UG/L AS HG)	MERCURY DIS- SOLVED (UG/L AS HG)	MOLYB- DENUM, TOTAL RECov- ERABLE (UG/L AS MO)
MAY 17...	16	1	20	10	10	420	350	70	.1	.1	.0	4
JUL 25...	250	3	260	250	10	6900	6900	30	.5	.4	.1	11

DATE	MOLYB- DENUM, SUS- PENDE RECov- ERABLE (UG/L AS MO)	MOLYB- DENUM, DIS- SOLVED (UG/L AS MO)	NICKEL, TOTAL RECov- ERABLE (UG/L AS NI)	NICKEL, SUS- PENDE RECov- ERABLE (UG/L AS NI)	NICKEL, DIS- SOLVED (UG/L AS NI)	SELE- NIUM, TOTAL RECov- ERABLE (UG/L AS SE)	SELE- NIUM, SUS- PENDE RECov- ERABLE (UG/L AS SE)	SELE- NIUM, DIS- SOLVED (UG/L AS SE)	VANA- DIUM, DIS- SOLVED (UG/L AS V)	ZINC, TOTAL RECov- ERABLE (UG/L AS ZN)	ZINC, SUS- PENDE RECov- ERABLE (UG/L AS ZN)	ZINC, DIS- SOLVED (UG/L AS ZN)
MAY 17...	2	2	21	16	5	3	0	3	3.0	110	40	70
JUL 25...	0	11	280	280	2	10	10	0	2.0	1500	1500	20

DATE	TIME	GROSS ALPHA, DIS- SOLVED (UG/L AS U-NAT)	GROSS ALPHA, SUSP. TOTAL (UG/L AS U-NAT)	GROSS BETA, DIS- SOLVED (PCI/L AS CS-137)	GROSS BETA, SUSP. TOTAL (PCI/L AS CS-137)	GROSS BETA, DIS- SOLVED (PCI/L AS SR/ YT-90)	GROSS BETA, SUSP. TOTAL (PCI/L AS SR/ YT-90)	RADIUM 226, DIS- SOLVED, RADON METHOD (PCI/L AS U)	URANIUM NATURAL DIS- SOLVED (UG/L AS U)	GROSS ALPHA, DIS- SOLVED (PCI/L AS U-NAT)	GROSS ALPHA, SUSP. TOTAL (PCI/L AS U-NAT)
MAY 17...	0930	<12	33	7.7	31	7.3	30	.12	1.7	8.2	22

DATE	TIME	TEMPER- ATURE (DEG C)	STREAM- FLOW, INSTAN- TANEOUS (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. FALL DIAM. % FINER THAN 1.00 MM	BED MAT. SIEVE DIAM. % FINER THAN 2.00 MM	BED MAT. SIEVE DIAM. % FINER THAN 4.00 MM	BED MAT. SIEVE DIAM. % FINER THAN 8.00 MM
MAY 17...	0930	11.0	.20	6	13	40	81	87	94	99	100

PLATTE RIVER BASIN

06632400 ROCK CREEK ABOVE KING CANYON CANAL, NEAR ARLINGTON, WY

LOCATION.--Lat 41°35'07", long 106°13'20", in SE¼SW¼ sec.25, T.19 N., R.79 W., Carbon County, Hydrologic Unit 10180004, on left bank 200 ft (61 m) upstream from point of diversion to King Canyon Canal, 0.4 mi (0.6 km) downstream from Overland Creek, 1.0 mi (1.6 km) southwest of Arlington, and 6.9 mi (11.1 km) southwest of McFadden.

DRAINAGE AREA.--62.9 mi² (162.9 km²).

PERIOD OF RECORD.--October 1965 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 7,790 ft (2,374 m), from topographic map.

REMARKS.--Records fair except those for winter period, which are poor. Minor regulation by Sand Lake, capacity, 1,100 acre-ft (1.36 hm³) on Deep Creek, 12 mi (19 km) upstream. No diversion above station.

AVERAGE DISCHARGE.--27 years (water years 1955-81) 81.2 ft³/s (2.300 m³/s), 58,830 acre-ft/yr (72.5 hm³/yr), includes records for station 06632500 Rock Creek at Arlington for water years 1955-65, adjusted for diversions by King Canyon Canal.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,590 ft³/s (73.3 m³/s) June 19, 1971, gage height, 5.83 ft (1.777 m); minimum daily, 5.5 ft³/s (0.16 m³/s) Dec. 21, 1967.

EXTREMES FOR CURRENT YEAR.--Peak discharge above base of 700 ft³/s (19.8 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
June 8	2130	*968 27.4	4.06 1.237

Minimum daily discharge, 6.0 ft³/s (0.17 m³/s) Feb. 4, 5, 10.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	12	14	14	12	8.0	7.8	8.1	147	410	63	16	15
2	12	15	14	12	7.4	7.8	8.4	193	415	63	15	14
3	12	14	15	12	6.7	7.8	8.5	260	430	103	15	17
4	12	14	14	12	6.0	7.9	8.4	185	502	90	14	17
5	12	15	14	11	6.0	7.9	8.5	147	496	74	14	18
6	12	16	14	11	6.2	7.9	8.6	143	518	59	14	24
7	11	17	13	10	6.5	8.0	9.1	119	607	50	14	25
8	11	16	12	10	6.8	8.0	9.9	92	655	43	14	23
9	11	15	12	10	6.9	8.0	11	82	578	39	16	33
10	11	15	12	9.9	6.0	8.1	11	74	400	38	20	34
11	11	14	12	9.8	6.2	8.2	12	76	380	34	18	34
12	11	15	12	9.7	6.4	8.2	14	64	357	33	18	34
13	11	14	12	9.6	6.9	8.1	14	61	303	38	18	34
14	12	13	12	9.6	7.2	8.0	15	58	235	34	19	34
15	13	12	12	9.5	7.3	8.0	16	84	177	28	19	34
16	13	12	12	9.5	7.3	7.9	17	76	155	25	19	33
17	14	11	12	9.6	7.4	7.8	20	74	150	23	20	33
18	15	12	13	9.7	7.4	7.7	23	70	145	23	19	32
19	15	13	14	9.9	7.4	7.6	30	72	140	23	17	30
20	15	13	13	10	7.5	7.6	38	121	145	21	16	29
21	15	13	12	10	7.5	7.6	39	145	143	19	15	28
22	15	13	12	10	7.6	7.7	30	112	133	18	16	25
23	13	12	12	11	7.7	7.8	23	133	119	17	15	23
24	13	12	13	10	7.8	7.8	24	172	107	17	15	21
25	15	11	13	9.7	7.9	8.0	47	209	94	17	15	21
26	14	11	13	9.5	7.9	8.2	92	311	88	21	14	29
27	14	12	13	9.3	7.9	8.2	107	405	84	41	14	26
28	14	13	13	9.2	7.8	8.2	112	400	86	24	14	19
29	14	14	11	9.2	---	8.1	116	353	82	19	14	15
30	14	14	12	9.0	---	8.0	135	331	68	17	13	14
31	15	---	12	8.6	---	8.0	---	371	---	16	17	---
TOTAL	402	405	394	312.3	199.6	245.9	1015.5	5140	8202	1130	497	768
MEAN	13.0	13.5	12.7	10.1	7.13	7.93	33.9	166	273	36.5	16.0	25.6
MAX	15	17	15	12	8.0	8.2	135	405	655	103	20	34
MIN	11	11	11	8.6	6.0	7.6	8.1	58	68	16	13	14
AC-FT	797	803	781	619	396	488	2010	10200	16270	2240	986	1520

CAL YR 1980	TOTAL	31266.0	MEAN	85.4	MAX	920	MIN	11	AC-FT	62020
WTR YR 1981	TOTAL	18711.3	MEAN	51.3	MAX	655	MIN	6.0	AC-FT	37110

06634600 LITTLE MEDICINE BOW RIVER NEAR MEDICINE BOW, WY

LOCATION.--Lat 41°57'12", long 106°09'38", in NW¼SW¼NE¼ sec.22, T.23 N., R.78 W., Carbon County, Hydrologic Unit 10180005, on right bank 1.6 mi (2.6 km) upstream from State Highway 487, 3.2 mi (5.1 km) downstream from Muddy Creek, and 4.3 mi (6.9 km) northeast of Medicine Bow.

DRAINAGE AREA.--963 mi² (2,494 km²), of which 54 mi² (140 km²) is probably noncontributing.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1973 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 6,600 ft (2,012 m), from topographic map.

REMARKS.--Records good except those for winter months and periods of no gage-height record, Nov. 22 to Mar. 8, Mar. 27, 28, May 21, 22, which are poor. Diversions for irrigation of about 5,200 acres (21.0 km²) above station.

AVERAGE DISCHARGE.--8 years, 54.1 ft³/s (1.532 m³/s), 39,200 acre-ft/yr (48.3 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 9,500 ft³/s (269 m³/s) May 17, 1978, computed from slope-area study, gage height, 14.10 ft (4.298 m) in gage well; no flow at times most years.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 400 ft³/s (11.3 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
May 25	0030	400 11.3	4.37 1.332
Aug. 17	0100	*584 16.5	4.86 1.481

Minimum daily discharge, 0.42 ft³/s (0.012 m³/s) Sept. 29.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.9	3.9	2.4	6.2	2.1	10	13	7.3	96	2.7	4.8	.99
2	2.9	4.1	2.9	5.9	1.4	9.9	20	7.3	78	2.5	3.3	.89
3	3.1	4.2	4.4	5.6	1.2	9.8	21	15	66	8.9	2.9	.79
4	3.1	4.3	7.6	5.4	1.1	9.8	19	27	55	7.8	2.7	.69
5	3.1	4.5	9.2	5.1	1.2	9.8	18	21	47	5.7	2.4	.60
6	3.1	4.7	9.7	4.8	1.3	9.8	22	14	40	4.0	2.0	.54
7	3.3	4.9	9.6	4.5	1.4	9.9	22	15	33	2.2	1.9	.54
8	3.3	5.0	9.2	4.2	1.5	10	17	14	26	1.6	1.7	.79
9	3.3	5.0	8.6	4.0	1.5	10	16	11	22	1.1	2.2	1.2
10	3.3	4.5	8.0	3.8	1.1	10	14	9.4	20	.89	2.9	1.2
11	3.3	4.0	7.6	3.6	1.3	11	14	7.3	17	.69	2.2	1.2
12	3.3	3.4	7.2	3.4	1.4	11	13	6.8	13	.69	19	1.1
13	3.3	2.7	7.0	3.3	1.7	12	23	6.8	11	.99	23	1.1
14	3.5	2.3	6.9	3.1	2.1	13	21	6.8	9.4	64	7.3	1.1
15	3.5	1.9	6.9	3.0	3.2	14	17	6.4	8.3	29	3.3	.99
16	3.1	1.6	7.0	2.9	4.5	16	16	6.8	7.3	12	5.9	1.2
17	3.0	1.4	7.0	2.8	6.2	21	16	9.4	6.1	7.3	201	1.2
18	3.1	1.2	7.0	2.7	8.0	18	15	10	5.7	5.1	18	1.2
19	3.1	1.3	7.0	2.6	9.1	13	16	10	5.1	4.0	6.4	1.2
20	3.2	1.4	7.1	2.6	9.5	24	20	10	4.6	3.1	3.7	1.2
21	3.2	1.6	7.2	2.6	8.6	27	15	13	3.5	2.5	2.7	1.1
22	3.2	1.7	7.3	2.6	9.0	17	15	21	3.1	2.0	2.2	.99
23	3.1	1.5	7.4	2.7	9.7	16	14	35	2.5	1.9	1.9	.99
24	3.1	1.3	7.4	2.7	10	18	13	187	2.4	1.5	1.6	1.3
25	3.2	1.2	7.4	2.7	10	16	11	299	2.4	27	1.3	1.2
26	3.2	1.3	7.3	2.6	11	16	9.4	215	2.7	151	1.2	1.3
27	3.2	1.4	7.2	2.6	10	17	9.4	184	11	114	1.2	.99
28	3.1	1.5	7.1	2.6	10	16	8.8	158	5.4	43	1.1	.60
29	3.2	1.7	6.9	2.6	---	16	7.8	154	4.0	15	1.1	.42
30	3.3	2.0	6.7	2.6	---	18	7.8	130	3.1	8.8	1.1	.60
31	3.6	---	6.4	2.5	---	12	---	109	---	6.1	.99	---
TOTAL	99.2	81.5	220.6	108.3	139.1	441.0	464.2	1726.3	610.6	537.06	332.99	29.21
MEAN	3.20	2.72	7.12	3.49	4.97	14.2	15.5	55.7	20.4	17.3	10.7	.97
MAX	3.6	5.0	9.7	6.2	11	27	23	299	96	151	201	1.3
MIN	2.9	1.2	2.4	2.5	1.1	9.8	7.8	6.4	2.4	.69	.99	.42
AC-FT	197	162	438	215	276	875	921	3420	1210	1070	660	58
CAL YR 1980	TOTAL	21214.40	MEAN	58.0	MAX	815	MIN	1.1	AC-FT	42080		
WTR YR 1981	TOTAL	4790.06	MEAN	13.1	MAX	299	MIN	.42	AC-FT	9500		

PLATTE RIVER BASIN

06634600 LITTLE MEDICINE BOW RIVER NEAR MEDICINE BOW, WY--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1965 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	TIME	DIS- CHARGE, IN CUBIC FEET PER SECOND	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	HARD- NESS (MG/L AS CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)
OCT 23...	1015	3.1	--	1330	8.1	.5	460	120	37
NOV 28...	1630	1.5	--	1250	8.2	1.0	520	140	40
DEC 09...	1100	8.6	--	1290	7.7	.5	500	130	40
JAN 20...	0930	2.6	--	1200	7.9	.0	460	120	39
FEB 19...	1240	--	9.1	975	8.3	1.0	330	97	22
MAR 09...	1115	10	--	--	--	5.0	300	86	20
APR 21...	1030	--	13	870	--	10.5	320	86	26
MAY 11...	1345	--	7.5	1100	--	7.0	360	96	28
JUN 15...	1100	--	9.2	850	--	10.0	310	81	25
JUL 13...	1330	--	.78	1330	--	29.0	460	130	34
AUG 21...	1315	--	2.8	1050	8.3	25.5	--	--	--
SEP 27...	1430	--	1.1	1250	8.3	19.5	490	140	34

DATE	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	POTAS- SIUM 40 DIS- SOLVED (PCI/L AS K40)	ALKA- LINITY LAB (MG/L AS CACO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SiO2)
OCT 23...	110	2.3	6.5	4.8	150	490	18	.5	12
NOV 28...	120	2.3	4.6	--	170	530	16	.5	8.5
DEC 09...	120	2.4	5.6	--	200	490	16	.6	12
JAN 20...	120	2.4	4.5	3.4	200	500	16	.6	15
FEB 19...	98	2.3	3.9	--	160	370	13	.6	.0
MAR 09...	70	1.8	4.4	--	150	300	13	.5	8.9
APR 21...	83	2.0	4.4	3.3	150	350	12	.6	12
MAY 11...	93	2.1	4.2	--	150	360	23	.7	5.0
JUN 15...	58	1.4	4.9	--	670	240	26	.5	13
JUL 13...	100	2.0	5.2	4.6	140	510	21	.8	14
AUG 21...	--	--	--	--	--	--	--	--	--
SEP 27...	120	2.4	5.3	--	140	560	23	.9	12

06634600 LITTLE MEDICINE BOW RIVER NEAR MEDICINE BOW, WY--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	SOLIDS, SUM OF CONSTITUENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)	SOLIDS, DIS- SOLVED (TONS PER DAY)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	PHOS- PHORUS, TOTAL (MG/L AS P)	CARBON, ORGANIC DIS- SOLVED (MG/L AS C)	CARBON, ORGANIC SUS- PENDED TOTAL (MG/L AS C)	SEDI- MENT, SUS- PENDED (MG/L)	SEDI- MENT, DIS- CHARGE, SUS- PENDED (T/DAY)
OCT 23...	884	1.2	7.4	.15	.050	4.6	.4	62	.52
NOV 28...	960	1.3	3.9	.50	.000	--	--	202	.82
DEC 09...	930	1.3	21.6	.39	.000	--	--	37	.86
JAN 20...	934	1.3	6.6	.09	.010	--	--	10	.07
FEB 19...	701	.95	17.2	.00	.000	--	--	28	.69
MAR 09...	590	.80	15.9	.05	.060	--	--	168	4.5
APR 21...	666	.91	23.6	.00	.030	--	--	136	4.8
MAY 11...	710	.97	14.4	.05	.130	--	--	18	.36
JUN 15...	540	.73	13.4	.00	.020	--	--	5	.12
JUL 13...	900	1.2	1.9	.07	.010	--	--	34	.07
AUG 21...	--	--	--	--	--	--	--	12	.09
SEP 27...	980	1.3	2.9	.00	.000	--	--	3	.01

DATE	TIME	ALUM- INUM, TOTAL RECOV- ERABLE (UG/L AS AL)	ALUM- INUM, SUS- PENDED RECOV. (UG/L AS AL)	ALUM- INUM, DIS- SOLVED (UG/L AS AL)	ARSENIC TOTAL (UG/L AS AS)	ARSENIC SUS- PENDED TOTAL (UG/L AS AS)	ARSENIC DIS- SOLVED (UG/L AS AS)	BERYL- LIUM, TOTAL RECOV- ERABLE (UG/L AS BE)	BERYL- LIUM, SUS- PENDED RECOV. (UG/L AS BE)	BERYL- LIUM, DIS- SOLVED (UG/L AS BE)	CADMIUM TOTAL RECOV- ERABLE (UG/L AS CD)	CADMIUM SUS- PENDED RECOV- ERABLE (UG/L AS CD)
OCT 23...	1015	100	80	20	2	0	3	0	0	0	1	1
APR 21...	1030	730	720	8	1	0	1	0	--	<1	0	0

DATE	CADMIUM DIS- SOLVED (UG/L AS CD)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR)	CHRO- MIUM, SUS- PENDED RECOV. (UG/L AS CR)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU)	COPPER, SUS- PENDED RECOV- ERABLE (UG/L AS CU)	COPPER, DIS- SOLVED (UG/L AS CU)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	IRON, SUS- PENDED RECOV- ERABLE (UG/L AS FE)	IRON, DIS- SOLVED (UG/L AS FE)	LEAD, TOTAL RECOV- ERABLE (UG/L AS PB)	LEAD, SUS- PENDED RECOV- ERABLE (UG/L AS PB)
OCT 23...	0	0	0	0	5	1	4	640	620	20	2	0
APR 21...	1	10	0	10	6	5	1	780	770	10	3	1

DATE	LEAD, DIS- SOLVED (UG/L AS PB)	LITHIUM TOTAL RECOV- ERABLE (UG/L AS LI)	LITHIUM SUS- PENDED RECOV- ERABLE (UG/L AS LI)	LITHIUM DIS- SOLVED (UG/L AS LI)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)	MANGA- NESE, SUS- PENDED RECOV. (UG/L AS MN)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	MERCURY TOTAL RECOV- ERABLE (UG/L AS HG)	MERCURY SUS- PENDED RECOV- ERABLE (UG/L AS HG)	MERCURY DIS- SOLVED (UG/L AS HG)	MOLYB- DENUM, TOTAL RECOV- ERABLE (UG/L AS MO)	MOLYB- DENUM, SUS- PENDED RECOV. (UG/L AS MO)
OCT 23...	3	40	0	50	70	30	40	1.0	.2	.8	8	0
APR 21...	2	30	0	40	30	30	4	.1	.0	.1	95	--

PLATTE RIVER BASIN

06634600 LITTLE MEDICINE BOW RIVER NEAR MEDICINE BOW, WY--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	MOLYB- DENUM, DIS- SOLVED (UG/L AS MO)	NICKEL, TOTAL RECOV- ERABLE (UG/L AS NI)	NICKEL, SUS- PENDE RECOV- ERABLE (UG/L AS NI)	NICKEL, DIS- SOLVED (UG/L AS NI)	SELE- NIUM, TOTAL (UG/L AS SE)	SELE- NIUM, SUS- PENDE TOTAL (UG/L AS SE)	SELE- NIUM, DIS- SOLVED (UG/L AS SE)	VANA- DIUM, DIS- SOLVED (UG/L AS V)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN)	ZINC, SUS- PENDE RECOV- ERABLE (UG/L AS ZN)	ZINC, DIS- SOLVED (UG/L AS ZN)
OCT 23...	8	5	5	0	2	0	2	2.0	50	30	20
APR 21...	<10	1	1	0	4	1	3	2.0	10	7	3

DATE	TIME	GROSS ALPHA, DIS- SOLVED (UG/L AS U-NAT)	GROSS ALPHA, SUSP. TOTAL (UG/L AS U-NAT)	GROSS BETA, DIS- SOLVED (PCI/L AS CS-137)	GROSS BETA, SUSP. TOTAL (PCI/L AS CS-137)	GROSS BETA, DIS- SOLVED (PCI/L AS SR/ YT-90)	GROSS BETA, SUSP. TOTAL (PCI/L AS SR/ YT-90)	RADIUM 226, DIS- SOLVED, RADON METHOD (PCI/L)	URANIUM NATURAL DIS- SOLVED (UG/L AS U)	GROSS ALPHA, DIS- SOLVED (PCI/L AS U-NAT)	GROSS ALPHA, SUSP. TOTAL (PCI/L AS U-NAT)
OCT 23...	1015	170	2.8	26	15	25	15	.28	129	120	1.9
JAN 20...	0930	250	<.4	28	9.6	26	9.8	.25	175	170	.3
APR 21...	1030	69	4.3	23	15	23	15	.27	105	47	2.9
JUL 13...	1330	89	.5	24	2.7	23	2.6	.35	90	61	.3

DATE	TIME	TEMPER- ATURE (DEG C)	STREAM- FLOW, INSTAN- TANEOUS (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. FALL DIAM. % FINER THAN 1.00 MM	BED MAT. FALL DIAM. % FINER THAN 2.00 MM	BED MAT. FALL DIAM. % FINER THAN 4.00 MM	BED MAT. FALL DIAM. % FINER THAN 8.00 MM	BED MAT. FALL DIAM. % FINER THAN 16.0 MM
APR 21...	1030	10.5	13	0	2	3	50	86	98	100	--	--
JUL 13...	1330	29.0	.78	1	2	5	30	48	65	82	93	100

06634990 HANNA DRAW NEAR HANNA, WY

LOCATION.--Lat 42°00'22", long 106°30'30", in SE¼SW¼NE¼ sec.34, T.24 N., R.81 W., Carbon County, Hydrologic Unit 10180004, on left bank 0.2 mi (0.3 km) upstream from mouth and 9.5 mi (15.3 km) north of Hanna.

DRAINAGE AREA.--21.6 mi² (55.9 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--April 1975 to September 1981 (discontinued).

GAGE.--Water-stage recorder. Altitude of gage is 6,440 ft (1,963 m), from topographic map.

REMARKS.--Records poor. Several small detention reservoirs above station.

AVERAGE DISCHARGE.--6 years, 0.52 ft³/s (0.015 m³/s), 377 acre-ft/yr (0.465 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 385 ft³/s (10.9 m³/s) Aug. 1, 1976, gage height, 4.08 ft (1.244 m); no flow most of each year.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 36 ft³/s (1.02 m³/s) July 25, gage height, 1.73 ft (0.527 m); no flow most of year.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.00	.00	.22	.26	.02	.11	.00	.00	.00
2	.00	.00	.00	.00	.00	.22	.26	.05	.06	.00	.00	.00
3	.00	.00	.00	.00	.00	.17	.30	.30	.05	.00	.00	.00
4	.00	.00	.00	.00	.00	.30	.39	.39	.03	.00	.00	.00
5	.00	.00	.00	.00	.00	.20	.22	.18	.02	.00	.00	.00
6	.00	.00	.00	.00	.00	.19	.44	.13	.02	.00	.00	.00
7	.00	.00	.00	.00	.00	.11	.30	.15	.01	.00	.00	.00
8	.00	.00	.00	.00	.00	.13	.50	.15	.00	.00	.00	.00
9	.00	.00	.00	.00	.00	.09	.34	.11	.00	.00	.00	.00
10	.00	.00	.00	.00	.00	.18	.13	.09	.00	.00	.00	1.0
11	.00	.00	.00	.00	.00	.46	.13	.11	.00	.00	.00	.12
12	.00	.00	.00	.00	.00	.59	.13	.06	.00	.00	.00	.00
13	.00	.00	.00	.00	.00	.30	.11	.04	.00	.00	.76	.00
14	.00	.00	.00	.00	.00	.30	.09	.04	.00	.00	.15	.00
15	.00	.00	.00	.00	.00	.30	.09	.05	.00	.00	.00	.00
16	.00	.00	.00	.00	.00	.50	.09	.18	.00	.00	.77	.00
17	.00	.00	.00	.00	.00	.34	.09	2.5	.00	.00	.03	.00
18	.00	.00	.00	.00	.00	.26	.09	1.1	.00	.00	.00	.00
19	.00	.00	.00	.00	.00	.15	.11	.44	.00	.00	.00	.00
20	.00	.00	.00	.00	.00	.22	.15	.39	.00	.00	.00	.00
21	.00	.00	.00	.00	.00	.18	.18	.44	.00	.00	.00	.00
22	.00	.00	.00	.00	.00	.30	.18	1.6	.00	.00	.00	.00
23	.00	.00	.00	.00	.00	.50	.15	2.1	.00	.00	.00	.00
24	.00	.00	.00	.00	.00	.50	.11	.63	.00	.00	.00	.00
25	.00	.00	.00	.00	.15	.39	.09	.34	.00	3.5	.00	.00
26	.00	.00	.00	.00	.22	.26	.06	.44	.00	1.4	.00	.00
27	.00	.00	.00	.00	.30	.26	.05	.71	.00	.04	.00	.00
28	.00	.00	.00	.00	.16	.34	.03	.80	.00	.00	5.8	.00
29	.00	.00	.00	.00	---	.56	.03	.44	.00	.00	.38	.00
30	.00	.00	.00	.00	---	.26	.01	.30	.00	.00	.00	.00
31	.00	---	.00	.00	---	.26	---	.15	---	.00	.00	---
TOTAL	.00	.00	.00	.00	.83	9.04	5.11	14.43	.30	4.94	7.89	1.12
MEAN	.000	.000	.000	.000	.030	.29	.17	.47	.010	.16	.25	.037
MAX	.00	.00	.00	.00	.30	.59	.50	2.5	.11	3.5	5.8	1.0
MIN	.00	.00	.00	.00	.00	.09	.01	.02	.00	.00	.00	.00
AC-FT	.00	.00	.00	.00	1.6	18	10	29	.6	9.8	16	2.2
CAL YR 1980	TOTAL	501.85	MEAN	1.37	MAX	38	MIN	.00	AC-FT	995		
WTR YR 1981	TOTAL	43.66	MEAN	.12	MAX	5.8	MIN	.00	AC-FT	87		

PLATTE RIVER BASIN

06634990 HANNA DRAW NEAR HANNA, WY--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1975 to September 1981 (discontinued).

REMARKS.--No flow observed Oct. 22, Nov. 28, Dec. 9, Jan. 24, Feb. 23, July 5, 13, 14.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	TIME	DIS- CHARGE, IN CUBIC FEET PER SECOND	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	TUR- BID- ITY (NTU)	OXYGEN, DIS- SOLVED (MG/L)	HARD- NESS (MG/L AS CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)
MAR 13...	1430	--	.13	2500	8.7	6.0	2.0	--	1400	260
APR 08...	1100	--	.20	3500	8.3	9.5	8.0	11.4	1600	280
10...	1700	.13	--	2500	8.4	15.5	4.0	9.8	1700	310
14...	1800	.09	--	2800	8.3	16.0	4.0	--	1700	310
22...	1615	--	.10	3500	8.3	13.0	6.0	8.8	1700	310
MAY 04...	1735	--	.20	3500	8.1	18.0	15	8.5	1700	300
JUN 02...	1415	--	.10	3750	7.9	26.0	8.0	9.6	1600	290
JUL 26...	1500	--	.71	950	7.9	17.0	20000	5.6	410	110

DATE	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	POTAS- SIUM 40 DIS- SOLVED (PCI/L AS K40)	ALKA- LINITY LAB (MG/L AS CACO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)
MAR 13...	190	230	2.6	8.1	6.0	390	1500	22	.4
APR 08...	210	260	2.9	7.9	5.9	340	1600	160	.4
10...	230	260	2.7	8.9	6.6	370	1800	34	.5
14...	230	260	2.7	9.3	6.9	380	1700	28	.4
22...	230	280	2.9	9.5	7.1	200	1800	29	.4
MAY 04...	240	300	3.1	11	8.2	280	2000	27	.4
JUN 02...	220	270	2.9	9.8	7.3	360	1800	18	.4
JUL 26...	32	42	.9	12	9.0	81	390	15	.4

DATE	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, SUM OF CONSTITUENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)	SOLIDS, DIS- SOLVED (TONS PER DAY)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS NH4)
MAR 13...	7.2	2450	3.3	.86	.43	--	.110	--	--
APR 08...	6.1	2730	3.7	1.5	.07	--	.130	--	--
10...	4.9	2870	3.9	1.0	.06	--	.090	--	--
14...	4.1	2770	3.8	.67	.02	--	.110	--	--
22...	6.5	2790	3.8	.75	.08	--	.140	--	--
MAY 04...	6.7	3050	4.1	1.6	.05	--	.140	--	--
JUN 02...	4.0	2830	3.8	.76	.07	.01	.190	.120	.15
JUL 26...	5.6	657	.89	1.3	2.0	--	.720	--	--

06634990 HANNA DRAW NEAR HANNA, WY--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

		NITRO- GEN, ORGANIC TOTAL (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO- GEN, TOTAL (MG/L AS N)	NITRO- GEN, TOTAL (MG/L AS NO3)	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHORUS TOTAL (MG/L AS PO4)	CARBON, ORGANIC TOTAL (MG/L AS C)	SEDI- MENT, SUS- PENDE (MG/L)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (T/DAY)			
DATE	TIME	ALUM- INUM, TOTAL RECOV- ERABLE (UG/L AS AL)	ALUM- INUM, SUS- PENDE RECOV. (UG/L AS AL)	ALUM- INUM, DIS- SOLVED (UG/L AS AL)	ARSENIC TOTAL (UG/L AS AS)	ARSENIC SUS- PENDE TOTAL (UG/L AS AS)	ARSENIC DIS- SOLVED (UG/L AS AS)	BERYL- LIUM, TOTAL RECOV- ERABLE (UG/L AS BE)	BERYL- LIUM, SUS- PENDE RECOV. (UG/L AS BE)	BERYL- LIUM, DIS- SOLVED (UG/L AS BE)	BORON, DIS- SOLVED (UG/L AS B)	CADMIUM TOTAL RECOV- ERABLE (UG/L AS CD)	
MAR													
13...	1430	140	--	--	0	--	--	0	--	--	50	0	
APR													
08...	1100	--	--	8	0	0	1	--	--	0	70	--	
10...	1700	80	70	10	0	0	0	0	0	0	80	0	
14...	1800	60	60	0	0	0	0	0	0	0	90	0	
22...	1615	140	120	20	1	1	0	0	0	0	90	0	
MAY													
04...	1735	280	260	20	1	1	0	10	0	10	120	0	
JUN													
02...	1415	210	190	20	1	0	1	0	--	<1	80	1	
JUL													
26...	1500	100000	100000	40	50	49	1	10	10	0	1400	12	
DATE	TIME	CADMIUM SUS- PENDE RECOV- ERABLE (UG/L AS CD)	CADMIUM DIS- SOLVED (UG/L AS CD)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR)	CHRO- MIUM, SUS- PENDE RECOV. (UG/L AS CR)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU)	COPPER, SUS- PENDE RECOV- ERABLE (UG/L AS CU)	COPPER, DIS- SOLVED (UG/L AS CU)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	IRON, SUS- PENDE RECOV- ERABLE (UG/L AS FE)	IRON, DIS- SOLVED (UG/L AS FE)	LEAD, TOTAL RECOV- ERABLE (UG/L AS PB)
MAR													
13...	--	--	20	--	--	5	--	--	610	300	310	8	
APR													
08...	--	0	--	--	10	--	--	3	--	--	40	--	
10...	0	0	30	10	20	5	3	2	260	200	60	0	
14...	0	1	20	10	10	0	0	2	310	250	60	8	
22...	0	0	10	0	10	5	3	2	350	300	50	3	
MAY													
04...	0	2	20	0	20	6	3	3	700	650	50	4	
JUN													
02...	--	<1	10	0	10	4	1	3	600	590	10	1	
JUL													
26...	11	1	380	380	0	750	720	35	470000	470000	90	380	

PLATTE RIVER BASIN

06634990 HANNA DRAW NEAR HANNA, WY--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	LEAD, SUS- PENDE RECov- ERABLE (UG/L AS PB)	LEAD, DIS- SOLVED (UG/L AS PB)	LITHIUM TOTAL RECov- ERABLE (UG/L AS LI)	LITHIUM SUS- PENDE RECov- ERABLE (UG/L AS LI)	LITHIUM DIS- SOLVED (UG/L AS LI)	MANGA- NESE, TOTAL RECov- ERABLE (UG/L AS MN)	MANGA- NESE, SUS- PENDE RECov- ERABLE (UG/L AS MN)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	MERCURY TOTAL RECov- ERABLE (UG/L AS HG)	MERCURY SUS- PENDE RECov- ERABLE (UG/L AS HG)	MERCURY DIS- SOLVED (UG/L AS HG)	MOLYB- DENUM, TOTAL RECov- ERABLE (UG/L AS MO)
MAR 13...	--	--	50	--	--	430	--	--	.2	--	--	2
APR 08...	--	4	--	--	50	--	--	360	.0	.0	.0	--
10...	0	1	50	0	60	350	20	330	3.0	3.0	.0	2
14...	5	3	60	0	60	400	0	400	.1	.0	.2	60
22...	0	4	50	0	60	330	20	310	.1	.0	.1	4
MAY 04...	4	0	70	0	70	280	20	260	.1	.1	.0	0
JUN 02...	0	4	60	0	80	320	20	300	.1	.1	.0	3
JUL 26...	380	2	350	330	20	11000	11000	60	.7	.6	.1	9

DATE	MOLYB- DENUM, SUS- PENDE RECov- ERABLE (UG/L AS MO)	MOLYB- DENUM, DIS- SOLVED (UG/L AS MO)	NICKEL, TOTAL RECov- ERABLE (UG/L AS NI)	NICKEL, SUS- PENDE RECov- ERABLE (UG/L AS NI)	NICKEL, DIS- SOLVED (UG/L AS NI)	SELE- NIUM, TOTAL RECov- ERABLE (UG/L AS SE)	SELE- NIUM, SUS- PENDE RECov- ERABLE (UG/L AS SE)	SELE- NIUM, DIS- SOLVED (UG/L AS SE)	VANA- DIUM, DIS- SOLVED (UG/L AS V)	ZINC, TOTAL RECov- ERABLE (UG/L AS ZN)	ZINC, SUS- PENDE RECov- ERABLE (UG/L AS ZN)	ZINC, DIS- SOLVED (UG/L AS ZN)
MAR 13...	--	--	6	--	--	0	--	--	--	30	--	--
APR 08...	--	--	--	--	1	1	1	0	2.0	--	--	30
10...	1	1	6	4	2	1	0	1	7.0	10	0	20
14...	57	3	6	4	2	0	0	0	6.0	120	110	10
22...	0	9	1	0	3	1	1	0	2.0	40	30	10
MAY 04...	0	7	6	2	4	0	0	0	2.0	40	30	10
JUN 02...	--	<10	6	2	4	0	0	0	.0	100	90	6
JUL 26...	0	9	450	450	5	0	0	1	7.0	2100	2100	10

DATE	TIME	GROSS ALPHA, DIS- SOLVED (UG/L AS U-NAT)	GROSS ALPHA, SUSP. TOTAL (UG/L AS U-NAT)	GROSS BETA, DIS- SOLVED (PCI/L AS CS-137)	GROSS BETA, SUSP. TOTAL (PCI/L AS CS-137)	GROSS BETA, DIS- SOLVED (PCI/L AS SR/ YT-90)	GROSS BETA, SUSP. TOTAL (PCI/L AS SR/ YT-90)	RADIUM 226, DIS- SOLVED, RADON METHOD (PCI/L)	URANIUM NATURAL DIS- SOLVED (UG/L AS U)	GROSS ALPHA, DIS- SOLVED (PCI/L AS U-NAT)	GROSS ALPHA, SUSP. TOTAL (PCI/L AS U-NAT)	
APR 08...	1100	<71	1.3	<27	4.7	<25	4.6	.17	30	48	.9	
DATE	TIME	TEMPER- ATURE (DEG C)	STREAM- FLOW, INSTAN- TANEOUS (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. FALL DIAM. % FINER THAN 1.00 MM	BED MAT. SIEVE DIAM. % FINER THAN 2.00 MM	BED MAT. SIEVE DIAM. % FINER THAN 4.00 MM	BED MAT. SIEVE DIAM. % FINER THAN 8.00 MM	BED MAT. SIEVE DIAM. % FINER THAN 16.0 MM
JUN 02...	1415	26.0	.10	13	19	33	52	61	70	86	96	100

06635000 MEDICINE BOW RIVER ABOVE SEMINOE RESERVOIR, NEAR HANNA, WY

LOCATION.--Lat 42°00'35", long 106°30'45", in SE¼NW¼ sec.34, T.24 N., R.81 W., Carbon County, Hydrologic Unit 10180004, on left bank 15 ft (5 m) downstream from county highway bridge, 2.0 mi (3.2 km) upstream from Troublesome Creek, 9.0 mi (14.5 km) upstream from high-water line of Seminole Reservoir at elevation 6,357 ft (1,938 m), and 10 mi (16 km) north of Hanna.

DRAINAGE AREA.--2,338 mi² (6,055 km²), of which 396 mi² (1,026 km²) is probably noncontributing.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--July 1939 to current year.

REVISED RECORDS.--WSP 956: 1941(M). WSP 1440: 1940(M), 1941. WSP 1710: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 6,415.40 ft (1,955.414 m), National Geodetic Vertical Datum of 1929.

REMARKS.--Records good except those for winter period, which are poor. Many small reservoirs above station, total capacity, about 6,000 acre-ft (7.40 hm³), for irrigation. Diversions for irrigation of about 43,000 acres (174 km²) above station.

COOPERATION.--Five discharge measurements furnished by Bureau of Reclamation.

AVERAGE DISCHARGE.--42 years, 177 ft³/s (5.013 m³/s), 128,200 acre-ft/yr (158 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 6,590 ft³/s (187 m³/s) Mar. 29, 1943, gage height, 5.23 ft (1.594 m), from rating curve extended above 2,500 ft³/s (70.8 m³/s); maximum gage height, 6.74 ft (2.054 m) May 12, 1973; minimum daily discharge, 1.1 ft³/s (0.031 m³/s) Sept. 7-14, 1959, Aug. 7, 1963.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 744 ft³/s (21.1 m³/s) June 11, gage height, 2.36 ft (0.719 m); minimum daily, 7.0 ft³/s (0.20 m³/s) July 11, 24.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	20	52	62	67	29	56	50	56	507	23	38	9.2
2	20	50	64	64	26	56	62	52	482	22	30	8.4
3	20	50	71	61	23	56	67	58	446	17	26	7.7
4	20	48	76	58	22	57	65	72	428	13	23	7.7
5	19	46	74	55	21	58	65	112	428	25	20	7.7
6	19	46	71	53	21	59	67	169	440	17	17	9.2
7	19	46	70	50	22	60	72	122	495	15	15	9.2
8	20	44	63	48	24	62	67	112	564	17	13	9.2
9	20	43	62	46	24	63	67	93	609	14	16	8.4
10	20	43	64	44	21	64	72	80	629	11	21	8.4
11	20	41	68	42	22	66	67	67	684	7.0	19	9.2
12	19	52	70	40	24	68	69	56	551	22	18	11
13	19	52	70	38	28	71	88	50	428	41	75	10
14	20	44	71	36	33	72	96	43	334	12	46	8.4
15	30	39	74	35	37	73	93	39	275	17	36	11
16	30	36	77	34	39	72	88	46	230	52	31	9.2
17	34	35	79	33	41	70	82	72	182	34	22	8.4
18	44	36	79	33	43	69	82	62	146	26	125	8.4
19	62	37	76	34	45	69	91	182	112	21	58	8.4
20	58	39	72	34	46	70	91	275	91	17	34	8.4
21	58	40	73	34	45	70	99	235	74	13	23	8.4
22	58	40	75	34	47	71	109	216	62	10	21	8.4
23	58	40	77	34	49	72	102	296	56	7.7	18	8.4
24	54	39	78	32	51	72	93	406	46	7.0	14	8.4
25	57	38	79	31	53	72	96	602	41	62	11	9.2
26	59	38	80	31	54	72	74	564	36	58	11	9.2
27	56	39	80	31	54	74	65	532	30	115	9.2	9.2
28	44	42	78	31	55	77	58	458	26	122	30	9.2
29	37	50	76	32	---	69	58	446	30	80	21	9.2
30	39	60	74	32	---	74	65	520	25	56	14	8.4
31	45	---	70	31	---	65	---	538	---	48	11	---
TOTAL	1098	1305	2253	1258	999	2079	2320	6631	8487	1001.7	866.2	265.5
MEAN	35.4	43.5	72.7	40.6	35.7	67.1	77.3	214	283	32.3	27.9	8.85
MAX	62	60	80	67	55	77	109	602	684	122	125	11
MIN	19	35	62	31	21	56	50	39	25	7.0	9.2	7.7
AC-FT	2180	2590	4470	2500	1980	4120	4600	13150	16830	1990	1720	527
CAL YR 1980	TOTAL	91578.9	MEAN	250	MAX	1990	MIN	5.5	AC-FT	181600		
WTR YR 1981	TOTAL	28563.4	MEAN	78.3	MAX	684	MIN	7.0	AC-FT	56660		

PLATTE RIVER BASIN

06635000 MEDICINE BOW RIVER ABOVE SEMINOLE RESERVOIR, NEAR HANNA, WY--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1965 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	TIME	DIS- CHARGE, IN CUBIC FEET PER SECOND	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	HARD- NESS (MG/L AS CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)
OCT 22...	1550	--	60	1440	8.4	6.0	580	140	57	100
NOV 28...	1230	42	--	1500	--	1.0	720	170	70	120
DEC 09...	1500	62	--	1440	8.9	.5	630	140	66	110
JAN 24...	1430	32	--	1650	8.3	.0	690	160	71	130
FEB 23...	1100	--	49	1060	8.4	.0	480	110	47	92
MAR 13...	1300	--	71	975	8.9	5.0	530	120	53	87
APR 21...	1515	--	96	1210	--	8.0	480	110	51	110
MAY 19...	1330	--	222	1700	--	11.0	570	110	69	170
JUN 15...	1500	--	273	750	--	13.0	280	68	27	54
JUL 14...	1030	--	12	1920	--	19.5	1100	270	96	70
AUG 25...	1415	--	11	1400	8.5	26.0	--	--	--	--
SEP 19...	1700	--	9.2	1500	8.3	19.5	640	160	59	81

DATE	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	POTAS- SIUM 40 DIS- SOLVED (PCI/L AS K40)	ALKA- LINITY LAB (MG/L AS CACO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SI02)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L)
OCT 22...	1.8	5.2	3.9	150	580	41	.6	6.3	1020
NOV 28...	2.0	3.4	--	200	710	38	.7	5.2	1240
DEC 09...	1.9	3.6	--	180	620	33	.6	3.9	1100
JAN 24...	2.2	3.9	2.3	200	710	43	.7	8.0	1250
FEB 23...	1.9	2.8	--	160	464	27	.5	.0	840
MAR 13...	1.7	3.3	--	110	540	32	.5	9.2	912
APR 21...	2.2	3.3	2.5	150	530	28	.7	10	933
MAY 19...	3.1	3.3	--	160	690	50	.8	.0	1200
JUN 15...	1.4	2.7	--	130	240	21	.4	7.5	500
JUL 14...	.9	8.3	7.5	140	1100	18	.9	7.0	1700
AUG 25...	--	--	--	--	--	--	--	--	--
SEP 19...	1.4	3.7	--	110	590	48	.5	3.2	1000

PLATTE RIVER BASIN

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06635000 MEDICINE BOW RIVER ABOVE SEMINOLE RESERVOIR, NEAR HANNA, WY--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE		SOLIDS, DIS- SOLVED (TONS PER AC-FT)	SOLIDS, DIS- SOLVED (TONS PER DAY)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	PHOS- PHORUS, TOTAL (MG/L AS P)	CARBON, ORGANIC DIS- SOLVED (MG/L AS C)	CARBON, ORGANIC SUS- PENDE TOTAL (MG/L AS C)	SEDI- MENT, SUS- PENDE (MG/L)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
OCT 22...		1.4	165	.00	.000	4.1	1.3	236	38	99
NOV 28...		1.7	141	.22	.020	--	--	74	8.4	--
DEC 09...		1.5	184	5.5	.020	--	--	73	12	--
JAN 24...		1.7	108	1.0	.000	--	--	27	2.3	--
FEB 23...		1.1	111	.48	.010	--	--	16	2.1	--
MAR 13...		1.2	175	.50	.030	--	--	59	11	--
APR 21...		1.3	243	.20	.040	--	--	85	22	--
MAY 19...		1.6	719	.11	.360	--	--	920	551	--
JUN 15...		.68	369	.06	.030	--	--	210	155	92
JUL 14...		2.3	55.1	.33	.200	--	--	214	6.9	--
AUG 25...		--	--	--	--	--	--	--	--	--
SEP 19...		1.4	24.8	.09	.040	--	--	38	.94	--

DATE	TIME	ALUM- INUM, TOTAL RECOV- ERABLE (UG/L AS AL)	ALUM- INUM, SUS- PENDE RECOV. (UG/L AS AL)	ALUM- INUM, DIS- SOLVED (UG/L AS AL)	ARSENIC TOTAL (UG/L AS AS)	ARSENIC SUS- PENDE TOTAL (UG/L AS AS)	ARSENIC DIS- SOLVED (UG/L AS AS)	BERYL- LIUM, TOTAL RECOV- ERABLE (UG/L AS BE)	BERYL- LIUM, SUS- PENDE RECOV. (UG/L AS BE)	BERYL- LIUM, DIS- SOLVED (UG/L AS BE)	CADMIUM TOTAL RECOV- ERABLE (UG/L AS CD)	CADMIUM SUS- PENDE RECOV- ERABLE (UG/L AS CD)
OCT 22...	1550	280	270	10	1	0	1	0	0	0	2	1
APR 21...	1515	1100	1100	30	1	0	1	0	--	<1	0	0

DATE	CADMIUM DIS- SOLVED (UG/L AS CD)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR)	CHRO- MIUM, SUS- PENDE RECOV. (UG/L AS CR)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU)	COPPER, SUS- PENDE RECOV- ERABLE (UG/L AS CU)	COPPER, DIS- SOLVED (UG/L AS CU)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	IRON, SUS- PENDE RECOV- ERABLE (UG/L AS FE)	IRON, DIS- SOLVED (UG/L AS FE)	LEAD, TOTAL RECOV- ERABLE (UG/L AS PB)	LEAD, SUS- PENDE RECOV- ERABLE (UG/L AS PB)
OCT 22...	1	0	0	0	11	2	9	2200	2000	190	5	2
APR 21...	2	10	0	10	8	5	3	1500	1500	20	5	3

DATE	LEAD, DIS- SOLVED (UG/L AS PB)	LITHIUM TOTAL RECOV- ERABLE (UG/L AS LI)	LITHIUM SUS- PENDE RECOV- ERABLE (UG/L AS LI)	LITHIUM DIS- SOLVED (UG/L AS LI)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)	MANGA- NESE, SUS- PENDE RECOV. (UG/L AS MN)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	MERCURY TOTAL RECOV- ERABLE (UG/L AS HG)	MERCURY SUS- PENDE RECOV- ERABLE (UG/L AS HG)	MERCURY DIS- SOLVED (UG/L AS HG)	MOLYB- DENUM, TOTAL RECOV- ERABLE (UG/L AS MO)	MOLYB- DENUM, SUS- PENDE RECOV. (UG/L AS MO)
OCT 22...	3	60	0	60	90	70	20	.1	.1	.0	8	1
APR 21...	2	60	0	60	90	70	20	.1	.0	.1	85	--

PLATTE RIVER BASIN

06635000 MEDICINE BOW RIVER ABOVE SEMINOLE RESERVOIR, NEAR HANNA, WY--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	MOLYB- DENUM, DIS- SOLVED (UG/L AS MO)	NICKEL, TOTAL RECOV- ERABLE (UG/L AS NI)	NICKEL, SUS- PENDE RECOV- ERABLE (UG/L AS NI)	NICKEL, DIS- SOLVED (UG/L AS NI)	SELE- NIUM, SUS- PENDE TOTAL (UG/L AS SE)	SELE- NIUM, SUS- PENDE TOTAL (UG/L AS SE)	SELE- NIUM, DIS- SOLVED (UG/L AS SE)	VANA- DIUM, DIS- SOLVED (UG/L AS V)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN)	ZINC, SUS- PENDE RECOV- ERABLE (UG/L AS ZN)	ZINC, DIS- SOLVED (UG/L AS ZN)
OCT 22...	7	8	7	1	3	0	3	.0	40	10	30
APR 21...	<10	3	3	0	9	1	8	1.0	160	150	10

DATE	TIME	GROSS ALPHA, DIS- SOLVED (UG/L AS U-NAT)	GROSS ALPHA, SUSP. TOTAL (UG/L AS U-NAT)	GROSS BETA, DIS- SOLVED (PCI/L AS CS-137)	GROSS BETA, SUSP. TOTAL (PCI/L AS CS-137)	GROSS BETA, DIS- SOLVED (PCI/L AS SR/ YT-90)	GROSS BETA, SUSP. TOTAL (PCI/L AS SR/ YT-90)	RADIUM 226, DIS- SOLVED, RADON METHOD (PCI/L)	URANIUM NATURAL DIS- SOLVED (UG/L AS U)	GROSS ALPHA, DIS- SOLVED (PCI/L AS U-NAT)	GROSS ALPHA, SUSP. TOTAL (PCI/L AS U-NAT)
OCT 22...	1550	64	9.2	<7.7	11	<7.3	10	.27	36	44	6.3
JAN 24...	1430	45	.9	14	4.3	13	4.1	.25	38	31	.6
APR 21...	1515	40	2.0	<8.4	4.6	<8.1	4.5	.19	33	27	1.4
JUL 14...	1030	<43	8.2	26	10	25	9.7	.54	34	29	5.6

DATE	TIME	TEMPER- ATURE (DEG C)	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SED. SUSP. FALL DIAM. % FINER THAN .004 MM	SED. SUSP. FALL DIAM. % FINER THAN .016 MM	SED. SUSP. FALL DIAM. % FINER THAN .062 MM	BED MAT. FALL DIAM. % FINER THAN .062 MM
MAY 19...	1330	11.0	222	44	82	100	--
JUL 14...	1030	19.5	12	--	--	--	1

DATE	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. FALL DIAM. % FINER THAN 1.00 MM	BED MAT. SIEVE DIAM. % FINER THAN 2.00 MM	BED MAT. SIEVE DIAM. % FINER THAN 4.00 MM	BED MAT. SIEVE DIAM. % FINER THAN 8.00 MM
MAY 19...	--	--	--	--	--	--	--
JUL 14...	5	10	51	76	94	99	100

06635500 SEMINOE RESERVOIR NEAR LEO, WY

LOCATION.--Lat 42°09'21", long 106°54'29", in NW¼NE¼ sec.8, T.25 N., R.84 W., Carbon County, Hydrologic Unit 10180003, on upstream side near center of dam on North Platte River, 6.0 mi (9.7 km) upstream from high-water line of Pathfinder Reservoir at elevation 5,850.1 ft (1,783.11 m), and 9.0 mi (14.5 km) southwest of Leo.

DRAINAGE AREA.--7,230 mi² (18,726 km²), of which 589 mi² (1,526 km²) is probably noncontributing.

PERIOD OF RECORD.--February 1939 to current year. Monthend figures only for February, March 1939, October 1940 to September 1950, published in WSP 1310

REVISED RECORDS.--WDR WY-76-1: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 6,190.00 ft (1,886.712 m) National Geodetic Vertical Datum of 1929 (levels by Bureau of Reclamation). Prior to Apr. 20, 1939, nonrecording gage at same site and datum.

REMARKS.--Reservoir is formed by concrete-arch dam. Storage began Apr. 1, 1939, but some regulation for power development during period Jan. 1 to Mar. 31, 1939. Capacity, 1,017,000 acre-ft (1,254 hm³) below elevation 6,357 ft (1,937.6 m), top of spillway gates. Figures given herein represent total contents, of which 31,700 acre-ft (39.1 hm³), capacity below elevation 6,239 ft (1,901.6 m), minimum operating level for power development, are not available for power development and 533 acre-ft (0.657 hm³), below elevation 6,185.09 ft (1,885.215 m), penstock invert, is dead storage. Water is used for irrigation and power development.

COOPERATION.--Records furnished by Bureau of Reclamation.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily contents, 1,073,000 acre-ft (1,320 hm³) June 20, 1949, elevation 6,359.29 ft (1,938.312 m); minimum daily (since appreciable storage was attained), 19,040 acre-ft (23.5 hm³) Sept. 1, 1939, elevation, 6,228.00 ft (1,898.294 m).

EXTREMES FOR CURRENT YEAR.--Maximum daily contents, 872,000 acre-ft (1,080 hm³) Oct. 1, 2, maximum elevation, 6,349.42 ft (1,935.303 m) Oct. 1; minimum daily contents, 459,000 acre-ft (566 hm³) May 2-4, minimum elevation, 6,320.10 ft (1,926.366 m) May 3.

Capacity table (elevation, in feet,
and contents, in acre-feet)

6,320	458,000	6,340	716,000
6,325	514,000	6,345	796,000
6,330	575,000	6,350	883,000
6,335	642,000		

RESERVOIR STORAGE (AC-FT), WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
INSTANTANEOUS OBSERVATIONS AT 2400

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	872000	838000	776000	702000	601000	547000	499000	461000	517000	600000	596000	577000
2	872000	834000	773000	699000	597000	545000	498000	459000	523000	600000	596000	576000
3	871000	833000	772000	697000	593000	544000	497000	459000	527000	600000	595000	575000
4	870000	831000	770000	694000	591000	542000	495000	459000	533000	601000	595000	574000
5	869000	831000	767000	691000	589000	541000	494000	460000	546000	602000	594000	573000
6	869000	830000	764000	689000	587000	539000	492000	460000	559000	603000	593000	572000
7	868000	828000	761000	685000	585000	538000	490000	461000	569000	603000	593000	572000
8	867000	826000	759000	683000	583000	537000	488000	462000	574000	603000	592000	571000
9	866000	823000	757000	680000	580000	535000	486000	463000	581000	603000	592000	570000
10	866000	821000	755000	678000	577000	534000	484000	464000	583000	602000	591000	570000
11	865000	818000	753000	676000	574000	533000	483000	464000	586000	602000	590000	570000
12	864000	815000	750000	674000	572000	531000	481000	464000	588000	602000	590000	569000
13	863000	813000	748000	670000	570000	530000	481000	465000	590000	602000	590000	568000
14	862000	811000	746000	668000	570000	528000	479000	465000	593000	602000	590000	566000
15	862000	808000	743000	665000	569000	528000	478000	466000	595000	602000	588000	565000
16	864000	805000	741000	662000	567000	526000	478000	467000	596000	602000	588000	564000
17	864000	802000	738000	659000	566000	525000	477000	467000	597000	602000	587000	563000
18	864000	799000	735000	656000	564000	522000	476000	469000	599000	601000	587000	562000
19	863000	797000	731000	653000	563000	520000	475000	469000	600000	601000	587000	561000
20	863000	796000	729000	649000	561000	519000	475000	471000	601000	600000	586000	560000
21	862000	793000	726000	645000	560000	517000	473000	473000	601000	599000	585000	559000
22	859000	791000	724000	642000	559000	516000	472000	474000	601000	598000	585000	559000
23	857000	789000	722000	638000	557000	515000	471000	477000	601000	599000	584000	558000
24	856000	787000	719000	633000	556000	512000	470000	480000	600000	598000	583000	556000
25	854000	784000	717000	629000	554000	511000	468000	485000	601000	597000	583000	555000
26	851000	784000	715000	625000	553000	509000	467000	489000	601000	598000	582000	554000
27	850000	783000	713000	620000	551000	507000	465000	492000	601000	598000	586000	553000
28	848000	782000	711000	616000	549000	507000	465000	497000	600000	598000	580000	552000
29	846000	780000	710000	612000	---	505000	463000	502000	600000	598000	579000	551000
30	844000	778000	707000	608000	---	503000	462000	507000	600000	597000	579000	550000
31	840000	---	703000	604000	---	501000	---	512000	---	596000	578000	---
MAX	872000	838000	776000	702000	601000	547000	499000	512000	601000	603000	602000	577000
MIN	840000	778000	703000	604000	549000	501000	462000	459000	517000	596000	578000	550000
(+)	6,347.62	6,343.95	6,339.19	6,332.20	6,327.90	6,323.93	6,320.37	6,328.45	6,331.90	6,331.62	6,330.20	6,327.99
(+)	-33,000	-62,000	-75,000	-99,000	-55,000	-48,000	-39,000	+50,000	+88,000	-4,000	-18,000	-28,000

CAL YR 1980 MAX 977000 MIN 317000 +65,000

WTR YR 1981 MAX 872000 MIN 459000 +323,000

(+) Elevation, in feet, at end of month.

