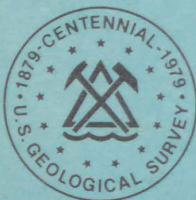
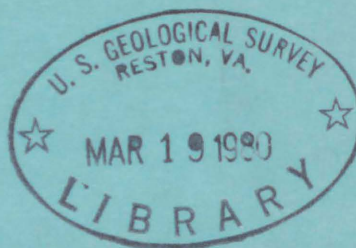


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Water Resources Data for Wyoming

Volume 1. Missouri River Basin



U.S. GEOLOGICAL SURVEY WATER-DATA REPORT WY-78-1

WATER YEAR 1978

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

CALENDAR FOR WATER YEAR 1978

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Water Resources Data for Wyoming

Volume 1. Missouri River Basin

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WATER YEAR 1978

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and with other agencies

UNITED STATES DEPARTMENT OF THE INTERIOR

CECIL D. ANDRUS, Secretary

GEOLOGICAL SURVEY

H. William Menard, Director

For information on the water program in Wyoming write to
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P.O. Box 1125
Cheyenne, Wyoming 82001

1980



United States Department of the Interior

GEOLOGICAL SURVEY
Water Resources Division
P. O. Box 1125
Cheyenne, Wyoming 82001

TO: Recipients of Water Resources Data for Wyoming

FROM: Chief, Hydrologic Surveillance Section, WRD
Cheyenne, Wyoming

SUBJECT: PUBLICATIONS - Water Resources Data for Wyoming - Water Year 1978

Water quality data for Belle Fourche River below Rattlesnake Creek, near Piney (station no. 06425720) and Belle Fourche River below Dry Creek, near Piney (station no. 06425780) were inadvertantly interchanged in the report WY-78-1 for water year 1978. Tabulations of data on pages 362-364 and pages 368-370 should be interchanged. The station descriptions on pages 362 and 368 are correct as are the records of daily discharge and suspended-sediment discharge.

Ernest S. Denison
Chief, Hydrologic
Surveillance Section

ESD/slg

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 J. S. Cragwall, Jr., Chief Hydrologist, U.S. Geological Survey, and Philip Cohen, 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

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7. Author(s)			6.
9. Performing Organization Name and Address U.S. Geological Survey, Water Resources Division P.O. Box 1125 Cheyenne, Wyoming 82001			8. Performing Organization Rept. No. USGS-WDR-WY-78-1
10. Project/Task/Work Unit No.			11. Contract/Grant No.
12. Sponsoring Organization Name and Address U.S. Geological Survey, Water Resources Division P. O. Box 1125 Cheyenne, Wyoming 82001			13. Type of Report & Period Covered Annual - Oct. 1, 1977 to Sept. 30, 1978
14.			
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16. Abstracts Water resources data for the 1978 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 wells. Volume 1 of this report contains discharge records for 166 gaging stations; stage only records for 1 lake; stage and contents for 10 lakes and reservoirs; water quality for 125 gaging stations, 76 ungaged stations, 2 reservoirs, 113 wells and springs; and water levels for 36 observation wells. Also included are 76 crest-stage partial-record stations. Additional water data were collected at various sites, not part of the systematic data-collection program, and are published as miscellaneous measurements and analyses. This data 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. Key Words and Document Analysis. 17a. 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.			
17b. Identifiers/Open-Ended Terms			
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WATER RESOURCES DATA FOR WYOMING, 1978

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

INTRODUCTION

Water resources data for the 1978 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 166 gaging stations; stage only records for 1 lake; stage and contents for 10 lakes and reservoirs, water quality for 125 gaging stations, 76 ungaged stations, 2 lakes and reservoirs, and 113 wells and springs; and water levels for 36 observation wells. Also included are 76 crest-stage partial-record stations. In Volume 1 (Missouri River basin) locations of gaging stations and peak-flow partial-record stations are shown in figures 4-6, and locations of observation wells and sites where water-quality data were collected from wells are shown in figures 7-9. In Volume 2 (Green River, Bear River, and Snake River basins) locations of gaging stations and peak-flow partial-record stations are shown in figures 4 and 5, and locations of observation wells and sites where water-quality data were collected from wells are shown in figures 6 and 7. Additional water data were collected at various sites, not part of the systematic data collection program, and are published as miscellaneous measurements. These data 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, 1200 South Eads Street, Arlington, VA 22202.

For water years 1961 through 1974, streamflow data were released by the Geological Survey in annual reports on a State-boundary basis. Water-quality records for water years 1964 through 1974 were similarly released either in separate reports or in conjunction with streamflow records. Beginning with the 1975 water year, water data for streamflow, water quality, and ground water are published as an official Survey report 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-78-1." Water-Data reports are for sale by the National Technical Information Service, U.S. Department of Commerce, Springfield, VA 22161.

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 Department of Agriculture, Larry J. Bourret, Commissioner of Agriculture
Wyoming State Engineer, George L. Christopoulos
Wyoming Department of Economic Planning and Development, Myron W. Goodson, Chief of Water Development
Wyoming Department of Environmental Quality, Robert E. Sundin, Director
Wyoming Highway Department, Leno H. Menghini, Superintendent and Chief Engineer
Wyoming Water Resources Research Institute, Paul A. Rechard, Director
City of Cheyenne, Board of Public Utilities, Ray L. Sherard, Director

Assistance in the form of funds or services was given by the Bureau of Reclamation, the Bureau of Land Management, and the National Park Service, Department of the Interior, the Corps of Engineers, U.S. Army, and the Environmental Protection Agency, in collecting data published in the report. Funds and services were also provided by the Missouri River Basin Program. Organizations that supplied data are acknowledged in station descriptions.

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Wyoming district personnel who contributed significantly to the collection and preparation of the data in this report were, E.S. Denison, chief, Hydrologic Surveillance Section, assisted by D.L. Butler, D.D. Carlson, H.B. Fabricius, W.R. Glass, S.L. Green, R.L. Muench, C.F. Obert, D.J. O'Connell, D.J. Pangburn, K.G. Polinoski, and B.J. Tucker.

HYDROLOGIC CONDITIONS

Streamflow at the beginning of the 1978 water year was deficient at the index stations. Monthly and annual means are compared with medians for the index sites in figure 3. The median is for the 30-year period, 1941-70. This below normal trend continued through the first part of the water year. Runoff from the above normal snowpack increased the monthly means to above normal during the last part of the water year. The snowpack was above normal in all but the Snake River basin. Streamflow at the index stations continued above normal through the remainder of the water years.

Rain and snow occurred from April 27 to May 12 in amounts sufficient to maintain wet soil conditions in most basins. These antecedent conditions created high runoff potential and the heavy rains of May 16-19 caused flooding throughout northern and eastern Wyoming. Floods occurred in the Bighorn River basin, Tongue River basin, Powder River basin, Cheyenne River basin, and parts of the North Platte River basin. The recurrence interval of the peak discharge at several gaging stations in northeastern Wyoming exceeded 100-years. At the National Weather Service reporting station, Gillette 2E, 11.08 inches fell during May. This is 8.58 inches above the 58-year average for May at this site. Twelve counties were declared disaster areas and damages to public property, private property, and agriculture exceeded 16 million dollars.

Reservoir storage in the Yellowstone River basin increased 512,500 acre-feet (632 hm³) during the year. Storage in Keyhole Reservoir attained a maximum of record 210,200 acre-feet (259 hm³) May 21. In the Platte River basin, storage in the major reservoirs increased 338,700 acre-feet (418 hm³). Storage in the Green River basin increased 27,200 acre-feet (33.5 hm³) during the year.

NOTICE

During water year 1978, revisions were made in the terminology used to define 143 of the water-quality parameter codes that have been used by the Geological Survey in its publication of water-quality data and in its WATSTORE data system. These revisions were made to achieve consistency in terminology and to conform to a joint USGS-EPA agreement on terminology. They do not represent a change in the way the codes have been used in the past or in the association of specific code numbers with identified analytical procedures.

Use of the new terminology began with data for the 1978 water year, and therefore, it first appears in this publication. Definitions on which the terminology is based are included in the "Definitions" section of this report, and a table showing both old and new terminology is attached as an appendix to the report.

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 the organisms which produce colonies within 24 hours when incubated at 35°C + 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 + 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 + 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/m^3), and periphyton and benthic organisms in grams per square meter (g/m^2).

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 noncontribution 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 as mass (micrograms) 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.

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.

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.

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 [$\text{mg C}/(\text{m}^2 \cdot \text{time})$ for periphyton and macrophytes and $\text{mg C}/(\text{m}^3 \cdot \text{time})$ 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 [$\text{mg O}_2/(\text{m}^2 \cdot \text{time})$ for periphyton and macrophytes and $\text{mg O}_2/(\text{m}^3 \cdot \text{time})$ 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 $0.45\mu\text{m}$ 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 μ 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 planimeted. All areas shown are those for the stage when the planimeted 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, 1978, is called the "1978 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 1 below.

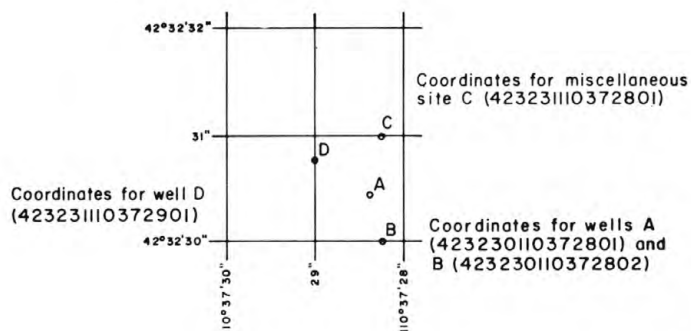


Figure 1.—System for numbering wells and miscellaneous sites (latitude and longitude).

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 2. 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 NE $\frac{1}{4}$ SE $\frac{1}{4}$ SW $\frac{1}{4}$ 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.

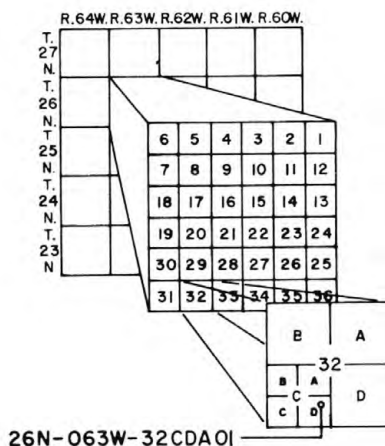


Figure 2.—System for numbering wells and miscellaneous sites (township and range).

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.

Seepage Study

Base-flow discharge and chemical-quality measurements were made at selected sites on streams during October-November 1977, August-September 1978, and October 1978. The purpose of the study is to provide data on the interaction between surface-water and ground-water systems in the Northern Great Plains area of Montana and Wyoming.

The data and its interpretation will be released in a U.S. Geological Survey open-file report describing measurements of discharge, gain or loss in flow, and chemical quality of streams in the Northern Great Plains area of Montana and Wyoming, 1977-78, by Stanley A. Druse and Kent A. Dodge.

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.

PUBLICATIONS ON TECHNIQUES OF WATER-RESOURCES INVESTIGATIONS

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. Prices are effective January 1978 but are subject to change.

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. \$1.60.
- 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. \$0.85.
- 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. \$1.90.
- 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. \$1.75.
- 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. \$1.00.
- 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. \$0.35.
- 3-A3. *Measurement of peak discharge at culverts by indirect methods*, by G. L. Bodhaine: USGS--TWRI Book 3, Chapter A3. 1968. 60 pages. \$0.40.
- 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. \$1.00.
- 3-A5. *Measurement of peak discharge at dams by indirect methods*, by Harry Hulsing: USGS--TWRI Book 3, Chapter A5. 1967. 29 pages. \$0.35.
- 3-A6. *General procedure for gaging streams*, by R. W. Carter and Jacob Davidian: USGS--TWRI Book 3, Chapter A6, 1968, 13 pages. \$1.00.
- 3-A7. *Stage measurements at gaging stations*, by T. J. Buchanan and W. P. Somers: USGS--TWRI Book 3, Chapter A7. 1968. 28 pages. \$1.40.
- 3-A8. *Discharge measurements at gaging stations*, by T. J. Buchanan and W. P. Somers: USGS--TWRI Book 3, Chapter A8. 1969. 65 pages. \$1.25.
- 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. \$1.20.
- 3-A12. *Fluorometric procedures for dye tracing*, by J. F. Wilson Jr.: USGS--TWRI Book 3, Chapter A12. 1968. 31 pages. \$0.35. Not currently available.
- 3-B1. *Aquifer-test design, observation, and data analysis*, by R. W. Stallman: USGS--TWRI Book 3, Chapter B1. 1971. 26 pages. \$0.70.
- 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. \$2.50.
- 3-C1. *Fluvial sediment concepts*, by H. P. Guy: USGS--TWRI Book 3, Chapter C1. 1970. 55 pages. \$0.65.
- 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. \$2.50.
- 3-C3. *Computation of fluvial-sediment discharge*, by George Porterfield: USGS--TWRI Book 3, Chapter C3. 1972. 66 pages. \$2.10.
- 4-A1. *Some statistical tools in hydrology*, by H. C. Riggs: USGS--TWRI Book 4 Chapter A1. 1968. 39 pages. \$1.60.
- 4-A2. *Frequency curves*, by H. C. Riggs: USGS--TWRI Book 4, Chapter A2. 1968. 15 pages. \$0.35.
- 4-B1. *Low-flow investigations*, by H. C. Riggs: USGS--TWRI Book 4, Chapter B1. 1972, 18 pages. \$0.65.
- 4-B2. *Storage analyses for water supply*, by H. C. Riggs and C. H. Hardison: USGS--TWRI Book 4, Chapter B2. 1973. 20 pages. \$0.75.
- 4-B3. *Regional analyses of streamflow characteristics*, by H. C. Riggs: USGS--TWRI Book 4, Chapter B3. 1973. 15 pages. \$0.65.
- 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. \$1.10.
- 5-A1. *Methods for collection and analysis of water samples for dissolved minerals and gases*, by Eugene Brown, M. W. Skougstad, and M. J. Fishman: USGS--TWRI Book 5, Chapter A1. 1970. 160 pages. \$2.40.
- 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. \$0.80.
- 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. \$0.90.
- 5-A4.* *Methods for collection and analysis of aquatic biological and microbiological samples*, edited by P.E. Greeson, T.A. Ehlke, G.A. Irwin, B.W. Lium, and K.V. Slack: USGS--TWRI Book 5, Chapter A4. 1977. 332 pages. \$20.00.
- 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. \$16.00.
- 5-C1. *Laboratory theory and methods for sediment analysis*, by H. P. Guy: USGS--TWRI Book 5, Chapter C1. 1969. 58 pages. \$2.10.
- 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. \$2.30.
- 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. \$0.70.
- 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. \$1.10.

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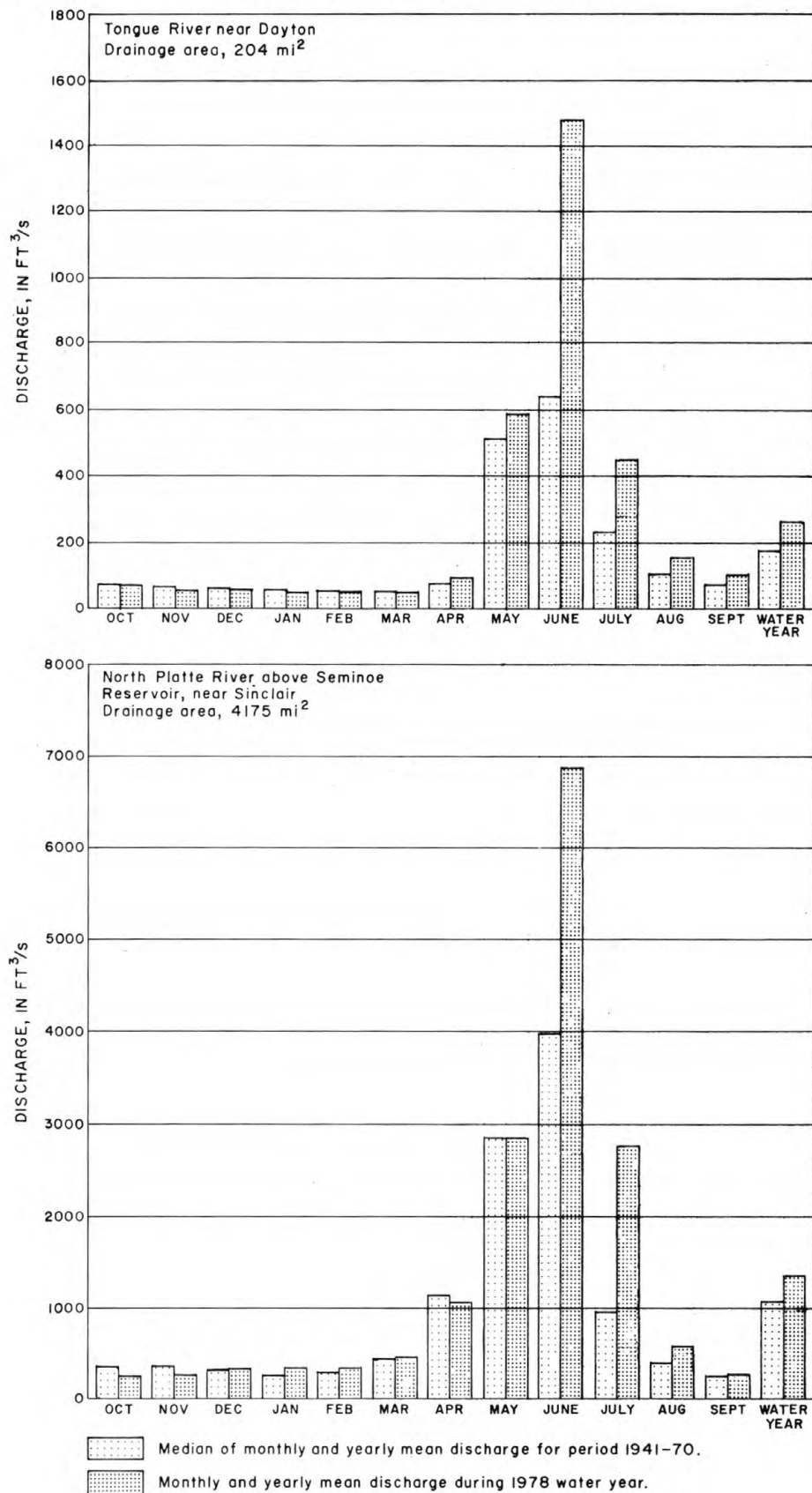


Figure 3.—Discharge during 1978 water year compared with median discharge for period 1941-70 for two representative gaging stations.

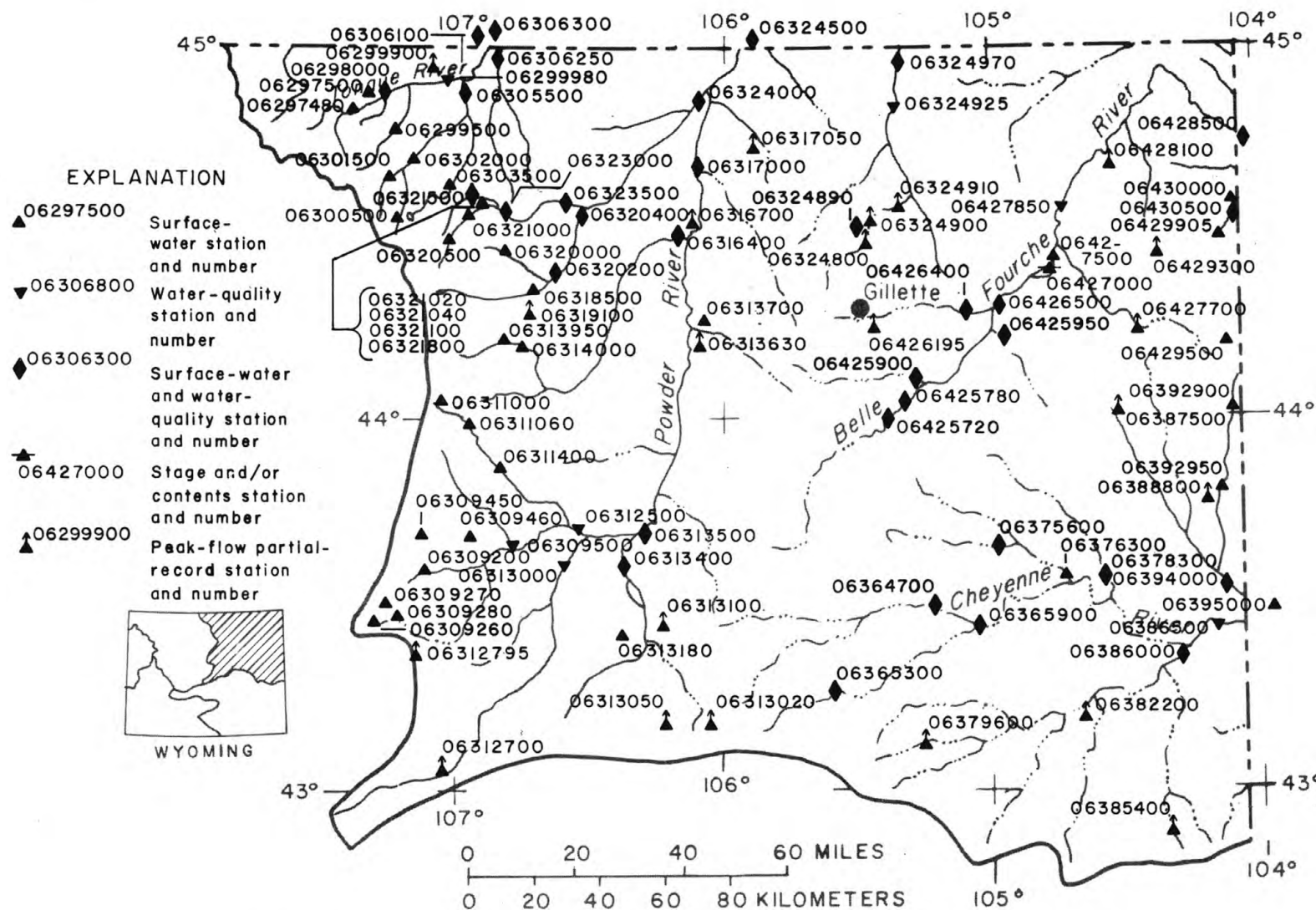
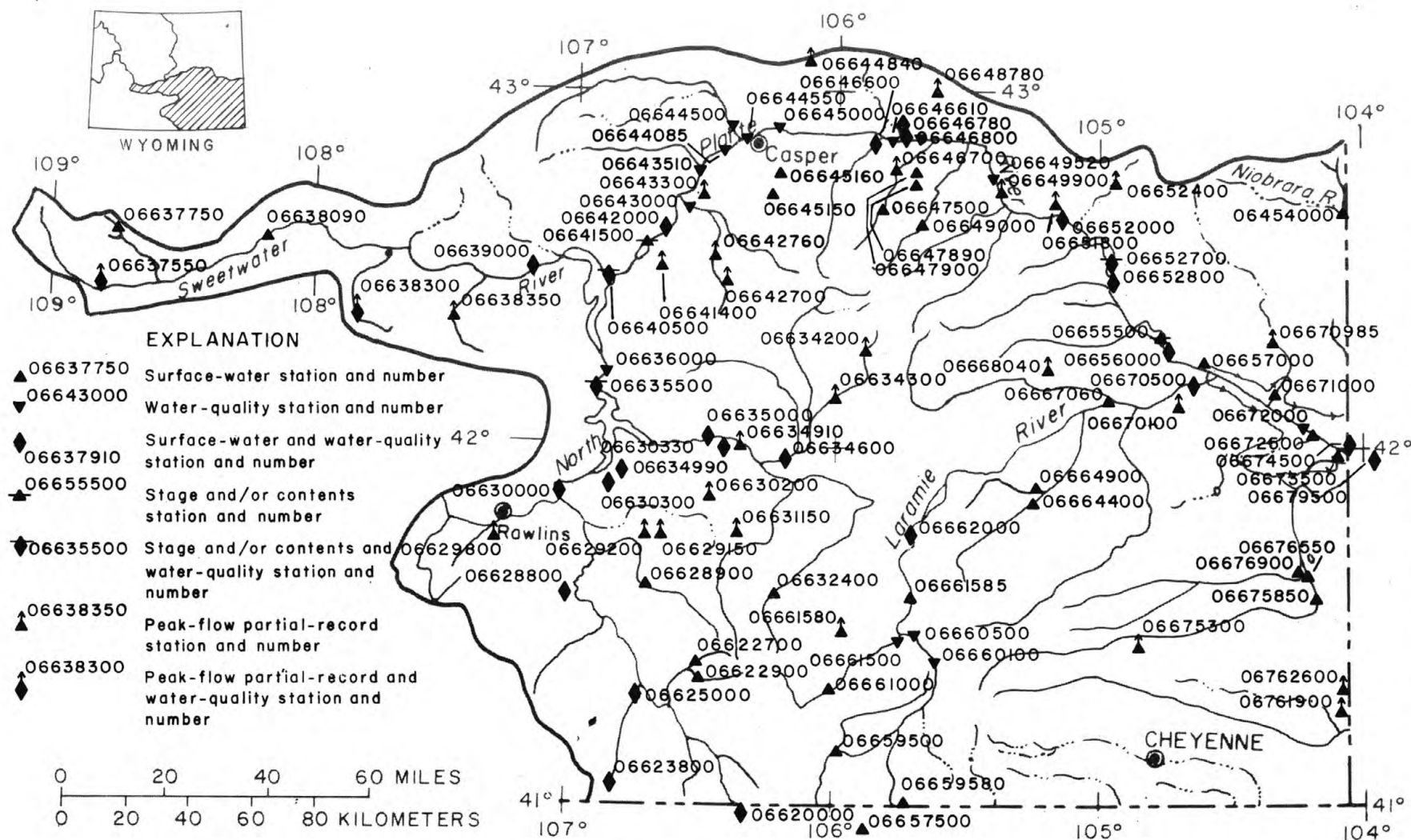


Figure 5.—Location of gaging stations and peak-flow partial-record stations in the Tongue River, Powder River, Belle Fourche River, and Cheyenne River basins.



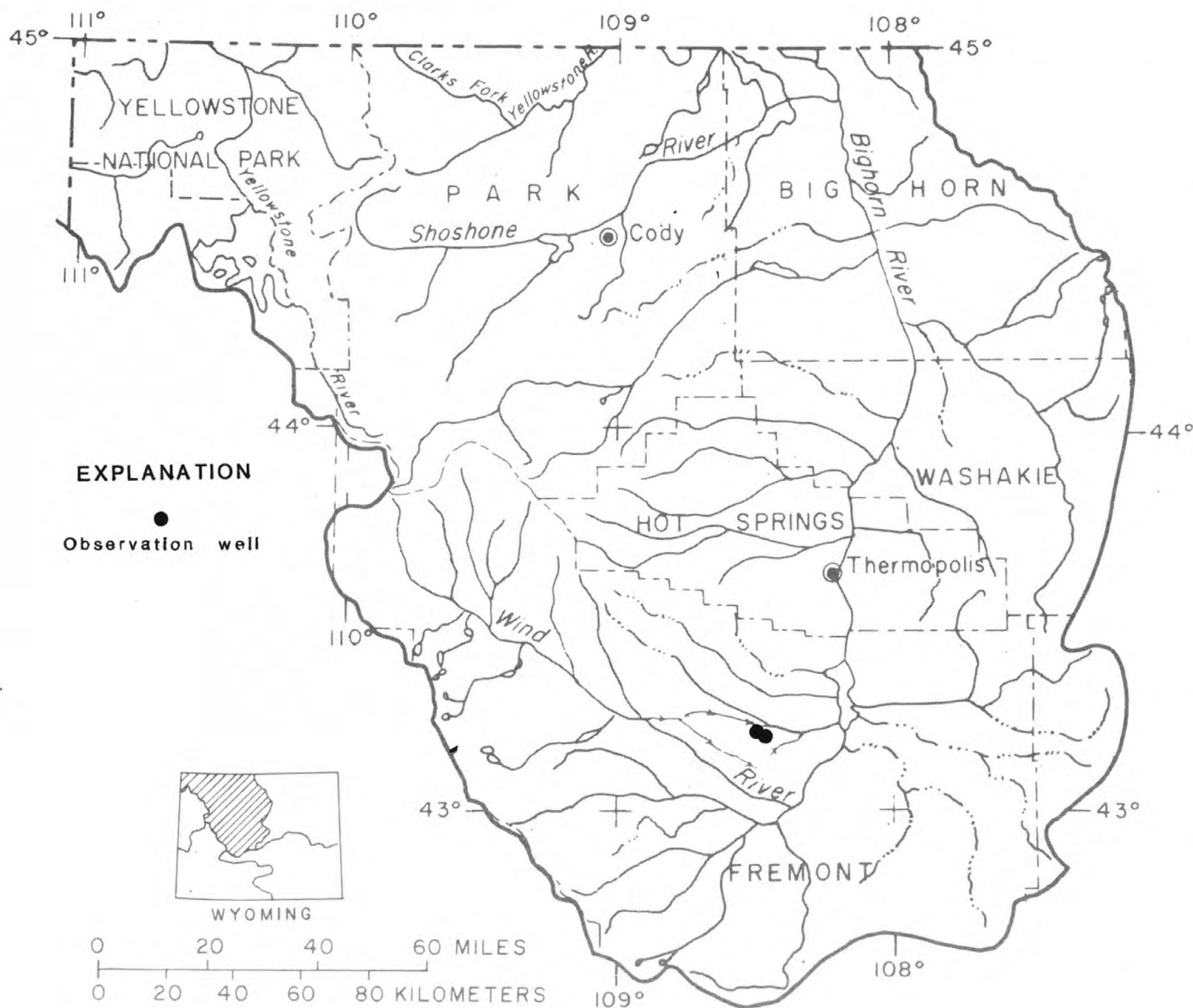


Figure 7.— Location of selected observation wells in the Yellowstone River, Clarks Fork Yellowstone River, and Bighorn River basins.

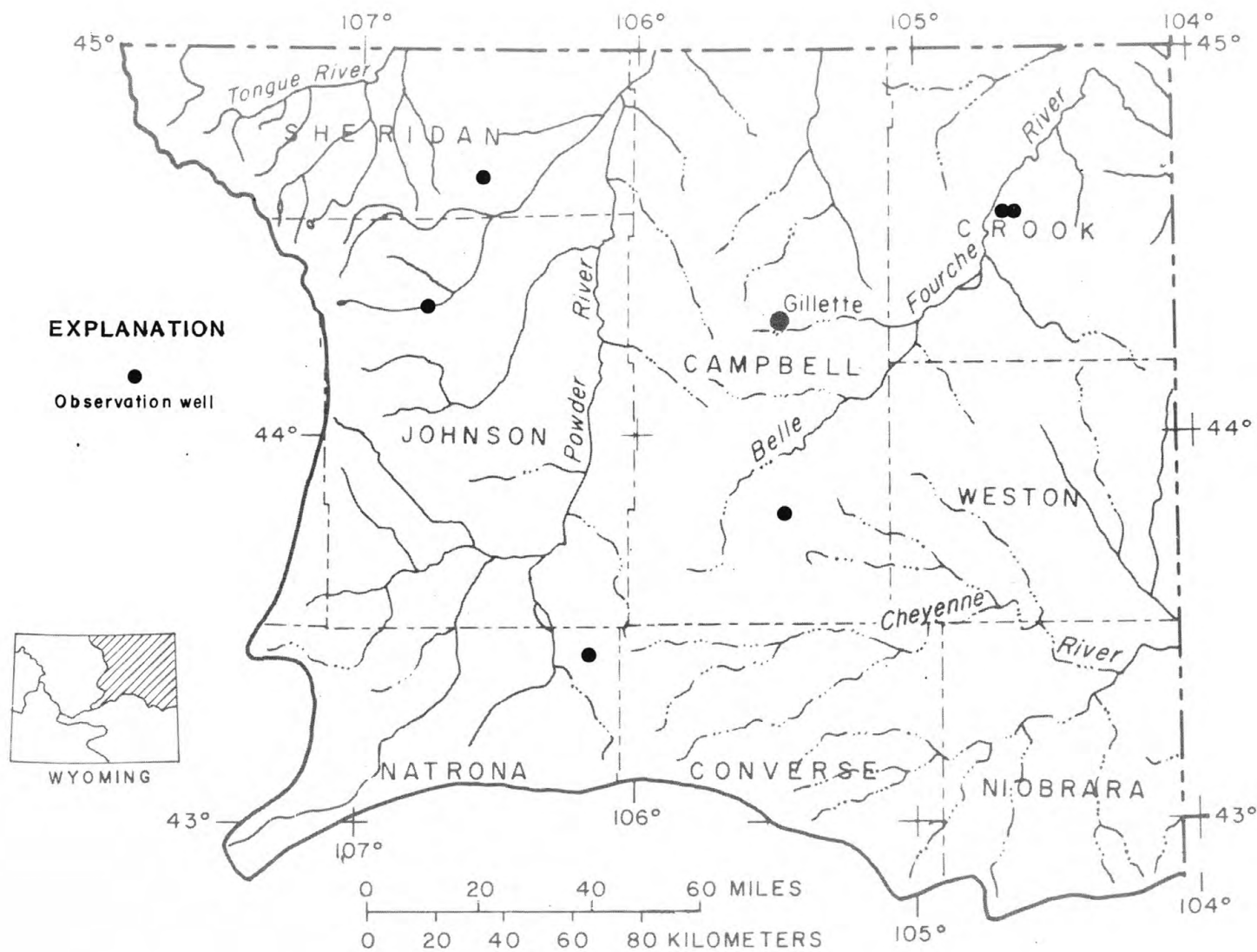


Figure 8.—Location of selected observation wells in the Tongue River, Powder River, Belle Fourche River, and Cheyenne River basins.

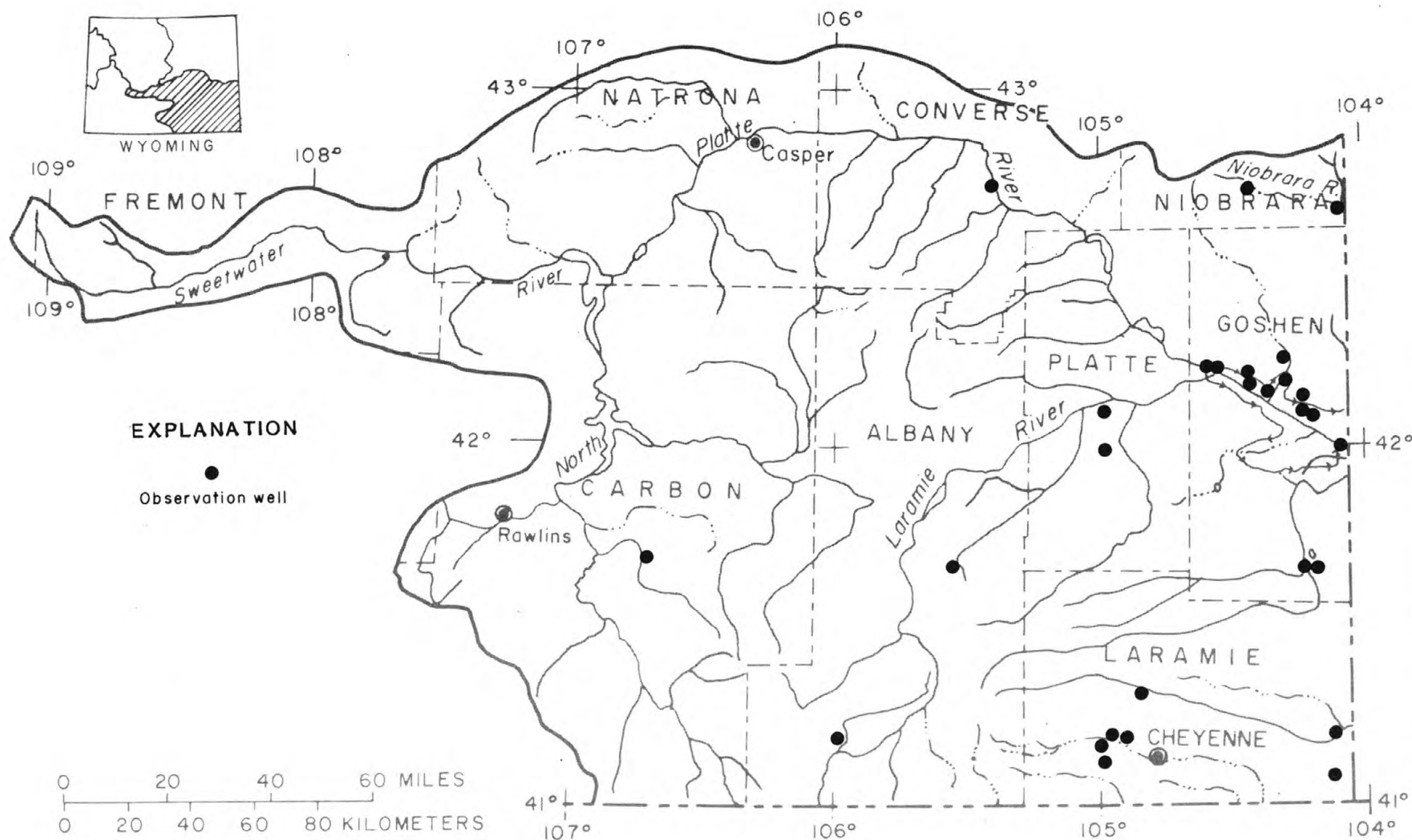


Figure 9.— Location of selected observation wells in the Niobrara River and Platte River basins.

APPENDIX

TABLE OF REVISED WATER-QUALITY PARAMETER CODES

NUMERIC LISTING

PARAM. CODE	NEW TERMINOLOGY -- FIRST LINE OLD TERMINOLOGY -- SECOND LINE
00623	NITROGEN, AMMONIA PLUS ORGANIC, DISSOLVED (MG/L AS N)
00623	NITROGEN, KJELDAHL, DISSOLVED (MG/L AS N)
00624	NITROGEN, AMMONIA PLUS ORGANIC, SUSPENDED TOTAL (MG/L AS N)
00624	NITROGEN, KJELDAHL, SUSPENDED (MG/L AS N)
00625	NITROGEN, AMMONIA PLUS ORGANIC, TOTAL (MG/L AS N)
00625	NITROGEN, KJELDAHL, TOTAL (MG/L AS N)
00626	NITROGEN, AMMONIA PLUS ORGANIC, TOTAL IN BOTTOM MATERIAL, DRY WT (MG/KG AS N)
00626	NITROGEN, KJELDAHL, TOTAL IN BOTTOM MATERIAL, DRY WT (MG/KG AS N)
00683	CARBON, ORGANIC, SUSPENDED TOTAL (MG/L AS C)
00683	CARBON, ORGANIC, SUSPENDED (MG/L AS C)
00688	CARBON, INORGANIC, SUSPENDED TOTAL (MG/L AS C)
00688	CARBON, INORGANIC, SUSPENDED (MG/L AS C)
00689	CARBON, ORGANIC, SUSPENDED TOTAL (MG/L AS C)
00689	CARBON, ORGANIC, SUSPENDED (MG/L AS C)
00694	CARBON, INORGANIC PLUS ORGANIC, SUSPENDED TOTAL (MG/L AS C)
00694	CARBON, INORGANIC PLUS ORGANIC, SUSPENDED (MG/L AS C)
00916	CALCIUM, TOTAL RECOVERABLE (MG/L AS CA)
00916	CALCIUM, TOTAL (MG/L AS CA)
00926	MAGNESIUM, SUSPENDED RECOVERABLE (MG/L AS MG)
00926	MAGNESIUM, SUSPENDED (MG/L AS MG)
00927	MAGNESIUM, TOTAL RECOVERABLE (MG/L AS MG)
00927	MAGNESIUM, TOTAL (MG/L AS MG)
01001	ARSENIC, SUSPENDED TOTAL (UG/L AS AS)
01001	ARSENIC, SUSPENDED (UG/L AS AS)
01006	BARIUM, SUSPENDED RECOVERABLE (UG/L AS BA)
01006	BARIUM, SUSPENDED (UG/L AS BA)
01007	BARIUM, TOTAL RECOVERABLE (UG/L AS BA)
01007	BARIUM, TOTAL (UG/L AS BA)
01008	BARIUM, RECOVERABLE FROM BOTTOM MATERIAL (UG/G AS BA)
01008	BARIUM, TOTAL IN BOTTOM MATERIAL (UG/G AS BA)
01011	BERYLLIUM, SUSPENDED RECOVERABLE (UG/L AS BE)
01011	BERYLLIUM, SUSPENDED (UG/L AS BE)
01012	BERYLLIUM, TOTAL RECOVERABLE (UG/L AS BE)
01012	BERYLLIUM, TOTAL (UG/L AS BE)
01013	BERYLLIUM, RECOVERABLE FROM BOTTOM MATERIAL (UG/G AS BE)
01013	BERYLLIUM, TOTAL IN BOTTOM MATERIAL (UG/G AS BE)
01016	BISMUTH, SUSPENDED TOTAL (UG/L AS BI)
01016	BISMUTH, SUSPENDED (UG/L AS BI)
01021	BORON, SUSPENDED RECOVERABLE (UG/L AS B)
01021	BORON, SUSPENDED (UG/L AS B)
01022	BORON, TOTAL RECOVERABLE (UG/L AS B)
01022	BORON, TOTAL (UG/L AS B)
01023	BORON, RECOVERABLE FROM BOTTOM MATERIAL (UG/G AS B)
01023	BORON, TOTAL IN BOTTOM MATERIAL (UG/G AS B)
01026	CADMIUM, SUSPENDED RECOVERABLE (UG/L AS CD)
01026	CADMIUM, SUSPENDED (UG/L AS CD)
01027	CADMIUM, TOTAL RECOVERABLE (UG/L AS CD)
01027	CADMIUM, TOTAL (UG/L AS CD)
01028	CADMIUM, RECOVERABLE FROM BOTTOM MATERIAL (UG/G AS CD)
01028	CADMIUM, TOTAL IN BOTTOM MATERIAL (UG/G AS CD)

NUMERIC LISTING--Continued

PARM. CODE	NEW TERMINOLOGY -- FIRST LINE OLD TERMINOLOGY -- SECOND LINE
01029	CHROMIUM, RECOVERABLE FROM BOTTOM MATERIAL (UG/G AS CR)
01029	CHROMIUM, TOTAL IN BOTTOM MATERIAL (UG/G AS CR)
01031	CHROMIUM, SUSPENDED RECOVERABLE (UG/L AS CR)
01031	CHROMIUM, SUSPENDED (UG/L AS CR)
01034	CHROMIUM, TOTAL RECOVERABLE (UG/L AS CR)
01034	CHROMIUM, TOTAL (UG/L AS CR)
01036	COBALT, SUSPENDED RECOVERABLE (UG/L AS CU)
01036	COBALT, SUSPENDED (UG/L AS CO)
01037	COBALT, TOTAL RECOVERABLE (UG/L AS CO)
01037	COBALT, TOTAL (UG/L AS CO)
01038	COBALT, RECOVERABLE FROM BOTTOM MATERIAL (UG/G AS CO)
01038	COBALT, TOTAL IN BOTTOM MATERIAL (UG/G AS CO)
01041	COPPER, SUSPENDED RECOVERABLE (UG/L AS CU)
01041	COPPER, SUSPENDED (UG/L AS CU)
01042	COPPER, TOTAL RECOVERABLE (UG/L AS CU)
01042	COPPER, TOTAL (UG/L AS CU)
01043	COPPER, RECOVERABLE FROM BOTTOM MATERIAL (UG/G AS CU)
01043	COPPER, TOTAL IN BOTTOM MATERIAL (UG/G AS CU)
01044	IRON, SUSPENDED RECOVERABLE (UG/L AS FE)
01044	IRON, SUSPENDED (UG/L AS FE)
01045	IRON, TOTAL RECOVERABLE (UG/L AS FE)
01045	IRON, TOTAL (UG/L AS FE)
01050	LEAD, SUSPENDED RECOVERABLE (UG/L AS PB)
01050	LEAD, SUSPENDED (UG/L AS PB)
01051	LEAD, TOTAL RECOVERABLE (UG/L AS PB)
01051	LEAD, TOTAL (UG/L AS PB)
01052	LEAD, RECOVERABLE FROM BOTTOM MATERIAL (UG/G AS PB)
01052	LEAD, TOTAL IN BOTTOM MATERIAL (UG/G AS PB)
01053	MANGANESE, RECOVERABLE FROM BOTTOM MATERIAL (UG/G AS MN)
01053	MANGANESE, TOTAL IN BOTTOM MATERIAL (UG/G AS MN)
01054	MANGANESE, SUSPENDED RECOVERABLE (UG/L AS MN)
01054	MANGANESE, SUSPENDED (UG/L AS MN)
01055	MANGANESE, TOTAL RECOVERABLE (UG/L AS MN)
01055	MANGANESE, TOTAL (UG/L AS MN)
01061	MOLYBDENUM, SUSPENDED RECOVERABLE (UG/L AS MO)
01061	MOLYBDENUM, SUSPENDED (UG/L AS MO)
01062	MOLYBDENUM, TOTAL RECOVERABLE (UG/L AS MO)
01062	MOLYBDENUM, TOTAL (UG/L AS MO)
01063	MOLYBDENUM, RECOVERABLE FROM BOTTOM MATERIAL (UG/G AS MO)
01063	MOLYBDENUM, TOTAL IN BOTTOM MATERIAL (UG/G AS MO)
01066	NICKEL, SUSPENDED RECOVERABLE (UG/L AS NI)
01066	NICKEL, SUSPENDED (UG/L AS NI)
01067	NICKEL, TOTAL RECOVERABLE (UG/L AS NI)
01067	NICKEL, TOTAL (UG/L AS NI)
01068	NICKEL, RECOVERABLE FROM BOTTOM MATERIAL (UG/G AS NI)
01068	NICKEL, TOTAL IN BOTTOM MATERIAL (UG/G AS NI)
01076	SILVER, SUSPENDED RECOVERABLE (UG/L AS AG)
01076	SILVER, SUSPENDED (UG/L AS AG)
01077	SILVER, TOTAL RECOVERABLE (UG/L AS AG)
01077	SILVER, TOTAL (UG/L AS AG)
01078	SILVER, RECOVERABLE FROM BOTTOM MATERIAL (UG/G AS AG)
01078	SILVER, TOTAL IN BOTTOM MATERIAL (UG/G AS AG)

TABLE OF REVISED WATER-QUALITY PARAMETER CODES--Continued

NUMERIC LISTING--Continued

PARM. CODE	NEW TERMINOLOGY -- FIRST LINE OLD TERMINOLOGY -- SECOND LINE
01081	STRONTIUM, SUSPENDED RECOVERABLE (UG/L AS SR)
01081	STRONTIUM, SUSPENDED (UG/L AS SR)
01082	STRONTIUM, TOTAL RECOVERABLE (UG/L AS SR)
01082	STRONTIUM, TOTAL (UG/L AS SR)
01083	STRONTIUM, RECOVERABLE FROM BOTTOM MATERIAL (UG/G AS SR)
01083	STRONTIUM, TOTAL IN BOTTOM MATERIAL (UG/G AS SR)
01086	VANADIUM, SUSPENDED TOTAL (UG/L AS V)
01086	VANADIUM, SUSPENDED (UG/L AS V)
01091	ZINC, SUSPENDED RECOVERABLE (UG/L AS ZN)
01091	ZINC, SUSPENDED (UG/L AS ZN)
01092	ZINC, TOTAL RECOVERABLE (UG/L AS ZN)
01092	ZINC, TOTAL (UG/L AS ZN)
01093	ZINC, RECOVERABLE FROM BOTTOM MATERIAL (UG/G AS ZN)
01093	ZINC, TOTAL IN BOTTOM MATERIAL (UG/G AS ZN)
01096	ANTIMONY, SUSPENDED TOTAL (UG/L AS SB)
01096	ANTIMONY, SUSPENDED (UG/L AS SB)
01101	TIN, SUSPENDED RECOVERABLE (UG/L AS SN)
01101	TIN, SUSPENDED (UG/L AS SN)
01102	TIN, TOTAL RECOVERABLE (UG/L AS SN)
01102	TIN, TOTAL (UG/L AS SN)
01105	ALUMINUM, TOTAL RECOVERABLE (UG/L AS AL)
01105	ALUMINUM, TOTAL (UG/L AS AL)
01107	ALUMINUM, SUSPENDED RECOVERABLE (UG/L AS AL)
01107	ALUMINUM, SUSPENDED (UG/L AS AL)
01108	ALUMINUM, RECOVERABLE FROM BOTTOM MATERIAL (UG/G AS AL)
01108	ALUMINUM, TOTAL IN BOTTOM MATERIAL (UG/G AS AL)
01116	CESIUM, SUSPENDED TOTAL (UG/L AS CS)
01116	CESIUM, SUSPENDED (UG/L AS CS)
01121	GALLIUM, SUSPENDED TOTAL (UG/L AS GA)
01121	GALLIUM, SUSPENDED (UG/L AS GA)
01126	GERMANIUM, SUSPENDED TOTAL (UG/L AS GE)
01126	GERMANIUM, SUSPENDED (UG/L AS GE)
01131	LITHIUM, SUSPENDED RECOVERABLE (UG/L AS LI)
01131	LITHIUM, SUSPENDED (UG/L AS LI)
01132	LITHIUM, TOTAL RECOVERABLE (UG/L AS LI)
01132	LITHIUM, TOTAL (UG/L AS LI)
01136	RUBIDIUM, SUSPENDED TOTAL (UG/L AS RB)
01136	RUBIDIUM, SUSPENDED (UG/L AS RB)
01146	SELENIUM, SUSPENDED TOTAL (UG/L AS SE)
01146	SELENIUM, SUSPENDED (UG/L AS SE)
01151	TITANIUM, SUSPENDED TOTAL (UG/L AS TI)
01151	TITANIUM, SUSPENDED (UG/L AS TI)
01161	ZIRCONIUM, SUSPENDED TOTAL (UG/L AS ZR)
01161	ZIRCONIUM, SUSPENDED (UG/L AS ZR)
01170	IRON, RECOVERABLE FROM BOTTOM MATERIAL (UG/G AS FE)
01170	IRON, TOTAL IN BOTTOM MATERIAL (UG/G AS FE)
01505	ALPHA, SUSPENDED TOTAL (PCI/L)
01505	ALPHA, SUSPENDED (PCI/L)
01506	ALPHA, SUSPENDED TOTAL, COUNTING ERROR (PCI/L)
01506	ALPHA, SUSPENDED, COUNTING ERROR (PCI/L)
01516	GROSS ALPHA RADIOACTIVITY, SUSPENDED TOTAL (PCI/L AS U NATURAL)
01516	GROSS ALPHA RADIOACTIVITY, SUSPENDED (PCI/L AS U NATURAL)

NUMERIC LISTING--Continued

PARM. CODE	NEW TERMINOLOGY -- FIRST LINE OLD TERMINOLOGY -- SECOND LINE
01517	GROSS ALPHA RADIOACTIVITY, SUSPENDED TOTAL (PCI/G AS U NATURAL)
01517	GROSS ALPHA RADIOACTIVITY, SUSPENDED (PCI/G AS U NATURAL)
01518	GROSS ALPHA RADIOACTIVITY, SUSPENDED TOTAL (UG/G AS U NATURAL)
01518	GROSS ALPHA RADIOACTIVITY, SUSPENDED (UG/G AS U NATURAL)
03505	BETA, SUSPENDED TOTAL (PCI/L)
03505	BETA, SUSPENDED (PCI/L)
03506	BETA, SUSPENDED TOTAL, COUNTING ERROR (PCI/L)
03506	BETA, SUSPENDED, COUNTING ERROR (PCI/L)
03516	GROSS BETA RADIOACTIVITY, SUSPENDED TOTAL (PCI/L AS CS-137)
03516	GROSS BETA RADIOACTIVITY, SUSPENDED (PCI/L AS CS-137)
03517	GROSS BETA RADIOACTIVITY, SUSPENDED TOTAL (PCI/G AS SR/YT-90)
03517	GROSS BETA RADIOACTIVITY, SUSPENDED (PCI/G AS SR/YT-90)
03518	GROSS BETA RADIOACTIVITY, SUSPENDED TOTAL (PCI/G AS CS-137)
03518	GROSS BETA RADIOACTIVITY, SUSPENDED (PCI/G AS CS-137)
07010	TRITIUM, SUSPENDED TOTAL (PCI/L)
07010	TRITIUM, SUSPENDED (PCI/L)
07011	TRITIUM, SUSPENDED TOTAL, COUNTING ERROR (PCI/L)
07011	TRITIUM, SUSPENDED, COUNTING ERROR (PCI/L)
07014	TRITIUM, SUSPENDED TOTAL, COUNTING ERROR (TRITIUM UNITS)
07014	TRITIUM, SUSPENDED, COUNTING ERROR (TRITIUM UNITS)
07016	TRITIUM, SUSPENDED TOTAL (TRITIUM UNITS)
07016	TRITIUM, SUSPENDED (TRITIUM UNITS)
07052	CALCIUM 45, SUSPENDED TOTAL (PCI/L)
07052	CALCIUM 45, SUSPENDED (PCI/L)
07053	CALCIUM 45, SUSPENDED TOTAL, COUNTING ERROR (PCI/L)
07053	CALCIUM 45, SUSPENDED, COUNTING ERROR (PCI/L)
07062	IRON 59, SUSPENDED TOTAL (PCI/L)
07062	IRON 59, SUSPENDED (PCI/L)
07063	IRON 59, SUSPENDED TOTAL, COUNTING ERROR (PCI/L)
07063	IRON 59, SUSPENDED, COUNTING ERROR (PCI/L)
07082	RHODAMINE WT, SUSPENDED TOTAL (UG/L)
07082	RHODAMINE WT, SUSPENDED (UG/L)
07102	SELENIUM 75, SUSPENDED TOTAL (PCI/L)
07102	SELENIUM 75, SUSPENDED (PCI/L)
07103	SELENIUM 75, SUSPENDED TOTAL, COUNTING ERROR (PCI/L)
07103	SELENIUM 75, SUSPENDED, COUNTING ERROR (PCI/L)
07122	SILVER 110, SUSPENDED TOTAL (PCI/L)
07122	SILVER 110, SUSPENDED (PCI/L)
07123	SILVER 110, SUSPENDED TOTAL, COUNTING ERROR (PCI/L)
07123	SILVER 110, SUSPENDED, COUNTING ERROR (PCI/L)
07142	SULFUR 35, SUSPENDED TOTAL (PCI/L)
07142	SULFUR 35, SUSPENDED (PCI/L)
07143	SULFUR 35, SUSPENDED TOTAL, COUNTING ERROR (PCI/L)
07143	SULFUR 35, SUSPENDED, COUNTING ERROR (PCI/L)
09505	RADIUM 226, SUSPENDED TOTAL (PCI/L)
09505	RADIUM 226, SUSPENDED (PCI/L)
13505	STRONTIUM 90, SUSPENDED TOTAL (PCI/L)
13505	STRONTIUM 90, SUSPENDED (PCI/L)

TABLE OF REVISED WATER-QUALITY PARAMETER CODES--Continued

NUMERIC LISTING--Continued

PARM. CODE	NEW TERMINOLOGY -- FIRST LINE OLD TERMINOLOGY -- SECOND LINE
13506	STRONTIUM 90, SUSPENDED TOTAL, COUNTING ERROR (PCI/L)
13506	STRONTIUM 90, SUSPENDED, COUNTING ERROR (PCI/L)
22705	URANIUM, NATURAL, SUSPENDED TOTAL (UG/L AS U NATURAL)
22705	URANIUM, NATURAL, SUSPENDED (UG/L AS U NATURAL)
28404	CESIUM 137, SUSPENDED TOTAL (PCI/L)
28404	CESIUM 137, SUSPENDED (PCI/L)
28405	CESIUM 137, SUSPENDED TOTAL, COUNTING ERROR (PCI/L)
28405	CESIUM 137, SUSPENDED, COUNTING ERROR (PCI/L)
28412	CESIUM 134, SUSPENDED TOTAL (PCI/L)
28412	CESIUM 134, SUSPENDED (PCI/L)
28413	CESIUM 134, SUSPENDED TOTAL, COUNTING ERROR (PCI/L)
28413	CESIUM 134, SUSPENDED, COUNTING ERROR (PCI/L)
29633	SCANDIUM 46, SUSPENDED TOTAL (PCI/L)
29633	SCANDIUM 46, SUSPENDED (PCI/L)
29634	SCANDIUM 46, SUSPENDED TOTAL, COUNTING ERROR (PCI/L)
29634	SCANDIUM 46, SUSPENDED, COUNTING ERROR (PCI/L)
39332	ALDRIN, SUSPENDED TOTAL (UG/L)
39332	ALDRIN, SUSPENDED (UG/L)
39342	LINDANE, SUSPENDED TOTAL (UG/L)
39342	LINDANE, SUSPENDED (UG/L)
39353	CHLORDANE, SUSPENDED TOTAL (UG/L)
39353	CHLORDANE, SUSPENDED (UG/L)
39362	DDD, SUSPENDED TOTAL (UG/L)
39362	DDD, SUSPENDED (UG/L)
39367	DDE, SUSPENDED TOTAL (UG/L)
39367	DDE, SUSPENDED (UG/L)
39372	DDT, SUSPENDED TOTAL (UG/L)
39372	DDT, SUSPENDED (UG/L)
39382	DIELDRIN, SUSPENDED TOTAL (UG/L)
39382	DIELDRIN, SUSPENDED (UG/L)
39392	ENDRIN, SUSPENDED TOTAL (UG/L)
39392	ENDRIN, SUSPENDED (UG/L)
39402	TOXAPHENE, SUSPENDED TOTAL (UG/L)
39402	TOXAPHENE, SUSPENDED (UG/L)
39412	HEPTACHLOR, SUSPENDED TOTAL (UG/L)
39412	HEPTACHLOR, SUSPENDED (UG/L)
39422	HEPTACHLOR EPOXIDE, SUSPENDED TOTAL (UG/L)
39422	HEPTACHLOR EPOXIDE, SUSPENDED (UG/L)
39432	ISODRIN, SUSPENDED TOTAL (UG/L)
39432	ISODRIN, SUSPENDED (UG/L)
39502	AROCLOR, SUSPENDED TOTAL, 1248 PCB SERIES (UG/L)
39502	AROCLOR, SUSPENDED, 1248 PCB SERIES (UG/L)
39506	AROCLOR, SUSPENDED TOTAL, 1254 PCB SERIES (UG/L)
39506	AROCLOR, SUSPENDED, 1254 PCB SERIES (UG/L)
39510	AROCLOR, SUSPENDED TOTAL, 1260 PCB SERIES (UG/L)
39510	AROCLOR, SUSPENDED, 1260 PCB SERIES (UG/L)
39518	PCB, SUSPENDED TOTAL (UG/L)
39518	PCB, SUSPENDED (UG/L)
39533	MALATHION, SUSPENDED TOTAL (UG/L)
39533	MALATHION, SUSPENDED (UG/L)
39543	PARATHION, SUSPENDED TOTAL (UG/L)
39543	PARATHION, SUSPENDED (UG/L)
39573	DIAZINON, SUSPENDED TOTAL (UG/L)
39573	DIAZINON, SUSPENDED (UG/L)

NUMERIC LISTING--Continued

PARM. CODE	NEW TERMINOLOGY -- FIRST LINE OLD TERMINOLOGY -- SECOND LINE
39603	METHYL PARATHION, SUSPENDED TOTAL (UG/L)
39603	METHYL PARATHION, SUSPENDED (UG/L)
39733	2,4-D, SUSPENDED TOTAL (UG/L)
39733	2,4-D, SUSPENDED (UG/L)
39743	2,4,5-T, SUSPENDED TOTAL (UG/L)
39743	2,4,5-T, SUSPENDED (UG/L)
39757	MIREX, SUSPENDED TOTAL (UG/L)
39757	MIREX, SUSPENDED (UG/L)
39763	SILVEX, SUSPENDED TOTAL (UG/L)
39763	SILVEX, SUSPENDED (UG/L)
70299	SOLIDS, RESIDUE AT 110 DEG. C, SUSPENDED TOTAL (MG/L)
70299	SOLIDS, RESIDUE AT 110 DEG. C, SUSPENDED (MG/L)
71895	MERCURY, SUSPENDED RECOVERABLE (UG/L AS HG)
71895	MERCURY, SUSPENDED (UG/L AS HG)
71900	MERCURY, TOTAL RECOVERABLE (UG/L AS HG)
71900	MERCURY, TOTAL (UG/L AS HG)
71921	MERCURY, RECOVERABLE FROM BOTTOM MATERIAL (UG/G AS HG)
71921	MERCURY, TOTAL IN BOTTOM MATERIAL (UG/G AS HG)
80040	GROSS ALPHA RADIOACTIVITY, SUSPENDED TOTAL (UG/L AS U NATURAL)
80040	GROSS ALPHA RADIOACTIVITY, SUSPENDED (UG/L AS U NATURAL)
80060	GROSS BETA RADIOACTIVITY, SUSPENDED TOTAL (PCI/L AS SR/YT-90)
80060	GROSS BETA RADIOACTIVITY, SUSPENDED (PCI/L AS SR/YT-90)

ALPHABETIC LISTING

PARM. CODE	NEW TERMINOLOGY -- FIRST LINE OLD TERMINOLOGY -- SECOND LINE
39332	ALDRIN, SUSPENDED TOTAL (UG/L)
39332	ALDRIN, SUSPENDED (UG/L)
01505	ALPHA, SUSPENDED TOTAL (PCI/L)
01505	ALPHA, SUSPENDED (PCI/L)
01506	ALPHA, SUSPENDED TOTAL, COUNTING ERROR (PCI/L)
01506	ALPHA, SUSPENDED, COUNTING ERROR (PCI/L)
01105	ALUMINUM, TOTAL RECOVERABLE (UG/L AS AL)
01105	ALUMINUM, TOTAL (UG/L AS AL)
01107	ALUMINUM, SUSPENDED RECOVERABLE (UG/L AS AL)
01107	ALUMINUM, SUSPENDED (UG/L AS AL)
01108	ALUMINUM, RECOVERABLE FROM BOTTOM MATERIAL (UG/G AS AL)
01108	ALUMINUM, TOTAL IN BOTTOM MATERIAL (UG/G AS AL)
01096	ANTIMONY, SUSPENDED TOTAL (UG/L AS SB)
01096	ANTIMONY, SUSPENDED (UG/L AS SB)
39502	AROCLOR, SUSPENDED TOTAL, 1248 PCB SERIES (UG/L)
39502	AROCLOR, SUSPENDED, 1248 PCB SERIES (UG/L)
39506	AROCLOR, SUSPENDED TOTAL, 1254 PCB SERIES (UG/L)
39506	AROCLOR, SUSPENDED, 1254 PCB SERIES (UG/L)
39510	AROCLOR, SUSPENDED TOTAL, 1260 PCB SERIES (UG/L)
39510	AROCLOR, SUSPENDED, 1260 PCB SERIES (UG/L)
01001	ARSENIC, SUSPENDED TOTAL (UG/L AS AS)
01001	ARSENIC, SUSPENDED (UG/L AS AS)
01006	BARIUM, SUSPENDED RECOVERABLE (UG/L AS BA)
01006	BARIUM, SUSPENDED (UG/L AS BA)
01007	BARIUM, TOTAL RECOVERABLE (UG/L AS BA)
01007	BARIUM, TOTAL (UG/L AS BA)
01008	BARIUM, RECOVERABLE FROM BOTTOM MATERIAL (UG/G AS BA)
01008	BARIUM, TOTAL IN BOTTOM MATERIAL (UG/G AS BA)
01011	BERYLLIUM, SUSPENDED RECOVERABLE (UG/L AS BE)
01011	BERYLLIUM, SUSPENDED (UG/L AS BE)
01012	BERYLLIUM, TOTAL RECOVERABLE (UG/L AS BE)
01012	BERYLLIUM, TOTAL (UG/L AS BE)
01013	BERYLLIUM, RECOVERABLE FROM BOTTOM MATERIAL (UG/G AS BE)
01013	BERYLLIUM, TOTAL IN BOTTOM MATERIAL (UG/G AS BE)
03505	BETA, SUSPENDED TOTAL (PCI/L)
03505	BETA, SUSPENDED (PCI/L)
03506	BETA, SUSPENDED TOTAL, COUNTING ERROR (PCI/L)
03506	BETA, SUSPENDED, COUNTING ERROR (PCI/L)
01016	BISMUTH, SUSPENDED TOTAL (UG/L AS BI)
01016	BISMUTH, SUSPENDED (UG/L AS BI)
01021	BORON, SUSPENDED RECOVERABLE (UG/L AS B)
01021	BORON, SUSPENDED (UG/L AS B)
01022	BORON, TOTAL RECOVERABLE (UG/L AS B)
01022	BORON, TOTAL (UG/L AS B)
01023	BORON, RECOVERABLE FROM BOTTOM MATERIAL (UG/G AS B)
01023	BORON, TOTAL IN BOTTOM MATERIAL (UG/G AS B)
01026	CADMIUM, SUSPENDED RECOVERABLE (UG/L AS CD)
01026	CADMIUM, SUSPENDED (UG/L AS CD)
01027	CADMIUM, TOTAL RECOVERABLE (UG/L AS CD)
01027	CADMIUM, TOTAL (UG/L AS CD)
01028	CADMIUM, RECOVERABLE FROM BOTTOM MATERIAL (UG/G AS CD)
01028	CADMIUM, TOTAL IN BOTTOM MATERIAL (UG/G AS CD)

ALPHABETIC LISTING--Continued

PARM. CODE	NEW TERMINOLOGY -- FIRST LINE OLD TERMINOLOGY -- SECOND LINE
00916	CALCIUM, TOTAL RECOVERABLE (MG/L AS CA)
00916	CALCIUM, TOTAL (MG/L AS CA)
07052	CALCIUM 45, SUSPENDED TOTAL (PCI/L)
07052	CALCIUM 45, SUSPENDED (PCI/L)
07053	CALCIUM 45, SUSPENDED TOTAL, COUNTING ERROR (PCI/L)
07053	CALCIUM 45, SUSPENDED, COUNTING ERROR (PCI/L)
00683	CARBON, ORGANIC, SUSPENDED TOTAL (MG/L AS C)
00683	CARBON, ORGANIC, SUSPENDED (MG/L AS C)
00688	CARBON, INORGANIC, SUSPENDED TOTAL (MG/L AS C)
00688	CARBON, INORGANIC, SUSPENDED (MG/L AS C)
00689	CARBON, ORGANIC, SUSPENDED TOTAL (MG/L AS C)
00689	CARBON, ORGANIC, SUSPENDED (MG/L AS C)
00694	CARBON, INORGANIC PLUS ORGANIC, SUSPENDED TOTAL (MG/L AS C)
00694	CARBON, INORGANIC PLUS ORGANIC, SUSPENDED (MG/L AS C)
01116	CESIUM, SUSPENDED TOTAL (UG/L AS CS)
01116	CESIUM, SUSPENDED (UG/L AS CS)
28404	CESIUM 137, SUSPENDED TOTAL (PCI/L)
28404	CESIUM 137, SUSPENDED (PCI/L)
28405	CESIUM 137, SUSPENDED TOTAL, COUNTING ERROR (PCI/L)
28405	CESIUM 137, SUSPENDED, COUNTING ERROR (PCI/L)
28412	CESIUM 134, SUSPENDED TOTAL (PCI/L)
28412	CESIUM 134, SUSPENDED (PCI/L)
28413	CESIUM 134, SUSPENDED TOTAL, COUNTING ERROR (PCI/L)
28413	CESIUM 134, SUSPENDED, COUNTING ERROR (PCI/L)
39353	CHLORDANE, SUSPENDED TOTAL (UG/L)
39353	CHLORDANE, SUSPENDED (UG/L)
01029	CHROMIUM, RECOVERABLE FROM BOTTOM MATERIAL (UG/G AS CR)
01029	CHROMIUM, TOTAL IN BOTTOM MATERIAL (UG/G AS CR)
01031	CHROMIUM, SUSPENDED RECOVERABLE (UG/L AS CR)
01031	CHROMIUM, SUSPENDED (UG/L AS CR)
01034	CHROMIUM, TOTAL RECOVERABLE (UG/L AS CR)
01034	CHROMIUM, TOTAL (UG/L AS CR)
01036	COBALT, SUSPENDED RECOVERABLE (UG/L AS CO)
01036	COBALT, SUSPENDED (UG/L AS CO)
01037	COBALT, TOTAL RECOVERABLE (UG/L AS CO)
01037	COBALT, TOTAL (UG/L AS CO)
01038	COBALT, RECOVERABLE FROM BOTTOM MATERIAL (UG/G AS CO)
01038	COBALT, TOTAL IN BOTTOM MATERIAL (UG/G AS CO)
01041	COPPER, SUSPENDED RECOVERABLE (UG/L AS CU)
01041	COPPER, SUSPENDED (UG/L AS CU)
01042	COPPER, TOTAL RECOVERABLE (UG/L AS CU)
01042	COPPER, TOTAL (UG/L AS CU)
01043	COPPER, RECOVERABLE FROM BOTTOM MATERIAL (UG/G AS CU)
01043	COPPER, TOTAL IN BOTTOM MATERIAL (UG/G AS CU)
39362	DDD, SUSPENDED TOTAL (UG/L)
39362	DDD, SUSPENDED (UG/L)
39367	DDE, SUSPENDED TOTAL (UG/L)
39367	DDE, SUSPENDED (UG/L)
39372	DDT, SUSPENDED TOTAL (UG/L)
39372	DDT, SUSPENDED (UG/L)
39573	DIAZINON, SUSPENDED TOTAL (UG/L)
39573	DIAZINON, SUSPENDED (UG/L)

TABLE OF REVISED WATER-QUALITY PARAMETER CODES--Continued

ALPHABETIC LISTING--Continued

PARM. CODE	NEW TERMINOLOGY -- FIRST LINE OLD TERMINOLOGY -- SECOND LINE
39382	DIELDRIN, SUSPENDED TOTAL (UG/L)
39382	DIELDRIN, SUSPENDED (UG/L)
39392	ENDRIN, SUSPENDED TOTAL (UG/L)
39392	ENDRIN, SUSPENDED (UG/L)
01121	GALLIUM, SUSPENDED TOTAL (UG/L AS GA)
01121	GALLIUM, SUSPENDED (UG/L AS GA)
01126	GERMANIUM, SUSPENDED TOTAL (UG/L AS GE)
01126	GERMANIUM, SUSPENDED (UG/L AS GE)
01516	GROSS ALPHA RADIOACTIVITY, SUSPENDED TOTAL (PCI/L AS U NATURAL)
01516	GROSS ALPHA RADIOACTIVITY, SUSPENDED (PCI/L AS U NATURAL)
01517	GROSS ALPHA RADIOACTIVITY, SUSPENDED TOTAL (PCI/G AS U NATURAL)
01517	GROSS ALPHA RADIOACTIVITY, SUSPENDED (PCI/G AS U NATURAL)
01518	GROSS ALPHA RADIOACTIVITY, SUSPENDED TOTAL (UG/G AS U NATURAL)
01518	GROSS ALPHA RADIOACTIVITY, SUSPENDED (UG/G AS U NATURAL)
80040	GROSS ALPHA RADIOACTIVITY, SUSPENDED TOTAL (UG/L AS U NATURAL)
80040	GROSS ALPHA RADIOACTIVITY, SUSPENDED (UG/L AS U NATURAL)
80060	GROSS BETA RADIOACTIVITY, SUSPENDED TOTAL (PCI/L AS SR/YT-90)
80060	GROSS BETA RADIOACTIVITY, SUSPENDED (PCI/L AS SR/YT-90)
03516	GROSS BETA RADIOACTIVITY, SUSPENDED TOTAL (PCI/L AS CS-137)
03516	GROSS BETA RADIOACTIVITY, SUSPENDED (PCI/L AS CS-137)
03517	GROSS BETA RADIOACTIVITY, SUSPENDED TOTAL (PCI/G AS SR/YT-90)
03517	GROSS BETA RADIOACTIVITY, SUSPENDED (PCI/G AS SR/YT-90)
03518	GROSS BETA RADIOACTIVITY, SUSPENDED TOTAL (PCI/G AS CS-137)
03518	GROSS BETA RADIOACTIVITY, SUSPENDED (PCI/G AS CS-137)
39412	HEPTACHLOR, SUSPENDED TOTAL (UG/L)
39412	HEPTACHLOR, SUSPENDED (UG/L)
39422	HEPTACHLOR EPOXIDE, SUSPENDED TOTAL (UG/L)
39422	HEPTACHLOR EPOXIDE, SUSPENDED (UG/L)
01044	IRON, SUSPENDED RECOVERABLE (UG/L AS FE)
01044	IRON, SUSPENDED (UG/L AS FE)
01045	IRON, TOTAL RECOVERABLE (UG/L AS FE)
01045	IRON, TOTAL (UG/L AS FE)
01170	IRON, RECOVERABLE FROM BOTTOM MATERIAL (UG/G AS FE)
01170	IRON, TOTAL IN BOTTOM MATERIAL (UG/G AS FE)
07062	IRON 59, SUSPENDED TOTAL (PCI/L)
07062	IRON 59, SUSPENDED (PCI/L)
07063	IRON 59, SUSPENDED TOTAL, COUNTING ERROR (PCI/L)
07063	IRON 59, SUSPENDED, COUNTING ERROR (PCI/L)
39432	ISODRIN, SUSPENDED TOTAL (UG/L)
39432	ISODRIN, SUSPENDED (UG/L)
01050	LEAD, SUSPENDED RECOVERABLE (UG/L AS PB)
01050	LEAD, SUSPENDED (UG/L AS PB)
01051	LEAD, TOTAL RECOVERABLE (UG/L AS PB)
01051	LEAD, TOTAL (UG/L AS PB)

ALPHABETIC LISTING--Continued

PARM. CODE	NEW TERMINOLOGY -- FIRST LINE OLD TERMINOLOGY -- SECOND LINE
01052	LEAD, RECOVERABLE FROM BOTTOM MATERIAL (UG/G AS PB)
01052	LEAD, TOTAL IN BOTTOM MATERIAL (UG/G AS PB)
39342	LINDANE, SUSPENDED TOTAL (UG/L)
39342	LINDANE, SUSPENDED (UG/L)
01131	LITHIUM, SUSPENDED RECOVERABLE (UG/L AS LI)
01131	LITHIUM, SUSPENDED (UG/L AS LI)
01132	LITHIUM, TOTAL RECOVERABLE (UG/L AS LI)
01132	LITHIUM, TOTAL (UG/L AS LI)
00926	MAGNESIUM, SUSPENDED RECOVERABLE (MG/L AS MG)
00926	MAGNESIUM, SUSPENDED (MG/L AS MG)
00927	MAGNESIUM, TOTAL RECOVERABLE (MG/L AS MG)
00927	MAGNESIUM, TOTAL (MG/L AS MG)
39533	MALATHION, SUSPENDED TOTAL (UG/L)
39533	MALATHION, SUSPENDED (UG/L)
01053	MANGANESE, RECOVERABLE FROM BOTTOM MATERIAL (UG/G AS MN)
01053	MANGANESE, TOTAL IN BOTTOM MATERIAL (UG/G AS MN)
01054	MANGANESE, SUSPENDED RECOVERABLE (UG/L AS MN)
01054	MANGANESE, SUSPENDED (UG/L AS MN)
01055	MANGANESE, TOTAL RECOVERABLE (UG/L AS MN)
01055	MANGANESE, TOTAL (UG/L AS MN)
71895	MERCURY, SUSPENDED RECOVERABLE (UG/L AS HG)
71895	MERCURY, SUSPENDED (UG/L AS HG)
71900	MERCURY, TOTAL RECOVERABLE (UG/L AS HG)
71900	MERCURY, TOTAL (UG/L AS HG)
71921	MERCURY, RECOVERABLE FROM BOTTOM MATERIAL (UG/G AS HG)
71921	MERCURY, TOTAL IN BOTTOM MATERIAL (UG/G AS HG)
39603	METHYL PARATHION, SUSPENDED TOTAL (UG/L)
39603	METHYL PARATHION, SUSPENDED (UG/L)
39757	MIREX, SUSPENDED TOTAL (UG/L)
39757	MIREX, SUSPENDED (UG/L)
01061	MOLYBDENUM, SUSPENDED RECOVERABLE (UG/L AS MO)
01061	MOLYBDENUM, SUSPENDED (UG/L AS MO)
01062	MOLYBDENUM, TOTAL RECOVERABLE (UG/L AS MO)
01062	MOLYBDENUM, TOTAL (UG/L AS MO)
01063	MOLYBDENUM, RECOVERABLE FROM BOTTOM MATERIAL (UG/G AS MO)
01063	MOLYBDENUM, TOTAL IN BOTTOM MATERIAL (UG/G AS MO)
01066	NICKEL, SUSPENDED RECOVERABLE (UG/L AS NI)
01066	NICKEL, SUSPENDED (UG/L AS NI)
01067	NICKEL, TOTAL RECOVERABLE (UG/L AS NI)
01067	NICKEL, TOTAL (UG/L AS NI)
01068	NICKEL, RECOVERABLE FROM BOTTOM MATERIAL (UG/G AS NI)
01068	NICKEL, TOTAL IN BOTTOM MATERIAL (UG/G AS NI)
00623	NITROGEN, AMMONIA PLUS ORGANIC, DISSOLVED (MG/L AS N)
00623	NITROGEN, KJELDAHL, DISSOLVED (MG/L AS N)
00624	NITROGEN, AMMONIA PLUS ORGANIC, SUSPENDED TOTAL (MG/L AS N)
00624	NITROGEN, KJELDAHL, SUSPENDED (MG/L AS N)
00625	NITROGEN, AMMONIA PLUS ORGANIC, TOTAL (MG/L AS N)
00625	NITROGEN, KJELDAHL, TOTAL (MG/L AS N)
00626	NITROGEN, AMMONIA PLUS ORGANIC, TOTAL IN BOTTOM MATERIAL, DRY WT (MG/KG AS N)
00626	NITROGEN, KJELDAHL, TOTAL IN BOTTOM MATERIAL, DRY WT (MG/KG AS N)
39543	PARATHION, SUSPENDED TOTAL (UG/L)
39543	PARATHION, SUSPENDED (UG/L)
39518	PCB, SUSPENDED TOTAL (UG/L)
39518	PCB, SUSPENDED (UG/L)