(+) Change in contents, in acre-feet.

PLATTE RIVER BASIN

06636000 NORTH PLATTE RIVER ABOVE PATHFINDER RESERVOIR, WY

LOCATION.--Lat 42°10'42", long 106°52'33", in NW¼NE¼SW¼ sec.34, T.26 N., R.84 W., Carbon County, Hydrologic Unit 10180003, at Bureau of Reclamation gaging station, 1,800 ft (549 m) downstream from Kortess Dam, 1.2 mi (1.9 km) upstream from Lost Creek, 5.0 mi (8.0 km) upstream from high-water line of Pathfinder Reservoir at elevation 5,850 ft (1,783 m), and 6.0 mi (9.6 km) southwest of Leo.

DRAINAGE AREA.--7,241 mi² (18,754 km²), of which 589 mi² (1,526 km²) is probably noncontributing.

PERIOD OF RECORD.--Water years 1969 to current year.

REVISED RECORDS.--WDR WY-76-1: Drainage area.

REMARKS.--Discharge records furnished by U.S. Bureau of Reclamation.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	TUR- BID- ITY (NTU)	OXYGEN, DIS- SOLVED (MG/L)
OCT							
07...	1115	500	425	8.5	14.5	150	10.8
NOV							
04...	1145	920	421	8.8	11.0	9.0	11.4
DEC							
08...	0910	1580	440	8.3	4.0	5.0	11.0
JAN							
06...	1035	2160	430	8.1	3.0	5.0	11.6
FEB							
09...	0940	2850	520	8.0	2.5	3.0	11.7
MAR							
05...	1050	1690	469	7.9	4.5	2.0	12.2
APR							
08...	0940	1450	546	8.2	5.0	2.0	10.4
MAY							
06...	0930	800	540	8.3	9.0	2.0	9.6
JUN							
08...	0925	520	483	8.3	12.0	2.0	10.4
JUL							
09...	1200	500	550	8.1	13.0	2.0	9.6
AUG							
11...	0940	515	540	8.5	15.5	3.0	10.0
SEP							
03...	0905	515	518	8.3	13.5	5.0	8.7

06637740 SWEETWATER RIVER ABOVE ROCK CREEK, NEAR ATLANTIC CITY, WY

LOCATION.--Lat 42°23'36", long 108°37'32", in NE¼NE¼NW¼ sec.22, T.28 N., R.99 W., Fremont County, Hydrologic Unit 10180006, at bridge on county road, 0.25 mi (0.40 km) upstream from Rock Creek, and 9 mi (14 km) southeast of Atlantic City.

PERIOD OF RECORD.--June to October 1981 (discontinued).

WATER-QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	TEMPER- ATURE (DEG C)	SEDI- MENT, SUS- PENDED (MG/L)	SEDI- MENT, DIS- CHARGE, SUS- PENDED (T/DAY)
JUN					
16...	1225	166	14.0	8	3.6
JUL					
13...	1530	56	22.0	10	1.5
AUG					
12...	1030	16	15.5	2	.09
SEP					
10...	1315	12	12.0	3	.10

WATER QUALITY DATA, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	TIME	TEMPER- ATURE (DEG C)	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SEDI- MENT, SUS- PENDED (MG/L)	SEDI- MENT, DIS- CHARGE, SUS- PENDED (T/DAY)
OCT					
23...	0915	.0	16	4	.17

06637750 ROCK CREEK ABOVE ROCK CREEK RESERVOIR, WY

LOCATION.--Lat 42°32'59", long 108°46'26", in NW¼NW¼ sec.27, T.30 N., R.100 W., Fremont County, Hydrologic Unit 10180006, Shoshone National Forest, on left bank 200 ft (61 m) upstream from high-water line of Rock Creek Reservoir, 2.7 mi (4.3 km) downstream from Little Rock Creek, and 4.3 mi (6.9 km) northwest of Atlantic City.

DRAINAGE AREA.--9.2 mi² (23.8 km²), approximately.

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

GAGE.--Water-stage recorder and concrete control. Altitude of gage is 8,330 ft (2,539 m), from topographic map.

REMARKS.--Records good except for periods of ice effect, which are fair. No diversions above station.

AVERAGE DISCHARGE.--19 years, 8.55 ft³/s (0.242 m³/s), 6,190 acre-ft/yr (7.63 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 214 ft³/s (6.06 m³/s) June 9, 1965, gage height, 7.26 ft (2.213 m); maximum gage height, 8.54 ft (2.603 m) Apr. 22, 1965 (backwater from ice); minimum daily discharge, 0.5 ft³/s (0.014 m³/s) Jan. 12-14, 1963.

EXTREMES FOR CURRENT YEAR.--Peak discharge above base of 70 ft³/s (1.98 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
May 23	2100	*70 1.98	6.36 1.939

Minimum daily discharge, 1.0 ft³/s (0.028 m³/s) Feb. 10.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.9	1.8	1.4	1.5	1.2	1.2	1.3	17	38	5.6	2.2	1.5
2	1.9	1.9	1.3	1.4	1.1	1.2	1.3	20	36	8.5	2.1	1.4
3	1.9	1.9	1.4	1.3	1.1	1.2	1.2	17	37	11	2.0	1.4
4	1.9	1.9	1.4	1.4	1.1	1.2	1.2	15	32	7.9	2.0	1.4
5	1.9	2.0	1.3	1.4	1.1	1.1	1.2	14	30	5.8	1.9	2.0
6	1.9	2.0	1.3	1.4	1.2	1.1	1.3	16	29	5.3	2.0	3.0
7	1.8	2.0	1.2	1.3	1.2	1.1	1.3	13	27	5.9	2.3	2.1
8	1.8	1.9	1.3	1.3	1.2	1.1	1.3	12	24	4.6	2.2	1.8
9	1.8	1.8	1.3	1.2	1.1	1.1	1.3	12	22	4.3	3.4	1.7
10	1.8	1.8	1.4	1.2	1.0	1.1	1.5	12	20	4.2	2.6	1.6
11	1.7	1.8	1.4	1.2	1.1	1.1	1.7	13	19	4.1	2.2	1.6
12	1.7	1.7	1.4	1.2	1.2	1.1	1.9	12	17	3.9	2.0	1.5
13	1.7	1.6	1.3	1.2	1.2	1.1	2.2	11	16	3.9	2.0	1.5
14	1.7	1.6	1.3	1.2	1.2	1.1	2.6	13	15	3.5	2.0	1.5
15	1.7	1.5	1.3	1.2	1.2	1.1	2.6	17	14	3.3	2.1	1.5
16	1.6	1.4	1.4	1.1	1.2	1.1	3.3	15	13	3.2	2.6	1.5
17	1.6	1.4	1.4	1.1	1.2	1.1	15	17	12	3.2	2.1	1.4
18	1.7	1.3	1.3	1.1	1.2	1.1	5.6	22	11	3.4	2.0	1.4
19	1.7	1.3	1.2	1.2	1.2	1.1	4.9	28	11	4.1	1.9	1.4
20	1.7	1.4	1.3	1.2	1.2	1.1	5.0	30	10	3.1	1.8	1.4
21	1.7	1.4	1.4	1.2	1.1	1.1	4.3	30	9.2	2.8	1.9	1.3
22	1.7	1.4	1.4	1.2	1.2	1.1	4.4	33	8.6	2.6	2.5	1.3
23	1.6	1.4	1.4	1.2	1.2	1.1	5.4	45	8.0	2.5	1.9	1.3
24	1.5	1.4	1.3	1.2	1.2	1.1	7.4	50	7.5	2.6	1.8	1.4
25	1.6	1.3	1.4	1.2	1.2	1.2	11	46	7.2	3.3	1.8	1.7
26	1.7	1.3	1.4	1.1	1.2	1.3	15	49	7.3	5.1	1.7	1.7
27	1.7	1.4	1.5	1.2	1.2	1.2	15	47	6.7	4.5	1.8	1.6
28	1.6	1.4	1.5	1.2	1.2	1.2	15	47	6.5	3.2	2.1	1.5
29	1.6	1.4	1.4	1.2	---	1.3	16	45	6.1	2.7	1.7	1.4
30	1.7	1.4	1.5	1.2	---	1.4	16	43	5.7	2.4	1.7	1.5
31	1.8	---	1.5	1.2	---	1.3	---	42	---	2.3	1.6	---
TOTAL	53.6	47.8	42.3	38.2	32.7	35.7	167.2	803	505.8	132.8	63.9	47.3
MEAN	1.73	1.59	1.36	1.23	1.17	1.15	5.57	25.9	16.9	4.28	2.06	1.58
MAX	1.9	2.0	1.5	1.5	1.2	1.4	16	50	38	11	3.4	3.0
MIN	1.5	1.3	1.2	1.1	1.0	1.1	1.2	11	5.7	2.3	1.6	1.3
AC-FT	106	95	84	76	65	71	332	1590	1000	263	127	94

CAL YR 1980	TOTAL	4499.7	MEAN	12.3	MAX	114	MIN	1.2	AC-FT	8930
WTR YR 1981	TOTAL	1970.3	MEAN	5.40	MAX	50	MIN	1.0	AC-FT	3910

06637950 ROCK CREEK AT OREGON TRAIL CROSSING, NEAR ATLANTIC CITY, WY

LOCATION.--Lat 42°26'24", long 108°37'24", in NW¼SE¼SE¼ sec.35, T.29 N., R.99 W., Fremont County, Hydrologic Unit 10180006, at bridge on Oregon Trail Highway, 2.0 mi (3.2 km) upstream from mouth, and 3.7 mi (6.0 km) southeast of Atlantic City.

PERIOD OF RECORD.--June to October 1981 (discontinued).

WATER-QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	TEMPER- ATURE (DEG C)	SEDI- MENT, SUS- PENDE (MG/L)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (T/DAY)
JUN 16...	1110	24	12.0	8	.52
JUL 13...	1640	7.3	24.0	8	.16
AUG 12...	1020	6.3	15.0	4	.07
SEP 10...	1215	3.4	9.0	4	.04

WATER QUALITY DATA, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	TIME	TEMPER- ATURE (DEG C)	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SEDI- MENT, SUS- PENDE (MG/L)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (T/DAY)
OCT 23...	0835	.0	2.6	4	.03

PLATTE RIVER BASIN

06638090 SWEETWATER RIVER NEAR SWEETWATER STATION, WY

LOCATION.--Lat 42°30'17", long 108°14'59", in SW¼SE¼NE¼ sec.12, T.29 N., R.96 W., Fremont County, Hydrologic Unit 10180006, on left bank 1.4 mi (2.3 km) downstream from Alkali Creek and 4.4 mi (7.1 km) southwest of Sweetwater Station.

DRAINAGE AREA.--849 mi² (2,199 km²).

PERIOD OF RECORD.--October 1973 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 6,590 ft (2,009 m), from topographic map.

REMARKS.--Records good except those for winter period and periods of no gage-height record, Oct. 7 to Nov. 3, Nov. 11 to Mar. 10, which are poor. Transbasin diversion by Continental Divide ditch diverts water from Little Sandy Creek to land along Lander Creek (tributary to Sweetwater River). A transbasin diversion diverts water from Sweetwater River into Pacific Creek (tributary to Big Sandy River in Green River basin).

AVERAGE DISCHARGE.--8 years, 136 ft³/s (3.852 m³/s), 98,530 acre-ft/yr (121 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 5,750 ft³/s (163 m³/s) Apr. 24, 1980, gage height, 12.40 ft (3.780 m), from floodmark; minimum daily, 5.6 ft³/s (0.16 m³/s) Jan. 9, 1977.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 490 ft³/s (13.9 m³/s) June 8, gage height, 3.81 ft (1.161 m), no peak above base of 900 ft³/s (25.5 m³/s); minimum daily, 10 ft³/s (0.28 m³/s) Sept. 22-25.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	33	39	32	17	24	54	95	161	392	73	23	15
2	31	38	31	16	23	54	108	165	407	71	22	14
3	38	38	31	16	24	56	120	185	371	73	22	12
4	33	49	32	16	25	58	94	204	385	118	21	11
5	36	54	33	16	26	58	79	181	379	113	21	12
6	37	52	31	15	27	58	96	175	370	87	21	17
7	38	54	29	16	28	60	100	157	404	69	21	18
8	37	52	28	15	29	60	92	166	441	59	21	18
9	36	54	27	16	29	60	94	154	437	68	21	18
10	35	50	27	15	29	60	113	147	438	58	21	18
11	34	47	28	16	29	56	140	143	390	51	22	18
12	35	45	29	15	30	59	147	147	295	50	22	17
13	36	43	28	15	32	57	163	147	260	49	22	15
14	37	41	26	15	34	59	159	147	263	45	22	15
15	39	38	29	15	35	63	160	139	222	45	20	15
16	40	36	29	14	36	69	176	146	196	39	24	15
17	41	34	28	13	37	70	180	213	172	36	25	14
18	42	34	25	14	39	72	208	274	151	34	25	13
19	42	35	23	15	40	62	290	262	142	36	22	12
20	42	35	23	16	42	59	285	224	134	34	18	12
21	41	36	24	18	44	62	242	223	134	32	19	11
22	40	35	24	19	45	59	210	250	127	29	17	10
23	39	33	23	20	46	63	161	300	112	27	17	10
24	38	31	21	21	48	69	149	316	99	25	16	10
25	37	30	20	21	50	71	157	323	101	26	15	10
26	36	29	21	21	52	74	171	315	96	29	14	11
27	36	30	21	22	52	86	182	362	85	32	12	12
28	37	32	21	23	52	94	177	405	85	37	12	13
29	38	33	20	24	---	86	159	395	85	37	12	13
30	39	33	19	25	---	109	152	382	81	33	13	15
31	39	---	17	25	---	100	---	386	---	27	16	---
TOTAL	1162	1190	800	545	1007	2077	4659	7194	7254	1542	599	414
MEAN	37.5	39.7	25.8	17.6	36.0	67.0	155	232	242	49.7	19.3	13.8
MAX	42	54	33	25	52	109	290	405	441	118	25	18
MIN	31	29	17	13	23	54	79	139	81	25	12	10
AC-FT	2300	2360	1590	1080	2000	4120	9240	14270	14390	3060	1190	821
CAL YR 1980	TOTAL	86451	MEAN	236	MAX	2880	MIN	17	AC-FT	171500		
WTR YR 1981	TOTAL	28443	MEAN	77.9	MAX	441	MIN	10	AC-FT	56420		

06639000 SWEETWATER RIVER NEAR ALCOVA, WY

LOCATION.--Lat 42°27'28", long 107°11'45", in SW¼NE¼ sec.25, T.29 N., R.87 W., Natrona County, Hydrologic Unit 10180006, on left bank at Dumbell Ranch, 1.0 mi (1.6 km) downstream from Schounmaker ditch diversion dam, 13 mi (21 km) upstream from high-water line of Pathfinder Reservoir at elevation 5,850 ft (1,783 m), and 25 mi (40 km) southwest of Alcovia.

DRAINAGE AREA.--2,327 mi² (6,027 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--August 1913 to September 1924, October 1938 to current year (no winter records during 1974, 1975, and since 1976). Monthly discharge only for some periods, published in WSP 1310.

REVISED RECORDS.--WSP 1310: 1921, 1923-24. WSP 1710: Drainage area.

GAGE.--Water-stage recorder. Altitude of gage is 5,920 ft (1,804 m), from topographic map. Aug. 28, 1913, to Sept. 30, 1924, nonrecording gages at site 0.4 mi (0.6 km) upstream at different datums.

REMARKS.--Records fair. Several small reservoirs above station, combined capacity, about 5,000 acre-ft (6.16 hm³), for irrigation. Diversions for irrigation of about 24,000 acres (97.1 km²) above station.

COOPERATION.--Records collected and computed by Office of the Wyoming State Engineer and reviewed by Geological Survey. Six discharge measurements were made by Bureau of Reclamation.

AVERAGE DISCHARGE.--47 years (water years 1914-24, 1939-73, 1976), 126 ft³/s (3.568 m³/s), 91,290 acre-ft/yr (113 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge observed, 4,290 ft³/s (121 m³/s) Apr. 13, 1924, gage height, 8.36 ft (2.548 m), site and datum then in use; minimum daily, 0.5 ft³/s (0.014 m³/s) July 30 to Aug. 12, 1940.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 265 ft³/s (7.50 m³/s) June 1, gage height, 3.67 ft (1.119 m); minimum daily during period of operation, 13 ft³/s (0.37 m³/s) Sept. 15, 16, 21-25.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1						---	104	148	261	37	42	25
2						---	110	135	249	37	39	25
3						---	112	131	245	37	33	24
4						---	112	129	247	37	33	23
5						---	108	131	261	34	36	24
6						---	110	131	242	31	37	27
7						---	104	135	240	30	36	29
8						---	99	131	231	29	35	31
9						---	95	123	212	28	36	23
10						---	101	119	217	29	36	17
11						---	101	108	240	29	35	16
12						---	101	97	249	28	36	15
13						---	102	88	254	27	36	15
14						---	116	80	217	26	37	15
15						---	131	76	189	23	39	13
16						---	146	71	170	22	39	13
17						---	150	76	158	22	34	14
18						---	154	86	135	23	33	14
19						---	156	76	114	35	31	14
20						---	156	80	99	35	29	14
21						---	164	101	85	31	29	13
22						---	208	110	74	30	28	13
23						---	223	112	63	29	29	13
24						---	212	129	60	28	28	13
25						99	193	160	58	30	27	13
26						97	170	183	45	39	27	15
27						97	154	210	42	51	28	17
28						102	148	221	41	52	31	22
29						102	148	225	35	42	28	34
30						102	150	240	34	40	26	35
31						108	---	256	---	42	26	---
TOTAL						---	4138	4098	4767	1013	1019	579
MEAN						---	138	132	159	32.7	32.9	19.3
MAX						---	223	256	261	52	42	35
MIN						---	95	71	34	22	26	13
AC-FT						---	8210	8130	9460	2010	2020	1150

WATER-QUALITY RECORDS

WATER-QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	TUR- BID- ITY (NTU)	OXYGEN, DIS- SOLVED (MG/L)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	HARD- NESS (MG/L AS CaCO3)	CALCIUM DIS- SOLVED (MG/L AS Ca)
OCT 07...	0930	57	459	8.0	9.0	4.0	8.9	70	150	44
NOV 04...	1020	84	437	8.3	3.5	6.0	11.3	K28	150	42
DEC 08...	1320	62	330	8.1	.0	7.0	12.0	K18	150	39
JAN 06...	0900	58	450	8.0	.5	5.0	12.0	22	150	43
FEB 09...	1120	57	521	7.8	.5	3.0	11.6	K6	150	46
MAR 05...	0900	88	400	7.3	2.0	7.0	11.4	<1	140	40
APR 08...	1130	105	443	7.9	5.5	9.0	10.4	<1	130	38
MAY 06...	1120	150	352	7.9	13.5	15	8.5	51	140	42
JUN 08...	1100	240	293	8.1	16.5	--	8.1	49	--	--
JUL 09...	1345	24	550	8.0	21.5	1.0	8.9	65	170	48
AUG 11...	1150	34	503	8.0	19.5	5.0	8.1	66	170	29
SEP 03...	1050	23	559	8.3	13.5	2.0	8.7	57	--	--

[illegible]

06639000 SWEETWATER RIVER NEAR ALCOVA, WY--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	SOLIDS, SUM OF CONSTITUENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)	SOLIDS, DIS- SOLVED (TONS PER DAY)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	PHOS- PHORUS, TOTAL (MG/L AS P)	CARBON, ORGANIC DIS- SOLVED (MG/L AS C)	CARBON, ORGANIC SUS- PENDED TOTAL (MG/L AS C)	SEDI- MENT, SUS- PENDED (MG/L)	SEDI- MENT, DIS- CHARGE, SUS- PENDED (T/DAY)
OCT 07...	290	.39	44.6	.07	.020	5.3	.0	18	2.8
NOV 04...	268	.36	60.8	.02	.000	--	--	20	4.5
DEC 08...	271	.37	45.4	.20	.020	--	--	24	4.0
JAN 06...	301	.41	47.1	.54	.000	--	--	63	9.9
FEB 09...	284	.39	43.7	.21	.000	--	--	6	.92
MAR 05...	253	.34	60.1	.20	.030	--	--	34	8.1
APR 08...	260	.35	73.7	.05	.030	--	--	30	8.5
MAY 06...	260	.35	105	.05	.460	--	--	68	28
JUN 08...	--	--	--	--	--	--	--	--	--
JUL 09...	340	.46	22.0	.00	.070	--	--	9	.58
AUG 11...	290	.39	26.6	.05	1.20	--	--	60	5.5
SEP 03...	--	--	--	--	--	--	--	134	8.3

DATE	TIME	ALUM- INUM, TOTAL RECOV- ERABLE (UG/L AS AL)	ALUM- INUM, SUS- PENDED RECOV. (UG/L AS AL)	ALUM- INUM, DIS- SOLVED (UG/L AS AL)	ARSENIC TOTAL (UG/L AS AS)	ARSENIC SUS- PENDED TOTAL (UG/L AS AS)	ARSENIC DIS- SOLVED (UG/L AS AS)	BERYL- LIUM, TOTAL RECOV- ERABLE (UG/L AS BE)	BERYL- LIUM, DIS- SOLVED (UG/L AS BE)	CADMIUM TOTAL RECOV- ERABLE (UG/L AS CD)	CADMIUM DIS- SOLVED (UG/L AS CD)
OCT 07...	0930	100	100	0	5	0	5	0	<1	0	<1

DATE	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR)	CHRO- MIUM, SUS- PENDED RECOV. (UG/L AS CR)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU)	COPPER, SUS- PENDED RECOV- ERABLE (UG/L AS CU)	COPPER, DIS- SOLVED (UG/L AS CU)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	IRON, SUS- PENDED RECOV- ERABLE (UG/L AS FE)	IRON, DIS- SOLVED (UG/L AS FE)	LEAD, TOTAL RECOV- ERABLE (UG/L AS PB)	LEAD, SUS- PENDED RECOV- ERABLE (UG/L AS PB)
OCT 07...	0	0	10	4	0	8	390	370	20	3	1

DATE	LEAD, DIS- SOLVED (UG/L AS PB)	LITHIUM TOTAL RECOV- ERABLE (UG/L AS LI)	LITHIUM SUS- PENDED RECOV- ERABLE (UG/L AS LI)	LITHIUM DIS- SOLVED (UG/L AS LI)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)	MANGA- NESE, SUS- PENDED RECOV. (UG/L AS MN)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	MERCURY TOTAL RECOV- ERABLE (UG/L AS HG)	MERCURY SUS- PENDED RECOV- ERABLE (UG/L AS HG)	MERCURY DIS- SOLVED (UG/L AS HG)	MOLYB- DENUM, TOTAL RECOV- ERABLE (UG/L AS MO)
OCT 07...	2	20	0	20	40	30	10	.0	.0	.0	0

DATE	MOLYB- DENUM, DIS- SOLVED (UG/L AS MO)	NICKEL, TOTAL RECOV- ERABLE (UG/L AS NI)	NICKEL, SUS- PENDED RECOV- ERABLE (UG/L AS NI)	NICKEL, DIS- SOLVED (UG/L AS NI)	SELE- NIUM, TOTAL (UG/L AS SE)	SELE- NIUM, SUS- PENDED TOTAL (UG/L AS SE)	SELE- NIUM, DIS- SOLVED (UG/L AS SE)	VANA- DIUM, DIS- SOLVED (UG/L AS V)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN)	ZINC, SUS- PENDED RECOV- ERABLE (UG/L AS ZN)	ZINC, DIS- SOLVED (UG/L AS ZN)
OCT 07...	<10	3	3	0	0	0	0	5.0	60	40	20

PLATTE RIVER BASIN

06639000 SWEETWATER RIVER NEAR ALCOVA, WY--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	TIME	GROSS ALPHA, DIS- SOLVED (UG/L AS U-NAT)	GROSS ALPHA, SUSP. TOTAL (UG/L AS U-NAT)	GROSS BETA, DIS- SOLVED (PCI/L AS CS-137)	GROSS BETA, SUSP. TOTAL (PCI/L AS CS-137)	GROSS BETA, DIS- SOLVED (PCI/L AS SR/ YT-90)	GROSS BETA, SUSP. TOTAL (PCI/L AS SR/ YT-90)	RADIUM 226, DIS- SOLVED, RADON METHOD (PCI/L)	URANIUM NATURAL DIS- SOLVED (UG/L AS U)	GROSS ALPHA, DIS- SOLVED (PCI/L AS U-NAT)	GROSS ALPHA, SUSP. TOTAL (PCI/L AS U-NAT)
OCT 07...	0930	29	.5	9.5	2.2	9.2	2.1	.10	13	20	.3
JAN 06...	0900	25	.8	5.2	1.6	5.0	1.6	.13	17	17	.5
APR 08...	1130	19	1.0	6.1	1.8	5.9	1.7	.09	10	13	.7
JUL 09...	1345	15	170	7.9	140	7.6	130	.14	18	10	120

06640500 PATHFINDER RESERVOIR NEAR ALCOVA, WY

LOCATION.--Lat 42°28'06", long 106°51'12", in NW¼SW¼ sec.24, T.29 N., R.84 W., Natrona County, Hydrologic Unit 10180003, in gatehouse near left end of dam on North Platte River and 9.0 mi (14.5 km) southwest of Alcova.

DRAINAGE AREA.--10,711 mi² (27,741 km²), of which 700 mi² (1,813 km²) is probably noncontributing.

PERIOD OF RECORD.--January 1909 to current year. Monthend figures only for some periods, published in WSP 1310.

REVISED RECORDS.--WDR WY-76-1: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 5,678.1 ft (1,730.68 m), National Geodetic Vertical Datum of 1929. Prior to Apr. 12, 1950, nonrecording gages near present site, and Apr. 12 to Sept. 30, 1950, water-stage recorder at present site, all at Bureau of Reclamation datum which was 1.9 ft (0.58 m) lower.

REMARKS.--Reservoir is formed by masonry dam. Storage began in April 1909. Capacity, 1,016,000 acre-ft (1,250 hm³) between elevations 5,668.1 ft (1,727.64 m), north outlet trashrack sill, and 5,850.1 ft (1,783.11 m), crest of spillway. No dead storage. Figures given herein represent total contents. Water is used to irrigate lands in Wyoming and Nebraska under the North Platte project. Since December 1960, the water has been diverted directly through a tunnel to Fremont Canyon Powerplant, bypassing a section of river channel immediately below Pathfinder Dam.

COOPERATION.--Records furnished by Bureau of Reclamation.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily contents, 1,182,000 acre-ft (1,460 hm³) June 25-27, 1917, elevation 5,858.86 ft (1,785.781 m), present datum; no storage at times during 1909-12, 1931, 1958-59.

EXTREMES FOR CURRENT YEAR.--Maximum daily contents, 804,000 acre-ft (991 hm³) Apr. 26, 27, maximum elevation, 5,839.70 ft (1,779.941 m) Apr. 27; minimum daily contents, 379,000 acre-ft (467 hm³) Sept. 30, elevation, 5,809.20 ft (1,770.644 m).

Capacity table (elevation, in feet,
and contents, in acre-feet)

5,809	377,000	5,820	498,000	5,835	720,000
5,812	407,000	5,825	564,000	5,840	810,000
5,815	439,000	5,830	638,000		

RESERVOIR STORAGE (AC-FT), WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
INSTANTANEOUS OBSERVATIONS AT 2400

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	562000	553000	586000	634000	702000	736000	782000	801000	761000	704000	607000	469000
2	560000	555000	587000	635000	705000	738000	784000	800000	761000	701000	602000	465000
3	559000	557000	586000	637000	707000	739000	785000	799000	761000	697000	598000	460000
5	556000	562000	589000	640000	710000	744000	786000	796000	762000	691000	589000	452000
6	554000	563000	590000	642000	712000	745000	787000	796000	762000	687000	585000	447000
7	553000	566000	592000	642000	713000	747000	788000	792000	761000	684000	580000	443000
8	551000	567000	593000	644000	714000	749000	789000	788000	760000	680000	576000	439000
9	550000	568000	595000	645000	716000	751000	789000	785000	759000	677000	572000	435000
10	549000	568000	597000	647000	717000	752000	790000	782000	758000	673000	568000	432000
11	548000	569000	597000	648000	719000	754000	790000	779000	757000	670000	564000	429000
12	547000	570000	598000	650000	719000	755000	792000	776000	756000	667000	560000	426000
13	546000	572000	600000	653000	719000	757000	792000	774000	755000	664000	556000	423000
14	544000	573000	602000	654000	720000	758000	794000	771000	752000	661000	552000	419000
15	544000	574000	603000	657000	721000	760000	795000	769000	752000	658000	547000	416000
16	544000	575000	606000	660000	721000	760000	796000	769000	751000	654000	542000	413000
17	543000	575000	607000	660000	723000	761000	797000	767000	747000	651000	538000	410000
18	542000	576000	609000	662000	724000	763000	798000	766000	744000	650000	533000	407000
19	541000	577000	611000	665000	725000	766000	799000	765000	741000	647000	529000	403000
20	541000	578000	612000	668000	725000	768000	800000	766000	737000	643000	524000	400000
21	542000	580000	614000	672000	726000	770000	801000	766000	734000	639000	520000	397000
22	542000	580000	615000	674000	728000	772000	802000	764000	732000	637000	514000	394000
23	544000	581000	616000	677000	729000	773000	803000	765000	728000	634000	510000	393000
24	544000	582000	618000	681000	729000	774000	802000	764000	725000	630000	505000	390000
25	545000	583000	621000	684000	730000	775000	803000	765000	722000	627000	500000	389000
26	546000	583000	622000	687000	732000	776000	804000	764000	719000	626000	495000	386000
27	547000	583000	624000	690000	732000	778000	804000	764000	715000	623000	491000	385000
28	547000	583000	627000	694000	734000	779000	803000	764000	713000	621000	487000	383000
29	548000	584000	629000	697000	---	781000	802000	763000	710000	618000	483000	381000
30	550000	584000	630000	700000	---	781000	802000	763000	707000	615000	477000	379000
31	552000	---	632000	701000	---	783000	---	762000	---	611000	473000	---
MAX	562000	584000	632000	701000	734000	783000	804000	801000	762000	704000	607000	469000
MIN	541000	553000	586000	634000	702000	736000	782000	762000	707000	611000	473000	379000
(†)	5,824.08	5,826.42	5,829.62	5,833.92	5,835.82	5,838.56	5,839.58	5,837.44	5,834.26	5,828.22	5,817.92	5,809.20
(‡)	-12,000	+32,000	+48,000	+69,000	+33,000	+49,000	+19,000	-40,000	-55,000	-96,000	-138,000	-94,000

CAL YR 1980 MAX 934000 MIN 541000 †+9,000

WTR YR 1981 MAX 804000 MIN 379000 †-185,000

(†) Elevation, in feet, at end of month.

(‡) Change in contents, in acre-feet.

PLATTE RIVER BASIN

06641500 ALCOVA RESERVOIR AT ALCOVA, WY

LOCATION.--Lat 42°32'52", long 106°43'08", in SE¼SE¼ sec.24, T.30 N., R.83 W., Natrona County, Hydrologic Unit 10180007, in elevator shaft at right end of dam on North Platte River and 0.2 mi (0.3 km) southwest of Alcovia.

DRAINAGE AREA.--10,766 mi² (27,884 km²), of which 700 mi² (1,813 km²) is probably noncontributing.

PERIOD OF RECORD.--February 1938 to current year. Prior to October 1950 monthend figures only, published in WSP 1310.

REVISED RECORDS.--WDR WY-76-1: Drainage area.

GAGE.--Water-stage recorder for elevations above 5,447.00 ft (1,660.246 m). Datum of gage is 5,320 ft (1,621.5 m), National Geodetic Vertical Datum of 1929 (levels by Bureau of Reclamation). Prior to June 27, 1955, nonrecording gages near present site at same datum.

REMARKS.--Reservoir is formed by rock-fill dam completed in January 1938; storage began Feb. 8, 1938. Capacity, 184,300 acre-ft (227 hm³) at elevation 5,500.00 ft (1,676.400 m), top of spillway gates. Dead storage, 100 acre-ft (0.123 hm³). Figures given herein represent total contents. Usable contents published prior to October 1956. Water is used for irrigation in North Platte River basin.

COOPERATION.--Records furnished by Bureau of Reclamation.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily contents, 190,300 acre-ft (235 hm³) Aug. 14, 15, 1952, elevation, 5,499.92 ft (1,676.376 m); minimum daily (since appreciable storage was attained), 1,980 acre-ft (2.44 hm³) Sept. 30, 1940, elevation, 5,353.56 ft (1,631.765 m). No usable storage prior to February 1938.

EXTREMES FOR CURRENT YEAR.--Maximum daily contents, 182,000 acre-ft (224 hm³) June 2, July 9, Aug. 9, 10; maximum elevation, 5,498.96 ft (1,676.083 m) Aug. 9, 10; minimum daily contents, 148,000 acre-ft (182 hm³) Nov. 8-10; minimum elevation, 5,484.42 ft (1,671.651 m) Nov. 8, 9.

Capacity table (elevation, in feet,
and contents, in acre-feet)

5,484	147,000	5,495	172,000
5,485	149,000	5,500	184,000
5,490	160,000		

RESERVOIR STORAGE (AC-FT), WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
INSTANTANEOUS OBSERVATIONS AT 2400

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	178000	157000	154000	156000	151000	153000	160000	177000	181000	179000	180000	179000
2	177000	157000	155000	155000	151000	152000	161000	177000	182000	179000	180000	179000
3	177000	156000	157000	154000	152000	153000	162000	178000	181000	179000	180000	179000
4	177000	154000	157000	155000	152000	153000	163000	178000	181000	179000	180000	179000
5	176000	152000	157000	156000	152000	152000	165000	179000	181000	180000	181000	178000
6	176000	150000	157000	156000	152000	152000	166000	178000	180000	180000	181000	178000
7	175000	149000	157000	157000	151000	152000	167000	178000	180000	180000	181000	178000
8	174000	148000	157000	157000	151000	151000	168000	178000	179000	180000	181000	178000
9	174000	148000	158000	156000	151000	151000	170000	178000	180000	182000	182000	178000
10	173000	148000	158000	156000	152000	151000	170000	178000	179000	181000	182000	178000
11	172000	149000	157000	155000	152000	151000	171000	179000	179000	181000	181000	178000
12	171000	150000	157000	155000	152000	151000	172000	179000	179000	181000	181000	178000
13	170000	151000	157000	155000	152000	151000	174000	179000	178000	181000	181000	177000
14	170000	152000	157000	154000	151000	151000	174000	179000	178000	181000	180000	177000
15	169000	153000	157000	154000	151000	151000	175000	179000	178000	181000	179000	177000
16	168000	154000	156000	154000	151000	151000	175000	179000	178000	181000	179000	177000
17	168000	155000	156000	153000	151000	152000	176000	179000	178000	181000	178000	177000
18	167000	155000	156000	154000	151000	153000	176000	179000	178000	180000	178000	177000
19	166000	155000	156000	154000	151000	152000	177000	179000	178000	180000	178000	178000
20	166000	155000	157000	152000	151000	152000	177000	179000	178000	180000	178000	178000
21	166000	155000	157000	152000	151000	152000	178000	179000	178000	180000	178000	179000
22	165000	155000	157000	151000	151000	152000	178000	179000	178000	179000	179000	179000
23	164000	155000	158000	151000	150000	153000	179000	179000	178000	180000	179000	179000
24	163000	154000	157000	151000	151000	154000	178000	179000	178000	180000	178000	179000
25	162000	154000	156000	150000	151000	155000	178000	178000	178000	180000	179000	179000
26	161000	154000	155000	151000	151000	156000	179000	179000	178000	180000	179000	179000
27	159000	154000	154000	151000	152000	157000	178000	180000	178000	180000	179000	179000
28	159000	154000	154000	151000	153000	157000	178000	180000	178000	179000	179000	178000
29	158000	154000	154000	151000	---	157000	177000	180000	178000	179000	179000	178000
30	157000	154000	154000	150000	---	158000	178000	181000	178000	179000	179000	179000
31	156000	---	155000	151000	---	159000	---	181000	---	180000	179000	---
MAX	178000	157000	158000	157000	153000	159000	179000	181000	182000	182000	182000	179000
MIN	156000	148000	154000	150000	150000	151000	160000	177000	178000	179000	178000	177000
(†)	5,488.23	5,487.28	5,487.45	5,485.77	5,486.53	5,489.53	5,497.25	5,498.66	5,497.51	5,498.07	5,497.88	5,497.70
(‡)	-23,000	-2,000	+1,000	-4,000	+2,000	+6,000	+19,000	+3,000	-3,000	+2,000	-1,000	0

CAL YR 1980 MAX 183000 MIN 148000 †0

WTR YR 1981 MAX 182000 MIN 148000 †0

(†) Elevation, in feet, at end of month.

(‡) Change in contents, in acre-feet.

06642000 NORTH PLATTE RIVER AT ALCOVA, WY

LOCATION.--Lat 42°34'27", long 106°41'31", in NW¼NE¼NW¼ sec.17, T.30 N., R.82 W., Natrona County, Hydrologic Unit 10180007, on left bank 0.5 mi (0.8 km) downstream from Hogback Draw, 0.8 mi (1.3 km) downstream from Gray Reef Dam, 1.9 mi (3.1 km) northeast of Alcova, and 3.8 mi (6.1 km) downstream from Alcova Dam.

DRAINAGE AREA.--10,812 mi² (28,003 km²), of which 700 mi² (1,813 km²) is noncontributing.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--February 1904 to December 1905, October 1934 to current year. Monthly discharge only for some periods, published in WSP 1310.

REVISED RECORDS.--WSP 1310: 1937-38, 1945. WDR WY-76-1: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 5,299.40 ft (1,615.257 m), National Geodetic Vertical Datum of 1929. Feb. 19, 1904, to Dec. 31, 1905, nonrecording gage at site 3.7 mi (6.0 km) upstream at different datum. June 1, 1935, to Apr. 27, 1961, water-stage recorder at site 3.5 mi (5.6 km) upstream at different datum.

REMARKS.--Records good. Flow completely regulated by Seminoe, Pathfinder, and Alcova Reservoirs. (See sta 06635500, 06640500, 06641500.) Natural flow of stream affected by transbasin diversions, storage reservoirs, power development, diversions for irrigation, and return flow from irrigated areas.

COOPERATION.--Seven discharge measurements furnished by Bureau of Reclamation.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge observed, 13,400 ft³/s (379 m³/s) June 6, 10, 11, 1905, gage height, 11.5 ft (3.51 m), site and datum then in use; minimum not determined.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 2,900 ft³/s (82.1 m³/s) Aug. 19, gage height, 4.14 ft (1.262 m); minimum daily, 391 ft³/s (11.1 m³/s) Mar. 31, Apr. 14.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1730	911	941	902	905	601	401	1810	515	1750	2300	2430
2	1710	919	938	899	909	614	401	1800	513	1740	2270	2430
3	1710	919	934	897	904	563	396	1810	521	1740	2290	2430
4	1710	911	934	898	905	508	401	1810	522	1740	2270	2520
5	1720	922	945	907	911	508	396	1880	565	1730	2240	2580
6	1720	910	938	903	902	508	396	2010	728	1730	2280	2580
7	1570	904	951	904	911	502	396	2010	730	1740	2180	2580
8	1490	917	948	900	905	508	401	2020	725	1740	2200	2440
9	1500	918	953	904	903	508	396	2010	732	1740	2200	2190
10	1500	919	951	903	911	508	396	2010	815	1780	2300	2160
11	1490	913	952	900	911	508	396	1950	1010	1830	2580	2160
12	1500	915	955	636	847	508	401	1640	1010	1790	2800	2160
13	1500	911	956	529	762	502	401	1460	1000	1790	2810	2160
14	1500	918	953	902	762	502	391	1220	1000	1800	2780	2160
15	1500	921	936	903	733	508	401	1210	1060	1800	2780	2160
16	1500	924	912	897	711	513	396	1220	1260	1800	2780	2040
17	1500	928	918	899	711	450	490	1150	1460	1790	2780	1990
18	1500	924	907	898	718	412	608	920	1660	1780	2770	1850
19	1490	926	913	897	718	401	608	634	1800	1790	2780	1790
20	1190	925	911	903	718	407	608	511	1810	1790	2670	1790
21	895	925	903	898	718	401	733	510	1790	1790	2570	1590
22	1250	926	908	899	718	401	908	517	1790	1780	2570	1490
23	1490	931	905	905	662	401	907	515	1790	1790	2540	1490
24	1480	933	909	909	614	412	1060	513	1790	1780	2550	1490
25	1480	934	909	911	601	401	1200	517	1770	1780	2550	1480
26	1480	928	912	911	601	401	1200	517	1750	1780	2500	1500
27	1490	933	910	908	601	401	1300	511	1750	1780	2470	1500
28	1480	939	907	910	601	396	1630	517	1760	1800	2450	1500
29	1490	946	907	907	---	401	1810	514	1750	1800	2450	1500
30	1360	938	905	907	---	396	1820	513	1750	1780	2450	1510
31	1080	---	903	905	---	391	---	514	---	1940	2430	---
TOTAL	46005	27688	28724	27351	21773	14441	21248	36743	37126	55190	77590	59650
MEAN	1484	923	927	882	778	466	708	1185	1238	1780	2503	1988
MAX	1730	946	956	911	911	614	1820	2020	1810	1940	2810	2580
MIN	895	904	903	529	601	391	391	510	513	1730	2180	1480
AC-FT	91250	54920	56970	54250	43190	28640	42150	72880	73640	109500	153900	118300
CAL YR 1980 TOTAL	593572			1622	2980	461			1177000			
WTR YR 1981 TOTAL	453529			1243	2810	391			899600			

PLATTE RIVER BASIN

06642000 NORTH PLATTE RIVER AT ALCOVA, WY--Continued
(National stream-quality accounting network station)

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1966 to current year.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: October 1965 to September 1969, October 1979 to September 1981 (discontinued).
WATER TEMPERATURES: October 1965 to September 1969, October 1979 to September 1981 (discontinued).
DISSOLVED SOLIDS: October 1965 to September 1969.
HARDNESS: October 1965 to September 1969.

REMARKS.--Daily samples for chemical analyses composited for discharge October 1965 to September 1969.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Maximum daily, 831 micromhos June 17, 1967; minimum daily, 203 micromhos Feb. 2, 1981.
WATER TEMPERATURES: Maximum, 23°C Sept. 21, 1966; minimum, 0.0°C Dec. 26, 1967, Jan. 5, 1968, and on several days during 1969.
DISSOLVED SOLIDS: Maximum, 462 mg/L July 1-6, 1967; minimum, 273 mg/L June 1-30, 1969.
HARDNESS: Maximum, 248 mg/L June 1-30, 1967; minimum, 159 mg/L Apr. 1-30, 1966.

EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Minimum daily, 203 micromhos Feb. 2.
WATER TEMPERATURES: Maximum daily, 19.5°C Sept. 16.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	TUR- BID- ITY (NTU)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN DEMAND, CHEM- ICAL (HIGH LEVEL) (MG/L)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	STREP- TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)	HARD- NESS (MG/L AS CACO3)
OCT											
07...	1250	1500	487	8.5	15.5	70	10.6	22	K3	K3	170
NOV											
04...	1345	918	483	9.0	11.5	130	11.3	20	K4	--	170
DEC											
08...	1430	952	495	8.2	4.0	6.0	11.9	17	K1	--	180
JAN											
06...	1255	1010	497	7.9	3.0	6.0	11.2	15	<1	--	180
FEB											
09...	1245	912	511	7.9	2.0	6.0	13.9	9	K1	K10	180
MAR											
05...	1210	496	485	8.4	4.5	7.0	15.0	18	<1	--	180
APR											
08...	1300	412	511	8.5	6.5	8.0	12.9	16	<1	K1	180
MAY											
06...	1250	1960	494	8.1	8.0	6.0	11.2	1	K3	--	170
JUN											
08...	1235	732	500	8.3	12.5	5.0	12.4	14	K8	K14	180
JUL											
09...	1510	1720	500	7.9	15.5	6.0	10.5	18	K8	--	190
AUG											
11...	1400	2710	502	8.0	16.0	6.0	8.3	18	27	K84	170
SEP											
03...	1150	2420	521	8.1	17.0	7.0	8.5	40	K4	--	190

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

06642000 NORTH PLATTE RIVER AT ALCOVA, WY--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LINITY LAB (MG/L AS CACO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)
OCT 07...	44	15	30	1.0	3.6	120	110	9.5	.3	12	314
NOV 04...	44	15	32	1.1	3.5	120	110	8.5	.3	11	314
DEC 08...	47	16	33	1.1	4.7	130	120	9.1	.4	11	328
JAN 06...	47	15	34	1.1	3.2	110	130	9.7	.3	12	320
FEB 09...	48	15	31	1.0	3.3	120	120	8.6	.3	12	312
MAR 05...	48	15	32	1.0	3.0	110	120	9.0	.2	11	300
APR 08...	48	15	32	1.0	3.5	110	120	17	.4	11	313
MAY 06...	45	14	28	.9	3.3	110	120	7.5	.3	11	308
JUN 08...	49	15	30	1.0	3.3	110	130	9.1	.3	11	308
JUL 09...	50	15	30	1.0	2.9	110	130	16	.3	11	303
AUG 11...	45	15	30	1.1	3.1	89	120	11	.3	11	311
SEP 03...	49	16	35	1.2	3.2	120	120	7.7	.3	11	311

DATE	SOLIDS, SUM OF CONSTITUENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)	SOLIDS, DIS- SOLVED (TONS PER DAY)	SOLIDS, RESIDUE AT 105 DEG. C, SUS- PENDE (MG/L)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N)	NITRO- GEN, AMMONIA TOTAL (MG/L AS NH4)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS NH4)
OCT 07...	297	.40	1200	25	.17	.11	.030	.040	.04	.05
NOV 04...	297	.40	736	--	.14	.07	.010	--	.01	--
DEC 08...	320	.44	823	--	.20	.21	.010	.020	.01	.03
JAN 06...	318	.43	867	--	.23	.24	.020	--	.02	--
FEB 09...	314	.43	773	--	.21	.76	.040	.080	.05	.10
MAR 05...	305	.41	408	--	.22	.22	.040	--	--	--
APR 08...	314	.43	349	--	.17	.26	.080	.100	--	.13
MAY 06...	296	.40	1570	--	.17	.16	.070	--	--	--
JUN 08...	314	.43	621	--	.13	.07	.080	.070	--	.09
JUL 09...	321	.44	1490	--	.10	.03	.070	.040	--	.05
AUG 11...	290	.39	2120	--	.07	.10	.120	.120	--	.15
SEP 03...	315	.43	2060	--	.13	.06	.030	--	--	--

WATER-QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

[illegible]

PLATTE RIVER BASIN

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06642000 NORTH PLATTE RIVER AT ALCOVA, WY--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	TIME	ARSENIC TOTAL (UG/L AS AS)	ARSENIC SUS- PENDE TOTAL (UG/L AS AS)	ARSENIC DIS- SOLVED (UG/L AS AS)	BARIUM, TOTAL RECOV- ERABLE (UG/L AS BA)	BARIUM, SUS- PENDE RECOV- ERABLE (UG/L AS BA)	BARIUM, DIS- SOLVED (UG/L AS BA)	CADMIUM TOTAL RECOV- ERABLE (UG/L AS CD)	CADMIUM SUS- PENDE RECOV- ERABLE (UG/L AS CD)	CADMIUM DIS- SOLVED (UG/L AS CD)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR)
OCT 07...	1250	4	1	3	100	40	60	0	--	<1	0
FEB 09...	1245	4	0	10	100	30	70	0	0	1	20
APR 08...	1300	3	0	3	100	30	70	0	--	<1	20
AUG 11...	1400	2	0	2	100	40	60	0	--	<1	40

DATE	CHRO- MIUM, SUS- PENDE RECOV. (UG/L AS CR)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR)	COBALT, TOTAL RECOV- ERABLE (UG/L AS CO)	COBALT, DIS- SOLVED (UG/L AS CO)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU)	COPPER, SUS- PENDE RECOV- ERABLE (UG/L AS CU)	COPPER, DIS- SOLVED (UG/L AS CU)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	IRON, SUS- PENDE RECOV- ERABLE (UG/L AS FE)	IRON, DIS- SOLVED (UG/L AS FE)	LEAD, TOTAL RECOV- ERABLE (UG/L AS PB)
OCT 07...	0	0	0	<3	3	0	6	500	480	20	0
FEB 09...	10	10	1	<3	3	0	3	310	270	40	3
APR 08...	10	10	0	<3	7	1	6	1000	980	20	1
AUG 11...	40	0	2	<3	4	0	10	270	230	37	1

DATE	LEAD, SUS- PENDE RECOV- ERABLE (UG/L AS PB)	LEAD, DIS- SOLVED (UG/L AS PB)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)	MANGA- NESE, SUS- PENDE RECOV. (UG/L AS MN)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	MERCURY TOTAL RECOV- ERABLE (UG/L AS HG)	MERCURY SUS- PENDE RECOV- ERABLE (UG/L AS HG)	MERCURY DIS- SOLVED (UG/L AS HG)	NICKEL, TOTAL RECOV- ERABLE (UG/L AS NI)	NICKEL, SUS- PENDE RECOV- ERABLE (UG/L AS NI)
OCT 07...	0	0	40	30	10	.0	.0	.0	3	3
FEB 09...	3	0	20	10	6	.1	.0	1.6	3	2
APR 08...	0	5	30	30	5	.0	.0	.8	2	0
AUG 11...	1	0	30	20	7	.1	.0	.1	0	0

DATE	NICKEL, DIS- SOLVED (UG/L AS NI)	SELE- NIUM, TOTAL (UG/L AS SE)	SELE- NIUM, SUS- PENDE TOTAL (UG/L AS SE)	SELE- NIUM, DIS- SOLVED (UG/L AS SE)	SILVER, TOTAL RECOV- ERABLE (UG/L AS AG)	SILVER, SUS- PENDE RECOV- ERABLE (UG/L AS AG)	SILVER, DIS- SOLVED (UG/L AS AG)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN)	ZINC, SUS- PENDE RECOV- ERABLE (UG/L AS ZN)	ZINC, DIS- SOLVED (UG/L AS ZN)
OCT 07...	0	1	1	0	0	0	0	20	10	10
FEB 09...	1	1	0	1	0	0	0	30	10	20
APR 08...	3	1	1	0	0	0	0	20	10	7
AUG 11...	1	0	0	1	0	0	0	120	90	27

PLATTE RIVER BASIN

06642000 NORTH PLATTE RIVER AT ALCOVA, WY--Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1		---		---	283	464	471	461	457	464	446	481
2		---		---	203	471	474	450	453	458	455	490
3		---		---	---	461	465	451	453	472	452	484
4		---		---	493	463	468	457	454	445	445	491
5		---		---	501	463	459	456	460	451	452	450
6		---		506	503	461	465	455	447	452	465	449
7		---		494	499	465	460	473	443	451	453	461
8		---		496	495	465	463	482	443	459	466	484
9		---		496	495	471	464	471	463	453	472	461
10		---		490	495	460	466	456	455	445	448	492
11		---		492	496	460	477	447	453	444	455	471
12		---		487	494	461	461	444	451	445	453	472
13		---		489	476	458	459	441	454	457	451	491
14		---		509	482	467	460	428	446	459	429	492
15		---		494	482	465	452	449	443	476	439	489
16		---		502	465	469	473	457	452	453	466	493
17		---		501	476	461	468	454	451	451	468	514
18		---		506	476	456	463	449	452	459	477	473
19		---		513	476	469	456	449	455	458	464	459
20		---		508	476	---	467	455	462	461	445	484
21		467		500	471	---	469	459	428	468	466	497
22		467		497	461	---	467	458	436	446	452	495
23		486		492	464	468	456	459	442	450	437	495
24		475		484	458	468	456	452	447	457	459	490
25		473		278	470	469	456	442	456	447	481	495
26		474		256	466	464	452	442	459	466	483	486
27		468		246	468	472	455	444	447	444	483	479
28		472		302	456	471	455	443	445	435	467	497
29		477		473	---	467	457	444	459	457	477	487
30		---		418	---	461	456	444	458	464	482	472
31		---		252	---	465	---	451	---	444	460	---
MEAN		473		449	462	465	462	452	451	455	460	482
WTR YR 1981	MEAN		460	MAX	514	MIN		203				

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1		---		---	2.0	4.5	7.0	10.5	14.0	13.0	16.0	18.0
2		---		---	2.0	4.5	7.5	9.5	16.0	13.5	15.5	18.0
3		---		---	---	4.5	6.0	7.0	14.0	14.0	16.0	18.0
4		---		---	2.0	4.5	6.5	9.5	14.0	14.0	17.0	18.5
5		---		---	2.0	5.0	7.5	9.5	16.5	16.0	15.0	18.0
6		---		3.0	2.0	5.0	7.5	9.5	16.0	15.5	17.0	16.0
7		---		3.0	2.0	5.5	6.5	8.0	13.5	15.5	17.0	16.5
8		---		3.0	2.0	4.5	6.5	9.0	15.0	15.0	16.0	18.5
9		---		3.0	2.0	6.0	7.5	10.5	14.0	15.0	16.5	18.0
10		---		3.0	---	6.5	6.5	10.5	14.5	15.0	16.5	17.0
11		---		3.0	1.0	6.5	7.0	9.5	13.5	15.0	17.0	19.0
12		---		3.0	3.0	6.5	8.0	9.5	12.5	13.0	16.5	18.0
13		---		3.5	3.0	6.0	10.0	10.5	11.5	16.0	16.5	19.0
14		---		2.5	4.0	6.0	9.0	10.5	11.0	16.0	16.0	18.5
15		---		2.5	3.5	7.0	10.5	8.5	12.5	16.5	17.5	18.5
16		---		2.5	3.5	5.5	10.0	10.0	12.5	15.5	16.5	19.5
17		---		2.5	4.0	4.5	10.0	9.5	11.5	15.0	16.0	18.0
18		---		2.5	3.5	5.0	9.5	9.5	13.5	16.5	17.0	19.0
19		---		3.0	3.5	7.0	7.5	10.5	12.5	16.0	17.0	18.5
20		---		3.0	3.0	---	8.0	10.0	12.0	16.0	17.0	18.5
21		5.5		3.0	3.0	---	8.5	9.5	13.0	15.0	16.5	18.0
22		5.5		3.0	3.5	---	9.0	9.5	13.0	16.0	16.0	18.5
23		5.5		3.0	3.5	7.0	10.0	10.5	12.5	16.0	18.0	19.0
24		6.0		3.0	4.0	7.5	10.0	10.5	12.5	16.5	19.0	18.0
25		6.0		2.5	4.0	7.5	9.5	14.5	13.5	15.0	19.0	18.0
26		6.0		2.5	4.0	8.5	10.0	14.0	13.0	16.5	16.5	17.0
27		6.0		2.0	4.0	7.5	9.5	14.5	13.0	16.5	18.5	17.0
28		6.0		2.0	4.0	5.5	10.0	15.5	13.5	16.0	18.5	17.0
29		6.0		2.0	---	5.5	9.5	14.0	13.5	15.5	16.5	17.5
30		---		2.0	---	6.0	10.0	16.0	13.0	16.0	18.0	15.5
31		---		2.0	---	7.0	---	14.0	---	15.5	18.0	---
MEAN		6.0		2.5	3.0	6.0	8.5	11.0	13.5	15.5	17.0	18.0
WTR YR 1981	MEAN		10.5	MAX	19.5	MIN		1.0				

06642000 NORTH PLATTE RIVER AT ALCOVA, WY--Continued

QUALITATIVE AND ASSOCIATED QUANTITATIVE ANALYSES OF BIOLOGICAL DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

PHYTOPLANKTON ANALYSES

DATE TIME	DEC 8,80 1430		FEB 9,81 1245		APR 8,81 1300		JUN 8,81 1235		AUG 11,81 1400	
TOTAL CELLS/ML	370		220		400		770		1000	
DIVERSITY: DIVISION	1.5		1.2		0.6		0.4		1.2	
..CLASS	1.5		1.2		0.6		0.4		1.2	
..ORDER	2.3		1.9		2.4		2.6		2.8	
...FAMILY	2.3		2.2		2.6		2.8		3.0	
....GENUS	2.3		2.4		2.7		3.1		3.3	
ORGANISM	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT
BACILLARIOPHYTA (DIATOMS)										
..BACILLARIOPHYCEAE										
...ACHNANTHALES										
....ACHNANTHACEAE										
.....ACHNANTHES	--	-	--	-	--	-	70	9	--	-
.....COCCONEIS	--	-	--	-	--	-	--	-	56	5
.....RHOICOSPHENIA	13	3	--	-	--	-	42	5	110	11
..BACILLARIALES										
...NITZSCHIAEAE										
.....NITZSCHIA	--	-	--	-	100#	26	200#	25	14	1
..EUPODISCALES										
...COSCINODISCACEAE										
.....CYCLOTELLA	13	3	52#	24	52	13	56	7	14	1
.....MELOSIRA	--	-	--	-	--	-	14	2	--	-
.....STEPHANODISCUS	--	-	13	6	--	-	--	-	--	-
..FRAGILARIALES										
...FRAGILARIAEAE										
.....DIATOMA	39	10	--	-	77#	19	56	7	28	3
....FRAGILARIA	--	-	--	-	--	-	--	-	320#	31
....SYNEDRA	--	-	--	-	13	3	--	-	--	-
..NAVICULALES										
...CYMBELLACEAE										
.....CYMBELLA	--	-	--	-	--	-	14	2	28	3
...GOMPHONEMACEAE										
.....GOMPHONEMA	--	-	26	12	13	3	14	2	42	4
...NAVICULACEAE										
.....NAVICULA	77#	21	65#	29	77#	19	200#	25	130	12
..SURIRELLALES										
...SURIRELLACEAE										
.....CYMATOPLEURA	--	-	--	-	--	-	14	2	14	1
....SURIRELLA	--	-	--	-	--	-	28	4	--	-
CHLOROPHYTA (GREEN ALGAE)										
..CHLOROPHYCEAE										
...CHLOROCOCCALES										
...OOCYSTACEAE										
....ANKISTRODESMUS	--	-	26	12	--	-	28	4	14	1
....SELENASTRUM	--	-	--	-	39	10	--	-	--	-
..VOLVOCALES										
...CHLAMYDOMONADACEAE										
....CHLAMYDOMONAS	--	-	--	-	26	6	42	5	70	7
CRYPTOPHYTA (CRYPTOMONADS)										
..CRYPTOPHYCEAE										
...CRYPTOMONADALES										
....CRYPTOCHRYSIDACEAE										
.....CHROOMONAS	64#	17	--	-	--	-	--	-	--	-
CYANOPHYTA (BLUE-GREEN ALGAE)										
..CYANOPHYCEAE										
...CHROOCOCCALES										
....CHROOCOCCACEAE										
.....ANACYSTIS	13	3	39#	18	--	-	--	-	98	.9
...OSCILLATORIALES										
....OSCILLATORIAEAE										
.....OSCILLATORIA	150#	41	--	-	--	-	--	-	70	7
EUGLENOPHYTA (EUGLENOIDS)										
..EUGLENOPHYCEAE										
...EUGLENALES										
....EUGLENACEAE										
.....PHACUS	--	-	--	-	--	-	--	-	14	1
PYRRHOPHYTA (FIRE ALGAE)										
..DINOPHYCEAE										
...DINOKONTAE										
....PERIDINIACEAE										
.....PERIDINIUM	--	-	--	-	--	-	--	-	14	1

NOTE: # - DOMINANT ORGANISM; EQUAL TO OR GREATER THAN 15%

* - OBSERVED ORGANISM, MAY NOT HAVE BEEN COUNTED; LESS THAN 1/2%

PLATTE RIVER BASIN

06642500 BATES CREEK NEAR FREELAND, WY

LOCATION.--Lat 42°32'00", long 109°19'00", in NW¼ sec.29, T.30 N., R.79 W., Natrona County, Hydrologic Unit 10180007, at bridge on old Casper-Medicine Bow Highway, 2.2 mi (3.5 km) downstream from Chalk Creek, and 20 mi (32 km) east of Alcova.

DRAINAGE AREA.--129 mi² (334 km²).

PERIOD OF RECORD.--June to September 1981.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	PH LAB (UNITS)	TEMPER- ATURE (DEG C)	HARD- NESS (MG/L AS CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)
MAY 26...	1400	36	203	8.0	15.5	86	26	5.0	8.2	.4	1.5
JUN 10...	1250	11	--	8.5	16.5	100	33	4.8	10	.4	2.2
JUL 08...	1010	8.6	--	8.1	17.0	110	32	7.4	11	.5	2.6
AUG 10...	1015	4.3	--	8.4	15.0	130	36	10	15	.6	3.2
SEP 03...	1130	2.6	--	8.2	12.0	100	26	8.4	14	.6	2.0

DATE	ALKA- LITY LAB (MG/L AS CACO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)	SOLIDS, DIS- SOLVED (TONS PER DAY)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	PHOS- PHORUS, TOTAL (MG/L AS P)
MAY 26...	90	13	5.8	.3	16	128	.17	12.4	.07	.170
JUN 10...	110	4.9	9.0	.3	16	150	.20	4.5	.03	.060
JUL 08...	120	11	1.9	.4	19	150	.20	3.5	.00	.040
AUG 10...	130	35	2.5	.4	23	180	.24	2.1	.00	.030
SEP 03...	120	16	2.5	.2	20	160	.22	1.1	.00	.050

06643000 BATES CREEK NEAR ALCOVA, WY

LOCATION.--Lat 42°40'34", long 106°36'09", in SE¼SE¼ sec.1, T.31 N., R.82 W., Natrona County, Hydrologic Unit 10180007, at former gaging station, 2.8 mi (4.5 km) upstream from mouth, and 10.5 mi (16.9 km) northeast of Alcova.

DRAINAGE AREA.--393 mi² (1,018 km²).

PERIOD OF RECORD.--Water years 1957-58, 1970 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	TUR- BID- ITY (NTU)	OXYGEN, DIS- SOLVED (MG/L)
OCT							
28...	1225	7.8	1570	8.1	5.5	3.0	11.3
NOV							
17...	0905	E15	1575	9.1	.0	9.0	11.6
DEC							
18...	0825	11	1300	8.5	2.0	5.0	10.9
JAN							
15...	0835	10	1435	8.0	.5	3.0	11.6
FEB							
09...	1425	14	1337	7.9	.0	70	11.6
MAR							
24...	0840	5.1	1600	8.0	6.0	3.0	9.6
APR							
21...	0845	1.7	1715	8.0	11.0	3.0	9.2
MAY							
06...	1340	E2.7	1740	7.9	15.5	3.0	7.4
JUN							
08...	1350	1.5	1670	8.0	22.5	20	9.6
JUL							
08...	1220	2.8	1720	8.4	21.0	15	8.9
AUG							
10...	1215	4.4	1550	--	17.5	2700	7.5
SEP							
03...	1335	1.2	1710	8.0	21.5	30	7.9

E-Estimate.

PLATTE RIVER BASIN

06644085 NORTH PLATTE RIVER AT MILLS, WY

LOCATION.--Lat 42°50'31", long 106°21'33", in NW¼NE¼SE¼ sec.7, T.33 N., R.79 W., Natrona County, Hydrologic Unit 10180007, at railroad bridge, 700 ft (213 m) upstream from Casper Creek, 900 ft (274 m) east of Mills city limits, and 0.2 mi (0.3 km) upstream from bridge on U.S. Highways 20 and 26.

PERIOD OF RECORD.--Water years 1970 to current year.

REMARKS.--Discharge records furnished by U.S. Bureau of Reclamation.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	TUR- BID- ITY (NTU)	OXYGEN, DIS- SOLVED (MG/L)	CYANIDE TOTAL (MG/L AS CN)	PHENOLS (UG/L)
OCT									
15...	0930	1520	570	8.0	11.5	9.0	8.4	--	0
NOV									
17...	1010	940	605	7.9	1.5	8.0	11.6	.00	--
DEC									
18...	0905	930	610	8.2	3.0	6.0	10.1	--	--
JAN									
15...	0930	900	617	8.3	.5	7.0	11.6	--	--
FEB									
17...	0845	700	671	8.0	3.5	8.0	10.5	.00	0
MAR									
24...	0925	520	780	8.6	7.0	9.0	9.9	--	--
APR									
20...	0925	640	642	8.1	10.5	10	9.0	--	--
MAY									
08...	0900	2200	590	8.4	7.5	15	9.8	--	--
13...	0945	1550	572	8.0	8.5	8.0	9.6	--	--
20...	0825	720	691	8.4	11.0	9.0	8.4	--	--
26...	1640	550	680	8.6	19.0	30	9.4	--	--
JUN									
05...	1145	640	694	8.3	18.5	8.0	10.0	--	--
12...	0925	1050	670	8.0	14.5	15	8.4	--	--
16...	1100	1220	604	8.0	11.5	9.0	10.0	--	--
25...	0900	1780	547	8.3	15.0	15	7.8	--	--
JUL									
02...	1045	1800	540	8.4	15.0	15	8.2	--	--
08...	1300	1700	540	8.2	18.0	15	9.5	--	--
17...	0930	1890	570	8.1	17.0	45	--	--	--
24...	0940	1780	555	8.1	17.0	20	7.8	--	--
29...	0845	1780	585	8.0	17.0	25	7.3	--	--
AUG									
05...	0835	2230	535	8.3	17.5	20	7.4	--	--
10...	0815	2250	565	--	15.0	15	7.8	--	--
17...	0900	2750	582	8.2	17.0	25	8.1	--	--
27...	0900	2550	555	8.2	17.0	10	6.9	--	--
31...	0850	2600	571	8.3	15.5	10	--	--	--
SEP									
10...	1125	2320	555	8.1	17.5	10	7.8	--	--
15...	1110	2020	562	8.3	17.0	8.0	8.2	--	--
21...	0850	1820	615	8.0	15.0	8.0	7.3	--	--
30...	1350	1500	630	8.1	14.0	9.0	8.9	--	--

PLATTE RIVER BASIN

471

06644500 CASPER CREEK AT CASPER, WY

LOCATION.--Lat 42°50'52", long 106°21'52", in NW¼NE¼ sec.7, T.33 N., R.79 W., Natrona County, Hydrologic Unit 10180007, at Bureau of Reclamation gaging station, 700 ft (213 m) upstream from bridge on U.S. Highways 20 and 26, 0.4 mi (0.6 km) upstream from mouth, and 2.0 mi (3.2 km) west of city hall in Casper.

DRAINAGE AREA.--668 mi² (1,730 km²), of which 98 mi² (254 km²) is probably noncontributing.

PERIOD OF RECORD.--Water years 1970 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	TUR- BID- ITY (NTU)	OXYGEN, DIS- SOLVED (MG/L)
OCT							
15...	0900	9.4	4680	7.9	8.0	8.0	9.4
NOV							
17...	1125	7.4	5040	8.0	1.0	100	10.9
DEC							
18...	0955	12	5070	7.9	1.0	130	10.8
JAN							
15...	1015	5.9	4980	7.8	.0	7.0	10.5
FEB							
12...	0830	4.3	5000	7.8	.0	10	7.7
MAR							
24...	1015	9.4	6050	7.9	8.0	6.0	10.4
APR							
20...	1405	7.1	5020	8.2	19.0	5.0	9.2
MAY							
08...	0830	7.6	5930	8.0	6.0	7.0	10.5
13...	0920	7.6	5210	7.9	8.5	6.0	10.0
20...	0800	9.6	5850	8.1	9.5	10	9.8
26...	1720	21	5710	8.1	22.0	25	7.1
JUN							
05...	1125	12	5250	8.1	20.0	15	8.0
12...	0900	11	4280	8.0	16.0	15	8.8
16...	0940	10	3520	8.0	13.5	15	10.0
25...	0835	9.1	3510	7.9	15.0	10	9.2
JUL							
02...	1020	12	3340	8.1	17.5	30	9.0
08...	1345	11	3130	8.1	25.5	9.0	8.8
17...	0910	13	3290	8.1	18.0	25	--
24...	0910	9.9	3080	8.0	16.5	10	9.2
29...	0815	18	2630	8.4	15.5	20	7.6
AUG							
05...	0910	11	3110	7.9	17.5	10	8.6
10...	0745	15	3050	7.9	13.0	20	8.5
17...	0840	15	2860	8.2	16.0	25	7.8
27...	0840	11	3140	8.3	14.5	8.0	8.5
31...	0820	12	2970	8.3	12.0	7.0	--
SEP							
10...	1050	15	2810	8.2	16.5	9.0	8.3
15...	1045	14	2940	8.5	16.0	8.0	9.0
21...	0825	11	3320	8.1	10.0	6.0	9.0
30...	1330	14	3240	8.0	13.5	6.0	9.1

PLATTE RIVER BASIN

06644550 NORTH PLATTE RIVER AT CASPER, WY

LOCATION.--Lat 42°51'26", long 106°19'09", in SE¼SE¼NW¼ sec.4, T.33 N., R.79 W., Natrona County, Hydrologic Unit 10180007, at bridge on service road, 800 ft (244 m) west of Center Street exit from Interstate Highway 25, and 0.6 mi (1.0 km) northwest of Casper Post Office.

PERIOD OF RECORD.--Water years 1972 to current year.

REMARKS.--Discharge records furnished by Bureau of Reclamation.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	TUR- BID- ITY (NTU)	OXYGEN, DIS- SOLVED (MG/L)	SEDI- MENT, SUS- PENDED (MG/L)	SEDI- MENT, DIS- CHARGE, SUS- PENDED (T/DAY)
OCT									
15...	1010	1520	600	7.9	11.5	9.0	8.4	33	135
NOV									
17...	1245	940	680	8.4	2.0	8.0	--	14	36
DEC									
18...	1030	930	690	7.8	2.5	6.0	10.5	14	35
JAN									
15...	1125	900	685	8.1	.5	7.0	11.9	18	44
FEB									
12...	0930	1200	705	8.2	.0	7.0	11.0	12	39
MAR									
24...	1050	520	952	8.6	8.0	10	10.4	26	37
APR									
20...	1430	640	700	8.2	13.5	10	10.4	73	126
MAY									
08...	0920	2200	603	8.4	7.5	15	9.7	--	--
13...	1020	1550	588	8.2	8.5	15	9.6	48	201
20...	0850	720	735	8.3	11.0	8.0	8.9	--	--
26...	1750	550	890	8.3	18.5	40	9.7	82	122
JUN									
05...	1220	640	806	8.4	19.5	8.0	10.0	--	--
12...	0945	1050	652	8.1	15.5	20	8.9	--	--
16...	1125	1220	635	8.1	12.0	8.0	9.8	--	--
25...	0935	1780	570	8.2	15.5	15	8.0	65	312
JUL									
02...	1110	1800	566	8.2	15.5	10	8.2	--	--
08...	1410	1700	610	8.0	19.0	15	8.7	--	--
17...	0950	1890	586	8.0	17.0	50	--	--	--
24...	1000	1780	590	8.0	17.5	25	7.8	--	--
29...	0920	1780	607	7.9	17.0	30	7.4	102	490
AUG									
05...	0935	2230	612	8.0	17.5	20	8.1	--	--
10...	0840	2250	603	--	15.0	20	8.3	--	--
17...	0925	2750	594	7.8	17.5	25	7.9	--	--
27...	0945	2550	571	8.2	17.0	10	8.2	61	420
31...	0905	2600	592	8.3	16.0	10	--	--	--
SEP									
10...	1150	2320	577	8.1	18.0	10	7.8	--	--
15...	1145	2020	594	8.3	17.0	9.0	8.3	--	--
21...	0930	1820	627	8.1	15.0	8.0	7.8	31	152
30...	1415	1500	660	8.1	14.0	8.0	8.9	--	--

DATE	TIME	TEMPER- ATURE (DEG C)	STREAM- FLOW, INSTAN- TANEOUS (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
MAY							
26...	1750	18.5	550	0	1	4	20

DATE	BED MAT. FALL DIAM. % FINER THAN 1.00 MM	BED MAT. SIEVE DIAM. % FINER THAN 2.00 MM	BED MAT. SIEVE DIAM. % FINER THAN 4.00 MM	BED MAT. SIEVE DIAM. % FINER THAN 8.00 MM	BED MAT. SIEVE DIAM. % FINER THAN 16.0 MM	BED MAT. SIEVE DIAM. % FINER THAN 32.0 MM	BED MAT. SIEVE DIAM. % FINER THAN 64.0 MM
MAY							
26...	25	29	35	45	57	87	100

06645000 NORTH PLATTE RIVER BELOW CASPER, WY

LOCATION.--Lat 42°51'40", long 106°12'53", in SE¼NW¼NW¼ sec.4, T.33 N., R.78 W., Natrona County, Hydrologic Unit 10180007, at New Mystery Bridge, 0.1 mi (0.2 km) upstream from Claude Creek, 0.6 mi (1.0 km) north of U.S. Highways 20 and 87, 5.8 mi (9.3 km) east of city hall in Casper, and 9.5 mi (15.3 km) downstream from Casper Creek.

DRAINAGE AREA.--12,574 mi² (32,567 km²), of which 831 mi² (2,152 km²) is probably noncontributing.

PERIOD OF RECORD.--Water years 1947-52, 1957-59, 1968 to current year.

REVISED RECORDS.--WDR WY-76-1: Drainage area.

REMARKS.--Discharge records furnished by U.S. Bureau of Reclamation.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	TIME	STREAM-FLOW, INSTANTANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	TUR- BID- ITY (NTU)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN DEMAND, CHEM- ICAL (HIGH LEVEL) (MG/L)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	HARD- NESS (MG/L AS CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)
OCT 15...	1120	1520	620	8.0	11.5	9.0	9.6	--	2100	220	54	21
NOV 17...	1330	940	700	8.6	2.0	7.0	--	25	K22	250	68	18
DEC 18...	1200	930	690	8.4	3.0	7.0	10.2	15	100	250	63	22
JAN 15...	1215	900	725	8.1	.5	65	11.8	23	K3	230	54	24
FEB 17...	0945	700	770	8.0	4.0	10	11.0	20	120	270	61	27
MAR 24...	1210	520	990	8.3	10.0	10	10.0	25	K26	310	72	32
APR 20...	1530	640	762	8.2	14.0	9.0	10.6	--	K3	240	60	22
MAY 13...	1115	1550	610	8.1	9.5	15	9.6	--	100	200	49	19
JUN 25...	1030	1780	570	8.2	16.5	15	9.1	25	130	210	54	19
JUL 29...	1010	1780	600	8.2	18.5	30	8.5	24	130	200	52	17
AUG 27...	1030	2550	574	8.4	17.5	15	9.3	35	73	200	52	17
SEP 21...	1020	1820	630	8.4	15.0	9.0	8.6	--	48	210	52	19

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

DATE	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LINITY LAB (MG/L AS CACO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)	SOLIDS, DIS- SOLVED (TONS PER DAY)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N)
OCT 15...	47	1.4	4.6	130	170	12	.4	.0	390	.53	1600	--
NOV 17...	56	1.6	4.0	140	200	17	.2	8.4	460	.63	1170	.44
DEC 18...	57	1.6	3.1	140	190	14	.6	4.9	441	.60	1110	.48
JAN 15...	58	1.7	3.9	130	210	12	.5	11	455	.62	1110	.47
FEB 17...	65	1.7	3.9	170	210	14	.5	.0	481	.65	909	.59
MAR 24...	90	2.2	3.0	160	330	22	.6	2.6	640	.87	899	.67
APR 20...	67	1.9	4.0	140	210	17	1.0	16	480	.65	829	.00
MAY 13...	41	1.3	3.6	120	130	15	.5	8.6	340	.46	1420	.17
JUN 25...	39	1.2	4.4	120	140	17	.4	6.2	350	.48	1680	.15
JUL 29...	37	1.1	3.1	120	120	12	.5	7.8	320	.44	1540	.21
AUG 27...	37	1.1	4.0	130	140	9.5	.5	9.5	350	.48	2410	.29
SEP 21...	47	1.4	3.0	130	160	11	.5	8.7	380	.52	1870	.12

PLATTE RIVER BASIN

06645000 NORTH PLATTE RIVER BELOW CASPER, WY--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N)	NITRO- GEN, AMMONIA TOTAL (MG/L AS NH4)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO- GEN, TOTAL (MG/L AS N)	NITRO- GEN, TOTAL (MG/L AS NO3)	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHORUS TOTAL (MG/L AS PO4)	CYANIDE TOTAL (MG/L AS CN)	PHENOLS (UG/L)
OCT 15...	.21	--	--	--	--	--	--	.100	--	--	2
NOV 17...	.42	.090	.11	.64	.73	1.2	5.2	.340	.49	.00	--
DEC 18...	.22	.040	.05	.63	.67	1.2	5.1	.130	.92	--	--
JAN 15...	.50	.240	.29	.96	1.20	1.7	7.4	.110	.31	--	--
FEB 17...	.59	.150	--	.95	1.10	1.7	7.5	.160	.77	.00	0
MAR 24...	.17	.210	--	.89	1.10	1.8	7.8	.110	.46	--	--
APR 20...	.47	.460	--	.94	1.40	1.4	6.2	.210	.64	--	--
MAY 13...	.56	.150	--	.72	.87	1.0	4.6	.090	.77	--	--
JUN 25...	.16	.080	--	.92	1.00	1.2	5.1	.020	.18	--	--
JUL 29...	.19	.160	--	.77	.93	1.1	5.0	.120	.25	--	--
AUG 27...	.07	.400	--	--	--	--	--	.030	.18	--	--
SEP 21...	.25	.000	--	1.0	1.00	1.1	5.0	.100	.15	--	--

06646600 DEER CREEK BELOW MILLAR WASTEWAY, AT GLENROCK, WY

LOCATION.--Lat 42°51'50", long 105°51'56", in NW¼NW¼ sec.4, T.33 N., R.75 W., Converse County, Hydrologic Unit 10180007, on right bank in Glenrock, 900 ft (274 m) downstream from bridge on U.S. Highways 20 and 87, and 0.5 mi (0.8 km) upstream from mouth.

DRAINAGE AREA.--213 mi² (552 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--February 1961 to current year.

REVISED RECORDS.--WSP 2118: Drainage area.

GAGE.--Water-stage recorder. Altitude of gage is 4,980 ft (1,518 m), from topographic map.

REMARKS.--Records good except those during winter period, which are poor. One small reservoir above station, capacity, about 60 acre-ft (0.074 hm³) for irrigation. Diversions above station for irrigation of about 3,700 acres (15.0 km²), of which about 400 acres (1.62 km²) are below station. Water is diverted at times to Millar ditch 0.3 mi (0.5 km) upstream and bypasses station.

AVERAGE DISCHARGE.--20 years, 69.5 ft³/s (1.968 m³/s), 50,350 acre-ft/yr (62.1 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 14,200 ft³/s (402 m³/s) June 12, 1970, gage height, 9.45 ft (2.880 m); no flow at times in 1961-63, 1965, 1977, 1978, 1980.

EXTREMES FOR CURRENT YEAR.--Peak discharge above base of 450 ft³/s (12.7 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
May 23	1500	*463 13.1	4.91 1.497

Minimum daily, 0.01 ft³/s (0.0003 m³/s) on several days.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.1	19	14	16	12	16	16	.56	76	1.2	.31	.01
2	2.1	19	13	16	12	16	13	.56	61	1.8	.31	.01
3	2.1	18	15	15	12	16	15	2.1	43	1.8	.31	.01
4	1.2	18	15	15	12	16	19	2.5	42	1.4	.22	.01
5	1.2	17	15	14	12	15	17	1.8	33	.95	.22	.02
6	2.1	17	15	14	13	14	14	1.8	22	.56	.15	.04
7	3.9	16	14	14	13	14	16	2.1	15	.22	.15	.10
8	6.2	16	14	14	12	14	14	1.4	10	.15	.15	.10
9	8.5	16	15	14	11	14	11	1.8	10	.22	.42	.10
10	2.1	16	15	14	10	14	8.5	1.8	9.3	.15	.31	.10
11	7.7	16	16	14	11	15	7.7	1.8	10	.15	.22	.10
12	7.7	17	16	14	13	14	6.2	2.1	8.5	.06	.22	.06
13	7.7	18	16	14	15	14	6.9	2.1	7.7	.04	.43	.04
14	10	17	16	14	18	15	4.4	.22	8.5	.04	.43	.02
15	11	17	17	13	17	15	1.8	.10	8.5	.04	.57	.01
16	11	16	18	12	16	15	1.8	.15	8.5	.04	.22	.01
17	15	16	18	13	15	15	1.4	.95	6.9	.04	.22	.01
18	16	17	17	13	15	16	1.4	.73	5.6	.02	.15	.01
19	16	17	15	13	15	16	1.4	.56	5.6	.02	.15	.01
20	16	18	15	13	15	16	1.2	1.2	5.6	.01	.15	.01
21	16	20	15	13	16	17	2.1	.95	5.6	.01	.04	.01
22	17	19	16	14	16	17	2.5	13	5.0	.01	.02	.01
23	17	18	15	14	13	17	2.1	320	3.9	.02	.02	.01
24	17	16	14	13	13	16	2.1	291	3.3	.02	.04	.01
25	17	16	15	13	15	16	1.4	204	.57	.72	.04	.01
26	18	16	16	13	16	17	1.2	187	.43	.43	.02	.01
27	18	16	17	13	17	17	1.4	184	1.2	.43	.01	.01
28	18	16	16	13	17	17	2.1	162	2.1	.42	.01	.01
29	18	17	16	14	---	16	.95	132	2.1	.42	.01	.01
30	18	17	17	14	---	16	.95	118	1.8	.31	.01	.01
31	19	---	17	13	---	15	---	91	---	.31	.01	---
TOTAL	342.6	512	483	426	392	481	194.50	1729.28	422.70	12.01	5.54	.88
MEAN	11.1	17.1	15.6	13.7	14.0	15.5	6.48	55.8	14.1	.39	.18	.029
MAX	19	20	18	16	18	17	19	320	76	1.8	.57	.10
MIN	1.2	16	13	12	10	14	.95	.10	.43	.01	.01	.01
AC-FT	680	1020	958	845	778	954	386	3430	838	24	11	1.7
CAL YR 1980	TOTAL	17970.36	MEAN 49.1	MAX 890	MIN .00	AC-FT 35640						
WTR YR 1981	TOTAL	5001.51	MEAN 13.7	MAX 320	MIN .01	AC-FT 9920						

PLATTE RIVER BASIN

06646600 DEER CREEK BELOW MILLAR WASTEWAY, AT GLENROCK, WY--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1968 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	HARD- NESS (MG/L AS CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)
OCT											
01...	1550	2.2	--	--	15.5	590	120	69	86	1.5	3.9
31...	1505	18	--	--	10.5	490	100	59	44	.9	1.4
DEC											
12...	1430	16	--	--	3.0	450	98	51	47	1.0	2.1
JAN											
08...	1450	14	945	8.2	2.5	440	90	52	51	1.1	2.5
FEB											
05...	1400	12	931	7.9	1.0	400	91	41	45	1.0	2.4
MAR											
04...	1230	16	835	7.9	7.0	400	83	48	39	.8	1.4
APR											
16...	1130	1.9	1060	8.3	16.0	470	96	56	71	1.4	2.2
MAY											
07...	1730	1.7	--	--	13.0	470	92	58	7.9	.2	2.8
29...	1530	130	--	--	16.5	190	43	19	17	.5	1.5
JUL											
13...	0700	.06	--	--	20.0	370	77	43	440	10	3.2
AUG											
06...	1205	.19	--	--	24.5	480	94	60	230	4.6	4.2
SEP											
09...	1145	.13	--	--	23.5	400	81	49	390	8.4	3.4

DATE	ALKA- LINIT LAB (MG/L AS CACO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, SUM OF CONSTITUENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)	SOLIDS, DIS- SOLVED (TONS PER DAY)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	PHOS- PHORUS, TOTAL (MG/L AS P)
OCT										
01...	300	420	9.4	.6	19	910	1.2	5.4	.00	.010
31...	250	320	7.1	.6	13	698	.95	33.9	.02	.000
DEC										
12...	250	280	7.2	.6	11	648	.88	28.0	.00	.040
JAN										
08...	250	290	4.4	.5	13	654	.89	24.7	.05	.350
FEB										
05...	220	260	6.4	.5	12	588	.80	19.1	.09	.010
MAR										
04...	250	220	5.2	.5	12	560	.76	24.2	.09	.800
APR										
16...	270	310	13	.5	22	730	.99	3.7	.07	1.00
MAY										
07...	250	330	18	.8	12	751	1.0	3.4	.04	.000
29...	130	71	7.4	.4	15	255	.35	89.5	.08	.110
JUL										
13...	600	280	290	3.8	22	1500	2.0	.24	.13	.000
AUG										
06...	480	400	79	2.0	13	1100	1.5	.56	.01	.030
SEP										
09...	570	420	170	2.4	23	1500	2.0	.53	.10	.020

06646780 SAND CREEK NEAR GLENROCK, WY

LOCATION.--Lat 42°51'27", long 105°46'01", in SE¼NW¼SW¼ sec.5, T.33 N., R.74 W., Converse County, Hydrologic Unit 10180007, on right bank 2.2 mi (3.5 km) upstream from mouth and 5.4 mi (8.7 km) east of Glenrock.

DRAINAGE AREA.--79.9 mi² (206.9 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1977 to September 1981 (discontinued).

GAGE.--Water-stage recorder. Altitude of gage is 5,000 ft (1,524 m), from topographic map.

REMARKS.--Records poor.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 546 ft³/s (15.5 m³/s) Aug. 17, 1979, gage height, 4.20 ft (1.280 m), from rating curve extended above 13 ft³/s (0.37 m³/s) on basis of slope-area measurement of peak flow; no flow for many days each year.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 321 ft³/s (9.09 m³/s) Aug. 16, gage height, 3.82 ft (1.164 m), backwater from ice; no flow for many days.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
2	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
3	.00	.00	.00	.00	.00	.00	.10	.01	.00	.00	.00	.00
4	.00	.00	.00	.00	.00	.00	.04	.01	.00	.00	.00	.00
5	.00	.00	.00	.00	.00	.00	.03	.00	.00	.00	.00	.00
6	.00	.00	.00	.00	.00	.00	.00	.01	.00	.00	.00	.00
7	.00	.00	.00	.00	.00	.00	.00	.01	.00	.00	.00	.00
8	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
9	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
10	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
11	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
12	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
13	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
14	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	8.4	.00
15	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.23	.00
16	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	24	.00
17	.00	.00	.00	.00	.00	.02	.00	.01	.00	.00	2.6	.00
18	.00	.00	.00	.00	.00	.02	.00	.01	.00	.00	.00	.00
19	.00	.00	.00	.00	.00	.01	.00	.00	.00	.00	.00	.00
20	.00	.00	.00	.00	.00	.01	.00	.00	.00	.00	.00	.00
21	.00	.00	.00	.00	.00	.03	.01	.01	.00	.00	.00	.00
22	.00	.00	.00	.00	.00	.00	.00	.04	.00	.00	.00	.00
23	.00	.00	.00	.00	.00	.00	.00	.01	.00	.00	.00	.00
24	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
25	.00	.00	.00	.00	.00	.00	.00	.00	.00	19	.00	.00
26	.00	.00	.00	.00	.00	.00	.00	.00	.00	.09	.00	.00
27	.00	.00	.00	.00	.00	.00	.01	.05	.00	.00	.00	.00
28	.00	.00	.00	.00	.00	.00	.01	.01	.00	.00	.00	.00
29	.00	.00	.00	.00	---	.00	.00	.00	.00	.00	.00	.00
30	.00	.00	.00	.00	---	.00	.00	.00	.00	.00	.00	.00
31	.00	---	.00	.00	---	.00	---	.00	---	.00	.00	---
TOTAL	.00	.00	.00	.00	.00	.09	.20	.18	.00	19.09	35.23	.00
MEAN	.000	.000	.000	.000	.000	.003	.007	.006	.000	.62	1.14	.000
MAX	.00	.00	.00	.00	.00	.03	.10	.05	.00	19	24	.00
MIN	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
AC-FT	.00	.00	.00	.00	.00	.2	.4	.4	.00	38	70	.00
CAL YR 1980	TOTAL	140.35	MEAN .38	MAX 60	MIN .00	AC-FT 278						
WTR YR 1981	TOTAL	54.79	MEAN .15	MAX 24	MIN .00	AC-FT 109						

PLATTE RIVER BASIN

06646780 SAND CREEK NEAR GLENROCK, WY--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--October 1977 to September 1981 (discontinued).

WATER-QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)
OCT		
09...	1255	.00
NOV		
07...	0845	.00
DEC		
04...	0920	.00
JAN		
08...	1350	.00
FEB		
05...	1215	.00
MAR		
04...	1143	.00
APR		
06...	1735	.00
MAY		
05...	1345	.00
JUN		
03...	1430	.00
JUL		
13...	1210	.00
AUG		
06...	1315	.00
SEP		
02...	1120	.00

06646800 NORTH PLATTE RIVER NEAR GLENROCK, WY

LOCATION.--Lat 42°50'10", long 105°45'30", in NW¼NE¼ sec.17, T.33 N., R.74 W., Converse County, Hydrologic Unit 10180007, on left bank 0.8 mi (1.3 km) downstream from Sand Creek, 1.0 mi (1.6 km) downstream from Dave Johnston powerplant, and 5.8 mi (9.3 km) east of Glenrock city limits.

DRAINAGE AREA.--13,538 mi² (35,063 km²), of which 1,173 mi² (3,038 km²) is probably noncontributing.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1959 to current year.

REVISED RECORDS.--WDR WY-76-1: Drainage area.

GAGE.--Water-stage recorder. Altitude of gage is 4,920 ft (1,500 m), from topographic map. Prior to Oct. 1, 1965, at datum 1.00 ft (0.305 m) higher.

REMARKS.--Records good. Flow regulated by Seminole, Pathfinder, and Alcova Reservoirs. (See sta 06635500, 06640500, 06641500.) Slight regulation 1.0 mi (1.6 km) upstream by storage pond for Dave Johnston powerplant, capacity, 755 acre-ft (0.931 hm³). Natural flow of stream affected by transbasin diversions, storage reservoirs, power development, diversions for irrigation, and return flow from irrigated areas.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 16,000 ft³/s (453 m³/s) May 14, 1965, gage height, 7.10 ft (2.164 m), present datum; minimum daily, 176 ft³/s (4.98 m³/s) Dec. 11, 1961.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 3,500 ft³/s (99.1 m³/s) July 13, gage height, 3.58 ft (1.091 m); minimum daily, 435 ft³/s (12.3 m³/s) Apr. 2, 14.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1800	1280	1060	994	922	715	448	1800	769	1760	1910	2480
2	1770	1070	1010	994	689	706	435	1750	733	1800	2300	2490
3	1740	1050	1060	983	751	706	490	1810	724	1810	2280	2510
4	1710	1050	1030	973	797	706	520	1910	724	1870	2300	2510
5	1710	1050	1030	973	912	638	483	1800	710	1870	2280	2560
6	1720	1050	1040	973	942	614	483	1850	672	1820	2250	2680
7	1710	1040	1040	963	1000	614	490	1980	773	1760	2300	2720
8	1660	1030	1010	963	873	614	469	1980	843	1730	2200	2680
9	1540	1010	1010	973	853	597	455	1980	842	1740	2220	2580
10	1510	1020	1000	963	630	597	448	2030	822	1760	2260	2300
11	1520	1030	1030	932	469	593	448	2030	830	1780	2330	2250
12	1520	1030	1040	932	566	581	448	2030	1050	1830	2550	2230
13	1510	1060	1040	942	1120	566	441	1750	1070	2230	2830	2220
14	1510	1050	1040	605	1240	566	435	1590	1060	2510	2940	2220
15	1570	1030	1040	806	1440	558	441	1350	1080	1970	2920	2170
16	1600	1010	1040	873	1170	550	441	1320	1080	1880	2880	2220
17	1590	1010	994	825	1210	558	441	1350	1240	1840	2900	2090
18	1570	1010	994	825	1040	638	441	1350	1440	1850	2840	2060
19	1560	1030	932	952	973	535	566	1090	1680	1840	2830	1970
20	1550	1030	844	1000	863	505	630	1000	1830	1810	2830	1870
21	1420	1010	1040	1000	863	512	630	733	1840	1800	2760	1820
22	1080	1010	1080	1070	825	520	680	751	1870	1780	2630	1720
23	1180	1030	994	1090	834	490	863	1050	1850	1780	2610	1560
24	1540	1030	963	1060	834	483	912	1090	1820	1800	2600	1540
25	1540	1010	994	994	751	483	983	983	1840	1850	2600	1550
26	1550	1030	973	983	724	462	1180	922	1810	1940	2580	1520
27	1570	1030	983	952	715	476	1240	902	1800	1970	2560	1540
28	1590	1030	963	994	698	476	1280	873	1820	1880	2530	1540
29	1570	1030	973	994	---	469	1570	844	1800	1840	2490	1520
30	1590	1040	973	983	---	455	1780	815	1790	1820	2490	1550
31	1520	---	973	994	---	455	---	778	---	1810	2490	---
TOTAL	48520	31190	31193	29558	24704	17438	20571	43491	38212	57730	78490	62670
MEAN	1565	1040	1006	953	882	563	686	1403	1274	1862	2532	2089
MAX	1800	1280	1080	1090	1440	715	1780	2030	1870	2510	2940	2720
MIN	1080	1010	844	605	469	455	435	733	672	1730	1910	1520
AC-FT	96240	61870	61870	58630	49000	34590	40800	86260	75790	114500	155700	124300
CAL YR 1980	TOTAL	632866	MEAN	1729	MAX	3660	MIN	498	AC-FT	1255000		
WTR YR 1981	TOTAL	483767	MEAN	1325	MAX	2940	MIN	435	AC-FT	959600		

PLATTE RIVER BASIN

06646800 NORTH PLATTE RIVER NEAR GLENROCK, WY--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1961 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	HARD- NESS (MG/L AS CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)
OCT 31...	1335	1650	--	--	18.5	230	55	22	44	1.3	2.3
DEC 12...	1400	1020	--	--	9.0	270	69	23	57	1.5	3.9
JAN 08...	1415	1070	763	8.2	7.0	250	59	25	60	1.7	3.9
FEB 05...	1330	815	740	8.5	10.0	250	61	23	57	1.6	4.6
MAR 04...	1210	733	845	8.2	15.0	280	74	22	65	1.7	3.5
20...	1500	510	--	--	14.0	330	84	30	91	2.2	3.9
APR 06...	1750	483	--	--	18.0	330	85	29	92	2.2	3.8
MAY 05...	1405	1780	--	--	17.0	240	59	24	54	1.5	4.2
JUN 04...	1550	750	--	--	26.0	310	70	32	68	1.7	3.3
JUL 13...	0935	1950	--	--	22.0	190	49	18	40	1.2	2.8
AUG 23...	1425	2590	--	--	21.5	210	53	19	37	1.1	3.8
SEP 20...	1620	1870	--	--	23.0	210	52	20	43	1.3	2.6

DATE	ALKA- LITY LAB (MG/L AS CACO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)	SOLIDS, DIS- SOLVED (TONS PER DAY)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	PHOS- PHORUS, TOTAL (MG/L AS P)
OCT 31...	130	160	12	.6	9.5	385	.52	1720	.43	.000
DEC 12...	150	200	17	.6	7.1	465	.63	1280	.39	.070
JAN 08...	140	220	13	.6	9.7	475	.65	1370	.46	.450
FEB 05...	140	200	15	.6	9.6	453	.62	997	.44	.090
MAR 04...	150	220	20	.6	6.8	505	.69	999	1.1	.640
20...	160	330	26	.6	5.5	660	.90	909	.91	.030
APR 06...	150	320	24	.7	2.8	650	.88	848	.38	.090
MAY 05...	130	210	16	.8	11	455	.62	2190	.89	.120
JUN 04...	150	270	22	.6	3.2	559	.76	1130	.10	.110
JUL 13...	120	130	17	.5	7.1	340	.46	1790	1.8	.170
AUG 23...	120	160	9.9	.4	11	370	.50	2590	.54	.150
SEP 20...	130	150	12	.6	7.2	370	.50	1870	.45	.040

06647500 BOX ELDER CREEK AT BOXELDER, WY

LOCATION.--Lat 42°36'44", long 105°51'29", in NE¼NE¼SW¼ sec.32, T.31 N., R.75 W., Converse County, Hydrologic Unit 10180007, on left bank at Hiser Ranch (old Boxelder Post Office), 0.8 mi (1.3 km) downstream from Snowshoe Creek, and 17 mi (27 km) south of Glenrock.

DRAINAGE AREA.--63.0 mi² (163.2 km²).

PERIOD OF RECORD.--April 1946 to September 1951, October 1961 to September 1967, October 1971 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 6,710 ft (2,045 m), from topographic map. Prior to June 7, 1946, nonrecording gage, and June 8, 1946, to July 21, 1976, water-stage recorder at site 400 ft (122 m) downstream at different datum.

REMARKS.--Records good for flow greater than 10 ft³/s (0.28 m³/s), ranging to poor for flow less than 2.5 ft³/s (0.07 m³/s). Diversions above station for irrigation of about 60 acres (24 hm²), of which about 40 acres (16 hm²) are below station.

AVERAGE DISCHARGE.--21 years, 36.7 ft³/s (1.039 m³/s), 26,590 acre-ft/yr (32.8 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 4,530 ft³/s (128 m³/s) May 14, 1965, gage height, 8.58 ft (2.615 m), site and datum then in use; no flow at times.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 250 ft³/s (7.08 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
May 23	0730	*770 21.8	4.84 1.475
May 25	1900	491 13.9	4.21 1.283

Minimum daily discharge, 0.02 ft³/s (0.001 m³/s) Aug. 31 to Sept. 2.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.07	.90	.64	1.0	.67	.96	1.9	11	114	4.4	.49	.02
2	.08	.84	.66	.99	.71	1.0	2.5	11	97	4.8	.41	.02
3	.08	.84	.83	.94	.75	1.0	2.0	15	84	5.4	.32	.03
4	.08	.84	.97	.92	.80	1.0	1.7	18	74	5.3	.26	.03
5	.10	.84	.90	.75	.83	1.1	1.6	16	61	4.1	.21	.06
6	.10	.84	.86	.63	.90	1.1	1.9	14	54	3.2	.21	.07
7	.12	.84	.79	.60	.75	1.0	2.2	16	48	2.4	.17	.08
8	.11	.72	.74	.58	.63	.99	2.4	16	41	1.8	.17	.08
9	.11	.78	.78	.55	.52	.96	2.5	19	37	1.6	.16	.08
10	.11	.90	.84	.50	.42	.99	4.3	24	34	1.4	.14	.08
11	.12	.84	.92	.47	.47	1.1	6.2	27	33	1.2	.14	.08
12	.12	.84	.92	.50	.53	1.1	7.8	28	28	1.1	.16	.07
13	.12	.73	.88	.47	.70	1.2	9.0	31	24	4.0	.14	.08
14	.16	.65	.90	.43	.84	1.2	8.3	35	22	4.9	.14	.07
15	.24	.57	.98	.39	.93	1.3	9.5	42	22	2.7	.14	.07
16	.35	.60	1.2	.36	.87	1.4	12	46	20	2.0	.32	.07
17	.41	.62	1.4	.37	.86	1.3	14	79	18	1.4	.49	.06
18	.41	.64	1.3	.40	.76	1.2	15	113	16	1.2	.38	.05
19	.45	.68	1.1	.45	.84	1.2	16	94	15	1.2	.29	.05
20	.53	.72	1.0	.52	.77	1.4	17	91	14	1.0	.17	.05
21	.49	.72	1.1	.65	.67	1.4	15	124	12	.78	.12	.05
22	.45	.72	1.3	.88	.74	1.5	15	232	11	.62	.10	.05
23	.45	.70	1.1	1.2	.82	1.7	14	599	9.7	.53	.08	.05
24	.47	.66	.90	.96	.90	1.8	15	426	8.6	.49	.05	.05
25	.58	.64	1.0	.62	1.0	1.9	15	367	7.8	.96	.05	.05
26	.67	.66	1.2	.62	1.1	2.4	15	323	7.2	1.8	.05	.05
27	.84	.68	1.5	.69	1.0	2.8	14	282	6.5	2.5	.03	.06
28	.90	.74	1.3	.78	.96	2.7	14	240	6.4	2.4	.03	.06
29	.90	.79	1.2	.84	---	2.2	13	201	6.0	1.4	.03	.06
30	1.0	.78	1.2	.78	---	2.6	12	168	5.4	.90	.03	.06
31	.96	---	1.1	.74	---	2.1	---	139	---	.58	.02	---
TOTAL	11.58	22.32	31.51	20.58	21.74	45.60	279.8	3847	936.6	68.06	5.50	1.74
MEAN	.37	.74	1.02	.66	.78	1.47	9.33	124	31.2	2.20	.18	.058
MAX	1.0	.90	1.5	1.2	1.1	2.8	17	599	114	5.4	.49	.08
MIN	.07	.57	.64	.36	.42	.96	1.6	11	5.4	.49	.02	.02
AC-FT	23	44	63	41	43	90	555	7630	1860	135	11	3.5
CAL YR 1980	TOTAL	11852.00	MEAN	32.4	MAX	391	MIN	.04	AC-FT	23510		
WTR YR 1981	TOTAL	5292.03	MEAN	14.5	MAX	599	MIN	.02	AC-FT	10500		

PLATTE RIVER BASIN

06647800 BOX ELDER CREEK NEAR BOXELDER, WY

LOCATION.--Lat 42°43'54", long 105°47'14", in NW¼ sec.24, T.32 N., R.75 W., Converse County, Hydrologic Unit 10180007, on left bank 0.2 mi (0.3 km) upstream from Converse County Park, 0.9 mi (1.4 km) downstream from bridge on Boxelder Road, 1.3 mi (2.1 km) downstream from Spring Creek, 9.3 mi (15.0 km) north of Boxelder, and 13.5 mi (21.7 km) southeast of Glenrock.

DRAINAGE AREA.--136 mi² (352 km²).

PERIOD OF RECORD.--April to September 1981.

GAGE.--Water-stage recorder. Altitude of gage is 6,080 ft (1,853 m), from topographic map.

REMARKS.--Reocreds good. Diversions for irrigation of about 800 acres (3.24 km²) above station. Additional discharge measurements on Box Elder Creek made closer to the Madison Formation outcropping are listed in the "DISCHARGE AT PARTIAL-RECORD STATIONS AND MISCELLANEOUS SITES" section of this report.

EXTREMES FOR PERIOD APRIL TO SEPTEMBER.--Maximum discharge, 853 ft³/s (24.2 m³/s) May 23, gage height, 3.95 ft (1.204 m); minimum daily, 0.80 ft³/s (0.023 m³/s) Aug. 30.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1							---	8.2	144	4.6	3.2	.82
2							---	7.0	120	4.3	1.9	.82
3							---	8.2	109	5.0	1.9	.85
4							---	14	131	5.7	1.8	.90
5							---	13	87	5.9	1.6	.99
6							---	10	73	4.8	1.8	1.3
7							---	10	56	3.7	1.9	1.4
8							---	11	55	2.9	1.8	1.3
9							---	12	50	2.9	1.9	1.3
10							---	17	40	2.9	1.8	1.3
11							---	19	40	2.6	1.8	1.3
12							---	22	37	2.4	1.5	1.2
13							---	32	30	3.5	1.4	1.4
14							---	39	27	4.4	1.6	1.3
15							---	44	27	4.1	1.5	1.2
16							---	51	26	4.6	1.4	1.2
17							6.3	103	23	5.0	1.4	1.2
18							6.5	159	21	4.4	1.4	1.1
19							7.7	125	18	3.9	1.2	.99
20							9.8	114	15	3.5	1.1	.90
21							11	131	12	3.2	.99	.90
22							13	208	9.3	3.0	.90	.90
23							11	639	7.9	2.8	.90	.90
24							9.2	507	7.2	2.7	.83	.90
25							9.8	403	6.5	23	.83	.99
26							10	390	6.1	8.5	.83	.99
27							10	323	6.1	5.7	.83	1.1
28							10	288	6.8	5.0	.83	1.1
29							11	240	6.3	4.6	.83	1.1
30							10	204	5.0	4.1	.80	.99
31							---	173	---	3.7	.82	---
TOTAL							---	4324.4	1202.2	147.4	43.29	32.64
MEAN							---	139	40.1	4.75	1.40	1.09
MAX							---	639	144	23	3.2	1.4
MIN							---	7.0	5.0	2.4	.80	.82
AC-FT							---	8580	2380	292	86	65

06647810 BOX ELDER CREEK AT CONVERSE COUNTY PARK, NEAR CAREYHURST, WY

LOCATION.--Lat 42°46'11", long 105°46'21", in SW¼ sec.6, T.32 N., R.74 W., Converse County, Hydrologic Unit 10180007, Converse County Park, on left bank 0.1 mi (0.2 km) upstream from Park boundary, 2.3 mi (3.7 km) upstream from Hunton Creek, 7.8 mi (12.6 km) southwest of Careyhurst, and 7.8 mi (12.6 km) southeast of Glenrock.

DRAINAGE AREA.--138 mi² (357 km²).

PERIOD OF RECORD.--May to September 1981.

GAGE.--Water-stage recorder. Altitude of gage is 5,240 ft (1,600 m), from topographic map. No facilities available to measure flows greater than 200 ft³/s (5.7 m³/s).

REMARKS.--Records good except those in the 2 to 4 ft³/s (.06 to .11 m³/s) range and those above 300 ft³/s (8.5 m³/s), which are poor. Diversions for irrigation of about 800 acres (3.24 km²) above station. Additional measurements on Box Elder Creek closer to the Madison Formation outcropping are listed in the "DISCHARGE AT PARTIAL-RECORD STATIONS AND MISCELLANEOUS SITES" section of this report.

EXTREMES FOR PERIOD MAY TO SEPTEMBER.--Maximum discharge, 853 ft³/s (24.2 m³/s) May 23, gage height, 4.98 ft (1.518 m), from rating curve extended above 200 ft³/s (5.7 m³/s) on the basis of peak flow at station 06647800; minimum daily discharge, 0.92 ft³/s (0.026 m³/s) Aug. 30.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1								8.4	146	4.8	4.4	.98
2								7.0	119	4.4	3.8	.98
3								8.0	109	4.8	2.5	.98
4								14	134	5.6	1.9	.98
5								13	92	5.6	1.7	.98
6								10	73	5.2	1.5	1.2
7								10	63	4.6	1.5	1.3
8								11	54	4.1	1.4	1.1
9								12	50	3.9	1.4	1.1
10								17	39	3.9	1.6	1.1
11								19	39	3.8	1.4	1.1
12								21	37	3.8	1.3	1.1
13								29	30	3.8	1.3	1.1
14								37	27	4.6	1.2	1.2
15								42	26	4.4	1.4	1.2
16								50	24	4.2	1.3	1.2
17								98	23	5.4	1.2	1.1
18								166	21	4.6	1.2	1.1
19								127	19	4.2	1.2	1.1
20								114	16	4.1	1.1	1.1
21								131	13	3.9	1.1	1.0
22								206	12	3.8	1.1	1.1
23								632	9.7	3.8	.98	1.0
24								504	8.0	3.6	.98	1.1
25								389	6.7	20	.98	1.0
26								382	5.8	15	.98	1.1
27								316	5.6	6.5	.98	1.0
28								290	7.0	5.2	.98	1.1
29								239	7.0	5.0	.98	1.0
30								206	5.8	4.8	.92	1.1
31								177	---	4.4	.98	---
TOTAL								4285.4	1221.6	165.8	45.26	32.50
MEAN								138	40.7	5.35	1.46	1.08
MAX								632	146	20	4.4	1.3
MIN								7.0	5.6	3.6	.92	.98
AC-FT								8500	2420	329	90	64

LOCATION.--Lat 42°45'04", long 105°44'25", in SE½SW¼SE¼ sec.8, T.32 N., R.74 W., Converse County, Hydrologic Unit 10180007, on right bank 4.6 mi (7.4 km) southwest of Barber Ranch and 7.6 mi (12.2 km) southwest of Careyhurst. Prior to Sept. 25, 1980, at site 170 ft (51.8 m) downstream.

PERIOD OF RECORD.--October 1974 to current year.

GAGE.--Water-stage recorder and bedrock control. Altitude of gage is 5,670 ft (1,728 m), from topographic map. Prior to Sept. 25, 1980, at site 170 ft (51.8 m) downstream at different datum.

REMARKS.--Records good except those above 7 ft³/s (0.20 m³/s), which are poor. No diversion above station.

AVERAGE DISCHARGE.--7 years, 1.33 ft³/s (0.038 m³/s), 964 acre-ft/yr (1.19 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 4193 ft³/s (5.47 m³/s) July 25, 1981, gage height, 62.11 ft (0.643 m), from rating curve extended above 62 ft³/s (1.76 m³/s) on basis of weir flow computation of peak flow; maximum gage height, 3.70 ft (1.128 m) July 25, 1981 (backwater from log jam), from floodmarks; minimum daily, 0.32 ft³/s (0.009 m³/s) Nov. 21, 1979.

a-May have been exceeded when the log jam that produced the maximum gage height on July 25, 1981 broke, releasing an unknown discharge.

b-About.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 8.0 ft³/s (0.23 m³/s) and maximum (*):

Date	Time	Discharge		Gage height	
		(ft ³ /s)	(m ³ /s)	(ft)	(m)
May 17	1915	13	0.37	1.22	0.372
July 25	1650	*a193	5.47	b2.11	.643

a-May have been exceeded when the log jam that produced the maximum gage height on July 25 broke, releasing an unknown discharge.

b-About.

Maximum gage height, 3.70 ft (1.128 m) July 25 (backwater from log jam), from floodmarks; minimum daily discharge, 0.35 ft³/s (0.010 m³/s) Sept. 14, 15, 18-21, 28.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.53	.49	.40	.49	.43	.60	.60	.57	1.4	.60	.45	.38
2	.55	.45	.45	.49	.47	.60	.60	.56	1.2	.63	.45	.38
3	.55	.45	.49	.45	.47	.60	.80	1.4	1.1	.62	.45	.38
4	.55	.45	.49	.49	.47	.60	.80	1.5	1.9	.59	.45	.38
5	.55	.45	.45	.55	.47	.60	1.1	1.1	1.2	.52	.45	.40
6	.55	.45	.45	.49	.50	.60	1.1	.98	1.1	.49	.45	.48
7	.55	.45	.40	.49	.49	.55	1.1	1.2	1.1	.47	.45	.43
8	.49	.45	.45	.49	.47	.60	1.0	1.1	.99	.47	.45	.41
9	.49	.45	.49	.49	.46	.60	1.0	.96	.96	.47	.49	.39
10	.49	.45	.49	.49	.45	.60	1.0	.96	.96	.46	.49	.39
11	.49	.45	.49	.49	.45	.60	.95	.88	.93	.44	.45	.39
12	.49	.49	.45	.49	.45	.55	.84	.88	.89	.48	.45	.38
13	.49	.49	.45	.49	.55	.55	.77	1.1	.85	.54	.45	.38
14	.55	.45	.45	.49	.66	.55	.71	.88	.84	.50	.45	.35
15	.60	.49	.49	.47	.60	.55	.68	.88	.84	.45	.45	.35
16	.66	.49	.49	.46	.60	.55	.66	.88	.81	.45	.45	.36
17	.60	.49	.49	.45	.66	.66	.64	5.4	.76	.46	.45	.36
18	.60	.49	.45	.50	.55	.66	.60	5.8	.76	.46	.45	.35
19	.66	.49	.43	.55	.66	.66	.65	2.8	.74	.45	.40	.35
20	.60	.49	.50	.57	.66	.73	.68	2.1	.72	.43	.40	.35
21	.55	.49	.55	.60	.60	.88	.79	1.9	.71	.43	.40	.35
22	.49	.49	.55	.55	.55	.88	.89	2.8	.70	.42	.40	.36
23	.49	.49	.49	.49	.55	.88	.70	4.8	.66	.43	.40	.36
24	.49	.49	.45	.49	.60	.88	.64	3.0	.65	.44	.40	.36
25	.49	.49	.49	.49	.60	.80	.63	2.5	.64	8.3	.40	.36
26	.49	.49	.49	.49	.60	.80	.59	2.4	.63	1.0	.36	.36
27	.55	.49	.49	.49	.60	.96	.61	2.5	.63	.62	.40	.36
28	.55	.55	.49	.55	.60	.80	.67	2.1	.63	.55	.40	.35
29	.55	.55	.49	.55	---	.73	.59	1.9	.63	.49	.36	.36
30	.55	.49	.49	.55	---	.66	.58	1.8	.60	.45	.36	.39
31	.49	---	.49	.52	---	.66	---	1.6	---	.49	.41	---
TOTAL	16.73	14.38	14.72	15.65	15.22	20.94	22.97	59.23	26.53	23.60	13.27	11.25
MEAN	.54	.48	.47	.50	.54	.68	.77	1.91	.88	.76	.43	.38
MAX	.66	.55	.55	.60	.66	.96	1.1	5.8	1.9	8.3	.49	.48
MIN	.49	.45	.40	.45	.43	.55	.58	.56	.60	.42	.36	.35
AC-FT	33	29	29	31	30	42	46	117	53	47	26	22

CAL	YR	1980	TOTAL	618.80	MEAN	1.69	MAX	19	MIN	.40	AC-FT	1230
WTR	YR	1981	TOTAL	254.49	MEAN	.70	MAX	8.3	MIN	.35	AC-FT	505

06647900 LITTLE BOX ELDER CREEK AT LITTLE BOX ELDER CAVE, NEAR CAREYHURST, WY

LOCATION.--Lat 42°45'38", long 105°43'33", in NE¼SE¼NW¼ sec.9, T.32 N., R.74 W., Converse County, Hydrologic Unit 10180007, on left bank 0.3 mi (0.5 km) southwest of Little Box Elder Cave, 3.6 mi (5.8 km) southwest of Barber Ranch, and 6.6 mi (10.6 km) southwest of Careyhurst.