TABLE OF REVISED WATER-QUALITY PARAMETER CODES--Continued

ALPHABETIC LISTING--Continued

PARAM. CODE	NEW TERMINOLOGY -- FIRST LINE OLD TERMINOLOGY -- SECOND LINE
09505	RADIUM 226, SUSPENDED TOTAL (PCI/L)
09505	RADIUM 226, SUSPENDED (PCI/L)
07082	RHODAMINE WT, SUSPENDED TOTAL (UG/L)
07082	RHODAMINE WT, SUSPENDED (UG/L)
01136	RUBIDIUM, SUSPENDED TOTAL (UG/L AS RB)
01136	RUBIDIUM, SUSPENDED (UG/L AS RB)
29633	SCANDIUM 46, SUSPENDED TOTAL (PCI/L)
29633	SCANDIUM 46, SUSPENDED (PCI/L)
29634	SCANDIUM 46, SUSPENDED TOTAL, COUNTING ERROR (PCI/L)
29634	SCANDIUM 46, SUSPENDED, COUNTING ERROR (PCI/L)
01146	SELENIUM, SUSPENDED TOTAL (UG/L AS SE)
01146	SELENIUM, SUSPENDED (UG/L AS SE)
07102	SELENIUM 75, SUSPENDED TOTAL (PCI/L)
07102	SELENIUM 75, SUSPENDED (PCI/L)
07103	SELENIUM 75, SUSPENDED TOTAL, COUNTING ERROR (PCI/L)
07103	SELENIUM 75, SUSPENDED, COUNTING ERROR (PCI/L)
01076	SILVER, SUSPENDED RECOVERABLE (UG/L AS AG)
01076	SILVER, SUSPENDED (UG/L AS AG)
01077	SILVER, TOTAL RECOVERABLE (UG/L AS AG)
01077	SILVER, TOTAL (UG/L AS AG)
01078	SILVER, RECOVERABLE FROM BOTTOM MATERIAL (UG/G AS AG)
01078	SILVER, TOTAL IN BOTTOM MATERIAL (UG/G AS AG)
07122	SILVER 110, SUSPENDED TOTAL (PCI/L)
07122	SILVER 110, SUSPENDED (PCI/L)
07123	SILVER 110, SUSPENDED TOTAL, COUNTING ERROR (PCI/L)
07123	SILVER 110, SUSPENDED, COUNTING ERROR (PCI/L)
39763	SILVEX, SUSPENDED TOTAL (UG/L)
39763	SILVEX, SUSPENDED (UG/L)
70299	SOLIDS, RESIDUE AT 110 DEG. C, SUSPENDED TOTAL (MG/L)
70299	SOLIDS, RESIDUE AT 110 DEG. C, SUSPENDED (MG/L)
01081	STRONTIUM, SUSPENDED RECOVERABLE (UG/L AS SR)
01081	STRONTIUM, SUSPENDED (UG/L AS SR)
01082	STRONTIUM, TOTAL RECOVERABLE (UG/L AS SR)
01082	STRONTIUM, TOTAL (UG/L AS SR)
01083	STRONTIUM, RECOVERABLE FROM BOTTOM MATERIAL (UG/G AS SR)
01083	STRONTIUM, TOTAL IN BOTTOM MATERIAL (UG/G AS SR)
13505	STRONTIUM 90, SUSPENDED TOTAL (PCI/L)
13505	STRONTIUM 90, SUSPENDED (PCI/L)
13506	STRONTIUM 90, SUSPENDED TOTAL, COUNTING ERROR (PCI/L)
13506	STRONTIUM 90, SUSPENDED, COUNTING ERROR (PCI/L)
07142	SULFUR 35, SUSPENDED TOTAL (PCI/L)
07142	SULFUR 35, SUSPENDED (PCI/L)
07143	SULFUR 35, SUSPENDED TOTAL, COUNTING ERROR (PCI/L)
07143	SULFUR 35, SUSPENDED, COUNTING ERROR (PCI/L)
01101	TIN, SUSPENDED RECOVERABLE (UG/L AS SN)
01101	TIN, SUSPENDED (UG/L AS SN)
01102	TIN, TOTAL RECOVERABLE (UG/L AS SN)
01102	TIN, TOTAL (UG/L AS SN)
01151	TITANIUM, SUSPENDED TOTAL (UG/L AS TI)
01151	TITANIUM, SUSPENDED (UG/L AS TI)
39402	TOXAPHENE, SUSPENDED TOTAL (UG/L)
39402	TOXAPHENE, SUSPENDED (UG/L)

ALPHABETIC LISTING--Continued

PARM. CODE	NEW TERMINOLOGY -- FIRST LINE OLD TERMINOLOGY -- SECOND LINE
07010	TRITIUM, SUSPENDED TOTAL (PCI/L)
07010	TRITIUM, SUSPENDED (PCI/L)
07011	TRITIUM, SUSPENDED TOTAL, COUNTING ERROR (PCI/L)
07011	TRITIUM, SUSPENDED, COUNTING ERROR (PCI/L)
07014	TRITIUM, SUSPENDED TOTAL, COUNTING ERROR (TRITIUM UNITS)
07014	TRITIUM, SUSPENDED, COUNTING ERROR (TRITIUM UNITS)
07016	TRITIUM, SUSPENDED TOTAL (TRITIUM UNITS)
07016	TRITIUM, SUSPENDED (TRITIUM UNITS)
22705	URANIUM, NATURAL, SUSPENDED TOTAL (UG/L AS U NATURAL)
22705	URANIUM, NATURAL, SUSPENDED (UG/L AS U NATURAL)
01086	VANADIUM, SUSPENDED TOTAL (UG/L AS V)
01086	VANADIUM, SUSPENDED (UG/L AS V)
01091	ZINC, SUSPENDED RECOVERABLE (UG/L AS ZN)
01091	ZINC, SUSPENDED (UG/L AS ZN)
01092	ZINC, TOTAL RECOVERABLE (UG/L AS ZN)
01092	ZINC, TOTAL (UG/L AS ZN)
01093	ZINC, RECOVERABLE FROM BOTTOM MATERIAL (UG/G AS ZN)
01093	ZINC, TOTAL IN BOTTOM MATERIAL (UG/G AS ZN)
01161	ZIRCONIUM, SUSPENDED TOTAL (UG/L AS ZR)
01161	ZIRCONIUM, SUSPENDED (UG/L AS ZR)
39733	2,4-D, SUSPENDED TOTAL (UG/L)
39733	2,4-D, SUSPENDED (UG/L)
39743	2,4,5-T, SUSPENDED TOTAL (UG/L)
39743	2,4,5-T, SUSPENDED (UG/L)

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LOCATION.--Lat 45°29'51", long 111°16'09", in SE4SE4SE4 sec.7, T.4 S., R.4 E., Gallatin County, Hydrologic Unit 10202008, 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 42.5 (68.4 km).

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

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.

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).

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 16	0300	2,960	83.8	3.90	1.189	June 15	0215	4,900	139	4.95	1.509
May 24	0530	3,020	85.5	3.94	1.201	June 30	0115	3,830	108	4.41	1.344
June 10	0130	*5,230	148	5.12	1.561						

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	522	368	307	260	322	312	682	888	1870	3290	948	548
2	484	407	317	256	327	283	645	1000	1850	3190	905	536
3	478	374	332	297	322	279	555	1080	2040	3070	863	523
4	472	418	317	317	317	317	522	1060	2340	2910	838	517
5	453	401	307	317	317	327	503	974	2770	2720	814	518
6	453	424	297	312	327	327	478	888	3420	2530	798	569
7	490	385	312	302	327	312	478	830	3800	2370	774	583
8	472	352	274	302	332	307	484	806	3930	2490	758	609
9	466	288	252	307	322	327	522	806	4510	2490	752	551
10	460	358	256	302	327	322	503	1020	4920	2340	749	535
11	418	363	288	302	322	312	542	1120	4020	2360	751	632
12	442	379	307	312	288	302	535	1020	3320	2200	724	693
13	453	368	312	307	279	312	535	1020	3480	2010	724	632
14	460	379	322	307	302	307	509	1280	4150	1910	740	624
15	448	374	342	317	312	288	522	2050	4630	1860	709	617
16	448	352	322	322	312	279	548	2710	4040	1820	692	657
17	453	347	274	322	297	312	568	2220	3550	1760	737	611
18	442	337	302	322	293	352	503	2010	3490	1620	713	625
19	436	297	283	322	297	358	509	1740	3710	1520	671	612
20	442	247	251	327	312	358	535	1660	3340	1560	640	594
21	436	226	234	332	307	358	575	1740	3390	1460	620	596
22	424	307	269	322	297	358	522	2120	3710	1320	612	626
23	418	352	307	322	307	358	509	2500	3740	1260	610	648
24	418	332	297	293	317	363	478	2880	3830	1220	595	678
25	412	327	274	309	317	337	522	2510	3800	1190	578	680
26	418	352	302	317	322	347	603	2190	3170	1140	572	677
27	424	337	269	322	317	368	720	2040	2940	1090	585	673
28	412	332	269	317	317	401	735	2050	3170	1110	576	681
29	407	327	293	322	---	436	758	2340	3460	1180	563	654
30	418	317	322	317	---	503	798	2200	3490	1050	556	624
31	401	---	302	307	---	589	---	2040	---	992	548	---
TOTAL	13780	10427	9112	9612	8755	10711	16898	50792	103880	59032	21715	18323
MEAN	445	348	294	310	313	346	563	1638	3463	1904	700	611
MAX	522	424	342	332	332	589	798	2880	4920	3290	948	693
MIN	401	226	234	256	279	279	478	806	1850	992	548	517
AC-FT	27330	20680	18070	19070	17370	21250	33520	100700	206000	117100	43070	363400

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, 5.74 ft (1.750 m) July 8, 12; minimum observed, 0.76 ft (0.232 m) Dec. 13.

GAGE HEIGHT, IN FEET, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	1.22	---	---	---	---	5.56	4.97	---
2	---	---	---	---	---	---	---	---	---	5.56	4.94	---
3	---	---	---	---	---	---	---	---	---	5.59	4.86	---
4	---	---	---	---	---	---	---	---	---	5.64	4.83	---
5	---	---	---	---	---	---	---	---	2.83	5.66	4.74	3.26
6	---	---	---	---	---	---	---	---	---	5.70	4.67	---
7	---	---	---	---	---	---	---	---	---	5.68	4.66	---
8	---	---	---	---	---	---	---	---	---	5.73	4.58	---
9	---	---	---	---	---	---	---	---	---	---	4.51	---
10	---	---	---	1.04	---	---	---	---	---	5.71	4.49	---
11	---	---	---	---	---	---	---	---	---	5.69	4.43	---
12	---	---	---	---	---	---	---	---	2.80	5.74	4.32	---
13	---	---	.76	---	---	---	---	---	---	5.69	4.32	---
14	---	---	---	---	---	1.28	---	---	---	5.64	4.23	---
15	---	---	---	---	---	---	---	---	---	5.64	4.18	---
16	---	---	---	---	---	---	---	---	---	---	4.22	---
17	---	---	---	---	---	---	---	---	---	5.60	4.18	---
18	---	---	---	---	---	---	---	---	---	5.59	4.11	---
19	---	---	---	---	---	---	---	---	---	5.56	4.00	---
20	---	---	---	---	1.36	---	---	---	4.72	5.53	3.96	---
21	---	---	---	---	---	---	---	---	---	5.44	3.90	---
22	---	---	---	---	---	---	---	---	---	5.42	3.95	---
23	---	---	---	---	---	---	---	2.06	---	5.40	3.88	---
24	---	---	---	---	---	---	---	2.07	---	5.32	3.74	---
25	---	---	---	---	---	---	---	---	---	5.26	3.72	---
26	---	---	---	---	---	---	---	---	5.24	---	3.70	2.74
27	---	---	---	---	---	---	1.16	---	5.29	5.16	---	---
28	1.08	---	.86	---	1.34	---	---	---	5.31	5.22	3.62	2.72
29	---	---	---	---	---	---	---	2.46	5.33	5.17	---	---
30	---	---	---	---	---	---	---	---	5.48	---	---	---
31	1.04	---	---	---	---	---	---	---	---	5.09	---	---

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, 0.2 mi (0.3 km) downstream from outlet of Yellowstone Lake, and at mile 594.8 (957.0 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 7,727.77 ft (2,355.424 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 except those for Oct. 29 to Dec. 1 and winter periods, which are poor. No artificial regulation.

AVERAGE DISCHARGE.--52 years (water years 1927-78), 1,329 ft³/s (37.64 m³/s), 17.94 in/yr (456 mm/yr), 962,900 acre-ft/yr (1.19 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, 5,460 ft³/s (155 m³/s) July 10, gage height, 6.70 ft (2.042 m); minimum daily, 220 ft³/s (6.23 m³/s) Mar. 3, 4.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	595	450	360	300	260	240	552	580	1510	4970	4120	1970
2	585	450	360	300	260	230	552	585	1520	5100	4010	1920
3	580	450	350	300	260	220	552	590	1570	5180	3920	1890
4	570	440	350	300	250	220	548	595	1600	5260	3840	1860
5	561	435	355	295	250	230	552	595	1640	5320	3720	1830
6	561	435	355	290	250	230	548	595	1730	5320	3640	1790
7	561	432	362	290	240	250	552	595	1820	5360	3550	1780
8	557	430	351	290	240	260	552	600	1940	5380	3460	1770
9	543	420	341	290	240	270	552	605	2120	5380	3370	1720
10	534	415	341	290	240	290	552	620	2280	5380	3290	1680
11	530	410	341	285	240	290	561	645	2520	5400	3190	1650
12	525	400	348	285	240	300	557	655	2630	5400	3100	1620
13	521	400	344	280	240	310	552	655	2720	5360	3070	1600
14	516	390	330	280	240	330	543	665	2870	5320	3010	1580
15	512	390	330	280	240	330	543	692	3100	5280	2900	1570
16	512	390	330	280	240	340	557	736	3290	5260	2870	1520
17	503	379	330	275	240	360	561	798	3440	5240	2810	1480
18	503	375	330	275	240	370	557	828	3550	5200	2740	1500
19	498	375	320	275	240	380	548	870	3630	5120	2680	1490
20	494	375	320	275	240	390	548	882	3740	5000	2610	1460
21	489	375	320	270	240	400	557	914	3820	4930	2540	1430
22	489	375	320	270	240	420	561	949	3920	4870	2490	1410
23	489	375	315	270	240	430	561	998	4070	4790	2440	1380
24	480	375	315	270	240	440	561	1080	4250	4660	2380	1360
25	480	370	315	265	240	460	552	1160	4410	4590	2290	1330
26	476	370	310	265	240	470	557	1200	4520	4480	2250	1320
27	468	370	310	265	240	480	561	1260	4570	4430	2200	1300
28	460	370	310	260	240	500	561	1300	4610	4410	2140	1280
29	460	360	310	260	---	510	566	1370	4720	4410	2110	1260
30	460	360	305	260	---	510	575	1420	4870	4340	2060	1250
31	450	---	305	260	---	530	---	1480	---	4250	2040	---
TOTAL	15962	11941	10283	8650	6810	10990	16651	26517	92980	155390	90840	47000
MEAN	515	398	332	279	243	355	555	855	3099	5013	2930	1567
MAX	595	450	362	300	260	530	575	1480	4870	5400	4120	1970
MIN	450	360	305	260	240	220	543	580	1510	4250	2040	1250
AC-FT	31660	23680	20400	17160	13510	21800	33030	52600	184400	308200	180200	93220
CAL YR 1977 TOTAL	261632			717	MAX 2130	MIN 280	AC-FT 518900					
WTR YR 1978 TOTAL	494014			MEAN 1353	MAX 5400	MIN 220	AC-FT 979900					

06191500 YELLOWSTONE RIVER AT CORWIN SPRINGS, MT

LOCATION.--Lat 45°06'43", long 110°47'37", in SE¼NW¼ 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 530.5 (853.6 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.--72 years, 3,123 ft³/s (88.44 m³/s), 16.17 in/yr (411 mm/yr), 2,263,000 acre-ft/yr (2.79 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)	
June 10	0600	*20,600	583	8.67	2.643
June 15	0500	18,800	532	8.28	2.524

Minimum discharge, 582 ft³/s (16.5 m³/s) Jan. 24, gage height, 0.53 ft (0.162 m).

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1470	998	857	678	711	879	1550	2630	6240	14000	5740	2860
2	1390	1050	836	639	678	864	1610	3040	6240	13600	5540	2800
3	1380	1080	793	765	671	843	1510	3760	7470	13400	5360	2730
4	1390	1090	770	779	685	930	1420	3560	8670	13200	5200	2690
5	1350	1080	760	752	671	953	1390	3090	10600	12000	5070	2650
6	1300	1080	750	704	691	975	1340	2760	12600	11500	4940	2620
7	1330	1040	740	691	698	945	1330	2540	13300	11200	4790	2630
8	1330	983	740	685	718	983	1390	2440	13500	11200	4650	2690
9	1300	793	752	685	704	1010	1510	2430	15800	11100	4540	2620
10	1290	923	765	678	711	1020	1530	3100	18700	10800	4440	2520
11	1210	975	779	678	718	990	1600	3620	14800	10800	4340	2560
12	1210	990	814	685	665	983	1600	3270	12000	10600	4220	2660
13	1250	960	821	678	671	990	1590	3010	12300	9970	4180	2590
14	1250	990	821	691	665	983	1530	3750	15600	9650	4320	2540
15	1250	983	843	698	704	908	1490	6410	17600	9380	4030	2600
16	1240	945	857	678	691	872	1500	9140	15200	9200	3990	2630
17	1230	886	745	691	691	975	1520	6790	13300	9110	4380	2500
18	1200	879	752	698	718	1030	1450	5700	13100	8500	4070	2400
19	1190	857	731	691	718	1040	1440	4860	14100	8240	3820	2420
20	1180	704	671	691	725	1080	1490	4750	13100	8070	3670	2360
21	1170	678	711	698	698	1070	1540	5220	13700	7990	3560	2310
22	1160	850	879	711	711	1100	1500	6870	14600	7470	3470	2350
23	1150	879	786	704	725	1080	1450	7820	15000	7180	3530	2350
24	1130	886	772	633	759	1080	1410	8840	15300	7020	3370	2340
25	1120	886	745	685	779	1070	1480	7880	15000	6790	3250	2260
26	1120	930	752	704	793	1070	1650	7100	12800	6540	3160	2190
27	1120	945	752	691	843	1090	2060	6890	11800	6320	3120	2100
28	1110	938	752	685	864	1120	2180	7000	12700	6440	3060	2060
29	1090	923	745	704	---	1170	2310	8440	14000	6690	3000	2020
30	1120	893	772	671	---	1250	2500	7990	14400	6220	2950	1990
31	1110	---	759	658	---	1380	---	6940	---	5980	2890	---
TOTAL	38140	28094	24022	21479	20076	31733	47870	161640	393520	290160	126650	74040
MEAN	1230	936	775	693	717	1024	1596	5214	13120	9360	4085	2468
MAX	1470	1090	879	779	864	1380	2500	9140	18700	14000	5740	2860
MIN	1090	678	671	633	665	843	1330	2430	6240	5980	2890	1990
AC-FT	75650	55720	47650	42600	39820	62940	94950	320600	780500	575500	251200	146900
CAL YR 1977	TOTAL	713937		MEAN	1956	MAX	10600	MIN	640	AC-FT	1416000	
WTR YR 1978	TOTAL	1257424		MEAN	3445	MAX	18700	MIN	633	AC-FT	2494000	

YELLOWSTONE RIVER BASIN

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06191500 YELLOWSTONE RIVER AT CORWIN SPRINGS, MT--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1969-74, 1977 to current year.

PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: June 1977 to current year.

INSTRUMENTATION.--Temperature recorder since June 1977.

REMARKS.--No record Nov. 7 to 21, Jan. 5 to Feb. 22.

EXTREMES FOR PERIOD OF DAILY RECORD.--

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

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURE: Maximum, 19.5°C Sept. 6, 7; minimum, 0.0°C on many days during December to March.

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

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

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

[illegible]

YELLOWSTONE RIVER BASIN

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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 0.4 mi (0.6 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 78.5 (126.3 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 period, 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. Altitude of gage is 3,980 ft (1,210 m), from topographic map. 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.--Water-discharge records good except those for winter period and June 1-27, July 4-31, and Aug. 10-30, which are poor. Diversions for irrigation of about 11,100 acres (44.9 km²) above station.

AVERAGE DISCHARGE.--57 years, 954 ft³/s (27.02 m³/s), 691,200 acre-ft/yr (852 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 12,700 ft³/s (360 m³/s) July 6, 1975, gage height, 8.77 ft (2.673 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 10	0630	*8,210 233	*7.03 2.143	June 25	0900	5,840 165	5.92 1.804
June 15	0815	6,990 198	6.48 1.975	June 30	0515	6,260 177	6.13 1.868

Minimum discharge, 85 ft³/s (2.41 m³/s) Oct. 12, gage height, 0.64 ft (0.195 m).

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	145	119	309	150	130	190	584	560	1910	5780	1890	354
2	136	119	318	160	160	160	566	554	1750	5520	1760	345
3	130	133	358	170	200	170	472	683	2240	5230	1550	336
4	154	124	349	190	220	210	406	690	2640	5150	1400	327
5	187	121	300	210	236	220	363	602	3260	5000	1290	327
6	133	154	270	240	243	236	336	536	4150	4100	1230	340
7	133	154	200	230	247	229	322	483	4960	3800	1250	372
8	127	145	140	230	243	225	327	445	5160	3700	1220	483
9	119	119	120	240	232	273	381	417	5940	4000	1170	530
10	119	113	200	250	225	358	428	518	7760	4100	1100	506
11	108	157	280	260	211	300	412	697	6140	4200	1050	578
12	95	154	340	266	218	262	417	711	4330	4100	1000	512
13	100	154	363	262	210	243	376	602	3780	4000	1000	472
14	110	151	390	236	200	240	358	725	5220	3900	1100	461
15	103	151	372	240	220	218	345	1420	6610	3700	980	506
16	105	170	354	262	220	204	349	2440	6340	3600	900	472
17	113	258	309	221	218	258	354	2150	5050	3800	840	450
18	110	258	322	251	240	300	336	2090	4370	3700	780	472
19	103	200	322	236	266	288	318	1860	4690	3200	740	478
20	113	160	266	247	211	285	331	1490	4420	2900	680	445
21	121	130	200	240	214	285	354	1750	4300	2800	620	439
22	121	221	281	247	220	288	349	2390	4830	2600	560	439
23	124	258	304	221	229	281	318	2660	5360	2300	485	401
24	121	296	262	229	243	281	304	3090	5650	2100	460	385
25	116	327	254	204	229	281	292	2950	5710	2100	440	363
26	108	395	273	232	221	269	318	2610	5010	2200	420	345
27	110	358	273	221	225	277	395	2390	3890	2200	430	331
28	121	345	251	221	221	309	439	2300	3860	2200	440	318
29	116	349	230	221	---	354	450	2730	5110	2500	390	313
30	116	340	190	210	---	434	450	2650	5920	2400	370	309
31	119	---	170	180	---	494	---	2270	---	2100	354	---
TOTAL	3736	6133	8570	6977	6152	8422	11450	47463	140360	108980	27899	12409
MEAN	121	204	276	225	220	272	382	1531	4679	3515	900	414
MAX	187	395	390	266	266	494	584	3090	7760	5780	1890	578
MIN	95	113	120	150	130	160	292	417	1750	2100	354	309
AC-FT	7410	12160	17000	13840	12200	16710	22710	94140	278400	216200	55340	24610
CAL YR 1977 TOTAL	190473			522	5290				377800			
WTR YR 1978 TOTAL	388551			1065	7760				770700			

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 78.1 (125.7 km).

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

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

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	TEMPER- ATURE (DEG C)	HARD- NESS (MG/L AS CACO3)	HARD- NESS, NONCAR- BONATE (MG/L CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	BICAR- BONATE (MG/L AS HCO3)
OCT 04...	1030	142	6.0	170	12	46	14	14	.5	2.1	180
NOV 01...	1015	121	3.5	190	18	52	15	16	.5	2.3	210
DEC 28...	1600	258	.0	150	27	41	12	12	.4	1.4	150
JAN 27...	0910	229	.0	170	39	47	12	11	.4	1.5	160
FEB 22...	1545	217	4.5	160	35	44	13	13	.4	1.1	140
MAR 27...	1245	281	--	150	19	40	12	14	.5	1.2	160
MAY 03...	1400	802	--	90	8	25	6.5	11	.5	.9	100
JUN 02...	1000	1820	--	63	16	18	4.4	4.7	.3	.0	57
JUL 10...	1400	4100	--	32	6	9.4	2.0	3.7	.3	.1	32
AUG 01...	1010	2120	15.5	50	3	15	3.2	3.8	.2	.1	57
SEP 07...	1030	367	17.0	120	13	35	8.7	8.8	.3	1.5	130

DATE	CAR- BONATE (MG/L AS CO3)	ALKA- LINITY (MG/L AS CACO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, SUM OF CONSTITUENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)	SOLIDS, DIS- SOLVED (TONS PER DAY)	NITRO- GEN, NITRATE DIS- SOLVED (MG/L AS N)	PHOS- PHURUS, TOTAL (MG/L AS P)
OCT 04...	6	160	36	1.9	.2	9.6	219	.30	84.0	.32	.00
NOV 01...	0	170	50	7.5	.3	10	257	.35	84.0	.56	.00
DEC 28...	0	120	48	5.1	.3	13	207	.28	144	.38	.00
JAN 27...	0	130	47	2.5	.1	10	212	.29	131	.23	.00
FEB 22...	6	120	53	2.5	.2	10	214	.29	125	.18	.12
MAR 27...	0	130	47	1.8	.2	23	218	.30	165	.09	.10
MAY 03...	0	86	28	.0	2.1	.2	123	.17	266	.05	.00
JUN 02...	0	47	13	11	.1	.0	110	.15	541	.05	.19
JUL 10...	0	26	8.0	.0	.2	3.6	44	.06	487	.14	.01
AUG 01...	0	47	7.8	.7	.1	4.5	63	.09	361	.02	.04
SEP 07...	0	110	34	.4	.2	7.1	227	.31	225	.25	.02

YELLOWSTONE RIVER BASIN

45

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 current year (no winter records).

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

REMARKS.--Records good, except those for July, which are poor. Natural flow of stream affected by transbasin diversions and return flow from irrigated areas.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 382 ft³/s (10.8 m³/s) May 2, 1978, gage height, 4.81 ft (1.466 m), from rating curve extended above 170 ft³/s (4.81 m³/s) on basis of slope-area measurement of peak flow; minimum daily during periods of operation, 1.2 ft³/s (0.034 m³/s) Apr. 18, 1974.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 382 ft³/s (10.8 m³/s) May 2, gage height, 4.81 ft (1.466 m), from rating curve extended above 170 ft³/s (4.81 m³/s) on basis of slope-area measurement of peak flow; minimum daily during period of operation, 3.1 ft³/s (0.088 m³/s) Mar. 1-3, 7.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	76					3.1	4.5	133	80	72	81	64
2	90					3.1	3.9	183	67	62	57	69
3	91					3.1	3.9	144	50	63	64	73
4	96					3.2	3.6	118	44	61	72	70
5	89					3.2	3.6	116	37	72	82	63
6	94					3.2	3.6	112	33	70	85	65
7	121					3.1	3.6	110	63	68	81	64
8	108					3.2	3.7	112	81	74	77	89
9	107					3.4	4.0	107	77	80	77	96
10	119					25	4.0	108	90	91	78	97
11	119					57	8.2	116	81	85	84	133
12	114					42	23	118	53	81	90	209
13	114					28	24	112	48	79	107	147
14	118					18	25	110	51	80	113	94
15	125					7.9	25	110	72	84	113	97
16	129					8.6	25	114	85	88	112	96
17	127					18	25	116	77	86	114	104
18	130					57	26	273	81	80	112	156
19	127					34	26	130	98	78	104	232
20	124					23	25	97	103	76	103	154
21	118					18	26	112	104	74	104	125
22	110					15	26	85	104	74	104	124
23	114					8.6	26	94	107	72	97	121
24	112					7.2	26	97	107	70	89	119
25	110					7.2	26	100	55	68	78	118
26	107					7.9	25	97	60	60	76	116
27	112					8.2	58	93	80	62	76	114
28	118					6.8	113	94	75	66	70	112
29	113					5.5	122	90	82	68	70	110
30	116					5.0	104	76	91	73	70	110
31	113					5.0	---	77	---	78	67	---
TOTAL	3461	---	---	---	---	441.5	822.6	3554	2236	2295	2707	3341
MEAN	112	---	---	---	---	14.2	27.4	115	74.5	74.0	87.3	111
MAX	130	---	---	---	---	57	122	273	107	91	114	232
MIN	76	---	---	---	---	3.1	3.6	76	33	60	57	63
AC-FT	6860	---	---	---	---	876	1630	7050	4440	4550	5370	6630

YELLOWSTONE RIVER BASIN

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

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1973 to current year.

PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: May 1973 to current year (no winter records).

SUSPENDED SEDIMENT DISCHARGE: May 1973 to current year (no winter records).

EXTREMES FOR PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: Maximum, 24.0°C July 5, 6, 11, 1973, July 19, 1974, June 27, July 21, Aug. 3, Sept. 7, 1977; minimum, 1.5°C Mar. 19, 1978.

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, 11,600 tons (10,500 tonnes) Oct. 31, 1974; minimum daily, 0.01 ton (0.01 tonne) Mar. 3, 7, 1976, Mar. 27, Apr. 1, 1977.

EXTREMES FOR PERIOD OCTOBER 1977, MARCH TO SEPTEMBER 1978.--

WATER TEMPERATURES: Maximum, 22.0°C Sept. 5; minimum, 1.5°C Mar. 19.

SEDIMENT CONCENTRATIONS: Maximum daily mean, 14,300 mg/L May 18; minimum daily mean, 5.0 mg/L Aug. 30, 31.

SEDIMENT LOADS: Maximum daily, 10,500 tons (9,530 tonnes) May 18; minimum daily, 0.17 ton (0.15 tonne) Mar. 7.

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

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHUS)	TEMPER- ATURE (DEG C)	HARD- NESS (MG/L AS CACO3)	HARD- NESS, NONCAR- BONATE (MG/L CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)
MAR 07...	1400	3.2	700	13.5	330	54	97	22	28
MAY 03...	1315	170	400	11.0	83	1	25	4.9	50
JUL 10...	1430	91	170	16.0	56	5	16	3.8	7.2
SEP 07...	0900	60	330	17.0	110	4	32	7.4	19

DATE	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	BICAR- BONATE (MG/L AS HCO3)	ALKA- LINEITY (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)
MAR 07...	.7	3.9	340	280	80	6.7	.3	12	418
MAY 03...	2.4	10	99	81	100	19	.3	9.8	268
JUL 10...	.4	1.3	62	51	16	.9	.6	11	87
SEP 07...	.8	2.3	130	110	41	2.2	.1	8.7	178

DATE	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,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)
MAR 07...	.57	3.61	3.4	--	.28	3.7	16	.01
MAY 03...	.36	123	.77	--	8.2	9.0	40	4.7
JUL 10...	.12	21.4	.08	--	.33	.41	1.8	.12
SEP 07...	.24	28.8	--	.22	--	--	--	.09

DATE	TIME	TEMPER- ATURE (DEG C)	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SEDI- MENT, SUS- PENDED (MG/L)	SEDI- MENT CHARGE, SUS- PENDED (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 .500 MM
MAY 03...	1320	11.0	170	10600	4870	86	95	96	98	99	100
19...	1640	11.0	108	3750	1090	79	97	100	--	--	--

YELLOWSTONE RIVER BASIN

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

SUSPENDED-SEDIMENT DISCHARGE (TONS/DAY), WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DAY	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
OCTOBER				NOVEMBER			DECEMBER		
1	76	39	8.0						
2	90	64	16						
3	91	55	14						
4	96	41	11						
5	89	25	6.0						
6	94	44	11						
7	121	50	16						
8	108	32	9.3						
9	107	27	7.8						
10	119	31	10						
11	119	26	8.4						
12	114	35	11						
13	114	30	9.2						
14	118	39	12						
15	125	31	10						
16	129	32	11						
17	127	18	6.2						
18	130	37	13						
19	127	47	16						
20	124	44	15						
21	118	32	10						
22	110	28	8.3						
23	114	25	7.7						
24	112	24	7.3						
25	110	38	11						
26	107	26	7.5						
27	112	33	10						
28	118	40	13						
29	113	27	8.2						
30	116	15	4.7						
31	113	36	11						
TOTAL	3461	---	319.6						
DAY	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
JANUARY				FEBRUARY			MARCH		
1							3.1	25	.21
2							3.1	34	.28
3							3.1	26	.22
4							3.2	32	.28
5							3.2	22	.19
6							3.2	26	.22
7							3.1	20	.17
8							3.2	25	.22
9							3.4	45	.41
10							25	803	167
11							57	1580	257
12							42	1930	248
13							28	1910	157
14							18	1310	64
15							7.9	900	19
16							8.6	1000	35
17							18	1350	145
18							57	4670	719
19							34	4420	406
20							23	4650	289
21							18	4300	209
22							15	6100	289
23							8.6	2750	64
24							7.2	600	12
25							7.2	425	8.3
26							7.9	940	20
27							8.2	1260	28
28							6.8	1060	19
29							5.5	600	8.9
30							5.0	440	5.9
31							5.0	360	4.9
TOTAL							441.5	---	3177.20

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

SUSPENDED-SEDIMENT DISCHARGE (TONS/DAY), WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

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	4.5	220	2.7	133	9640	3460	80	160	35
2	3.9	148	1.6	183	7650	5020	67	160	29
3	3.9	148	1.6	144	5940	2600	50	110	15
4	3.6	152	1.5	118	650	207	44	100	12
5	3.6	112	1.1	116	220	69	37	80	8.0
6	3.6	65	.63	112	175	53	33	120	11
7	3.6	50	.49	110	440	131	63	220	37
8	3.7	45	.45	112	520	157	81	400	87
9	4.0	60	.65	107	290	84	77	330	69
10	4.0	54	.58	108	1930	563	90	460	112
11	8.2	121	5.5	116	1990	623	81	148	32
12	23	212	13	118	340	108	53	102	15
13	24	137	8.9	112	200	60	48	142	18
14	25	122	8.2	110	140	42	51	130	18
15	25	98	6.6	110	280	83	72	166	32
16	25	92	6.2	114	510	157	85	158	36
17	25	74	5.0	116	11700	3660	77	133	28
18	26	58	4.1	273	14300	10500	81	94	21
19	26	42	2.9	130	6480	2510	98	82	22
20	25	86	5.8	97	1100	288	103	72	20
21	26	56	3.9	112	920	278	104	80	22
22	26	56	3.9	85	1460	335	104	102	29
23	26	44	3.1	94	900	228	107	132	38
24	26	48	3.4	97	560	147	107	110	32
25	26	37	2.6	100	430	116	55	65	9.7
26	25	29	2.0	97	260	68	60	59	9.6
27	58	3430	636	93	160	40	80	81	17
28	113	2950	900	94	140	36	75	71	14
29	122	3960	1300	90	130	32	82	48	11
30	104	670	188	76	200	41	91	68	17
31	---	---	---	77	170	35	---	---	---
TOTAL	822.6	---	3120.40	3554	---	31731	2236	---	856.3
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)
JULY			AUGUST			SEPTEMBER			
1	72	82	16	81	98	21	64	9	1.6
2	62	68	11	57	74	11	69	21	3.9
3	63	55	9.4	64	60	10	73	56	11
4	61	60	9.9	72	70	14	70	54	10
5	72	67	13	82	77	17	63	25	4.3
6	70	60	11	85	58	13	65	46	8.1
7	68	83	15	81	53	12	64	88	15
8	74	78	16	77	38	7.9	89	282	68
9	80	79	17	77	43	8.9	96	123	32
10	91	82	20	78	44	9.3	97	79	21
11	85	122	28	84	43	9.8	133	3430	1470
12	81	150	33	90	54	13	209	9510	5370
13	79	133	28	107	36	10	147	554	313
14	80	78	17	113	42	13	94	160	41
15	84	77	17	113	49	15	97	107	28
16	88	69	16	112	36	11	96	99	26
17	86	72	17	114	44	14	104	93	26
18	80	61	13	112	46	14	156	1730	1030
19	78	55	12	104	48	13	232	4780	3230
20	76	53	11	103	40	11	154	1640	682
21	74	50	10	104	24	6.7	125	227	77
22	74	89	18	104	22	6.2	124	148	50
23	72	79	15	97	23	6.0	121	77	25
24	70	62	12	89	16	3.8	119	72	23
25	68	80	15	78	22	4.6	118	78	25
26	60	73	12	76	16	3.3	116	76	24
27	62	101	17	76	20	4.1	114	58	18
28	66	157	28	70	45	8.5	112	51	15
29	68	116	21	70	13	2.5	110	56	17
30	73	103	20	70	5	.94	110	51	15
31	78	88	19	67	5	.90	---	---	---
TOTAL	2295	---	517.3	2707	---	295.44	3341	---	12679.9
YEAR	18858.1		52697.14						

YELLOWSTONE RIVER BASIN

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.--33 years, 179 ft³/s (5.069 m³/s), 129,700 acre-ft/yr (160 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 discharges 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)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
June 10	0430	*1,320 37.4	4.92 1.500	June 23	0230	1,180 33.4	4.76 1.451
June 16	0430	1,170 33.1	4.76 1.451	June 30	0330	983 27.8	4.50 1.372