DRAINAGE AREA.--8.47 mi² (21.9 km²).

PERIOD OF RECORD.--October 1974 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 5,480 ft (1,670 m), from topographic map.

REMARKS.--Records good. One small detention reservoir above station.

AVERAGE DISCHARGE.--7 years, 0.31 ft³/s (0.009 m³/s), 225 acre-ft/yr (277,400 m³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 41 ft³/s (1.16 m³/s) May 18, 1978, gage height, 2.07 ft (0.631 m); no flow for many days each year.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 4.7 ft³/s (0.13 m³/s) July 25, gage height, 1.55 ft (0.472 m); no flow for many days.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
2	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
3	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
4	.00	.00	.00	.00	.00	.00	.00	.00	.22	.00	.00	.00
5	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
6	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
7	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
8	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
9	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
10	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
11	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
12	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
13	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
14	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
15	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
16	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
17	.00	.00	.00	.00	.00	.00	.00	.04	.00	.00	.00	.00
18	.00	.00	.00	.00	.00	.00	.00	1.3	.00	.00	.00	.00
19	.00	.00	.00	.00	.00	.00	.00	.11	.00	.00	.00	.00
20	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
21	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
22	.00	.00	.00	.00	.00	.00	.00	.19	.00	.00	.00	.00
23	.00	.00	.00	.00	.00	.00	.00	1.7	.00	.00	.00	.00
24	.00	.00	.00	.00	.00	.00	.00	.51	.00	.00	.00	.00
25	.00	.00	.00	.00	.00	.00	.00	.34	.00	.82	.00	.00
26	.00	.00	.00	.00	.00	.00	.00	.19	.00	3.3	.00	.00
27	.00	.00	.00	.00	.00	.00	.00	.33	.00	.02	.00	.00
28	.00	.00	.00	.00	.00	.00	.00	.16	.00	.00	.00	.00
29	.00	.00	.00	.00	---	.00	.00	.08	.00	.00	.00	.00
30	.00	.00	.00	.00	---	.00	.00	.04	.00	.00	.00	.00
31	.00	---	.00	.00	---	.00	---	.00	---	.00	.00	---
TOTAL	.00	.00	.00	.00	.00	.00	.00	4.99	.22	4.14	.00	.00
MEAN	.000	.000	.000	.000	.000	.000	.000	.16	.007	.13	.000	.000
MAX	.00	.00	.00	.00	.00	.00	.00	1.7	.22	3.3	.00	.00
MIN	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
AC-FT	.00	.00	.00	.00	.00	.00	.00	9.9	.4	8.2	.00	.00
CAL YR 1980	TOTAL	207.93	MEAN .57	MAX 14	MIN .00	AC-FT 412						
WTR YR 1981	TOTAL	9.35	MEAN .026	MAX 3.3	MIN .00	AC-FT 19						

PLATTE RIVER BASIN

06647910 LITTLE BOX ELDER SPRING NEAR CAREYHURST, WY

LOCATION.--Lat 42°46'10", long 105°42'08", in SE $\frac{1}{4}$ NW $\frac{1}{4}$ SE $\frac{1}{4}$ sec.3, T.32 N., R.74 W., Converse County, Hydrologic Unit 10180007, in spring house, 2.4 mi (3.9 km) southwest of Barber Ranch, and 5.7 mi (9.2 km) south of Careyhurst.

PERIOD OF RECORD.--October 1980 to September 1981.

GAGE.--Water-stage recorder and Cipolletti weir. Altitude of gage is 5,310 ft (1,620 m), from topographic map.

REMARKS.--Records good except those for periods of missing record, Oct. 2 to Nov. 5, Nov. 7-28, which are fair. No independent verification of theoretical stage-discharge rating. Flow rises inside the spring house, drops over the weir, and exits the house through a pipeline to Douglas.

EXTREMES FOR CURRENT YEAR.--Maximum daily discharge, 2.6 ft³/s (0.074 m³/s) Dec. 6, 7, gage height, 0.40 ft (0.122 m); minimum daily, 1.8 ft³/s (0.051 m³/s) Sept. 15-18, 23, 24, 26-29.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.4	2.3	2.4	2.1	2.3	2.0	2.1	2.2	2.5	2.2	2.0	1.9
2	2.4	2.3	2.5	2.1	2.3	2.0	2.2	2.2	2.5	2.2	2.0	1.9
3	2.4	2.3	2.5	2.1	2.3	2.0	2.2	2.2	2.5	2.2	2.0	1.9
4	2.4	2.3	2.5	2.1	2.3	2.0	2.1	2.2	2.5	2.2	2.0	1.9
5	2.4	2.3	2.5	2.1	2.3	2.0	2.1	2.2	2.4	2.2	2.0	1.9
6	2.4	2.3	2.6	2.1	2.3	2.0	2.2	2.3	2.5	2.2	2.0	1.9
7	2.4	2.3	2.6	2.1	2.3	2.0	2.2	2.3	2.5	2.2	2.0	1.9
8	2.4	2.4	2.5	2.1	2.3	2.0	2.2	2.3	2.5	2.2	2.0	1.9
9	2.4	2.4	2.5	2.1	2.2	2.0	2.2	2.3	2.5	2.2	2.0	1.9
10	2.4	2.4	2.4	2.1	2.1	2.0	2.2	2.3	2.4	2.2	2.0	1.9
11	2.4	2.4	2.4	2.2	2.1	2.0	2.2	2.3	2.4	2.2	2.0	1.9
12	2.4	2.4	2.4	2.2	2.1	2.0	2.2	2.3	2.4	2.2	2.0	1.9
13	2.4	2.4	2.4	2.2	2.1	2.0	2.2	2.3	2.4	2.2	2.0	1.9
14	2.4	2.4	2.4	2.2	2.1	2.1	2.2	2.3	2.4	2.2	1.9	1.9
15	2.4	2.3	2.3	2.2	2.1	2.0	2.2	2.3	2.3	2.1	1.9	1.8
16	2.3	2.3	2.3	2.2	2.1	2.1	2.2	2.3	2.3	2.1	1.9	1.8
17	2.3	2.3	2.3	2.2	2.1	2.1	2.2	2.3	2.3	2.1	1.9	1.8
18	2.3	2.3	2.2	2.2	2.2	2.0	2.2	2.3	2.3	2.1	1.9	1.8
19	2.3	2.3	2.2	2.2	2.2	2.0	2.2	2.3	2.3	2.1	1.9	1.9
20	2.3	2.3	2.2	2.2	2.2	2.1	2.2	2.4	2.3	2.1	1.9	1.9
21	2.3	2.3	2.2	2.2	2.1	2.0	2.2	2.4	2.3	2.1	1.9	1.9
22	2.3	2.3	2.3	2.2	2.1	2.0	2.2	2.4	2.3	2.1	1.9	1.9
23	2.3	2.3	2.2	2.2	2.1	2.0	2.2	2.4	2.3	2.1	1.9	1.8
24	2.3	2.3	2.2	2.2	2.1	2.1	2.3	2.4	2.3	2.1	1.9	1.8
25	2.3	2.3	2.2	2.2	2.1	2.1	2.3	2.4	2.3	2.1	1.9	1.9
26	2.3	2.3	2.2	2.2	2.1	2.1	2.3	2.4	2.3	2.0	1.9	1.8
27	2.3	2.3	2.2	2.3	2.0	2.1	2.2	2.4	2.3	2.0	1.9	1.8
28	2.3	2.3	2.2	2.3	2.0	2.1	2.2	2.4	2.3	2.0	1.9	1.8
29	2.3	2.3	2.2	2.3	---	2.2	2.2	2.4	2.2	2.0	1.9	1.8
30	2.3	2.3	2.1	2.3	---	2.2	2.2	2.4	2.2	2.1	1.9	1.9
31	2.3	---	2.1	2.3	---	2.1	---	2.5	---	2.0	1.9	---
TOTAL	72.8	69.7	72.2	67.7	60.6	63.4	66.0	72.1	71.0	66.0	60.2	56.0
MEAN	2.35	2.32	2.33	2.18	2.16	2.05	2.20	2.33	2.37	2.13	1.94	1.87
MAX	2.4	2.4	2.6	2.3	2.3	2.2	2.3	2.5	2.5	2.2	2.0	1.9
MIN	2.3	2.3	2.1	2.1	2.0	2.0	2.1	2.2	2.2	2.0	1.9	1.8
AC-FT	144	138	143	134	120	126	131	143	141	131	119	111

WTR YR 1981 TOTAL 797.7 MEAN 2.19 MAX 2.6 MIN 1.8 AC-FT 1580

06647920 COTTONWOOD CREEK NEAR CAREYHURST, WY

LOCATION.--Lat 42°44'16", long 105°40'31", in NE¼SE¼SE¼ sec.14, T.32 N., R.74 W., Converse County, Hydrologic Unit 10180007, on right bank 4.2 mi (6.8 km) south of Barber Ranch, 5.6 mi (9.0 km) upstream from Little Box Elder Creek, and 7.7 mi (12.4 km) south of Careyhurst.

DRAINAGE AREA.--2.33 mi² (6.03 km²).

PERIOD OF RECORD.--March to September 1981.

GAGE.--Water-stage recorder and bedrock control. Altitude of gage is 5,810 ft (1,770 m), from topographic map.

REMARKS.--Records good. No diversion above station.

EXTREMES FOR CURRENT YEAR.--May to September 1981: Maximum discharge during period of operation, 10.3 ft³/s (0.29 m³/s) July 25, gage height, 2.42 ft (0.738 m) backwater from debris, discharge determination from area-velocity study of peak flow; minimum daily discharge, 0.31 ft³/s (0.009 m³/s) Aug. 9-22, Sept. 21-24.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1						---	.42	.49	.79	.43	.43	.36
2						---	.43	.49	.74	.43	.43	.36
3						---	.52	.69	.74	.37	.43	.36
4						---	.49	.68	.74	.37	.43	.36
5						---	.53	.65	.57	.37	.43	.36
6						---	.52	.65	.57	.37	.43	.34
7						---	.43	.78	.57	.37	.43	.36
8						---	.42	.74	.57	.37	.43	.36
9						---	.43	.73	.49	.37	.31	.36
10						---	.42	.65	.49	.37	.31	.36
11						---	.43	.65	.49	.37	.31	.36
12						---	.49	.65	.49	.37	.31	.36
13						---	.49	.65	.49	.37	.31	.36
14						---	.49	.60	.49	.37	.31	.36
15						---	.49	.57	.49	.37	.31	.36
16						---	.49	.59	.49	.37	.31	.36
17						---	.49	2.9	.43	.37	.31	.36
18						---	.49	3.0	.43	.37	.31	.36
19						---	.49	1.5	.43	.37	.31	.36
20						---	.49	1.2	.43	.36	.31	.34
21						---	.53	1.1	.43	.36	.31	.31
22						---	.57	1.4	.43	.36	.31	.31
23						---	.53	2.2	.43	.36	.35	.31
24						---	.49	1.6	.43	.36	.36	.31
25						---	.49	1.5	.43	1.0	.36	.36
26						.36	.49	1.3	.43	.47	.36	.36
27						.42	.49	1.2	.43	.43	.36	.36
28						.43	.49	1.1	.43	.43	.36	.36
29						.42	.49	.95	.43	.43	.36	.36
30						.43	.49	.90	.43	.43	.36	.36
31						.42	---	.84	---	.43	.36	---
TOTAL						---	14.51	32.95	15.23	12.57	11.01	10.56
MEAN						---	.48	1.06	.51	.41	.36	.35
MAX						---	.57	3.0	.79	1.0	.43	.36
MIN						---	.42	.49	.43	.36	.31	.31
AC-FT						---	29	65	30	25	22	21

PLATTE RIVER BASIN

06647990 BOX ELDER CREEK BELOW INTERSTATE 25, NEAR CAREYHURST, WY

LOCATION.--Lat 42°49'41", long 105°40'33", in SW¼NE¼SE¼ sec.13, T.33 N., R.74 W., Converse County, Hydrologic Unit 10180007, 300 ft (91 m) downstream from bridge on old U.S. Highway 20-26, 1.5 mi (2.4 km) south of Careyhurst, 1.9 mi (3.1 km) downstream from I-25, and 3.2 mi (5.1 km) upstream from mouth.

PERIOD OF RECORD.--June to September 1981.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE LAB (UMHOS)	PH LAB (UNITS)	TEMPER- ATURE (DEG C)	HARD- NESS (MG/L AS CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)
JUN											
08...	1630	25	266	8.0	16.0	120	30	11	15	.6	2.3
24...	1445	3.0	516	8.0	22.5	230	56	21	33	1.0	4.9
JUL											
19...	1300	.09	699	8.2	25.0	260	70	20	58	1.6	4.6
AUG											
23...	1135	.04	635	8.3	21.5	260	70	21	73	2.0	5.4
SEP											
20...	1325	.04	907	8.2	21.0	260	69	22	110	3.0	4.1

DATE	ALKA- LINITY LAB (MG/L AS CACO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)	SOLIDS, DIS- SOLVED (TONS PER DAY)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	PHOS- PHORUS, TOTAL (MG/L AS P)
JUN										
08...	110	30	14	.3	16	180	.24	12.2	.06	.010
24...	220	64	14	.4	22	350	.48	2.8	.04	.000
JUL										
19...	290	69	8.3	.5	21	420	.57	.10	.60	.020
AUG										
23...	290	140	6.9	.3	16	510	.69	.06	.04	.030
SEP										
20...	260	200	10	.5	22	600	.82	.06	.36	.030

06649000 LA PRELE CREEK NEAR DOUGLAS, WY

LOCATION.--Lat 42°40'52", long 105°37'48", in SW¼NE¼SW¼ sec.5, T.31 N., R.73 W., Converse County, Hydrologic Unit 10180007, on right bank 0.8 mi (1.3 km) upstream from La Prele Reservoir and 13.5 mi (21.7 km) southwest of Douglas.

DRAINAGE AREA.--135 mi² (350 km²).

PERIOD OF RECORD.--August 1919 to current year (no winter records since 1971).

REVISED RECORDS.--WSP 1710: Drainage area. WSP 1918: 1920(M), 1952(M).

GAGE.--Water-stage recorder. Altitude of gage is about 5,600 ft (1,707 m), from nearby line of levels.

REMARKS.--Records good. Several small reservoirs above station, combined capacity, about 140 acre-ft (0.173 hm³) for irrigation. Diversions for irrigation of about 4,600 acres (18.6 km²) above station. Water is imported from La Bonte Creek and Wagon Hound Creek basins into Little La Prele Creek, upstream from the station, for irrigation below La Prele Reservoir.

COOPERATION.--Records collected and computed by Office of the Wyoming State Engineer and reviewed by Geological Survey.

AVERAGE DISCHARGE.--52 years (water years 1920-71), 40.4 ft³/s (1.144 m³/s), 29,270 acre-ft/yr (36.1 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 17,300 ft³/s (490 m³/s) June 12, 1970, gage height, 13.01 ft (3.965 m), from rating curve extended above 2,700 ft³/s (76.5 m³/s) on basis of slope-area measurement of peak flow; no flow at times in 1936, 1939-40, 1943.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 462 ft³/s (13.1 m³/s) May 23, gage height 8.09 ft (2.466 m) minimum daily during period of operation, 0.50 ft³/s (0.014 m³/s) Sept. 10.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1						5.3	2.3	.88	52	4.4	1.1	.70
2						5.5	2.3	.70	39	3.8	.98	.62
3						5.5	2.6	.98	30	3.0	.98	.62
4						5.5	2.3	1.1	33	1.9	1.1	.62
5						5.1	2.3	.88	24	1.8	1.3	.56
6						4.9	2.3	.98	16	1.7	1.2	.70
7						4.2	2.3	.78	14	1.9	1.4	.62
8						3.6	2.5	.70	13	1.7	1.1	.62
9						3.5	2.3	.62	7.2	1.6	1.1	.56
10						2.7	2.3	.98	5.5	1.6	1.7	.50
11						2.4	2.7	1.4	4.7	1.4	1.4	.62
12						2.3	2.7	1.4	2.7	1.4	1.4	.56
13						2.1	2.7	1.9	2.3	1.6	1.3	.62
14						2.1	2.5	1.9	2.3	1.4	1.1	.62
15						1.9	2.5	1.3	2.1	1.4	.98	.62
16						1.8	2.7	1.3	1.8	1.4	.88	.62
17						2.1	5.8	18	1.7	1.4	.98	.62
18						3.5	4.9	100	1.7	1.4	.98	.56
19						4.2	5.1	36	1.6	1.4	.98	.56
20						2.3	4.9	13	1.6	1.4	.88	.56
21						2.3	3.7	23	1.7	1.4	.88	.56
22						2.3	7.2	100	1.6	1.4	.88	.56
23						2.3	6.3	344	1.7	1.4	.88	.62
24						3.7	5.5	264	1.4	1.4	.88	.56
25						4.4	4.7	222	1.9	1.6	1.2	.56
26						3.8	2.6	206	2.6	1.7	.70	.56
27						2.3	2.6	154	4.7	1.6	.78	.56
28						2.2	2.5	133	4.9	1.5	.78	.56
29						2.1	.98	107	5.3	1.4	.70	.56
30						2.1	.88	88	5.1	1.2	.62	.62
31						2.1	---	66	---	1.1	.62	---
TOTAL						100.1	96.96	1891.80	287.1	53.3	31.76	17.80
MEAN						3.23	3.23	61.0	9.57	1.72	1.02	.59
MAX						5.5	7.2	344	52	4.4	1.7	.70
MIN						1.8	.88	.62	1.4	1.1	.62	.50
AC-FT						199	192	3750	569	106	63	35

PLATTE RIVER BASIN

06649500 LA PRELE CREEK NEAR ORPHA, WY

LOCATION.--Lat 42°50'12", long 105°19'25", in SE¼NW¼NW¼ sec.15, T.33 N., R.72 W., Converse County, Hydrologic Unit 10180007, at bridge on county road, 1.5 mi (2.4 km) upstream from mouth, 1.5 mi (2.4 km) southeast of Orpha, and 7.5 mi (12.1 km) northwest of Douglas.

PERIOD OF RECORD.--June to September 1981.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE LAB (UMHOS)	PH LAB (UNITS)	TEMPER- ATURE (DEG C)	HARD- NESS (MG/L AS CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)
MAY 18...	1815	.08	900	8.3	8.0	290	71	27	100	2.6	9.8
JUN 27...	1435	.03	1000	8.3	17.0	310	81	25	120	3.0	13
JUL 19...	1430	.09	968	8.2	22.0	280	75	23	120	3.1	11
AUG 30...	1620	.19	1010	8.3	20.5	310	74	30	130	3.2	15
SEP 28...	1155	.55	1080	8.3	13.5	340	88	30	120	2.8	12

DATE	ALKA- LITY LAB (MG/L AS CACO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTITUENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)	SOLIDS, DIS- SOLVED (TONS PER DAY)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	PHOS- PHORUS, TOTAL (MG/L AS P)
MAY 18...	380	99	34	.6	17	593	.81	.13	.17	.150
JUN 27...	420	130	23	.6	34	680	.92	.06	.18	.000
JUL 19...	400	110	18	.6	30	630	.86	.15	.55	.070
AUG 30...	410	170	16	.6	38	720	.98	.37	.04	.060
SEP 28...	440	140	16	1.0	42	720	.98	1.1	.14	.070

06650500 WAGONHOUND CREEK NEAR LA BONTE, WY

LOCATION.--Lat 42°39'35", long 105°22'10", in SW¼NE¼ sec.16, T.31 N., R.71 W., Converse County, Hydrologic Unit 10180008, 0.6 mi (1.0 km) upstream from mouth, 3.5 mi (5.6 km) northeast of La Bonte, and 6.0 mi (10 km) south of Douglas.

PERIOD OF RECORD.--June to September 1981.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE LAB (UMHOS)	PH LAB (UNITS)	TEMPER- ATURE (DEG C)	HARD- NESS (MG/L AS CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)
MAY											
31...	1430	6.6	1560	8.0	15.0	850	270	43	56	.8	5.2
JUN											
28...	1455	.32	1850	7.9	19.5	1100	330	74	52	.7	8.2
JUL											
30...	1900	.18	1870	7.9	19.5	1100	370	53	49	.6	6.7
AUG											
16...	1920	.30	1890	7.8	15.0	1200	350	72	57	.7	7.1
SEP											
28...	0935	.07	2050	7.9	10.0	1300	420	66	63	.8	6.9

DATE	ALKA- LINITY LAB (MG/L AS CACO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)	SOLIDS, DIS- SOLVED (TONS PER DAY)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	PHOS- PHORUS, TOTAL (MG/L AS P)
MAY										
31...	220	720	21	.9	24	1270	1.7	22.6	.21	.100
JUN										
28...	240	950	18	.7	22	1600	2.2	1.4	.45	.020
JUL										
30...	170	960	19	.8	20	1600	2.2	.78	1.0	.010
AUG										
16...	200	1000	14	.5	20	1700	2.3	1.4	.70	.060
SEP										
28...	210	1100	18	.8	25	1800	2.4	.34	.54	.000

PLATTE RIVER BASIN

06651500 LA BONTE CREEK NEAR LA BONTE, WY

LOCATION.--Lat 42°38'59", long 105°21'36", in SE¼SW¼ sec.15, T.31 N., R.71 W., Converse County, Hydrologic Unit 10180008, 1.1 mi (1.8 km) upstream from mouth, 3.0 mi (4.8 km) northeast of La Bonte, and 7.3 mi (11.7 km) south of Douglas.

PERIOD OF RECORD.--June to September 1981.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE LAB (UMHOS)	PH LAB (UNITS)	TEMPER- ATURE (DEG C)	HARD- NESS (MG/L AS CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)
MAY											
31...	1200	102	334	7.9	16.0	130	38	8.3	24	.9	2.1
JUN											
28...	1600	3.4	697	8.3	24.5	280	82	17	57	1.5	7.1
JUL											
30...	2045	1.6	770	8.2	23.5	280	86	15	62	1.6	6.9
AUG											
16...	2040	2.0	750	8.2	20.0	300	89	20	64	1.6	5.9
SEP											
28...	1045	.15	1150	8.1	11.0	500	140	33	80	1.6	6.0

DATE	ALKA- LINITY LAB (MG/L AS CACO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)	SOLIDS, DIS- SOLVED (TONS PER DAY)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	PHOS- PHORUS, TOTAL (MG/L AS P)
MAY										
31...	120	49	9.2	.4	18	220	.30	60.6	.09	.080
JUN										
28...	250	150	14	.4	24	500	.68	4.6	.07	.020
JUL										
30...	230	180	15	.5	23	530	.72	2.3	.53	.010
AUG										
16...	210	200	7.5	.3	22	540	.73	2.9	.13	.090
SEP										
28...	260	360	14	.4	28	820	1.1	.33	.02	.000

06652000 NORTH PLATTE RIVER AT ORIN, WY

LOCATION.--Lat 42°39'02", long 105°09'46", in SE¼SW¼SW¼ sec.17, T.31 N., R.69 W., Converse County, Hydrologic Unit 10180008, on right bank 630 ft (192 m) downstream from bridge on U.S. Highway 87, 0.2 mi (0.3 km) upstream from Shawnee Creek, and 1.5 mi (2.4 km) east of Orin.

DRAINAGE AREA.--14,888 mi² (38,560 km²), of which 1,193 mi² (3,090 km²) is probably noncontributing.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--January, April to November 1895, April to October 1896, January 1897 to December 1898, April to November 1899, April to September 1917, April to September 1918, May to September 1924, April 1958 to current year. Monthly discharge only for some periods, published in WSP 1310. Published as "at Orin Junction" 1895, 1897-99 and as "at McKinley" 1917-18.

REVISED RECORDS.--WSP 1310: 1896, 1899. WDR WY-76-1: Drainage area.

GAGE.--Water-stage recorder. Altitude of gage is 4,660 ft (1,420 m), from topographic map. Jan. 1, 1895, to Nov. 30, 1899, and May 1 to Sept. 30, 1924, nonrecording gage at railroad bridge just upstream from U.S. Highway 87 at different datum. Apr. 1, 1917, to Sept. 30, 1918, nonrecording gage at site 2.2 mi (3.5 km) downstream at different datum.

REMARKS.--Records good except those for winter period, which are poor. Major regulation began after completion of Pathfinder Reservoir in April 1909. Natural flow of stream affected by storage reservoirs, power development, diversions for irrigation, and return flow from irrigated areas.

COOPERATION.--Twenty-five discharge measurements furnished by Bureau of Reclamation.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 23,800 ft³/s (674 m³/s) May 15, 1965, gage height, 10.00 ft (3.048 m); maximum gage height, 10.45 ft (3.185 m) June 12, 1970; minimum daily discharge determined, 170 ft³/s (4.81 m³/s) Sept. 11-14, 1899.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 3,070 ft³/s (86.9 m³/s) July 14, gage height, 4.40 ft (1.341 m); maximum gage height, 8.06 ft (2.457 m) Feb. 14 (backwater from ice); minimum daily discharge, 456 ft³/s (12.9 m³/s) Apr. 17.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1940	1630	1110	1080	925	747	513	1710	1010	1560	1730	2400
2	1820	1390	1090	1090	835	747	513	1710	931	1580	1920	2400
3	1770	1200	1170	1090	735	747	528	1760	845	1640	2190	2400
4	1740	1180	1200	1070	800	747	566	1890	892	1680	2140	2410
5	1730	1180	1170	1060	875	747	597	1850	818	1720	2140	2400
6	1730	1170	1150	1050	989	687	558	1740	747	1660	2100	2550
7	1740	1140	1170	1050	999	645	536	1920	695	1540	2070	2640
8	1760	1120	1140	1040	1020	645	543	1930	764	1510	2110	2640
9	1680	1100	1100	1040	900	645	521	1940	809	1470	2040	2630
10	1590	1100	1100	1040	675	645	485	1940	809	1530	2120	2400
11	1590	1100	1110	1030	625	645	463	1920	782	1540	2100	2220
12	1590	1100	1110	1000	600	645	470	1930	773	1610	2170	2180
13	1580	1140	1110	1000	960	637	477	1860	950	1840	2480	2170
14	1580	1140	1110	1000	1280	621	463	1580	960	2300	2710	2150
15	1630	1130	1130	610	1360	613	463	1440	989	1970	2760	2170
16	1760	1120	1120	800	1400	597	470	1240	979	1710	2690	2170
17	1770	1080	1120	860	1210	605	456	1310	960	1660	2720	2190
18	1730	1060	1090	940	1250	637	463	2370	1090	1680	2610	2050
19	1720	1090	1050	1000	1070	687	477	1900	1290	1770	2600	2040
20	1660	1120	1000	1040	1020	597	582	1370	1530	1770	2600	1890
21	1640	1150	940	1070	921	574	670	1180	1680	1760	2610	1820
22	1450	1140	1150	1050	911	566	687	999	1680	1780	2540	1800
23	1140	1130	1100	1120	883	566	687	1260	1680	1740	2510	1670
24	1320	1100	1020	1130	892	528	845	2010	1640	1730	2520	1540
25	1620	1070	1010	1110	883	528	883	1920	1620	1800	2480	1520
26	1630	1120	1100	1060	800	528	960	1670	1610	2120	2450	1570
27	1680	1120	1080	1060	773	513	1150	1680	1610	2000	2410	1530
28	1690	1130	1080	1020	764	528	1220	1460	1610	1850	2400	1530
29	1710	1130	1060	1090	---	528	1290	1340	1590	1770	2390	1510
30	1710	1150	1070	1070	---	521	1570	1220	1580	1760	2390	1510
31	1730	---	1060	1000	---	506	---	1120	---	1730	2390	---
TOTAL	51430	34530	34020	31670	26355	19172	20106	51169	34923	53780	73090	62100
MEAN	1659	1151	1097	1022	941	618	670	1651	1164	1735	2358	2070
MAX	1940	1630	1200	1130	1400	747	1570	2370	1680	2300	2760	2640
MIN	1140	1060	940	610	600	506	456	999	695	1470	1730	1510
AC-FT	102000	68490	67480	62820	52280	38030	39880	101500	69270	106700	145000	123200
CAL YR 1980	TOTAL	688118	MEAN	1880	MAX	5650	MIN	410	AC-FT	1365000		
WTR YR 1981	TOTAL	492345	MEAN	1349	MAX	2760	MIN	456	AC-FT	976600		

PLATTE RIVER BASIN

06652000 NORTH PLATTE RIVER AT ORIN, WY--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1966 to current year.

PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: May to September 1979.

SUSPENDED-SEDIMENT DISCHARGE: May to September 1979.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	TUR- BID- ITY (NTU)	OXYGEN, DIS- SOLVED (MG/L)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	HARD- NESS (MG/L AS CAC03)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)
OCT											
23...	1400	1140	720	8.7	6.0	8.0	10.7	37	250	64	22
26...	1550	1640	--	--	7.0	--	--	--	--	--	--
NOV											
18...	0730	1190	750	8.4	.5	6.0	11.7	K15	280	77	20
26...	1605	1160	--	--	3.0	--	--	--	--	--	--
DEC											
15...	1545	1120	--	--	6.0	--	--	--	--	--	--
17...	1000	1120	740	8.5	5.0	5.0	11.0	110	270	68	25
JAN											
20...	1550	1040	770	8.5	2.0	8.0	12.2	K1	270	57	30
22...	1150	892	--	--	3.0	--	--	--	--	--	--
FEB											
20...	0930	1030	810	8.4	5.5	15	10.0	68	280	69	25
23...	1330	883	--	--	8.0	--	--	--	--	--	--
MAR											
16...	1320	594	--	--	10.5	--	--	--	--	--	--
18...	0800	629	850	8.5	4.0	4.0	10.1	38	280	70	26
APR											
10...	1535	475	--	--	14.0	--	--	--	--	--	--
24...	1100	873	840	8.4	16.5	30	9.5	97	290	71	27
MAY											
14...	1400	1580	610	8.3	14.5	20	8.7	K13	220	56	19
JUN											
19...	1100	1250	690	8.3	19.0	30	7.8	130	230	60	20
JUL											
15...	1700	1950	--	--	24.0	--	--	--	--	--	--
19...	1200	1800	610	7.8	23.0	230	--	K2180	200	55	14
AUG											
18...	1145	2640	559	8.1	20.5	90	7.8	200	200	52	17
SEP											
16...	1200	2170	--	--	17.0	--	--	--	--	--	--
22...	0730	1800	650	8.7	15.0	10	7.5	K53	230	59	20

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

PLATTE RIVER BASIN

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06652000 NORTH PLATTE RIVER AT ORIN, WY--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	POTAS- SIUM 40 DIS- SOLVED (PCI/L AS K40)	ALKA- LINITY LAB (MG/L AS CACO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L)
OCT										
23...	56	1.5	4.4	3.3	140	200	14	.6	7.4	455
26...	--	--	--	--	--	--	--	--	--	--
NOV										
18...	65	1.7	3.3	--	150	230	19	.4	6.8	513
26...	--	--	--	--	--	--	--	--	--	--
DEC										
15...	--	--	--	--	--	--	--	--	--	--
17...	61	1.6	3.7	--	150	230	16	.6	3.7	499
JAN										
20...	66	1.8	4.1	3.1	150	240	15	.6	9.3	513
22...	--	--	--	--	--	--	--	--	--	--
FEB										
20...	70	1.8	3.6	--	150	230	16	.6	.0	508
23...	--	--	--	--	--	--	--	--	--	--
MAR										
16...	--	--	--	--	--	--	--	--	--	--
18...	73	1.9	4.0	--	160	240	18	.7	.0	530
APR										
10...	--	--	--	--	--	--	--	--	--	--
24...	67	1.7	4.3	3.2	160	240	21	.7	8.2	535
MAY										
14...	46	1.4	3.1	--	130	160	17	.5	4.0	385
JUN										
19...	46	1.3	4.3	--	140	170	20	.5	2.9	410
JUL										
15...	--	--	--	--	--	--	--	--	--	--
19...	39	1.2	3.4	2.8	130	140	13	.6	8.7	400
AUG										
18...	41	1.3	2.9	--	130	150	11	.4	9.8	360
SEP										
16...	--	--	--	--	--	--	--	--	--	--
22...	44	1.3	2.8	--	130	170	11	.6	5.3	390

DATE	SOLIDS, DIS- SOLVED (TONS PER AC-FT)	SOLIDS, DIS- SOLVED (TONS PER DAY)	NITRO- GEN, NITRATE TOTAL (MG/L AS N)	NITRO- GEN, NITRITE TOTAL (MG/L AS N)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N)	NITRO- GEN, AMMONIA TOTAL (MG/L AS NH4)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N)
OCT										
23...	.62	1400	--	--	--	.06	--	--	--	--
26...	--	--	--	--	--	--	--	--	--	--
NOV										
18...	.70	1650	--	--	.23	.20	.090	.11	.60	.69
26...	--	--	--	--	--	--	--	--	--	--
DEC										
15...	--	--	--	--	--	--	--	--	--	--
17...	.68	1510	--	--	.21	1.4	.070	.08	1.1	1.20
JAN										
20...	.70	1440	--	--	.52	.52	.070	.08	.85	.92
22...	--	--	--	--	--	--	--	--	--	--
FEB										
20...	.69	1410	--	--	.51	.52	.040	--	.77	.81
23...	--	--	--	--	--	--	--	--	--	--
MAR										
16...	--	--	--	--	--	--	--	--	--	--
18...	.72	900	--	--	.06	.02	.060	--	.92	.98
APR										
10...	--	--	--	--	--	--	--	--	--	--
24...	.73	1260	--	--	.29	.40	.120	--	.78	.90
MAY										
14...	.52	1640	--	--	.05	.41	.060	--	.94	1.00
JUN										
19...	.56	1380	.31	.010	.32	.00	.050	--	1.3	1.30
JUL										
15...	--	--	--	--	--	--	--	--	--	--
19...	.54	1940	--	--	.39	.46	.120	--	1.4	1.50
AUG										
18...	.49	2570	--	--	.27	.33	.040	--	1.4	1.40
SEP										
16...	--	--	--	--	--	--	--	--	--	--
22...	.53	1900	--	--	>.10	.02	.120	--	.79	.91

PLATTE RIVER BASIN

06652000 NORTH PLATTE RIVER AT ORIN, WY--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

		NITRO- GEN, TOTAL (MG/L AS N)	NITRO- GEN, TOTAL (MG/L AS NO3)	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHORUS, TOTAL (MG/L AS PO4)	CARBON, ORGANIC DIS- SOLVED (MG/L AS C)	CARBON, ORGANIC SUS- PENDED TOTAL (MG/L AS C)	CYANIDE TOTAL (MG/L AS CN)	PHENOLS (UG/L)	SEDI- MENT, SUS- PENDED (MG/L)	SEDI- MENT, DIS- CHARGE, SUS- PENDED (T/DAY)	
OCT 23...		--	--	.000	--	19	.6	.00	0	--	--	
26...		--	--	--	--	--	--	--	--	46	204	
NOV 18...		.92	4.1	.080	.15	--	--	--	--	--	--	
26...		--	--	--	--	--	--	--	--	28	88	
DEC 15...		--	--	--	--	--	--	--	--	31	94	
17...		1.4	6.2	.710	.15	--	--	--	--	--	--	
JAN 20...		1.4	6.4	.110	.34	--	--	--	--	--	--	
22...		--	--	--	--	--	--	--	--	72	173	
FEB 20...		1.3	5.8	.050	.21	--	--	--	--	--	--	
23...		--	--	--	--	--	--	--	--	49	117	
MAR 16...		--	--	--	--	--	--	--	--	25	40	
18...		1.0	4.6	.070	.34	--	--	--	--	--	--	
APR 10...		--	--	--	--	--	--	--	--	81	104	
24...		1.2	5.3	.230	.71	--	--	.00	6	--	--	
MAY 14...		1.1	4.6	.250	.46	--	--	.00	8	82	350	
JUN 19...		1.6	7.2	.040	.67	--	--	--	--	142	479	
JUL 15...		--	--	--	--	--	--	--	--	16200	85300	
19...		1.9	8.4	.190	1.7	--	--	--	--	--	--	
AUG 18...		1.7	7.4	.280	.80	--	--	--	--	328	2340	
SEP 16...		--	--	--	--	--	--	--	--	80	469	
22...		--	--	.100	.12	--	--	--	--	--	--	
DATE	TIME	ALUM- INUM, TOTAL RECOV- ERABLE (UG/L AS AL)	ALUM- INUM, SUS- PENDED RECOV. (UG/L AS AL)	ALUM- INUM, DIS- SOLVED (UG/L AS AL)	ARSENIC TOTAL (UG/L AS AS)	ARSENIC SUS- PENDED TOTAL (UG/L AS AS)	ARSENIC DIS- SOLVED (UG/L AS AS)	BERYL- LIUM, TOTAL RECOV- ERABLE (UG/L AS BE)	BERYL- LIUM, DIS- SOLVED (UG/L AS BE)	CADMIUM TOTAL RECOV- ERABLE (UG/L AS CD)	CADMIUM DIS- SOLVED (UG/L AS CD)	
OCT 23...	1400	180	160	20	2	0	3	0	<1	0	<1	
MAY 14...	1400	740	740	0	3	1	2	0	<1	0	<1	
DATE	TIME	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR)	CHRO- MIUM, SUS- PENDED RECOV. (UG/L AS CR)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU)	COPPER, SUS- PENDED RECOV- ERABLE (UG/L AS CU)	COPPER, DIS- SOLVED (UG/L AS CU)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	IRON, SUS- PENDED RECOV- ERABLE (UG/L AS FE)	IRON, DIS- SOLVED (UG/L AS FE)	LEAD, TOTAL RECOV- ERABLE (UG/L AS PB)	LEAD, SUS- PENDED RECOV- ERABLE (UG/L AS PB)
OCT 23...	10	10	10	0	7	0	7	400	--	<10	2	1
MAY 14...	10	10	0	10	8	7	1	1200	1200	20	6	5
DATE	TIME	LEAD, DIS- SOLVED (UG/L AS PB)	LITHIUM TOTAL RECOV- ERABLE (UG/L AS LI)	LITHIUM SUS- PENDED RECOV- ERABLE (UG/L AS LI)	LITHIUM DIS- SOLVED (UG/L AS LI)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)	MANGA- NESE, SUS- PENDED RECOV. (UG/L AS MN)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	MERCURY TOTAL RECOV- ERABLE (UG/L AS HG)	MERCURY SUS- PENDED RECOV- ERABLE (UG/L AS HG)	MERCURY DIS- SOLVED (UG/L AS HG)	MOLYB- DENUM, TOTAL RECOV- ERABLE (UG/L AS MO)
OCT 23...	1	30	0	40	20	20	2	.1	.0	.1	4	
MAY 14...	1	30	0	30	70	70	4	.1	.0	.1	3	

06652000 NORTH PLATTE RIVER AT ORIN, WY--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	MOLYB- DENUM, DIS- SOLVED (UG/L AS MO)	NICKEL, TOTAL RECOV- ERABLE (UG/L AS NI)	NICKEL, SUS- PENDE RECOV- ERABLE (UG/L AS NI)	NICKEL, DIS- SOLVED (UG/L AS NI)	SELE- NIUM, TOTAL (UG/L AS SE)	SELE- NIUM, SUS- PENDE TOTAL (UG/L AS SE)	SELE- NIUM, DIS- SOLVED (UG/L AS SE)	VANA- DIUM, DIS- SOLVED (UG/L AS V)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN)	ZINC, SUS- PENDE RECOV- ERABLE (UG/L AS ZN)	ZINC, DIS- SOLVED (UG/L AS ZN)
OCT 23...	<10	5	3	2	5	1	4	3.0	70	60	8
MAY 14...	<10	3	3	0	3	0	3	2.0	60	50	8

DATE	TIME	GROSS ALPHA, DIS- SOLVED (UG/L AS U-NAT)	GROSS ALPHA, SUSP. TOTAL (UG/L AS U-NAT)	GROSS BETA, DIS- SOLVED (PCI/L AS CS-137)	GROSS BETA, SUSP. TOTAL (PCI/L AS CS-137)	GROSS BETA, DIS- SOLVED (PCI/L AS SR/ YT-90)	GROSS BETA, SUSP. TOTAL (PCI/L AS SR/ YT-90)	RADIUM 226, DIS- SOLVED, RADON METHOD (PCI/L)	URANIUM NATURAL DIS- SOLVED (UG/L AS U)	GROSS ALPHA, DIS- SOLVED (PCI/L AS U-NAT)	GROSS ALPHA, SUSP. TOTAL (PCI/L AS U-NAT)
OCT 23...	1400	12	1.2	<3.6	1.5	<3.4	1.5	.15	11	8.2	.8
JAN 20...	1550	51	<.4	15	1.3	14	1.3	.15	10	35	.3
APR 24...	1100	18	6.9	<6.4	5.7	<6.2	5.4	.19	13	12	4.7
JUL 19...	1200	14	110	6.8	65	6.6	62	.17	7.8	9.5	75

DATE	TIME	2,4-D, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	2,4-D, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	2,4-DP, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	2,4-DP, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	2,4,5-T TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	2,4,5-T TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	SILVEX, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	SILVEX, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)
JUN 19...	1100	.01	0	.00	.00	.00	0	.00	0
JUL 19...	1200	.00	0	.00	.00	.00	0	.00	0
AUG 18...	1145	.00	0	.00	.00	.00	0	.00	0
SEP 22...	0730	.00	0	.00	.00	.00	0	.00	0

DATE	TOTAL DICAMBA (UG/L)	DICAMBA IN BOTTOM MA- TERIAL (UG/KG)	TOTAL PICLORAM (UG/L)	PICLORAM IN BOTTOM MA- TERIAL (UG/KG)
JUN 19...	.00	.0	.01	.0
JUL 19...	.00	.0	.00	.0
AUG 18...	.00	.0	.01	.0
SEP 22...	.00	.0	.01	.0

PLATTE RIVER BASIN

06652000 NORTH PLATTE RIVER AT ORIN, WY--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	TIME	TEMPER- ATURE (DEG C)	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SED. SUSP. FALL DIAM. % FINER THAN .004 MM	SED. SUSP. FALL DIAM. % FINER THAN .016 MM	SED. SUSP. FALL DIAM. % FINER THAN .062 MM	BED MAT. FALL DIAM. % FINER THAN .062 MM	BED MAT. FALL DIAM. % FINER THAN .125 MM	BED MAT. FALL DIAM. % FINER THAN .250 MM
NOV 26...	1605	3.0	1160	--	--	--	0	0	1
MAR 16...	1320	10.5	594	--	--	--	0	0	0
JUN 19...	1100	19.0	1250	--	--	--	0	0	1
JUL 15...	1700	24.0	1950	75	98	100	--	--	--

DATE	BED MAT. FALL DIAM. % FINER THAN .500 MM	BED MAT. FALL DIAM. % FINER THAN 1.00 MM	BED MAT. SIEVE DIAM. % FINER THAN 2.00 MM	BED MAT. SIEVE DIAM. % FINER THAN 4.00 MM	BED MAT. SIEVE DIAM. % FINER THAN 8.00 MM	BED MAT. SIEVE DIAM. % FINER THAN 16.0 MM	BED MAT. SIEVE DIAM. % FINER THAN 32.0 MM	BED MAT. SIEVE DIAM. % FINER THAN 64.0 MM
NOV 26...	19	30	45	62	74	81	88	100
MAR 16...	11	31	53	71	79	85	96	100
JUN 19...	10	48	76	96	99	100	--	--
JUL 15...	--	--	--	--	--	--	--	--

06652700 GLENDO RESERVOIR NEAR GLENDO, WY

LOCATION.--Lat 42°28'21", long 104°57'28", in SW¼NE¼ sec.24, T.29 N., R.68 W., Platte County, Hydrologic Unit 10180008, on right bank in gate shaft house on North Platte River, 0.5 mi (0.8 km) southwest of Glendo Dam, and 5.0 mi (8.0 km) southeast of Glendo.

DRAINAGE AREA.--15,545 mi² (40,262 km²), of which 1,215 mi² (3,147 km²) is probably noncontributing.

PERIOD OF RECORD.--October 1957 to current year.

REVISED RECORDS.--WDR WY-76-1: Drainage area.

GAGE.--Water-stage recorder for elevations above 4,543.50 ft (1,384.859 m). Datum of gage is 4,543.50 ft (1,384.859 m), National Geodetic Vertical Datum of 1929 (levels by Bureau of Reclamation).

REMARKS.--Reservoir is formed by rock-fill dam completed in October 1957. Storage began Oct. 17, 1957. Capacity, 789,400 acre-ft (973 hm³) at elevation 4,653.00 ft (1,418.234 m), spillway crest. Dead storage, 11,030 acre-ft (13.6 hm³). Figures given herein represent total contents. Water is used for irrigation in North Platte River basin, and for development of power.

COOPERATION.--Records furnished by Bureau of Reclamation.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily contents, 758,800 acre-ft (936 hm³) May 28, 1973, elevation, 4,650.94 ft (1,417.607 m); minimum daily (since appreciable storage was attained), 15,140 acre-ft (18.7 hm³) Sept. 28, 1966, elevation, 4,548.10 ft (1,386.261 m).

EXTREMES FOR CURRENT YEAR.--Maximum daily contents, 544,000 acre-ft (671 hm³) June 1, 2, maximum elevation, 4,637.07 ft (1,413.379 m) June 1; minimum daily, 70,500 acre-ft (86.9 hm³) Sept. 25, elevation, 4,572.27 ft (1,393.628 m).

Capacity table (elevation in feet,
and contents, in acre-feet)

4,572	69,600	4,610	274,000
4,580	98,800	4,620	358,000
4,590	144,000	4,630	459,000
4,600	202,000	4,638	556,000

RESERVOIR STORAGE (AC-FT), WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
INSTANTANEOUS OBSERVATIONS AT 2400

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	89600	194000	260000	326000	388000	438000	473000	481000	544000	409000	230000	105000
2	93400	197000	263000	329000	390000	440000	474000	481000	544000	402000	219000	102000
3	97000	199000	265000	331000	390000	442000	476000	482000	543000	397000	212000	98400
4	101000	201000	267000	333000	392000	441000	476000	483000	542000	391000	207000	95600
5	104000	204000	269000	335000	394000	444000	478000	484000	541000	389000	201000	93500
6	108000	206000	271000	337000	396000	445000	478000	487000	539000	390000	194000	91700
7	112000	208000	274000	339000	398000	446000	479000	488000	538000	391000	188000	90800
8	115000	210000	276000	341000	400000	447000	480000	489000	535000	388000	182000	90000
9	119000	212000	278000	343000	402000	449000	481000	490000	532000	382000	176000	89300
10	122000	214000	280000	345000	403000	450000	482000	492000	529000	374000	170000	88300
11	125000	217000	282000	347000	404000	451000	483000	494000	525000	367000	164000	86700
12	129000	219000	285000	349000	405000	452000	484000	495000	522000	360000	159000	85500
13	132000	221000	287000	351000	406000	453000	484000	496000	519000	354000	155000	84200
14	135000	224000	289000	353000	408000	454000	483000	498000	517000	348000	152000	82800
15	139000	226000	291000	354000	411000	456000	483000	501000	513000	343000	148000	81700
16	142000	228000	293000	355000	415000	457000	482000	503000	508000	336000	145000	80900
17	146000	230000	295000	357000	417000	458000	482000	505000	504000	329000	142000	80100
18	149000	232000	298000	358000	420000	459000	481000	509000	499000	322000	139000	79200
19	153000	234000	299000	360000	422000	460000	481000	512000	494000	317000	137000	78500
20	156000	237000	301000	362000	424000	462000	481000	515000	489000	311000	136000	77500
21	159000	239000	303000	365000	426000	463000	480000	516000	484000	305000	134000	76300
22	162000	241000	306000	367000	427000	464000	480000	519000	478000	299000	131000	75000
23	165000	243000	308000	369000	429000	465000	479000	521000	471000	294000	130000	73400
24	167000	245000	310000	371000	431000	466000	479000	524000	463000	288000	127000	71200
25	170000	247000	312000	374000	432000	467000	478000	527000	456000	282000	124000	70500
26	174000	250000	314000	376000	434000	468000	478000	531000	448000	278000	122000	71200
27	177000	252000	316000	378000	435000	469000	478000	533000	440000	274000	119000	72800
28	180000	254000	318000	380000	437000	470000	478000	536000	432000	270000	116000	74500
29	184000	256000	320000	382000	---	471000	478000	538000	424000	263000	113000	76700
30	187000	258000	322000	384000	---	472000	479000	539000	416000	252000	111000	79400
31	191000	---	324000	386000	---	473000	---	542000	---	241000	108000	---
MAX	191000	258000	324000	386000	437000	473000	484000	542000	544000	409000	230000	105000
MIN	89600	194000	260000	326000	388000	438000	473000	481000	416000	241000	108000	70500
(†)	4,598.17	4,607.97	4,616.17	5,622.95	4,627.92	4,631.22	4,631.80	4,636.92	4,625.95	4,605.62	4,582.12	4,574.85
(‡)	+105,200	+67,000	+66,000	+62,000	+51,000	+36,000	+6,000	+63,000	-126,000	-175,000	-133,000	-28,600

CAL YR 1980 MAX 540000 MIN 67600 †+23,000
WTR YR 1981 MAX 544000 MIN 70500 ‡ -6,400

(†) Elevation, in feet, at end of month.

(‡) Change in contents, in acre-feet.

PLATTE RIVER BASIN

06652800 NORTH PLATTE RIVER BELOW GLENDO RESERVOIR, WY

LOCATION.--Lat 42°27'25", long 104°56'50", in SW¼SW¼NW¼ sec.30, T.29 N., R.67 W., Platte County, Hydrologic Unit 10180008, on right bank opposite Sand Draw, 1.3 mi (2.1 km) upstream from Horseshoe Creek, 3.1 mi (5.0 km) downstream from Glendo Dam, and 5.2 mi (8.4 km) southeast of Glendo.

DRAINAGE AREA.--15,548 mi² (40,269 km²), of which 1,215 mi² (3,147 km²) is probably noncontributing.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1957 to current year.

REVISED RECORDS.--WDR WY-76-1: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 4,488.94 ft (1,368.229 m), National Geodetic Vertical Datum of 1929 (levels by Bureau of Reclamation).

REMARKS.--Records good except those below 10 ft³/s (0.28 m³/s), which are poor. Flow completely regulated by Glendo Reservoir since Oct. 17, 1957. (See sta 06652700.) Natural flow of stream affected by transbasin diversions, storage reservoirs, power development, ground-water withdrawals and diversions for irrigation, and return flow from irrigated areas.

COOPERATION.--Thirty discharge measurements furnished by Bureau of Reclamation.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 9,700 ft³/s (275 m³/s) June 1, 6, 1973; maximum gage height, 10.97 ft (3.344 m) June 1, 1973; minimum daily discharge, 0.41 ft³/s (0.012 m³/s) Oct. 17, 1977.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 7,590 ft³/s (215 m³/s) July 30, gage height, 9.94 ft (3.030 m); minimum daily, 0.78 ft³/s (0.022 m³/s) Oct. 13.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	113	10	10	10	9.0	12	12	799	21	5500	7440	3890
2	10	10	10	10	9.0	12	12	1560	547	4880	7160	3880
3	10	10	10	10	10	12	13	1540	1140	4430	5520	3890
4	10	10	10	10	16	12	12	1340	1270	4410	4710	3760
5	10	10	10	10	10	12	12	1310	1300	2730	5120	3630
6	11	10	10	10	10	12	12	752	1460	1160	5260	3350
7	14	10	10	10	10	12	12	1270	1410	1160	5240	3040
8	2.2	10	10	10	10	12	55	1160	1840	2800	5120	2990
9	2.0	10	10	10	9.6	12	22	1230	2170	4490	5020	2980
10	1.3	10	10	10	9.2	12	21	1240	2170	5210	4980	2970
11	.91	10	10	10	9.0	12	21	1240	2590	5170	4960	2930
12	.84	10	10	10	10	12	21	1160	2100	5190	4720	2860
13	.78	11	10	10	12	12	368	1020	2250	5020	4510	2830
14	1.6	11	10	9.3	12	12	703	500	2050	4690	4510	2880
15	8.0	10	10	10	13	12	703	376	2850	5030	4380	2700
16	9.3	10	10	9.3	12	12	697	307	2880	5170	4360	2570
17	7.4	10	10	10	12	13	697	307	2970	5070	4360	2580
18	7.4	10	10	10	12	12	703	210	3310	4820	4130	2500
19	7.4	10	9.3	9.3	12	12	709	160	3520	4620	3730	2440
20	8.0	10	11	9.3	12	12	709	160	3830	4540	3660	2440
21	8.6	10	10	9.3	12	12	709	158	4250	4540	3660	2450
22	9.3	10	10	10	12	12	907	81	4670	4510	3660	2450
23	8.6	10	10	10	12	12	1190	23	5190	4460	3650	2580
24	8.0	10	10	9.3	12	12	1190	22	5390	4690	3800	2650
25	8.6	10	10	10	12	12	1180	22	5410	4670	3880	1910
26	9.3	10	10	9.3	12	11	1180	22	5390	3920	3860	989
27	9.3	10	10	9.3	12	12	1200	148	5500	3820	3850	999
28	9.3	10	10	9.3	12	12	1290	207	5500	3850	3830	999
29	9.3	10	10	9.3	---	12	1210	21	5500	5100	3820	482
30	10	10	10	9.3	---	12	709	21	5480	7280	3790	216
31	10	---	10	9.2	---	12	---	21	---	7440	3850	---
TOTAL	335.43	302	310.3	301.5	314.8	372	16279	18387	93958	140370	140540	76835
MEAN	10.8	10.1	10.0	9.73	11.2	12.0	543	593	3132	4528	4534	2561
MAX	113	11	11	10	16	13	1290	1560	5500	7440	7440	3890
MIN	.78	10	9.3	9.2	9.0	11	12	21	21	1160	3650	216
AC-FT	665	599	615	598	624	738	32290	36470	186400	278400	278800	152400
CAL YR 1980	TOTAL	664638.83	MEAN	1816	MAX	7300	MIN	.78	AC-FT	1318000		
WTR YR 1981	TOTAL	488305.03	MEAN	1338	MAX	7440	MIN	.78	AC-FT	968600		

06652800 NORTH PLATTE RIVER BELOW GLENDO RESERVOIR, WY--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1967 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	TUR- BID- ITY (NTU)	OXYGEN, DIS- SOLVED (MG/L)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	HARD- NESS (MG/L AS CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)
OCT 09...	1245	1.9	620	8.5	14.0	2.0	12.0	K1	240	55	24	53
NOV 05...	1300	10	652	8.9	9.0	1.0	16.1	<1	240	62	21	49
DEC 03...	1315	10	670	8.7	3.5	2.0	13.0	<1	250	60	23	54
JAN 02...	1200	10	620	8.4	3.0	2.0	12.4	<1	260	63	24	55
FEB 13...	1100	14	770	8.1	2.0	2.0	12.4	<1	270	66	25	64
MAR 26...	1000	11	780	8.3	7.0	2.0	11.6	K1	260	75	17	57
APR 08...	1315	77	650	8.6	8.0	6.0	11.3	<1	240	63	21	60
MAY 07...	1530	1610	750	8.5	11.5	3.0	9.8	K3	260	64	24	57
JUN 03...	1130	1080	745	8.4	13.5	1.0	8.9	<1	250	64	23	62
JUL 09...	1400	3210	735	8.1	19.0	4.0	6.2	37	240	63	19	55
AUG 13...	1045	4590	650	7.9	21.0	4.0	9.1	K2	220	55	20	48
SEP 10...	1520	2870	650	8.0	19.0	5.0	7.6	K8	220	57	20	45

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

DATE	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LINITY LAB (MG/L AS CACO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTITUENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)	SOLIDS, DIS- SOLVED (TONS PER DAY)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	PHOS- PHORUS, TOTAL (MG/L AS P)
OCT 09...	1.5	5.4	140	200	14	.5	.1	430	.58	2.2	.00	.080
NOV 05...	1.4	3.8	150	180	.5	.5	2.9	410	.56	11.1	.24	.050
DEC 03...	1.5	4.0	140	190	12	.4	2.0	434	.59	11.7	.17	.030
JAN 02...	1.5	4.3	150	180	14	.5	.0	435	.59	11.7	.33	.100
FEB 13...	1.7	3.9	170	200	14	.5	.0	474	.64	17.9	.11	.000
MAR 26...	1.5	4.3	160	200	16	.2	3.7	470	.64	14.0	.03	.020
APR 08...	1.7	3.6	150	190	15	.5	10	450	.61	93.6	.03	.070
MAY 07...	1.5	5.0	150	190	18	.7	2.8	456	.62	1980	.54	.030
JUN 03...	1.7	4.4	150	210	23	.6	2.3	480	.65	1400	.06	.040
JUL 09...	1.6	3.5	140	200	13	.6	.8	440	.60	3810	.40	.060
AUG 13...	1.4	3.3	130	160	12	.5	7.3	390	.53	4830	.46	.100
SEP 10...	1.3	4.5	130	150	13	.5	9.3	380	.52	2940	1.3	.100

PLATTE RIVER BASIN

06652800 NORTH PLATTE RIVER BELOW GLENDON RESERVOIR, WY--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	TIME	2,4-D, TOTAL (UG/L)	2,4-D, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	2, 4-DP TOTAL (UG/L)	2,4-DP, IN BOTTOM MAT. (UG/KG)	2,4,5-T TOTAL (UG/L)	2,4,5-T TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	SILVEX, TOTAL (UG/L)	SILVEX, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)
JUL 09...	1400	.00	0	.00	.00	.00	0	.00	0
AUG 13...	1045	.09	0	.00	.00	.00	0	.00	0
SEP 10...	1520	.00	0	.00	.00	.00	0	.00	0

DATE	TOTAL DICAMBA (UG/L)	DICAMBA IN BOTTOM MA- TERIAL (UG/KG)	TOTAL PICLORAM (UG/L)	PICLORAM IN BOTTOM MA- TERIAL (UG/KG)
JUL 09...	.00	.0	.01	.0
AUG 13...	.02	.0	.01	.0
SEP 10...	.00	.0	.00	.0

06655500 GUERNSEY RESERVOIR NEAR GUERNSEY, WY

LOCATION.--Lat 42°17'23", long 104°45'48", in NE¼NW¼ sec.27, T.27 N., R.66 W., Platte County, Hydrologic Unit 10180008, on gate structure at right end of dam on North Platte River and 1.2 mi (1.9 km) northwest of Guernsey.