Minimum daily discharge, 39 ft³/s (1.10 m³/s) Feb. 13.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	55	45	46	44	43	49	147	120	315	885	294	124
2	51	49	45	44	44	49	117	115	331	823	281	121
3	52	54	44	45	44	47	85	132	404	814	265	120
4	49	57	44	47	45	47	84	123	382	800	251	119
5	50	60	43	49	45	48	82	116	438	687	238	119
6	56	58	42	50	44	49	74	112	601	665	232	119
7	70	52	42	50	43	49	79	105	739	652	231	119
8	61	46	42	50	43	49	78	99	873	641	218	130
9	58	44	43	50	42	49	87	92	1010	594	210	120
10	52	44	44	49	41	51	84	111	1190	586	203	117
11	50	45	45	48	40	51	86	126	880	588	195	128
12	60	48	45	47	40	51	82	121	693	567	192	138
13	67	50	45	47	39	50	78	115	709	553	206	137
14	67	50	44	46	40	49	81	151	964	539	212	130
15	64	50	43	45	41	48	79	227	1080	573	187	128
16	63	48	42	45	43	48	84	338	1040	529	182	123
17	63	46	42	44	44	50	77	291	813	538	194	118
18	60	44	42	43	46	51	70	251	813	491	175	135
19	58	42	42	43	48	53	70	215	829	455	162	130
20	59	40	42	44	49	56	80	236	756	430	154	134
21	60	40	42	44	50	60	78	294	862	451	148	125
22	58	42	43	44	50	63	72	354	1000	405	147	134
23	55	43	44	45	50	65	71	384	1070	366	146	134
24	57	45	45	46	50	65	66	409	1070	360	143	134
25	56	46	45	45	49	64	82	389	1050	347	138	127
26	55	46	44	44	49	64	95	356	809	350	136	121
27	55	47	44	44	50	68	112	341	734	333	133	115
28	55	47	44	43	50	75	101	356	782	333	131	111
29	54	46	44	42	---	85	100	460	926	390	130	109
30	51	46	43	42	---	100	117	423	919	347	128	105
31	48	---	43	42	---	110	---	353	---	312	125	---
TOTAL	1769	1420	1348	1411	1262	1813	2598	7315	24082	16404	5787	3724
MEAN	57.1	47.3	43.5	45.5	45.1	58.5	86.6	236	803	529	187	124
MAX	70	60	46	50	50	110	147	460	1190	885	294	138
MIN	48	40	42	42	39	47	66	92	315	312	125	105
AC-FT	3510	2820	2670	2800	2500	3600	5150	14510	47770	32540	11480	7390
CAL YR 1977	TOTAL	30148	MEAN	82.6	MAX	497	MIN	36	AC-FT	59800		
WTR YR 1978	TOTAL	68933	MEAN	189	MAX	1190	MIN	39	AC-FT	136700		

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 1977 TO SEPTEMBER 1978

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	PH (UNITS)	TEMPER- ATURE (DEG C)	TUR- BID- ITY (JTU)	OXYGEN, DIS- SOLVED (MG/L)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	HARD- NESS (MG/L AS CAC03)	HARD- NESS, NONCAR- BONATE (MG/L CAC03)
OCT									
11...	1000	44	--	.0	2	10.5	50	90	0
NOV									
01...	1540	46	--	1.0	3	9.8	14	110	0
DEC									
01...	1515	46	--	.0	3	9.9	7	95	0
JAN									
04...	0830	48	--	.0	1	9.0	--	99	1
31...	0900	44	--	.0	2	9.5	16	100	0
MAR									
07...	1100	50	--	1.5	5	11.2	--	92	0
APR									
04...	0920	72	--	6.0	8	10.5	16	130	15
MAY									
02...	0915	117	--	5.0	20	9.2	11	110	0
31...	0920	363	--	6.0	15	9.0	33	51	0
JUL									
06...	1250	666	7.7	10.0	15	9.0	45	38	0
AUG									
08...	1030	228	7.8	12.0	--	8.3	32	54	0
SEP									
07...	1230	123	8.1	13.5	1	8.5	7	64	0

DATE	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	BICAR- BONATE (MG/L AS HCO3)	CAR- BONATE (MG/L AS CO3)	ALKA- LINITY (MG/L AS CAC03)	SULFATE DIS- SOLVED (MG/L AS SO4)
OCT									
11...	24	7.3	10	.5	2.5	120	0	98	8.0
NOV									
01...	31	8.3	12	.5	2.4	140	0	120	19
DEC									
01...	27	6.8	11	.5	2.2	120	0	98	15
JAN									
04...	29	6.6	9.9	.4	1.9	120	0	98	13
31...	26	9.2	11	.5	2.2	130	0	110	18
MAR									
07...	26	6.7	9.9	.4	2.2	120	0	98	14
APR									
04...	36	8.5	13	.5	2.6	140	0	120	29
MAY									
02...	32	6.8	15	.6	2.2	140	0	120	17
31...	20	3.3	6.5	.4	1.2	72	0	59	10
JUL									
06...	11	2.6	4.2	.3	.1	52	0	43	4.5
AUG									
08...	15	4.0	5.3	.3	1.8	70	0	57	7.0
SEP									
07...	19	4.0	6.8	.4	1.9	86	0	71	10

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, NITRATE DIS- SOLVED (MG/L AS N)	PHOS- PHORUS, TOTAL (MG/L AS P)
OCT								
11...	1.9	.2	23	137	.19	16.3	.00	.05
NOV								
01...	1.9	.2	26	348	.47	43.2	.00	.06
DEC								
01...	1.9	.2	9.1	132	.18	16.4	.02	.05
JAN								
04...	1.8	.1	27	151	.21	19.6	.02	.07
31...	2.5	.4	30	163	.22	19.4	.05	.04
MAR								
07...	2.9	.2	26	146	.20	19.7	.00	.56
APR								
04...	2.5	.4	16	178	.24	34.6	.05	.23
MAY								
02...	1.7	1.8	.5	218	.30	68.9	.16	.00
31...	.0	.2	16	130	.18	127	.11	.13
JUL								
06...	.0	.2	18	67	.09	120	.09	.07
AUG								
08...	1.5	.0	22	91	.12	56.0	.00	.07
SEP								
07...	1.9	.2	23	153	.21	50.8	.07	.09

YELLOWSTONE RIVER BASIN

06218500 WIND RIVER NEAR DUBOIS, WY--Continued

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

DATE	TIME	PCB, TOTAL (UG/L)	PCB, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	NAPH- THA- LENES, POLY- CHLOR. TOTAL (UG/L)	ALDRIN, TOTAL (UG/L)	ALDRIN, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	CHLOR- DANE, TOTAL (UG/L)	CHLOR- DANE, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	DDD, TOTAL (UG/L)	DDD, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)
NOV 01...	1540	--	0	--	--	.0	--	0	--	.1
MAY 31...	0920	.0	0	.00	.00	.0	.0	0	.00	.1

DATE	DDE, TOTAL (UG/L)	DDE, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	DDT, TOTAL (UG/L)	DDT, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	DI- AZINON, TOTAL (UG/L)	DI- ELDRIN, TOTAL (UG/L)	DI- ELDRIN, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	ENDO- SULFAN, TOTAL (UG/L)	ENDRIN, TOTAL (UG/L)	ENDRIN, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)
NOV 01...	--	.2	--	.0	--	--	.0	--	--	.0
MAY 31...	.00	.2	.00	.0	.00	.00	.0	.00	.00	.0

DATE	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)	METHYL PARA- THION, TOTAL (UG/L)	METHYL TRI- THION, TOTAL (UG/L)
NOV 01...	--	--	.0	--	.0	--	.0	--	--	--
MAY 31...	.00	.00	.0	.00	.0	.00	.0	.00	.00	.00

DATE	PARA- THION, TOTAL (UG/L)	TOX- APHENE, TOTAL (UG/L)	TOXA- PHENE, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	TOTAL TRI- THION (UG/L)	2,4-D, TOTAL (UG/L)	2,4-D, TOTAL IN BOT- TOM MA- TERIAL (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)
NOV 01...	--	--	0	--	.00	--	.00	--	.00	--
MAY 31...	.00	0	--	.00	.00	0	.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)
MAY 31...	.00	0	.00	0

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 good except those for winter period and period of no gage-height record, Feb. 10 to Mar. 7, Mar. 11 to Apr. 4, June 30 to July 10, July 19 to Aug. 1, which are poor. Diversions for irrigation of about 2,000 acres (8.09 hm²) above station.

AVERAGE DISCHARGE.--10 years, 280 ft³/s (7.930 m³/s), 202,900 acre-ft/yr (250 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 5,700 ft³/s (161 m³/s) June 26, 1954, gage height, 7.72 ft (2.353 m), from rating curve extended above 3,400 ft³/s (96.3 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, 3,460 ft³/s (98.0 m³/s) June 23, gage height, 6.34 ft (1.932 m); minimum daily, 29 ft³/s (0.82 m³/s) Mar. 15.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	82	45	33	36	31	31	110	205	325	2200	480	139
2	76	52	33	37	31	30	130	165	290	1900	414	139
3	65	52	33	38	31	30	110	223	356	1700	394	134
4	60	53	33	39	32	30	100	177	305	1500	368	139
5	67	51	33	40	32	31	108	158	452	1300	324	139
6	82	48	32	41	32	32	94	139	790	1200	324	139
7	82	42	32	41	32	33	110	132	1140	1020	306	139
8	69	36	33	41	31	33	113	132	1320	1020	324	150
9	61	32	33	40	31	33	129	124	1710	1020	268	144
10	61	32	34	39	30	33	132	177	2020	1050	245	144
11	55	35	35	38	30	33	148	177	1160	1670	230	139
12	53	40	35	37	30	32	118	127	888	1370	238	144
13	57	44	35	37	30	32	118	145	1140	1440	238	144
14	60	48	35	36	30	30	118	352	1840	1520	230	139
15	61	47	35	36	30	29	108	734	2190	1820	204	134
16	63	45	34	35	30	30	108	822	2120	1370	192	128
17	63	40	34	34	31	32	100	582	2070	1520	198	128
18	63	39	34	33	31	33	89	452	2080	1240	192	161
19	63	37	34	33	32	35	94	350	2330	1030	179	150
20	63	33	35	32	32	36	110	362	1910	970	166	144
21	65	31	35	32	32	37	105	508	2250	1010	166	150
22	65	31	36	32	32	39	91	638	2840	820	179	179
23	61	32	37	32	32	41	91	646	2260	720	192	155
24	58	33	37	32	32	44	72	670	2470	680	172	150
25	58	34	38	32	31	43	91	494	2230	660	161	144
26	58	34	38	31	31	43	132	410	1150	640	155	139
27	58	34	38	31	31	50	177	386	853	560	144	134
28	57	34	38	31	31	57	129	445	1330	560	144	128
29	55	33	37	31	---	68	129	662	2440	700	150	128
30	55	33	37	31	---	79	152	480	2300	620	150	123
31	52	---	36	31	---	90	---	374	---	550	139	---
TOTAL	1948	1180	1082	1089	871	1229	3416	11448	46559	35380	7266	4247
MEAN	62.8	39.3	34.9	35.1	31.1	39.6	114	369	1552	1141	234	142
MAX	82	53	38	41	32	90	177	822	2840	2200	480	179
MIN	52	31	32	31	30	29	72	124	290	550	139	123
AC-FT	3860	2340	2150	2160	1730	2440	6780	22710	92350	70180	14410	8420

CAL YR 1977 TOTAL 43860 MEAN 120 MAX 1230 MIN 18 AC-FT 87000
WTR YR 1978 TOTAL 115715 MEAN 317 MAX 2840 MIN 29 AC-FT 229500

YELLOWSTONE RIVER BASIN

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 1977 TO SEPTEMBER 1978

DATE	TIME	TEMPER- ATURE (DEG C)	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHUS)	PH (UNITS)	TEMPER- ATURE (DEG C)						
OCT												
12...	1045	3.5	55	325	--	3.5						
NOV												
02...	0850	1.5	49	310	--	1.5						
DEC												
01...	1210	.0	33	235	--	.0						
JAN												
04...	1100	.0	39	255	--	.0						
31...	1100	.0	31	255	--	.0						
MAR												
07...	1320	2.0	33	280	--	2.0						
APR												
04...	1130	5.0	91	190	--	5.0						
MAY												
02...	1135	6.0	162	220	--	6.0						
31...	1215	7.5	356	140	--	7.5						
JUN												
08...	1230	7.0	1180	110	--	7.0						
15...	0610	10.5	2530	100	--	10.5						
JUL												
10...	1345	12.0	944	95	8.4	12.0						
31...	1300	15.0	535	105	8.3	15.0						
SEP												
07...	1040	14.0	152	100	7.9	14.0						
DATE	TIME	TEMPER- ATURE (DEG C)	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SEDI- MENT, SUS- PENDED (MG/L)	SEDI- MENT DIS- CHARGE, SUS- PENDED (T/DAY)	SED. SUSP. FALL DIAM. % FINER THAN .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 --
OCT												
12...	1045	3.5	55	12	1.8	--	--	--	--	--	--	--
NOV												
02...	0850	1.5	49	8	1.1	--	--	--	--	--	--	--
DEC												
01...	1210	.0	33	11	.98	--	--	--	--	--	--	--
JAN												
04...	1100	.0	39	17	1.8	--	--	--	--	--	--	--
31...	1100	.0	31	21	1.8	--	--	--	--	--	--	--
MAR												
07...	1320	2.0	33	24	2.1	--	--	--	--	--	--	--
APR												
04...	1130	5.0	91	38	9.3	--	--	--	--	--	--	--
MAY												
02...	1135	6.0	162	142	62	--	--	--	--	--	--	--
31...	1215	7.5	356	40	38	--	--	--	--	--	--	--
JUN												
08...	1230	7.0	1180	739	2350	18	36	66	85	98	100	--
JUL												
10...	1345	12.0	944	48	122	--	--	--	--	--	--	--
31...	1300	15.0	535	26	38	--	--	--	--	--	--	--
SEP												
07...	1040	14.0	152	10	4.1	--	--	--	--	--	--	--

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LOCATION.--Lat 43°20'44", long 109°24'34", in SE4SE4 sec.1, T.4 N., R.6 W., Fremont County, Hydrologic Unit 108080001, Wind River Indian Reservation, on left bank 0.5 mi (0.8 km) upstream from Upper Dinwoody Lake, 7.0 mi (11.3 km) west of Burris, and 17 mi (27 km) southeast of Dubois.

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)	
June 10	0600	794	22.5	4.04	1.231	July 1	0700	831	23.5	4.07	1.241
June 15	0800	859	24.3	4.09	1.247	July 17	1400	845	23.9	4.08	1.244
June 25	1000	*960	27.2	4.16	1.268	July 29	0830	783	22.2	4.03	1.228

Minimum daily discharge, 7.2 ft³/s (0.204 m³/s) Feb. 13.

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	50	17	17	12	8.6	8.0	21	33	165	753	501	172
2	48	20	17	12	8.5	8.0	22	37	169	696	474	185
3	48	21	16	13	8.6	8.0	16	59	178	656	431	199
4	44	23	16	13	8.4	8.0	15	47	171	598	408	211
5	43	22	18	14	8.4	8.2	15	37	169	488	391	243
6	43	21	19	14	8.6	8.4	13	19	203	461	393	272
7	47	19	20	14	8.4	8.6	14	34	364	465	396	320
8	40	14	20	13	8.2	9.0	14	47	482	509	396	351
9	35	13	21	13	8.2	9.2	15	53	595	558	390	313
10	45	13	21	13	8.0	8.9	16	67	730	596	381	238
11	30	14	21	13	7.8	9.3	18	70	502	582	377	213
12	32	15	21	13	7.4	9.4	15	63	373	597	398	163
13	43	15	21	12	7.2	11	16	61	409	573	394	128
14	41	14	20	12	7.4	11	16	96	706	703	396	110
15	36	14	20	12	7.4	10	15	163	798	766	314	97
16	35	12	20	12	7.4	11	15	222	718	696	241	90
17	34	13	20	12	7.4	11	14	212	510	789	208	79
18	32	14	20	12	7.6	11	13	181	451	682	176	84
19	31	14	19	11	7.6	10	14	150	483	547	142	68
20	30	13	18	11	7.8	10	15	162	414	507	123	72
21	31	12	18	11	8.0	10	15	208	453	529	115	65
22	30	13	18	11	8.4	10	13	241	598	471	131	69
23	27	13	17	10	8.6	10	14	268	641	413	185	63
24	28	13	17	10	8.6	9.9	12	282	692	416	180	58
25	26	14	17	10	8.6	9.3	15	226	831	437	171	55
26	25	14	17	9.7	8.4	9.7	16	181	556	488	172	53
27	25	14	17	9.5	8.4	10	21	170	477	482	174	52
28	24	14	16	9.1	8.2	11	22	195	578	532	172	52
29	23	16	16	9.0	---	13	21	258	688	709	165	48
30	21	17	15	8.6	---	14	25	241	760	622	161	46
31	14	---	15	8.6	---	15	---	185	---	542	164	---
TOTAL	1061	461	568	357.5	226.1	309.9	486	4268	14864	17863	8720	4169
MEAN	34.2	15.4	18.3	11.5	8.08	10.0	16.2	138	495	576	281	139
MAX	50	23	21	14	8.6	15	25	282	831	789	501	351
MIN	14	12	15	8.6	7.2	8.0	12	19	165	413	115	46
AC=FT	2100	914	1130	709	448	615	964	8470	29480	35430	17300	8276

CAL YR 1977	TOTAL	42380.4	MEAN 116	MAX 1130	MIN 1.0	AC-FT	84060
WTR YR 1978	TOTAL	53353.5	MEAN 146	MAX 831	MIN 7.2	AC-FT	105800

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, which are poor. No diversion above station.

AVERAGE DISCHARGE.--16 years, 22.2 ft³/s (0.629 m³/s), 16,080 acre-ft/yr (19.8 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 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)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
June 10	0200	322 9.12	4.79 1.460	June 23	2030	256 7.25	4.63 1.411
June 14	2400	*325 9.20	4.80 1.463	June 29	2100	228 6.46	4.53 1.381

Minimum daily discharge, 1.5 ft³/s (0.042 m³/s) Mar. 15.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.5	2.5	2.8	2.8	2.2	2.5	4.5	7.5	53	140	30	7.9
2	2.0	2.8	2.8	2.6	2.2	2.8	4.2	7.9	46	142	34	7.9
3	2.0	2.8	2.8	2.8	2.3	2.5	6.0	9.0	44	134	31	7.9
4	2.0	2.6	2.9	3.0	2.4	2.3	5.8	8.6	39	122	28	7.9
5	2.1	2.4	3.0	3.0	2.4	2.1	5.0	8.3	32	108	25	7.2
6	2.6	2.3	2.9	2.9	2.3	2.0	6.0	7.2	74	93	25	7.2
7	2.5	2.3	2.8	2.6	2.1	1.9	6.3	7.0	136	86	21	6.8
8	2.1	2.2	2.8	2.6	2.2	2.2	6.3	7.2	168	80	21	6.5
9	2.0	2.2	2.8	2.5	2.2	2.0	6.3	7.5	220	80	20	6.3
10	2.2	2.3	2.9	2.4	2.4	1.9	6.8	9.8	244	79	19	6.5
11	2.2	2.4	3.0	2.5	2.3	1.7	6.8	9.4	138	74	18	6.8
12	2.1	2.4	3.1	2.6	2.3	1.8	7.2	9.0	110	66	19	6.5
13	2.4	2.7	3.2	2.6	2.4	1.7	7.0	10	162	65	18	6.3
14	2.4	3.0	3.2	2.6	2.4	1.6	6.5	20	247	65	18	6.0
15	2.5	3.2	3.2	2.5	2.4	1.5	6.3	34	244	58	16	6.0
16	2.5	3.2	3.1	2.6	2.4	1.6	6.8	53	228	59	14	6.0
17	2.4	3.1	3.0	2.6	2.3	1.6	6.8	56	182	56	14	6.3
18	2.4	3.0	2.9	2.6	2.4	1.6	6.2	42	152	48	14	7.9
19	2.6	2.9	2.8	2.5	2.5	1.7	6.4	36	140	46	12	6.5
20	2.6	2.9	2.6	2.6	2.5	1.8	6.8	39	114	44	12	6.8
21	2.8	2.9	2.8	2.5	2.6	1.8	6.5	46	144	53	10	7.2
22	2.8	2.9	2.9	2.6	2.6	1.8	6.4	66	154	37	10	9.0
23	2.8	3.0	3.0	2.6	2.6	1.9	5.5	86	188	38	10	10
24	2.8	3.0	2.9	2.5	2.7	1.9	5.2	96	182	39	10	8.6
25	2.8	3.1	2.9	2.5	2.7	2.0	6.0	87	158	38	9.8	8.6
26	2.8	3.1	3.0	2.5	2.6	2.0	7.9	84	120	38	9.0	7.9
27	2.8	3.0	3.0	2.4	2.4	2.2	8.6	82	144	36	9.0	7.9
28	2.8	2.9	2.9	2.4	2.4	2.4	7.9	82	152	37	8.6	7.5
29	2.9	2.8	2.9	2.3	---	2.8	7.6	98	178	33	8.6	7.5
30	2.6	2.8	3.0	2.2	---	3.4	7.9	80	156	30	8.6	7.5
31	2.5	---	2.8	2.2	---	4.2	---	66	---	30	8.3	---
TOTAL	76.5	82.7	90.7	79.6	67.2	65.2	193.5	1261.4	4349	2054	510.9	218.9
MEAN	2.47	2.76	2.93	2.57	2.40	2.10	6.45	40.7	145	66.3	16.5	7.30
MAX	2.9	3.2	3.2	3.0	2.7	4.2	8.6	98	247	142	34	10
MIN	2.0	2.2	2.6	2.2	2.1	1.5	4.2	7.0	32	30	8.3	6.0
AC-FT	152	164	180	158	133	129	384	2500	8630	4070	1010	434

CAL YR 1977	TOTAL	2013.04	MEAN	5.52	MAX	36	MIN	.48	AC-FT	3990
WTR YR 1978	TOTAL	9049.60	MEAN	24.8	MAX	247	MIN	1.5	AC-FT	17950

YELLOWSTONE RIVER BASIN

06222700 CROW CREEK NEAR TIPPERARY, WY--Continued

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WATER-QUALITY RECORDS

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

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

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)
OCT					
04...	1030	2.0	115	--	.5
NOV					
02...	1150	3.0	110	--	1.0
DEC					
14...	0955	3.2	75	--	.0
JAN					
27...	1135	2.4	100	--	.0
MAR					
02...	1240	2.7	100	--	.0
APR					
22...	1030	6.5	100	--	1.5
MAY					
25...	1130	92	90	--	2.5
JUN					
08...	1000	148	58	--	5.0
14...	1845	241	85	--	8.0
22...	1100	143	40	--	12.0
JUL					
10...	1015	73	34	7.3	10.5
AUG					
01...	1320	27	70	7.3	12.0
SEP					
07...	1305	7.2	55	7.4	12.0

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 except those for winter months and periods of no gage-height record, Oct. 8 to Nov. 10, Dec. 15 to Jan. 27, Sept. 20-30, which are poor. No diversions above station.

AVERAGE DISCHARGE.--24 years (water years 1942-53, 1967-78), 301 ft³/s (8.524 m³/s), 218,100 acre-ft/yr (269 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 3,420 ft³/s (96.9 m³/s) June 18, 1971, gage height, 7.05 ft (2.149 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 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)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
June 10	0630	1,980 56.1	5.66 1.725	June 25	1000	1,930 54.7	5.62 1.713
June 15	0700	*2,160 61.2	5.38 1.792	July 1	1130	1,880 53.2	5.57 1.698

Minimum daily discharge, 17 ft³/s (0.48 m³/s) Feb. 13.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	116	50	50	32	21	20	59	96	487	1810	783	222
2	115	59	56	31	21	20	60	102	496	1660	737	220
3	112	66	56	32	22	19	48	123	505	1540	702	223
4	107	70	58	34	23	20	47	110	505	1430	656	230
5	102	71	66	35	23	20	50	114	482	1250	601	240
6	102	70	59	35	23	21	54	112	567	1110	562	261
7	107	67	66	35	23	21	57	132	892	1060	551	287
8	97	64	59	34	23	23	57	152	1240	1100	540	338
9	84	62	52	33	21	23	62	152	1590	1200	540	370
10	80	62	62	33	20	23	66	190	1890	1270	529	339
11	74	57	59	34	19	23	64	215	1450	1260	505	301
12	92	48	54	32	18	23	57	190	1090	1280	498	271
13	102	46	53	32	17	22	56	190	1140	1210	531	240
14	97	43	47	31	18	21	56	332	1740	1170	580	213
15	86	42	49	30	18	18	54	462	2060	1200	525	190
16	84	41	50	30	19	23	53	516	1960	1190	429	165
17	81	42	49	30	19	24	49	548	1580	1270	357	150
18	77	36	47	30	19	24	42	462	1360	1230	321	156
19	74	35	45	29	19	25	43	413	1330	1070	282	150
20	72	25	44	28	20	24	45	400	1240	927	247	135
21	74	22	43	27	20	25	45	467	1270	952	219	124
22	71	28	42	27	21	27	39	521	1530	1010	203	130
23	64	35	43	25	22	28	38	626	1650	849	216	120
24	66	41	43	25	22	26	37	687	1790	763	227	111
25	61	46	43	25	21	22	39	573	1830	746	230	104
26	59	48	43	25	21	23	46	503	1540	782	229	100
27	60	48	41	25	21	25	54	503	1290	804	231	96
28	57	45	40	24	20	28	54	527	1350	804	229	99
29	54	48	39	23	---	32	54	651	1540	912	229	92
30	50	50	38	22	---	37	76	629	1750	950	228	87
31	43	---	35	22	---	44	---	520	---	856	221	---
TOTAL	2520	1467	1531	910	574	754	1561	11218	39144	34665	12938	5764
MEAN	81.3	48.9	49.4	29.4	20.5	24.3	52.0	362	1305	1118	417	192
MAX	116	71	66	35	23	44	76	687	2060	1810	783	370
MIN	43	22	35	22	17	18	37	96	482	746	203	87
AC-FT	5000	2910	3040	1800	1140	1500	3100	22250	77640	68760	25660	11430
CAL YR 1977	TOTAL	65376.0	MEAN 179	MAX 1300	MIN 6.2	AC-FT	129700					
WTR YR 1978	TOTAL	113046.0	MEAN 310	MAX 2060	MIN 17	AC-FT	224200					

YELLOWSTONE RIVER BASIN

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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 1977 TO SEPTEMBER 1978

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)
OCT					
06...	1220	97	40	--	8.0
NOV					
10...	1050	67	50	--	.0
DEC					
14...	0840	49	53	--	.5
JAN					
27...	1000	24	80	--	.0
MAR					
02...	1115	20	90	--	.0
APR					
22...	0900	40	290	--	6.0
MAY					
23...	1120	600	40	--	7.0
JUN					
16...	1045	2040	40	--	7.5
JUL					
11...	1105	1280	43	7.9	10.5
AUG					
09...	1100	541	50	7.4	12.0
SEP					
15...	1115	195	65	7.6	12.0

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.

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

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.

AVERAGE DISCHARGE.--60 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, 1,810 ft³/s (51.3 m³/s) July 2, gage height, 4.29 ft (1.308 m); minimum daily, 9.8 ft³/s (0.28 m³/s) Oct. 29 to Nov. 8.

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	119	9.8	15	13	15	23	23	65	51	1740	590	543
2	56	9.8	15	13	15	23	24	32	52	1760	585	542
3	23	9.8	15	13	15	23	24	130	54	1760	583	541
4	14	9.8	15	13	14	23	24	222	55	1620	588	542
5	12	9.8	15	14	12	23	23	167	56	1320	583	542
6	12	9.8	15	14	12	23	21	148	55	1140	585	524
7	11	9.8	15	14	12	23	21	143	56	800	584	465
8	10	9.8	15	14	11	23	22	140	56	732	583	464
9	10	10	15	14	11	23	31	140	56	801	584	465
10	11	10	14	14	15	25	33	135	57	1100	585	464
11	11	10	14	14	16	25	33	135	58	1600	582	459
12	11	10	14	14	16	25	33	134	58	1310	578	445
13	11	10	14	14	18	25	33	135	58	1150	574	380
14	11	10	14	14	23	25	33	135	60	1080	574	380
15	11	11	14	14	23	25	33	120	66	979	573	408
16	11	11	14	14	23	25	32	52	101	1000	572	459
17	11	11	13	15	23	25	30	54	267	1070	571	463
18	11	12	13	15	23	25	34	57	437	1140	571	465
19	11	13	13	15	23	25	35	53	555	1130	570	491
20	11	13	13	15	23	25	35	51	516	1050	565	578
21	11	13	13	15	23	24	35	51	440	925	561	654
22	11	14	13	15	22	23	34	51	442	880	606	722
23	11	14	13	15	23	23	34	51	506	807	650	777
24	11	14	13	15	23	23	34	51	656	759	648	763
25	11	14	13	15	23	23	34	51	908	664	648	728
26	11	14	13	15	23	23	88	50	1070	587	643	648
27	10	14	13	15	23	24	262	50	1370	525	643	777
28	10	14	13	15	23	22	236	50	1400	594	641	1260
29	9.8	15	13	15	---	18	209	50	1420	590	638	956
30	9.8	15	13	15	---	19	178	51	1480	590	638	197
31	9.8	---	13	15	---	19	---	51	---	590	601	---
TOTAL	503.4	350.4	428	445	526	723	1721	2805	12416	31793	18497	17102
MEAN	16.2	11.7	13.8	14.4	18.8	23.3	57.4	90.5	414	1026	597	570
MAX	119	15	15	15	23	25	262	222	1480	1760	650	1260
MIN	9.8	9.8	13	13	11	18	21	32	51	525	561	197
AC-FT	998	695	849	883	1040	1430	3410	5560	24630	63060	36690	33920
CAL YR 1977	TOTAL	46994.70	MEAN 129	MAX 708	MIN 9.40	AC-FT	93210					
WTR YR 1978	TOTAL	87309.80	MEAN 239	MAX 1760	MIN 9.8	AC-FT	173200					

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 page .) Diversions for irrigation of about 25,000 acres (101 km²) above station.

AVERAGE DISCHARGE.--33 years, 1,240 ft³/s (35.12 m³/s), 898,400 acre-ft/yr (1,110 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); minimum daily, 190 ft³/s (5.38 m³/s) Feb. 6, 1976.

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, 7,480 ft³/s (212 m³/s) June 10, gage height, 8.44 ft (2.573 m); minimum daily, 220 ft³/s (6.23 m³/s) Feb. 14.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	520	337	260	235	245	260	525	625	1580	6880	3080	1120
2	466	319	265	230	250	250	541	583	1440	6520	2740	1120
3	424	353	265	235	270	245	452	634	1550	6420	2510	1140
4	424	342	255	245	275	255	384	735	1610	5980	2380	1160
5	410	348	255	260	275	275	370	651	1650	5100	2230	1170
6	410	355	255	270	275	280	343	667	2200	4660	2170	1170
7	459	350	250	270	275	260	340	647	2990	4120	2140	1150
8	445	332	245	270	270	265	356	651	3830	4230	2070	1200
9	431	275	250	270	270	280	371	593	4850	4220	2000	1270
10	431	278	250	265	265	310	394	558	6500	4670	1930	1260
11	424	314	255	265	255	295	399	617	5150	5110	1860	1210
12	403	322	260	260	240	285	407	629	3740	4720	1840	1150
13	410	319	265	255	230	270	376	593	3480	4560	1850	1060
14	410	309	265	250	220	242	375	682	5240	4400	1940	1010
15	410	317	270	245	230	242	373	1140	6380	4640	1830	1010
16	410	321	265	245	235	257	367	1680	6710	4460	1670	1010
17	403	286	260	245	245	255	369	1870	5380	4620	1610	998
18	403	298	255	245	255	269	342	1890	4960	4430	1520	1140
19	396	298	250	245	260	320	329	1480	5220	4110	1440	1160
20	394	260	250	250	265	324	332	1250	4430	3780	1350	1250
21	399	230	250	250	270	312	353	1390	4490	4000	1270	1360
22	399	250	255	245	285	329	334	1730	5370	3720	1280	1460
23	390	260	260	245	290	311	315	1920	5910	3250	1320	1520
24	375	265	260	245	290	303	312	2190	6270	3120	1300	1500
25	372	270	255	245	280	284	296	2040	6630	2910	1300	1450
26	374	270	255	250	280	269	397	1820	5690	2820	1280	1300
27	372	270	255	250	270	291	607	1670	5180	2710	1280	1420
28	372	270	250	255	265	316	597	1700	5540	2910	1270	1940
29	366	270	245	250	---	338	549	2180	6300	3680	1280	1640
30	366	265	240	250	---	400	591	2210	6800	3650	1280	709
31	366	---	240	245	---	469	---	1870	---	3430	1200	---
TOTAL	12634	8953	7910	7785	7335	9061	12096	38895	137070	133830	54220	37057
MEAN	408	298	255	251	262	292	403	1255	4569	4317	1749	1235
MAX	520	355	270	270	290	469	607	2210	6800	6880	3080	1940
MIN	366	230	240	230	220	242	296	558	1440	2710	1200	709
AC-FT	25060	17760	15690	15440	14550	17970	23990	77150	271900	265500	107500	73500
CAL YR 1977 TOTAL	232447			637	MAX 2690	MIN 206	AC-FT 461100					
WTR YR 1978 TOTAL	466846			MEAN 1279	MAX 6880	MIN 220	AC-FT 926000					

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 1977 TO SEPTEMBER 1978

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)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	TEMPER- ATURE (DEG C)	SED. SUSP. FALL DIAM. THAN .062 MM	SED. SUSP. FALL DIAM. THAN .004 MM	SED. SUSP. FALL DIAM. THAN .016 MM	SED. SUSP. FALL DIAM. THAN .062 MM	SED. SUSP. FALL DIAM. THAN .125 MM	SED. SUSP. FALL DIAM. THAN .250 MM	SED. SUSP. FALL DIAM. THAN .500 MM
MAR														
02...	1240		A250			100	.0							
A-Daily mean discharge.														
OCT														
04...	1400	11.5	420	10	11	--	--	--	--	--	--	--	--	--
NOV														
02...	1420	4.0	305	6	4.9	--	--	--	--	--	--	--	--	--
DEC														
06...	1220	.0	253	52	36	--	--	--	--	--	--	--	--	--
JAN														
06...	1145	.0	261	21	15	--	--	--	--	--	--	--	--	--
FEB														
06...	1115	.0	274	10	7.4	--	--	--	--	--	--	--	--	--
MAR														
09...	1050	1.0	256	102	71	--	--	--	--	--	--	--	--	--
APR														
06...	1130	6.5	336	64	58	--	--	--	--	--	--	--	--	--
20...	0810	6.5	310	24	20	92	--	--	--	--	--	--	--	--
26...	1140	16.0	332	14	13	90	--	--	--	--	--	--	--	--
MAY														
03...	1100	7.5	504	386	525	--	76	100	--	--	--	--	--	--
10...	0940	5.5	536	190	275	84	--	--	--	--	--	--	--	--
19...	0910	8.0	1570	1830	7760	--	56	82	100	--	--	--	--	--
24...	0915	10.5	2380	1400	9000	--	19	42	90	100	--	--	--	--
31...	1100	8.0	1920	552	2860	30	--	--	--	--	--	--	--	--
JUN														
07...	1240	13.0	3490	3720	35100	--	16	32	66	89	98	100	--	--
14...	1205	12.0	5960	1380	22200	--	26	48	84	98	100	--	--	--
21...	1040	15.0	5010	327	4420	72	--	--	--	--	--	--	--	--
28...	0950	13.0	5910	206	3290	59	--	--	--	--	--	--	--	--
JUL														
05...	1130	14.5	5340	92	1330	58	--	--	--	--	--	--	--	--
12...	1155	14.0	4900	51	675	65	--	--	--	--	--	--	--	--
19...	0830	10.0	4280	111	1280	38	--	--	--	--	--	--	--	--
26...	1000	15.5	3130	102	862	40	--	--	--	--	--	--	--	--
AUG														
02...	1140	15.5	2790	34	256	49	--	--	--	--	--	--	--	--
09...	1330	15.0	2050	12	66	73	--	--	--	--	--	--	--	--
16...	1120	15.0	1660	11	49	84	--	--	--	--	--	--	--	--
23...	1150	14.0	1320	6	21	93	--	--	--	--	--	--	--	--
30...	1205	16.0	1300	6	21	86	--	--	--	--	--	--	--	--
SEP														
06...	1130	17.0	1210	6	20	94	--	--	--	--	--	--	--	--
20...	0940	9.0	1180	29	92	97	--	--	--	--	--	--	--	--
27...	0905	12.0	1200	20	65	86	--	--	--	--	--	--	--	--

YELLOWSTONE RIVER BASIN

63

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 after 1976). 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 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00					---	409	608	710	1590	1300	749
2	.00					---	407	493	827	1560	1310	741
3	.00					---	403	316	888	1580	1340	751
4	.00					---	398	377	837	1600	1380	766
5	---					---	391	376	885	1500	1450	780
6	---					---	369	377	1100	1380	1430	790
7	---					---	324	375	1200	1430	1460	763
8	---					---	354	382	1390	1550	1430	787
9	---					---	365	401	1370	1540	1390	790
10	---					---	376	372	1310	1540	1320	792
11	---					---	388	371	1060	1410	1240	789
12	---					---	399	372	1120	1420	1280	780
13	---					---	377	371	1340	1460	1270	713
14	---					---	368	371	1400	1460	1190	664
15	---					---	377	510	1390	1510	1200	646
16	---					---	368	824	1520	1530	1210	665
17	---					---	367	709	1670	1590	1160	647
18	---					---	360	435	1740	1620	1090	706
19	---					238	333	259	1760	1610	1010	771
20	---					333	334	210	1750	1580	931	820
21	---					327	336	210	1730	1570	880	925
22	---					325	335	194	1710	1550	855	994
23	---					330	333	231	1700	1580	895	1050
24	---					317	331	400	1680	1580	885	996
25	---					309	315	574	1700	1600	881	972
26	---					288	322	476	1590	1590	861	914
27	---					277	340	348	1560	1600	858	848
28	---					318	415	315	1570	1590	860	988
29	---					329	544	314	1610	1530	868	1020
30	---					359	585	363	1620	1440	872	395
31	---					408	---	502	---	1440	836	---
TOTAL	---	---	---	---	---	---	11323	12436	41737	47530	34942	24012
MEAN	---	---	---	---	---	---	377	401	1391	1533	1127	800
MAX	---	---	---	---	---	---	585	824	1760	1620	1460	1050
MIN	---	---	---	---	---	---	315	194	710	1380	836	395
AC-FT	---	---	---	---	---	---	22460	24670	82790	94280	69310	47630

YELLOWSTONE RIVER BASIN

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 1977 TO SEPTEMBER 1978

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. SIEVE DIAM. % FINER THAN .062 MM	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
APR										
20...	1000	8.0	334	20	18	89	--	--	--	--
26...	0930	10.0	319	18	16	92	--	--	--	--
MAY										
03...	0930	9.0	292	1020	804	--	79	100	--	--
10...	1015	9.0	374	253	255	--	71	94	100	--
24...	1015	11.0	316	284	242	98	--	--	--	--
31...	1000	7.0	443	177	212	94	--	--	--	--
JUN										
07...	1015	11.0	1160	687	2150	--	24	46	95	100
14...	1020	12.0	1500	1290	5220	--	23	50	93	100
21...	1030	12.0	1720	473	2200	58	--	--	--	--
28...	1020	12.0	1610	357	1550	60	--	--	--	--
JUL										
05...	1030	12.0	1550	262	1100	44	--	--	--	--
12...	1030	13.0	1400	170	643	43	--	--	--	--
19...	1015	14.0	1620	171	748	26	--	--	--	--
26...	1015	15.0	1610	172	748	24	--	--	--	--
AUG										
02...	1015	15.0	1320	102	364	25	--	--	--	--
09...	1015	15.0	1370	101	374	21	--	--	--	--
16...	1015	13.0	1220	83	273	18	--	--	--	--
23...	1015	14.0	898	70	170	19	--	--	--	--
30...	1015	14.0	872	73	172	16	--	--	--	--
SEP										
06...	1015	15.0	798	66	142	23	--	--	--	--
13...	1015	9.0	712	54	104	46	--	--	--	--
20...	1015	8.0	790	91	194	57	--	--	--	--
27...	1015	12.0	808	39	85	24	--	--	--	--

YELLOWSTONE RIVER BASIN

65

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 1977 TO SEPTEMBER 1978

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	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
APR											
20...	0905	7.0	334	20	18	94	--	--	--	--	--
26...	1030	9.0	319	19	16	90	--	--	--	--	--
MAY											
03...	1015	9.0	292	862	680	--	75	95	100	--	--
10...	0930	9.0	374	218	220	--	72	94	100	--	--
19...	0930	7.0	291	1740	1370	--	45	63	100	--	--
24...	0930	10.0	316	1160	990	82	--	--	--	--	--
31...	0930	6.0	443	219	262	75	--	--	--	--	--
JUN											
07...	0930	11.0	1160	1940	6080	--	18	42	76	99	100
14...	0930	11.0	1500	2250	9110	--	17	35	68	93	100
21...	0930	12.0	1720	810	3760	36	--	--	--	--	--
28...	0930	12.0	1610	593	2580	39	--	--	--	--	--
JUL											
05...	0930	12.0	1550	415	1740	27	--	--	--	--	--
12...	0930	13.0	1400	246	930	30	--	--	--	--	--
19...	0930	13.0	1620	167	730	28	--	--	--	--	--
26...	0930	15.0	1610	112	487	36	--	--	--	--	--
AUG											
02...	0930	15.0	1320	67	239	29	--	--	--	--	--
09...	0930	15.0	1370	55	203	26	--	--	--	--	--
16...	0930	13.0	1220	46	152	29	--	--	--	--	--
23...	0930	13.0	898	28	68	30	--	--	--	--	--
30...	0930	13.0	872	27	64	27	--	--	--	--	--
SEP											
06...	0930	15.0	798	32	69	29	--	--	--	--	--
13...	0930	9.0	712	21	40	35	--	--	--	--	--
20...	0930	8.0	790	63	134	71	--	--	--	--	--
27...	0930	11.0	808	16	35	31	--	--	--	--	--

YELLOWSTONE RIVER BASIN

06227600 WIND RIVER NEAR KINNEAR, WY

LOCATION.--Lat 43°08'34", long 108°42'32", in SW¼SE¼SW¼ sec.13, T.2 N., R.1 E., Fremont County, Hydrologic Unit 10080001, Wind River Indian Reservation, on right bank, at upstream side of bridge on Wyoming State Secondary Highway 132, and 1.7 mi (2.7 km) southwest of Kinnear.