DRAINAGE AREA.--16,224 mi² (42,020 km²), of which 1,216 mi² (3,149 km²) is probably noncontributing.

PERIOD OF RECORD.--January 1928 to current year. Prior to October 1950 monthend figures only, published in WSP 1310.

REVISED RECORDS.--WDR WY-76-1: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 4,370.00 ft (1,331.976 m), National Geodetic Vertical Datum of 1929 (levels by Bureau of Reclamation); gage readings have been reduced to elevations of National Geodetic Vertical Datum of 1929. Prior to Sept. 20, 1966, nonrecording gages at same datum.

REMARKS.--Reservoir is formed by rock-fill dam completed in July 1927. Capacity, 45,230 acre-ft (55.8 hm³) at elevation 4,420 ft (1,347.2 m), top of spillway gate. Dead storage is negligible. Figures given herein represent total contents. Usable contents published prior to October 1956. Water is used for irrigation in eastern Wyoming and western Nebraska and for development of power.

COOPERATION.--Records furnished by Bureau of Reclamation.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily contents, 73,240 acre-ft (90.3 hm³) Oct. 17, 1929, elevation, 4,420.95 ft (1,347.506 m); minimum daily, 30 acre-ft (0.0370 hm³) Oct. 5, 6, 1958, elevation, 4,361.50 ft (1,329.385 m), and Oct. 18 to Nov. 3, 1969, elevation, 4,367.70 ft (1,331.275 m).

EXTREMES FOR CURRENT YEAR.--Maximum daily contents, 41,300 acre-ft (50.9 hm³) May 31, elevation, 4,418.33 ft (1,346.707 m); minimum daily, 492 acre-ft (0.607 hm³) Oct. 16, elevation, 4,375.15 ft (1,333.546 m).

Capacity table (elevation, in feet,
and contents, in acre-feet)

4,375	477	4,395	5,870	4,410	24,100
4,380	1,060	4,400	9,840	4,415	34,000
4,385	2,010	4,405	15,900	4,419	42,900
4,390	3,530				

RESERVOIR STORAGE (AC-FT), WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
INSTANTANEOUS OBSERVATIONS AT 2400

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	15200	2360	4220	5820	7490	8980	10500	32200	40500	35600	21500	28500
2	13800	2430	4280	5880	7540	9030	10500	33100	38400	35300	26700	28900
3	12400	2490	4330	5940	7600	9070	10500	34100	38100	33700	29100	29400
4	10800	2560	4380	6000	7660	9120	10600	35000	37700	32100	28900	30200
5	9290	2640	4440	6050	7720	9160	10600	35100	37200	28900	28900	31200
6	7660	2710	4490	6100	7780	9210	10600	35200	36500	20700	29300	31500
7	6080	2780	4550	6160	7840	9250	10600	35300	35000	12500	29800	31500
8	4650	2830	4600	6210	7880	9310	10700	35500	34100	4870	30200	31500
9	3130	2890	4650	6250	7950	9360	10700	35600	33700	3380	30500	31600
10	1670	2950	4700	6310	7980	9380	10800	35800	33800	3020	30800	31600
11	1130	3010	4750	6360	8020	9430	10800	36000	34500	2790	31200	31600
12	997	3100	4790	6400	8060	9470	10900	36200	34900	2590	31400	31500
13	883	3150	4850	6450	8120	9500	10900	36200	34800	2880	31000	31100
14	782	3230	4900	6500	8180	9570	12100	36100	34300	2390	31000	30600
15	651	3300	4950	6560	8230	9610	13400	36400	34900	2000	31000	30000
16	492	3360	5000	6610	8300	9650	14800	36600	35400	2450	31100	29100
17	606	3420	5060	6670	8360	9700	16100	37000	35700	2490	31500	28200
18	807	3480	5100	6720	8430	9750	17400	37700	35600	2570	32100	27100
19	1230	3530	5140	6780	8490	9770	18800	37400	35200	2520	31900	25900
20	1370	3590	5190	6840	8580	9840	20300	38400	34700	2140	31400	24500
21	1470	3650	5240	6890	8620	9920	21700	38800	34900	2020	30900	23200
22	1590	3710	5300	6950	8660	9990	23200	39200	34900	2020	30200	21900
23	1660	3760	5370	7010	8700	10000	25400	39300	35000	1870	29500	21000
24	1750	3820	5410	7070	8740	10100	27200	39400	35100	1760	29000	21100
25	1820	3880	5470	7110	8780	10100	28900	39500	35000	2500	29100	21200
26	1910	3940	5520	7170	8850	10200	30300	39700	34700	2590	29000	19300
27	1990	4000	5580	7210	8890	10200	31500	40000	34600	2450	28800	17500
28	2070	4050	5630	7270	8930	10300	32100	40800	34800	2270	28600	17500
29	2140	4120	5680	7330	---	10300	32600	41100	34900	2910	28500	16900
30	2220	4170	5730	7390	---	10400	32400	41200	35200	8870	28400	15400
31	2290	---	5780	7460	---	10500	---	41300	---	15800	28200	---
MAX	15200	4170	5780	7460	8930	10500	32600	41300	40500	35600	32100	31600
MIN	492	2360	4220	5820	7490	8980	10500	32200	33700	1760	21500	15400

(+) 4,386.09 4,391.59 4,394.83 4,397.33 4,399.06 4,400.58 4,414.23 4,418.33 4,415.56 4,404.90 4,412.14 4,404.63
 (\$) -14,010 +1,880 +1,610 +1,680 +1,470 +1,570 +21,900 +8,900 -6,100 -19,400 +12,400 -12,800

CAL YR 1980 MAX 37200 MIN 492 $\pm$ 580

WTR YR 1981 MAX 41300 MIN 492 $\pm$ 900

(+) Elevation, in feet, at end of month.

(\$) Change in contents, in acre-feet.

06656000 NORTH PLATTE RIVER BELOW GUERNSEY RESERVOIR, WY

LOCATION.--Lat 42°16'50", long 104°45'15", in SE¼SE¼ sec.27, T.27 N., R.66 W., Platte County, Hydrologic Unit 10180008, on right bank 1.0 mi (1.6 km) northwest of Guernsey and 1.1 mi (1.8 km) downstream from Guernsey Dam.

DRAINAGE AREA.--16,237 mi² (42,054 km²), of which 1,216 mi² (3,149 km²) is probably noncontributing.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--June 1900 to current year (no winter records prior to 1903). Monthly discharge only for some periods, published in WSP 1310. Published as "near Guernsey" 1900-1901, 1904; as "at Guernsey" 1902-3, 1905-8, March to October 1912; as "at Whalen" 1909; as North Platte River and Interstate Canal at Whalen 1910-11, 1913-16; and as "above Whalen" 1917-27.

REVISED RECORDS.--WSP 1310: 1903-4, 1924. WDR WY-76-1: Drainage area.

GAGE.--Water-stage recorder. Altitude of gage is 4,340 ft (1,323 m), from topographic map. Prior to Nov. 17, 1908, and Mar. 30 to Oct. 31, 1912, nonrecording gages downstream at several sites within 0.8 mi (1.3 km) at different datums. May 1, 1909, to Dec. 31, 1927, nonrecording gages at different datums on river and diversion canals at Whalen Dam about 9.0 mi (14.5 km) downstream. Jan. 1, 1928, to Sept. 30, 1964, water-stage recorder at present site and datum 1.50 ft (0.457 m) higher.

REMARKS.--Records good except those below 10 ft³/s (0.28 m³/s), which are poor. Flow completely regulated by Guernsey Reservoir since 1927. (See sta 06655500.) Small diversions for irrigation between this station and diversion dam at Whalen. Natural flow of stream affected by transbasin diversions, storage reservoirs, power development, ground-water withdrawals and diversions for irrigation, and return flow from irrigated areas.

COOPERATION.--Thirty-nine discharge measurements furnished by Bureau of Reclamation.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 30,000 ft³/s (850 m³/s) June 2 or 3, 1908, gage height, 11.5 ft (3.51 m), from floodmark, site and datum then in use, from rating curve extended above 13,000 ft³/s (368 m³/s); no flow Feb. 28, 1927, Nov. 19 to Dec. 8, Dec. 10-12, 14, 15, 1951.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 5,610 ft³/s (159 m³/s) July 6, gage height, 6.36 ft (1.939 m); minimum daily, 1.8 ft³/s (0.051 m³/s) Feb. 22.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	786	5.5	3.8	2.3	2.7	2.2	6.8	889	632	5170	4400	3680
2	791	5.5	3.8	2.3	2.5	2.2	6.3	893	1270	5260	4560	3590
3	775	5.1	3.8	2.5	2.5	2.1	5.5	893	1340	5270	4690	3490
4	792	3.8	3.8	2.5	2.5	2.1	4.1	978	1510	5250	4850	3360
5	798	3.5	3.8	2.5	2.5	2.1	3.8	1010	1570	5210	4950	3270
6	801	5.5	3.8	2.3	2.5	2.1	3.5	1020	1920	5220	4950	3120
7	788	5.1	3.8	2.3	2.5	2.1	4.1	1020	2160	5290	4940	3060
8	787	5.1	3.8	2.3	2.5	2.0	7.2	1030	2200	5290	4890	2960
9	804	5.1	3.8	2.3	2.5	2.0	7.2	1020	2310	5340	4890	2910
10	726	5.1	4.1	2.3	2.3	2.0	5.9	1050	2290	5370	4770	2920
11	291	5.1	4.1	2.3	1.9	2.0	4.8	1060	2250	5370	4740	2890
12	65	4.8	4.1	2.3	2.3	2.0	3.8	1060	2210	5330	4700	2900
13	54	5.1	4.1	2.3	2.3	2.0	3.0	1010	2250	5250	4640	2960
14	45	4.8	4.1	2.3	2.3	2.0	3.5	719	2370	4970	4490	3020
15	63	4.1	4.1	2.3	2.3	2.0	8.2	342	2540	5050	4350	3070
16	75	4.1	4.1	2.3	2.3	2.1	9.8	204	2690	5150	4310	2980
17	37	4.1	4.1	2.3	2.3	2.2	12	160	2890	5150	4130	3040
18	5.9	4.1	3.8	2.3	2.3	2.1	14	115	3280	4970	3900	3070
19	5.5	4.1	3.0	2.3	2.3	2.1	15	87	3720	4780	3850	3060
20	5.5	3.8	2.5	2.3	2.3	2.1	17	19	3940	4710	3830	3110
21	5.9	3.8	2.5	2.3	2.0	2.2	11	17	4130	4610	3860	3140
22	5.5	3.8	2.5	2.3	1.8	2.2	6.8	17	4500	4540	3910	3130
23	4.4	3.5	2.5	2.3	2.0	2.3	6.8	15	4970	4510	3890	3050
24	5.1	3.5	2.3	2.3	2.0	2.3	89	15	5210	4650	3850	2660
25	5.1	3.5	2.3	2.5	2.3	2.5	252	16	5320	4650	3800	2410
26	5.1	3.5	2.3	2.5	2.3	2.7	292	16	5370	4160	3790	2080
27	5.1	3.5	2.3	2.5	2.2	3.0	479	15	5400	3970	3810	1660
28	5.1	3.5	2.3	2.5	2.2	2.3	754	16	5320	3890	3800	1240
29	5.1	3.8	2.3	2.5	---	2.0	909	15	5240	3960	3800	1140
30	5.1	3.8	2.3	2.5	---	2.7	915	15	5180	4000	3780	1050
31	5.1	---	2.3	2.7	---	5.1	---	15	---	4190	3730	---
TOTAL	8551.5	129.6	102.2	73.5	64.4	70.8	3860.1	14751	95982	150530	132850	84020
MEAN	276	4.32	3.30	2.37	2.30	2.28	129	476	3199	4856	4285	2801
MAX	804	5.5	4.1	2.7	2.7	5.1	915	1060	5400	5370	4950	3680
MIN	4.4	3.5	2.3	2.3	1.8	2.0	3.0	15	632	3890	3730	1050
AC-FT	16960	257	203	146	128	140	7660	29260	190400	298600	263500	166700
CAL YR 1980	TOTAL	679667.5	MEAN	1857	MAX	5750	MIN	2.3	AC-FT	1348000		
WTR YR 1981	TOTAL	490985.1	MEAN	1345	MAX	5400	MIN	1.8	AC-FT	973900		

06656000 NORTH PLATTE RIVER BELOW GUERNSEY RESERVOIR, WY--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1947-58, 1966 to current year.

PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: October 1951 to September 1958, October 1965 to September 1968, May to September 1979.

SUSPENDED-SEDIMENT DISCHARGE: April 1947 to June 1953, May to September 1979.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	TUR- BID- ITY (NTU)	OXYGEN, DIS- SOLVED (MG/L)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	HARD- NESS (MG/L AS CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)
OCT											
09...	1720	885	670	8.3	14.0	--	--	--	240	63	19
NOV											
06...	0745	5.8	630	8.3	7.0	--	--	--	250	64	22
DEC											
03...	1000	3.9	750	8.0	3.0	2.0	11.6	>1	290	72	26
JAN											
02...	1530	2.2	650	8.5	6.5	1.0	12.6	2	270	67	25
FEB											
12...	1540	2.6	700	8.0	1.0	2.0	14.4	<1	290	72	28
MAR											
25...	1600	2.7	650	8.7	16.0	--	--	--	210	47	23
APR											
07...	1600	3.2	670	8.4	8.5	--	--	--	270	70	23
MAY											
07...	1050	1020	750	8.4	13.0	--	--	--	250	63	23
JUN											
02...	1800	1240	670	8.4	17.5	--	--	--	250	64	45
JUL											
09...	1030	5330	755	7.8	18.0	--	--	--	250	65	21
AUG											
12...	1700	4620	680	--	20.0	--	--	--	240	55	26
SEP											
10...	1050	2920	655	8.3	19.0	--	--	--	210	53	19

DATE	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LINITY LAB (MG/L AS CACO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)	SOLIDS, DIS- SOLVED (TONS PER DAY)
OCT											
09...	45	1.3	5.0	160	150	12	.5	.0	390	.53	932
NOV											
06...	48	1.3	4.6	170	150	13	.2	7.3	410	.56	6.4
DEC											
03...	53	1.4	5.8	200	170	11	.6	7.3	466	.63	4.9
JAN											
02...	51	1.4	5.3	160	200	13	.6	11	269	.37	1.6
FEB											
12...	57	1.4	5.0	240	160	15	.5	.0	478	.65	3.4
MAR											
25...	53	1.6	5.0	160	160	16	.8	9.6	410	.56	3.0
APR											
07...	50	1.3	4.6	200	160	12	.6	25	470	.64	4.1
MAY											
07...	55	1.5	4.8	160	190	16	.7	4.0	453	.62	1250
JUN											
02...	57	1.3	4.5	150	200	21	1.5	2.7	460	.63	1540
JUL											
09...	55	1.5	3.9	150	210	15	.6	1.5	460	.63	6620
AUG											
12...	55	1.5	3.9	120	220	13	.8	6.6	450	.61	5610
SEP											
10...	45	1.3	3.0	130	160	12	.6	9.1	380	.52	3000

PLATTE RIVER BASIN

06656000 NORTH PLATTE RIVER BELOW GUERNSEY RESERVOIR, WY--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N)	NITRO- GEN, AMMONIA TOTAL (MG/L AS NH4)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO- GEN, TOTAL (MG/L AS N)	NITRO- GEN, TOTAL (MG/L AS NO3)	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHORUS TOTAL (MG/L AS PO4)
OCT 09...	--	.00	--	--	--	--	--	--	.070	--
NOV 06...	--	.18	--	--	--	--	--	--	.060	--
DEC 03...	.41	.40	.020	.02	.49	.51	.92	4.1	.030	.18
JAN 02...	.38	.22	.120	.15	.41	.53	.91	4.0	.320	.98
FEB 12...	.37	.38	.090	--	.68	.77	1.1	5.0	.010	.12
MAR 25...	--	.06	--	--	--	--	--	--	.080	--
APR 07...	--	.02	--	--	--	--	--	--	.040	--
MAY 07...	--	.02	--	--	--	--	--	--	.020	--
JUN 02...	--	.03	--	--	--	--	--	--	.050	--
JUL 09...	--	.50	--	--	--	--	--	--	.190	--
AUG 12...	--	.20	--	--	--	--	--	--	.080	--
SEP 10...	--	.47	--	--	--	--	--	--	.050	--

06656500 NORTH PLATTE RIVER NEAR GUERNSEY, WY

LOCATION.--Lat 42°15'02", long 104°40'25", in NE¼SE¼SE¼ sec.5, T.26 N., R.65 W., Platte County, Hydrologic Unit 10180008, 500 ft (152 m) south of Burlington Northern Railroad tracks and 3.5 mi (5.6 km) southeast of Guernsey.

PERIOD OF RECORD.--March to September 1981.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	TUR- BID- ITY (NTU)	OXYGEN, DIS- SOLVED (MG/L)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	NITRO- GEN, NITRATE TOTAL (MG/L AS N)	NITRO- GEN, NITRITE TOTAL (MG/L AS N)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)
MAR 25...	1345	6.0	680	8.6	12.0	2.0	14.2	<1	--	--	.57	--
APR 07...	1330	7.2	580	8.4	8.5	1.0	11.6	0	--	--	.01	--
MAY 06...	1345	1020	710	8.5	12.0	5.0	9.3	23	.00	.040	.04	--
JUN 02...	1330	1230	705	8.4	20.0	4.0	8.9	44	--	--	.01	--
JUL 08...	1515	5270	770	8.1	21.5	9.0	7.9	25	--	--	.03	.03
AUG 12...	1400	4620	650	8.6	23.0	3.0	8.2	10	--	--	.00	--
SEP 09...	1400	2930	630	8.5	21.0	5.0	11.2	K7	--	--	1.9	--

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

DATE	NITRO- GEN, AMMONIA TOTAL (MG/L AS N)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N)	NITRO- GEN, AMMONIA TOTAL (MG/L AS NH4)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS NH4)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO- GEN, TOTAL (MG/L AS N)	NITRO- GEN, TOTAL (MG/L AS NO3)	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHORUS TOTAL (MG/L AS PO4)	PHOS- PHORUS, ORTHO, TOTAL (MG/L AS P)
MAR 25...	--	--	.06	--	.82	.88	1.5	6.4	.030	.09	--
APR 07...	.030	--	--	--	.87	.90	.91	4.0	.040	.12	--
MAY 06...	.100	--	--	--	2.3	2.40	2.4	11	.050	.15	.040
JUN 02...	.070	--	--	--	1.1	1.20	1.2	5.4	.040	.12	--
JUL 08...	.100	.080	--	.10	1.5	1.60	1.6	7.2	.060	.18	--
AUG 12...	.140	--	--	--	1.1	1.20	1.2	5.3	.070	.21	--
SEP 09...	<.060	--	--	--	--	.78	2.7	12	.040	.12	--

PLATTE RIVER BASIN

06657000 NORTH PLATTE RIVER BELOW WHALEN DIVERSION DAM, WY

LOCATION.--Lat 42°14'20", long 104°36'29", in NE¼SW¼ sec.12, T.26 N., R.65 W., Goshen County, Hydrologic Unit 10180009, on left bank 0.2 mi (0.3 km) downstream from Cottonwood Draw, 2.5 mi (4.0 km) downstream from Whalen diversion dam, and 4.8 mi (7.7 km) northwest of Fort Laramie.

DRAINAGE AREA.--16,425 mi² (42,541 km²), of which 1,219 mi² (3,157 km²) is probably noncontributing.

PERIOD OF RECORD.--May 1909 to current year. Prior to Apr. 16, 1938, published as "below Whalen", and Apr. 16, 1938, to Sept. 30, 1974, as "at recorder station, below Whalen".

REVISED RECORDS.--WSP 1310: 1924. WDR WY-761: Drainage area.

GAGE.--Water-stage recorder. Altitude of gage is 4,250 ft (1,295 m), from topographic map. Prior to Apr. 16, 1938, nonrecording gages at Whalen diversion dam and canals 2.5 mi (4.0 km) upstream at different datums. Apr. 16, 1938, to Nov. 17, 1955, water-stage recorder at site 200 ft (61 m) downstream, and Nov. 18, 1955, to Feb. 16, 1972, at present site at datum 1.00 ft (0.305 m) higher.

REMARKS.--Records good except those for winter months, which are poor. Flow regulated by Whalen diversion dam 2.5 mi (4.0 km) upstream. Natural flow of stream affected by storage reservoirs, transbasin diversions, power development, ground-water withdrawals and diversions for irrigation, and return flow from irrigated areas.

COOPERATION.--Twenty-one discharge measurements furnished by Bureau of Reclamation.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge determined, 22,000 ft³/s (623 m³/s) June 26, 1955, gage height, 9.85 ft (3.002 m), from rating curve extended above 4,500 ft³/s (127 m³/s) on basis of studies of peak flow measurements of upstream floods; no flow at times in 1910, 1916, 1925-27, 1962-64, 1967, 1970-71, 1975-77, 1981.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 2,050 ft³/s (58.1 m³/s) June 27, gage height, 4.04 ft (1.231 m); no flow Feb. 21 to Apr. 4.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	117	14	5.4	2.8	.48	.00	.00	117	41	1770	1300	776
2	102	13	5.7	2.7	.45	.00	.00	124	497	1760	1400	681
3	98	13	6.2	2.6	.49	.00	.00	141	453	1730	1450	653
4	95	12	6.2	2.5	.46	.00	.00	141	671	1720	1500	559
5	91	11	5.7	2.4	.48	.00	.12	117	816	1650	1580	543
6	93	11	5.4	2.3	.49	.00	.42	127	826	1670	1610	439
7	91	11	5.4	2.1	.49	.00	.63	141	699	1710	1600	362
8	91	11	6.0	2.0	.48	.00	.70	132	653	1690	1540	285
9	87	11	6.0	1.9	.45	.00	.63	132	618	1720	1580	270
10	87	11	5.2	1.7	.40	.00	.81	138	609	1730	1450	275
11	85	11	5.2	1.6	.58	.00	.92	144	568	1770	1410	275
12	150	10	5.1	1.5	.85	.00	1.2	147	551	1730	1360	280
13	183	13	4.5	1.3	1.2	.00	1.3	132	536	1800	1280	333
14	138	14	4.5	1.2	1.8	.00	1.2	138	520	1640	1190	380
15	117	11	4.5	.92	2.5	.00	1.0	185	528	1710	1080	453
16	135	9.6	4.3	.56	1.3	.00	.70	248	592	1760	1210	356
17	117	8.9	4.0	.50	.70	.00	.63	228	662	1690	1030	386
18	67	8.5	3.8	.52	.56	.00	1.9	169	776	1560	847	439
19	50	7.8	3.2	.53	.42	.00	10	130	1010	1450	847	419
20	41	7.1	3.1	.55	.05	.00	14	83	1060	1410	858	439
21	38	6.8	3.3	.58	.00	.00	3.4	67	1140	1380	868	482
22	35	6.5	3.4	.61	.00	.00	3.0	54	1300	1280	911	490
23	32	6.5	3.3	.65	.00	.00	3.2	49	1650	1300	901	439
24	33	6.5	3.3	.67	.00	.00	3.2	46	1840	1410	879	171
25	30	6.5	3.3	.70	.00	.00	42	39	1940	1490	806	138
26	29	6.5	3.4	.70	.00	.00	226	36	1990	1180	806	119
27	28	6.2	3.4	.49	.00	.00	159	30	2000	1040	796	262
28	27	6.5	3.3	.49	.00	.00	85	26	1960	922	806	144
29	25	5.9	3.2	.49	---	.00	107	24	1840	1040	816	216
30	17	5.6	3.1	.49	---	.00	127	24	1770	1120	816	138
31	15	---	3.0	.50	---	.00	---	23	---	1190	806	---
TOTAL	2344	282.4	135.4	38.55	14.63	.00	794.96	3332	30116	47022	35333	11202
MEAN	75.6	9.41	4.37	1.24	.52	.000	26.5	107	1004	1517	1140	373
MAX	183	14	6.2	2.8	2.5	.00	226	248	2000	1800	1610	776
MIN	15	5.6	3.0	.49	.00	.00	.00	23	41	922	796	119
AC-FT	4650	560	269	76	29	.00	1580	6610	59740	93270	70080	22220

CAL YR 1980 TOTAL 261187.20 MEAN 714 MAX 2700 MIN 3.0 AC-FT 518100
WTR YR 1981 TOTAL 130614.94 MEAN 358 MAX 2000 MIN .00 AC-FT 259100

06657500 LARAMIE RIVER NEAR GLENDEVEY, CO

LOCATION.--Lat 40°48'02", long 105°52'40", in NW¼NW¼ sec.36, T.10 N., R.76 W., Larimer County, Hydrologic Unit 10180010, on left bank 200 ft (61 m) downstream from bridge on county road, 350 ft (110 m) downstream from Nunn Creek, 1,300 ft (400 m) upstream from Stub Creek, and 3.0 mi (4.8 km) east of Glendevy.

DRAINAGE AREA.--101 mi² (262 km²).

PERIOD OF RECORD.--June 1904 to October 1905, August 1910 to current year. Monthly discharge only for some periods, published in WSP 1310. Published as "at Glendevy" 1905, 1910-18.

REVISED RECORDS.--WSP 469: 1911-12. WSP 506: Drainage area. WSP 1310: 1905, 1914. WSP 1918: 1918 (monthly runoff).

GAGE.--Water-stage recorder. Altitude of gage is 8,230 ft (2,509 m), from topographic map. See WSP 1730 for history of changes prior to Sept. 20, 1935.

REMARKS.--Records good except those for winter period, which are fair. Diversions for irrigation of about 700 acres (2.83 km²) of hay meadows above station. Transbasin diversions above station to Cache la Poudre River and tributaries (see elsewhere in this report).

AVERAGE DISCHARGE.--72 years, 72.8 ft³/s (2.062 m³/s), 52,740 acre-ft/yr (65.0 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,240 ft³/s (63.4 m³/s) June 9, 1923, gage height, 4.55 ft (1.387 m), site and datum then in use, from floodmarks, from rating curve extended above 1,400 ft³/s (40 m³/s); minimum daily recorded, 5.0 ft³/s (0.14 m³/s) Feb. 14, 15, 1911, but may have been less during winter periods of no gage-height record.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 672 ft³/s (19.0 m³/s) June 9, gage height, 2.85 ft (0.869 m); minimum daily, 10 ft³/s (0.28 m³/s) Jan. 20, 21, Feb. 7, 10.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	13	23	19	17	11	13	16	65	175	46	21	21
2	13	23	19	16	11	13	19	70	170	70	21	16
3	13	22	19	17	11	13	19	86	180	130	20	19
4	13	23	19	15	11	13	17	72	245	114	19	16
5	13	23	19	15	11	14	18	55	348	80	18	15
6	12	24	18	15	11	14	18	60	376	44	18	16
7	12	24	17	14	10	14	18	56	544	36	18	16
8	12	25	17	14	11	14	16	43	574	46	18	16
9	12	23	16	14	11	14	21	39	577	37	20	20
10	12	23	15	13	10	14	38	43	520	46	22	25
11	12	23	15	13	11	14	39	46	439	32	19	25
12	12	23	15	12	12	15	36	41	316	42	21	18
13	12	23	15	11	12	17	33	43	145	67	23	16
14	13	23	16	12	12	17	32	48	111	62	19	16
15	18	20	16	12	12	16	34	53	87	37	22	15
16	17	19	17	12	12	15	36	54	70	30	29	15
17	16	18	17	12	12	14	39	60	53	39	21	14
18	16	18	17	12	13	14	44	55	50	38	19	13
19	16	19	17	11	12	15	54	61	46	35	17	13
20	16	19	16	10	13	14	66	86	40	29	16	13
21	16	19	16	10	13	15	54	86	35	26	16	14
22	16	19	16	11	13	16	45	66	38	34	16	14
23	18	19	16	11	13	14	36	76	41	38	15	13
24	18	19	16	11	14	15	36	91	33	36	16	17
25	18	19	16	11	14	16	54	114	33	34	19	18
26	18	19	16	11	14	16	74	138	37	37	17	18
27	18	19	17	11	13	16	73	156	38	38	16	17
28	19	19	17	11	13	16	65	176	49	29	15	17
29	25	19	17	11	---	15	69	173	55	25	15	19
30	24	19	16	11	---	15	69	172	33	22	15	18
31	23	---	16	11	---	16	---	176	---	23	15	---
TOTAL	486	628	518	387	336	457	1188	2560	5458	1402	576	503
MEAN	15.7	20.9	16.7	12.5	12.0	14.7	39.6	82.6	182	45.2	18.6	16.8
MAX	25	25	19	17	14	17	74	176	577	130	29	25
MIN	12	18	15	10	10	13	16	39	33	22	15	13
AC-FT	964	1250	1030	768	666	906	2360	5080	10830	2780	1140	998
CAL YR 1980	TOTAL	26886	MEAN 73.5	MAX 745	MIN 12	AC-FT	53330					
WTR YR 1981	TOTAL	14499	MEAN 39.7	MAX 577	MIN 10	AC-FT	28760					

06659500 LARAMIE RIVER AND PIONEER CANAL NEAR WOODS, WY

LOCATION.--River: Lat 41°08'17", long 105°58'49", in NW¼SE¼ sec.36, T.14 N., R.77 W., Albany County, Hydrologic Unit 10180010, on left bank 100 ft (30 m) upstream from diversion dam for Pioneer Canal, 2.2 mi (3.5 km) downstream from Fox Creek, 2.5 mi (4.0 km) northeast of Woods, and 23 mi (37 km) southwest of Laramie.

Canal: Lat 41°08'21", long 105°58'45", in SE¼NE¼ sec.36, T.14 N., R.77 W., Albany County, on left bank 400 ft (122 m) downstream from headgate.

DRAINAGE AREA.--434 mi² (1,124 km²). Drainage area at mouth, 4,565 mi² (11,823 km²).

PERIOD OF RECORD.--April 1912 to September 1924, October 1926 to September 1927, October 1931 to current year (no winter records since 1972). Monthly discharge only for some periods, published in WSP 1310.

REVISED RECORDS.--WSP 1310: 1918-20, 1922, 1924. WSP 1710: Drainage area.

GAGE.--River: Water-stage recorder and concrete control. Datum of gage is 7,388.99 ft (2,252.164 m), National Geodetic Vertical Datum of 1929. Apr. 16 to Nov. 15, 1912, nonrecording gage and Nov. 16, 1912, to Sept. 22, 1915, water-stage recorder 90 ft (27 m) downstream between dam crest and canal headgates at datum 1.00 ft (0.305 m) higher. Sept. 23, 1915, to Sept. 30, 1924, Apr. 19 to Sept. 30, 1927, and Apr. 11, 1932, to Sept. 30, 1935, water-stage recorder at site 50 ft (15 m) downstream at datum 1.00 ft (0.305 m) higher. Oct. 1, 1935, to July 13, 1950, water-stage recorder at site 50 ft (15 m) downstream at present datum.

Canal: Water-stage recorder and Parshall flume. Altitude of gage is 7,390 ft (2,250 m), from topographic map. Apr. 16, 1912, to Apr. 10, 1923, nonrecording gage; Apr. 11, 1923, to Sept. 30, 1924, and Apr. 19 to June 9, 1927, water-stage recorder; June 10 to Sept. 30, 1927, and Apr. 11, 1932, to May 8, 1938, nonrecording gage; May 9, 1938, to Apr. 26, 1966, water-stage recorder at site 1.5 mi (2.4 km) downstream at different datums. Apr. 27, 1966, to May 8, 1967, at present site, at datum 0.06 ft (0.018 m) lower.

REMARKS.--Records good. Pioneer Canal diverts from left bank of river at diversion dam 100 ft (30 m) downstream for irrigation in vicinity of Laramie. Records show combined flow of river and canal. Three small reservoirs above station in Wyoming, total capacity, about 600 acre-ft (0.740 hm³) for irrigation, stock water, and domestic use. Diversions for irrigation of about 5,200 acres (21.0 km²) above station. Transbasin diversions above station to Cache la Poudre River and tributaries.

COOPERATION.--Records collected and computed by Office of the Wyoming State Engineer and reviewed by Geological Survey.

EXTREMES FOR PERIOD OF RECORD (combined flow river and canal).--Maximum discharge, 5,060 ft³/s (143 m³/s) June 10, 1923 (river discharge by computation of peak flow over dam); minimum daily (1950-72), 10 ft³/s (0.28 m³/s) Aug. 30, Sept. 2-5, 1954.

EXTREMES FOR CURRENT YEAR (combined flow river and canal).--Maximum discharge, 933 ft³/s (26.4 m³/s) June 8; minimum daily during period of operation, 27 ft³/s (0.76 m³/s) Sept. 21.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1							64	164	488	80	46	32
2							68	171	471	90	44	38
3							77	209	466	195	41	38
4							76	251	579	246	40	43
5							69	198	610	207	38	36
6							73	154	672	350	36	36
7							59	154	749	100	36	36
8							52	138	891	89	37	36
9							47	116	521	90	43	40
10							66	109	827	97	47	48
11							91	111	742	93	56	54
12							97	111	637	82	51	55
13							97	111	386	113	55	44
14							95	111	291	126	56	39
15							99	116	249	108	52	38
16							106	123	205	88	63	37
17							115	205	176	79	68	36
18							124	213	138	88	56	33
19							135	170	134	77	44	30
20							184	219	121	66	38	28
21							177	265	100	59	35	27
22							142	238	94	49	33	30
23							116	241	87	53	32	32
24							108	262	90	56	32	30
25							135	329	71	64	34	31
26							169	361	68	73	54	36
27							197	402	66	86	44	36
28							174	505	77	81	39	35
29							182	527	132	60	36	31
30							172	475	104	52	36	32
31							---	482	---	47	33	---
TOTAL							3366	7241	10242	3144	1355	1097
MEAN							112	234	341	101	43.7	36.6
MAX							197	527	891	350	68	55
MIN							47	109	66	47	32	27
AC-FT							6680	14360	20320	6240	2690	2180

06659580 SAND CREEK AT COLORADO-WYOMING STATE LINE

LOCATION.--Lat 40°59'37", long 105°45'35", in NW¼NW¼SW¼ sec.24, T.12 N., R.75 W., Larimer County, CO, Hydrologic Unit 10180010, on right bank 1,200 ft (370 m) south of Colorado-Wyoming State line and 17 mi (27 km) southwest of Tie Siding, WY.

DRAINAGE AREA.--29.2 mi² (75.6 km²).

PERIOD OF RECORD.--October 1968 to current year (no winter records since 1971).

GAGE.--Water-stage recorder. Altitude of gage is 7,580 ft (2,310 m), from topographic map. Prior to July 19, 1977, gage at site 700 ft (210 m) upstream at different datum.

REMARKS.--Records good. Natural flow affected by diversion above station to Cache la Poudre River basin through Wilson Supply ditch. Water imported above station from Deadman Creek in Laramie River basin is rediverted through Wilson Supply ditch but is wasted down Sand Creek at times. Diversions for irrigation of about 170 acres (69 hm²) above station.

COOPERATION.--Records collected and computed by Office of the Wyoming State Engineer and reviewed by Geological Survey.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 6,710 ft³/s (190 m³/s) July 19, 1977, from slope-area measurement of peak flow, gage height, 6.65 ft (2.027 m), from floodmarks, present site and datum; minimum daily during period of operation, 0.13 ft³/s (0.004 m³/s) July 26-28, 1972.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 39 ft³/s (1.10 m³/s) May 28, gage height, 1.18 ft (0.360 m); minimum daily during period of operation, 1.0 ft³/s (0.028 m³/s) Aug. 5.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1							8.2	20	30	6.8	1.8	1.4
2							4.1	19	28	6.8	1.7	1.4
3							4.6	23	28	7.0	1.4	1.5
4							3.7	27	33	7.5	1.1	1.4
5							3.0	20	32	7.9	1.0	1.6
6							3.9	18	32	8.3	1.1	1.7
7							3.9	17	30	8.8	1.2	1.7
8							2.8	14	28	9.0	1.2	1.8
9							4.1	14	35	9.1	2.7	1.8
10							7.8	12	35	8.9	3.0	1.8
11							8.8	9.1	33	8.7	3.4	1.9
12							9.4	11	28	8.5	2.7	2.0
13							10	11	22	7.9	2.5	2.2
14							8.6	11	20	6.6	2.7	2.0
15							8.8	8.8	20	5.1	2.5	1.9
16							9.1	14	16	3.7	3.9	1.8
17							10	22	16	3.2	3.2	1.5
18							11	19	17	3.0	2.7	1.3
19							10	18	14	2.8	2.0	1.3
20							12	26	8.6	2.5	1.8	1.3
21							12	32	7.3	2.2	1.7	1.3
22							9.1	30	6.8	1.9	1.5	1.3
23							8.3	32	6.1	1.8	1.4	1.3
24							7.6	31	5.8	1.5	1.3	1.3
25							7.3	32	4.6	2.5	1.3	1.3
26							8.3	30	4.9	6.1	1.3	1.4
27							9.1	29	4.4	8.3	1.4	1.4
28							9.4	36	6.6	5.8	1.4	1.4
29							18	36	8.8	4.1	1.4	1.4
30							20	32	7.8	2.8	1.4	1.4
31							---	31	---	2.3	1.3	---
TOTAL							252.9	684.9	568.7	171.4	59.0	46.8
MEAN							8.43	22.1	19.0	5.53	1.90	1.56
MAX							20	36	35	9.1	3.9	2.2
MIN							2.8	8.8	4.4	1.5	1.0	1.3
AC-FT							502	1360	1130	340	117	93

PLATTE RIVER BASIN

06660070 LARAMIE RIVER ABOVE HOWELL, WY

LOCATION.--Lat 41°22'05", long 105°35'40", in NW¼SW¼SW¼ sec.9, T.16 N., R.73 W., Albany County, Hydrologic Unit 10180010, at bridge on unimproved dirt road, 1.9 mi (3.1 km) downstream from Laramie sewage disposal plant, 2.8 mi (4.5 km) north of Laramie, and 4.7 mi (7.6 km) south of Howell.

PERIOD OF RECORD.--November 1980 to September 1981.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	TUR- BID- ITY (NTU)	OXYGEN, DIS- SOLVED (MG/L)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	HARD- NESS (MG/L AS CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)
NOV 19...	1500	46	710	8.2	.5	4.0	11.0	K60	270	60	28	37
DEC 16...	1430	64	630	8.4	1.0	4.0	11.6	32	250	56	26	36
JAN 20...	1600	38	850	8.6	.0	6.0	11.2	120	360	79	39	49
FEB 26...	1415	76	615	8.2	1.5	6.0	13.0	92	200	50	19	24
MAR 09...	1600	45	750	8.1	7.0	3.0	12.0	K16	320	73	33	48
APR 20...	1445	24	1420	8.6	13.5	15	10.2	130	530	110	62	110
MAY 22...	1430	91	1430	8.4	10.0	5.0	10.6	43	630	140	67	120
JUN 09...	1450	346	510	7.9	18.5	20	6.3	160	190	44	20	32
JUL 13...	1100	49	960	8.1	21.0	10	7.8	680	390	84	43	59
AUG 17...	1215	17	1660	8.3	19.5	7.0	11.2	84	670	124	88	130
SEP 14...	1140	13	2140	8.3	16.0	9.0	10.4	530	830	152	110	160

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

DATE	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LINITY LAB (MG/L AS CACO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)	SOLIDS, DIS- SOLVED (TONS PER DAY)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N)
NOV 19...	1.0	3.7	130	200	19	.4	13	--	440	.60	54.6	--
DEC 16...	1.0	2.5	120	200	18	.4	12	438	424	.58	73.3	.09
JAN 20...	1.1	3.8	170	260	19	.6	14	595	567	.77	58.2	.07
FEB 26...	.7	2.5	110	130	10	.3	10	329	312	.42	64.0	.00
MAR 09...	1.2	2.9	150	250	21	.4	12	543	530	.72	64.5	.00
APR 20...	2.1	6.6	170	520	43	.6	9.0	1040	964	1.3	62.5	.21
MAY 22...	2.1	4.2	170	650	27	.7	13	1220	1130	1.5	278	.22
JUN 09...	1.0	2.3	80	160	6.5	.3	11	342	324	.44	303	.00
JUL 13...	1.3	4.2	150	330	21	.4	11	664	643	.87	85.1	.04
AUG 17...	2.5	6.8	220	640	54	.7	8.2	1290	1180	1.6	54.2	.05
SEP 14...	2.7	8.1	220	880	64	.7	8.5	1620	1520	2.1	53.4	.04

06660070 LARAMIE RIVER ABOVE HOWELL, WY--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N)	NITRO- GEN, AMMONIA TOTAL (MG/L AS NH4)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS NH4)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO- GEN, TOTAL (MG/L AS N)	NITRO- GEN, TOTAL (MG/L AS NO3)	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHORUS TOTAL (MG/L AS PO4)	CARBON, ORGANIC TOTAL (MG/L AS C)
NOV 19...	.13	--	--	--	--	--	--	--	--	.430	1.3	--
DEC 16...	.11	1.50	--	1.8	--	1.5	3.00	3.1	14	.540	1.7	--
JAN 20...	.06	3.00	--	3.6	--	3.3	6.30	6.4	28	.800	2.5	--
FEB 26...	.00	1.20	--	--	--	1.4	2.60	2.6	12	.570	1.7	14
MAR 09...	--	1.70	--	--	--	2.1	3.80	3.8	17	.790	2.4	--
APR 20...	.18	2.30	--	--	--	4.0	6.30	6.5	29	1.40	4.3	--
MAY 22...	.76	.430	.290	--	.37	1.4	1.80	2.0	8.9	.310	.95	--
JUN 09...	.06	.090	--	--	--	1.0	1.10	1.1	4.9	.110	.34	--
JUL 13...	.06	.670	--	--	--	1.6	2.30	2.3	10	.490	1.5	--
AUG 17...	.07	2.70	--	--	--	2.3	5.00	5.1	22	1.30	4.0	--
SEP 14...	.05	3.10	--	--	--	4.0	7.10	7.1	32	.000	.00	--

PLATTE RIVER BASIN

06660100 LARAMIE RIVER AT HOWELL, WY

LOCATION.--Lat 41°24'50", long 105°36'56", in NE¼SE¼SE¼ sec.30, T.17 N., R.73 W., Albany County, Hydrologic Unit 10180010, at bridge on Howell road, 100 ft (30 m) downstream from bridge on Union Pacific Railroad, 0.2 mi (0.3 km) south of Howell, and 7.3 mi (11.7 km) north of Laramie.

PERIOD OF RECORD.--Water years 1974 to October 1980 (discontinued).

WATER-QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	HARD- NESS (MG/L AS CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM AD- SORP- TION RATIO
OCT 21...	1430	32	1150	8.4	7.5	11.0	220	450	94	52	77	1.6

DATE	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LINITY LAB (MG/L AS CACO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)	SOLIDS, DIS- SOLVED (TONS PER DAY)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHORUS TOTAL (MG/L AS PO4)
OCT 21...	5.3	170	410	33	.5	11	786	1.1	67.9	.19	.980	3.0

06660500 LARAMIE RIVER AT TWO RIVERS, WY

LOCATION.--Lat 41°28'22", long 105°43'30", in NW¼NE¼SW¼ sec.5, T.17 N., R.74 W., Albany County, Hydrologic Unit 10180010, at former gaging station, at old Two Rivers Post Office, 0.6 mi (1.0 km) upstream from Little Laramie River, and 14 mi (23 km) northwest of Laramie.

DRAINAGE AREA.--1,224 mi² (3,170 km²), of which 188 mi² (487 km²) is probably noncontributing.

PERIOD OF RECORD.--Water years 1966 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	HARD- NESS (MG/L AS CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)
OCT 21...	1300	32	1330	8.3	4.0	540	110	65	88	1.6	3.7
NOV 17...	1340	46	820	8.3	5.0	340	80	33	42	1.0	3.9
DEC 16...	1230	52	650	8.4	.5	290	67	29	38	1.0	2.5
JAN 20...	1315	37	840	8.4	.0	380	74	47	56	1.3	3.3
FEB 26...	1220	33	705	8.0	1.0	250	57	25	33	.9	2.0
MAR 09...	1430	42	850	8.3	7.0	340	84	31	53	1.3	3.2
APR 20...	1230	5.2	1100	9.0	14.0	470	100	52	81	1.6	3.6
MAY 22...	1200	48	1280	--	10.0	510	110	60	110	2.1	2.9
JUN 09...	1240	122	760	8.3	17.5	290	64	32	46	1.2	2.6
JUL 13...	0920	34	1160	8.3	20.0	460	110	48	71	1.4	2.6
AUG 17...	1100	17	1500	8.6	17.0	650	120	87	110	1.9	4.3
SEP 14...	1000	2.7	1660	8.1	13.0	650	130	79	120	2.0	4.2

DATE	ALKA- LINIT LAB (MG/L AS CACO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, SUM OF CONSTITUENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)	SOLIDS, DIS- SOLVED (TONS PER DAY)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	PHOS- PHORUS, TOTAL (MG/L AS P)
OCT 21...	160	480	37	.8	6.6	884	1.2	76.4	1.6	.010
NOV 17...	140	250	21	.6	10	530	.72	65.8	4.2	.320
DEC 16...	130	190	20	.6	6.5	432	.59	60.7	.00	.090
JAN 20...	160	290	24	.7	12	603	.82	60.2	.32	.060
FEB 26...	120	160	20	.5	9.5	377	.51	33.6	.13	.470
MAR 09...	150	260	25	.8	6.2	550	.75	62.4	1.7	.590
APR 20...	190	370	34	.7	8.5	760	1.0	10.7	.03	.710
MAY 22...	160	540	24	.9	8.6	954	1.3	124	.40	.260
JUN 09...	120	250	15	.7	11	483	.66	159	.05	.160
JUL 13...	180	380	27	.8	7.8	760	1.0	69.8	.01	.330
AUG 17...	180	650	39	.6	2.4	1100	1.5	50.5	.26	.330
SEP 14...	230	600	52	1.1	3.9	1100	1.5	8.0	.31	.300

PLATTE RIVER BASIN

06661000 LITTLE LARAMIE RIVER NEAR FILMORE, WY

LOCATION.--Lat 41°17'42", long 106°02'03", in SE¼NE¼SE¼ sec.4, T.15 N., R.77 W., Albany County, Hydrologic Unit 10180010, on right bank 40 ft (12 m) downstream from State Highway 130, 1.2 mi (1.9 km) west of Filmore, and 4.4 mi (7.1 km) downstream from North Fork.

DRAINAGE AREA.--157 mi² (407 km²). Area at site used prior to Sept. 8, 1976, 156 mi² (404 km²).

PERIOD OF RECORD.--July 1902 to September 1903 (published as "near Hatton"), May 1911 to November 1926, October 1932 to current year (no winter records since 1971). Monthly discharge only for some periods, published in WSP 1310.

REVISED RECORDS.--WSP 1310: 1903, 1914, 1922-26. WSP 1440: 1902. WSP 1730: Drainage area.

GAGE.--Water-stage recorder. Altitude of gage is 7,610 ft (2,320 m), from topographic map. Prior to Sept. 16, 1938, nonrecording gages, and Sept. 16, 1938 to Sept. 7, 1976, water-stage recorder, at sites 0.7 mi (1.1 km) upstream at different datums.

REMARKS.--Records good. Ten small reservoirs above station, combined capacity, about 160 acre-ft (0.20 hm³), for irrigation, stock water, recreation, and domestic use. Diversions above station for irrigation of about 11,020 acres (44.6 km²), of which about 20 acres (8.1 hm²) are below station.

COOPERATION.--Records collected and computed by Office of the Wyoming State Engineer and reviewed by Geological Survey.

AVERAGE DISCHARGE.--55 years (water years 1903, 1912-26, 1933-71), 103 ft³/s (2.917 m³/s), 74,620 acre-ft/yr (92.0 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 3,450 ft³/s (97.7 m³/s) June 10, 1965, gage height, 5.33 ft (1.625 m), site and datum then in use; minimum daily determined, 1.0 ft³/s (0.028 m³/s) Sept. 17-20, 1913.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 671 ft³/s (19.0 m³/s) June 9, gage height, 3.14 ft (0.957 m); minimum daily during period of operation, 14 ft³/s (0.40 m³/s) Aug. 4, 5.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1							24	89	348	68	17	18
2							25	107	345	78	16	17
3							25	192	367	127	15	17
4							24	171	442	121	14	17
5							24	121	429	89	14	16
6							24	111	437	73	16	19
7							24	104	478	58	16	20
8							22	93	497	48	15	19
9							23	89	538	44	32	24
10							25	82	390	48	34	23
11							23	80	352	41	27	30
12							22	73	296	40	26	25
13							22	70	264	48	32	22
14							20	66	208	46	26	22
15							19	68	181	38	27	34
16							19	70	154	32	32	27
17							20	166	132	33	33	22
18							25	161	121	36	25	21
19							30	113	111	39	20	19
20							41	109	111	29	18	18
21							36	111	111	22	18	18
22							38	102	107	18	17	19
23							33	104	98	17	17	19
24							28	102	91	16	16	20
25							35	121	84	19	17	22
26							51	161	84	27	22	27
27							65	222	78	48	50	24
28							66	283	96	30	22	22
29							71	303	106	22	18	20
30							84	286	80	18	17	20
31							---	316	---	17	18	---
TOTAL							988	4246	7136	1390	687	641
MEAN							32.9	137	238	44.8	22.2	21.4
MAX							84	316	538	127	50	34
MIN							19	66	78	16	14	16
AC-FT							1960	8420	14150	2760	1360	1270

06661500 LITTLE LARAMIE RIVER AT TWO RIVERS, WY

LOCATION.--Lat 41°28'07", long 105°43'56", in SE½SE½SE½ sec.6, T.17 N., R.74 W., Albany County, Hydrologic Unit 10180010, at former gaging station, at old Two Rivers Post Office, 0.5 mi (0.8 km) upstream from mouth, and 14 mi (23 km) northwest of Laramie.

DRAINAGE AREA.--376 mi² (974 km²), of which 58 mi² (150 km²) is probably noncontributing.

PERIOD OF RECORD.--Water years 1965 to current year.

REMARKS.--No flow observed Sept. 14.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	HARD- NESS (MG/L AS CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)
OCT 21...	1200	34	735	7.8	1.5	250	60	23	47	1.3	3.1
NOV 17...	1200	18	645	8.2	.5	250	63	22	40	1.1	3.1
DEC 16...	1030	17	610	8.4	.5	250	65	21	46	1.3	2.5
JAN 20...	1215	4.7	545	7.9	.0	240	54	25	32	.9	1.7
FEB 26...	1040	17	525	7.9	.5	190	48	17	28	.9	1.6
MAR 09...	1400	7.8	460	8.3	4.0	180	47	16	24	.8	1.6
APR 20...	1110	25	670	8.0	10.5	280	66	27	40	1.0	2.4
MAY 22...	1045	41	855	--	8.0	340	81	34	66	1.6	2.7
JUN 09...	1000	138	440	8.3	15.0	190	42	19	25	.8	1.8
JUL 13...	0800	12	505	8.0	18.0	170	37	19	29	1.0	1.7
AUG 17...	0950	2.3	600	8.1	15.0	200	42	23	41	1.3	2.0

DATE	ALKA- LINITY LAB (MG/L AS CACO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)	SOLIDS, DIS- SOLVED (TONS PER DAY)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	PHOS- PHORUS, TOTAL (MG/L AS P)
OCT 21...	120	160	35	.4	8.4	409	.56	37.5	.10	.000
NOV 17...	160	140	21	.5	8.8	400	.54	19.4	1.1	.060
DEC 16...	160	130	28	.5	7.8	394	.54	18.1	1.3	.060
JAN 20...	170	120	4.8	.6	9.7	348	.47	4.4	.00	.000
FEB 26...	130	93	12	.4	7.2	285	.39	13.1	.00	.050
MAR 09...	140	77	7.5	.6	4.1	260	.35	5.5	.00	.040
APR 20...	190	140	12	.5	17	410	.56	27.7	.00	.070
MAY 22...	210	250	20	.7	14	589	.80	65.2	.01	.070
JUN 09...	150	86	6.0	.7	14	286	.39	107	.05	.050
JUL 13...	150	82	9.3	.5	4.4	270	.37	8.7	.01	.050
AUG 17...	110	150	19	.4	4.1	350	.48	2.2	.25	.120

PLATTE RIVER BASIN

06661500 LITTLE LARAMIE RIVER AT TWO RIVERS, WY--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	TIME	2,4-D, TOTAL (UG/L)	2,4-D, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	2, 4-DP TOTAL (UG/L)	2,4-DP, IN BOTTOM MAT. (UG/KG)	2,4,5-T TOTAL (UG/L)	2,4,5-T TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	SILVEX, TOTAL (UG/L)	SILVEX, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)
JUN 09...	1000	.00	0	.00	.00	.00	0	.00	0
JUL 13...	0800	.01	0	.00	.00	.00	0	.00	0

DATE	TOTAL DICAMBA (UG/L)	DICAMBA IN BOTTOM MA- TERIAL (UG/KG)	TOTAL PICLORAM (UG/L)	PICLORAM IN BOTTOM MA- TERIAL (UG/KG)
JUN 09...	.00	.0	.00	.0
JUL 13...	.01	.0	.01	.0

06661585 LARAMIE RIVER NEAR BOSLER, WY

LOCATION.--Lat 41°33'17", long 105°40'58", in NW¼NW¼NE¼ sec.10, T.18 N., R.74 W., Albany County, Hydrologic Unit 10180010, on left bank 50 ft (15 m) upstream from bridge on U.S. Highways 30 and 287, 0.2 mi (0.3 km) northwest of Bosler Junction, 1.7 mi (2.7 km) south of Bosler, and 2.0 mi (3.2 km) downstream from Soil Bank Boughton Canal diversion dam.

DRAINAGE AREA.--1,790 mi² (4,636 km²), of which 283 mi² (733 km²) is probably noncontributing.

PERIOD OF RECORD.--October 1972 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 7,030 ft (2,140 m), from topographic map.

REMARKS.--Records good except those for winter period, which are poor. Natural flow of stream affected by transbasin diversions, storage reservoirs, diversion above station for irrigation of about 54,700 acres (221 km²), of which about 2,300 acres (9.31 km²) are below station, and return flow from irrigated areas.

COOPERATION.--Records collected and computed by Office of the Wyoming State Engineer and reviewed by Geological Survey.

AVERAGE DISCHARGE.--9 years, 142 ft³/s (4.021 m³/s), 102,900 acre-ft/yr (127 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,820 ft³/s (51.5 m³/s) June 12, 1979, gage height, 6.83 ft (2.082 m); maximum gage height, 8.40 ft (2.560 m) Apr. 22, 1973 (backwater from ice jam); minimum daily discharge, 0.20 ft³/s (0.006 m³/s) Sept. 4, 1980.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 461 ft³/s (13.1 m³/s) June 12, gage height, 2.49 ft (0.759 m); minimum daily, 0.35 ft³/s (0.010 m³/s) Oct. 9.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.80	60	62	105	42	50	32	9.6	139	22	22	10
2	.65	62	69	106	38	52	40	9.6	142	20	21	8.7
3	.50	67	69	108	36	55	40	14	126	40	25	7.9
4	.50	69	67	103	33	64	35	35	126	54	22	7.2
5	.50	69	68	99	32	56	40	50	159	62	16	7.2
6	.50	69	68	98	32	62	36	40	188	69	12	7.9
7	.50	67	66	95	30	60	36	32	216	84	12	7.9
8	.50	67	65	90	29	52	35	25	249	76	10	6.6
9	.35	67	65	88	29	48	38	17	284	62	12	6.0
10	.50	57	64	83	28	52	40	16	336	50	12	5.5
11	.80	69	66	80	28	50	36	15	400	44	12	5.0
12	1.3	67	70	80	28	50	36	14	450	43	18	4.2
13	2.1	62	77	71	31	50	33	14	394	48	20	3.9
14	2.5	60	85	60	32	52	28	14	330	52	20	4.2
15	3.0	50	95	51	35	48	18	12	252	48	21	7.6
16	2.5	44	102	48	38	46	17	14	148	44	25	7.2
17	2.3	43	120	46	42	46	15	40	105	48	30	17
18	5.9	40	140	44	42	46	15	115	76	46	25	12
19	18	41	150	42	45	44	17	184	67	43	24	8.7
20	41	44	125	43	47	46	25	132	64	36	21	7.2
21	48	50	115	45	50	46	28	102	58	30	20	6.6
22	54	52	115	47	50	43	27	97	50	22	18	6.0
23	36	54	120	49	52	43	24	86	43	20	15	5.5
24	38	56	120	49	54	43	18	72	36	17	12	6.0
25	59	54	129	48	55	41	16	64	32	17	14	6.6
26	56	57	130	43	52	43	14	64	28	17	12	7.2
27	44	57	135	42	51	43	12	60	27	18	12	6.6
28	30	57	130	42	50	41	12	60	27	22	12	5.5
29	36	55	120	43	---	40	9.6	60	28	24	12	5.5
30	52	56	110	43	---	40	10	69	25	20	12	5.0
31	64	---	100	43	---	28	---	108	---	17	12	---
TOTAL	601.70	1722	3017	2034	1111	1480	782.6	1644.2	4605	1215	531	212.4
MEAN	19.4	57.4	97.3	65.6	39.7	47.7	26.1	53.0	154	39.2	17.1	7.08
MAX	64	69	150	108	55	64	40	184	450	84	30	17
MIN	.35	40	62	42	28	28	9.6	9.6	25	17	10	3.9
AC-FT	1190	3420	5980	4030	2200	2940	1550	3260	9130	2410	1050	421
CAL YR 1980	TOTAL	59629.90	MEAN	163	MAX	1150	MIN	.20	AC-FT	118300		
WTR YR 1981	TOTAL	18955.90	MEAN	51.9	MAX	450	MIN	.35	AC-FT	37600		

PLATTE RIVER BASIN

06662000 LARAMIE RIVER NEAR LOOKOUT, WY

LOCATION.--Lat 41°45'44", long 105°41'16", in NE¼NW¼SE¼ sec.27, T.21 N., R.74 W., Albany County, Hydrologic Unit 10180010, on right bank 155 ft (47 m) downstream from bridge on county road, 1.0 mi (1.6 km) upstream from Wheatland Reservoir No. 2, and 9.0 mi (14.5 km) northeast of Lookout.

DRAINAGE AREA.--2,174 mi² (5,631 km²), of which 603 mi² (1,562 km²) is probably noncontributing.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--May 1912 to December 1917, January 1921 to December 1927, April 1932 to current year (no winter records since 1972). Monthly discharge only for some periods, published in WSP 1310.

REVISED RECORDS.--WSP 1310: 1913-17. WSP 1710: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 6,962.68 ft (2,122.225 m), National Geodetic Vertical Datum of 1929. Prior to Apr. 22, 1915, nonrecording gage and Apr. 22, 1915, to Aug. 31, 1917, water-stage recorder, at bridge 155 ft (47 m) upstream at same datum. Oct. 14, 1931, to Sept. 17, 1938, at site 125 ft (38 m) upstream at same datum.

REMARKS.--Records good. Natural flow of stream affected by transbasin diversions, storage reservoirs, diversions for irrigation of about 108,000 acres (437 km²) above station, and return flow from irrigated areas.

COOPERATION.--Records collected and computed by Office of the Wyoming State Engineer and reviewed by Geological Survey.

AVERAGE DISCHARGE.--51 years (water years 1913-17, 1922-27, 1933-72), 131 ft³/s (3.710 m³/s), 94,910 acre-ft/yr (117 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 3,340 ft³/s (94.6 m³/s) June 17, 1957, gage height, 6.41 ft (1.954 m); maximum gage height, about 8.0 ft (2.4 m), occurred in 1973 (backwater from ice); no flow at times in 1934-35, 1939-40, 1954-55, 1977.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 382 ft³/s (10.8 m³/s) June 12, gage height, 2.51 ft (0.765 m); minimum daily during period of operation, 3.4 ft³/s (0.096 m³/s) Sept. 17.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1							48	14	115	40	30	8.7
2							38	14	134	37	26	7.3
3							38	19	139	37	28	7.3
4							37	26	124	54	28	7.3
5							32	37	132	64	36	6.6
6							32	48	159	64	22	6.0
7							32	37	172	77	18	5.5
8							34	31	180	86	14	4.5
9							30	30	201	84	17	4.0
10							32	25	240	78	18	4.0
11							32	21	302	68	14	4.5
12							31	19	364	64	28	4.0
13							31	21	358	68	18	3.6
14							30	21	308	68	18	3.6
15							25	20	249	66	16	3.6
16							19	21	189	66	16	3.6
17							18	34	134	63	17	3.4
18							20	48	111	64	20	4.5
19							21	105	95	63	19	14
20							25	136	89	56	16	15
21							25	103	82	48	15	14
22							32	86	77	42	14	13
23							30	86	71	37	14	11
24							26	80	66	32	12	9.5
25							22	71	61	32	11	8.7
26							20	68	56	34	10	10
27							18	66	53	40	9.5	8.7
28							16	61	50	32	8.7	9.5
29							14	63	48	28	7.3	9.5
30							14	68	46	32	8.0	8.7
31							---	78	---	30	9.5	---
TOTAL							822	1557	4405	1654	538.0	223.6
MEAN							27.4	50.2	147	53.4	17.4	7.45
MAX							48	136	364	86	36	15
MIN							14	14	46	28	7.3	3.4
AC-FT							1630	3090	8740	3280	1070	444

PLATTE RIVER BASIN

06662000 LARAMIE RIVER NEAR LOOKOUT, WY--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1976 to September 1981 (discontinued).

WATER-QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	TIME	PCB, TOTAL (UG/L)	PCB, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	NAPH- THA- LENES, POLY- CHLOR. TOTAL (UG/L)	PCN, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	ALDRIN, TOTAL (UG/L)	ALDRIN, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	CHLOR- DANE, TOTAL (UG/L)	CHLOR- DANE, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	DDD, TOTAL (UG/L)
OCT 23...	1330	.00	0	.00	.0	.00	.0	.00	.0	.00
DATE		DDD, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	DDE, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	DDT, TOTAL (UG/L)	DDT, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	DI- AZINON, TOTAL (UG/L)	DI- ELDRIN, TOTAL (UG/L)	DI- ELDRIN, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	ENDO- SULFAN, TOTAL (UG/L)	ENDO- SULFAN, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)
OCT 23...	.0	.00	.0	.00	.0	.02	.00	.0	.00	.0
DATE	ENDRIN, TOTAL (UG/L)	ENDRIN, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	ETHION, TOTAL (UG/L)	HEPTA- CHLOR, TOTAL (UG/L)	HEPTA- CHLOR, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	HEPTA- CHLOR EPOXIDE TOTAL (UG/L)	HEPTA- CHLOR EPOXIDE TOT. IN BOTTOM MATL. (UG/KG)	LINDANE TOTAL (UG/L)	LINDANE TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	MALA- THION, TOTAL (UG/L)
OCT 23...	.00	.0	.00	.00	.0	.00	.0	.00	.0	.00
DATE	METH- OXY- CHLOR, TOTAL (UG/L)	METH- OXY- CHLOR, TOT. IN BOTTOM MATL. (UG/KG)	METHYL PARA- THION, TOTAL (UG/L)	METHYL TRI- THION, TOTAL (UG/L)	MIREX, TOTAL (UG/L)	MIREX, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	PARA- THION, TOTAL (UG/L)	PER- THANE TOTAL (UG/L)	PER- THANE IN BOTTOM MATERIL (UG/KG)	TOX- APHENE, TOTAL (UG/L)
OCT 23...	.00	.0	.00	.00	.00	.0	.00	.00	.00	.00
DATE	TOXA- PHENE, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	TOTAL TRI- THION (UG/L)	2,4-D, TOTAL (UG/L)	2,4-D, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	2, 4-DP TOTAL (UG/L)	2,4-DP, IN BOTTOM MAT. (UG/KG)	2,4,5-T TOTAL (UG/L)	2,4,5-T TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	SILVEX, TOTAL (UG/L)	SILVEX, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)
OCT 23...	.0	.00	.11	0	.00	.00	.00	0	.00	0
DATE				TOTAL DICAMBA (UG/L)	DICAMBA IN BOTTOM MA- TERIAL (UG/KG)	TOTAL PICLORAM (UG/L)	PICLORAM IN BOTTOM MA- TERIAL (UG/KG)			
OCT 23...				.00	.0	.02	.0			

PLATTE RIVER BASIN

06664400 SYBILLE CREEK ABOVE MULE CREEK, NEAR WHEATLAND, WY

LOCATION.--Lat 41°50'39", long 105°13'15", in NE¼SW¼SE¼ sec.27, T.22 N., R.70 W., Platte County, Hydrologic Unit 10180011, on right bank just upstream from bridge on U.S. Highway 34, 900 ft (274 m) upstream from Mule Creek, 2.9 mi (4.7 km) upstream from Bluegrass Creek, and 20 mi (32 km) southwest of Wheatland.

DRAINAGE AREA.--194 mi² (502 km²).

PERIOD OF RECORD.--April 1974 to current year (no winter records).

GAGE.--Water-stage recorder. Altitude of gage is 5,340 ft (1,628 m), from topographic map.

REMARKS.--Records good. Seven small reservoirs above station, combined capacity, about 400 acre-ft (0.493 hm³), for irrigation. Diversions above station for irrigation of about 2,020 acres (8.17 km²), of which about 80 acres (32.4 hm²) lies below station.

COOPERATION.--Records collected and computed by Office of the Wyoming State Engineer and reviewed by Geological Survey.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 502 ft³/s (14.2 m³/s) July 24, 1977, gage height, 4.83 ft (1.472 m), from rating curve extended above 60 ft³/s (1.70 m³/s) on basis of slope-conveyance study; minimum daily, 0.49 ft³/s (0.014 m³/s) Sept. 8, 9, 1977.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 402 ft³/s (11.4 m³/s) July 25, gage height, 4.12 ft (1.256 m), from rating curve extended above 175 ft³/s (4.96 m³/s); minimum daily during period of operation, 2.7 ft³/s (0.076 m³/s) May 16, Sept. 26-30.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1							7.6	3.4	23	8.0	8.9	3.7
2							7.2	3.4	22	8.5	8.0	3.4
3							7.6	3.7	20	9.4	8.0	3.7
4							7.2	6.4	20	9.4	7.6	3.7
5							6.0	5.7	17	8.5	7.6	3.7
6							6.4	6.0	17	8.0	7.2	4.5
7							6.8	6.8	17	7.6	6.4	4.9
8							6.8	6.0	16	8.5	6.0	4.9
9							6.8	6.4	13	8.5	6.8	4.5
10							6.0	6.4	13	8.5	7.2	4.1
11							6.0	6.0	14	8.0	6.8	4.1
12							6.4	4.5	14	8.0	6.8	3.7
13							6.8	4.1	14	9.4	6.4	3.7
14							6.8	3.4	14	9.4	6.4	3.7
15							6.8	3.0	14	9.4	6.0	4.1
16							6.8	2.7	14	9.9	7.6	3.7
17							6.4	6.0	14	10	7.2	4.1
18							5.3	19	14	10	6.0	4.1
19							5.7	29	13	11	5.7	3.7
20							7.2	23	12	10	5.3	3.7
21							6.8	24	11	9.9	4.9	4.1
22							6.4	26	11	8.9	5.7	3.7
23							5.7	24	9.9	8.9	5.3	3.7
24							3.7	26	8.9	15	4.9	3.7
25							3.7	28	8.0	61	4.9	3.0
26							3.4	29	8.0	29	4.5	2.7
27							3.0	31	8.0	16	4.5	2.7
28							3.4	31	8.0	15	4.1	2.7
29							3.4	30	8.5	11	3.0	2.7
30							3.4	29	8.5	9.9	3.4	2.7
31							---	25	---	9.4	3.7	---
TOTAL							175.5	457.9	404.8	374.0	186.8	111.4
MEAN							5.85	14.8	13.5	12.1	6.03	3.71
MAX							7.6	31	23	61	8.9	4.9
MIN							3.0	2.7	8.0	7.6	3.0	2.7
AC-FT							348	908	803	742	371	221

06665790 SYBILLE CREEK ABOVE CANAL NO. 3, NEAR WHEATLAND, WY

LOCATION.--Lat 41°54'40", long 105°07'36", in NW¼SW¼NE¼ sec.4, T.22 N., R.69 W., Platte County, Hydrologic Unit 10180011, on right bank 100 ft (30 m) upstream from State Highway 34, 200 ft (61 m) downstream from Deadhead Creek, 2.7 mi (4.3 km) upstream from canal No. 3, and 19.7 mi (3.2 km) southwest of Wheatland.

PERIOD OF RECORD.--April 1980 to current year (no winter records).

GAGE.--Water-stage recorder. Altitude of gage is 5,040 ft (1,536 m), from topographic map.

REMARKS.--Records good. Most of flow during irrigation season is water released from Wheatland Reservoir No. 2, capacity 98,930 acre-ft (122 hm³), on the Laramie River and diverted down Bluegrass Creek for irrigation of land near Wheatland. Diversions for irrigation of about 4,400 acres (1,780 hm²) above station.

COOPERATION.--Records collected and computed by Office of the Wyoming State Engineer and reviewed by Geological Survey.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 763 ft³/s (21.6 m³/s) July 24, 1981, gage height, 3.02 ft (0.920 m); no flow Sept. 1-4, 11, 1981.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 763 ft³/s (21.6 m³/s) July 24, gage height, 3.02 ft (0.920 m); no flow Sept. 1-4, 11.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1							17	13	23	94	33	.00
2							16	12	23	101	48	.00
3							17	12	22	88	48	.00
4							18	14	23	110	40	.00
5							15	12	21	108	36	40
6							15	11	19	96	45	57
7							15	13	19	68	54	40
8							18	13	18	81	45	31
9							16	14	17	75	59	18
10							15	14	16	68	56	3.0
11							15	15	16	59	42	.00
12							16	15	14	59	25	6.7
13							17	14	13	70	22	10
14							17	14	14	59	46	9.9
15							17	31	14	33	41	9.4
16							16	44	14	26	38	9.4
17							16	58	17	25	41	8.4
18							15	85	22	30	34	8.4
19							15	40	19	34	33	7.4
20							15	25	18	28	31	6.5
21							17	30	13	21	30	6.1
22							15	21	52	25	30	6.1
23							15	23	52	28	25	6.1
24							14	25	94	120	22	6.1
25							13	25	106	152	18	5.7
26							13	25	110	208	5.0	5.3
27							13	26	106	54	7.3	5.3
28							13	26	92	57	24	4.6
29							13	26	90	50	5.3	4.2
30							13	25	90	106	.50	4.2
31							---	24	---	40	.20	---
TOTAL							460	745	1167	2173	984.30	318.80
MEAN							15.3	24.0	38.9	70.1	31.8	10.6
MAX							18	85	110	208	59	57
MIN							13	11	13	21	.20	.00
AC-FT							912	1480	2310	4310	1950	632

06670500 LARAMIE RIVER NEAR FORT LARAMIE, WY

LOCATION.--Lat 42°12'02", long 104°32'16", in NE¼SE¼NE¼ sec.28, T.26 N., R.64 W., Goshen County, Hydrologic Unit 10180011, on right bank 600 ft (183 m) upstream from bridge on county road, 0.6 mi (1.0 km) upstream from mouth, and 1.1 mi (1.8 km) southwest of Fort Laramie.

DRAINAGE AREA.--4,564 mi² (11,821 km²), of which 631 mi² (1,634 km²) is probably noncontributing. Drainage area at mouth, 4,565 mi² (11,823 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--April 1915 to current year (no winter records prior to 1927). Monthly discharge only for some periods, published in WSP 1310. Records for water years 1926-39, previously published including diversions to Gering-Fort Laramie Canal, were adjusted to exclude flow in the canal in WSP 1310. Prior to October 1931, published as "at Fort Laramie."

REVISED RECORDS.--WSP 1918: Drainage area.

GAGE.--Water-stage recorder. Altitude of gage is 4,220 ft (1,286 m), from topographic map. Apr. 4, 1915, to Mar. 31, 1925, nonrecording gage at site 0.1 mi (0.2 km) downstream at different datum. Apr. 1, 1925, to Sept. 30, 1932, nonrecording gage and Oct. 1, 1932, to Aug. 20, 1935, water-stage recorder at site 4.3 mi (6.9 km) upstream at different datum. Aug. 21, 1935, to Nov. 2, 1970, water-stage recorder at site 0.3 mi (0.5 km) upstream at different datum. Nov. 3, 1970, to May 9, 1973, water-stage recorder 0.1 mi (0.2 km) downstream at different datum. May 10, 1973, to Apr. 5, 1977, water-stage recorder 4.3 mi (6.9 km) upstream at different datum.

REMARKS.--Records poor. Diversion, at times, to Gering-Fort Laramie Canal, 5.4 mi (8.7 km) upstream. Natural flow of stream affected by transbasin diversions, storage reservoirs, ground-water withdrawals and diversions for irrigation of about 176,000 acres (710 km²) above station, and return flow from irrigated areas.

AVERAGE DISCHARGE.--25 years (water years 1957-81), 131 ft³/s (3.710 m³/s), 94,910 acre-ft/yr (117 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 6,260 ft³/s (177 m³/s) May 10, 1973, gage height, 9.40 ft (2.865 m) site and datum then in use; no flow Jan. 31 to Mar. 20, Oct. 24 to Dec. 17, 1926, Mar. 1-26, 1927, Apr. 14, 1938 (all flow diverted by Gering-Fort Laramie Canal).

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 122 ft³/s (3.46 m³/s) Sept. 25, gage height, 4.07 ft (1.241 m); maximum gage height, 4.32 ft (1.317 m) Dec. 6 (backwater from ice); minimum daily discharge, 2.0 ft³/s (0.057 m³/s) Jan. 23.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	14	14	8.4	11	4.1	29	20	40	37	35	43	32
2	15	15	8.5	10	5.0	30	24	39	21	35	40	33
3	15	11	8.0	9.6	6.2	32	32	40	19	40	40	33
4	14	7.6	6.9	9.0	8.0	30	36	48	40	40	40	33
5	15	7.6	5.6	8.4	10	30	37	46	56	40	43	37
6	14	8.4	5.1	7.6	14	29	37	45	30	43	50	40
7	14	10	4.5	7.6	22	27	33	48	27	46	46	40
8	14	11	4.1	7.6	21	24	32	43	33	48	43	39
9	15	11	4.3	9.3	19	21	30	24	35	46	43	37
10	15	9.0	4.5	9.3	16	16	30	12	35	45	45	37
11	16	9.2	4.7	8.4	14	21	34	18	32	43	45	37
12	16	9.3	4.9	7.6	15	22	36	33	22	37	40	37
13	16	9.2	5.0	7.6	17	22	36	32	21	46	40	39
14	16	9.0	5.1	6.9	19	21	36	30	50	39	43	39
15	16	8.5	5.1	6.9	20	21	36	24	58	33	43	39
16	16	7.9	5.1	6.2	21	21	41	18	58	33	45	43
17	15	7.0	5.1	5.6	22	21	45	27	54	35	58	43
18	14	7.6	4.6	4.6	22	21	45	35	46	40	46	43
19	14	8.6	5.1	5.1	22	19	45	35	43	40	45	40
20	14	10	5.1	5.1	21	21	45	32	37	40	40	43
21	14	12	5.0	3.6	20	22	40	35	35	39	40	43
22	16	14	5.0	2.3	19	24	40	35	35	40	40	45
23	16	14	5.3	2.0	18	22	43	50	35	39	39	43
24	16	14	5.7	4.1	17	21	40	58	35	39	37	43
25	17	14	6.6	3.6	21	21	40	61	33	45	30	50
26	17	12	7.7	3.2	21	21	43	54	32	48	37	45
27	17	11	9.0	2.9	22	21	43	50	29	46	41	43
28	17	10	10	4.0	27	21	43	48	33	46	39	40
29	17	9.3	11	5.1	---	23	43	45	37	46	36	35
30	17	9.3	11	5.6	---	22	40	45	37	45	35	30
31	15	---	11	6.0	---	21	---	45	---	45	34	---
TOTAL	477	310.5	197.0	195.8	483.3	717	1125	1195	1095	1282	1286	1181
MEAN	15.4	10.4	6.35	6.32	17.3	23.1	37.5	38.5	36.5	41.4	41.5	39.4
MAX	17	15	11	11	27	32	45	61	58	48	58	50
MIN	14	7.0	4.1	2.0	4.1	16	20	12	19	33	30	30
AC-FT	946	616	391	388	959	1420	2230	2370	2170	2540	2550	2340
CAL YR 1980	TOTAL	64868.5	MEAN	177	MAX	1190	MIN	4.1	AC-FT	128700		
WTR YR 1981	TOTAL	9544.6	MEAN	26.1	MAX	61	MIN	2.0	AC-FT	18930		

PLATTE RIVER BASIN

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06670500 LARAMIE RIVER NEAR FORT LARAMIE, WY--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD---Water years 1966 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	TUR- BID- ITY (NTU)	OXYGEN, DIS- SOLVED (MG/L)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	HARD- NESS (MG/L AS CAC03)
OCT									
09...	1200	17	740	8.0	12.0	2.0	12.1	14	330
NOV									
06...	1145	8.8	760	8.2	8.0	2.0	11.8	16	310
DEC									
02...	1545	8.5	815	8.0	3.0	2.0	12.8	28	300
JAN									
05...	1415	8.8	770	8.1	5.0	2.0	12.5	20	290
FEB									
12...	1315	16	780	7.9	1.0	4.0	13.0	21	310
MAR									
25...	1000	21	830	7.9	7.0	4.0	10.8	68	290
APR									
07...	0845	33	780	8.3	8.5	8.0	9.9	28	290
MAY									
06...	1020	44	805	8.0	12.0	5.0	9.2	59	300
JUN									
02...	0930	22	780	7.8	16.5	3.0	8.6	180	290
JUL									
08...	0840	46	810	7.7	15.5	5.0	8.6	140	300
AUG									
12...	1100	42	755	8.0	18.0	3.0	8.8	--	330
SEP									
09...	1020	40	840	7.9	15.0	6.0	9.0	70	300

DATE	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LINITY LAB (MG/L AS CAC03)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)
OCT									
09...	86	27	58	1.4	5.8	220	190	16	.6
NOV									
06...	91	20	52	1.3	5.4	220	160	18	.3
DEC									
02...	74	28	59	1.5	5.2	220	170	15	.6
JAN									
05...	83	21	60	1.5	5.0	230	170	15	.6
FEB									
12...	78	29	60	1.5	5.0	240	170	19	.7
MAR									
25...	75	25	56	1.4	6.0	210	170	21	.6
APR									
07...	74	26	53	1.4	5.4	210	160	19	.7
MAY									
06...	74	29	61	1.5	6.4	210	170	22	.7
JUN									
02...	77	24	58	1.5	6.3	220	170	25	.7
JUL									
08...	81	23	56	1.4	5.5	220	170	19	.7
AUG									
12...	92	24	61	1.5	5.1	220	200	18	.5
SEP									
09...	79	25	59	1.5	6.1	220	170	19	.7

PLATTE RIVER BASIN

06670500 LARAMIE RIVER NEAR FORT LARAMIE, WY--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)	SOLIDS, DIS- SOLVED (TONS PER DAY)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	PHOS- PHORUS, TOTAL (MG/L AS P)	SEDI- MENT, SUS- PENDE (MG/L)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (T/DAY)
OCT 09...	17	530	.72	24.3	.27	.010	38	1.7
NOV 06...	23	500	.68	11.9	.04	.050	10	.24
DEC 02...	13	495	.67	11.4	.32	.010	54	1.2
JAN 05...	25	520	.71	12.4	.29	.010	10	.24
FEB 12...	.0	502	.68	21.7	.31	.010	34	1.5
MAR 25...	18	500	.68	28.4	.23	.010	18	1.0
APR 07...	30	500	.68	44.6	.12	.050	32	2.9
MAY 06...	15	511	.70	60.7	.23	.020	25	3.0
JUN 02...	17	510	.69	30.3	.17	.070	12	.71
JUL 08...	22	510	.69	63.3	.70	.020	19	2.4
AUG 12...	19	550	.75	62.4	.19	.070	24	2.7
SEP 09...	21	510	.69	55.1	.60	.140	16	1.7

DATE	TIME	ALUM- INUM, TOTAL RECOV- ERABLE (UG/L AS AL)	ARSENIC TOTAL (UG/L AS AS)	BERYL- LIUM, TOTAL RECOV- ERABLE (UG/L AS BE)	CADMIUM TOTAL RECOV- ERABLE (UG/L AS CD)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU)
OCT 09...	1200	20	2	0	0	0	5

DATE	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	LEAD, TOTAL RECOV- ERABLE (UG/L AS PB)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)	MERCURY TOTAL RECOV- ERABLE (UG/L AS HG)	NICKEL, TOTAL RECOV- ERABLE (UG/L AS NI)	SELE- NIUM, TOTAL RECOV- ERABLE (UG/L AS SE)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN)
OCT 09...	190	2	40	.0	6	1	20

DATE	TIME	PCB, TOTAL (UG/L)	PCB, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	NAPH- THA- LENES, POLY- CHLOR. TOTAL (UG/L)	PCN, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	ALDRIN, TOTAL (UG/L)	ALDRIN, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	CHLOR- DANE, TOTAL (UG/L)	CHLOR- DANE, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	DDD, TOTAL (UG/L)
OCT 09...	1200	.00	0	.00	.0	.00	.0	.00	.0	.00

DATE	DDD, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	DDE, TOTAL (UG/L)	DDE, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	DDT, TOTAL (UG/L)	DDT, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	DI- AZINON, TOTAL (UG/L)	DI- ELDRIN, TOTAL (UG/L)	DI- ELDRIN, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	ENDO- SULFAN, TOTAL (UG/L)	ENDO- SULFAN, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)
OCT 09...	.1	.00	.0	.00	.0	.00	.00	.0	.00	.0

06670500 LARAMIE RIVER NEAR FORT LARAMIE, WY--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	ENDRIN, TOTAL (UG/L)	ENDRIN, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	ETHION, TOTAL (UG/L)	HEPTA- CHLOR, TOTAL (UG/L)	HEPTA- CHLOR, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	HEPTA- CHLOR EPOXIDE TOTAL (UG/L)	HEPTA- CHLOR EPOXIDE TOT. IN BOTTOM MATL. (UG/KG)	LINDANE TOTAL (UG/L)	LINDANE TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	MALA- THION, TOTAL (UG/L)
OCT 09...	.00	.0	.00	.00	.0	.00	.0	.00	.0	.00

DATE	METH- OXY- CHLOR, TOTAL (UG/L)	METH- OXY- CHLOR, TOT. IN BOTTOM MATL. (UG/KG)	METHYL PARA- THION, TOTAL (UG/L)	METHYL TRI- THION, TOTAL (UG/L)	MIREX, TOTAL (UG/L)	MIREX, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	PARA- THION, TOTAL (UG/L)	PER- THANE TOTAL (UG/L)	PER- THANE IN BOTTOM MATERIL (UG/KG)	TOX- APHENE, TOTAL (UG/L)
OCT 09...	.00	.0	.00	.00	.00	.0	.00	.00	.00	.00

DATE	TOXA- PHENE, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	TOTAL TRI- THION (UG/L)	2,4-D, TOTAL (UG/L)	2,4-D, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	2, 4-DP TOTAL (UG/L)	2,4-DP, IN BOTTOM MAT. (UG/KG)	2,4,5-T TOTAL (UG/L)	2,4,5-T TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	SILVEX, TOTAL (UG/L)	SILVEX, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)
OCT 09...	.0	.00	.00	0	.00	.00	.00	0	.00	0

DATE	TOTAL DICAMBA (UG/L)	DICAMBA IN BOTTOM MA- TERIAL (UG/KG)	TOTAL PICLORAM (UG/L)	PICLORAM IN BOTTOM MA- TERIAL (UG/KG)
OCT 09...	.00	.0	.00	.0

PLATTE RIVER BASIN

06671000 RAWHIDE CREEK NEAR LINGLE, WY

LOCATION.--Lat 42°07'32", long 104°19'36", in SE¼NE¼ sec.20, T.25 N., R.62 W., Goshen County, Hydrologic Unit 10180009, on right bank 200 ft (61 m) upstream from bridge on U.S. Highway 26, 1.0 mi (1.6 km) east of Lingle, and 1.0 mi (1.6 km) upstream from mouth.

DRAINAGE AREA.--522 mi² (1,352 km²).

PERIOD OF RECORD.--May 1928 to current year (no winter records since 1971). Monthly discharge only for some periods, published in WSP 1310.

REVISED RECORDS.--WSP 1440: 1932, 1936(M). WSP 1918: Drainage area.

GAGE.--Water-stage recorder. Altitude of gage is 4,160 ft (1,268 m), from topographic map. See WSP 1918 for history of changes prior to May 16, 1955.

REMARKS.--Records good. Low flow represents return water from lands irrigated by Interstate Canal in Rawhide Creek basin. Six small reservoirs above station, combined capacity, about 460 acre-ft (0.567 hm³), for irrigation. Diversions for irrigation of about 1,600 acres (6.48 km²) above station.

COOPERATION.--Records collected and computed by Office of the Wyoming State Engineer and reviewed by Geological Survey.

AVERAGE DISCHARGE.--43 years (water years 1929-71), 21.5 ft³/s (0.609 m³/s), 15,580 acre-ft/yr (19.2 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 3,970 ft³/s (112 m³/s) Sept. 7, 1946, gage height, 11.76 ft (3.584 m); no flow July 5-7, 1961, Apr. 12, 29, 1966, Mar. 20-28, 1967, Apr. 13, 1971.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 139 ft³/s (3.94 m³/s) July 15, gage height, 4.72 ft (1.439 m); minimum daily during period of operation, 0.42 ft³/s (0.012 m³/s) Apr. 17.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1							6.4	32	10	2.6	13	13
2							2.2	48	16	4.1	16	10
3							2.4	49	33	3.8	12	9.3
4							2.6	47	30	2.2	9.6	14
5							2.4	37	23	2.0	8.6	14
6							2.4	39	25	2.8	8.6	16
7							2.2	48	26	2.8	6.4	15
8							2.2	44	21	2.2	7.8	16
9							2.2	39	16	3.1	18	19
10							2.2	38	20	6.8	17	20
11							2.2	36	22	8.2	11	24
12							2.2	34	21	15	10	28
13							2.0	33	19	54	13	30
14							2.0	27	21	26	28	32
15							2.0	23	21	106	18	35
16							1.1	26	20	75	16	31
17							.42	34	19	60	20	20
18							.64	28	16	91	17	23
19							.64	23	16	61	15	24
20							.86	20	14	58	17	21
21							.86	17	13	50	21	20
22							.86	19	13	29	27	27
23							.86	20	15	13	34	35
24							.86	20	5.2	33	31	31
25							.64	19	1.7	72	29	30
26							.86	13	.64	75	25	41
27							.64	13	3.1	59	24	32
28							1.1	15	3.1	48	25	20
29							1.1	13	5.0	41	28	19
30							1.1	13	4.1	17	25	23
31							---	10	---	8.2	15	---
TOTAL							50.14	877	472.84	1031.8	566.0	692.3
MEAN							1.67	28.3	15.8	33.3	18.3	23.1
MAX							6.4	49	33	106	34	41
MIN							.42	10	.64	2.0	6.4	9.3
AC-FT							99	1740	938	2050	1120	1370

06672500 CHERRY CREEK DRAIN NEAR TORRINGTON, WY

LOCATION.--Lat 42°02'22", long 104°10'07", in SW¼NW¼ sec.23, T.24 N., R.61 W., Goshen County, Hydrologic Unit 10180009, on left bank 50 ft (15 m) downstream from bridge on county road, 0.6 mi (1.0 km) upstream from mouth, and 2.0 mi (3.2 km) southeast of Torrington.

DRAINAGE AREA.--356 mi² (922 km²).

PERIOD OF RECORD.--May to September 1931, May to September 1932, May 1935 to current year (no winter records since 1971). Monthly discharge only for some periods, published in WSP 1310.

GAGE.--Water-stage recorder. Altitude of gage is 4,080 ft (1,244 m), from topographic map. Prior to June 12, 1935, nonrecording gage at site 1.0 mi (1.6 km) upstream at different datum. June 12, 1935, to Sept. 30, 1945, water-stage recorder at site 100 ft (30 m) downstream at datum 2.00 ft (0.610 m) higher. Oct. 1, 1945, to Nov. 27, 1950, water-stage recorder at site 100 ft (30 m) downstream at present datum.

REMARKS.--Records good. Flow is mainly return water from irrigation.

COOPERATION.--Records collected and computed by Office of the Wyoming State Engineer and reviewed by Geological Survey.

AVERAGE DISCHARGE.--36 years (water years 1936-71), 21.6 ft³/s (0.612 m³/s), 15,650 acre-ft/yr (19.3 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,420 ft³/s (68.5 m³/s) June 27, 1955, gage height, 10.31 ft (3.142 m) from floodmark; minimum daily, 0.40 ft³/s (0.011 m³/s) Jan. 28, 29, 1949.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 278 ft³/s (7.87 m³/s) June 3, gage height, 3.47 ft (1.058 m); minimum daily during period of operation, 6.0 ft³/s (0.17 m³/s) Apr. 29 to May 2.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1							7.4	6.0	6.9	33	47	60
2							8.4	6.0	6.9	41	44	64
3							9.4	7.4	55	33	44	60
4							9.9	9.9	54	30	42	58
5							8.9	8.4	103	30	46	58
6							8.4	7.9	79	29	47	64
7							7.9	18	25	25	52	57
8							9.9	11	19	41	55	58
9							8.9	8.4	9.4	27	59	61
10							7.9	8.9	10	30	69	56
11							7.4	7.9	13	33	68	52
12							7.4	7.9	23	38	68	53
13							6.9	8.9	34	133	71	54
14							6.9	22	38	75	79	56
15							6.9	21	41	60	82	58
16							6.9	18	42	53	104	59
17							6.9	27	39	55	91	61
18							6.4	52	37	134	82	68
19							7.4	28	39	72	78	72
20							9.9	14	43	64	75	73
21							8.4	11	46	51	75	73
22							7.4	11	48	44	78	73
23							6.9	11	49	41	94	75
24							6.4	9.4	51	45	85	71
25							6.4	8.9	44	65	78	65
26							6.4	8.9	34	92	74	60
27							6.4	8.4	34	91	74	51
28							6.4	7.9	38	69	72	43
29							6.0	7.4	36	65	71	37
30							6.0	6.9	34	55	69	35
31							---	6.4	---	47	64	---
TOTAL							226.7	395.8	1131.2	1701	2137	1785
MEAN							7.56	12.8	37.7	54.9	68.9	59.5
MAX							9.9	52	103	134	104	75
MIN							6.0	6.0	6.9	25	42	35
AC-FT							450	785	2240	3370	4240	3540

PLATTE RIVER BASIN

06673500 KATZER DRAIN NEAR HENRY, NE

LOCATION.--Lat 41°58'45", long 104°04'15", in NW¼NW¼SW¼ sec.10, T.23 N., R.60 W., Goshen County, WY, Hydrologic Unit 10180009, on left bank 0.2 mi (0.3 km) upstream from bridge on county road, 0.8 mi (1.3 km) upstream from mouth, and 1.7 mi (2.7 km) southwest of Henry.

DRAINAGE AREA.--45.9 mi² (118.9 km²), of which 8.2 mi² (21.2 km²) is probably noncontributing.

PERIOD OF RECORD.--May 1928 to current year (no winter records prior to 1932 and since 1971).

REVISED RECORDS.--WSP 1710: Drainage area. WDR WY-77-1: 1975(M), 1976 (M).

GAGE.--Water-stage recorder. Altitude of gage is 4,040 ft (1,231 m), from topographic map. See WSP 1918 for history of changes prior to Dec. 1, 1950. Dec. 1, 1950, to Sept. 30, 1969, at site 1.0 mi (1.6 km) upstream at different datum. Oct. 1, 1969, to Mar. 31, 1974, at site 0.2 mi (0.3 km) downstream at different datum.

REMARKS.--Records good. Flow is mainly return water from land irrigated by Fort Laramie Canal.

COOPERATION.--Records collected and computed by Office of the Wyoming State Engineer and reviewed by Geological Survey.

AVERAGE DISCHARGE.--40 years (water years 1932-71), 19.6 ft³/s (0.555 m³/s), 14,200 acre-ft/yr (17.5 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,460 ft³/s (41.3 m³/s) June 11, 1977, gage height, 8.56 ft (2.609 m), from rating curve extended above 130 ft³/s (3.68 m³/s) on basis of slope-area measurement of peak flow; minimum daily, 0.50 ft³/s (0.014 m³/s) Jan. 14, 1937.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 811 ft³/s (23.0 m³/s) July 13, gage height, 6.07 ft (1.850 m); minimum daily during period of operation, 6.1 ft³/s (0.17 m³/s) May 2.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1							6.4	6.4	7.0	37	44	68
2							6.4	6.1	7.0	36	40	69
3							6.7	6.4	93	40	37	69
4							7.0	9.2	21	35	35	67
5							7.0	7.4	12	34	33	66
6							7.0	7.7	15	32	30	65
7							7.0	34	30	29	29	67
8							7.0	9.2	49	42	37	65
9							7.0	7.7	49	37	41	64
10							7.4	6.7	32	39	46	59
11							7.4	6.7	29	35	52	58
12							7.4	6.7	28	39	53	58
13							7.0	7.0	26	254	52	60
14							7.0	6.7	22	90	51	63
15							7.0	6.7	21	71	52	69
16							7.4	6.7	21	64	56	63
17							7.4	11	23	68	52	60
18							7.4	30	22	76	52	61
19							7.7	16	22	71	47	61
20							8.5	10	50	67	44	62
21							8.1	9.2	48	59	49	64
22							7.7	8.5	49	48	44	60
23							7.4	8.5	51	44	55	63
24							7.4	8.1	45	44	56	58
25							7.0	7.7	37	67	52	58
26							7.0	7.7	40	83	52	42
27							6.7	7.7	53	88	54	40
28							6.7	7.7	66	67	57	36
29							6.4	7.4	61	62	66	18
30							6.4	7.4	43	56	71	15
31							---	7.0	---	48	66	---
TOTAL							213.9	295.2	1072.0	1862	1505	1728
MEAN							7.13	9.52	35.7	60.1	48.5	57.6
MAX							8.5	34	93	254	71	69
MIN							6.4	6.1	7.0	29	29	15
AC-FT							424	586	2130	3690	2990	3430

06674500 NORTH PLATTE RIVER AT WYOMING-NEBRASKA STATE LINE

LOCATION.--Lat 41°59'25", long 104°02'57", in SW¼NE¼SE¼ sec.4, T.23 N., R.58 W., Scottsbluff County, NE, Hydrologic Unit 10180009, on right bank 650 ft (198 m) upstream from bridge on NE State Highway 86, 700 ft (213 m) downstream from Wyoming-Nebraska State line, and 0.5 mi (0.8 km) south of Henry, NE.

DRAINAGE AREA.--22,218 mi² (57,545 km²), of which 1,929 mi² (4,996 km²), is probably noncontributing.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--April 1929 to current year.

REVISED RECORDS.--WDR WY-76-1: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 4,021.35 ft (1,225.707 m), National Geodetic Vertical Datum of 1929. Prior to Nov. 6, 1929, nonrecording gage and Nov. 6, 1929, to Sept. 30, 1959, water-stage recorder at site 0.5 mi (0.8 km) upstream at datum 4.42 ft (1.347 m) higher. Oct. 7, 1959 to Feb. 22, 1972, water-stage recorder at site 0.5 mi (0.8 km) upstream at datum 3.42 ft (1.042 m) higher.

REMARKS.--Records good. Natural flow of stream affected by storage reservoirs, transbasin diversions, power development, ground-water withdrawals and diversions for irrigation, and return flow from irrigated areas. Gering-Mitchell Canal diverts from right bank 0.8 mi (1.3 km) upstream.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge observed, 17,900 ft³/s (507 m³/s) June 2, 1929, gage height 7.04 ft (2.146 m), site and datum then in use; minimum daily, 13 ft³/s (0.37 m³/s) May 12, 1961.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 2,330 ft³/s (66.0 m³/s) July 13, gage height, 4.23 ft (1.289 m); minimum daily, 14 ft³/s (0.40 m³/s) May 11.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	560	322	251	200	170	167	140	152	172	1460	1110	963
2	538	316	245	199	165	167	140	153	152	1500	1180	982
3	500	316	246	199	169	167	141	169	179	1550	1270	917
4	485	313	249	198	167	165	145	184	349	1480	1290	881
5	465	309	245	201	168	165	142	105	363	1490	1370	803
6	455	306	241	202	167	164	138	53	407	1450	1430	787
7	446	306	240	200	167	164	144	98	437	1360	1450	737
8	428	303	237	198	167	163	151	77	443	1390	1470	706
9	406	300	235	197	168	162	147	57	412	1360	1470	662
10	398	294	234	195	160	159	144	22	387	1400	1460	634
11	394	291	233	193	140	158	141	14	414	1420	1370	608
12	390	291	232	191	158	157	138	28	395	1430	1370	590
13	363	291	230	191	173	157	137	44	391	2110	1360	572
14	335	291	229	189	183	156	135	55	385	1810	1350	584
15	349	288	228	189	181	154	136	55	390	1710	1330	602
16	335	285	227	187	180	152	137	48	390	1780	1290	634
17	332	282	225	188	178	152	135	100	403	1830	1400	602
18	325	282	224	185	174	152	135	166	424	1970	1290	578
19	319	279	220	184	171	151	137	151	454	1860	1150	596
20	309	276	218	183	174	150	152	115	581	1730	1110	602
21	303	270	216	181	172	154	149	93	676	1630	1110	627
22	306	270	214	176	169	154	145	164	723	1520	1090	669
23	300	267	214	176	170	152	139	206	823	1410	1220	690
24	338	265	210	176	170	149	135	201	1030	1310	1090	662
25	352	265	210	174	169	147	135	198	1200	1490	1020	566
26	349	262	209	172	169	146	136	196	1300	1590	945	490
27	349	259	207	172	169	145	144	190	1420	1410	954	460
28	342	256	205	171	168	145	178	185	1550	1200	973	450
29	335	251	204	170	---	145	180	183	1510	1100	954	398
30	332	251	203	170	---	143	163	179	1490	1100	963	428
31	329	---	201	172	---	142	---	176	---	1080	963	---
TOTAL	11767	8557	6982	5779	4736	4804	4319	3817	19250	46930	37802	19480
MEAN	380	285	225	186	169	155	144	123	642	1514	1219	649
MAX	560	322	251	202	183	167	180	206	1550	2110	1470	982
MIN	300	251	201	170	140	142	135	14	152	1080	945	398
AC-FT	23340	16970	13850	11460	9390	9530	8570	7570	38180	93090	74980	38640
CAL YR 1980	TOTAL	347966	MEAN 951	MAX 3370	MIN 201	AC-FT 690200						
WTR YR 1981	TOTAL	174223	MEAN 477	MAX 2110	MIN 14	AC-FT 345600						

PLATTE RIVER BASIN

06674500 NORTH PLATTE RIVER AT WYOMING-NEBRASKA STATE LINE--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1966 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	TUR- BID- ITY (NTU)	OXYGEN, DIS- SOLVED (MG/L)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	HARD- NESS (MG/L AS CACO3)
OCT 08...	1400	423	860	8.5	15.0	4.0	9.6	35	300
NOV 05...	1330	319	935	8.2	12.0	2.0	11.0	K20	290
DEC 02...	1200	245	1060	8.1	2.0	3.0	12.6	K10	290
JAN 05...	0930	201	1000	8.4	5.0	2.0	10.6	47	290
FEB 13...	1510	191	1020	8.1	7.0	7.0	11.4	47	280
MAR 24...	1530	145	1050	8.2	11.0	3.0	10.8	K10	280
APR 06...	1430	139	990	8.2	13.0	3.0	10.6	2	280
MAY 05...	1500	130	920	8.1	17.0	5.0	8.6	K250	290
JUN 01...	1400	173	990	8.2	19.5	5.0	10.4	0	280
JUL 07...	1430	1280	800	8.2	25.0	25	7.8	100	260
AUG 11...	1400	1380	600	8.1	23.0	25	8.4	56	240
SEP 08...	1630	647	800	8.0	20.0	15	9.2	120	250

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

DATE	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LINITY LAB (MG/L AS CACO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)
OCT 08...	78	22	100	2.6	7.6	180	270	22	.5
NOV 05...	81	22	89	2.3	7.0	240	200	20	.5
DEC 02...	82	21	120	3.1	10	260	250	20	.6
JAN 05...	85	19	110	2.8	8.2	250	230	19	.7
FEB 13...	80	18	110	2.9	8.3	250	230	3.1	.5
MAR 24...	78	21	120	3.1	9.5	270	240	24	.5
APR 06...	80	19	110	2.9	8.0	250	230	22	.5
MAY 05...	75	24	97	2.5	8.4	220	220	27	.7
JUN 01...	76	22	94	2.4	9.2	170	240	37	.5
JUL 07...	67	21	61	1.7	5.2	160	210	17	.6
AUG 11...	62	21	66	1.8	4.9	160	200	14	.9
SEP 08...	67	20	77	2.1	6.7	180	200	18	.6

06674500 NORTH PLATTE RIVER AT WYOMING-NEBRASKA STATE LINE--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, SUM OF CONSTITUENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)	SOLIDS, DIS- SOLVED (TONS PER DAY)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	PHOS- PHORUS, TOTAL (MG/L AS P)	SEDI- MENT, SUS- PENDED (MG/L)	SEDI- MENT, DIS- CHARGE, SUS- PENDED (T/DAY)
OCT 08...	19	630	.86	720	1.7	.020	50	57
NOV 05...	25	587	.80	506	2.0	.000	12	10
DEC 02...	15	681	.93	450	2.2	.120	10	6.6
JAN 05...	29	653	.89	354	2.4	.030	13	7.1
FEB 13...	.0	602	.82	310	2.5	.020	58	30
MAR 24...	24	680	.92	266	2.8	.030	18	7.0
APR 06...	44	670	.91	251	2.0	.030	32	12
MAY 05...	20	609	.83	214	2.5	.030	20	7.0
JUN 01...	21	600	.82	280	1.9	.040	34	16
JUL 07...	4.2	480	.65	1660	1.6	.200	125	432
AUG 11...	9.6	470	.64	1750	.48	.090	113	421
SEP 08...	18	520	.71	908	2.2	.250	79	138

PLATTE RIVER BASIN

06676550 HORSE CREEK AT WYXCROSS RANCH, NEAR LA GRANGE, WY

LOCATION.--Lat 41°40'35", long 104°12'11", in SW¼NW¼ sec.28, T.20 N., R.61 W., Goshen County, Hydrologic Unit 10180012, 0.3 mi (0.5 km) upstream from Hawk Springs, ditch, 1.4 mi (2.3 km) downstream from WyCross ditch, 2.7 mi (4.3 km) upstream from Bear Creek, and 3.3 mi (5.3 km) northwest of La Grange.

DRAINAGE AREA.--651 mi² (1,686 km²).

PERIOD OF RECORD.--March to September 1981.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	TUR- BID- ITY (NTU)	OXYGEN, DIS- SOLVED (MG/L)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	NITRO- GEN, NITRATE TOTAL (MG/L AS N)	NITRO- GEN, NITRITE TOTAL (MG/L AS N)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N)
MAR 24...	1050	19	550	8.0	7.0	3.0	10.8	56	--	--	.00
APR 06...	1030	11	475	8.3	9.5	3.0	11.1	14	--	--	.59
MAY 05...	1050	4.0	680	7.7	11.0	2.0	9.5	46	.00	.230	.23
JUN 01...	1000	5.2	740	7.7	15.5	15	8.8	120	--	--	.13
JUL 07...	0900	11	560	7.7	20.0	15	7.8	K400	--	--	.19
AUG 11...	1000	12	498	8.2	18.5	55	7.7	1300	--	--	.11
SEP 08...	1100	3.0	640	7.5	14.0	10	8.4	300	--	--	.09

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

DATE	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS NH4)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO- GEN, TOTAL (MG/L AS N)	NITRO- GEN, TOTAL (MG/L AS NO3)	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHORUS TOTAL (MG/L AS PO4)	PHOS- PHORUS, ORTHO, TOTAL (MG/L AS P)
MAR 24...	--	.060	--	--	.71	.77	.77	3.4	.040	.12	--
APR 06...	--	.080	--	--	1.2	1.30	1.9	8.4	.030	.09	--
MAY 05...	--	.100	--	--	.90	1.00	1.2	5.4	.080	.25	.070
JUN 01...	--	.070	--	--	.84	.91	1.0	4.6	.050	.15	--
JUL 07...	.03	.050	.040	.05	1.2	1.20	1.4	6.2	.060	.18	--
AUG 11...	--	.160	--	--	1.3	1.50	1.6	7.1	.100	.31	--
SEP 08...	--	<.060	--	--	--	.84	.93	4.1	.070	.21	--

06679500 NORTH PLATTE RIVER AT MITCHELL, NE

LOCATION.--Lat 41°55'38", long 103°48'48", in NE¼NE¼ sec.33, T.33 N., R.56 W., Scotts Bluff County, Hydrologic Unit 10180009, on right bank of main channel on downstream side of bridge on State Highway 29, 0.5 mi (0.8 km) south of Mitchell.

DRAINAGE AREA.--24,300 mi² (62,900 km²), approximately, of which about 22,300 mi² (57,800 km²) contributes directly to surface runoff.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--June 1901 to September 1910, May to December 1911, February 1912 to July 1913 (gage heights only), May 1916 to October 1918 (irrigation seasons only), May 1920 to current year. Monthly discharge only for some periods, published in WSP 1310.

REVISED RECORDS.--WDR NE-67, WDR NE-76-1: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 3,929.3 ft (1,197.65 m), National Geodetic Vertical Datum of 1929. See WSP 1918 for history of changes prior to May 27, 1960. May 27, 1960, to Aug. 24, 1971, at datum 1.00 ft (0.305 m) higher.

REMARKS.--Records good. Natural flow of stream affected by transmountain diversions, storage reservoirs, power developments, ground-water withdrawals and diversions for irrigation, and return flow from irrigated areas.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 27,500 ft³/s (779 m³/s) June 3, 1909, gage height, 6.45 ft (1.966 m), datum then in use, from graph based on gage readings, from rating curve extended above 17,000 ft³/s (481 m³/s); minimum daily observed, 25 ft³/s (0.71 m³/s) Sept. 25-29, 1908.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,810 ft³/s (51.3 m³/s) July 13, gage height, 4.21 ft (1.283 m); minimum daily, 122 ft³/s (3.46 m³/s) June 2.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	902	616	530	491	394	406	339	340	125	275	366	340
2	870	613	517	490	379	406	338	327	122	282	328	335
3	834	602	526	482	398	410	338	353	130	329	320	351
4	813	600	534	482	390	406	341	338	201	327	301	345
5	788	609	526	479	394	398	334	202	171	295	291	348
6	763	616	526	474	394	398	335	207	308	258	304	399
7	756	609	526	473	398	402	338	195	445	207	348	427
8	743	606	517	470	394	402	353	183	465	199	381	417
9	735	592	517	469	394	398	345	163	373	218	373	395
10	726	589	517	465	338	390	343	154	369	279	426	371
11	723	587	526	457	323	390	341	151	408	236	428	358
12	717	584	526	454	394	386	342	146	364	256	418	344
13	709	584	526	457	477	386	338	140	291	1210	408	334
14	731	583	526	454	470	379	336	138	310	895	384	321
15	767	575	521	451	472	379	338	127	284	753	380	308
16	777	569	521	443	466	375	340	125	262	714	382	306
17	767	559	518	439	460	375	336	143	222	743	402	304
18	755	557	515	441	450	375	336	213	189	930	430	308
19	739	555	506	439	445	371	346	198	183	849	385	308
20	718	553	499	437	444	367	383	168	195	777	356	329
21	696	551	501	430	438	379	379	160	171	694	327	349
22	676	548	505	429	427	375	366	157	174	600	312	370
23	659	556	503	426	423	367	357	154	165	508	338	418
24	655	543	497	422	422	360	348	148	160	430	362	404
25	645	539	498	420	421	360	343	143	151	475	363	482
26	638	539	506	415	418	356	340	146	135	721	331	694
27	635	530	501	410	418	352	339	143	140	748	317	689
28	629	539	494	408	410	352	362	140	238	606	318	788
29	629	534	490	406	---	352	381	138	429	505	314	878
30	625	534	494	406	---	344	376	135	301	470	337	858
31	623	---	493	410	---	343	---	135	---	423	341	---
TOTAL	22443	17171	15902	13829	11651	11739	10431	5610	7481	16212	11071	12878
MEAN	724	572	513	446	416	379	348	181	249	523	357	429
MAX	902	616	534	491	477	410	383	353	465	1210	430	878
MIN	623	530	490	406	323	343	334	125	122	199	291	304
AC-FT	44520	34060	31540	27430	23110	23280	20690	11130	14840	32160	21960	25540
CAL YR 1980	TOTAL	321784	MEAN 879	MAX 3440	MIN 284	AC-FT 638300						
WTR YR 1981	TOTAL	156418	MEAN 429	MAX 1210	MIN 122	AC-FT 310300						

PLATTE RIVER BASIN

06679500 NORTH PLATTE RIVER AT MITCHELL, NE--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1964, 1976 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	TIME	TEMPER- ATURE (DEG C)	PCB, TOTAL (UG/L)	PCB, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	NAPH- THA- LENES, POLY- CHLOR- TOTAL (UG/L)	PCN, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	ALDRIN, TOTAL (UG/L)	ALDRIN, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	CHLOR- DANE, TOTAL (UG/L)	CHLOR- DANE, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	DDD, TOTAL (UG/L)
OCT 08...	1630	12.0	.00	0	.00	.0	.00	.0	.00	.0	.00

DATE	DDD, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	DDE, TOTAL IN BOT- TOM MA- TERIAL (UG/L)	DDE, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	DDT, TOTAL IN BOT- TOM MA- TERIAL (UG/L)	DDT, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	DI- AZINON, TOTAL (UG/L)	DI- ELDRIN TOTAL (UG/L)	DI- ELDRIN, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	ENDO- SULFAN, TOTAL IN BOT- TOM MA- TERIAL (UG/L)	ENDO- SULFAN, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)
OCT 08...	.6	.00	3.2	.00	.3	.00	.00	.7	.00	.0

DATE	ENDRIN, TOTAL (UG/L)	ENDRIN, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	ETHION, TOTAL (UG/L)	HEPTA- CHLOR, TOTAL (UG/L)	HEPTA- CHLOR, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	HEPTA- CHLOR EPOXIDE TOTAL (UG/L)	HEPTA- CHLOR EPOXIDE TOT. IN BOTTOM MATL. (UG/KG)	LINDANE TOTAL (UG/L)	LINDANE TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	MALA- THION, TOTAL (UG/L)
OCT 08...	.00	.2	.00	.00	.0	.00	.0	.00	.0	.00

DATE	METH- OXY- CHLOR, TOTAL (UG/L)	METH- OXY- CHLOR, TOT. IN BOTTOM MATL. (UG/KG)	METHYL PARA- THION, TOTAL (UG/L)	METHYL TRI- THION, TOTAL (UG/L)	MIREX, TOTAL (UG/L)	MIREX, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	PARA- THION, TOTAL (UG/L)	PER- THANE TOTAL (UG/L)	PER- THANE IN BOTTOM MATERIL (UG/KG)	TOX- APHENE, TOTAL (UG/L)
OCT 08...	.00	.0	.00	.00	.00	.0	.00	.00	.00	.00

DATE	TOXA- PHENE, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	TOTAL TRI- THION (UG/L)	2,4-D, TOTAL (UG/L)	2,4-D, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	2, 4-DP TOTAL (UG/L)	2,4-DP, IN BOTTOM MAT. (UG/KG)	2,4,5-T TOTAL (UG/L)	2,4,5-T TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	SILVEX, TOTAL (UG/L)	SILVEX, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)
OCT 08...	.0	.00	.00	0	.00	.00	.00	0	.00	0

DATE	TOTAL DICAMBA (UG/L)	DICAMBA IN BOTTOM MA- TERIAL (UG/KG)	TOTAL PICLORAM (UG/L)	PICLORAM IN BOTTOM MA- TERIAL (UG/KG)
OCT 08...	.00	.0	.00	.0

Crest-stage partial-record stations

The following table contains annual maximum discharges for crest-stage stations. A crest-stage gage is a device which will register the peak stage occurring between inspections of the gage. A stage-discharge relation for each gage is developed from discharge measurements made by indirect measurements of peak flow or by current meter. The date of the maximum discharge is not always certain but is usually determined by comparison with nearby continuous-record stations, weather records, or local inquiry. Only the maximum discharge for each water year is given. Information on some lower floods may have been obtained, and discharge measurements may have been made for purposes of establishing the stage-discharge relation, but these are not published herein. The years given in the period of record represent water years for which the annual maximum has been determined.