DRAINAGE AREA.--2,194 mi² (5,682 km²).

PERIOD OF RECORD.--April 1974 to current year (no winter records).

GAGE.--Water-stage recorder. Altitude of gage is 5,280 ft (1,609 m), from topographic map.

REMARKS.--Records good. Some regulation by Bull Lake beginning in 1938 (see page) and Pilot Butte Reservoir beginning in 1926, combined capacity, 182,000 acre-ft (224 hm³). Diversions above station for irrigation of about 102,100 acres (413 km²) lying both 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, 8,540 ft³/s (242 m³/s) June 19, 1974, gage height, 7.23 ft (2.204 m); minimum daily during periods of operation, 28 ft³/s (0.79 m³/s) Apr. 24, 25, 1978.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 6,040 ft³/s (171 m³/s) June 10, gage height, 6.48 ft (1.975 m); minimum daily during period of operation, 28 ft³/s (0.79 m³/s) Apr. 24, 25.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1							147	91	1010	5630	1910	410
2							193	122	670	5380	1500	410
3							141	225	605	5270	1260	417
4							70	452	761	4960	1110	417
5							48	350	750	4160	816	417
6							43	368	920	3720	740	417
7							42	350	1510	3400	720	410
8							54	326	2420	3100	670	424
9							47	250	3600	3200	641	473
10							54	216	4910	3300	623	512
11							55	255	4640	3600	641	473
12							57	290	2750	3400	544	438
13							49	255	1950	3140	544	410
14							52	250	3260	2980	596	404
15							54	605	4560	3090	578	404
16							44	748	4910	3070	512	404
17							44	1120	3900	3140	488	404
18							31	1500	3040	2950	466	452
19							32	1370	3110	2690	466	480
20							31	1110	2950	2340	459	480
21							43	1150	2400	2380	452	480
22							46	1460	3160	2500	438	480
23							34	1680	4030	1800	452	504
24							28	1730	4450	1590	452	536
25							28	1530	4820	1370	459	536
26							35	1370	4420	1220	438	528
27							226	1360	3700	1140	438	552
28							275	1370	3850	1190	438	908
29							100	1730	4500	2360	431	932
30							83	1870	5180	2560	417	932
31							---	1530	---	2320	410	---
TOTAL	---	---	---	---	---	---	2186	27033	92736	92950	20109	15044
MEAN	---	---	---	---	---	---	72.9	872	3091	2998	649	501
MAX	---	---	---	---	---	---	275	1870	5180	5630	1910	932
MIN	---	---	---	---	---	---	28	91	605	1140	410	404
AC-FT	---	---	---	---	---	---	4340	53620	183900	184400	39890	29840

YELLOWSTONE RIVER BASIN

67

06228000 WIND RIVER AT RIVERTON, WY

LOCATION.--Lat 43°00'38", long 108°22'32", in NE&NW&NW¼ 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 and periods of no gage-height record, Dec. 11 to Jan. 3, Feb. 12-21, 25-27, Apr. 3-5, 19, May 4-10, May 29 to June 7, which are poor. Some regulation by Bull Lake beginning in 1938 (see page) and Pilot Butte Reservoir beginning in 1926, combined capacity, 182,000 acre-ft (224 km³). 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, 5,500 ft³/s (156 m³/s) June 10, gage height, 8.56 ft (2.609 m); minimum daily, 47 ft³/s (1.33 m³/s) Apr. 25, 26.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	310	397	260	260	280	280	166	119	894	4880	1480	125
2	422	368	260	260	290	270	227	114	547	4660	1170	122
3	377	379	260	270	290	260	224	248	364	4500	928	116
4	347	394	250	280	300	270	127	407	501	4310	798	116
5	314	389	250	290	300	290	84	396	507	3570	534	110
6	326	395	250	290	300	300	72	418	493	3080	431	103
7	352	394	240	300	300	280	69	447	1060	2560	345	98
8	425	385	230	300	300	280	69	412	1830	2230	286	99
9	466	350	220	300	290	300	74	335	2700	2270	254	118
10	464	296	210	290	290	330	69	203	4040	2480	250	184
11	458	337	220	290	280	320	82	189	4460	3250	279	162
12	437	363	240	290	260	300	74	239	2670	3140	247	125
13	429	372	250	280	250	290	78	231	1680	2730	198	130
14	426	364	270	270	240	260	71	219	2530	2580	237	129
15	429	362	290	270	250	260	75	416	3940	2550	334	134
16	433	374	290	270	260	270	73	638	4620	2610	267	147
17	427	352	290	270	270	280	65	1090	3760	2570	225	165
18	421	330	290	270	280	290	64	1580	2730	2440	219	286
19	422	285	280	270	280	340	60	1520	2740	2170	227	330
20	421	180	280	280	290	251	52	1160	2910	1880	225	349
21	445	138	280	270	290	144	53	1110	2100	1770	213	376
22	432	170	290	270	300	122	67	1360	2660	2110	204	375
23	431	200	290	270	310	114	62	1630	3570	1450	174	402
24	416	240	300	270	310	115	49	1620	4040	1260	184	484
25	407	280	290	270	310	116	47	1490	4440	1100	186	474
26	411	330	290	270	300	116	47	1310	4400	920	149	428
27	411	350	290	280	290	112	128	1270	3590	824	133	402
28	409	360	280	280	280	112	349	1250	3520	807	138	730
29	409	360	280	280	---	111	201	1450	4010	1540	129	816
30	404	350	270	270	---	103	111	1750	4620	1850	133	414
31	404	---	270	270	---	121	---	1450	---	1730	132	---
TOTAL	12685	9844	8260	8600	7990	7007	2989	26071	81926	75821	10709	8049
MEAN	409	328	266	277	285	226	99.6	841	2731	2446	345	268
MAX	466	397	300	300	310	340	349	1750	4620	4880	1480	816
MIN	310	138	210	260	240	103	47	114	364	807	129	98
AC=FT	25160	19530	16380	17060	15850	13900	5930	51710	162500	150400	21240	15970
CAL YR 1977 TOTAL	81120.6			MEAN 222	MAX 1110	MIN 9.8	AC=FT 160900					
WTR YR 1978 TOTAL	259951.0			MEAN 712	MAX 4880	MIN 47	AC=FT 515600					

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 1977 TO SEPTEMBER 1978

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	PH (UNITS)	TEMPER- ATURE (DEG C)	TUR- BID- ITY (JTU)	OXYGEN, DIS- SOLVED (MG/L)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	HARD- NESS (MG/L AS CACO3)	HARD- NESS, NONCAR- BONATE (MG/L CACO3)
OCT									
05...	1345	332	--	9.5	20	9.0	7	180	8
NOV									
03...	1410	380	--	5.0	4	8.9	23	190	42
30...	1445	336	--	.0	10	10.7	47	200	20
JAN									
09...	1000	310	--	.0	3	10.5	4	220	33
FEB									
01...	1220	280	--	.0	2	10.3	5	210	20
27...	1445	281	--	.0	5	9.9	22	200	20
APR									
05...	1345	75	--	7.0	45	10.5	4	210	18
27...	1400	66	--	11.0	9	9.6	210	250	37
JUN									
01...	1030	902	--	10.0	40	9.3	51	90	0
JUL									
05...	0805	3440	7.9	14.5	35	9.5	50	59	0
AUG									
07...	1100	377	8.0	17.0	5	8.4	510	92	2
SEP									
08...	1045	103	8.1	18.5	1	9.1	200	140	9

DATE	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	BICAR- BONATE (MG/L AS HCO3)	CAR- BONATE (MG/L AS CO3)	ALKA- LINITY (MG/L AS CACO3)	SULFATE DIS- SOLVED (MG/L AS SO4)
OCT									
05...	49	15	33	1.1	2.9	210	0	170	65
NOV									
03...	50	17	32	1.0	4.4	180	0	150	75
30...	53	16	32	1.0	2.8	220	0	180	76
JAN									
09...	57	19	29	.8	3.0	220	4	190	73
FEB									
01...	59	16	31	.9	2.5	220	6	190	80
27...	55	16	30	.9	2.8	220	0	180	85
APR									
05...	58	15	56	1.7	3.1	210	12	190	110
27...	64	22	72	2.0	2.8	260	0	210	160
JUN									
01...	25	6.8	14	.6	1.4	110	0	90	34
JUL									
05...	18	3.7	6.6	.4	.1	73	0	60	14
AUG									
07...	25	7.2	19	.9	1.7	110	0	90	41
SEP									
08...	42	9.5	34	1.2	2.5	160	0	130	85

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 CONSTITU- ENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)	SOLIDS, DIS- SOLVED (TONS PER DAY)	NITRO- GEN, NITRATE DIS- SOLVED (MG/L AS N)	PHOS- PHORUS, TOTAL (MG/L AS P)
OCT								
05...	5.6	.3	14	290	.39	260	.38	.00
NOV								
03...	6.4	.4	17	293	.40	301	.11	.00
30...	6.1	.4	20	315	.43	286	.11	.00
JAN								
09...	19	.4	18	330	.45	276	.23	.02
FEB								
01...	6.1	.5	29	340	.46	257	.23	.02
27...	9.0	.3	17	322	.44	244	.18	.09
APR								
05...	8.2	.5	12	453	.62	91.7	.11	.08
27...	5.1	.1	.3	455	.62	81.1	.09	.00
JUN								
01...	1.7	.2	13	209	.28	509	.54	.16
JUL								
05...	.0	.0	10	89	.12	827	.11	.05
AUG								
07...	1.5	.1	8.8	160	.22	163	.11	.04
SEP								
08...	5.6	.5	9.0	348	.47	96.8	.02	.01

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DRAINAGE AREA.--90.3 mi² (233.9 km²).

WATER-DISCHARGE RECORDS

EXTREMES FOR CURRENT YEAR.--Peak discharges 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)		Date	Time	Discharge (ft ³ /s) (m ³ /s)		Gage height (ft) (m)	
June 10	0200	1,100	31.2	6.28	1.914	June 24	0330	1,180	33.4	6.43	1.960
June 15	0200	*1,370	38.8	6.82	2.079	June 30	0330	1,060	30.0	6.13	1.868

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

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	47	29	31	28	20	17	42	45	256	922	283	77
2	44	32	30	27	20	17	40	57	286	900	268	75
3	42	35	30	28	20	17	32	78	287	804	255	74
4	41	36	29	29	20	17	30	68	269	720	239	71
5	39	35	30	29	20	17	29	46	249	611	215	71
6	40	33	31	29	20	18	27	24	363	574	200	72
7	47	29	30	29	20	19	30	44	556	535	195	74
8	46	25	29	29	20	19	30	66	693	582	187	82
9	44	23	27	28	20	19	33	71	866	641	181	85
10	45	27	27	28	19	19	32	89	995	647	170	80
11	39	31	29	28	18	18	34	110	700	623	159	78
12	42	31	31	27	16	19	28	96	583	638	154	75
13	41	30	31	26	15	18	28	116	747	576	162	72
14	40	29	31	26	14	18	28	216	1130	568	177	68
15	39	29	30	26	15	17	26	358	1210	578	165	63
16	38	27	30	26	16	18	28	359	1090	547	138	58
17	38	26	30	26	17	18	24	284	891	579	124	56
18	36	25	31	25	17	19	24	183	798	529	118	67
19	35	23	31	24	17	19	25	168	810	450	105	64
20	35	21	31	23	18	20	26	204	751	406	93	63
21	38	24	32	22	19	20	26	244	811	449	84	59
22	40	27	33	22	19	21	23	287	978	449	84	58
23	39	30	33	22	19	18	24	337	998	372	97	56
24	39	32	33	22	19	18	23	338	1090	341	97	54
25	37	33	33	22	18	18	27	259	1060	332	95	53
26	36	33	33	22	18	19	31	231	829	344	91	52
27	35	33	32	22	18	20	36	257	734	332	90	51
28	34	32	31	21	17	21	34	312	832	323	87	49
29	33	32	31	21	---	24	32	405	923	383	86	48
30	31	31	30	21	---	29	39	364	960	352	84	47
31	28	---	29	20	---	32	---	275	---	306	80	---
TOTAL	1208	883	949	778	509	603	891	5991	22745	16413	4563	1952
MEAN	39.0	29.4	30.6	25.1	18.2	19.5	29.7	193	758	529	147	65.1
MAX	47	36	33	29	20	32	42	405	1210	922	283	85
MIN	28	21	27	20	14	17	23	24	249	306	80	47
AC-FT	2400	1750	1880	1540	1010	1200	1770	11880	45110	32560	9050	3870
CAL YR 1977	TOTAL	26448.5	MEAN	72.5	MAX	639	MIN	4.5	AC-FT	52460		
WTR YR 1978	TOTAL	57485.0	MEAN	157	MAX	1210	MIN	14	AC-FT	114000		

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 1977 TO SEPTEMBER 1978

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	HARD- NESS (MG/L AS CACO3)	HARD- NESS, NONCAR- BONATE (MG/L CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM AD- SURP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)
OCT												
05...	1530	38	80	--	9.0	32	9	8.6	2.5	2.8	.2	.6
31...	1245	24	90	--	1.0	36	8	9.4	3.0	3.3	.2	.6
DEC												
13...	1520	31	84	--	.0	32	10	8.2	2.8	2.7	.2	.6
JAN												
27...	0925	21	31	--	.5	40	8	10	3.6	3.9	.3	.7
MAR												
02...	1030	16	54	--	.0	48	11	12	4.3	4.4	.3	.7
APR												
03...	1410	20	87	--	6.5	50	13	13	4.2	4.0	.2	.8
MAY												
15...	1330	232	41	--	5.5	22	7	6.3	1.6	1.5	.1	.6
JUN												
09...	1140	819	29	--	5.5	11	0	3.9	.3	1.2	.2	.5
JUL												
13...	1155	580	50	7.6	8.0	13	5	4.0	.7	.9	.1	.4
AUG												
14...	1130	171	76	7.6	11.0	13	1	3.7	1.0	1.1	.1	.4
30...	1315	84	42	8.4	14.5	21	7	5.6	1.7	2.0	.2	.4

DATE	BICAR- BONATE (MG/L AS HCO3)	CAR- BONATE (MG/L AS CO3)	ALKA- LINITY (MG/L AS CACO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SiO2)	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												
05...	28	--	23	5.4	5.3	.1	4.0	43	.06	4.41	--	.00
31...	34	--	28	3.0	6.1	.1	4.5	47	.06	3.05	--	.00
DEC												
13...	27	--	22	4.8	5.3	.2	4.6	43	.06	3.60	.19	.02
JAN												
27...	39	--	32	7.2	8.6	.1	6.3	61	.08	3.46	.24	.01
MAR												
02...	45	--	37	5.9	9.8	.1	7.4	67	.09	2.89	.15	.02
APR												
03...	45	--	37	8.5	9.2	.1	6.6	69	.09	3.73	.11	.00
MAY												
15...	19	--	16	7.7	1.6	.0	6.5	35	.05	21.9	.04	.04
JUN												
09...	13	--	11	5.1	.8	.0	4.6	23	.03	50.9	.06	.00
JUL												
13...	10	0	8	4.9	.8	.0	2.8	20	.03	31.3	.08	.01
AUG												
14...	15	0	12	2.3	1.1	.0	2.2	19	.03	8.77	.03	.00
30...	17	0	14	3.0	2.5	.0	2.8	27	.04	6.12	.03	.01

YELLOWSTONE RIVER BASIN

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06231000 LITTLE WIND RIVER ABOVE ARAPAHOE, WY

LOCATION.--Lat 42°57'37", long 108°29'54", in NE¼SE¼ sec.22, T.1 S., R.3 E., Fremont County, Hydrologic Unit 10080002, Wind River Indian Reservation, at bridge on county road, 0.5 mi (0.8 km) west of Arapahoe, and 1.2 mi (1.9 km) upstream from Popo Agie River.

DRAINAGE AREA.--660 mi² (1,709 km²).

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

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

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	PH (UNITS)	TEMPER- ATURE (DEG C)	TUR- BID- ITY (JTU)	OXYGEN, DIS- SOLVED (MG/L)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	HARD- NESS (MG/L AS CAC03)	HARD- NESS, NONCAR- BONATE (MG/L CAC03)
OCT									
05...	1410	120	--	9.5	30	9.2	11	360	200
NOV									
03...	1430	82	--	6.0	4	9.0	32	430	250
DEC									
08...	1400	113	--	.0	--	--	--	330	170
JAN									
05...	1430	87	--	.0	--	--	--	330	170
FEB									
08...	0915	77	--	.0	--	--	--	300	140
MAR									
13...	1420	51	--	1.0	--	--	--	420	260
APR									
07...	1105	70	--	13.0	--	--	--	430	250
MAY									
01...	1330	145	--	12.0	--	--	--	380	220
JUN									
02...	1015	480	--	12.0	--	--	--	120	46
JUL									
06...	0850	820	7.8	15.0	--	--	--	94	32
AUG									
07...	1150	159	8.0	20.0	--	--	--	260	130
28...	1330	18	8.4	19.0	--	--	--	320	160

DATE	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	BICAR- BONATE (MG/L AS HCO3)	CAR- BONATE (MG/L AS CO3)	ALKA- LINITY (MG/L AS CAC03)	SULFATE DIS- SOLVED (MG/L AS SO4)
OCT									
05...	80	39	80	1.8	2.9	200	0	160	330
NOV									
03...	87	52	110	2.3	3.8	220	0	180	430
DEC									
08...	70	30	58	1.5	2.1	190	0	160	260
JAN									
05...	79	31	55	1.3	2.3	180	6	160	250
FEB									
08...	72	30	50	1.2	1.7	190	0	160	230
MAR									
13...	83	52	120	2.5	4.9	200	0	160	460
APR									
07...	99	43	120	2.5	3.3	220	0	180	340
MAY									
01...	74	46	81	1.8	2.3	200	0	160	360
JUN									
02...	28	12	20	.8	.5	90	0	74	81
JUL									
06...	24	8.4	15	.7	.1	76	0	62	58
AUG									
07...	60	27	55	1.5	2.6	160	0	130	230
28...	77	32	73	1.8	3.0	200	0	160	280

YELLOWSTONE RIVER BASIN

06231000 LITTLE WIND RIVER ABOVE ARAPAHOE, WY--Continued

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

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, NITRATE DIS- SOLVED (MG/L AS N)	PHOS- PHORUS, TOTAL (MG/L AS P)
OCT								
05...	9.3	.5	6.0	646	.88	209	.16	.00
NOV								
03...	16	.7	13	823	1.12	182	.32	.00
DEC								
08...	12	.4	8.7	531	.72	162	.25	.00
JAN								
05...	12	.5	9.7	535	.73	126	.36	.03
FEB								
08...	16	.6	9.0	503	.68	105	.32	.01
MAR								
13...	13	.6	13	840	1.14	116	.36	.01
APR								
07...	18	.8	7.1	740	1.01	140	.20	.06
MAY								
01...	10	.1	.2	672	.91	263	.00	.01
JUN								
02...	7.5	.2	.0	240	.33	311	.05	.15
JUL								
06...	.0	.1	4.8	148	.20	328	.07	.02
AUG								
07...	8.9	.4	2.5	467	.64	200	.45	.03
28...	8.9	.6	5.5	680	.92	33.0	.05	.05

YELLOWSTONE RIVER BASIN

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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 poor. 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 16	0730	*665	18.8	5.02	1.530

Minimum daily discharge during period of operation, 16 ft³/s (0.45 m³/s) May 7.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1							72	86	190	355	76	55
2							70	86	172	316	74	57
3							57	84	170	307	70	57
4							48	84	168	283	66	57
5							48	74	165	247	63	57
6							43	46	210	230	63	54
7							57	16	286	218	59	54
8							59	90	340	205	57	59
9							66	92	388	202	57	55
10							54	97	442	195	55	54
11							59	99	397	185	54	52
12							48	90	358	182	52	54
13							52	95	382	168	52	54
14							54	128	500	160	61	54
15							54	162	559	158	66	54
16							52	222	590	148	70	52
17							39	247	506	162	80	54
18							24	222	433	145	78	76
19							37	202	430	142	76	64
20							39	205	418	132	70	59
21							36	225	412	135	68	61
22							22	241	460	130	64	64
23							22	280	469	112	64	66
24							24	286	500	103	63	66
25							41	244	510	95	61	63
26							48	222	412	95	61	61
27							64	208	349	90	61	59
28							63	205	346	86	61	57
29							66	222	358	92	61	45
30							80	230	370	86	61	37
31							---	198	---	80	57	---
TOTAL							1498	4988	11290	5244	1981	1711
MEAN							49.9	161	376	169	63.9	57.0
MAX							80	286	590	355	80	76
MIN							22	16	165	80	52	37
AC-FT							2970	9890	22390	10400	3930	3390

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 was observed Feb. 2, Aug. 8.

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

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	PH (UNITS)	TEMPER- ATURE (DEG C)	HARD- NESS (MG/L AS CACO3)	HARD- NESS, NONCAR- BONATE (MG/L CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	BICAR- BONATE (MG/L AS HCO3)
OCT												
31...	1420	.16	--	4.0	560	400	150	45	230	4.2	11	190
NOV												
30...	1315	.70	--	.0	750	500	220	50	260	4.1	11	310
JAN												
03...	0855	.08	--	.0	680	430	200	47	240	4.0	7.9	310
FEB												
27...	1040	1.4	--	.5	640	390	180	47	240	4.1	9.7	300
APR												
07...	1040	14	--	12.0	450	250	130	32	170	3.5	8.7	240
MAY												
01...	1305	2.4	--	12.0	640	460	180	46	100	1.7	9.4	220
JUN												
02...	0930	66	--	11.5	200	77	58	13	45	1.4	3.0	150
JUL												
06...	1100	.01	8.2	24.5	830	610	250	51	250	3.8	1.1	270

DATE	CAR- BONATE (MG/L AS CO3)	ALKA- LINITY (MG/L AS CACO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)	SOLIDS, DIS- SOLVED (TONS PER DAY)	NITRO- GEN, NITRATE DIS- SOLVED (MG/L AS N)	PHOS- PHORUS, TOTAL (MG/L AS P)
OCT											
31...	0	160	700	130	1.1	15	1380	1.88	.60	.70	.00
NOV											
30...	0	250	880	120	1.2	19	1710	2.33	3.23	.36	.01
JAN											
03...	0	250	740	120	1.1	17	1530	2.08	.33	.07	.02
FEB											
27...	0	250	670	130	1.5	20	1450	1.97	5.48	.07	.06
APR											
07...	0	200	560	53	1.2	10	1080	1.47	40.8	.18	.18
MAY											
01...	0	180	710	110	3.2	.4	1270	1.73	8.23	.00	.00
JUN											
02...	0	120	140	19	.3	7.4	440	.60	78.4	.18	.57
JUL											
06...	0	220	880	150	1.1	17	1730	2.35	.05	.00	.03

06235500 LITTLE WIND RIVER NEAR RIVERTON, WY

LOCATION.--Lat 42°59'51", long 108°22'29", in NE¼NW¼ 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.--37 years, 586 ft³/s (16.60 m³/s), 424,600 acre-ft/yr (524 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 discharges 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)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
June 11	1045	4,220 120	6.42 1.957	June 25	2100	4,170 118	6.39 1.948
June 16	1745	*5,210 148	6.95 2.118				

Minimum daily discharge, 110 ft³/s (3.12 m³/s) Apr. 26.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	168	198	300	125	135	140	237	232	1670	3150	649	217
2	204	186	300	120	135	135	266	290	1510	2930	603	212
3	201	197	300	120	135	140	257	267	1380	2700	586	211
4	210	233	290	120	135	150	236	254	1360	2440	554	217
5	205	232	290	125	135	160	217	287	1310	2170	511	224
6	199	232	270	130	135	185	210	348	1190	1880	465	214
7	207	230	255	135	130	210	198	382	1460	1830	445	201
8	211	220	225	135	130	240	192	399	2220	1690	435	192
9	220	200	200	140	130	270	192	601	2840	1710	370	186
10	230	200	195	140	130	300	190	671	3710	1820	357	196
11	250	220	200	140	125	320	183	645	4050	1760	335	206
12	234	230	200	140	120	320	173	635	3070	1690	309	210
13	225	235	205	140	120	310	169	533	2680	1620	285	223
14	238	236	200	135	115	295	161	557	3250	1460	302	234
15	230	232	195	135	120	275	161	741	4290	1410	379	250
16	224	225	185	135	125	260	158	1070	4860	1410	361	246
17	220	219	175	130	125	270	156	1550	4670	1410	342	238
18	217	205	165	130	130	290	147	2320	3610	1350	331	384
19	208	185	160	135	135	295	137	2040	3150	1280	332	465
20	203	130	160	135	135	290	136	1440	3000	1080	322	393
21	239	150	160	135	135	285	129	1370	2820	985	304	398
22	273	180	155	135	135	280	121	1430	3090	1220	274	402
23	248	220	160	130	140	260	117	1670	3470	1110	235	398
24	236	250	160	130	145	255	112	1830	3690	951	221	384
25	230	280	155	130	145	229	111	1810	3980	843	204	366
26	222	300	150	130	145	214	110	1670	3690	765	224	361
27	226	310	145	130	145	212	122	1610	2820	728	228	348
28	225	310	140	135	140	210	135	1660	2620	699	230	340
29	215	310	135	135	---	206	139	1890	2760	699	228	335
30	207	310	135	135	---	210	146	2040	3110	744	229	330
31	202	---	130	135	---	220	---	1950	---	725	227	---
TOTAL	6827	6865	6095	4105	3710	7436	5018	34192	87330	46259	10877	8581
MEAN	220	229	197	132	133	240	167	1103	2911	1492	351	286
MAX	273	310	300	140	145	320	266	2320	4860	3150	649	465
MIN	168	130	130	120	115	135	110	232	1190	699	204	186
AC-FT	13540	13620	12090	8140	7360	14750	9950	67820	173200	91750	21570	17020

CAL YR 1977 TOTAL 82420 MEAN 226 MAX 1670 MIN 44 AC-FT 163500
WTR YR 1978 TOTAL 227295 MEAN 623 MAX 4860 MIN 110 AC-FT 450800

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 1977 TO SEPTEMBER 1978

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	PH (UNITS)	TEMPER- ATURE (DEG C)	HARD- NESS (MG/L AS CAC03)	HARD- NESS, NONCAR- BONATE (MG/L 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)	BICAR- BONATE (MG/L AS HCU3)
OCT 07...	1405	220	--	11.0	410	220	94	43	89	1.9	3.0	230
NOV 01...	1135	208	--	3.0	350	170	87	32	79	1.8	2.7	220
DEC 05...	1525	290	--	.0	330	170	78	34	63	1.5	2.1	200
JAN 03...	1215	121	--	.0	360	170	91	33	62	1.4	2.2	210
FEB 02...	1400	135	--	.0	340	160	78	34	53	1.3	2.0	220
MAR 14...	1350	297	--	.0	370	210	80	42	88	2.0	5.2	190
APR 07...	1355	197	--	11.0	380	210	92	35	78	1.8	3.2	210
MAY 01...	1055	246	--	10.0	360	200	82	37	75	1.7	2.1	200
JUN 01...	1300	1610	--	10.0	120	46	33	11	18	.7	1.2	90
JUL 05...	1400	2170	7.7	17.0	99	32	26	8.4	13	.6	.1	82
AUG 07...	1330	443	8.1	20.0	270	120	65	27	53	1.4	3.2	180
28...	1030	230	8.4	16.0	340	160	85	31	63	1.5	2.5	220

DATE	CAR- BONATE (MG/L AS CO3)	ALKA- LINITY (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)	SILICA, DIS- SOLVED (MG/L AS SIU2)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)	SOLIDS, DIS- SOLVED (TONS PER DAY)	NITRO- GEN, NITRATE DIS- SOLVED (MG/L AS N)	PHOS- PHORUS, TOTAL (MG/L AS P)
OCT 07...	0	190	370	10	.5	5.9	726	.99	431	.05	.00
NOV 01...	0	180	320	11	.5	4.9	645	.88	362	.07	.00
DEC 05...	0	160	270	9.8	.4	7.2	567	.77	444	.27	.00
JAN 03...	9	190	280	14	.6	9.5	604	.82	197	.45	.01
FEB 02...	0	180	240	8.3	.5	18	544	.74	198	.41	.05
MAR 14...	0	160	400	12	.5	13	739	1.01	593	.93	.09
APR 07...	0	170	340	11	1.0	5.5	670	.91	356	.11	.15
MAY 01...	0	160	320	8.5	.3	.2	624	.85	414	.00	.01
JUN 01...	0	74	80	.9	.3	6.7	242	.33	1050	.14	.17
JUL 05...	0	67	55	.0	.1	5.2	148	.20	867	.02	.02
AUG 07...	0	150	220	5.2	.4	3.1	465	.63	556	.23	.03
28...	0	180	280	9.6	.6	5.6	697	.95	433	.00	.03

DATE	TIME	2,4-D, TOTAL (UG/L)	2,4-D, TOTAL IN BOT- TOM MA- TERIAL (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 01...	1300	.00	0	.00	0	.00	.0

YELLOWSTONE RIVER BASIN

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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 1977 TO SEPTEMBER 1978

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	PH (UNITS)	TEMPER- ATURE (DEG C)	TUR- BID- ITY (JTU)	OXYGEN, DIS- SOLVED (MG/L)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	HARD- NESS (MG/L AS CACO3)	HARD- NESS, NONCAR- BONATE (MG/L CACO3)
OCT									
05...	1055	694	--	10.5	20	9.2	72	270	82
NOV									
03...	0900	640	--	4.0	5	9.0	82	270	78
30...	1135	752	--	.0	10	10.9	350	280	100
JAN									
09...	1525	580	--	.0	5	9.4	400	170	84
FEB									
01...	1430	555	--	.0	3	9.0	750	250	66
MAR									
03...	1500	450	--	.0	7	9.9	600	270	83
APR									
05...	1030	375	--	7.5	55	10.0	76	300	120
25...	1010	250	--	8.5	8	9.8	11	320	120
JUN									
01...	0920	2750	--	9.5	60	8.5	270	120	38
JUL									
05...	1320	5710	7.8	17.0	50	9.6	71	76	20
AUG									
07...	0830	1040	7.8	17.0	10	8.0	520	180	60
SEP									
08...	1005	400	8.1	18.0	1	9.1	170	250	72

DATE	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	BICAR- BONATE (MG/L AS HCO3)	CAR- BONATE (MG/L AS CO3)	ALKA- LINITY (MG/L AS CACU3)	SULFATE DIS- SOLVED (MG/L AS SO4)
OCT									
05...	67	25	54	1.4	3.1	230	--	190	200
NOV									
03...	67	26	47	1.2	2.9	240	--	200	180
30...	66	29	50	1.3	2.8	220	--	180	190
JAN									
09...	45	15	27	.9	2.0	110	--	90	120
FEB									
01...	64	23	42	1.1	2.7	230	--	190	140
MAR									
03...	71	23	43	1.1	2.9	230	--	190	150
APR									
05...	73	28	61	1.5	3.2	220	--	180	230
25...	74	32	73	1.8	3.1	240	--	200	270
JUN									
01...	32	9.5	18	.7	1.7	99	--	81	64
JUL									
05...	21	5.8	9.7	.5	1.4	69	0	57	35
AUG									
07...	47	16	35	1.1	2.2	150	0	120	110
SEP									
08...	65	22	62	1.7	3.2	220	0	180	180

YELLOWSTONE RIVER BASIN

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

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

DATE	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)	SOLIDS, DIS- SOLVED (TONS PER DAY)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	PHOS- PHORUS, TOTAL (MG/L AS P)
OCT 05...	6.8	.5	11	481	.65	901	--	.06
NOV 03...	6.6	.4	12	460	.63	795	--	.02
30...	7.1	.4	13	467	.64	948	--	.07
JAN 09...	4.7	.2	10	278	.38	435	--	.05
FEB 01...	6.6	.3	15	409	.56	613	.34	.08
MAR 03...	7.7	.4	17	430	.58	522	.32	.10
APR 05...	12	.4	12	529	.72	536	.21	.07
25...	10	.4	6.3	587	.80	396	.04	.05
JUN 01...	3.4	.2	9.9	188	.26	1400	.12	.05
JUL 05...	1.8	.1	8.2	177	.24	2730	.03	.19
AUG 07...	3.8	.3	9.9	298	.41	837	.01	.05
SEP 08...	6.7	.4	9.4	457	.62	494	.01	.06

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	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)	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 19...	0800	E800	7.0	.0	0	.00	.00	.0	.0	0	.00
MAY 11...	1800	E700	16.0	.0	0	.00	.00	.0	.0	0	.00

E-Estimate.

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- FLORIN, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	ENDO- SULFAN, TOTAL (UG/L)	ENDRIN, TOTAL (UG/L)	ENDRIN, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)
OCT 19...	.0	.00	.1	.00	.0	.00	.00	.0	.00	.00	.0
MAY 11...	.1	.00	.1	.00	.0	.00	.00	.0	.00	.00	.0

DATE	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)	METHYL PARA- THION, TOTAL (UG/L)	METHYL TRI- THION, TOTAL (UG/L)
OCT 19...	.00	.00	.0	.00	.0	.00	.0	.00	.00	.00
MAY 11...	.00	.00	.0	.00	.0	.00	.0	.00	.00	.00

DATE	PARA- THION, TOTAL (UG/L)	TOXA- PHENE, TOTAL (UG/L)	TOXA- PHENE, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	TOTAL TRI- THION (UG/L)	2,4-D, TOTAL (UG/L)	2,4-D, TOTAL IN BOT- TOM MA- TERIAL (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 19...	.00	0	0	.00	.00	--	.00	--	.00	--
MAY 11...	.00	0	0	.00	.00	0	.00	0	.00	.0

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 to September 1978.

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 except those for periods of no gage-height record, May 13 to June 7, July 31 to Aug. 10, which are fair.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 108 ft³/s (3.06 m³/s) Sept. 7, 1978, gage height, 3.99 ft (1.216 m); no flow at times in 1949 and 1952.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 108 ft³/s (3.06 m³/s) Sept. 7, gage height, 3.99 ft (1.216 m); minimum daily, 6.3 ft³/s (0.18 m³/s) Apr. 24.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1						---	14	11	30	52	90	95
2						---	14	12	30	53	92	95
3						---	14	12	30	54	92	95
4						---	13	13	30	55	92	94
5						---	13	13	30	55	93	95
6						---	13	15	29	56	94	96
7						---	13	18	29	57	94	96
8						---	13	19	29	58	94	95
9						---	11	20	29	59	97	93
10						---	11	20	30	61	98	92
11						---	13	21	28	62	95	91
12						---	10	23	28	62	95	85
13						---	9.5	25	29	63	95	84
14						---	9.2	26	29	64	95	83
15						---	9.1	27	29	65	95	83
16						---	9.3	28	29	65	97	83
17						---	11	28	29	66	95	83
18						---	7.9	29	30	67	95	88
19						---	7.3	29	30	68	96	89
20						---	7.5	29	31	68	96	89
21						---	8.2	29	32	70	96	88
22						---	8.6	29	34	74	97	88
23						---	6.6	30	37	76	96	88
24						---	6.3	30	40	78	95	88
25						---	6.6	29	43	80	95	88
26						---	7.3	29	42	80	93	86
27						---	7.7	29	44	80	93	86
28						---	8.2	29	45	81	93	86
29						---	8.8	29	48	83	93	86
30						14	9.5	29	50	86	94	85
31						14	---	30	---	88	94	---
TOTAL	---	---	---	---	---	---	300.6	740	1003	2086	2929	2673
MEAN	---	---	---	---	---	---	10.0	23.9	33.4	67.3	94.5	89.1
MAX	---	---	---	---	---	---	14	30	50	88	98	96
MIN	---	---	---	---	---	---	6.3	11	28	52	90	83
AC-FT	---	---	---	---	---	---	596	1470	1990	4140	5810	5300

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 to September 1978.