Annual maximum discharge at crest-stage partial-record stations

Station No.	Station Name	Location	Drain- age area (sq mi)	Period of Record	Annual maximum		
					Date	Gage height (feet)	Dis- charge (cfs)
Yellowstone River basin							
06218700	Wagon Gulch near Dubois, WY	Lat 43°34'42", long 109°44'13", in NE¼NE¼ sec.30; T.42 N., R.107 W., Fremont County, 600 ft upstream from U.S. Highways 26 and 287 and 6.2 miles northwest of Dubois. Prior to Oct. 1, 1970, at site 600 ft downstream at different datum.	4.89	1961-81	4- 3-81	14.25	6
06223800	Wind River tributary No. 2 near Crowheart, WY (station discontinued)	Lat 43°14'18", long 109°01'52", in SE¼NE¼ sec.18, T.3 N., R.2 W., Fremont County, Wind River Indian Reservation, at culvert on U.S. Highway 26 and 9.6 miles southeast of Crowheart.	3.16	1961-81	1981		(a)
06226200	Little Dry Creek near Crowheart, WY (station discontinued)	Lat 43°32'10", long 109°05'20", in SW¼ sec.35, T.7 N., R.3 W., Fremont County, Wind River Indian Reservation, 800 ft upstream from Blue Draw Road and 16.5 miles north of Crowheart. Prior to June 16, 1965, at site 800 ft downstream at different datum.	10.5	1961-81	8-19-79 10-15-79 6- 9-81	b3.96 b2.52 b3.98	c199 c52 201
06226300	Dry Creek near Crowheart, WY (station discontinued)	Lat 43°23'40", long 109°02'25", in NW¼SE¼ sec.19, T.5 N., R.2 W., Fremont County, Wind River Indian Reservation, on left bank 9.7 miles northeast of Crowheart.	97.9	1959, 1961-81	6- 9-81	4.95	58
06229700	Norkok Meadows Creek near Fort Washakie, WY (station discontinued)	Lat 43°04'56", long 108°54'12", in NE¼NW¼ sec.8, T.1 N., R.1 W., Fremont County, Wind River Indian Reservation, 100 ft downstream from culvert on U.S. Highway 287 and 5.5 miles north of Fort Washakie.	15.4	1965-81	5- 7-81	5.08	d.5
06229800	Sand Draw near Fort Washakie, WY (station discontinued)	Lat 43°03'42", long 108°54'44", in NE¼SE¼ sec.18, T.1 N., R.1 W., Fremont County, Wind River Indian Reservation, at culvert on U.S. Highway 287 and 4.3 miles north of Fort Washakie.	.99	1961-81	1981		(a)
06229900	Trout Creek near Fort Washakie, WY	Lat 42°57'04", long 108°56'54", in NW¼NW¼ sec.25, T.1 S., R.2 W., Fremont County, Wind River Indian Reservation, 100 ft upstream from Blue Trail and 5.0 miles southwest of Fort Washakie. Prior to Oct. 1, 1968, at site 100 ft downstream at same datum.	16.1	1961-68, 1970-81	6- 9-81	5.69	112
06233360	Monument Draw at lower station, near Hudson, WY	Lat 42°49'15", long 108°34'59", in SW¼NW¼ sec.21, T.33 N., R.98 W., Fremont County, on left bank 225 ft upstream from dirt road crossing and 5.8 miles south of Hudson.	8.38	1965-81	5-17-81	.98	9.2
06234800	Bobcat Draw near Sand Draw, WY (station discontinued)	Lat 42°49'34", long 108°13'18", in NW¼NW¼ sec.21, T.33 N., R.95 W., Fremont County, about 500 ft upstream from culvert on Sand Draw Road, 0.3 mile upstream from mouth, and 5.0 miles north of Sand Draw.	e2.89	1969, 1971-81	5-22-81	b5.15	46

See footnotes at end of table, p. 543.

Annual maximum discharge at crest-stage partial-record stations--Continued

Station No.	Station Name	Location	Drainage area (sq mi)	Period of Record	Annual maximum		
					Date	Gage height (feet)	Discharge (cfs)
Yellowstone River basin--Continued							
06236000	Kirby Draw near Riverton, WY	Lat 43°05'29", long 108°16'06", in NW¼SE¼ sec.3, T.1 N., R.5 E., Fremont County, Wind River Indian Reservation, on left bank 1.5 miles upstream from mouth and 7.0 miles northeast of Riverton.	129	1951-53, [†] 1961-81	4-19-81	2.86	68
06238760	West Fork Dry Cheyenne Creek at upper station, near Riverton, WY	Lat 42°57'12", long 108°06'16", in NE¼NW¼ sec.4, T.34 N., R.94 W., Fremont County, on left bank 45 ft upstream from dim trail, 2.2 miles south of Ohio Road, and about 14 miles east of Riverton.	.69	1965-81	5-23-81	1.22	13
06255300	Poison Creek tributary near Shoshoni, WY (station discontinued)	Lat 43°13'26", long 107°59'59", in NW¼NE¼ sec.33, T.38 N., R.93 W., Fremont County, at culvert on old U.S. Highways 20 and 26 and 5.2 miles east of Shoshoni.	.39	1959-81	1981		(a)
06256600	Red Creek near Arminto, WY (station discontinued)	Lat 43°14'44", long 107°19'38", in SW¼SE¼ sec.19, T.38 N., R.87 W., Natrona County, at culvert on Lost Cabin-Arminto Road and 5.9 miles northwest of Arminto.	7.15	1963-81	8-15-80 8-22-81	f4.14 f5.90	c72 375
06256700	South Bridger Creek near Lysite, WY (station discontinued)	Lat 43°26'40", long 107°45'22", in SE¼SE¼ sec.9, T.40 N., R.91 W., Fremont County, 600 ft downstream from bridge on Bridger Creek Road and 12.5 miles northwest of Lysite. Prior to Oct. 1, 1968, at site 600 ft upstream at different datum.	10.0	1960-81	4-19-81	4.96	5
06257300	Shotgun Creek tributary near Pavillion, WY (station discontinued)	Lat 43°27'35", long 108°44'37", in SW¼SE¼ sec.27, T.6 N., R.1 E., Fremont County, Wind River Indian Reservation, at bridge on dirt road, about 1 mile west of Shotgun Butte, and 15.2 miles north of Pavillion.	2.57	1961-81	1981		(a)
06265200	Sand Draw near Thermopolis, WY (station discontinued)	Lat 43°48'30", long 108°28'00", in SW¼ sec.2, T.44 N., R.97 W., Hot Springs County, at culvert on State Highway 120 and about 17 miles northwest of Thermopolis.	6.33	1960-81	5-18-78 8-27-79 6-16-80 7-26-81	4.49 4.09 3.61 11.45	g54 g20 g13 880
06265600	Tie Down Gulch near Worland, WY	Lat 43°53'15", long 108°07'45", in NW¼NW¼ sec.10, T.45 N., R.94 W., Washakie County, at culvert on U.S. Highway 20 and 12.3 miles southwest of Worland.	1.78	1961-81	5-22-81	5.01	53
06266460	Murphy Draw near Grass Creek, WY (station discontinued)	Lat 44°00'52", long 108°30'08", in SE¼NW¼ sec.28, T.47 N., R.97 W., Hot Springs County, on left bank 0.4 mile upstream from State Secondary Highway 2200 and 8.9 miles northeast of Grass Creek.	2.32	1965-81	5-22-81	b3.48	65
06267260	North Prong East Fork Nowater Creek near Worland, WY	Lat 43°57', long 107°49', in SW¼SE¼ sec.18, T.46 N., R.91 W., Washakie County, on right bank 0.3 mile upstream from South Fork-Sand Creek Oil Field Road and 8.7 miles southeast of Worland.	3.77	1964-81	5-26-81	3.19	63
06269750	Nowood River tributary near Ten Sleep, WY (station discontinued)	Lat 43°58'30", long 107°23'20", in NE¼NE¼ sec.11, T.46 N., R.88 W., Washakie County, at culvert on paved county road and 5.1 miles southeast of Ten Sleep.	.42	1960-81	5-22-81	4.50	<1

See footnotes at end of table, p. 543.

Annual maximum discharge at crest-stage partial-record stations--Continued

Station No.	Station Name	Location	Drainage area (sq mi)	Period of Record	Annual maximum		
					Date	Gage height (feet)	Discharge (cfs)
Yellowstone River basin--Continued							
06274190	Nowood River tributary No. 2 near Basin, WY	Lat 44°16'42", long 107°54'33", in SE½NE¼ sec.28, T.50 N., R.92 W., Big Horn County, on right bank 0.2 mile upstream from State Secondary Highway 0201, 2.7 miles east of Manderson, and 9.3 miles southeast of Basin.	1.51	1965-81	8- 9-81	b4.30	302
06274250	Elk Creek near Basin, WY (station discontinued)	Lat 44°18'30", long 108°01'50", in NE¼ sec.16, T.50 N., R.93 W., Big Horn County, at bridge on Orchard Bench Road and 5.1 miles south of Basin.	96.9	1959-81	5-22-81	b9.06	2,200
06277700	Twentyfour Mile Creek near Emblem, WY (station discontinued)	Lat 44°27'32", long 108°36'30", in SE½SW¼ sec.23, T.52 N., R.98 W., Park County, 300 ft downstream from culvert on U.S. Highways 14 and 20 and 10.0 miles southwest of Emblem.	12.8	1960-81	7-26-81	11.62	25
06277750	Dry Creek tributary near Emblem, WY (station discontinued)	Lat 44°27'42", long 108°34'12", in NW¼SW¼ sec.19, T.52 N., R.97 W., Big Horn County, at culvert on U.S. Highways 14 and 20 and 8.8 miles southwest of Emblem.	.65	1960-68, 1970-81	5-22-81	3.10	5
06279020	Red Gulch near Shell, WY (station discontinued)	Lat 44°32'04", long 107°50'06", in NE¼NW¼ sec.32, T.53 N., R.91 W., Big Horn County, 0.2 mile downstream from bridge on old section of U.S. Highway 14, 0.3 mile upstream from mouth, and 2.7 miles west of Shell. Prior to Oct. 1, 1971, at site 400 ft upstream at different datum.	47.8	1967, 1970-81	7-13-81	12.20	2,490
06299900	Slater Creek near Monarch, WY	Lat 44°54'32", long 107°02'49", in SE½SW¼ sec.18, T.57 N., R.84 W., Sheridan County, 30 ft upstream from bridge on U.S. Highways 14 and 87, 0.2 mile upstream from mouth, and 0.9 mile northwest of Monarch.	18.0	1967-81	6-13-81	57.69	300
06312700	South Fork Powder River near Powder River, WY	Lat 43°02'00", long 107°01'00", in SE¼NW¼ sec.3, T.35 N., R.85 W., Natrona County, 800 ft downstream from bridge on U.S. Highways 20 and 26 and 1.6 miles west of Powder River. Prior to July 11, 1973, at site 800 ft upstream at different datum.	262	1961-81	3-15-80 7-25-81	b5.0 b3.36	d230 23
06312795	Sanchez Creek above reservoir, near Arminto, WY (station discontinued)	Lat 43°20'23", long 107°10'48", in NE¼NE¼ sec.20, T.39 N., R.86 W., Natrona County, 0.9 mile upstream from Buffalo Creek Road, 1.0 mile upstream from mouth, and 12.3 miles northeast of Arminto.	5.53	1970-81	8-22-81	14.07	3
06313020	Bobcat Creek near Edgerton, WY (station discontinued)	Lat 43°11'55", long 106°05'25", in NW¼NW¼ sec.10, T.37 N., R.77 W., Natrona County, on left bank about 300 ft upstream from jeep road, about 600 ft south of Seven L Ranch Headquarters, and 16.7 miles southeast of Edgerton.	8.29	1965-81	5-22-81	b.29	.9
06313100	Coal Draw near Midwest, WY	Lat 43°27'00", long 106°14'00", in NE¼SE¼ sec.8, T.40 N., R.78 W., Natrona County, at bridge on State Highway 387 and 3.4 miles northeast of Midwest.	11.4	1961-81	7-17-81	14.93	2,900
06313450	North Spring Draw near Sussex, WY (station discontinued)	Lat 43°37'49", long 106°24'36", in SE¼SW¼SE¼ sec.1, T.42 N., R.80 W., Johnson County, on left bank 12 ft upstream from culvert on West Sussex-Dugout Oil Field road, 2.1 miles upstream from mouth, and 8 miles southwest of Sussex.	5.21	1980-81	6- 3-81	13.00	640

See footnotes at end of table, p. 543.

Annual maximum discharge at crest-stage partial-record stations--Continued

Station No.	Station Name	Location	Drainage area (sq mi)	Period of Record	Annual maximum		
					Date	Gage height (feet)	Discharge (cfs)
Yellowstone River basin--Continued							
06313630	Van Houten Draw near Buffalo, WY (station discontinued)	Lat 44°10'40", long 106°07'25", in NE¼ sec.33, T.49 N., R.77 W., Johnson County, about 300 ft upstream from dirt road, 0.4 mile upstream from mouth, and 31 miles southeast of Buffalo.	10.8	1971-81	7-25-81	7.63	115
06316700	Coal Draw near Buffalo, WY (formerly Powder River tributary near Buffalo, WY)	Lat 44°30', long 106°08', in NE¼NW¼ sec.9, T.52 N., R.77 W., Johnson County, on right bank 0.5 mile upstream from bridge on Crazy Woman Creek-Arvada Road and about 30 miles northeast of Buffalo.	1.64	1965-81	7-17-81	3.50	266
06317050	Rucker Draw near Spotted Horse, WY (station discontinued)	Lat 44°43'10", long 105°53'10", in NW¼NE¼ sec.28, T.55 N., R.75 W., Campbell County, at culvert on U.S. Highways 14 and 16 and 2.7 miles west of Spotted Horse.	3.98	1961-81	7-25-81	7.03	d3
06319100	Bull Creek near Buffalo, WY	Lat 44°16'38", long 106°44'42", in SW¼NE¼ sec.29, T.50 N., R.82 W., Johnson County, 3.5 miles upstream from bridge on U.S. Highway 87 and 5.5 miles southwest of Buffalo.	10.8	1969-81	7-17-81	4.39	48
06324800	Little Powder River tributary near Gillette, WY (station discontinued)	Lat 44°26'50", long 105°27'40", in NE¼ sec.36, T.52 N., R.72 W., Campbell County, 145 ft upstream from culvert on State Secondary Highway 0301 and 10.6 miles north of Gillette. Prior to Oct. 1, 1969, at site 125 ft downstream at same datum.	.81	1960-81	7-15-81	6.99	.8
06324900	Cedar Draw near Gillette, WY (station discontinued)	Lat 44°31'00", long 105°26'40", in NW¼ sec.6, T.52 N., R.71 W., Campbell County, at culvert on State Secondary Highway 0301 and 15.3 miles north of Gillette.	3.45	1959-81	7-15-81	9.09	470
06324910	Cow Creek tributary near Weston, WY	Lat 44°32'35", long 105°21'40", in SE¼ sec.26, T.53 N., R.71 W., Campbell County, at culvert on dirt road, about 0.4 mile upstream from mouth, and about 6.6 miles south of Weston.	.72	1971-81	5-27-81	10.56	295
Cheyenne River basin							
06379600	Box Creek near Bill, WY (station discontinued)	Lat 43°06'20", long 105°15'35", in SW¼SE¼ sec.9, T.36 N., R.70 W., Converse County, on left bank 12 ft downstream from bridge on State Highway 59 and 8.8 miles south of Bill.	112	1956-58, [†] 1959, 1961-81	7-25-81	5.16	243
06382200	Pritchard Draw near Lance Creek, WY (station discontinued)	Lat 43°12', long 104°41', in SW¼NE¼ sec.8, T.37 N., R.65 W., Niobrara County, on right bank 200 ft upstream from unmaintained road, 4.1 miles west of Lance Creek-Cow Creek Road, and 11.9 miles north of Lance Creek.	d5.1	1964-81	8- 5-81	7.0	730
06387500	Turner Creek near Osage, WY	Lat 44°01'10", long 104°30'10", in SW¼SE¼ sec.26, T.47 N., R.64 W., Weston County, at bridge on U.S. Highway 16 and 4.7 miles northwest of Osage. Prior to Oct. 1, 1979, at site about 1 mile upstream at different datum.	47.8	1959-81	7-17-81	18.25	4,700
06388800	Blacktail Creek tributary near Newcastle, WY (station discontinued)	Lat 43°47'53", long 104°10'52", in NE¼NE¼ sec.16, T.44 N., R.61 W., Weston County, at culvert on U.S. Highway 85 and 4.1 miles south of Newcastle.	.25	1960-81	7-25-81	5.02	18

See footnotes at end of table, p. 543.

Annual maximum discharge at crest-stage partial-record stations--Continued

Station No.	Station Name	Location	Drainage area (sq mi)	Period of Record	Annual maximum		
					Date	Gage height (feet)	Discharge (cfs)
Cheyenne River basin--Continued							
06426195	Donkey Creek tributary above reservoir, near Gillette, WY	Lat 44°16'57", long 105°25'38", in NW¼SW¼ sec.29, T.50 N., R.71 W., Campbell County, 0.1 mile upstream from culvert on U.S. Highways 14 and 16, 0.2 mile upstream from mouth, and 3.8 miles east of Gillette.	0.2	1970-81	7-25-81	16.20	50
06427700	Inyan Kara Creek near Upton, WY	Lat 44°13'45", long 104°26'45", in S¼ sec.17, T.49 N., R.63 W., Crook County, at bridge on State Highway 116 and 13.0 miles northeast of Upton.	96.5	1959-81	10-21-80		h2.5
06428100	Belle Fourche River tributary No. 2 near Hulett, WY	Lat 44°41'35", long 104°32'10", in SW¼SW¼ sec.3, T.54 N., R.64 W., Crook County, at culvert on State Highway 24 and 3.2 miles east of Hulett.	10.2	1962-81	7-25-81	f5.48	8
06429300	Ogden Creek near Sundance, WY (station discontinued)	Lat 44°27'30", long 104°21'10", in SW¼SW¼ sec.30, T.52 N., R.62 W., Crook County, on left bank 225 ft upstream from bridge on Sundance-Farrall Road and 3.9 miles northeast of Sundance. Prior to 1967, station Nos. 06429299 and 06429300 published as separate stations.	8.42	1962-81	1981		(a)
Platte River basin							
06629150	Coal Bank Draw tributary near Walcott, WY (station discontinued)	Lat 41°44'05", long 106°43'18", in SE¼NW¼ sec.3, T.20 N., R.83 W., Carbon County, on right bank 60 ft downstream from dirt road and 6.6 miles southeast of Walcott.	3.65	1962-81	8-17-81	5.49	26
06629200	Coal Bank Draw tributary No. 2 near Walcott, WY (station discontinued)	Lat 41°44'19", long 106°43'36", in NE¼NE¼ sec.4, T.20 N., R.83 W., Carbon County, on left bank 6.3 miles southeast of Walcott.	2.41	1962-81	5- 4-81	4.64	3
06629800	Coal Creek near Rawlins, WY (station discontinued)	Lat 41°45'44", long 107°16'07", in NW¼SW¼ sec.30, T.21 N., R.87 W., Carbon County, 0.2 mile upstream from State Secondary Highway 0402 and 2 miles southwest of Rawlins. Prior to June 25, 1970, at site 0.2 mile downstream at different datum.	7.32	1959-81	4- 4-81	16.03	26
06630200	Big Ditch tributary near Hanna, WY (station discontinued)	Lat 41°51'45", long 106°31'35", in SE¼ sec.21, T.22 N., R.81 W., Carbon County, at culvert on U.S. Highway 30 and 2 miles southeast of Hanna.	7.42	1959-81	8-17-81	6.02	137
06631150	Third Sand Creek near Medicine Bow, WY (station discontinued)	Lat 41°45', long 106°19', in SE¼SE¼ sec.29, T.21 N., R.79 W., Carbon County, on right bank 60 ft upstream from bridge on Medicine Bow-Elk Mountain Road and 11.0 miles southwest of Medicine Bow.	10.8	1965-81	7- 4-81	4.08	460
06634200	Sheep Creek near Marshall, WY (station discontinued)	Lat 42°16'48", long 105°53'06", in NW¼SW¼ sec.30, T.27 N., R.75 W., Albany County, 500 ft downstream from culverts on Marshall Road and 2.4 miles southwest of Marshall. Prior to Oct. 1, 1969, at site 500 ft upstream at different datum.	61.0	1961-81	5-18-81	5.46	235
06634300	Sheep Creek near Medicine Bow, WY	Lat 42°07'48", long 106°00'19", in NW¼NW¼ sec.19, T.25 N., R.76 W., Albany County, at bridge on Marshall Road and 19.5 miles northeast of Medicine Bow.	174	1961-81	7-25-81	5.78	172

See footnotes at end of table, p. 543.

Annual maximum discharge at crest-stage partial-record stations--Continued

Station No.	Station Name	Location	Drainage area (sq mi)	Period of Record	Annual maximum		
					Date	Gage height (feet)	Discharge (cfs)
Platte River basin--Continued							
06634910	Medicine Bow River tributary near Hanna, WY	Lat 42°00'32", long 106°29'32", in SE¼NW¼ sec.35, T.24 N., R.81 W., Carbon County, on left bank 0.2 mile upstream from dirt road, 1.0 mile east of North Road, and 10.2 miles north-east of Hanna.	3.01	1965-81	7- 4-81	2.78	184
06637550	Sweetwater River near South Pass City, WY (station discontinued)	Lat 44°22'30", long 108°52'56", in NW¼NW¼ sec.28, T.28 N., R.101 W., Fremont County, on left bank 100 ft downstream from small tributary, 0.8 mile downstream from Fog Gulch, 1.2 miles downstream from State Highway 28, and 7.6 miles southwest of South Pass City.	177	1958-73, [†] 1974-81	6- 6-81	5.15	415
06638300	West Fork Crooks Creek near Jeffrey City, WY (station discontinued)	Lat 42°20'56", long 107°51'45", in SE¼SW¼ sec.31, T.28 N., R.92 W., Fremont County, at culvert on dirt road and 10.1 miles south of Jeffrey City.	11.6	1961-81	5-24-81	4.18	17
06638350	Coal Creek near Muddy Gap, WY (station discontinued)	Lat 42°20'23", long 107°28'02", in NE¼SE¼ sec.4, T.27 N., R.89 W., Carbon County, 500 ft upstream from culvert on U.S. Highway 287 and 1.0 mile southwest of Muddy Gap. Prior to Oct. 1, 1970, at site 500 ft downstream at different datum.	6.08	1961-81	5-24-81	13.84	6.5
06641400	Bear Springs Creek near Alcova, WY	Lat 42°31'57", long 106°41'56", in SE¼SE¼ sec.30, T.30 N., R.82 W., Natrona County, 250 ft upstream from culvert on Kortess Road and 1.6 miles southeast of Alcova. Prior to Oct. 1, 1970, at site 250 ft downstream at same datum.	9.33	1960-81	5-17-81	11.62	50
06642700	Lawn Creek near Alcova, WY	Lat 42°29'21", long 106°27'28", in SW¼SW¼ sec.8, T.29 N., R.80 W., Natrona County, at bridge on State Highway 487 and 13.9 miles southeast of Alcova.	11.5	1961-81	7-12-81	f13.85	4,760
06642760	Stinking Creek near Alcova, WY (station discontinued)	Lat 42°32'31", long 106°27'32", in SE¼NE¼ sec.30, T.30 N., R.80 W., Natrona County, at bridge on Bates Hole Stock Trail and 13.2 miles east of Alcova.	117	1961-81	7-12-81	11.35	6,700
06643300	Coal Creek near Goose Egg, WY	Lat 42°42'47", long 106°32'13", in SW¼NW¼ sec.27, T.32 N., R.81 W., Natrona County, 0.2 mile upstream from culvert on State Highway 220 and 4.2 miles southwest of Goose Egg. Prior to Oct. 1, 1970, at site 0.2 mile downstream at different datums.	5.39	1960-81	7-13-81	8.15	256
06644840	McKenzie Draw tributary near Casper, WY (station discontinued)	Lat 43°06'20", long 106°09'05", in SW¼NE¼ sec.12, T.36 N., R.78 W., Natrona County, on right bank about 2,000 ft northwest of Ormsby Road and about 22 miles northeast of Casper.	2.02	1965-81	5-27-81	.94	4
06646700	East Fork Dry Creek tributary near Glenrock, WY (station discontinued)	Lat 42°47'37", long 105°49'40", in SW¼SW¼ sec.26, T.33 N., R.75 W., Converse County, at culvert on Boxelder Road and 4.9 miles southeast of Glenrock.	2.60	1961-81	7-25-81	8.10	163
06648780	Sage Creek tributary near Orpha, WY	Lat 43°00'35", long 105°40'00", in NE¼NW¼ sec.18, T.35 N., R.73 W., Converse County, on right bank 600 ft upstream from culvert on Ross Road and about 14 miles northwest of Orpha.	1.38	1965-81	1981		(a)

See footnotes at end of table, p. 543.

Annual maximum discharge at crest-stage partial-record stations--Continued

Station No.	Station Name	Location	Drainage area (sq mi)	Period of Record	Annual maximum		
					Date	Gage height (feet)	Discharge (cfs)
Platte River basin--Continued							
06649900	North Platte River tributary near Douglas, WY (station discontinued)	Lat 42°41'22", long 105°23'30", in SW¼NE¼ sec.5, T.31 N., R.71 W., Converse County, at culvert on Esterbrook Road and 4.2 miles south of Douglas.	8.53	1961-81	5-22-81	4.91	87
06651800	Sand Creek near Orin, WY	Lat 42°40'09", long 105°12'44", in NE¼SE¼ sec.11, T.31 N., R.70 W., Converse County, 27 ft upstream from three culverts on old U.S. Highway 87 and 1.6 miles northwest of Orin.	27.8	1955, 1961-81	7-25-81	3.92	110
06652400	Watkins Draw near Lost Springs, WY (formerly Watson Draw near Lost Springs, WY)	Lat 42°45'20", long 104°57'30", in SW¼SE¼ sec.12, T.32 N., R.68 W., Converse County, 350 ft downstream from culvert on U.S. Highway 20 and 2.1 miles southwest of Lost Springs. Prior to Sept. 30, 1963, at site 250 ft upstream at different datum.	6.95	1960-81	7-13-81	9.26	660
06661580	Sevenmile Creek near Centennial, WY	Lat 41°27'29", long 106°00'36", in NW¼SE¼ sec.11, T.17 N., R.77 W., Albany County, at culvert on county road and 12.7 miles northeast of Centennial.	11.2	1962-81	5-17-81	4.62	43
06668040	Rabbit Creek near Wheatland, WY	Lat 42°12'57", long 105°13'43", in NW¼NE¼ sec.22, T.26 N., R.70 W., Platte County, on right bank 200 ft east of Fletcher Park Road and about 17 miles northwest of Wheatland.	dl.3	1965-81	8-16-81	1.36	108
06670100	Laramie River tributary near Guernsey, WY (station discontinued)	Lat 42°09'08", long 104°42'25", in N¼SW¼ sec.7, T.25 N., R.65 W., Platte County, at culvert on county road, 0.4 mile upstream from mouth, and 9.4 miles south of Guernsey.	1.97	1971-81	1981	(i)	
06670985	Dry Rawhide Creek near Lingle, WY (station discontinued)	Lat 42°18'14", long 104°18'18", in NE¼NE¼ sec.21, T.27 N., R.62 W., Goshen County, 400 ft upstream from culvert on U.S. Highway 85, 0.6 mile upstream from mouth, and 11.5 miles north of Lingle.	20	1969-81	7-13-81	9.68	710
06675300	Horse Creek tributary near Little Bear, WY (station discontinued)	Lat 41°27'21", long 104°53'00", in NW¼SW¼ sec.10, T.17 N., R.67 W., Laramie County, at culvert on U.S. Highway 87 and 6.1 miles south of Little Bear. Prior to Sept. 30, 1966, at different datum.	8.16	1961-81	7-12-81	5.82	40
06761900	Lodgepole Creek tributary near Pine Bluffs, WY (station discontinued)	Lat 41°15'23", long 104°04'50", in NE¼NE¼ sec.21, T.15 N., R.60 W., Laramie County, at culvert on State Secondary Highway 1104 and 5.0 miles north of Pine Bluffs.	.44	1960-81	7- 2-81	10.27	158
06762600	Lodgepole Creek tributary No. 2 near Albin, WY	Lat 41°19'11", long 104°04'49", in SE¼SE¼ sec.28, T.16 N., R.60 W., Laramie County, at culvert on State Secondary Highway 1104 and 6.8 miles south of Albin.	5.69	1960-81	7-25-81	6.20	93

‡ Operated as a continuous-record gaging stations.

† Discharge not determined.

* About.

a No evidence of flow.

b Effective gage height.

c Revised.

d Estimated.

e Of which 0.5 mi² is probably noncontributing.

f New site and datum.

g Not previously published.

h Maximum observed.

i No record for 1981.

Discharge measurements made at miscellaneous sites during water year 1981

Stream	Tributary to	Location	Drainage area (sq mi)	Measured previously (water years)	Measurements	
					Date	Dis-charge (cfs)
Yellowstone River basin						
South Tributary to Five Springs Creek near forest boundary	Bighorn River	Lat 44°47'46", long 107°57'48", in SE½SE½SE½ sec.30, T.56 N., R.92 W., Big Horn County, 1.2 mi (1.9 km) upstream from mouth, 3.0 mi (4.8 km) southwest of Medicine Wheel, and 12.2 mi (19.6 km) southeast of Kane.	1.07	1977-79	10- 4-79	0.29
					4-15-80	.12
					9-10-80	.16
					10-17-80	.12
					5- 5-81	.49
					5-24-81	3.05
					7- 1-81	2.08
					7-28-81	.85
					8-19-81	.62
					9-23-81	.20
South Tributary to Five Springs Creek near mouth	Bighorn River	Lat 44°47'42", long 107°58'09", in NW¼NW¼NE½ sec.31, T.56 N., R.92 W., Big Horn County, 0.9 mi (1.4 km) upstream from mouth, 3.2 mi (5.2 km) southwest of Medicine Wheel, and 11.9 mi (19.2 km) southeast of Kane.	1.28	1977-79	10- 4-79	.32
					4-15-80	.12
					9-10-80	.17
					10-17-80	.11
					5- 5-81	.25
					5-24-81	2.85
					7- 1-81	1.65
					7-28-81	.43
					8-19-81	.38
					9-23-81	.11
East Fork Big Goose Creek below Park Reservoir	Goose Creek	Lat 44°34'12", long 107°12'38", in SE½NW½NW½ sec.15, T.53 N., R.86 W., Sheridan County, Bighorn National Forest, 100 ft (30 m) downstream from Park Reservoir and 24 mi (38.6 km) southwest of Big Horn.			11- 5-80	14.3
Cheyenne River Basin						
Dry Fork Cheyenne River	Cheyenne River	Lat 43°12'55", long 105°42'04", in NE½NE½NE½ sec.2, T.37 N., R.74 W., Converse County, 15 ft (4.6 m) upstream from Ross Road and 22 mi (35 km) west of Bill.			11- 6-80	.01
Brown Springs Creek	Dry Fork Cheyenne River	Lat 43°09'55", long 105°42'45", in SW½SE½NW½ sec.23, T.37 N., R.74 W., Converse County, 50 ft (15 m) downstream from Ross Road and 24 mi (39 km) southwest of Bill.			11- 6-80	.02
					3-26-81	.54
					4-24-81	.28
					5-30-81	.73
					6-17-81	.01
Sand Creek	Antelope Creek	Lat 43°21'40", long 105°46'20", in NW½NW½ sec.17, T.39 N., R.74 W., Converse County, at bridge on Ross Road, 6.4 mi (10.3 km) north of Bear Creek, and 25 mi (40 km) east of Midwest.		1979-80	11- 6-80	.17
					7-21-81	.32
					8-27-81	.12
					9-24-81	.19
Box Creek	Lightning Creek	Lat 43°04'35", long 105°23'38", in SW½NW½SW½ sec.21, T.36 N., R.71 W., Converse County, 30 ft (9.1 m) downstream from Highland Loop Road and 11 mi (18 km) southwest of Bill.			11- 7-80	.63
					1-29-81	.13
					3-26-81	.13
					4-22-81	.17
					5-30-81	.32
					6-18-81	.13
					7-20-81	.05
					8-28-81	.04
					9-24-81	.05

Discharge measurements made at miscellaneous sites during water year 1981

Stream	Tributary to	Location	Drainage area (sq mi)	Measured pre- viously (water years)	Measurements	
					Date	Dis- charge (cfs)
Platte River Basin						
Box Elder Creek	North Platte River	Lat 42°45'22", long 105°46'52", in SE½ sec.12, T.32 N., R.75 W., Converse County, Converse County Park, at Madison-Precambrian Contact, 1.5 mi (2.4 km) upstream from canals at canyon mouth, and 8.3 mi (13.4 km) southeast of Glenrock.		1974 1975	6-13-81	32.4
					7-14-81	4.92
					9-11-81	1.07
Box Elder Creek	North Platte River	Lat 42°45'46", long 105°46'35", in NW¼NW¼ sec.7, T.32 N., R.74 W., Converse County, Converse County Park, at Madison-Casper Contact, 0.8 mi (1.3 km) upstream from canals at canyon mouth, and 8.1 mi (13.0 km) southeast of Glenrock.		1974 1975	6-13-81	30.2
					7-14-81	4.90
					9-11-81	1.10
Box Elder Creek	North Platte River	Lat 42°46'19", long 105°46'19", in W½ sec.6, T.32 N., R.74 W., Converse County, at Converse County Park boundary, 20 ft (6.1 m) upstream from canals at canyon mouth, and 7.6 mi (12.2 km) southeast of Glenrock.			7-14-81	5.09
					9- 4-81	1.33
					9-11-81	1.23
Cottonwood Creek at Lower Site near Careyhurst 06647925	North Platte River	Lat 42°44'34", long 105°40'40", in SW¼SE¼NE¼ sec.14, T.32 N., R.74 W., Converse County, on left bank at Madison-Casper Contact, at small tributary from old mining gulch, and 7.3 mi (11.7 km) south of Careyhurst.	*2.4		5-17-81	4.09
					5-18-81	.91
					5-23-81	.34
Hog Park Creek 06623820	Encampment River	Lat 41°02'01", long 106°51'33", in SW¼SE¼ sec.5, T.12 N., R.84 W., Carbon County, about 800 ft (240 m) downstream from Hog Park Creek Dam and 13.2 mi (21.2 km) southwest of Encampment.		1967-80	10-23-80	4.58
					6-10-81	113
					7-14-81	10.3
					8-19-81	2.76
					9-15-81	1.97

* About.

ANALYSES OF SAMPLES COLLECTED AT MISCELLANEOUS SITES IN WYOMING

WATER-QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

YELLOWSTONE RIVER BASIN

442715110504001 IRON SPRING CREEK ABOVE OLD FAITHFUL SEWAGE LAG, YNP (LAT 44 27 15 LONG 110 50 40)

DATE	TIME	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	HARD- NESS (MG/L AS CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM AD- SORP- TION RATIO	
JUL 28...	1000	125	7.8	16.5	17	5.3	.8	19	2.1	
DATE	TIME	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LINEITY LAB (MG/L AS CACO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)
JUL 28...	3.4	32	<1.0	9.1	3.6	71	133	.18	.21	
DATE	TIME	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS NH4)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N)	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHORUS TOTAL (MG/L AS PO4)	IRON, DIS- SOLVED (UG/L AS FE)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	CARBON, ORGANIC DIS- SOLVED (MG/L AS C)	
JUL 28...		.230	.30	.28	<.010	.03	25	9	2.5	

442726110504801 IRON SPRING CREEK BELOW OLD FAITHFUL SEWAGE LAG, YNP (LAT 44 27 26 LONG 110 50 48)

DATE	TIME	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	HARD- NESS (MG/L AS CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM AD- SORP- TION RATIO
JUL 28...	1230	180	7.8	22.0	16	5.2	.8	29	3.3
		POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LINITY LAB (MG/L AS CACO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)
JUL 28...	4.3	40	<1.0	19	3.9	82	29	.04	.23
		NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS NH4)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N)	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHORUS TOTAL (MG/L AS PO4)	IRON, DIS- SOLVED (UG/L AS FE)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	CARBON, ORGANIC DIS- SOLVED (MG/L AS C)
JUL 28...		.430	.55	.39	<.010	.03	34	19	2.2

WATER-QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

YELLOWSTONE RIVER BASIN

443403110224801 YELLOWSTONE RIVER AT FISHING BRIDGE, YNP (LAT 44 34 03 LONG 110 22 48)

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	HARD- NESS (MG/L AS CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM AD- SORP- TION RATIO
JUL 22...	0845	3000	85	7.7	14.0	21	4.9	2.2	9.1	.9

DATE	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LINITY LAB (MG/L CACO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)	SOLIDS, DIS- SOLVED (TONS PER DAY)
JUL 22...	1.6	22	5.0	5.0	.5	10	52	.07	421

DATE	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS NH4)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N)	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHORUS TOTAL (MG/L AS PO4)	IRON, DIS- SOLVED (UG/L AS FE)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	CARBON, ORGANIC DIS- SOLVED (MG/L AS C)
JUL 22...	.11	.310	.40	.49	.030	.09	20	2	1.5

443446110223001 YELLOWSTONE RIVER BELOW FISHING BRIDGE, YNP (LAT 44 34 46 LONG 110 22 30)

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	HARD- NESS (MG/L AS CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)
JUL 22...	1105	3000	85	7.8	14.5	21	4.9	2.2	9.1

DATE	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LINITY LAB (MG/L AS CACO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)
JUL 22...	.9	1.6	24	4.0	5.0	.5	10	53	.07

DATE	SOLIDS, DIS- SOLVED (TONS PER DAY)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS NH4)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N)	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHORUS TOTAL (MG/L AS PO4)	IRON, DIS- SOLVED (UG/L AS FE)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)
JUL 22...	429	.34	.250	.32	.81	.040	.12	30	3

ANALYSES OF SAMPLES COLLECTED AT MISCELLANEOUS SITES IN WYOMING

WATER-QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

YELLOWSTONE RIVER BASIN

443835110515001 MADISON RIVER NEAR MADISON JUNCTION, YNP (LAT 44 38 35 LONG 110 51 50)

DATE	TIME	SPECIFIC CONDUCTANCE (UMHOS)	PH (UNITS)	TEMPERATURE (DEG C)	HARDNESS (MG/L AS CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNESIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	
JUL 24...	1040	465	7.9	17.5	18	6.3	.6	88	
DATE	SODIUM ADSORPTION RATIO	POTASSIUM, DIS-SOLVED (MG/L AS K)	ALKALINITY LAB (MG/L AS CACO3)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLORIDE, DIS-SOLVED (MG/L AS CL)	FLUORIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTITUENTS, DIS-SOLVED (MG/L)	SOLIDS, DIS-SOLVED (TONS PER AC-FT)
JUL 24...	9.0	9.0	98	11	64	6.3	96	341	.46
DATE	NITROGEN, NO2+NO3 DIS-SOLVED (MG/L AS N)	NITROGEN, AMMONIA DIS-SOLVED (MG/L AS N)	NITROGEN, AMMONIA DIS-SOLVED (MG/L AS NH4)	NITROGEN, AMMONIA + ORGANIC TOTAL (MG/L AS N)	PHOSPHORUS, TOTAL (MG/L AS P)	PHOSPHORUS, TOTAL (MG/L AS PO4)	IRON, DIS-SOLVED (UG/L AS FE)	MANGANESE, DIS-SOLVED (UG/L AS MN)	
JUL 24...	.09	.260	.33	.57	.040	.12	80	10	

443832110522801 MADISON RIVER BELOW MADISON JUNCTION, YNP (LAT 44 38 32 LONG 110 52 28)

DATE	TIME	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	HARD- NESS (MG/L AS CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	
JUL 24...	0920	465	7.4	17.0	20	7.0	.6	92	
DATE	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LINITY LAB (MG/L AS CACO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)
JUL 24...	9.0	8.1	100	20	63	6.3	98	356	.48
DATE	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS NH4)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N)	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHORUS TOTAL (MG/L AS PO4)	IRON, DIS- SOLVED (UG/L AS FE)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	
JUL 24...	.12	.200	.26	.61	.030	.09	80	10	

WATER-QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

YELLOWSTONE RIVER BASIN

06313700 DEAD HORSE CREEK NEAR BUFFALO, WY (LAT 44 12 54 LONG 106 06 41)

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	TUR- BID- ITY (NTU)	OXYGEN, DIS- SOLVED (MG/L)
DEC 10...	1445	--	--	--	--	6.0	--
MAR 10...	1400	E.01	3600	8.1	10.0	8.0	11.8

E-Estimate.

06324790 LITTLE POWDER RIVER AT STATE HIGHWAY 59, NEAR GILLETTE, WY (LAT 44 26 08 LONG 105 17 19)

DATE	TIME	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	TUR- BID- ITY (NTU)	OXYGEN, DIS- SOLVED (MG/L)
DEC 12...	1415	--	--	--	2.0	--
MAR 09...	1500	1780	8.4	6.0	12	13.1

CHEYENNE RIVER BASIN

430245105420901 FRANK DRAW TRIBUTARY NO. 2 NEAR ORPHA, WY (LAT 43 02 45 LONG 105 42 09)

DATE	TIME	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	TUR- BID- ITY (NTU)	OXYGEN, DIS- SOLVED (MG/L)
DEC 14...	1315	--	--	--	2.0	--
MAR 12...	0830	630	8.8	7.5	1.0	11.6
12...	1215	610	8.9	14.5	--	10.7
12...	1730	630	8.8	11.0	--	10.2
12...	2045	600	8.7	8.0	--	8.8
13...	0050	630	8.6	7.0	--	9.0
13...	0530	590	8.6	6.0	1.0	9.0

430433105234301 BOX CREEK AT COUNTY ROAD 32, NEAR BILL, WY (LAT 43 04 33 LONG 105 23 43)

DATE	TIME	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	TUR- BID- ITY (NTU)	OXYGEN, DIS- SOLVED (MG/L)
DEC 14...	0945	--	--	--	5.0	--
MAR 12...	1415	960	8.4	8.5	--	10.2

ANALYSES OF SAMPLES COLLECTED AT MISCELLANEOUS SITES IN WYOMING

WATER-QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

NIOBRARA RIVER BASIN

06454000 NIOBRARA RIVER AT WYOMING-NEBRASKA STATE LINE (LAT 42 39 33 LONG 104 03 54)

DATE	TIME	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	TUR- BID- ITY (NTU)	OXYGEN, DIS- SOLVED (MG/L)
DEC 09...	1300	--	--	--	2.0	--
MAR 08...	1200	380	8.4	7.0	1.0	12.0

PLATTE RIVER BASIN

06623510 NORTH PLATTE RIVER ABOVE BEAVER CREEK, NEAR ENCAMPMENT, WY (LAT 41 15 23 LONG 106 38 22)

DATE	TIME	TEMPER- ATURE (DEG C)	2,4-D, TOTAL (UG/L)	2,4-D, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	2, 4-DP TOTAL (UG/L)	2,4-DP, IN BOTTOM MAT. (UG/KG)	2,4,5-T TOTAL (UG/L)	2,4,5-T TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	SILVEX, TOTAL (UG/L)	SILVEX, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)
OCT 22...	1130	--	--	0	--	.00	--	0	--	0
JUN 17...	1815	--	.02	0	.00	.00	.00	0	.01	0
JUL 16...	1430	--	.00	0	.00	.00	.00	0	.00	0
AUG 18...	0815	14.0	.00	0	.00	.00	.00	0	.00	0
SEP 21...	0900	--	.00	0	.00	.00	.00	0	.00	0

DATE	TOTAL DICAMBA (UG/L)	DICAMBA IN BOTTOM MA- TERIAL (UG/KG)	TOTAL PICLORAM (UG/L)	PICLORAM IN BOTTOM MA- TERIAL (UG/KG)
OCT 22...	.00	.0	.00	.0
JUN 17...	.00	.0	.00	.0
JUL 16...	.00	.0	.00	.0
AUG 18...	.00	.0	.01	.0
SEP 21...	.00	.0	.00	.0

CAMPBELL COUNTY

434611105295001. Local number, 44N 072W 22cc01.

LOCATION.--Lat 43°46'11", long 105°29'50", in SW¼SW¼ sec.22, T.44 N., R.72 W., Hydrologic Unit 10120201.

Owner: Durham Meat Co.

AQUIFER.--Wasatch Formation.

WELL CHARACTERISTICS.--Drilled unused artesian well, diameter 14 in (36 cm), depth 189 ft (57.6 m), cased.

DATUM.--Altitude of land-surface datum is about 4,890 ft (1,490 m). Measuring point: Top of casing 0.50 ft (0.15 m) above land-surface datum.

PERIOD OF RECORD.--May 1966 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 43.80 ft (13.35 m) below land-surface datum, Oct. 7, 1968; lowest, 47.87 ft (14.59 m) below land-surface datum, Sept. 3, 1976.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	WATER LEVEL
NOV 20	45.90
MAR 20	45.29

CARBON COUNTY

414104106442701. Local number, 20N 083W 28bab01.

LOCATION.--Lat 41°41'04", long 106°44'27", in NW¼NE¼NW¼ sec.28, T.20 N., R.83 W., Hydrologic Unit 10180002.

Owner: State of Wyoming.

AQUIFER.--Sand of North Park Formation.

WELL CHARACTERISTICS.--Drilled unused water-table well, diameter 3 in (8 cm), depth 33 ft (10.0 m), cased.

DATUM.--Altitude of land-surface datum is about 6,762 ft (2,061 m). Measuring point: Top of casing 2.70 ft (0.82 m) above land-surface datum.

PERIOD OF RECORD.--August 1950 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 15.13 ft (4.61 m) below land-surface datum, Nov. 18, 1975; lowest, 22.00 ft (6.71 m) below land-surface datum, Sept. 22, 1961.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	WATER LEVEL
OCT 26	16.08
MAR 11	16.63

CONVERSE COUNTY

424229105242901. Local number, 32N 071W 31aaa01.

LOCATION.--Lat 42°42'29", long 105°24'29", in NE¼NE¼NE¼ sec.31, T.32 N., R.71 W., Hydrologic Unit 10180008.

Owner: Mrs. Sallie Edwards.

AQUIFER.--Siltstone of White River Group.

WELL CHARACTERISTICS.--Drilled domestic water-table well, diameter 6 in (15 cm), depth 84 ft (25.6 m), cased.

DATUM.--Altitude of land-surface datum is about 4,837 ft (1,474 m). Measuring point: Hole in pump housing, 1.70 ft (0.52 m) above land-surface datum.

PERIOD OF RECORD.--July 1950 to September 1956, May 1959 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 12.17 ft (3.71 m) below land-surface datum, Dec. 15, 1970; lowest, 31.15 ft (9.49 m) below land-surface datum, Feb. 22, 1978.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	WATER LEVEL
NOV 17	13.04
MAR 13	12.68

CROOK COUNTY

443503104425101. Local number, 53N 065W 18bac01.

LOCATION.--Lat 44°35'03", long 104°42'51", in SW¼NE¼NW¼ sec.18, T.53 N., R.65 W., Hydrologic Unit 10120201.

Owner: National Park Service.

AQUIFER.--Minnekahta Limestone.

WELL CHARACTERISTICS.--Drilled artesian well, diameter 6 in (15 cm), depth 468 ft (142.6 m), cased to 448 ft (136.6 m), open hole below.

DATUM.--Altitude of land-surface datum is about 3,865 ft (1,178 m). Measuring point: Top of casing, 1.10 ft (0.34 m) above land-surface datum.

PERIOD OF RECORD.--July 1955, April 1960, May 1962 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 11.95 ft (3.64 m) below land-surface datum, Oct. 8, 1975; lowest, 26.10 ft (7.96 m) below land-surface datum, Apr. 23, 1963.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	WATER LEVEL
NOV 19	16.24
MAR 20	16.7.

GROUND-WATER LEVELS

CROOK COUNTY--Continued

443453104425601. Local number, 53N 065W 18bbd02.

LOCATION.--Lat 44°34'53", long 104°42'56", in SE¼NW¼NW¼ sec.18, T.53 N., R.65 W., Hydrologic Unit 10120201.

Owner: National Park Service.

AQUIFER.--Pahasapa Limestone.

WELL CHARACTERISTICS.--Drilled artesian well, diameter 8 in (20 cm), depth 1,341 ft (408.7 m), perforated casing 1,315-1,341 ft (400.8-408.7 m).

DATUM.--Altitude of land-surface datum is about 3,865 ft (1,178 m). Measuring point: Top of casing 2.30 ft (0.70 m) above land-surface datum.

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

REVISED RECORDS.--WDR WY-77-1: 1977 (water levels).

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 3.90 ft (1.19 m) below land-surface datum, Sept. 1, 1976; lowest, 22.24 ft (6.78 m) below land-surface datum, May 8, 1964.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	WATER LEVEL
NOV 19	10.63
MAR 20	11.09

FREMONT COUNTY

431327108311101. Local number, 03N 003E 21ada02.

LOCATION.--Lat 43°13'27", long 108°31'11", in NW¼SE¼NE¼ sec.21, T.3 N., R.3 E., Hydrologic Unit 10080005.

Owner: H. W. Roland.

AQUIFER.--Sandstone of Wind River Formation.

WELL CHARACTERISTICS.--Drilled unused artesian well, diameter 6 in (15 cm), depth 425 ft (129.5 m), cased to 403 ft (122.8 m).

DATUM.--Altitude of land-surface datum is about 5,273 ft (1,607 m). Measuring point: Top of casing at land-surface datum.

PERIOD OF RECORD.--December 1948 to current year.

REVISED RECORDS.--WDR WY-79-1: 1950 (highest water-level).

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 146.29 ft (44.59 m) below land-surface datum, Dec. 1, 1950; lowest, 171.48 ft (52.27 m) below land-surface datum, Jan. 12, 1976.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	WATER LEVEL
NOV 13	150.09
MAR 16	148.83

431253108284401. Local Number, 03N 003E 25bbb01.

LOCATION.--Lat 43°12'53", long 108°28'44", in NW¼NW¼NW¼ sec.25, T.3 N., R.3 E., Hydrologic Unit 10080005.

Owner: U.S. Bureau of Reclamation.

AQUIFER.--Alluvium.

WELL CHARACTERISTICS.--Drilled unused water-table well, diameter 3 in (8 cm), depth 28 ft (8.5 m), casing perforated 0-28 ft (0-8.5 m).

DATUM.--Altitude of land-surface datum is about 5,150 ft (1,570 m). Measuring point: Top of casing 1.50 ft (0.46 m) above land-surface datum.

PERIOD OF RECORD.--October 1949 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 1.81 ft (0.55 m) below land-surface datum, Aug. 29, 1974; lowest, 15.38 ft (4.69 m) below land-surface datum, May 10, 1972.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	WATER LEVEL
NOV 13	9.91
MAR 16	13.06

GOSHEN COUNTY

413816104094901. Local number, 19N 061W 02ccd01.

LOCATION.--Lat 41°38'16", long 104°09'49", in SE¼SW¼SW¼ sec.2, T.19 N., R.61 W., Hydrologic Unit 10180012.

Owner: City of LaGrange.

AQUIFER.--Gravel of alluvium.

WELL CHARACTERISTICS.--Drilled unused water-table well, diameter 4 in (10 cm), depth 30 ft (9.1 m), galvanized casing.

DATUM.--Altitude of land-surface datum is 4,577.2 ft (1,395.1 m). Measuring point: Top of casing, 0.90 ft (0.27 m) above land-surface datum.

PERIOD OF RECORD.--May to July 1943, April 1949 to October 1969, May 1972 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 11.26 ft (3.43 m) below land-surface datum, Aug. 29, 1973; lowest, 21.20 ft (6.46 m) below land-surface datum, Oct. 5, 1964.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 21	17.00	FEB 20	16.07
DEC 12	15.07	MAY 15	16.72
JAN 20	15.17		

GOSHEN COUNTY--Continued

413813104115501. Local number, 19N 061W 04cdd02.

LOCATION.--Lat 41°38'13", long 104°11'55", in SE¼SE¼SW¼ sec.4, T.19 N., R.61 W., Hydrologic Unit 10180012.

Owner: Frank Sanders.

AQUIFER.--Alluvium.

WELL CHARACTERISTICS.--Drilled irrigation water-table well, diameter 4 ft (1.2 m), depth 33 ft (10.1 m), cased, connected by syphon to nearby irrigation well.

DATUM.--Altitude of land-surface datum is about 4,557 ft (1,389 m). Measuring point: Top of casing, north side, 0.20 ft (0.06 m) above land-surface datum.

PERIOD OF RECORD.--June 1943, November 1948 to October 1969, May 1972 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 4.07 ft (1.24 m) below land-surface datum, June 4, 1949; lowest, 29.94 ft (9.13 m) below land-surface datum (nearby well being pumped), Sept. 21, 1961.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 6	10.02	JAN 20	9.07	MAY 15	8.20
NOV 21	9.37	FEB 20	8.80	JUN 24	7.40
DEC 12	9.10	MAR 20	8.34	AUG 27	27.23

415902104031601. Local number, 23N 060W 10aac01.

LOCATION.--Lat 41°59'02", long 104°03'16", in SW¼NE¼NE¼ sec.10, T.23 N., R.60 W., Hydrologic Unit 10180009.

Owner: French Ditch Irrigation Co.

AQUIFER.--Alluvium.

WELL CHARACTERISTICS.--Drilled irrigation water-table well, diameter 24 in (61 cm) depth 50 ft (15.2 m), cased.

DATUM.--Altitude of land-surface datum is 4,030.8 ft (1,228.6 m). Measuring point: Top of casing 0.50 ft (0.15 m) above land-surface datum.

PERIOD OF RECORD.--September 1950 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 4.34 ft (1.32 m) below land-surface datum, May 20, 1971;

lowest, 9.08 (2.77 m) below land-surface datum, Mar. 19, 1975; maximum low, 16.43 ft (5.01 m) below land-surface datum (well being pumped), Aug. 10, 1970.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	WATER LEVEL
OCT 6	8.17
JAN 8	8.62
JUN 10	8.02

420449104133401. Local number, 24N 061W 05cbb02.

LOCATION.--Lat 42°04'49", long 104°13'34", in NW¼NW¼SW¼ sec.5, T.24 N., R.61 W., Hydrologic Unit 10180009.

Owner: U.S. Geological Survey.

AQUIFER.--Alluvium.

WELL CHARACTERISTICS.--Bored observation water-table well, diameter 1 in (3 cm), depth 27 ft (8.2 m), cased to 27 ft (8.2 m), sand point.

DATUM.--Altitude of land-surface datum is about 4,121 ft (1,256 m). Measuring point: Top of casing, 2.00 ft (0.61 m) above land-surface datum. Prior to June 1962 top of casing was 4.50 ft (1.37 m) above land-surface datum. Prior to October 1955 top of casing was 2.60 ft (0.79 m) above land-surface datum.

PERIOD OF RECORD.--October 1951 to current year. Prior to June 1962 well was located 3.0 ft (0.9 m) east of present location.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 18.28 ft (5.57 m) below land-surface datum, July 10, 1973; lowest, 26.20 ft (7.99 m) below land-surface datum, Apr. 18, 1955.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	WATER LEVEL
OCT 6	20.97
JAN 8	24.27
JUN 11	23.47

420427104100601. Local number, 24N 061W 11bbb01.

LOCATION.--Lat 42°04'27", long 104°10'06", in NW¼NW¼NW¼ sec.11, T.24 N., R.61 W., Hydrologic Unit 10180009.

Owner: Bill Ring.

AQUIFER.--Terrace deposits.

WELL CHARACTERISTICS.--Drilled irrigation water-table well, diameter 18 in (46 cm), depth 118 ft (36.0 m), cased with 10 gauge steel.

DATUM.--Altitude of land-surface datum is about 4,207 ft (1,282 m). Measuring point: Top edge of hole in pump base, 0.75 ft (0.23 m) above land-surface datum.

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

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 69.32 ft (21.13 m) below land-surface datum, Oct. 8, 1974; lowest, 87.85 ft (26.78 m) below land-surface datum, May 18, 1979.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	WATER LEVEL
OCT 6	75.33
JAN 8	75.66
JUN 10	80.57

GOSHEN COUNTY--Continued

420626104114501. Local number, 25N 061W 28dbc01.

LOCATION.--Lat 42°06'26", long 104°11'45", in SW¼NW¼SE¼ sec.28, T.25 N., R.61 W., Hydrologic Unit 10180009.

Owner: M. W. Berry

AQUIFER.--Gravel of terrace deposits.

WELL CHARACTERISTICS.--Drilled irrigation water-table well, diameter 24 in (61 m), depth 108 ft (32.9 m) cased, gravel packed.

DATUM.--Altitude of land-surface datum is 4,223.1 ft (1,287.2 m). Measuring point: Top of casing, 0.90 ft (0.27 m) above land-surface datum.

PERIOD OF RECORD.--May 1943, October 1948 to May 1952, June 1954 to current year.

REVISED RECORDS.--WDR WY-79-1: 1951 (highest water-level); 1964 (lowest water-level).

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 36.58 ft (11.15 m) below land-surface datum, Oct. 16, 1951; lowest, 59.60 ft (18.17 m) below land-surface datum, Sept. 3, 1964.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	WATER LEVEL
OCT 6	49.56
JAN 8	49.40
JUN 10	53.63

421031104170001. Local number, 25N 062W 02bbb01.

LOCATION.--Lat 42°10'31", long 104°17'00", in NW¼NW¼NW¼ sec.2, T.25 N., R.62 W., Hydrologic Unit 10180009.

Owner: U.S. Geological Survey.

AQUIFER.--Terrace deposits.

WELL CHARACTERISTICS.--Bored observation water-table well, diameter 1 in (3 cm), depth 28 ft (8.5 m), cased.

DATUM.--Altitude of land-surface datum is about 4,230 ft (1,289 m). Measuring point: Top of casing, 2.00 ft (0.61 m) above land-surface datum.

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

REVISED RECORDS.--WDR WY-79-1: 1966 (highest water-level).

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 9.15 ft (2.79 m) below land-surface datum, Sept. 7, 1966; lowest, 12.99 ft (3.96 m) below land-surface datum, Apr. 7, 1965.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	WATER LEVEL
NOV 7	10.40
JAN 8	11.72
JUN 10	12.20

420753104204701. Local number, 25N 062W 19aab01

LOCATION.--Lat 42°07'53", long 104°20'47", in NW¼NE¼NE¼ sec.19, T.25 N., R.62 W., Hydrologic Unit 10180009.

Owner: Homer Stroud.

AQUIFER.--Gravel of alluvium.

WELL CHARACTERISTICS.--Drilled irrigation water-table well, diameter 18 in (46 cm), depth 83 ft (25.3 m), cased.

DATUM.--Altitude of land-surface datum is about 4,172 ft (1,272 m). Measuring point: Top of pump base, 0.60 ft (0.18 m) above land-surface datum.

PERIOD OF RECORD.--October 1948 to September 1953, April 1955 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 18.07 ft (5.51 m) below land-surface datum, Sept. 26, 1952; lowest, 27.23 ft (8.30 m) below land-surface datum, May 21, 1971.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	WATER LEVEL
OCT 7	20.39
JAN 8	24.82
JUN 10	26.12

420900104262201. Local number, 25N 063W 09ccb01.

LOCATION.--Lat 42°09'00", long 104°26'22", in NW¼SW¼SW¼ sec.9, T.25 N., R.63 W., Hydrologic Unit 10180009.

Owner: Emery Bright.

AQUIFER.--Alluvium.

WELL CHARACTERISTICS.--Drilled irrigation water-table well, diameter 24 in (61 cm), depth 61 ft (18.6 m), galvanized casing, gravel packed.

DATUM.--Altitude of land-surface datum is 4,196.8 ft (1,279.2 m). Measuring Point: Top of casing, 1.50 ft (0.46 m) above land-surface datum.

PERIOD OF RECORD.--August 1943, November 1948 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 16.34 ft (4.98 m) below land-surface datum (water in nearby channel), Sept. 26, 1952; lowest, 24.85 ft (7.57 m) below land-surface datum, Oct. 8, 1962; maximum low, 31.80 ft (9.69 m) below land-surface datum (well being pumped), July 17, 1970.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	WATER LEVEL
OCT 7	19.89
JAN 8	22.04
JUN 1	22.75

GOSHEN COUNTY--Continued

421357104165001. Local number, 26N 062W 14bba01.

LOCATION.--Lat 42°13'57", long 104°16'50", in NE¼NW¼NW¼ sec.14, T.26 N., R.62 W., Hydrologic Unit 10180009.

Owner: Arthur Damrow.

AQUIFER.--Gravel of alluvium.

WELL CHARACTERISTICS.--Drilled irrigation water-table well, diameter 18 in (46 cm), reported depth 39 ft (11.9 m), galvanized iron casing, gravel packed.

DATUM.--Altitude of land-surface datum is 4,274.4 ft (1,302.8 m). Measuring point: Hole in wood cover, 0.20 ft (0.06 m) above land-surface datum.

PERIOD OF RECORD.--October 1948 to current year.

REVISED RECORDS.--WDR WY-79-1: 1971 (highest water level).

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 10.78 ft (3.29 m) below land-surface datum, June 30, 1971; lowest, 18.03 ft (5.50 m) below land-surface datum, Sept. 21, 1961.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	WATER LEVEL
OCT 7	15.39
JAN 8	14.20
JUN 10	14.95

421044104263201. Local number, 26N 063W 32dac01.

LOCATION.--Lat 42°10'44", long 104°26'32", in SW¼NE¼SE¼ sec.32, T.26 N., R.63 W., Hydrologic Unit 10180009.

Owner: Joseph Speckner.

AQUIFER.--Gravel of alluvium.

WELL CHARACTERISTICS.--Drilled irrigation water-table well, diameter 18 in (46 cm), depth 80 ft (24.4 m), cased to 80 ft (24.4 m).

DATUM.--Altitude of land-surface datum is 4,204.6 ft (1,281.6 m). Measuring point: Top of casing through hole in pump base at land-surface datum.

PERIOD OF RECORD.--October 1948 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 17.97 ft (5.48 m) below land-surface datum, Sept. 26, 1952; lowest, 27.82 ft (8.48 m) below land-surface datum, Feb. 26, 1971; maximum low, 28.51 ft (8.69 m) below land-surface datum (well being pumped), Oct. 1, 1969.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	WATER LEVEL
OCT 7	21.73
JAN 8	24.82
JUN 10	24.89

421216104332301. Local number, 26N 064W 28bbb01.

LOCATION.--Lat 42°12'16", long 104°33'23", in NW¼NW¼NW¼ sec.28, T.26 N., R.64 W., Hydrologic Unit 10180009.

Owner: National Park Service.

AQUIFER.--Gravel of alluvium.

WELL CHARACTERISTICS.--Drilled domestic water-table well, diameter 18 in (46 cm), depth 29 ft (8.8 m), cased to 29 ft (8.8 m).

DATUM.--Altitude of land-surface datum is 4,245.9 ft (1,294.2 m). Measuring point: Top of casing, 1.20 ft (0.37 m) above land-surface datum.

PERIOD OF RECORD.--July 1948 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 10.72 ft (3.27 m) below land-surface datum, May 15, 1973; lowest, 17.80 ft (5.43 m) below land-surface datum, Oct. 16, 1967.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 6	17.30	JAN 5	17.69	APR 24	17.27	JUL 27	15.74
NOV 6	17.52	FEB 4	17.63	MAY 26	17.02	AUG 26	16.35
DEC 4	17.60	MAR 4	17.53	JUN 30	16.37	SEP 25	16.61

421205104333001. Local number, 26N 064W 29ada01.

LOCATION.--Lat 42°12'05", long 104°33'30", in NE¼SE¼NE¼ sec.29, T.26 N., R.64 W., Hydrologic Unit 10180011.

Owner: National Park Service.

AQUIFER.--Gravel of alluvium.

WELL CHARACTERISTICS.--Dug observation water-table well, diameter 36 in (91 cm), depth 43 ft (13.1 m), cribbed with rock.

DATUM.--Altitude of land-surface datum is 4,248.8 ft (1,295.0 m). Measuring point: Top of platform, 0.80 ft (0.24 m) above land-surface datum.

PERIOD OF RECORD.--September 1942 to February 1943, August 1946 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 12.40 ft (3.78 m) below land-surface datum, May 17, 1971; lowest, 19.17 ft (5.84 m) below land-surface datum, Feb. 20, 1954.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 6	18.59	JAN 5	18.85	APR 24	18.49	JUL 27	17.90
NOV 6	18.67	FEB 4	18.79	MAY 26	18.37	AUG 26	18.27
DEC 4	18.62	MAR 4	18.65	JUN 30	18.25	SEP 25	18.19

JOHNSON COUNTY

442427106494001. Local number, 51N 083W 10acB01.

LOCATION.--Lat 44°24'27", long 106°49'40", in NW¼SW¼NE¼ sec.10, T.51 N., R.83 W., Hydrologic Unit 10090206.

Owner: Helen Rauch.

AQUIFER.--Kingsbury Conglomerate member of Wasatch Formation.

WELL CHARACTERISTICS.--Drilled stock water-table well, diameter 6 in (15 cm), depth 275 ft (83.8 m), cased to 205 ft (62.5 m).

DATUM.--Altitude of land-surface datum is about 5,240 ft (1,597 m). Measuring point: Top of casing, 1.60 ft (0.49 m) above land-surface datum.

PERIOD OF RECORD.--January 1960 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 30.90 ft (9.42 m) below land-surface datum, Apr. 11, 1960; lowest, 35.86 ft (10.93 m) below land-surface datum (surface water on ground near well), May 28, 1974.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	WATER LEVEL
JAN 13	35.74
MAY 5	35.75
SEP 16	35.94

LARAMIE COUNTY

410534105002401. Local number, 13N 068W 16dbd01.

LOCATION.--Lat 41°05'34", long 105°00'24", in SE¼NW¼SE¼ sec.16, T.13 N., R.68 W., Hydrologic Unit 10190008.

Owner: City of Cheyenne.

AQUIFER.--Gravel of Ogallala Formation.

WELL CHARACTERISTICS.--Drilled municipal water-table well, diameter 10 to 8 in (25 to 20 cm), depth 300 ft (91.4 m), cased.

DATUM.--Altitude of land-surface datum is 6,641.9 ft (2,024.5 m). Measuring point: Top of auxiliary pipe, 1.00 ft (0.30 m) above land-surface datum.

PERIOD OF RECORD.--September 1949 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 104.16 ft (31.75 m) below land-surface datum, Nov. 30, 1949; lowest, 157.95 ft (48.14 m) below land-surface datum, Mar. 20, 1978.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	WATER LEVEL
APR 23	145.02

411238104070801. Local number, 14N 060W 05bcb01.

LOCATION.--Lat 41°12'38", long 104°07'08", in NW¼SW¼NW¼ sec.5, T.14 N., R.60 W., Hydrologic Unit 10190015.

Owner: C. C. Gross.

AQUIFER.--Siltstone of Brule Formation.

WELL CHARACTERISTICS.--Drilled unused water-table well, diameter 18 in (46 cm), reported depth 100 ft (30.5 m), cased.

DATUM.--Altitude of land-surface datum is about 5,082 ft (1,549 m). Measuring point: Top of casing, at land-surface datum.

PERIOD OF RECORD.--October 1957 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 29.40 ft (8.96 m) below land-surface datum, July 9, 10, 1967; lowest, 56.62 ft (17.26 m) below land-surface datum, July 30, 1976.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

Highest water level for the day, from recorder graph

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	.....	38.94	37.82	37.27	36.29	35.80	35.41	40.35	37.16	.....	.....	.....
10	.....	38.76	37.69	36.97	36.21	35.78	35.34	39.16	37.01	.....	.....	.....
15	.....	38.66	37.50	36.86	36.12	35.70	35.60	38.50	37.69	.....	.....	.....
20	39.84	38.43	37.34	36.69	36.00	35.54	37.55	38.09	38.93	.....	.....	.....
25	39.46	38.19	37.16	36.52	35.94	35.53	50.21	37.74	41.57	.....	.....	.....
EOM	39.15	37.94	37.02	36.35	35.90	35.46	39.93	37.45	42.92	.....	.....	.....
WTR YEAR 1981	MAX	35.34	APR 9, 10, 11	MIN	53.93	JUN 30						

LARAMIE COUNTY--Continued

411034104554001. Local number, 14N 067W 18ddc01.

LOCATION.--Lat 41°10'34", long 104°55'40", in SW¼SE¼SE¼ sec.18, T.14 N., R.67 W., Hydrologic Unit 10190009.

Owner: City of Cheyenne.

AQUIFER.--Gravel of Brule Formation.

WELL CHARACTERISTICS.--Drilled unused artesian well, diameter 12 in (30 cm), depth 229 ft (69.8 m), cased.

DATUM.--Altitude of land-surface datum is about 6,248 ft (1,904 m). Measuring point: Top of casing, 1.50 ft (0.46 m) above land-surface datum.

PERIOD OF RECORD.--May 1956 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 12.48 ft (3.80 m) below land-surface datum, Sept. 26, Oct. 28, 1957; lowest, 49.18 ft (14.99 m) below land-surface datum, Aug. 31, 1978.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

Highest water level for the day, from recorder graph

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	28.56	28.57	25.82	23.46	25.30	24.70	22.43	25.13	23.70	25.25	27.75	29.30
10	28.64	28.08	25.50	23.11	25.40	24.72	22.51	24.08	24.91	26.84	27.51	28.20
15	28.42	27.31	25.11	24.91	25.36	24.68	22.38	23.17	24.82	25.85	28.18	28.11
20	28.14	26.92	24.22	25.27	25.21	23.99	22.42	22.45	25.91	26.96	28.42	28.98
25	28.17	26.67	23.73	25.26	24.99	23.04	22.68	21.57	26.56	26.81	28.80	29.02
EOM	28.51	26.23	23.73	25.04	24.88	22.63	25.32	21.08	26.33	26.71	29.17	28.48

WTR YEAR 1981 MAX 21.08 MAY 31 MIN 29.58 SEP 2

411050104584701. Local number, 14N 068W 14cbb01.

LOCATION.--Lat 41°10'50", long 104°58'47", in NW¼NW¼SW¼ sec.14, T.14N., R.68 W., Hydrologic Unit 10190009.

Owner: City of Cheyenne.

AQUIFER.--Alluvium.

WELL CHARACTERISTICS.--Drilled unused water-table well, diameter 12 in (30 cm), depth 188 ft (57.3 m), cased.

DATUM.--Altitude of land-surface datum is about 6,310 ft (1,923 m). Measuring point: Top of casing, 1.00 ft (0.30 m) above land-surface datum.

PERIOD OF RECORD.--September 1941 to February 1948, February 1950 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 7.09 ft (2.16 m) below land-surface datum, Feb. 26, 1944; lowest, 65.34 ft (19.92 m) below land-surface datum, Apr. 18, 1979.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

WATER
LEVEL
DATE
APR 22 11.28

410836105002801. Local number, 14N 068W 33abc01.

LOCATION.--Lat 41°08'36", long 105°00'28", in SW¼NW¼NE¼ sec.33, T.14 N., R.68 W., Hydrologic Unit 10190009.

Owner: City of Cheyenne.

AQUIFER.--Gravel of Ogallala Formation.

WELL CHARACTERISTICS.--Drilled municipal water-table well, diameter 10 in (25 cm), depth 230 ft (70.1 m), perforated casing.

DATUM.--Altitude of land-surface datum is about 6,568 ft (2,002 m). Measuring point: Top of auxiliary pipe, south side of well, 2.30 ft (0.70 m) above land-surface datum.

PERIOD OF RECORD.--January 1947 to September 1970, April 1973 to current year.

REVISED RECORDS.--WDR-WY-79-1: 1978 (water-levels).

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 120.16 ft (36.62 m) below land-surface datum, Feb. 11, 1950; lowest, 192.56 ft (58.69 m) below land-surface datum, July 5, 1957.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

WATER
LEVEL
DATE
APR 22 a

411750104510901. Local number, 15N 067W 02dba01.

LOCATION.--Lat 41°17'50", long 104°51'09", in NE¼NW¼SE¼ sec.2, T.15 N., R.67 W., Hydrologic Unit 10190015.

Owner: Ervin A. Mueller.

AQUIFER.--Gravel of Ogallala Formation.

WELL CHARACTERISTICS.--Drilled irrigation artesian well, diameter 16 in (41 cm), depth 182 ft (55.5 m), cased, perforated 78-84 ft (23.8-25.6 m), 123-132 ft (37.5-40.2 m), 139-152 ft (42.4-46.3 m).

DATUM.--Altitude of land-surface datum is about 6,240 ft (1,902 m). Measuring point: Hole in side of casing, at land-surface datum.

PERIOD OF RECORD.--June 1961 to December 1970, September 1972, May 1975 to current year.

REVISED RECORDS.--WDR WY-78-1: (water level).

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 72.14 ft (21.99 m) below land-surface datum, May 5, 1964; lowest, 77.06 ft (23.49 m) below land-surface datum, Oct. 1, 1969.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

WATER
LEVEL
DATE
APR 22 76.25

GROUND-WATER LEVELS

NATRONA COUNTY

432633106115201. Local number, 40N 078W 15aab01.

LOCATION.--Lat 43°26'33", long 106°11'52", in NW¼NE¼NE¼ sec.15, T.40 N., R.78 W., Hydrologic Unit 10090204.

Owner: Town of Edgerton.

AQUIFER.--Mesaverde (?) Formation.

WELL CHARACTERISTICS.--Drilled unused artesian well, diameter 7 in (18 cm), depth 317 ft (96.6 m), cased.

DATUM.--Altitude of land-surface datum is about 5,080 ft (1,548 m). Measuring point: Top of casing, 2.00 ft (0.61 m) above land-surface datum.

PERIOD OF RECORD.--April 1965 to current year.

REVISED RECORDS.--WDR WY-79-1: 1965 (highest water level).

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 72.89 ft (22.22 m) below land-surface datum, Aug. 12, 1965; lowest, 82.22 ft (25.06 m) below land-surface datum, Oct. 20, 1975.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	WATER LEVEL
NOV 6	74.93
MAR 3	75.40

NIOBRARA COUNTY

423940104031201. Local number, 31N 060W 15da01.

LOCATION.--Lat 42°39'40", long 104°03'12", in NE¼SE¼ sec.15, T.31 N., R.60 W., Hydrologic Unit 10150002.

Owner: U.S. Geological Survey.

AQUIFER.--Arikaree Formation.

WELL CHARACTERISTICS.--Drilled observation water-table well, diameter 1.5 in (3.8 cm), depth 110 ft (33.5 m), cased.

DATUM.--Altitude of land-surface datum is about 4,740 ft (1,445 m). Measuring point: Top of casing, 3.90 ft (1.19 m) above land-surface datum.

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

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 35.15 ft (10.71 m) below land-surface datum, Nov. 12, 1980; lowest, 37.04 ft (11.29 m) below land-surface datum, Oct. 13, 1964.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	WATER LEVEL
NOV 12	35.15
MAR 26	35.76

424232104261001. Local number, 32N 063W 33bbb01.

LOCATION.--Lat 42°42'32", long 104°26'10", in NW¼NW¼NW¼ sec.33, T.32 N., R.63 W., Hydrologic Unit 10150002.

Owner: Earl Quigley.

AQUIFER.--Sandstone of Arikaree Formation.

WELL CHARACTERISTICS.--Drilled test hole for irrigation water-table well, diameter 6 in (15 cm), depth 205 ft (62.5 m), cased to 10 ft (3 m).

DATUM.--Altitude of land-surface datum is about 4,990 ft (1,521 m). Measuring point: Top of casing at land-surface datum.

PERIOD OF RECORD.--November 1957, May 1960 to current year.

REVISED RECORDS.--WDR WY-78-1: (water level).

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 40.25 ft (12.27 m) below land-surface datum, June 26, 1972; lowest, 42.48 ft (12.95 m) below land-surface datum, Dec. 15, 1970.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	WATER LEVEL
NOV 12	41.75
MAR 3	41.84

PLATTE COUNTY

415733104585601. Local number, 23N 068W 15ddd01.

LOCATION.--Lat 41°57'33", long 104°58'56", in SE¼SE¼SE¼ sec.15, T.23 N., R.68 W., Hydrologic Unit 10180011.

Owner: U.S. Bureau of Reclamation.

AQUIFER.--Arikaree Formation.

WELL CHARACTERISTICS.--Drilled observation water-table well, diameter 1.75 in (4 cm), depth 602 ft (183.5 m), cased to 232 ft (70.7 m).

DATUM.--Altitude of land-surface datum is 5,087.8 ft (1,550.8 m). Measuring point: Top of casing, 2.90 ft (0.88 m) above land-surface datum.

PERIOD OF RECORD.--December 1958 to December 1970, September 1972, March 1974 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 52.15 ft (15.90 m) below land-surface datum, Sept. 13, 1960; lowest, 71.19 ft (21.70 m) below land-surface datum, June 19, 1979.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	WATER LEVEL
OCT 28	68.88
NOV 24	68.60
DEC 18	68.58

PLATTE COUNTY--Continued

420441104585801. Local number, 24N 068W 03dad01.

LOCATION.--Lat 42°04'41", long 104°58'58", in SE¼NE¼SE¼ sec.3, T.24 N., R.68 W., Hydrologic Unit 10180011.

Owner: U.S. Bureau of Reclamation.

AQUIFER.--Arikaree Formation.

WELL CHARACTERISTICS.--Drilled observation artesian well, diameter 2 in (5 cm), depth 600 ft (182.9 m), cased, screened.

DATUM.--Altitude of land-surface datum is 4,713.07 ft (1,436.54 m). Measuring point: Top of casing, 1.00 ft (0.30 m) above land-surface datum.

PERIOD OF RECORD.--October 1958 to December 1970, September 1972, March 1974 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 11.86 ft (3.61 m) below land-surface datum, Sept. 19, 1972; lowest, 17.36 ft (5.29 m) below land-surface datum, Oct. 12, 1977.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	WATER LEVEL
OCT 28	13.62
NOV 24	13.38
DEC 18	13.25

SHERIDAN COUNTY

443915106352202. Local number, 54N 081W 14bc02.

LOCATION.--Lat 44°39'15", long 106°35'22", in SW¼NW¼ sec.14, T.54 N., R.81 W., Hydrologic Unit 10090206.

Owner: Ulm School.

AQUIFER.--Coal of Wasatch Formation.

WELL CHARACTERISTICS.--Drilled unused water-table well, diameter 4 in (10 cm), depth 121 ft (36.9 m). Casing information not available.

DATUM.--Altitude of land-surface datum is about 4,500 ft (1,372 m). Measuring point: Hole in plate over casing, 1.30 ft (0.40 m) above land-surface datum.

PERIOD OF RECORD.--June 1961 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 54.57 ft (16.63 m) below land-surface datum, May 7, 1979; lowest, 64.00 ft (19.51 m) below land-surface datum, July 18, 1973.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	WATER LEVEL
JAN 6	56.46
MAY 13	56.71
SEP 10	57.26

QUALITY OF GROUND WATER

WATER-QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

STATION NUMBER	LOCAL IDENT- I- FIER	GEO- LOGIC UNIT	SITE	DATE OF SAMPLE	TIME	SPE- CIFIC CON- DUCT- ANCE LAB (UMHOS)	PH LAB (UNITS)	HARD- NESS (MG/L AS CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)
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CARBON

422616107145501	28N 087W 36DB	122ARKR	GW	81-09-29	1815	409	8.1	160	42
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STATION NUMBER	DATE OF SAMPLE	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LINIT LAB (MG/L AS CACO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SIO2)
422616107145501	81-09-29	14	24	.8	6.2	150	62	5.5	.3	56

STATION NUMBER	DATE OF SAMPLE	SOLIDS, SUM OF CONSTITUENTS, DIS- SOLVED (MG/L)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	PHOS- PHORUS, TOTAL (MG/L AS P)
422616107145501	81-09-29	300	.79	.050

WATER-QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

STATION	NUMBER	LOCAL IDENTIFIER	GEO-LOGIC UNIT	SITE	DATE OF SAMPLE	TIME	STREAM-FLOW, INSTANTANEOUS (CFS)	SPECIFIC CONDUCTANCE (UMHOS)	PH (UNITS)	TEMPERATURE (DEG C)		
CONVERSE COUNTY												
424655105384501	33N 073W 32CD 01		331MDSN	GW	81-08-12	1200	--	1620	7.1	138		
425851105210901	35N 071W 26BBD01		211LNCE	GW	81-06-11	1500	250	--	--	--		
			211LNCE	GW	81-06-12	1430	--	950	7.8	53.0		
STATION	NUMBER	DATE OF SAMPLE	OXYGEN DEMAND, CHEMICAL (HIGH LEVEL) (MG/L)	HARDNESS (MG/L AS CaCO3)	CALCIUM DIS-SOLVED (MG/L AS Ca)	MAGNESIUM, DIS-SOLVED (MG/L AS Mg)	SODIUM, DIS-SOLVED (MG/L AS Na)	SODIUM ADSORPTION RATIO	POTASSIUM, DIS-SOLVED (MG/L AS K)	POTASSIUM 40 DIS-SOLVED (PCI/L AS K40)	ALKALINITY LAB (MG/L AS CaCO3)	SULFIDE TOTAL (MG/L AS S)
424655105384501	81-08-12		49	640	190	39	140	2.5	21	--	120	.2
425851105210901	81-06-11		--	22	7.0	1.1	250	23	5.2	--	--	--
	81-06-12		--	75	3.5	16	240	12	3.3	2.5	490	--
STATION	NUMBER	DATE OF SAMPLE	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLORIDE, DIS-SOLVED (MG/L AS CL)	FLUORIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SiO2)	SOLIDS, SUM OF CONSTITUENTS, DIS-SOLVED (MG/L)	NITROGEN, NO2+NO3 DIS-SOLVED (MG/L AS N)	PHOSPHORUS, TOTAL (MG/L AS P)	PHOSPHORUS, DIS-SOLVED (MG/L AS P)	GROSS ALPHA, DIS-SOLVED (UG/L AS U-NAT)	GROSS ALPHA, SUSP. TOTAL (UG/L AS U-NAT)
424655105384501	81-08-12		620	130	1.6	39	1250	--	--	--	<30	.8
425851105210901	81-06-11		12	39	3.6	25	640	.09	.050	--	--	--
	81-06-12		27	23	3.3	26	637	.01	--	.030	<14	<.4
STATION	NUMBER	DATE OF SAMPLE	GROSS BETA, DIS-SOLVED (PCI/L AS CS-137)	GROSS BETA, SUSP. TOTAL (PCI/L AS CS-137)	GROSS BETA, DIS-SOLVED (PCI/L AS SR/YT-90)	GROSS BETA, SUSP. TOTAL (PCI/L AS SR/YT-90)	RADIUM 226, DIS-SOLVED, RADON METHOD (PCI/L)	URANIUM NATURAL DIS-SOLVED (UG/L AS U)	URANIUM DIS-SOLVED, EXTRACTION (UG/L)	GROSS ALPHA, DIS-SOLVED (PCI/L AS U-NAT)	GROSS ALPHA, SUSP. TOTAL (PCI/L AS U-NAT)	CARBON, ORGANIC TOTAL (MG/L AS C)
424655105384501	81-08-12		31	.7	30	.7	2.9	2.4	2.4	--	.5	<.1
425851105210901	81-06-11		--	--	--	--	--	--	--	--	--	--
	81-06-12		<7.1	<.4	<6.9	<.4	.15	--	<.60	9.5	.3	--
STATION	NUMBER	DATE OF SAMPLE	CARBON, ORGANIC DIS-SOLVED (MG/L AS C)	CARBON, ORGANIC SUSPENDED TOTAL (MG/L AS C)	PHENOLS (UG/L)	TRITIUM TOTAL (PCI/L)	CARBON-14, DISS AP-PARENT AGE (YEARS BP)	C-13/C-12 STABLE ISOTOPE RATIO PER MIL	H-2/H-1 STABLE ISOTOPE RATIO PER MILL	O-18/O-16 STABLE ISOTOPE RATIO PER MIL	S-34/S-32 STABLE ISOTOPE RATIO PER MIL	
424655105384501	81-08-12		<.1	.1	3	10	16200	-11.7	-144.0	-19.0	9.2	
425851105210901	81-06-11		--	--	--	--	--	--	--	--	--	
	81-06-12		--	--	360	--	--	--	--	--	--	

QUALITY OF GROUND WATER

WATER-QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

STATION NUMBER	LOCAL IDENTIFIER	GEO-LOGIC UNIT	SITE	DATE OF SAMPLE	TIME	ALUM-INUM, TOTAL RECOVERABLE (UG/L AS AL)	ALUM-INUM, SUS-PENDED RECOV. (UG/L AS AL)	ALUM-INUM, DIS-SOLVED (UG/L AS AL)	ARSENIC TOTAL (UG/L AS AS)
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CONVERSE COUNTY--Continued

424655105384501	33N 073W 32CD 01	331MDSN	GW	81-08-12	1200	20	10	10	11
425851105210901	35N 071W 26BBD01	211LNCE	GW	81-06-12	1430	--	--	60	--

STATION NUMBER	DATE OF SAMPLE	ARSENIC SUS-PENDED TOTAL (UG/L AS AS)	ARSENIC DIS-SOLVED (UG/L AS AS)	BERYL-LIUM, TOTAL RECOVERABLE (UG/L AS BE)	BERYL-LIUM, DIS-SOLVED (UG/L AS BE)	BORON, DIS-SOLVED (UG/L AS B)	CADMIUM TOTAL RECOVERABLE (UG/L AS CD)	CADMIUM DIS-SOLVED (UG/L AS CD)	CHROMIUM, TOTAL RECOVERABLE (UG/L AS CR)	CHROMIUM, SUS-PENDED RECOV. (UG/L AS CR)	CHROMIUM, DIS-SOLVED (UG/L AS CR)
424655105384501	81-08-12	6	5	0	<1	310	0	<1	10	0	10
425851105210901	81-06-12	--	1	--	<1	190	--	<1	--	--	10

STATION NUMBER	DATE OF SAMPLE	COPPER, TOTAL RECOVERABLE (UG/L AS CU)	COPPER, SUS-PENDED RECOVERABLE (UG/L AS CU)	COPPER, DIS-SOLVED (UG/L AS CU)	IRON, TOTAL RECOVERABLE (UG/L AS FE)	IRON, SUS-PENDED RECOVERABLE (UG/L AS FE)	IRON, DIS-SOLVED (UG/L AS FE)	LEAD, TOTAL RECOVERABLE (UG/L AS PB)	LEAD, SUS-PENDED RECOVERABLE (UG/L AS PB)	LEAD, DIS-SOLVED (UG/L AS PB)	LITHIUM TOTAL RECOVERABLE (UG/L AS LI)
424655105384501	81-08-12	4	4	0	1000	830	170	0	0	1	180
425851105210901	81-06-12	--	--	1	--	--	110	--	--	0	--

STATION NUMBER	DATE OF SAMPLE	LITHIUM SUS-PENDED RECOVERABLE (UG/L AS LI)	LITHIUM DIS-SOLVED (UG/L AS LI)	MANGANESE, TOTAL RECOVERABLE (UG/L AS MN)	MANGANESE, SUS-PENDED RECOVERABLE (UG/L AS MN)	MANGANESE, DIS-SOLVED (UG/L AS MN)	MERCURY TOTAL RECOVERABLE (UG/L AS HG)	MERCURY SUS-PENDED RECOVERABLE (UG/L AS HG)	MERCURY DIS-SOLVED (UG/L AS HG)	MOLYBDENUM, TOTAL RECOVERABLE (UG/L AS MO)	MOLYBDENUM, SUS-PENDED RECOVERABLE (UG/L AS MO)
424655105384501	81-08-12	0	210	70	4	66	.0	.0	.0	8	0
425851105210901	81-06-12	--	7	--	--	9	--	--	.1	--	--

STATION NUMBER	DATE OF SAMPLE	MOLYBDENUM, DIS-SOLVED (UG/L AS MO)	NICKEL, TOTAL RECOVERABLE (UG/L AS NI)	NICKEL, SUS-PENDED RECOVERABLE (UG/L AS NI)	NICKEL, DIS-SOLVED (UG/L AS NI)	SELENIUM, TOTAL RECOVERABLE (UG/L AS SE)	SELENIUM, SUS-PENDED RECOVERABLE (UG/L AS SE)	SELENIUM, DIS-SOLVED (UG/L AS SE)	VANADIUM, DIS-SOLVED (UG/L AS V)
424655105384501	81-08-12	13	2	1	1	0	0	0	.0
425851105210901	81-06-12	<10	--	--	1	--	--	0	2.0

STATION NUMBER	DATE OF SAMPLE	ZINC, TOTAL RECOVERABLE (UG/L AS ZN)	ZINC, SUS-PENDED RECOVERABLE (UG/L AS ZN)	ZINC, DIS-SOLVED (UG/L AS ZN)
424655105384501	81-08-12	20	10	10
425851105210901	81-06-12	--	--	10

WATER-QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

STATION NUMBER	LOCAL IDENTIFIER	GEO-LOGIC UNIT	SITE	DATE OF SAMPLE	TIME	DEPTH OF WELL, TOTAL (FEET)	SPECIFIC CONDUCTANCE LAB (UMHOS)	PH (UNITS)	TEMPERATURE (DEG C)
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JOHNSON COUNTY

442104106392901	51N 081W 31BBC	124WSTC	GW	81-08-25	--	16	40500	7.1	13.0
442111106395001	51N 086W 36AAB	124WSTC	GW	81-08-25	--	108	29500	7.8	14.0

STATION NUMBER	DATE OF SAMPLE	GROSS ALPHA, DIS-SOLVED (UG/L AS U-NAT)	GROSS ALPHA, SUSP. TOTAL (UG/L AS U-NAT)	GROSS BETA, DIS-SOLVED (PCI/L AS CS-137)	GROSS BETA, SUSP. TOTAL (PCI/L AS CS-137)	GROSS BETA, DIS-SOLVED (PCI/L AS SR/YT-90)	GROSS BETA, SUSP. TOTAL (PCI/L AS SR/YT-90)	RADIUM 226, DIS-SOLVED, RADON METHOD (PCI/L)	URANIUM NATURAL DIS-SOLVED (UG/L AS U)
442104106392901	81-08-25	<55	<.4	<32	<.4	<30	<.4	.10	11
442111106395001	81-08-25	<28	<.4	<16	<.4	<15	<.4	.50	<.5

STATION NUMBER	LOCAL IDENTIFIER	GEO-LOGIC UNIT	SITE	DATE OF SAMPLE	TIME	SPECIFIC CONDUCTANCE LAB (UMHOS)	PH LAB (UNITS)	HARDNESS (MG/L AS CaCO3)	CALCIUM DIS-SOLVED (MG/L AS Ca)
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NATRONA COUNTY

424638106221001	32N 079W 06BB	111ALVM	SP	81-09-01	--	316	7.8	130	36
424638106221002	32N 079W 06BB	111ALVM	SP	81-09-01	--	294	8.5	140	39
424638106221003	32N 079W 06BB	111ALVM	GW	81-09-01	--	379	8.0	150	41
424638106221004	32N 079W 06BB	111ALVM	SP	81-09-01	--	265	8.1	140	36
424638106221005	32N 079W 06BB	111ALVM	SP	81-09-01	--	285	8.2	130	37

STATION NUMBER	DATE OF SAMPLE	MAGNESIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	SODIUM AD-SORPTION RATIO	POTASSIUM, DIS-SOLVED (MG/L AS K)	ALKALINITY LAB (MG/L AS CaCO3)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLORIDE, DIS-SOLVED (MG/L AS CL)	FLUORIDE, DIS-SOLVED (MG/L AS F)
424638106221001	81-09-01	10	9.9	.4	2.5	150	7.4	3.6	.2
424638106221002	81-09-01	12	8.0	.3	1.9	140	13	8.5	.0
424638106221003	81-09-01	12	8.0	.3	1.5	140	24	4.8	.0
424638106221004	81-09-01	11	6.0	.2	2.2	120	8.2	5.8	.0
424638106221005	81-09-01	9.7	7.4	.3	1.7	140	7.4	3.8	.3

STATION NUMBER	DATE OF SAMPLE	SILICA, DIS-SOLVED (MG/L AS SiO2)	NITROGEN, NO2+NO3 DIS-SOLVED (MG/L AS N)	PHOSPHORUS, TOTAL (MG/L AS P)
424638106221001	81-09-01	15	.42	.030
424638106221002	81-09-01	15	1.5	.060
424638106221003	81-09-01	16	.65	.020
424638106221004	81-09-01	16	1.3	.010
424638106221005	81-09-01	16	.64	.030

QUALITY OF GROUND WATER

WATER-QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

STATION NUMBER	LOCAL IDENTIFIER	GEO-LOGIC UNIT	SITE	DATE OF SAMPLE	TIME	SAMPLING DEPTH (FT)	SPECIFIC CONDUCTANCE (UMHOS)	PH (UNITS)	TEMPERATURE (DEG C)
PARK COUNTY									
443440110215201	WELL FB 3 YNP	111LCTN	GW	81-07-21	1330	51.0	265	6.6	10.0
443443110215001	WELL FB 4 YNP	111LCTN	GW	81-07-21	1500	49.0	215	6.7	10.0
443452110220401	WELL FB10 YNP	111LCTN	GW	81-07-22	1545	40.0	110	6.7	8.5

STATION NUMBER	DATE OF SAMPLE	HARDNESS (MG/L AS CaCO3)	CALCIUM DIS-SOLVED (MG/L AS Ca)	MAGNESIUM DIS-SOLVED (MG/L AS Mg)	SODIUM DIS-SOLVED (MG/L AS Na)	SODIUM ADSORPTION RATIO	POTASSIUM DIS-SOLVED (MG/L AS K)	POTASSIUM 40 DIS-SOLVED (MG/L AS K40)	ALKALINITY LAB (MG/L AS CaCO3)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLORIDE DIS-SOLVED (MG/L AS Cl)
443440110215201	81-07-21	84	19	8.8	15	.7	6.1	4.6	72	9.0	12
443443110215001	81-07-21	75	17	8.0	5.3	.3	4.7	3.5	43	12	9.2
443452110220401	81-07-22	49	9.5	6.2	2.9	.2	2.8	2.1	19	10	7.7

STATION NUMBER	DATE OF SAMPLE	FLUORIDE DIS-SOLVED (MG/L AS F)	SILICA DIS-SOLVED (MG/L AS SiO2)	SOLIDS, SUM OF CONSTITUENTS, DIS-SOLVED (MG/L)	NITROGEN, NO2+NO3 DIS-SOLVED (MG/L AS N)	NITROGEN, AMMONIA DIS-SOLVED (MG/L AS N)	NITROGEN, AMMONIA DIS-SOLVED (MG/L AS NH4)	NITROGEN, AMMONIA + ORGANIC TOTAL (MG/L AS N)	PHOSPHORUS, TOTAL (MG/L AS P)	PHOSPHORUS, TOTAL (MG/L AS PO4)
443440110215201	81-07-21	.8	43	184	6.0	.250	.32	2.10	.460	1.4
443443110215001	81-07-21	.1	46	161	7.4	.240	.31	1.90	.630	1.9
443452110220401	81-07-22	.1	31	94	2.7	.260	.33	1.50	.170	.52

STATION NUMBER	DATE OF SAMPLE	IRON, DIS-SOLVED (UG/L AS Fe)	MANGANESE, DIS-SOLVED (UG/L AS Mn)	CARBON, ORGANIC DIS-SOLVED (MG/L AS C)
443440110215201	81-07-21	20	50	4.6
443443110215001	81-07-21	30	20	4.0
443452110220401	81-07-22	40	8	--

STATION NUMBER	LOCAL IDENTIFIER	GEO-LOGIC UNIT	SITE	DATE OF SAMPLE	TIME	DEPTH OF HOLE, TOTAL (FEET)	FLOW RATE (GPM)	SPECIFIC CONDUCTANCE LAB (UMHOS)	PH LAB (UNITS)
SHERIDAN COUNTY									
445729107283001	58N 088W 34CA	331MDSN	GW	81-08-31	1630	3100	--	587	8.1
		331MDSN	GW	81-09-01	0830	3100	900	586	8.1

STATION NUMBER	DATE OF SAMPLE	HARDNESS (MG/L AS CaCO3)	CALCIUM DIS-SOLVED (MG/L AS Ca)	MAGNESIUM DIS-SOLVED (MG/L AS Mg)	SODIUM DIS-SOLVED (MG/L AS Na)	SODIUM ADSORPTION RATIO	POTASSIUM DIS-SOLVED (MG/L AS K)	ALKALINITY LAB (MG/L AS CaCO3)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLORIDE DIS-SOLVED (MG/L AS Cl)	FLUORIDE DIS-SOLVED (MG/L AS F)
445729107283001	81-08-31	340	88	30	.0	.0	2.0	190	160	1.7	1.2
	81-09-01	330	83	29	.0	.0	2.0	190	77	2.1	1.2

STATION NUMBER	DATE OF SAMPLE	SILICA DIS-SOLVED (MG/L AS SiO2)	SOLIDS, SUM OF CONSTITUENTS, DIS-SOLVED (MG/L)	NITROGEN, NO2+NO3 DIS-SOLVED (MG/L AS N)	PHOSPHORUS, TOTAL (MG/L AS P)
445729107283001	81-08-31	11	410	.84	.070
	81-09-01	11	320	.30	.010

WATER-QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

STATION	NUMBER	LOCAL IDENTIFIER	GEO-LOGIC UNIT	SITE	DATE OF SAMPLE	TIME	SAMPLING DEPTH (FT)	SPECIFIC CONDUCTANCE (UMHOS)	PH (UNITS)	TEMPERATURE (DEG C)		
TETON COUNTY												
442322110321002	WELL GV 3AYNP		111LCTN	GW	81-07-25	1300	38.0	26	6.3	5.5		
442321110391901	WELL GV 4 YNP		111LCTN	GW	81-07-25	1430	58.0	390	6.5	10.0		
442317110321601	WELL GV 7 YNP		111LCTN	GW	81-07-26	1115	105	390	7.0	9.0		
443844110521901	WELL MJ 3 YNP		111ALVM	GW	81-07-23	1330	60.0	390	6.2	15.0		
443843110522001	WELL MJ 7 YNP		111ALVM	GW	81-07-23	1515	50.0	210	6.5	13.5		
442720110504101	WELL OF 2 YNP		112GLCL	GW	81-07-27	1345	48.0	335	6.0	19.5		
442722110504401	WELL OF 3 YNP		112GLCL	GW	81-07-27	1420	65.0	370	6.4	16.0		
442724110504801	WELL OF 5 YNP		112GLCL	GW	81-07-27	1500	49.0	320	6.0	16.5		
442723110505203	WELL OF 7BYNP		112GLCL	GW	81-07-28	1430	30.0	425	6.1	15.0		
STATION	NUMBER	DATE OF SAMPLE	HARDNESS (MG/L AS CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNESIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	SODIUM ADSORPTION RATIO	POTASSIUM, DIS-SOLVED (MG/L AS K)	POTASSIUM 40 DIS-SOLVED (PCI/L AS K40)	ALKALINITY LAB (MG/L AS CACO3)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLORIDE, DIS-SOLVED (MG/L AS CL)
442322110321002	81-07-25	10	3.3	.5	1.5	.2	1.8	1.3	10	<1.0	.8	
442321110391901	81-07-25	120	31	11	22	.9	11	8.2	73	17	21	
442317110321601	81-07-26	150	38	14	11	.4	8.2	6.1	82	16	19	
443844110521901	81-07-23	83	25	5.0	38	1.8	7.3	5.4	51	7.0	35	
443843110522001	81-07-23	29	8.7	1.8	30	2.4	6.2	4.6	51	<1.0	19	
442720110504101	81-07-27	34	10	2.1	40	3.2	11	--	30	5.0	14	
442722110504401	81-07-27	33	9.8	2.0	48	3.8	12	--	94	1.0	35	
442724110504801	81-07-27	23	7.0	1.4	51	4.8	13	--	62	3.0	41	
442723110505203	81-07-28	51	16	2.7	49	3.1	8.5	--	52	30	36	
STATION	NUMBER	DATE OF SAMPLE	FLUORIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTITUENTS, DIS-SOLVED (MG/L)	NITROGEN, NO2+NO3 DIS-SOLVED (MG/L AS N)	NITROGEN, AMMONIA DIS-SOLVED (MG/L AS N)	NITROGEN, AMMONIA DIS-SOLVED (MG/L AS NH4)	NITROGEN, AMMONIA + ORGANIC TOTAL (MG/L AS N)	PHOSPHORUS, TOTAL (MG/L AS P)	PHOSPHORUS, TOTAL (MG/L AS PO4)	
442322110321002	81-07-25	.0	19	--	.71	.450	.58	1.80	.770	2.4		
442321110391901	81-07-25	.1	52	275	15	.250	.32	2.50	2.90	8.9		
442317110321601	81-07-26	.3	47	274	16	.390	.50	2.60	.740	2.3		
443844110521901	81-07-23	2.9	64	277	14	.360	.46	1.90	.180	.55		
443843110522001	81-07-23	5.7	57	--	1.5	.340	.44	.88	.570	1.7		
442720110504101	81-07-27	1.6	54	231	17	1.40	1.8	3.10	4.00	12		
442722110504401	81-07-27	2.5	45	233	4.4	.190	.24	9.90	8.80	27		
442724110504801	81-07-27	1.5	50	227	2.7	1.50	1.9	3.90	21.0	64		
442723110505203	81-07-28	.9	53	282	12	4.50	5.8	4.60	.230	.71		

WATER-QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

YELLOWSTONE RIVER BASIN

442043106442801 BUFFALO METEOROLOGICAL STATION NO. 1, BUFFALO, WY (LAT 44 20 43 LONG 106 44 28)

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	PH (UNITS)	HARD- NESS (MG/L AS CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM AD- SORP- TION RATIO	SILICA, DIS- SOLVED (MG/L AS SIO2)
OCT 15...	--	--	--	--	2	.5	.2	<.2	--	.1
17...	1900	--	--	--	8	2.5	.4	.8	.1	.2
NOV 12-13	--	--	--	--	<2	.3	.4	<.2	--	.1
30...	0600	--	--	--	2	.5	.1	<.2	.1	.0
DEC 06...	1800	.02	--	--	37	8.5	3.8	4.0	.3	33
JAN 30-31	--	--	--	--	--	--	--	--	--	--
FEB 01-01	--	--	--	--	--	--	--	--	--	--
08-10	--	--	--	--	4	1.4	.2	<.2	--	.1
26-27	--	--	--	--	--	--	--	--	--	--
MAR 20-21	--	.32	13	4.8	1	.3	.1	.3	.1	.1
27...	1200	--	--	--	--	--	--	--	--	--
APR 02-03	--	--	--	--	3	1.0	.0	.5	.1	.2
19-20	--	--	--	--	5	1.6	.2	.4	.1	.2
21...	1830	--	--	--	2	.6	.1	<.2	--	<.0
MAY 02-03	--	.38	15	4.8	3	1.0	.2	.3	.1	.3
06-08	--	.57	15	4.7	--	--	--	--	--	--

[illegible]

YELLOWSTONE RIVER BASIN

442043106442801 BUFFALO METEOROLOGICAL STATION NO. 1, BUFFALO, WY--Continued
(LAT 44 20 43 LONG 106 44 28)

	STRONTIUM, DISSOLVED (UG/L AS SR)	VANADIUM, DISSOLVED (UG/L AS V)	ZINC, DISSOLVED (UG/L AS ZN)	BROMIDE DISSOLV (UG/L)	CHLORIDE DISSOLV (UG/L)	FLUORIDE DISSOLV (UG/L)	NITROGEN NITRATE DISSOLV (UG/L)	PHOSPHORUS, ORTHO, DISSOLVED (UG/L AS P)	SULFATE DISSOLV (UG/L)
OCT									
15... 17...	1 7	<3.0 <3.0	6 51	<50.0 --	90.0 --	60.0 --	230 --	<10.0 --	1100 --
NOV									
12-13 30...	<1 3	<6.0 <6.0	8 4	<50.0 <50.0	1570 2000	550 1000	150 .00	<10.0 <10.0	2100 1000
DEC									
06...	39	<6.0	10	--	--	--	--	--	--
JAN									
30-31	--	--	--	<50.0	390	530	880	<100	31500
FEB									
01-01 08-10 26-27	-- 3 --	-- <6.0 --	-- 6 --	<50.0 <50.0 <50.0	390 420 5330	530 80.0 300	880 1010 7640	<100 <100 210	31500 1080 1250
MAR									
20-21 27...	1 --	<6.0 --	17 --	<50.0 <50.0	760 2390	70.0 1630	40.0 300	<100 <100	490 1810
APR									
02-03 19-20 21...	5 4 1	<6.0 <6.0 <6.0	29 28 28	<50.0 <50.0	970 870	170 420	1080 240	<100 <100	2570 1670
MAY									
02-03 06-08	3 --	<6.0 --	16 --	<50.0 --	240 --	110 --	180 --	<100 --	1190 --

ANALYSES OF SAMPLES COLLECTED AT PRECIPITATION SITES IN WYOMING

WATER-QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

YELLOWSTONE RIVER BASIN

442316106452301 BUFFALO METEOROLOGICAL STATION NO. 2, BUFFALO, WY (LAT 44 23 16 LONG 106 45 23)

DATE	TIME	SPECIFIC CONDUCTANCE (UMHOS)	PH (UNITS)	HARDNESS (MG/L AS CaCO3)	CALCIUM DIS-SOLVED (MG/L AS Ca)	MAGNESIUM, DIS-SOLVED (MG/L AS Mg)	SODIUM, DIS-SOLVED (MG/L AS Na)	SODIUM ADSORPTION RATIO	SILICA, DIS-SOLVED (MG/L AS SiO2)	BARIUM, DIS-SOLVED (UG/L AS Ba)
MAY										
08-10	--	17	4.7	2	.5	.1	.5	.2	.1	5
10-11	--	17	4.6	2	.4	.2	.5	.2	.2	4
17...	1200	11	4.8	1	.1	.1	.2	.1	.2	<2
19...	1700	16	4.5	1	.2	<.0	<.2	--	.0	<2
21...	2130	4	5.7	--	.2	<.0	<.2	--	.2	3
22-23	--	11	5.2	2	.6	.2	<.2	--	.1	20
26...	2100	--	--	4	1.4	.2	<.2	--	.1	<2
28-29	--	14	4.6	1	.3	.0	<.2	--	.1	--
30...	2200	20	5.0	--	--	--	--	--	--	--
JUN										
03...	2100	9	4.9	--	.3	<.0	.3	--	.1	30
08-09	--	--	--	--	.2	<.0	.3	--	.1	20
12-13	--	13	4.8	2	.5	.1	.3	.1	.1	40
JUL										
18...	1900	17	6.0	4	1.1	.3	.5	.1	130	5
24-27	--	8	4.7	--	.2	<.0	<.2	--	<.0	<2
AUG										
07...	--	--	--	--	--	--	--	--	--	--
09...	--	14	4.8	1	.3	.1	.5	.2	.0	2
14...	0200	17	4.6	1	.3	.0	<.2	--	.1	2
SEP										
05...	2000	24	6.7	11	3.1	.7	.1	.0	.2	8
26...	1400	35	7.3	21	6.7	1.0	.2	.0	.4	10
30...	0100	--	--	--	.5	<.0	<.2	--	.1	<2

DATE	BERYLLIUM, DIS-SOLVED (UG/L AS BE)	CADMIUM DIS-SOLVED (UG/L AS Cd)	COBALT, DIS-SOLVED (UG/L AS Co)	COPPER, DIS-SOLVED (UG/L AS Cu)	IRON, DIS-SOLVED (UG/L AS Fe)	LEAD, DIS-SOLVED (UG/L AS Pb)	LITHIUM DIS-SOLVED (UG/L AS Li)	MANGANESE, DIS-SOLVED (UG/L AS Mn)	MOLYBDENUM, DIS-SOLVED (UG/L AS Mo)
MAY									
08-10	<1	7	<3	<10	<10	<10	<4	8	<10
10-11	<1	4	<3	<10	35	13	<4	6	<10
17...	<1	1	<3	<10	11	<10	<4	1	<10
19...	<1	2	<3	<10	<10	<10	<4	2	<10
21...	<1	<1	<3	<10	<10	<10	<4	<1	<10
22-23	<1	<1	<3	<10	13	17	<4	11	<10
26...	<1	3	<3	<10	<10	<10	<4	22	<10
28-29	<1	<1	<3	<10	<10	16	<4	2	<10
30...	--	--	--	--	--	--	--	--	--
JUN									
03...	<1	<1	<3	<10	<10	<10	<4	2	<10
08-09	<1	<1	<3	<10	<10	<10	<4	1	<10
12-13	<1	2	<3	<10	<10	<10	<4	4	<10
JUL									
18...	<1	<1	<3	<10	<10	<10	<4	5	<10
24-27	<1	<1	<3	<10	<10	<10	<4	1	<10
AUG									
07...	--	--	--	--	--	--	--	--	--
09...	1	1	2	20	<10	11	<4	4	<10
14...	<1	<1	<3	<10	<10	<10	<4	4	<10
SEP									
05...	<1	<1	<3	<10	<10	<10	<4	<1	10
26...	<1	<1	<3	<10	<10	<10	<4	<1	<10
30...	<1	<1	<3	30	<10	<10	<4	3	<10

WATER-QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

YELLOWSTONE RIVER BASIN

442316106452301 BUFFALO METEOROLOGICAL STATION NO. 2, BUFFALO, WY--Continued
(LAT 44 23 16 LONG 106 45 23)

DATE	STRON- TIUM, DIS- SOLVED (UG/L AS SR)	VANA- DIUM, DIS- SOLVED (UG/L AS V)	ZINC, DIS- SOLVED (UG/L AS ZN)	BROMIDE DISSOLV (UG/L)	CHLO- RIDE DISSOLV (UG/L)	FLUO- RIDE DISSOLV (UG/L)	NITRO- GEN NITRATE DISSOLV (UG/L)	PHOS- PHORUS, ORTHO, DIS- SOLVED (UG/L AS P)	SULFATE DISSOLV (UG/L)
MAY									
08-10	3	<6.0	11	<50.0	120	20.0	410	<100	2410
10-11	3	<6.0	8	<50.0	480	40.0	290	<100	2850
17...	<1	<6.0	5	<50.0	190	20.0	150	<100	990
19...	<1	<6.0	13	<50.0	550	50.0	290	100	1900
21...	<1	<6.0	14	<50.0	160	20.0	50.0	<100	270
22-23	2	<6.0	6	<50.0	90.0	40.0	200	<100	1820
26...	7	<6.0	100	<50.0	1120	80.0	310	<100	2750
28-29	<1	<6.0	22	<50.0	430	110	130	<100	1480
30...	--	--	--	--	--	--	--	--	--
JUN									
03...	2	<6.0	7	<50.0	150	40.0	140	<100	1230
08-09	2	<6.0	4	<50.0	160	60.0	70.0	<100	720
12-13	3	<6.0	5	<50.0	280	70.0	260	<100	1700
JUL									
18...	4	<6.0	5	<50.0	960	70.0	330	<100	2090
24-27	<1	<6.0	<4	<50.0	140	20.0	110	<100	610
AUG									
07...	--	--	--	<50.0	2740	100	650	<100	3030
09...	3	<6.0	10	<50.0	600	70.0	120	<100	590
14...	1	<6.0	4	<50.0	210	80.0	320	<100	1520
SEP									
05...	8	<6.0	<3	<50.0	360	50.0	410	<100	2360
26...	11	<6.0	<3	--	--	--	--	--	--
30...	1	<6.0	12	--	--	--	--	--	--

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FACTORS FOR CONVERTING INCH-POUND UNITS TO INTERNATIONAL SYSTEM UNITS (SI)

The following factors may be used to convert the inch-pound units published herein to the International System of Units (SI). This report contains both the inch-pound and SI unit equivalents in the station manuscript descriptions.

Multiply inch-pound units	By	To obtain SI units
<i>Length</i>		
inches (in)	2.54×10^1	millimeters (mm)
	2.54×10^{-2}	meters (m)
feet (ft)	3.048×10^{-1}	meters (m)
miles (mi)	1.609×10^0	kilometers (km)
<i>Area</i>		
acres	4.047×10^3	square meters (m ²)
	4.047×10^{-1}	square hectometers (hm ²)
	4.047×10^{-3}	square kilometers (km ²)
square miles (mi ²)	2.590×10^0	square kilometers (km ²)
<i>Volume</i>		
gallons (gal)	3.785×10^0	liters (L)
	3.785×10^0	cubic decimeters (dm ³)
	3.785×10^{-3}	cubic meters (m ³)
million gallons	3.785×10^3	cubic meters (m ³)
	3.785×10^{-3}	cubic hectometers (hm ³)
cubic feet (ft ³)	2.832×10^1	cubic decimeters (dm ³)
	2.832×10^{-2}	cubic meters (m ³)
cfs-days	2.447×10^3	cubic meters (m ³)
	2.447×10^{-3}	cubic hectometers (hm ³)
acre-feet (acre-ft)	1.233×10^3	cubic meters (m ³)
	1.233×10^{-3}	cubic hectometers (hm ³)
	1.233×10^{-6}	cubic kilometers (km ³)
<i>Flow</i>		
cubic feet per second (ft ³ /s)	2.832×10^1	liters per second (L/s)
	2.832×10^1	cubic decimeters per second (dm ³ /s)
	2.832×10^{-2}	cubic meters per second (m ³ /s)
gallons per minute (gal/min)	6.309×10^{-2}	liters per second (L/s)
	6.309×10^{-2}	cubic decimeters per second (dm ³ /s)
	6.309×10^{-5}	cubic meters per second (m ³ /s)
million gallons per day	4.381×10^1	cubic decimeters per second (dm ³ /s)
	4.381×10^{-2}	cubic meters per second (m ³ /s)
<i>Mass</i>		
tons (short)	9.072×10^{-1}	megagrams (Mg) or metric tons



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