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

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	HARD- NESS (MG/L AS CAC03)	HARD- NESS, NONCAR- BONATE (MG/L AS CAC03)	CALCIUM DIS- SOLVED (MG/L AS CA)
APR									
06...	1030	13	1800	7.2	9.0	9.6	320	130	78
25...	1345	6.9	1625	8.5	10.0	10.6	320	120	79
JUN									
05...	1205	30	1750	8.9	18.0	8.3	330	140	83
JUL									
13...	0935	62	1350	8.2	20.0	7.2	310	120	76
AUG									
10...	0945	98	1450	8.4	19.0	7.0	290	100	72
SEP									
01...	1300	95	1400	8.4	20.0	8.1	290	120	76

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)	BICAR- BONATE (MG/L AS HCO3)	CAR- BONATE (MG/L AS CO3)	ALKA- LINITY (MG/L AS CAC03)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)
APR									
06...	30	280	6.8	5.0	230	--	190	690	23
25...	29	270	6.6	5.3	230	3	190	650	23
JUN									
05...	29	290	7.0	5.6	220	5	190	700	21
JUL									
13...	28	260	6.5	5.3	220	0	180	660	24
AUG									
10...	26	260	6.7	5.5	220	2	180	630	20
SEP									
01...	25	240	6.1	5.3	200	6	170	580	21

DATE	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)	BORON, DIS- SOLVED (UG/L AS B)	IRON, DIS- SOLVED (UG/L AS FE)
APR								
06...	.7	6.0	1230	1.67	43.2	.04	130	20
25...	.7	5.2	1180	1.60	22.0	.01	130	50
JUN								
05...	.7	4.4	1250	1.70	101	.01	130	10
JUL								
13...	.7	6.5	1170	1.59	196	.05	130	20
AUG								
10...	.7	7.9	1130	1.54	299	.00	130	10
SEP								
01...	.6	8.3	1060	1.44	272	.02	130	30

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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.

WATER-DISCHARGE RECORDS

REMARKS.--Records good 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.

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, 509 ft³/s (14.4 m³/s) July 31, gage height, 3.92 ft (1.195 m); minimum daily, 33 ft³/s (0.94 m³/s) Jan. 2.

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	173	72	62	36	36	44	52	158	152	354	464	350
2	129	75	62	33	36	43	48	154	150	357	406	340
3	118	72	62	34	36	43	47	135	160	360	392	323
4	109	72	61	35	36	46	45	127	180	360	385	316
5	107	71	60	36	37	47	45	139	200	360	392	306
6	111	71	57	37	37	48	44	158	205	360	410	316
7	106	71	58	37	38	48	43	171	210	350	424	330
8	97	70	58	37	38	49	44	164	220	350	392	350
9	96	70	56	37	38	49	43	150	222	350	388	330
10	94	72	56	37	38	54	41	133	218	350	382	330
11	91	68	58	37	38	48	43	129	225	340	388	347
12	85	67	58	38	37	50	44	133	228	340	385	368
13	84	67	60	38	36	48	42	135	254	340	385	382
14	81	67	60	38	36	48	43	141	280	340	410	374
15	80	67	56	37	36	45	46	154	303	343	428	368
16	78	66	53	37	36	44	88	154	316	347	416	364
17	78	70	53	37	37	46	118	154	303	354	413	360
18	78	64	52	37	37	48	54	283	293	360	402	406
19	77	58	52	38	37	50	50	212	316	378	396	396
20	77	54	51	38	39	51	107	144	330	402	406	396
21	81	52	51	38	40	50	85	124	316	406	410	364
22	78	52	50	37	43	51	114	124	316	413	402	392
23	77	54	50	37	44	51	133	122	333	416	402	382
24	75	56	49	36	45	49	135	124	333	406	382	357
25	76	58	47	36	45	48	135	164	350	410	382	354
26	75	60	46	36	45	48	144	175	374	416	374	347
27	74	62	45	37	44	48	139	180	371	432	368	340
28	74	62	44	37	44	48	144	175	368	456	385	343
29	72	60	42	36	---	47	146	175	357	472	374	340
30	71	61	40	36	---	47	150	164	368	468	368	343
31	71	---	38	36	---	51	---	156	---	484	368	---
TOTAL	2773	1941	1647	1136	1089	1487	2412	4811	8251	11874	12279	10614
MEAN	89.5	64.7	53.1	36.6	38.9	48.0	80.4	155	275	383	396	354
MAX	173	75	62	38	45	54	150	283	374	484	464	406
MIN	71	52	38	33	36	43	41	122	150	340	368	306
AC-FT	5500	3850	3270	2250	2160	2950	4780	9540	16370	23550	24360	21050
CAL YR 1977	TOTAL	32918	MEAN	90.2	MAX 387	MIN 34	AC-FT	65290				
WTR YR 1978	TOTAL	60314	MEAN	165	MAX 484	MIN 33	AC-FT	119600				

YELLOWSTONE RIVER BASIN

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 1977 TO SEPTEMBER 1978

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	HARD- NESS (MG/L AS CACO3)	HARD- NESS, NONCAR- BONATE (MG/L CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)
OCT									
14...	0950	83	--	--	7.5	480	240	120	46
31...	1235	69	--	--	4.0	460	230	110	49
NOV									
28...	1030	63	--	--	.5	520	270	140	41
JAN									
10...	1045	40	--	--	.0	510	230	110	54
FEB									
03...	1435	39	--	--	.5	640	350	170	52
MAR									
06...	1450	51	--	--	.0	650	480	180	49
APR									
06...	1330	42	--	--	13.5	650	420	180	48
25...	0850	144	--	--	8.5	270	90	75	19
JUN									
05...	0905	222	960	--	13.0	250	86	69	19
JUL									
14...	0835	343	--	--	17.0	190	34	55	13
AUG									
02...	1230	413	--	8.1	17.5	180	32	51	12
SEP									
05...	1130	309	--	8.3	18.0	250	78	73	17

DATE	SODIUM, AD- SORP- TION (MG/L AS NA)	SODIUM SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	BICAR- BONATE (MG/L AS HCO3)	CAR- BONATE (MG/L AS CO3)	ALKA- LITY (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									
14...	300	5.9	3.7	290	0	240	810	21	1.0
31...	320	6.4	3.8	280	0	230	900	24	1.0
NOV									
28...	260	5.0	3.9	310	0	250	790	25	1.0
JAN									
10...	440	8.6	4.6	340	0	280	1100	28	1.2
FEB									
03...	420	7.2	4.3	350	0	290	1100	30	1.2
MAR									
06...	400	6.8	4.9	210	0	170	1300	30	1.0
APR									
06...	490	8.4	5.4	280	0	230	1400	32	1.0
25...	130	3.5	2.7	220	0	180	320	5.1	.1
JUN									
05...	150	4.1	3.4	200	0	160	360	7.7	.6
JUL									
14...	130	4.1	.3	190	0	160	290	10	.6
AUG									
02...	120	3.9	.1	180	0	150	290	9.3	.6
SEP									
05...	180	4.9	3.7	210	0	170	410	12	.4

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, NITRATE 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								
14...	4.9	1500	2.04	336	2.9	.01	--	--
31...	6.3	1570	2.14	293	3.4	.00	--	--
NOV								
28...	7.7	1430	1.94	243	2.7	.00	--	--
JAN								
10...	8.6	1950	2.65	211	2.3	.01	--	--
FEB								
03...	7.5	2000	2.72	211	4.5	.05	--	--
MAR								
06...	8.8	2090	2.84	288	2.7	.45	--	--
APR								
06...	3.8	2330	3.17	264	2.9	.05	--	--
25...	.3	661	.90	257	.02	.00	--	--
JUN								
05...	15	720	.98	432	3.6	.48	278	167
JUL								
14...	5.1	600	.82	556	1.2	.03	265	245
AUG								
02...	8.2	582	.79	649	.54	.26	246	274
SEP								
05...	7.5	917	1.25	765	.81	.19	91	76

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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.

WATER-DISCHARGE RECORDS

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.

Date	Time	Discharge		Gage height	
		(ft ³ /s)	(m ³ /s)	(ft)	(m)
May 18	0700	*144	4.08	5.69	1.734

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.00	.00	.00	.00	8.0	21	.00	.00	.00
2	.00	.00	.00	.00	.00	.00	.00	11	17	.00	.00	.00
3	.00	.00	.00	.00	.00	.00	.00	15	15	.00	.00	.00
4	.00	.00	.00	.00	.00	.00	.00	29	17	.00	.00	.00
5	.00	.00	.00	.00	.00	.00	.00	26	18	.00	.00	.00
6	.00	.00	.00	.00	.00	.00	.00	23	13	.00	.00	.00
7	.00	.00	.00	.00	.00	.00	.00	20	11	.00	.00	.00
8	.00	.00	.00	.00	.00	.00	.00	26	11	.00	.00	.00
9	.00	.00	.00	.00	.00	.00	.00	30	9.8	.00	.00	.00
10	.00	.00	.00	.00	.00	.00	.00	36	9.8	.00	.00	.00
11	.00	.00	.00	.00	.00	.00	.00	35	8.1	.00	.00	.00
12	.00	.00	.00	.00	.00	.00	.00	30	5.8	.00	.00	.00
13	.00	.00	.00	.00	.00	.00	.00	27	4.7	.00	.00	.00
14	.00	.00	.00	.00	.00	.00	.00	28	1.2	.00	.00	.00
15	.00	.00	.00	.00	.00	.00	.00	29	.24	.00	.00	.00
16	.00	.00	.00	.00	.00	.00	.00	29	.07	2.1	.00	.00
17	.00	.00	.00	.00	.00	.00	.00	47	.02	.00	.00	.00
18	.00	.00	.00	.00	.00	.00	.00	94	.00	.00	.00	.00
19	.00	.00	.00	.00	.00	.00	.00	63	.00	.00	.00	.00
20	.00	.00	.00	.00	.00	.00	.00	70	.00	.00	.00	.00
21	.00	.00	.00	.00	.00	.00	.00	80	.00	.00	.00	.00
22	.00	.00	.00	.00	.00	.00	.00	83	.00	.00	.00	.00
23	.00	.00	.00	.00	.00	.00	.00	79	.00	.00	.00	.00
24	.00	.00	.00	.00	.00	.00	.00	70	.00	.00	.00	.00
25	.00	.00	.00	.00	.00	.00	.00	54	.00	.00	.00	.00
26	.00	.00	.00	.00	.00	.00	.00	39	.00	.00	.00	.00
27	.00	.00	.00	.00	.00	.00	.00	31	.00	.00	.00	.00
28	.00	.00	.00	.00	.00	.00	.57	26	.00	.00	.00	.00
29	.00	.00	.00	.00	---	.00	22	22	.00	.00	.00	.00
30	.00	.00	.00	.00	---	.00	12	24	.00	.00	.00	.00
31	.00	---	.00	.00	---	.00	---	23	---	.00	.00	---
TOTAL	.00	.00	.00	.00	.00	.00	34.57	1207.0	162.73	2.10	.00	.00
MEAN	.0000	.0000	.0000	.0000	.0000	.0000	1.15	38.9	5.42	.068	.0000	.0000
MAX	.00	.00	.00	.00	.00	.00	.22	94	21	2.1	.00	.00
MIN	.00	.00	.00	.00	.00	.00	.00	8.0	.00	.00	.00	.00
AC-FT	.00	.00	.00	.00	.00	.00	69	2390	323	4.2	.00	.00
CAL YR 1977	TOTAL	941.48	MEAN 2.58	MAX 57	MIN .00	AC-FT 1870						
WTR YR 1978	TOTAL	1406.40	MEAN 3.85	MAX 94	MIN .00	AC-FT 2790						

YELLOWSTONE RIVER BASIN

06256900 DRY CREEK NEAR BONNEVILLE, WY--Continued

WATER-QUALITY RECORDS

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

PERIOD OF DAILY RECORD.--

SUSPENDED-SEDIMENT DISCHARGE: September 1965 to current year.

REMARKS.--No flow was observed Aug. 2.

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, 1,780 tons (1,615 tonnes) May 18; minimum daily, 0 tons on many days during year.

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

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	TEMPER- ATURE (DEG C)	HARD- NESS (MG/L AS CACO3)	HARD- NESS, NONCAR- BONATE (MG/L CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)
MAY											
08...	1055	26	190	4.0	87	17	27	4.8	11	.5	1.7
15...	0915	30	195	9.5	86	19	26	5.2	7.4	.3	1.4
18...	1330	94	270	5.0	88	19	27	4.9	19	.9	2.4
24...	1440	71	210	13.0	87	17	26	5.4	9.8	.5	2.2
JUN											
02...	0925	18	300	10.0	120	23	35	8.2	14	.6	1.6
07...	0800	11	330	12.0	--	--	--	--	--	--	--
12...	0925	7.0	340	11.0	170	44	47	12	19	.6	1.8

DATE	BICAR- BONATE (MG/L AS HCO3)	ALKA- LINEITY (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											
08...	86	71	34	2.0	.2	14	137	.19	9.62	.04	.28
15...	82	67	25	1.3	.1	7.1	114	.16	9.23	.01	.26
18...	84	69	57	2.8	.2	13	168	.23	42.6	.13	1.2
24...	86	71	33	2.1	.1	15	136	.19	26.1	.01	.28
JUN											
02...	120	98	56	2.5	.2	16	193	.26	9.38	.03	.05
07...	--	--	--	--	--	--	--	--	--	--	--
12...	150	120	70	2.3	.3	19	245	.33	4.63	.03	.02

MONTHLY AND ANNUAL SUMMARY OF WATER AND SUSPENDED-SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

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 1977...	0	0	0	0	0	0		
NOVEMBER.....	0	0	0	0	0	0		
DECEMBER.....	0	0	0	0	0	0		
JANUARY 1978...								
FEBRUARY.....	0	0	0	0	0	0		
MARCH.....	0	0	0	0	0	0		
APRIL.....	34.57	69	80.15	2.67	60	0		
MAY.....	1,207	2,390	10,741.7	347	1,780	9.7		
JUNE.....	162.73	323	304.34	10.1	55	0		
JULY.....	2.1	4.2	1.1	.035	1.1	0		
AUGUST.....	0	0	0	0	0	0		
SEPTEMBER.....	0	0	0	0	0	0		
WATER YEAR...	1,406.40	2,790	11,127.29	30.5	1,780	0		

YELLOWSTONE RIVER BASIN

85

06256900 DRY CREEK NEAR BONNEVILLE, WY--Continued

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

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 .500 MM	SED. SUSP. FALL DIAM. % FINER THAN 1.00 MM
MAY												
08...	1055	4.0	26	629	44	60	76	96	99	100	--	--
15...	0915	9.5	30	580	47	36	46	73	93	98	99	100
18...	1300	5.0	94	5500	1400	31	40	60	85	97	100	--
24...	1440	13.0	71	1360	261	31	41	61	80	96	100	--
JUN												
02...	0925	10.0	18	88	4.3	--	--	--	--	--	--	--
12...	0925	11.0	7.0	44	.83	--	--	--	--	--	--	--

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							
08...	1055	4.0	26	5	7	12	25
JUN							
02...	0925	10.0	18	5	16	27	41
12...	0925	11.0	7.0	0	1	7	28

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							
08...	47	64	79	87	92	96	100
JUN							
02...	53	69	81	89	93	96	100
12...	46	64	80	92	99	100	--

YELLOWSTONE RIVER BASIN

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 November to May, and September, 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.--25 years (water years 1950-68, 1973-78), 20.3 ft³/s (0.575 m³/s), 14,710 acre-ft/yr (18.1 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 OF 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, 303 ft³/s (8.58 m³/s) May 18, gage height, 3.80 ft (1.158 m); maximum gage height, 3.84 ft (1.170 m) Mar. 21 (backwater from ice); minimum daily discharge, 3.5 ft³/s (0.10 m³/s) Jan. 2.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	15	9.2	12	4.2	6.0	11	17	22	28	34	38	15
2	14	8.0	12	3.5	6.5	10	16	28	37	35	43	15
3	13	9.2	11	3.7	8.4	10	15	30	32	35	44	14
4	14	8.2	11	3.9	9.0	10	14	28	26	30	41	15
5	13	8.8	10	4.0	9.2	10	13	26	29	26	39	15
6	11	8.8	10	4.1	9.4	10	13	23	27	30	47	16
7	10	9.2	10	4.1	9.6	11	12	22	30	27	52	16
8	9.2	9.2	10	4.1	9.6	11	11	24	26	24	44	17
9	9.2	7.8	9.6	4.2	9.8	13	10	23	25	22	39	20
10	8.2	8.2	9.4	4.2	9.4	15	10	20	26	22	32	20
11	8.0	8.5	9.4	4.2	8.5	14	9.2	17	28	22	29	23
12	7.7	8.6	9.6	4.4	7.2	13	8.4	19	31	20	29	28
13	8.2	8.8	9.8	4.5	7.0	12	8.0	17	33	19	30	33
14	8.0	9.1	9.4	4.6	7.0	12	8.0	14	30	20	35	32
15	7.5	9.4	9.0	4.6	7.0	11	8.0	16	35	24	42	31
16	7.7	9.6	8.8	4.5	7.2	11	8.0	17	33	30	50	34
17	7.5	9.8	8.5	4.3	7.2	12	7.7	29	35	30	51	39
18	9.2	9.8	8.4	4.4	7.0	14	112	130	34	28	47	42
19	9.6	9.6	8.4	4.7	7.0	17	95	43	37	30	54	40
20	8.2	9.4	8.2	5.2	7.2	20	79	32	34	32	56	37
21	8.4	9.1	8.1	5.2	8.0	19	70	23	31	30	59	35
22	8.0	9.2	8.0	5.0	8.9	19	18	19	28	32	59	39
23	7.1	9.8	7.6	4.9	10	30	28	18	30	32	42	38
24	6.9	10	7.4	4.8	11	27	38	18	26	32	30	37
25	6.9	12	7.3	5.0	12	23	23	14	28	29	24	36
26	7.1	13	7.0	5.2	12	21	23	15	30	22	24	36
27	6.9	13	6.4	5.3	11	19	29	16	34	23	23	36
28	6.9	13	6.0	5.6	11	19	23	21	45	25	26	36
29	6.9	13	5.6	5.8	---	18	19	17	33	28	23	36
30	7.3	12	5.1	5.8	---	17	19	18	37	32	20	35
31	12	---	4.7	5.6	---	14	---	18	---	36	17	---
TOTAL	282.6	293.3	267.7	143.6	243.1	473	764.3	777	938	861	1189	866
MEAN	9.12	9.78	8.64	4.63	8.68	15.3	25.5	25.1	31.3	27.8	38.4	28.9
MAX	15	13	12	5.8	12	30	112	130	45	36	59	42
MIN	6.9	7.8	4.7	3.5	6.0	10	7.7	14	25	19	17	14
AC-FT	561	582	531	285	482	938	1520	1540	1860	1710	2360	1720

CAL YR 1977 TOTAL 5931.3 MEAN 16.3 MAX 208 MIN 4.7 AC-FT 11760
WTR YR 1978 TOTAL 7098.6 MEAN 19.4 MAX 130 MIN 3.5 AC-FT 14080

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 since October 1951. (See page .) 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.--27 years, 1,425 ft³/s (40.36 m³/s), 1,032,000 acre-ft/yr (1,272 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, 5,080 ft³/s (144 m³/s) July 2-6, gage height, 8.58 ft (2.615 m); minimum daily, 287 ft³/s (8.13 m³/s) Dec. 17.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	775	308	307	293	455	626	2110	1760	1210	5020	2980	1210
2	778	309	309	307	455	620	2110	1760	1210	5020	2980	1210
3	763	306	308	304	455	622	2050	1770	1210	4950	2980	1210
4	696	305	310	325	455	622	2100	1770	1210	5040	2810	1200
5	643	308	304	334	455	619	2100	1470	1200	5040	2560	1210
6	589	314	302	332	455	617	2100	1310	1200	5050	2550	1210
7	541	312	303	332	490	637	2110	1310	1190	5010	2550	1220
8	486	310	305	332	490	651	2100	1310	1200	4820	2250	1220
9	442	306	304	332	499	656	2100	1300	1200	4420	2080	1210
10	395	309	304	360	498	659	2130	1180	1200	4420	2080	1220
11	338	303	302	365	497	654	2160	1120	1210	4440	2070	1230
12	307	309	302	365	493	654	2160	1180	1200	4470	2060	1230
13	308	306	302	365	493	654	2150	1300	1200	4380	2050	1240
14	309	301	299	360	528	654	2140	1310	1200	4540	2050	1250
15	307	309	311	360	545	687	2140	1160	1200	4540	2050	1230
16	305	307	299	360	541	702	2140	1150	1240	4540	2040	1220
17	306	305	287	385	541	704	2140	1270	1300	4560	2040	1210
18	306	308	312	385	541	696	2150	980	1290	4540	2030	1220
19	310	309	309	385	541	700	2150	480	1300	4450	2030	1230
20	308	302	309	385	540	707	2150	479	1300	4360	2020	1230
21	308	303	310	385	565	735	2150	483	1300	4240	2020	1230
22	308	304	310	385	576	749	2140	829	1290	4060	2000	1230
23	304	302	310	385	575	954	2150	1280	1290	4060	1990	1220
24	308	301	309	425	586	1270	1970	1300	1300	4060	1990	1220
25	312	302	303	425	577	1390	1770	1310	1300	4070	1760	1210
26	312	301	306	425	577	1390	1770	1250	1510	3700	1530	1210
27	309	300	305	425	574	1590	1770	1210	1970	3260	1540	1220
28	306	305	301	425	609	1980	1770	1210	2700	2950	1540	1220
29	305	309	302	425	---	2120	1770	1210	3680	2950	1330	1410
30	308	308	304	425	---	2120	1770	1210	4620	2960	1210	1640
31	309	---	307	450	---	2120	---	1210	---	2980	1210	---
TOTAL	12601	9181	9455	11546	14606	29559	61520	37871	45430	132900	64380	37220
MEAN	406	306	305	372	522	954	2051	1222	1514	4287	2077	1241
MAX	778	314	312	450	609	2120	2160	1770	4620	5050	2980	1640
MIN	304	300	287	293	455	617	1770	479	1190	2950	1210	1200
AC-FT	24990	18210	18750	22900	28970	58630	122000	75120	90110	263600	127700	73830
CAL YR 1977 TOTAL	284394			779	1640	283	AC-FT	564100				
WTR YR 1978 TOTAL	466269			1277	5050	287	AC-FT	924800				

YELLOWSTONE RIVER BASIN

06259000 WIND RIVER BELOW BOYSEN RESERVOIR, WY--Continued

WATER-QUALITY RECORDS

LOCATION.--Daily water temperatures and samples for specific conductance collected at tailrace of powerplant at Boysen Dam, 0.6 mi (1.0 km) upstream from discharge station.

PERIOD OF RECORD.--Water years 1954, 1961 to current year.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: November 1953 to September 1954, December 1960 to current year.

WATER TEMPERATURES: December 1953 to September 1954, December 1960 to current year.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Maximum daily, 1,380 micromhos June 18, 1954; minimum daily, 367 micromhos July 1, 1976.

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

EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum daily, 956 micromhos Apr. 9; minimum daily, 473 micromhos Sept. 1.

WATER TEMPERATURES: Maximum, 20.0°C Aug. 14; minimum, 1.0°C Dec. 28 to Jan. 3.

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

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHQS)	TEMPER- ATURE (DEG C)	TUR- BID- ITY (JTU)	OXYGEN, DIS- SOLVED (MG/L)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	HARD- NESS (MG/L AS CACO3)	HARD- NESS, NONCAR- BONATE (MG/L CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)
OCT										
11...	1130	366	850	14.0	6	--	<1	250	100	61
NOV										
05...	1130	308	810	12.0	2	8.9	K2	250	94	62
DEC										
13...	1030	298	980	2.0	--	12.0	<1	260	96	67
JAN										
07...	1130	336	870	2.0	1	12.4	K1	260	96	67
FEB										
09...	1100	546	900	3.0	1	10.1	<1	290	110	67
MAR										
09...	1030	596	890	3.5	1	12.2	<1	290	110	68
APR										
04...	1200	2100	750	4.5	1	12.7	<1	270	96	63
MAY										
09...	1230	1350	800	8.0	3	10.7	--	470	370	60
JUN										
06...	1200	1200	900	14.0	--	10.0	2	230	74	59
27...	1230	2100	850	16.0	2	8.3	<1	200	69	54
JUL										
27...	1230	3470	550	17.5	2	--	20	160	62	44
AUG										
30...	1045	1250	540	20.0	4	7.0	--	170	72	46

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)	BICAR- BONATE (MG/L AS HCO3)	CAR- BONATE (MG/L AS CO3)	ALKA- LINITY (MG/L AS CACO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)
OCT									
11...	23	91	2.5	3.4	180	0	150	270	10
NOV									
05...	24	89	2.4	3.7	190	0	160	250	9.7
DEC									
13...	23	92	2.5	3.1	200	0	160	270	9.6
JAN									
07...	22	95	2.6	4.2	200	0	160	280	13
FEB									
09...	30	92	2.3	3.2	220	0	180	280	9.6
MAR									
09...	29	88	2.3	3.0	220	0	180	280	13
APR									
04...	26	94	2.5	2.8	200	6	170	280	9.6
MAY									
09...	21	89	2.5	2.8	120	0	100	290	6.4
JUN									
06...	21	88	2.5	2.8	190	0	160	240	23
27...	18	71	2.1	2.5	160	0	130	200	8.5
JUL									
27...	13	47	1.6	2	120	0	98	150	6.3
AUG									
30...	13	45	1.5	2.2	120	0	98	150	3.7

06259000 WIND RIVER BELOW BOYSEN RESERVOIR, WY--Continued

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

DATE		FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, RESIDUE AT 105 DEG. C, DIS- SOLVED (MG/L)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)	SOLIDS, DIS- SOLVED (TONS PER DAY)	SOLIDS, RESIDUE AT 105 DEG. C, SUS- PENDED (MG/L)	NITRO- GEN, NITRATE DIS- SOLVED (MG/L AS N)	PHOS- PHORUS, TOTAL (MG/L AS P)
OCT	11...	.6	12	--	566	.77	559	--	.45	.03
NOV	05...	.5	5.7	--	542	.74	451	--	.20	.01
DEC	13...	.4	7.0	610	569	.77	458	3	.25	.02
JAN	07...	.6	4.8	--	581	.79	527	--	.18	.02
FEB	09...	.6	7.8	630	600	.82	885	<1	.18	.02
MAR	09...	.5	9.4	--	597	.81	961	--	.14	.00
APR	04...	.5	13	590	594	.81	3370	<1	.11	.09
MAY	09...	.5	5.1	--	535	.73	1950	--	.34	.02
JUN	06...	.6	7.5	--	530	.72	1720	--	.14	.03
JUL	27...	.5	9.4	490	440	.60	2490	1	.18	.05
AUG	27...	.4	6.1	--	327	.44	3060	--	.02	.02
	30...	.5	7.7	--	389	.53	1310	--	.16	.01

DATE		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)
DEC	13...	40	20	20	3	0	3	0	0	0	0	0
APR	04...	40	40	0	2	0	2	0	0	10	1	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, DIS- SOLVED (UG/L 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)
DEC	13...	0	0	0	0	4	2	2	160	10	0	0	0
APR	04...	1	0	0	0	4	3	1	30	20	6	4	2

DATE		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- ERABLE (UG/L AS MO)
DEC	13...	30	0	30	10	10	0	.0	.0	.0	2	2
APR	04...	20	0	30	20	20	0	.0	.0	.0	2	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 RECOV- ERABLE (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)
DEC	13...	0	6	4	2	1	0	2	1.1	10	0	10
APR	04...	3	6	6	0	1	1	0	1.0	10	0	10

YELLOWSTONE RIVER BASIN

06259000 WIND RIVER BELOW BOYSEN RESERVOIR, WY--Continued

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

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)
DEC 13...	1030	15	<.4	6.5	1.5	5.9	1.6	.19	9.5
FEB 09...	1100	15	<.4	6.4	1.8	5.5	1.9	.12	10
APR 04...	1200	12	<.4	5.6	.4	4.9	.5	.18	11
JUN 27...	1230	10	<.4	5.5	.8	5.2	.9	.10	8.7

DATE	TIME	STREAM-FLOW, INSTANTANEOUS (CFS)	TEMPERATURE (DEG C)	PCB, TOTAL (UG/L)	PCB, IN BOT-TOM MATERIAL (UG/KG)	NAPH-THA-LENES, POLY-CHLOR. TOTAL (UG/L)	ALDRIN, TOTAL (UG/L)	ALDRIN, IN BOT-TOM MATERIAL (UG/KG)	CHLOR-DANE, TOTAL (UG/L)	CHLOR-DANE, IN BOT-TOM MATERIAL (UG/KG)	DDD, TOTAL (UG/L)
OCT 19...	0900	284	11.5	.0	0	.00	.00	.0	.0	0	.00
MAY 11...	1615	1060	11.0	.0	0	.00	.00	.0	.0	0	.00

DATE	DDD, TOTAL IN BOT-TOM MATERIAL (UG/KG)	DDE, TOTAL (UG/L)	DDE, IN BOT-TOM MATERIAL (UG/KG)	DDT, TOTAL (UG/L)	DDT, IN BOT-TOM MATERIAL (UG/KG)	DI-AZINON, TOTAL (UG/L)	DI-ELDRIN, TOTAL (UG/L)	DI-ELDRIN, IN BOT-TOM MATERIAL (UG/KG)	ENDO-SULFAN, TOTAL (UG/L)	ENDRIN, TOTAL (UG/L)	ENDRIN, IN BOT-TOM MATERIAL (UG/KG)
OCT 19...	.0	.00	.0	.00	.0	.00	.00	.0	.00	.00	.0
MAY 11...	.0	.00	.0	.00	.0	.00	.00	.0	.00	.00	.0

DATE	ETHION, TOTAL (UG/L)	HEPTA-CHLOR, TOTAL (UG/L)	HEPTA-CHLOR, IN BOT-TOM MATERIAL (UG/KG)	HEPTA-CHLOR, EPOXIDE TOTAL (UG/L)	HEPTA-CHLOR, EPOXIDE IN BOT-TOM MATERIAL (UG/KG)	LINDANE TOTAL (UG/L)	LINDANE, IN BOT-TOM MATERIAL (UG/KG)	MALA-THION, TOTAL (UG/L)	METHYL PARA-THION, TOTAL (UG/L)	METHYL TRI-THION, TOTAL (UG/L)
OCT 19...	.00	.00	.0	.00	.0	.00	.0	.00	.00	.00
MAY 11...	.00	.00	.0	.00	.0	.00	.0	.00	.00	.00

DATE	PARA-THION, TOTAL (UG/L)	TOXAPHENE, TOTAL (UG/L)	TOXAPHENE, IN BOT-TOM MATERIAL (UG/KG)	TOTAL TRI-THION (UG/L)	2,4-D, TOTAL (UG/L)	2,4-D, IN BOT-TOM MATERIAL (UG/KG)	2,4,5-T TOTAL (UG/L)	2,4,5-T IN BOT-TOM MATERIAL (UG/KG)	SILVEX, TOTAL (UG/L)	SILVEX, IN BOT-TOM MATERIAL (UG/KG)
OCT 19...	.00	0	0	.00	.08	--	.00	--	.00	--
MAY 11...	.00	0	0	.00	.06	0	.00	0	.00	.0

DATE	TOTAL DICAMBA (UG/L)	DICAMBA IN BOT-TOM MATERIAL (UG/KG)	TOTAL PICLORAM (UG/L)	PICLORAM IN BOT-TOM MATERIAL (UG/KG)
MAY 11...	.02	0	.08	0

YELLOWSTONE RIVER BASIN

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06259000 WIND RIVER BELOW BOYSEN RESERVOIR, WY--Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	812	829	801	854	885	823	818	839	849	729	517	473
2	815	837	808	868	864	833	784	832	844	714	517	489
3	827	837	819	856	869	828	842	832	848	719	486	509
4	779	837	826	888	872	830	818	819	854	692	489	486
5	816	827	833	861	860	856	787	828	834	608	510	486
6	806	813	856	850	870	827	799	829	818	762	499	488
7	821	827	849	857	872	816	863	836	828	602	494	483
8	815	845	826	880	868	821	945	864	818	606	489	497
9	814	833	840	844	872	829	956	831	813	654	529	503
10	803	841	825	844	872	824	898	842	797	594	494	512
11	820	826	836	849	873	827	858	844	805	587	478	507
12	826	831	845	856	871	820	890	834	805	622	491	520
13	816	817	851	861	871	817	861	838	795	539	491	496
14	816	836	858	800	821	822	850	855	785	550	501	492
15	819	826	856	866	844	828	837	861	786	571	510	514
16	821	827	836	855	833	834	814	851	797	563	490	519
17	831	826	841	854	830	831	820	834	827	604	535	562
18	831	832	862	843	834	843	822	829	751	599	555	532
19	831	827	852	858	852	837	831	838	740	648	480	531
20	816	822	837	868	825	831	828	844	763	638	485	536
21	816	831	847	839	831	831	837	862	752	645	495	530
22	816	821	851	840	838	824	852	851	736	511	485	529
23	821	818	856	857	821	830	826	844	729	522	476	546
24	813	801	856	874	836	823	837	859	687	558	495	561
25	803	825	858	858	842	819	829	859	670	562	500	584
26	806	809	857	831	833	816	843	859	660	514	500	561
27	811	824	854	887	820	819	837	875	728	523	500	553
28	816	801	839	869	834	827	837	849	717	518	515	548
29	811	797	844	878	---	831	839	848	684	491	495	603
30	842	811	844	881	---	825	843	873	687	491	500	532
31	831	---	837	880	---	804	---	849	---	558	494	---
MEAN	817	824	842	858	850	827	843	845	774	597	500	523
WTR YR 1978	MEAN	758	MAX	956	MIN	473						

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	15.0	11.0	4.0	1.0	2.0	3.0	5.0	7.0	12.0	15.0	18.0	19.0
2	15.0	11.0	4.0	1.0	2.0	3.0	5.0	8.0	11.0	16.0	18.0	18.0
3	15.0	11.0	4.0	1.0	2.0	3.0	5.0	8.0	13.0	15.0	18.0	18.0
4	15.0	11.0	4.0	2.0	4.0	3.0	5.0	8.0	12.0	16.0	18.0	18.0
5	15.0	11.0	4.0	2.0	2.0	4.0	5.0	8.0	12.0	17.0	18.0	18.0
6	15.0	10.0	4.0	2.0	2.0	3.0	5.0	8.0	12.0	15.0	19.0	18.0
7	15.0	10.0	4.0	2.0	2.0	3.0	5.0	8.0	12.0	16.0	18.0	18.0
8	14.0	9.0	3.0	2.0	2.0	3.0	5.0	8.0	13.0	16.0	19.0	18.0
9	14.0	9.0	3.0	2.0	2.0	4.0	5.0	8.0	15.0	16.0	18.0	18.0
10	14.0	9.0	3.0	2.0	3.0	4.0	5.0	8.0	16.0	16.0	19.0	18.0
11	13.0	9.0	3.0	2.0	3.0	4.0	5.0	8.0	13.0	16.0	19.0	18.0
12	13.0	9.0	3.0	2.0	3.0	5.0	5.0	8.0	13.0	16.0	19.0	18.0
13	13.0	9.0	3.0	2.0	3.0	4.0	5.0	8.0	13.0	17.0	20.0	18.0
14	13.0	9.0	3.0	2.0	3.0	4.0	5.0	11.0	13.0	17.0	20.0	18.0
15	13.0	8.0	3.0	2.0	3.0	4.0	5.0	10.0	14.0	17.0	19.0	17.0
16	13.0	8.0	3.0	2.0	3.0	4.0	5.0	9.0	14.0	17.0	19.0	17.0
17	13.0	8.0	3.0	2.0	3.0	5.0	5.0	9.0	14.0	18.0	18.0	17.0
18	13.0	8.0	3.0	2.0	3.0	4.0	6.0	9.0	16.0	18.0	17.0	17.0
19	13.0	8.0	4.0	2.0	3.0	5.0	6.0	9.0	15.0	18.0	17.0	17.0
20	12.0	7.0	4.0	2.0	3.0	5.0	6.0	9.0	14.0	17.0	17.0	17.0
21	12.0	7.0	4.0	2.0	3.0	5.0	6.0	9.0	15.0	17.0	18.0	17.0
22	12.0	6.0	2.0	2.0	3.0	5.0	6.0	9.0	15.0	17.0	18.0	17.0
23	12.0	6.0	2.0	2.0	2.0	5.0	8.0	9.0	15.0	17.0	18.0	14.0
24	12.0	5.0	2.0	2.0	4.0	5.0	7.0	11.0	15.0	17.0	18.0	16.0
25	12.0	5.0	2.0	2.0	4.0	5.0	7.0	11.0	17.0	18.0	19.0	15.0
26	12.0	5.0	2.0	3.0	4.0	5.0	7.0	12.0	16.0	18.0	18.0	15.0
27	11.0	5.0	2.0	2.0	3.0	5.0	7.0	13.0	16.0	18.0	18.0	15.0
28	11.0	4.0	1.0	2.0	3.0	5.0	7.0	12.0	16.0	18.0	18.0	16.0
29	11.0	4.0	1.0	2.0	---	5.0	7.0	12.0	16.0	18.0	18.0	15.0
30	11.0	4.0	1.0	2.0	---	5.0	7.0	12.0	17.0	18.0	18.0	15.0
31	11.0	---	1.0	2.0	---	5.0	---	12.0	---	18.0	18.0	---
MEAN	13.0	8.0	3.0	2.0	3.0	4.5	5.5	9.5	14.0	17.0	18.5	17.0
WTR YR 1978	MEAN	9.5	MAX	20.0	MIN	1.0						

LOCATION (REVISED).--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.

WATER-DISCHARGE RECORDS

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.

AVERAGE DISCHARGE.--20 years (water years 1941, 1960-78), 35.4 ft³/s (1.003 m³/s), 25,650 acre-ft/yr (31.6 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; minimum daily, 0.10 ft³/s (0.003 m³/s) Jan. 11-22, 1960.

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)	
June 9	2330	515	14.6	2.85	0.869	June 23	2230	456	12.9	2.69	0.820
June 14	2300	*523	14.8	2.87	.875	June 29	2400	464	13.1	2.71	.826

Minimum daily discharge, 1.7 ft³/s (0.048 m³/s) Nov. 1.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	8.7	1.7	3.4	3.0	4.6	4.2	9.2	13	78	262	60	19
2	6.9	10	3.0	3.1	5.0	4.0	8.2	12	71	230	56	19
3	7.9	6.3	3.2	3.4	5.3	4.4	7.2	18	71	219	50	18
4	7.9	9.6	3.0	4.0	5.6	4.8	7.8	17	67	211	47	18
5	7.5	9.6	2.8	4.5	5.7	5.0	8.1	12	70	165	47	17
6	8.3	9.6	3.0	5.0	6.0	5.0	7.0	8.7	104	147	47	15
7	9.2	6.3	2.8	5.0	5.8	4.7	10	8.7	172	134	46	15
8	7.2	6.0	2.6	4.6	5.4	4.7	11	11	201	145	44	15
9	6.9	6.6	2.4	4.3	5.7	5.0	12	12	282	142	44	14
10	7.5	7.2	2.5	4.0	5.8	4.8	11	21	360	158	42	13
11	5.3	7.4	2.6	4.6	5.1	4.4	12	22	203	150	40	14
12	9.2	7.6	3.0	4.6	4.2	4.6	6.9	16	162	136	40	14
13	8.3	7.6	3.2	4.4	4.4	4.2	7.5	22	217	128	38	14
14	7.2	7.6	3.2	5.1	4.6	4.2	9.6	50	394	130	40	14
15	6.3	7.6	3.0	4.8	4.7	4.1	8.7	94	425	113	33	14
16	6.6	7.0	2.9	5.2	4.5	3.7	9.2	102	348	118	30	13
17	6.3	6.0	2.8	5.6	4.4	3.4	7.2	87	282	112	31	13
18	6.3	5.4	2.6	5.2	4.4	3.6	6.9	73	255	105	28	15
19	6.3	4.0	2.6	4.9	4.4	3.8	6.9	67	245	98	25	15
20	6.3	3.0	2.8	5.4	4.6	4.4	8.7	71	178	93	24	15
21	6.6	3.0	3.1	5.6	5.0	5.0	8.7	80	242	113	24	15
22	5.7	3.4	3.3	6.0	5.4	6.0	5.3	100	342	79	24	16
23	6.3	3.8	3.5	5.6	5.2	5.4	6.9	121	339	87	24	15
24	6.6	4.2	3.3	5.2	5.2	5.0	6.3	128	339	87	23	15
25	6.3	4.3	3.0	4.9	4.7	4.7	8.7	108	315	84	23	14
26	6.3	4.3	2.6	5.0	5.0	6.0	9.6	98	199	83	22	14
27	6.3	4.3	2.3	5.1	5.0	6.8	11	94	201	78	22	14
28	6.3	4.3	2.4	5.0	4.5	7.2	10	90	272	73	20	13
29	6.3	4.1	2.7	5.2	---	8.0	11	108	330	70	20	13
30	4.8	3.8	3.0	5.2	---	9.0	14	95	318	64	23	13
31	3.1	---	3.4	5.0	---	9.8	---	84	---	62	20	---
TOTAL	210.7	175.6	90.0	148.5	140.2	159.9	266.6	1843.4	7082	3876	1057	446
MEAN	6.80	5.85	2.90	4.79	5.01	5.16	8.89	59.5	236	125	34.1	14.9
MAX	9.2	10	3.5	6.0	6.0	9.8	14	128	425	262	60	19
MIN	3.1	1.7	2.3	3.0	4.2	3.4	5.3	8.7	67	62	20	13
AC-FT	418	348	179	295	278	317	529	3660	14050	7690	2100	885

CAL YR 1977	TOTAL	5340.71	MEAN 14.6	MAX 155	MIN .58	AC-FT	10590
WTR YR 1978	TOTAL	15495.90	MEAN 42.5	MAX 425	MIN 1.7	AC-FT	30740

YELLOWSTONE RIVER BASIN

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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 1977 TO SEPTEMBER 1978

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	TEMPER- ATURE (DEG C)	TUR- BID- ITY (JTU)	OXYGEN, DIS- SOLVED (MG/L)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	HARD- NESS (MG/L AS CACO3)	HARD- NESS, NONCAR- BONATE (MG/L CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)
OCT										
08...	1255	8.3	150	3.0	--	--	--	--	--	--
NOV										
03...	1400	7.5	180	1.0	--	--	--	--	--	--
DEC										
22...	1200	3.3	200	.5	--	--	--	--	--	--
MAR										
15...	1345	4.1	190	.0	--	--	--	--	--	--
APR										
08...	1320	9.6	160	6.0	3	6.9	<1	45	0	11
MAY										
13...	1235	15	160	7.5	--	--	--	--	--	--
25...	1245	107	125	5.0	45	--	K3	41	0	11
JUN										
22...	1440	248	69	13.5	40	8.9	8	44	11	14
JUL										
12...	1245	115	85	6.5	4	9.7	K7	26	0	7.4
26...	1300	74	90	12.5	--	8.3	--	31	0	9.2

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)	BICAR- BONATE (MG/L AS HCO3)	ALKA- LINITY (MG/L AS CACO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SiO2)
OCT										
08...	--	--	--	--	--	--	--	--	--	--
NOV										
03...	--	--	--	--	--	--	--	--	--	--
DEC										
22...	--	--	--	--	--	--	--	--	--	--
MAR										
15...	--	--	--	--	--	--	--	--	--	--
APR										
08...	4.2	12	.8	1.0	71	58	16	1.2	.1	19
MAY										
13...	--	--	--	--	--	--	--	--	--	--
25...	3.4	13	.9	1.0	64	53	8.6	1.1	.1	20
JUN										
22...	2.2	5.1	.3	.8	40	33	7.3	1.0	.1	16
JUL										
12...	1.9	5.1	.4	.7	34	28	5.8	.4	1.2	30
26...	2.0	5.9	.5	.9	38	31	5.1	.5	.1	17

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)	BORON, DIS- SOLVED (UG/L AS B)	IRON, DIS- SOLVED (UG/L AS FE)	SEDI- MENT, SUS- PENDED (MG/L)	SEDI- MENT DIS- CHARGE, SUS- PENDED (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
OCT									
08...	--	--	--	--	--	--	--	--	--
NOV									
03...	--	--	--	--	--	--	--	--	--
DEC									
22...	--	--	--	--	--	--	--	--	--
MAR									
15...	--	--	--	--	--	--	--	--	--
APR									
08...	100	.14	2.5	.15	20	130	18	.47	69
MAY									
13...	--	--	--	--	--	--	--	--	--
25...	91	.12	26.3	.28	20	460	859	248	28
JUN									
22...	67	.09	44.9	.09	20	230	418	280	43
JUL									
12...	70	.10	21.7	.05	10	100	32	9.9	54
26...	62	.08	12.5	.63	10	50	42	8.4	68

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 November to March, which are poor. Flow regulated by Anchor Dam (see station 06260300). No diversion above station.

AVERAGE DISCHARGE.--19 years, 21.3 ft³/s (0.603 m³/s), 15,430 acre-ft/yr (19.0 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, 186 ft³/s (5.27 m³/s) June 30, gage height, 3.37 ft (1.027 m); minimum daily, 0.01 ft³/s (0.028 dm³/s) Nov. 10.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	7.1	5.2	1.5	.56	.92	1.7	4.3	12	30	184	75	14
2	6.5	.61	1.3	.56	1.0	1.6	5.4	9.4	30	182	75	12
3	2.6	1.9	1.4	.60	1.1	1.5	4.9	12	31	182	73	12
4	4.1	1.8	1.3	.66	1.1	1.6	5.8	15	31	166	72	12
5	4.3	1.8	1.2	.72	1.1	1.9	5.8	12	31	131	71	12
6	4.6	3.6	1.3	.80	1.2	1.8	5.9	8.6	31	110	69	12
7	12	9.0	1.2	.84	1.1	1.9	7.1	4.6	32	91	68	11
8	5.4	2.7	1.1	.80	1.0	2.3	7.8	7.8	33	90	66	11
9	4.8	.36	1.0	.74	1.1	2.1	7.8	11	36	90	65	10
10	2.6	.01	.90	.70	1.2	2.0	6.5	16	40	76	62	10
11	4.1	.19	.80	.76	1.1	2.1	5.1	21	39	72	60	10
12	3.4	4.4	.90	.76	1.0	2.0	6.2	18	40	69	57	11
13	3.8	3.8	.80	.76	1.0	2.0	5.9	16	40	71	55	11
14	3.8	3.8	.80	.84	1.1	1.9	5.9	22	32	69	52	9.8
15	4.1	3.6	.85	.80	1.1	1.9	6.2	24	26	68	50	9.4
16	4.3	2.8	.80	.84	1.0	2.0	6.2	24	26	97	46	8.2
17	4.3	2.4	.76	.92	1.1	2.1	5.6	26	26	113	38	8.2
18	4.3	2.0	.68	.86	1.2	2.2	3.5	28	26	113	36	13
19	4.3	1.6	.55	.84	1.3	2.1	.45	24	27	112	33	11
20	4.3	1.3	.54	.90	1.5	2.0	7.0	24	27	110	31	9.8
21	4.3	1.3	.57	1.0	1.7	2.0	5.6	24	28	108	28	5.9
22	4.3	1.4	.60	1.1	1.8	2.0	3.7	25	28	96	25	8.6
23	4.6	1.5	.54	1.0	1.7	1.9	3.0	27	27	85	22	10
24	4.8	1.6	.52	.94	1.5	1.7	3.8	29	27	85	18	10
25	4.8	1.6	.50	.88	1.4	1.7	3.6	30	33	84	14	10
26	4.8	1.7	.47	.86	1.6	1.7	3.8	29	99	80	12	10
27	4.8	1.8	.50	.90	1.7	1.7	5.4	26	112	80	12	20
28	4.8	1.8	.60	.84	1.6	1.9	7.5	28	149	79	12	9.8
29	4.8	1.8	.58	1.0	---	3.0	7.5	28	174	79	12	9.8
30	4.8	1.7	.56	.92	---	5.1	11	29	176	78	25	9.4
31	4.8	---	.62	1.0	---	4.6	---	29	---	76	14	---
TOTAL	146.3	69.07	25.74	25.70	35.22	66.0	168.25	639.4	1487	3126	1348	320.9
MEAN	4.72	2.30	.83	.83	1.26	2.13	5.61	20.6	49.6	101	43.5	10.7
MAX	12	9.0	1.5	1.1	1.8	5.1	11	30	176	184	75	20
MIN	2.6	.01	.47	.56	.92	1.5	.45	4.6	26	68	12	5.9
AC-FT	290	137	51	51	70	131	334	1270	2950	6200	2670	637
CAL YR 1977	TOTAL	4328.88	MEAN	11.9	MAX	131	MIN	.00	AC-FT	8590		
WTR YR 1978	TOTAL	7457.58	MEAN	20.4	MAX	184	MIN	.01	AC-FT	14790		

YELLOWSTONE RIVER BASIN

95

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

WATER-QUALITY RECORDS

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

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

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	TEMPER- ATURE (DEG C)
OCT				
08...	1110	6.2	160	2.5
NOV				
03...	1200	1.8	240	1.0
DEC				
22...	1000	A.60	210	.5
MAR				
15...	1115	1.9	180	.5
APR				
08...	1055	7.8	150	6.0
MAY				
13...	1030	16	160	3.5
JUL				
26...	1100	80	92	15.0

A-Daily mean discharge.

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 1977 TO SEPTEMBER 1978

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	TEMPER- ATURE (DEG C)	HARD- NESS (MG/L AS CACO3)	HARD- NESS, NONCAR- BONATE (MG/L CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	BICAR- BONATE (MG/L AS HCO3)
OCT 11...	1330	538	13.0	300	150	73	28	92	2.3	4.6	160
NOV 05...	1300	310	13.0	320	130	79	30	94	2.3	6.7	230
DEC 13...	1130	396	--	320	130	82	29	91	2.2	5.6	230
JAN 07...	1300	350	3.0	310	120	80	27	88	2.2	5.0	230
FEB 09...	1315	E500	--	320	120	71	35	92	2.2	4.3	240
MAR 09...	1250	640	4.0	340	150	76	36	85	2.0	3.9	230
APR 04...	1415	E2000	8.5	280	110	67	26	88	2.3	3.2	210
MAY 09...	1400	1200	10.0	540	360	72	22	97	2.6	3.1	220
JUN 06...	1400	E1000	17.0	270	110	65	25	91	2.4	3.3	190
27...	1440	E1800	20.0	220	72	55	20	71	2.1	3.0	180
JUL 27...	1430	3570	18.0	160	45	43	14	48	1.6	.2	140
AUG 30...	1240	1360	21.5	190	67	53	15	49	1.5	2.6	150

E-Estimate.

DATE	CAR- BONATE (MG/L AS CO3)	ALKA- LINITY (MG/L AS CACO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)	SOLIDS, DIS- SOLVED (TONS PER DAY)	NITRO- GEN, NITRATE DIS- SOLVED (MG/L AS N)	PHOS- PHORUS, TOTAL (MG/L AS P)
OCT 11...	12	150	300	23	.6	8.2	622	.85	904	.02	.01
NOV 05...	0	190	280	24	.7	6.3	635	.86	532	.05	.00
DEC 13...	0	190	300	22	.4	7.8	649	.88	694	.20	.02
JAN 07...	0	190	280	23	.7	6.6	620	.84	586	.32	.08
FEB 09...	0	200	290	15	.7	7.5	635	.86	--	.84	.03
MAR 09...	0	190	300	13	.5	12	640	.87	1110	.16	.02
APR 04...	0	170	270	8.9	.6	8.0	581	.79	--	.16	.11
MAY 09...	0	180	300	8.5	.6	4.1	616	.84	2000	.14	.01
JUN 06...	3	160	300	2.6	.6	6.6	590	.80	--	.07	.05
27...	0	150	200	12	.5	8.2	450	.61	--	.07	.05
JUL 27...	0	120	140	7.4	.4	5.9	327	.44	3150	.27	.03
AUG 30...	0	120	170	8.1	.5	7.8	456	.62	1670	.02	.03

YELLOWSTONE RIVER BASIN

97

06265337 COTTONWOOD CREEK AT COUNTY BRIDGE, NEAR HAMILTON DOME, WY

LOCATION.--Lat 43°45'40", long 108°40'30", in SE¼SE¼ sec.24, T.44 N., R.99 W., Hot Springs County, Hydrologic Unit 10080007, at bridge on county road, 5.2 mi (8.4 km) west of Hamilton Dome, and 12 mi (19 km) south of Grass Creek.

PERIOD OF RECORD.--May 1977 to September 1978 (discontinued).

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

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	TEMPER- ATURE (DEG C)	TUR- BID- ITY (JTU)	OXYGEN, DIS- SOLVED (MG/L)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	HARD- NESS (MG/L AS CACO3)	HARD- NESS, NONCAR- BONATE (MG/L AS CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)
APR 03...	1230	3.2	380	11.0	25	8.8	<1	74	0	20
MAY 20...	1115	97	320	9.0	600	8.8	--	64	0	21
JUN 06...	1200	70	215	13.5	75	8.6	100	38	0	10
27...	1130	28	220	17.0	9	7.7	42	39	0	11

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)	BICAR- BONATE (MG/L AS HCO3)	ALKA- LINITY (MG/L AS CACO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SiO2)
APR 03...	5.9	55	2.8	1.2	170	140	48	2.8	.4	17
MAY 20...	2.9	72	3.9	1.3	150	120	62	3.5	.6	15
JUN 06...	3.1	35	2.5	1.4	100	82	21	1.7	.3	24
27...	2.7	34	2.4	1.2	99	81	19	2.0	.3	26

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)	BORON, DIS- SOLVED (UG/L AS B)	IRON, DIS- SOLVED (UG/L AS FE)	SEDI- MENT, SUS- PENDED (MG/L)	SEDI- MENT DIS- CHARGE, SUS- PENDED (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
APR 03...	235	.32	2.03	.04	60	170	20	.17	87
MAY 20...	254	.35	66.5	.25	130	280	5000	1310	58
JUN 06...	147	.20	27.8	.09	60	1100	801	151	30
27...	146	.20	11.1	.07	60	390	22	1.7	53

YELLOWSTONE RIVER BASIN

06265410 COTTONWOOD CREEK AT STATE HIGHWAY 120, NEAR HAMILTON DOME, WY

LOCATION.--Lat 43°50'27", long 108°28'00", in SW¼NW¼ sec.26, T.45 N., R.97 W., Hot Springs County, Hydrologic Unit 10080007, 250 ft (76 m) upstream from bridge on State Highway 120, 7.0 mi (11.3 km) northeast of Hamilton Dome, and 19 mi (31 km) northwest of Thermopolis.

PERIOD OF RECORD.--April 1977 to September 1978 (discontinued).

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

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHQS)	TEMPER- ATURE (DEG C)	TUR- BID- ITY (JTU)	OXYGEN, DIS- SOLVED (MG/L)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	HARD- NESS (MG/L AS CACO3)	HARD- NESS, NONCAR- BONATE (MG/L AS CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)
APR										
03...	1500	13	3800	15.5	10	8.7	1	980	630	240
MAY										
20...	1400	124	1450	11.0	2200	10.6	--	280	110	71
JUN										
06...	1300	72	1500	18.5	160	8.6	980	320	210	69
27...	1300	21	2650	23.0	20	8.8	96	630	380	140
JUL										
13...	1200	13	5000	20.0	8	8.4	5200	1000	720	220
26...	1000	13	4500	16.0	4	8.3	210	940	650	210

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)	BICAR- BONATE (MG/L AS HCO3)	ALKA- LINITY (MG/L AS CACO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SiO2)
APR										
03...	93	490	6.8	66	430	350	1200	350	1.1	18
MAY										
20...	26	190	4.9	7.8	210	170	420	65	.7	15
JUN										
06...	35	180	4.4	17	130	110	440	100	.6	25
27...	69	330	5.7	27	310	250	870	190	.9	25
JUL										
13...	110	550	7.6	55	340	280	1400	360	.1	7.6
26...	100	500	7.1	58	350	290	1200	350	1.2	29

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)	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
APR									
03...	2670	3.63	93.7	.11	1300	30	55	1.9	84
MAY									
20...	902	1.23	302	.48	310	270	12000	4020	74
JUN									
06...	933	1.27	181	.45	400	400	2220	432	38
27...	1810	2.46	103	.46	680	210	89	5.0	68
JUL									
13...	2870	3.90	102	.13	1200	110	51	1.8	73
26...	2620	3.56	92.0	.06	1300	190	190	6.7	90

YELLOWSTONE RIVER BASIN

99

06265435 GRASS CREEK ABOVE LITTLE GRASS CREEK, NEAR GRASS CREEK, WY

LOCATION.--Lat 43°53'32", long 108°47'11", in NE¼SW¼SW¼ sec.6, T.45 N., R.99 W., Hot Springs County, Hydrologic Unit 10080007, 0.1 mi (0.2 km) upstream from Little Grass Creek, 7.6 mi (12.2 km) southwest of town of Grass Creek, and 13.3 mi (21.4 km) northwest of Hamilton Dome.

PERIOD OF RECORD.--May 1977 to September 1978 (discontinued).

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

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	TEMPER- ATURE (DEG C)	TUR- BID- ITY (JTU)	OXYGEN, DIS- SOLVED (MG/L)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	HARD- NESS (MG/L AS CACO3)	HARD- NESS, NONCAR- BONATE (MG/L AS CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)
MAR 31...	1210	2.9	800	10.0	25	9.6	--	250	0	65
MAY 24...	1030	84	240	5.0	1300	--	--	63	0	15
JUN 06...	0910	28	295	8.5	50	9.3	250	66	0	17
27...	0930	7.5	480	11.0	3	9.0	84	140	0	37

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)	BICAR- BONATE (MG/L AS HCO3)	ALKA- LINITY (MG/L AS CACO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SiO2)
MAR 31...	22	62	1.7	2.0	330	270	110	3.9	.6	11
MAY 24...	6.2	39	2.1	2.1	150	120	18	1.9	.3	12
JUN 06...	5.6	38	2.0	1.7	150	120	24	2.4	.4	16
27...	11	56	2.1	1.4	250	210	43	2.8	.6	10

DATE	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)	BORON, DIS- SOLVED (UG/L AS B)	IRON, DIS- SOLVED (UG/L AS FE)	SEDI- MENT, SUS- PENDED (MG/L)	SEDI- MENT, DIS- CHARGE, SUS- PENDED (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
MAR 31...	440	.60	3.45	.20	70	20	120	.94	96
MAY 24...	169	.23	38.7	.01	70	370	8930	2050	65
JUN 06...	180	.24	13.6	.18	60	180	501	38	52
27...	285	.39	5.77	.01	60	180	14	.28	69

YELLOWSTONE RIVER BASIN

06265492 GRASS CREEK NEAR MOUTH, NEAR HAMILTON DOME, WY

LOCATION.--Lat 43°52'14", long 108°23'36", in NE4NE4 sec.17, T.45 N., R.96 W., Hot Springs County, Hydrologic Unit 10080007, 1.5 mi (2.4 km) upstream from mouth, 11.2 mi (18.0 km) northeast of Hamilton Dome, and 11.5 mi (18.5 km) northwest of Kirby.

PERIOD OF RECORD.--May 1977 to September 1978 (discontinued).

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

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	TEMPER- ATURE (DEG C)	TUR- BID- ITY (JTU)	OXYGEN, DIS- SOLVED (MG/L)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	HARD- NESS (MG/L AS CACO3)	HARD- NESS, NONCAR- BONATE (MG/L AS CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)
MAR 31...	1445	.36	2200	16.0	55	8.9	--	560	210	79
MAY 24...	1300	58	700	14.5	2300	--	K1700	140	0	25
JUN 06...	1420	18	1120	22.0	390	8.6	4200	270	22	48
27...	1400	.21	5100	29.5	3	7.2	1100	870	410	86

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)	BICAR- BONATE (MG/L AS HCO3)	ALKA- LINITY (MG/L AS CACO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SiO2)
MAR 31...	89	380	7.0	5.9	430	350	690	190	.7	6.6
MAY 24...	19	95	3.5	3.9	220	180	130	16	.5	12
JUN 06...	36	150	4.0	5.5	300	250	250	52	.6	15
27...	160	660	9.7	15	570	470	1400	360	1.0	9.6

DATE	SULIDS, 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)	BORON, DIS- SOLVED (UG/L AS B)	IRON, DIS- SOLVED (UG/L AS FE)	SEDI- MENT, SUS- PENDED (MG/L)	SEDI- MENT, DIS- CHARGE, SUS- PENDED (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
MAR 31...	1650	2.24	1.60	.04	400	10	369	.36	72
MAY 24...	412	.56	64.5	.33	130	100	11000	1720	75
JUN 06...	706	.96	34.3	.24	200	220	2370	115	69
27...	2970	4.04	1.68	.13	820	140	20	.01	65

YELLOWSTONE RIVER BASIN

101

06265500 COTTONWOOD CREEK AT WINCHESTER, WY

LOCATION.--Lat 43°51'45", long 108°09'10", in SEkSEkSEk sec.17, T.45 N., R.94 W., Washakie County, Hydrologic Unit 10080007, at former gaging station, at bridge on State Highway 20, at Winchester, 0.7 mi (1.1 km) upstream from mouth, 5.9 mi (9.5 km) southwest of Neiber, and 14 mi (23 km) southwest of Worland.

DRAINAGE AREA.--416 mi² (1,077 km²).

PERIOD OF RECORD.--Water years 1947, 1965-66, April 1977 to September 1978 (discontinued).

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

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	TEMPER- ATURE (DEG C)	TUR- BID- ITY (JTU)	OXYGEN, DIS- SOLVED (MG/L)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	HARD- NESS (MG/L AS CACO3)	HARD- NESS, NONCAR- BONATE (MG/L AS CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)
APR										
03...	1720	9.4	4500	15.5	8	7.4	120	900	610	210
MAY										
21...	1230	259	1400	15.5	6200	8.5	21000	230	61	54
JUN										
06...	1600	95	2000	23.5	400	7.6	2100	440	250	96
27...	1500	6.6	5000	28.5	15	9.2	240	920	630	170
JUL										
13...	0900	1.6	6000	18.0	3	8.2	8100	1100	770	180
26...	0830	.40	6800	13.0	1	9.6	<1	1400	920	200

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)	BICAR- BONATE (MG/L AS HCO3)	ALKA- LINITY (MG/L AS CACO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SiO2)
APR										
03...	92	690	10	42	360	300	1500	420	1.0	18
MAY										
21...	22	200	5.8	7.1	200	160	380	55	.8	14
JUN										
06...	48	250	5.2	17	230	190	620	140	.7	23
27...	120	590	8.5	26	350	290	1400	320	.9	20
JUL										
13...	160	950	12	26	410	340	2100	470	.1	16
26...	210	1400	17	24	540	440	2900	630	1.0	22

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)	BORON, DIS- SOLVED (UG/L AS B)	IRON, DIS- SOLVED (UG/L AS FE)	SEDI- MENT, DIS- SUS- PENDED (MG/L)	SEDI- MENT, DIS- CHARGE, SUS- PENDED (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
APR									
03...	3150	4.28	79.9	.28	1200	20	36	.91	76
MAY									
21...	833	1.13	583	.34	280	60	27900	19500	74
JUN									
06...	1310	1.78	336	.29	520	160	4090	1050	42
27...	2820	3.84	50.3	.08	960	160	55	.98	90
JUL									
13...	4110	5.59	17.8	.11	1300	30	28	.12	61
26...	5660	7.70	6.11	.12	1600	70	87	.09	83

YELLOWSTONE RIVER BASIN

06265800 GOOSEBERRY CREEK AT DICKIE, WY

LOCATION.--Lat 44°00'00", long 108°45'25", in NE¼ sec.32, T.47 N., R.99 W., Hot Springs County, Hydrologic Unit 10080007, at left downstream wingwall of county bridge, 0.6 mi (1.0 km) downstream from Middle Creek, and 0.8 mi (1.3 km) northwest of Dickie.

DRAINAGE AREA.--95.0 mi² (246.0 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1957 to September 1978 (discontinued).

GAGE.--Water-stage recorder. Altitude of gage is 5,750 ft (1,753 m), from topographic map.

REMARKS.--Records good except those for November through January, which are poor. No diversion above station.

AVERAGE DISCHARGE.--21 years, 13.7 ft³/s (0.388 m³/s), 9,930 acre-ft/yr (12.2 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,130 ft³/s (32.0 m³/s) June 15, 1963, gage height, 5.66 ft (1.725 m), from rating curve extended above 250 ft³/s (7.08 m³/s) on basis of slope-area measurement of peak flow; no flow Sept. 8-13, 1959, Jan. 28 to Feb. 8, Aug. 5, 6, 18-25, 1961, Jan. 5-9, Aug. 19, 1970.

EXTREMES FOR CURRENT YEAR.--Peak discharge above base of 150 ft³/s (4.25 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
May 24	0030	*455 12.9	3.62 1.103

Minimum daily discharge, 0.34 ft³/s (0.010 m³/s) Jan. 2.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.3	2.7	1.9	.37	.76	.84	12	12	125	32	11	4.2
2	3.2	3.4	1.8	.34	.68	.84	9.5	7.0	112	28	12	3.5
3	2.7	3.4	1.7	.37	.68	.84	8.5	11	100	20	12	3.3
4	2.7	3.4	1.7	.39	.60	.84	6.6	12	95	20	10	3.3
5	3.0	3.2	1.7	.37	.60	.84	7.3	12	95	18	8.4	2.9
6	3.0	3.0	1.6	.35	.52	.84	5.9	12	120	16	8.4	2.8
7	3.2	3.0	1.6	.40	.60	.84	6.2	8.0	110	25	8.0	2.8
8	3.0	3.4	1.6	.48	.60	.92	5.9	16	110	18	7.0	2.6
9	2.7	2.3	1.5	.54	.60	1.1	6.2	18	139	18	6.7	2.4
10	3.6	2.7	1.5	.56	.76	1.5	5.2	22	137	16	6.7	2.5
11	4.3	3.0	1.5	.58	.76	1.4	4.3	28	122	14	6.4	4.9
12	3.8	3.2	1.4	.60	.76	1.5	4.3	29	103	14	5.8	5.8
13	3.6	3.0	1.4	.60	.76	1.5	4.1	26	96	13	6.7	6.1
14	3.4	2.7	1.4	.60	.76	1.5	3.8	39	101	12	12	5.6
15	3.4	2.9	1.3	.60	.76	1.5	3.4	55	105	10	11	4.7
16	3.2	2.7	1.1	.60	.76	1.5	3.8	66	98	11	7.7	4.2
17	3.0	2.5	1.0	.52	.68	1.6	3.4	62	78	8.8	6.7	4.0
18	3.0	2.2	.90	.60	.68	2.2	2.7	57	66	7.0	6.1	11
19	3.0	1.8	.80	.68	.68	3.2	2.2	61	60	6.7	6.1	11
20	3.0	1.5	.80	.68	.68	10	2.3	72	56	6.7	5.6	9.6
21	3.0	1.7	.86	.68	.60	20	2.5	106	53	16	4.4	9.2
22	3.0	1.9	.86	.76	.68	16	3.2	164	55	22	4.2	7.3
23	3.2	2.1	.86	.76	.84	12	2.3	205	53	12	4.4	6.4
24	3.2	2.2	.80	.68	.84	11	2.2	286	51	8.8	3.8	5.8
25	3.2	2.4	.70	.68	.84	14	2.2	255	52	8.8	3.5	5.6
26	3.2	2.4	.64	.76	.84	18	2.2	224	43	8.0	3.5	5.1
27	3.2	2.3	.60	.76	.84	22	2.7	200	39	8.8	3.8	4.7
28	3.0	2.3	.56	.76	.84	10	3.8	178	37	11	4.4	4.7
29	3.0	2.2	.50	.76	---	9.0	4.5	190	38	17	4.7	4.7
30	3.2	2.0	.46	.68	---	12	5.9	167	41	13	4.9	4.7
31	2.7	---	.42	.76	---	12	---	147	---	10	4.7	---
TOTAL	99.0	77.5	35.46	18.27	20.00	191.30	139.1	2747.0	2490	449.6	210.6	155.4
MEAN	3.19	2.58	1.14	.59	.71	6.17	4.64	88.6	83.0	14.5	6.79	5.18
MAX	4.3	3.4	1.9	.76	.84	22	12	286	139	32	12	11
MIN	2.7	1.5	.42	.34	.52	.84	2.2	7.0	37	6.7	3.5	2.4
AC-FT	196	154	70	36	40	379	276	5450	4940	892	418	308
CAL YR 1977	TOTAL	2474.86	MEAN	6.78	MAX	59	MIN	.01	AC-FT	4910		
WTR YR 1978	TOTAL	6633.23	MEAN	18.2	MAX	286	MIN	.34	AC-FT	13160		

06265800 GOOSEBERRY CREEK AT DICKIE, WY--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--April 1977 to September 1978 (discontinued).

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

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHUS)	TEMPER- ATURE (DEG C)	TUR- BID- ITY (JTU)	OXYGEN, DIS- SOLVED (MG/L)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	HARD- NESS (MG/L AS CAC03)	HARD- NESS, NONCAR- BONATE (MG/L CAC03)	CALCIUM DIS- SOLVED (MG/L AS CA)
MAR										
30...	1220	5.5	800	8.0	25	9.6	K8	320	130	65
MAY										
17...	1515	60	390	3.0	110	10.1	6100	140	18	30
JUN										
08...	1150	141	270	9.0	400	9.0	550	84	2	19
22...	1100	62	400	14.0	40	8.3	160	140	18	30
JUL										
11...	1020	14	700	16.0	15	8.3	K200	270	71	53
26...	1200	8.4	750	15.0	8	10.2	K180	320	100	64

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)	BICAR- BONATE (MG/L AS HC03)	ALKA- LINITY (MG/L AS CAC03)	SULFATE DIS- SOLVED (MG/L AS SD4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SiO2)
MAR										
30...	39	55	1.3	4.4	240	200	230	9.8	.4	10
MAY										
17...	16	34	1.2	2.4	150	120	77	3.4	.2	14
JUN										
08...	8.9	22	1.0	2.2	100	82	40	2.2	.2	18
22...	16	30	1.1	2.2	150	120	73	4.0	.3	19
JUL										
11...	33	49	1.3	3.8	240	200	150	7.3	.4	15
26...	40	64	1.5	6.0	270	220	180	11	.5	13

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)	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
MAR									
30...	533	.72	7.9	.03	290	250	70	1.0	94
MAY									
17...	251	.34	40.7	.05	60	80	870	141	47
JUN									
08...	162	.22	61.7	.02	40	110	2760	1050	55
22...	249	.34	41.7	.01	60	70	252	42	52
JUL									
11...	430	.58	16.3	.06	80	50	50	1.9	92
26...	512	.70	11.6	.11	100	80	217	4.9	82

YELLOWSTONE RIVER BASIN

06266450 GOOSEBERRY CREEK AT STATE HIGHWAY 431, NEAR GRASS CREEK, WY

LOCATION.--Lat 44°00'14", long 108°31'12", in NW¼NW¼NE¼ sec.32, T.47 N., R.97 W., Hot Springs County, Hydrologic Unit 10080007, 40 ft (12 m) downstream from bridge on State Highway 431, 7.9 mi (12.7 km) northeast of Grass Creek, and 16 mi (26 km) north of Hamilton Dome.

PERIOD OF RECORD.--April 1977 to September 1978 (discontinued).

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

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	TEMPER- ATURE (DEG C)	TUR- BID- ITY (JTU)	OXYGEN, DIS- SOLVED (MG/L)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	HARD- NESS (MG/L AS CAC03)	HARD- NESS, NONCAR- BONATE (MG/L AS CAC03)	CALCIUM DIS- SOLVED (MG/L AS CA)
MAR 30...	1330	6.3	2150	12.0	460	9.0	--	700	380	100
MAY 17...	1715	77	1100	5.5	1200	10.4	5700	260	110	41
JUN 08...	0930	143	480	12.0	460	9.8	200	140	19	27
22...	0950	33	75	15.0	80	8.2	200	230	44	42
JUL 11...	1215	9.9	1080	21.5	50	4.4	350	360	86	62
26...	1330	6.0	1400	21.0	10	8.3	210	410	140	65

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)	BICAR- BONATE (MG/L AS HCO3)	ALKA- LINITY (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)	SILICA, DIS- SOLVED (MG/L AS SiO2)
MAR 30...	110	340	5.6	17	390	320	1000	61	.6	9.4
MAY 17...	38	150	4.1	7.8	180	150	400	26	.3	11
JUN 08...	18	47	1.7	3.2	150	120	100	6.5	.3	17
22...	31	81	2.3	3.9	230	190	190	7.6	.4	18
JUL 11...	49	110	2.5	5.7	330	270	290	15	.5	14
26...	61	160	3.4	6.9	330	270	410	13	.6	9.5

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 DIS- SOLVED (MG/L AS N)	BORON, DIS- SOLVED (UG/L AS B)	IRON, DIS- SOLVED (UG/L AS FE)	SEDI- MENT, SUS- PENDED (MG/L)	SEDI- MENT DIS- CHARGE, SUS- PENDED (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
MAR 30...	1830	2.49	31	.10	280	60	1210	21	98
MAY 17...	764	1.04	159	.13	140	70	7090	1470	62
JUN 08...	293	.40	113	.06	80	110	4400	1700	37
22...	488	.66	43	.05	90	40	912	81	30
JUL 11...	709	.96	19	.05	100	40	143	3.8	95
26...	890	1.21	14	.23	130	60	81	1.3	88

YELLOWSTONE RIVER BASIN

105

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 Dec. 18 to Feb. 3, Feb. 14-21, Mar. 9-10, May 19-30, June 5-30, July 14-21.

AVERAGE DISCHARGE.--7 years, 6.12 ft³/s (0.173 m³/s), 4,430 acre-ft/yr (5.46 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 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)
Apr. 28	1430	2,720 77.0	6.20 1.890	May 18	2330	*3,040 86.1	6.65 2.027
Apr. 29	2100	580 16.4	2.77 .844	Sept. 18	1200	300 8.50	2.19 .668

No flow for many days.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5.8	.00	.00	.00	.00	.00	.00	4.3	.04	.00	.00	.00
2	12	.00	.00	.00	.00	.00	.00	1.0	.00	.00	.00	.00
3	1.3	.00	2.0	.00	.00	.00	.00	.21	.00	.00	.00	.00
4	.31	.00	1.0	.00	.00	.00	.00	77	.00	.00	.00	.00
5	.12	.00	.50	.00	.00	.00	.00	20	.00	.00	.00	.00
6	.13	.00	.00	.00	.00	.00	.00	34	.00	.00	.00	.00
7	.04	.00	.00	.00	.00	.00	.00	61	.00	.00	.00	.00
8	.00	.00	.00	.00	.00	.00	.00	6.7	.00	.00	.00	.00
9	.00	.00	.00	.00	.00	45	.00	1.5	.00	.00	.00	.00
10	.00	.00	.00	.00	.00	90	.00	.11	.00	.00	.00	.00
11	1.5	.00	.00	.00	.00	50	.00	.00	.00	.00	.00	.00
12	4.4	.00	.00	.00	.00	25	.00	.00	.00	.00	.00	.00
13	2.4	.00	.00	.00	.00	11	.00	.00	.00	.00	.00	1.4
14	.62	.00	.00	.00	.00	9.5	.00	.00	.00	.00	.00	3.8
15	.31	.00	.00	.00	.00	10	.00	.00	.00	.00	19	1.0
16	.31	.00	.00	.00	.00	10	.00	.00	.00	.00	3.0	.30
17	.06	.00	.00	.00	.00	15	.00	333	.00	.00	1.0	.04
18	.02	.00	.00	.00	.00	52	.00	1850	.00	.00	.39	64
19	.00	.00	.00	.00	.00	43	.00	580	.00	.00	.03	44
20	.00	.00	.00	.00	.00	28	.00	19	.00	.00	.00	4.8
21	.00	.00	.00	.00	.00	16	.00	1.7	.00	.00	.00	1.7
22	.00	.00	.00	.00	.00	11	.00	.70	.00	.00	.00	.60
23	.00	.00	.00	.00	.00	2.8	.00	.00	.00	.00	.00	.30
24	.00	.00	.00	.00	.00	5.3	.00	.00	.00	.00	.00	.13
25	.00	.00	.00	.00	.00	1.5	.00	.00	.00	.00	.00	.00
26	.00	.00	.00	.00	.00	1.1	.00	.00	.00	.00	.00	.00
27	.00	.00	.00	.00	.00	.09	.00	.00	.00	.00	.00	.00
28	.00	.00	.00	.00	.00	.00	981	.00	.00	.00	.00	.00
29	.00	.00	.00	.00	.00	.00	164	.00	.00	.00	.00	.00
30	.00	.00	.00	.00	.00	.00	40	.00	.00	.00	.00	.00
31	.00	.00	.00	.00	.00	.00	.00	.04	.00	.00	.00	.00
TOTAL	29.32	.00	3.50	.00	.00	426.29	1211.00	2990.26	.04	.00	23.42	122.07
MEAN	.95	.000	.11	.000	.000	13.8	40.4	96.5	.001	.000	.76	4.07
MAX	12	.00	2.0	.00	.00	90	981	1850	.04	.00	19	64
MIN	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
AC-FT	58	.00	6.9	.00	.00	846	2400	5930	.08	.00	46	242
CAL YR 1977	TOTAL	773.12	MEAN	2.12	MAX	84	MIN	.00	AC-FT	1530		
WTR YR 1978	TOTAL	4805.90	MEAN	13.2	MAX	1650	MIN	.00	AC-FT	9530		

YELLOWSTONE RIVER BASIN

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

WATER-QUALITY RECORDS

PERIOD OF RECORD.--March 1977 to current year.

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

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	TEMPER- ATURE (DEG C)	TUR- BID- ITY (JTU)	HARD- NESS (MG/L AS CACO3)	HARD- NESS, NONCAR- BONATE (MG/L CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM AD- SORP- TION RATIO
MAR										
10...	0910	117	.0	12000	29	0	7.0	2.9	50	4.0
14...	1430	9.7	.5	11000	13	0	3.9	.8	45	5.4
APR										
28...	2230	132	8.0	28000	42	0	12	2.8	91	6.1
MAY										
18...	1415	1550	6.0	17500	20	0	4.9	1.8	80	7.9
AUG										
15...	1455	14	18.0	23000	37	0	10	3.0	92	6.6

DATE	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	BICAR- BONATE (MG/L AS HCO3)	ALKA- LINITY (MG/L AS CACO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, SUM OF CONSTITUENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)	SOLIDS, DIS- SOLVED (TONS PER DAY)
MAR										
10...	2.6	58	48	58	3.3	.4	5.9	159	.22	50.2
14...	2.3	83	68	46	3.0	.4	6.6	149	.20	3.9
APR										
28...	4.8	110	90	130	6.7	.8	8.4	312	.42	111
MAY										
18...	2.8	110	90	97	3.2	.5	7.5	253	.34	1060
AUG										
15...	3.8	110	90	140	3.9	.9	11	319	.43	12.1

DATE	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, 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)
MAR									
10...	--	--	1.1	.33	14	14	15	67	3.0
14...	--	--	.83	.12	14	14	15	66	4.4
APR									
28...	--	--	2.2	.18	27	27	29	130	--
MAY									
18...	2.0	.00	2.0	.27	25	25	27	120	7.5
AUG									
15...	--	--	1.5	.05	4.2	4.2	5.7	25	7.9

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

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

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)	BORON, TOTAL RECOV- ERABLE (UG/L AS B)	CADMIUM TOTAL RECOV- ERABLE (UG/L AS CD)	CADMIUM DIS- SOLVED (UG/L AS CD)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR)
MAR											
10...	0910	--	--	--	--	--	--	120	--	--	--
14...	1430	--	--	--	--	--	--	90	--	--	--
APR											
28...	2230	0	580	20	1	30	0	380	11	1	340
MAY											
18...	1415	--	--	--	--	--	--	140	--	--	--
AUG											
15...	1455	150	80	65	2	20	0	80	3	0	400

DATE	TIME	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)	IRON, DIS- SOLVED (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)
MAR												
10...	--	--	--	--	--	240	--	--	--	--	--	--
14...	--	--	--	--	--	160	--	--	--	--	--	--
APR												
28...	10	780	24	340000	590	560	3	490	20	2600	10	10
MAY												
18...	--	--	--	--	510	--	--	--	--	--	--	--
AUG												
15...	10	60	13	400000	140	110	0	490	10	2400	10	10

DATE	TIME	MERCURY TOTAL RECOV- ERABLE (UG/L AS HG)	MERCURY DIS- SOLVED (UG/L AS HG)	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 RECOV- ERABLE (UG/L AS SE)	SELE- NIUM, DIS- SOLVED (UG/L AS SE)	VANA- DIUM, TOTAL RECOV- ERABLE (UG/L AS V)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN)	ZINC, DIS- SOLVED (UG/L AS ZN)
MAR												
10...	--	--	--	--	--	--	--	--	--	--	--	--
14...	--	--	--	--	--	--	--	--	--	--	--	--
APR												
28...	.9	.0	0	--	30	6	24	6	2.0	3000	50	50
MAY												
18...	--	--	--	--	--	--	--	--	--	--	--	--
AUG												
15...	2.3	.0	3	3	630	3	10	10	3.0	3400	20	20

DATE	TIME	TEMPER- ATURE (DEG C)	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SEDI- MENT, SUS- PENDED (MG/L)	SEDI- MENT CHARGE, SUS- PENDED (T/DAY)	SED. SUSP. SIEVE DIAM. X FINER THAN .062 MM
MAR						
10...	0910	.0	117	15600	4930	99
10...	1725	.0	55	17400	2580	93
11...	0845	1.0	76	12000	2460	98
13...	0850	.5	12	10400	337	96
14...	1430	.5	9.7	16700	437	95
17...	1430	1.0	26	29000	2040	94
20...	1330	9.0	15	33400	1350	89
22...	1145	1.0	7.6	30200	620	100
23...	1435	2.0	1.3	18400	65	100
APR						
28...	1530	10.0	2680	70400	509000	87
29...	1630	9.5	97	35500	9300	99
MAY						
01...	1430	8.0	3.6	18200	177	100
04...	1440	7.0	286	70800	54700	92
04...	1940	7.0	62	42400	7100	99
05...	1000	6.0	21	28700	1630	100
06...	1210	6.0	14	17900	677	100
17...	1750	8.5	512	68100	94100	87
18...	1415	6.0	1550	41800	175000	91
AUG						
15...	0845	14.0	41	57000	6310	--
15...	1455	18.0	14	44400	1680	100
17...	0915	15.0	E.10	2340	.63	--

YELLOWSTONE RIVER BASIN

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 to September 1978.

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

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	TEMPER- ATURE (DEG C)	TUR- BID- ITY (JTU)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	HARD- NESS (MG/L AS CACO3)	HARD- NESS, NONCAR- BONATE (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
AUG 14...	1720	140	420	15.5	18000	6000	14	0	3.9	1.1	73	8.4
DATE		POTAS- SIUM, DIS- SOLVED (MG/L AS K)	BICAR- BONATE (MG/L AS HCO3)	ALKA- LINEITY (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)
AUG 14...		3.1	93	76	91	4.6	.7	12	236	.32	89.2	1.7
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 NU3)	PHOS- PHORUS, TOTAL (MG/L AS P)	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
AUG 14...		.07	2.4	2.5	4.2	19	6.9	60	350	51400	19400	87

YELLOWSTONE RIVER BASIN

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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 to September 1978. 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 good except those above 200 ft³/s (5.7 m³/s), which are poor. Bureau of Land Management has extensive spreader systems on some of the tributaries above station.

AVERAGE DISCHARGE.--21 years (water years 1952-72), 10.9 ft³/s (0.309 m³/s), 7,900 acre-ft/yr (9.74 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	unknown	*4,270 121	a10.58 3.225	Aug. 14	1900	615 17.4	4.38 1.335

a-From floodmark.

No flow for many days.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1									16	.00	1.9	.00
2									15	.00	.76	.00
3									10	.00	.50	.00
4									7.2	.00	.00	.00
5									3.3	.00	.00	.00
6									2.3	.00	.00	.00
7									1.4	.00	.00	.00
8									2.1	.00	.00	.00
9									1.8	.00	.00	.00
10									.79	50	.00	.00
11									.00	11	.00	.00
12									.00	1.0	.00	108
13									.00	.00	.00	51
14									.00	.00	137	15
15									.00	.00	81	4.9
16									54	.00	24	2.2
17									15	.00	26	1.5
18									3.8	.00	6.2	77
19									1.4	.00	2.4	91
20									.32	.00	1.5	18
21									.00	.00	.70	9.2
22									.00	.00	.00	6.1
23									.00	.00	.00	3.9
24									.00	.00	.00	2.6
25									.00	.00	.00	1.8
26									.00	.00	.00	1.2
27									.00	.00	.00	.82
28									.00	.00	.00	.50
29									.00	.00	.00	.00
30									.00	.00	.00	.00
31									---	6.7	.00	---
TOTAL	---	---	---	---	---	---	---	---	134.41	68.70	281.96	394.72
MEAN	---	---	---	---	---	---	---	---	4.48	2.22	9.10	13.2
MAX	---	---	---	---	---	---	---	---	54	50	137	108
MIN	---	---	---	---	---	---	---	---	.00	.00	.00	.00
AC-FT	---	---	---	---	---	---	---	---	267	136	559	783

WATER-QUALITY RECORDS

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

PERIOD OF DAILY RECORD.--

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

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 DISCHARGES: 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, 71,500 mg/L July 11; minimum daily, no flow on many days.

SEDIMENT DISCHARGES: Maximum daily, 18,900 tons (17,100 tonnes) Sept. 12; minimum daily, 0 tons on many days.

MONTHLY AND ANNUAL SUMMARY OF WATER AND SUSPENDED-SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

MONTH	DISCHARGE (CFS-DAYS)	RUNOFF (ACRE-FEET)	DISCHARGE (TONS)	SUSPENDED SEDIMENT			CONCENTRATION (MG/L)	
				DAILY DISCHARGE (TONS)			WEIGHTED MEAN	MAXIMUM OBSERVED
				MEAN	MAXIMUM	MINIMUM		
OCTOBER 1977...	0	0	0	0	0	0		
NOVEMBER.....	0	0	0	0	0	0		
DECEMBER.....	0	0	0	0	0	0		
JANUARY 1978...	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.....	0	0	0	0	0	0		
JUNE.....	134.41	267	11,931.25	398	8,720	0		
JULY.....	68.7	136	17,250.00	556	14,400	0		
AUGUST.....	281.96	559	31,180.97	1,010	15,900	0		
SEPTEMBER.....	394.72	783	45,742.33	1,520	18,900	0		
WATER YEAR...	879.79	1,745	106,104.55	291	18,900	0		

YELLOWSTONE RIVER BASIN

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06268600 BIGHORN RIVER AT WORLAND, WY

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.

DRAINAGE AREA.--10,810 mi² (27,998 km²).

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

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

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	TEMPER- ATURE (DEG C)	HARD- NESS (MG/L AS CACO3)	HARD- NESS, NONCAR- BONATE (MG/L CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	BICAR- BONATE (MG/L AS HCO3)
OCT											
11...	1445	560	15.0	300	120	73	29	96	2.4	4.8	220
NOV											
05...	1415	455	16.0	430	180	97	47	150	3.1	7.6	300
DEC											
19...	1500	E560	15.0	400	180	96	39	150	3.3	7.3	270
JAN											
07...	1340	400	9.0	420	130	110	38	98	2.1	10	360
FEB											
09...	1415	738	10.0	370	170	85	38	140	3.2	6.0	250
MAR											
09...	1445	700	6.0	330	140	78	33	140	3.4	5.9	230
APR											
04...	1500	E2300	8.5	320	140	71	34	96	2.3	3.4	220
MAY											
09...	1430	1300	12.0	600	420	79	25	170	4.3	3.1	220
JUN											
06...	1500	E750	--	330	140	79	33	150	3.6	4.8	230
27...	1515	E610	--	290	110	72	27	130	3.3	4.2	220
JUL											
27...	1505	2680	18.5	190	67	52	15	58	1.8	.2	150
AUG											
30...	1315	395	--	230	82	64	18	73	2.1	3.4	180

E-Estimate.

DATE	CAR- BONATE (MG/L AS CO3)	ALKA- LINITY (MG/L AS CACO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-F1)	SOLIDS, DIS- SOLVED (TONS PER DAY)	NITRO- GEN, NITRATE DIS- SOLVED (MG/L AS N)	PHOS- PHORUS, TOTAL (MG/L AS P)
OCT											
11...	0	180	270	25	.6	9.7	621	.84	939	.02	.00
NOV											
05...	0	250	430	32	.8	5.5	930	1.26	1140	2.3	.00
DEC											
19...	0	220	420	51	.8	6.3	906	1.23	1370	.47	.02
JAN											
07...	0	300	290	41	.8	10	772	1.05	834	.41	.15
FEB											
09...	0	200	420	31	.8	9.4	849	1.15	1690	.36	.09
MAR											
09...	0	190	370	27	.7	10	723	.98	1370	.52	.13
APR											
04...	0	180	320	16	.6	8.9	660	.90	4100	.18	.11
MAY											
09...	0	180	470	9.6	.6	6.0	874	1.19	3070	.54	.17
JUN											
06...	0	190	410	27	.7	11	820	1.12	1660	.38	.06
27...	0	180	340	18	.6	9.8	710	.97	1170	.86	.30
JUL											
27...	0	120	170	8.5	.4	6.5	385	.52	2790	.36	.07
AUG											
30...	0	150	230	26	.6	8.6	630	.86	672	.79	.12

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 1977 TO SEPTEMBER 1978

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	TEMPER- ATURE (DEG C)	HARD- NESS (MG/L AS CACO3)	HARD- NESS, NONCAR- BONATE (MG/L CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)
OCT								
11...	1045	89	2.0	400	210	100	37	23
NOV								
02...	1030	91	4.5	450	280	120	36	20
DEC								
05...	1105	76	.0	390	270	100	32	18
JAN								
10...	1000	73	.0	400	210	110	31	15
FEB								
08...	0940	93	.0	400	220	94	40	15
MAR								
09...	1130	128	.0	310	160	82	26	22
APR								
06...	1015	113	8.0	390	210	110	32	22
29...	1150	1240	7.5	260	150	76	18	51
MAY								
15...	1230	1390	11.0	--	--	--	--	--
18...	2030	3060	4.0	--	--	--	--	--
19...	2010	3000	6.5	--	--	--	--	--
JUN								
07...	1045	839	9.0	170	120	45	13	12
JUL								
06...	1140	142	21.0	400	230	110	30	26
AUG								
02...	1030	76	19.0	400	260	110	30	43
29...	0915	74	17.0	510	340	150	36	25

DATE	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	BICAR- BONATE (MG/L AS HCO3)	CAR- BONATE (MG/L AS CO3)	ALKA- LINITY (MG/L AS CACO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SiO2)
OCT									
11...	.5	2.4	230	0	190	260	1.9	.4	9.4
NOV									
02...	.4	1.9	210	0	170	280	4.0	.4	9.7
DEC									
05...	.4	1.8	150	0	120	270	3.8	.4	12
JAN									
10...	.3	2.1	230	0	190	220	6.5	.4	13
FEB									
08...	.3	1.6	220	0	180	240	1.8	.4	14
MAR									
09...	.5	6.2	180	0	150	210	1.1	.4	11
APR									
06...	.5	1.7	220	0	180	250	2.5	.5	7.1
29...	1.4	3.3	130	0	110	270	1.7	.4	.3
MAY									
15...	--	--	--	--	--	--	--	--	--
18...	--	--	--	--	--	--	--	--	--
19...	--	--	--	--	--	--	--	--	--
JUN									
07...	.4	1.5	63	0	52	110	17	.2	1.3
JUL									
06...	.6	.2	210	0	180	270	.0	.4	10
AUG									
02...	.9	.1	170	0	140	350	2.6	.5	7.1
29...	.5	2.1	210	0	170	380	3.7	.5	7.8

YELLOWSTONE RIVER BASIN

06270000 NOWOOD RIVER NEAR TEN SLEEP, WY--Continued

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

DATE	SOLIDS, SUM OF CONSTITUENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)	SOLIDS, DIS- SOLVED (TONS PER DAY)	NITRO- GEN, NITRATE 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)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
OCT								
11...	548	.75	132	.00	.01	103	25	93
NOV								
02...	577	.78	142	.41	.01	--	--	--
DEC								
05...	518	.70	106	.61	.00	97	20	78
JAN								
10...	515	.70	102	.68	.07	71	14	86
FEB								
08...	516	.70	130	.52	.05	149	37	92
MAR								
09...	446	.61	154	1.3	.14	331	114	74
APR								
06...	534	.73	163	.70	.06	157	48	89
29...	488	.66	1630	.70	.01	11300	37800	80
MAY								
15...	--	--	--	--	--	5950	22300	62
18...	--	--	--	--	--	5650	46700	90
19...	--	--	--	--	--	3520	28500	77
JUN								
07...	270	.37	612	.50	.52	1700	3850	59
JUL								
06...	551	.75	211	.14	.01	252	97	88
AUG								
02...	628	.85	129	.68	.84	1120	230	99
29...	706	.96	141	.16	.04	60	12	94

YELLOWSTONE RIVER BASIN

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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 1977 RO SEPTEMBER 1978

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	TEMPER- ATURE (DEG C)	HARD- NESS (MG/L AS CACO3)	HARD- NESS, NONCAR- BONATE (MG/L CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	BICAR- BONATE (MG/L AS HCO3)
OCT											
11...	1330	82	4.5	410	220	110	31	34	.7	2.5	230
NOV											
02...	1200	--	7.0	400	200	110	31	32	.7	2.0	240
DEC											
05...	1300	64	.0	360	190	98	28	33	.8	1.5	210
JAN											
10...	1245	48	.0	350	170	97	28	31	.7	1.9	220
FEB											
08...	1200	46	.0	360	190	97	29	36	.8	1.7	210
MAR											
09...	1330	62	.0	350	180	86	32	31	.7	5.8	210
APR											
06...	1300	54	11.0	330	170	89	27	39	.9	1.8	170
MAY											
08...	1000	69	6.0	460	330	61	19	27	.8	1.3	160
JUN											
07...	1230	1180	10.0	67	32	18	5.3	4.7	.3	.5	43
JUL											
06...	1330	618	18.5	89	32	24	6.7	7.0	.3	.0	70
AUG											
02...	1300	237	14.0	190	100	53	13	14	.4	.4	110
29...	1130	96	12.0	310	160	91	21	25	.6	1.8	180

DATE	CAR- BONATE (MG/L AS CO3)	ALKA- LINITY (MG/L AS CACO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)	SOLIDS, DIS- SOLVED (TONS PER DAY)	NITRO- GEN, NITRATE DIS- SOLVED (MG/L AS N)	PHOS- PHORUS, TOTAL (MG/L AS P)
OCT											
11...	0	190	270	3.7	.5	13	587	.80	130	.23	.01
NOV											
02...	0	200	260	3.8	.4	13	566	.77	--	.00	.01
DEC											
05...	0	170	240	3.3	.4	12	518	.70	89.5	.18	.00
JAN											
10...	0	180	220	3.2	.4	13	500	.68	64.8	.41	.03
FEB											
08...	0	170	250	7.5	.6	12	650	.88	80.7	.38	.02
MAR											
09...	0	170	230	1.8	.8	11	507	.69	84.9	1.5	.00
APR											
06...	12	160	240	1.8	.6	8.0	501	.68	73.0	.07	.04
MAY											
08...	0	130	170	1.1	.3	7.8	367	.50	68.4	.20	.01
JUN											
07...	0	35	30	7.1	.1	.0	110	.15	350	.25	.24
JUL											
06...	0	57	42	.0	.1	5.7	121	.16	202	.00	.02
AUG											
02...	0	90	120	1.9	.3	6.2	263	.36	168	.11	.04
29...	0	150	200	.7	.4	8.1	439	.60	114	.27	.02

YELLOWSTONE RIVER BASIN

06274220 NOWOOD RIVER AT MANDERSON, WY

LOCATION.--Lat 44°16'34", long 107°57'35", in NE¼SW¼ 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 1977 TO SEPTEMBER 1978

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	TEMPER- ATURE (DEG C)	HARD- NESS (MG/L AS CACO3)	HARD- NESS, NONCAR- BONATE (MG/L CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	BICAR- BONATE (MG/L AS HCO3)
OCT											
11...	1410	258	5.5	450	280	110	46	40	.8	2.8	210
NOV											
02...	1300	245	7.0	420	290	110	35	35	.7	2.3	160
DEC											
05...	1400	222	.0	390	210	100	33	32	.7	1.8	220
JAN											
10...	1330	202	.0	400	210	94	39	26	.6	1.8	230
FEB											
08...	1300	240	.0	390	210	110	32	27	.6	1.9	220
MAR											
09...	1430	269	.0	390	220	97	35	25	.6	2.2	210
APR											
06...	1430	233	11.0	440	280	120	37	39	.8	2.5	200
MAY											
08...	1300	830	6.0	530	430	75	19	51	1.4	2.5	120
JUN											
07...	1400	2710	12.0	120	68	33	10	10	.4	.8	63
JUL											
06...	1440	1320	18.0	120	45	33	9.7	11	.4	.1	92
AUG											
02...	1330	530	19.0	250	140	68	18	59	1.6	.3	130
29...	1310	212	20.0	400	240	110	30	42	.9	2.2	190

E-Estimate.

DATE	CAR- BONATE (MG/L AS CO3)	ALKA- LITY (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, NITRATE DIS- SOLVED (MG/L AS N)	PHOS- PHORUS, TOTAL (MG/L AS P)
OCT											
11...	0	170	340	5.6	.4	14	660	.90	460	.18	.03
NOV											
02...	0	130	320	3.8	.4	9.4	391	.53	259	.09	.02
DEC											
05...	0	180	260	2.9	.4	11	556	.76	333	.54	.00
JAN											
10...	0	190	250	7.2	.4	13	543	.74	296	.61	.06
FEB											
08...	0	180	270	2.5	.4	14	559	.76	362	.54	.01
MAR											
09...	0	170	270	1.8	.3	15	548	.75	398	.59	.02
APR											
06...	0	160	340	2.5	.5	7.5	645	.88	406	.43	.37
MAY											
08...	0	100	270	1.1	.4	5.3	484	.66	1080	.16	.06
JUN											
07...	0	52	72	9.0	.2	.0	200	.27	1460	.70	.75
JUL											
06...	0	75	71	.0	.1	5.5	178	.24	634	.43	.03
AUG											
02...	0	110	250	3.0	.5	5.9	472	.64	675	.05	1.5
29...	0	160	330	3.7	.4	4.3	614	.84	351	.02	.04

YELLOWSTONE RIVER BASIN

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06274810 WOOD RIVER AT KIRWIN, WY

LOCATION.--Lat 43°52'33", long 109°17'52", Park County, Hydrologic Unit 10080009, Shoshone National Forest, on right bank at bridge, 0.1 mi (0.2 km) northwest of Kirwin, 0.2 mi (0.3 km) downstream from Cascade Creek, and 28 mi (45 km) southwest of Meeteetse.

DRAINAGE AREA.--11.4 mi² (29.5 km²).

PERIOD OF RECORD.--October 1970 to September 1975 (gage heights and discharge measurements only), October 1975 to September 1978 (discontinued).

GAGE.--Water-stage recorder. Altitude of gage is 9,190 ft (2,801 m), from topographic map. Prior to Oct. 10, 1975, nonrecording gage at site 10 ft (3 m) upstream at same datum.

REMARKS.--Records poor. No diversion above station.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 252 ft³/s (7.14 m³/s) June 28, 1978, gage height, 4.38 ft (1.335 m); minimum daily, 0.50 ft³/s (0.014 m³/s) Mar. 14 to Apr. 5, 1977.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 252 ft³/s (7.14 m³/s) June 28, gage height, 4.38 ft (1.335 m); minimum daily, 0.97 ft³/s (0.027 m³/s) Mar. 17.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6.1	2.4	2.3	1.6	1.2	1.1	1.4	1.7	13	142	50	13
2	7.1	2.4	2.3	1.6	1.3	1.1	1.3	1.5	13	142	46	13
3	4.5	2.4	2.1	1.6	1.3	1.1	1.2	1.6	14	148	43	13
4	4.7	2.6	2.0	1.6	1.3	1.1	1.3	1.8	13	128	36	12
5	5.2	2.6	1.9	1.6	1.3	1.1	1.3	3.0	17	111	35	12
6	5.0	2.6	1.9	1.6	1.3	1.1	1.4	4.2	30	85	32	13
7	5.0	2.3	1.9	1.6	1.3	1.1	1.3	5.3	45	85	31	12
8	5.2	2.2	1.9	1.6	1.3	1.1	1.4	5.6	58	94	28	10
9	5.2	2.2	1.9	1.6	1.3	1.1	1.2	5.1	104	100	26	8.9
10	4.5	2.3	1.9	1.6	1.3	1.0	1.2	4.0	111	114	25	8.5
11	4.1	2.4	2.0	1.5	1.2	1.0	1.2	3.4	66	111	25	8.5
12	4.0	2.4	2.0	1.5	1.2	1.0	1.4	3.3	51	104	23	8.5
13	3.8	2.4	2.1	1.5	1.1	1.0	1.3	3.2	87	102	22	7.1
14	3.8	2.4	2.1	1.5	1.1	1.0	1.2	5.5	139	109	19	7.1
15	3.8	2.4	2.1	1.5	1.1	1.0	1.3	11	150	96	18	6.7
16	3.8	2.3	2.1	1.4	1.1	1.0	1.3	13	150	89	17	6.7
17	3.4	2.3	2.1	1.4	1.1	.97	1.2	12	114	72	18	6.7
18	3.4	2.3	2.1	1.4	1.1	1.0	1.2	9.7	121	72	17	6.7
19	3.6	2.3	2.1	1.4	1.1	1.0	1.3	8.5	111	67	16	6.6
20	3.4	2.3	2.2	1.4	1.2	1.1	1.3	8.5	85	66	15	6.4
21	3.1	2.3	2.2	1.3	1.2	1.1	1.2	11	118	63	15	6.2
22	2.9	2.3	2.0	1.3	1.2	1.0	1.6	14	134	50	15	6.1
23	2.9	2.3	2.0	1.3	1.2	1.1	1.4	16	156	60	15	6.1
24	2.9	2.3	2.0	1.2	1.2	1.1	1.3	17	153	63	15	6.1
25	2.7	2.3	1.8	1.2	1.1	1.4	1.3	16	136	67	14	6.1
26	2.7	2.3	1.8	1.2	1.1	1.5	1.4	14	98	61	14	5.5
27	2.7	2.3	1.8	1.2	1.1	1.7	1.4	13	96	61	14	5.5
28	2.7	2.3	1.8	1.2	1.1	1.7	1.4	15	146	69	13	5.2
29	2.7	2.3	1.8	1.2	---	1.6	1.3	19	168	63	14	4.7
30	2.7	2.3	1.8	1.2	---	1.8	1.5	16	165	57	14	4.7
31	2.6	---	1.7	1.2	---	1.3	---	14	---	52	14	---
TOTAL	120.2	70.5	61.7	44.0	33.4	36.27	39.5	276.9	2862	2703	699	242.6
MEAN	3.88	2.35	1.99	1.42	1.19	1.17	1.32	8.93	95.4	87.2	22.5	8.09
MAX	7.1	2.6	2.3	1.6	1.3	1.8	1.6	19	168	148	50	13
MIN	2.6	2.2	1.7	1.2	1.1	.97	1.2	1.5	13	50	13	4.7
AC-FT	238	140	122	87	66	72	78	549	5680	5360	1390	481
CAL YR 1977 TOTAL	2731.06			MEAN 7.48	MAX 116	MIN .50	AC-FT 5420					
WTR YR 1978 TOTAL	7189.07			MEAN 19.7	MAX 168	MIN .97	AC-FT 14260					

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 poor. Water diverts above station to Lower Sunshine Reservoir since 1972. Diversions 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); 6 years (water years 1973-78), 106 ft³/s (3.002 m³/s), 76,800 acre-ft/yr (94.7 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; minimum daily, 0.40 ft³/s (0.011 m³/s) Mar. 13, 1978.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,150 ft³/s (32.6 m³/s) June 9, gage height, 7.38 ft (2.249 m); minimum daily, 0.40 ft³/s (0.011 m³/s) Mar. 13.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	38	5.9	2.1	1.4	1.1	1.3	2.6	41	251	315	206	73
2	39	5.9	2.1	1.4	1.2	1.3	2.5	28	321	334	194	73
3	41	4.9	2.0	1.4	1.3	1.3	2.3	30	303	303	173	79
4	41	4.9	1.9	1.4	1.3	1.4	2.4	30	246	209	168	78
5	41	4.9	1.8	1.4	1.3	1.5	2.5	29	324	132	162	78
6	41	4.9	1.8	1.4	1.3	1.6	2.7	25	488	111	157	74
7	35	4.6	1.8	1.4	1.3	1.8	2.7	9.7	450	260	153	70
8	31	4.4	1.8	1.4	1.3	2.0	2.5	8.0	421	436	153	58
9	30	4.3	1.7	1.4	1.3	1.8	2.8	7.5	758	411	155	56
10	32	4.2	1.7	1.3	1.3	1.8	2.7	7.5	795	462	149	55
11	18	4.0	1.7	1.3	1.3	1.8	2.7	6.3	324	465	149	59
12	12	3.7	1.8	1.3	1.3	1.54	2.5	5.2	192	432	149	55
13	12	3.4	1.9	1.3	1.3	1.40	2.2	48	392	376	145	54
14	11	3.0	2.0	1.3	1.2	1.3	2.3	160	785	404	145	54
15	10	2.7	2.0	1.2	1.2	1.7	2.3	157	800	418	132	64
16	9.7	2.6	2.0	1.2	1.2	1.6	2.3	257	830	411	126	61
17	9.7	2.6	2.0	1.2	1.2	.87	2.3	122	654	400	134	60
18	9.7	2.6	1.8	1.2	1.2	.84	3.0	7.1	432	356	122	81
19	9.7	2.6	1.5	1.2	1.2	.82	4.0	6.7	480	321	119	76
20	9.7	2.5	1.7	1.1	1.2	.88	4.0	6.3	318	294	113	81
21	9.2	2.5	1.7	1.1	1.4	.88	4.3	38	312	370	117	82
22	9.7	2.5	1.6	1.1	1.4	1.3	3.7	160	458	282	119	81
23	9.7	2.5	1.6	1.0	1.4	1.3	4.3	251	500	273	117	72
24	9.7	2.5	1.6	1.0	1.4	1.2	5.2	291	596	276	109	72
25	10	2.4	1.6	1.0	1.4	1.2	6.3	171	596	265	106	64
26	9.2	2.3	1.6	1.0	1.3	2.0	21	106	404	257	95	58
27	9.2	2.2	1.6	1.0	1.3	2.4	34	147	432	248	85	56
28	8.6	2.2	1.6	1.0	1.3	2.8	19	229	564	268	85	55
29	6.3	2.2	1.6	1.0	---	2.8	36	271	580	259	82	55
30	4.9	2.2	1.5	1.0	---	2.8	45	192	476	259	82	55
31	3.7	---	1.4	1.0	---	2.5	---	145	---	219	74	---
TOTAL	570.7	102.1	54.5	37.4	35.9	47.73	232.1	2992.3	14482	9826	4075	1989
MEAN	18.4	3.40	1.76	1.21	1.28	1.54	7.74	96.5	483	317	131	66.3
MAX	41	5.9	2.1	1.4	1.4	2.8	45	291	830	465	206	82
MIN	3.7	2.2	1.4	1.0	1.1	.40	2.2	5.2	192	111	74	54
AC-FT	1130	203	108	74	71	95	460	5940	28730	19490	8080	3950
CAL YR 1977 TOTAL	13418.40			36.8	404	1.4	AC-FT	26620				
WTR YR 1978 TOTAL	34444.73			94.4	830	.40	AC-FT	68320				

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 poor. 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, 2,930 ft³/s (83.0 m³/s) June 10, gage height, 4.92 ft (1.500 m); minimum daily during period of operation, 18 ft³/s (0.51 m³/s) Apr. 14, 15.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1							39	45	295	1600	786	500
2							35	45	407	1500	709	476
3							29	45	370	1460	646	464
4							26	29	311	1340	618	506
5							26	29	436	1090	578	506
6							24	29	848	928	584	500
7							25	29	849	1090	542	486
8							25	29	944	1350	572	506
9							26	48	1340	1420	716	476
10							26	44	1980	1490	765	428
11							24	44	1030	1440	765	470
12							22	35	858	1400	772	464
13							20	27	957	1200	765	416
14							18	149	1670	1540	716	356
15							18	130	2050	1540	625	338
16							19	264	1660	1530	611	311
17							19	271	1260	1520	597	291
18							20	163	1020	1210	506	351
19							21	181	1180	1200	440	422
20							21	154	892	1190	405	500
21							22	135	976	1240	440	512
22							19	254	1380	1090	530	506
23							19	368	1500	1070	548	500
24							20	440	1740	1080	518	500
25							21	287	1780	1060	512	494
26							39	202	1300	1020	494	476
27							42	202	1180	976	494	566
28							35	279	1370	1000	506	646
29							45	338	1690	1090	500	646
30							60	279	1940	896	500	646
31							---	205	---	840	500	---
TOTAL							805	4779	35213	38400	18260	14259
MEAN							26.8	154	1174	1239	589	475
MAX							60	440	2050	1600	786	646
MIN							18	27	295	840	405	291
AC-FT							1600	9480	69840	76170	36220	28280

YELLOWSTONE RIVER BASIN

06277500 GREYBULL RIVER NEAR BASIN, WY

LOCATION.--Lat 44°24'24", long 108°11'10", in NE¼NW¼SW¼ 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 1977 TO SEPTEMBER 1978

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	TEMPER- ATURE (DEG C)	HARD- NESS (MG/L AS CAC03)	HARD- NESS, NONCAR- BONATE (MG/L 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)	BICAR- BONATE (MG/L AS HCO3)
OCT 03...	1845	E10	12.0	340	53	81	33	190	4.5	4.9	350
NOV 01...	1335	47	3.5	400	110	86	45	110	2.4	4.0	360
DEC 06...	1400	31	.0	400	55	110	43	160	3.3	1.5	420
JAN 11...	1300	50	.0	410	57	100	37	150	3.3	3.1	430
FEB 16...	1500	54	--	410	65	97	42	130	2.8	3.5	420
MAR 22...	1015	251	.5	290	77	66	31	110	2.8	4.4	260
APR 07...	1005	59	10.0	430	0	100	40	160	3.4	4.0	530
MAY 08...	1500	33	11.0	680	390	85	30	190	4.5	3.4	350
JUN 02...	1600	51	21.0	300	62	76	26	130	3.3	2.9	290
JUL 10...	1000	549	14.0	110	0	27	9.8	42	1.8	2.2	140
AUG 02...	1240	113	18.0	210	0	55	18	85	2.5	.1	260
SEP 07...	1145	47	21.0	280	26	74	24	140	3.6	4.1	310
E-Estimate.											

DATE	CAR- BONATE (MG/L AS CO3)	ALKA- LINITY (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)	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, NITRATE DIS- SOLVED (MG/L AS N)	PHOS- PHORUS, TOTAL (MG/L AS P)
OCT 03...	0	290	440	16	.7	18	956	1.30	25	.75	.00
NOV 01...	0	300	300	10	.5	18	750	1.02	95	.45	.00
DEC 06...	0	340	320	11	.5	20	882	1.20	73	1.3	.00
JAN 11...	0	350	360	11	.6	19	902	1.23	122	1.1	.04
FEB 16...	0	340	320	8.3	.5	19	1040	1.41	152	.90	.04
MAR 22...	0	210	310	6.7	.4	15	672	.91	455	.43	.24
APR 07...	0	440	290	8.9	.5	9.7	875	1.19	139	.29	.02
MAY 08...	0	290	450	5.3	.6	13	953	1.30	84	.72	.02
JUN 02...	0	240	310	18	.4	7.4	860	1.17	118	.18	.25
JUL 10...	0	120	86	1.5	.3	7.7	248	.34	368	.97	.02
AUG 02...	0	210	170	6.3	.5	16	483	.66	147	.38	.19
SEP 07...	0	250	300	8.9	.8	17	882	1.20	112	.66	.27

YELLOWSTONE RIVER BASIN

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06277500 GREYBULL RIVER NEAR BASIN, WY--Continued

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

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	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)	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 03...	1845	E10	12.0	.0	4	.00	.00	.0	.0	2	.00
MAY 14...	1700	E1.5	24.0	.0	0	.00	.00	.0	.0	0	.00
SEP 17...	1700	139	14.5	.0	0	.00	.00	.0	.0	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)	ENDRIN, TOTAL (UG/L)	ENDRIN, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)
OCT 03...	.0	.00	.0	.00	.0	.00	.00	.2	.00	.00	.0
MAY 14...	.0	.00	.2	.00	.1	.00	.00	.1	.00	.00	.0
SEP 17...	.0	.00	.0	.00	.0	.00	.00	.0	--	.00	.0

DATE	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)	METHYL PARA- THION, TOTAL (UG/L)	METHYL TRI- THION, TOTAL (UG/L)	MIREX, TOTAL (UG/L)
OCT 03...	.00	.00	.0	.00	.2	.00	.0	.00	.00	.00	--
MAY 14...	.00	.00	.0	.00	.0	.00	.1	.00	.00	.00	--
SEP 17...	.00	.00	.0	.00	.0	.00	.0	.00	.00	.00	.00

DATE	PARA- THION, TOTAL (UG/L)	TOX- APHENE, TOTAL (UG/L)	TOXA- PHENE, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	TOTAL TRI- THION (UG/L)	2,4-D, TOTAL (UG/L)	2,4-D, TOTAL IN BOT- TOM MA- TERIAL (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 03...	.00	0	0	.00	.00	--	.00	--	.00	--
MAY 14...	.00	0	0	.00	.05	0	.00	0	.00	.0
SEP 17...	.00	0	0	.00	.00	0	.00	0	.00	.0

YELLOWSTONE RIVER BASIN

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 November to April, which are poor. No diversions above station.

AVERAGE DISCHARGE.--22 years, 37.1 ft³/s (1.051 m³/s), 26,880 acre-ft/yr (33.1 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)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
June 10	1330	512 14.5	5.03 1.533	June 22	2230	716 20.3	5.65 1.722
June 15	2200	*755 21.4	5.75 1.753	June 28	2230	652 18.5	5.47 1.667

Minimum daily discharge, 1.5 ft³/s (0.042 m³/s) Mar. 3.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	14	9.1	5.4	3.2	3.2	1.8	3.8	6.7	79	337	41	16
2	12	9.8	5.0	3.2	3.2	1.7	3.8	6.7	66	332	39	15
3	12	9.3	5.1	3.4	3.2	1.5	3.5	7.1	64	299	36	14
4	12	9.1	5.1	3.5	3.3	1.6	3.4	7.1	72	241	32	14
5	12	9.1	5.0	3.6	3.3	1.9	3.3	7.3	114	189	28	12
6	11	8.8	4.6	3.5	3.2	2.5	3.2	8.4	214	151	27	12
7	13	8.6	4.5	3.4	3.1	2.6	3.2	8.6	301	141	25	12
8	14	7.5	4.5	3.4	2.9	2.6	3.3	8.4	261	152	23	12
9	12	7.8	4.1	3.6	2.8	2.7	3.2	8.8	390	221	23	11
10	12	8.1	4.4	3.7	2.6	2.8	3.0	8.6	481	156	22	11
11	12	8.1	4.5	3.7	2.5	2.9	3.1	8.6	252	138	20	15
12	11	8.1	4.6	3.7	2.3	2.9	3.2	8.6	169	126	19	16
13	12	7.7	4.6	3.7	2.2	2.9	3.0	9.1	276	105	19	17
14	13	7.7	4.5	3.7	2.1	2.8	3.1	25	598	93	24	18
15	14	7.5	4.7	3.7	2.0	2.7	3.2	46	618	86	26	22
16	13	7.4	4.7	3.5	1.9	2.6	3.3	29	475	80	25	28
17	13	7.2	4.5	3.7	1.8	2.6	3.2	39	254	86	29	29
18	12	7.0	4.4	3.8	1.7	2.7	3.0	45	265	76	32	29
19	12	6.6	4.3	3.8	1.6	2.9	2.8	68	335	65	32	27
20	12	6.3	4.0	3.8	1.7	3.0	2.9	66	225	59	30	25
21	11	5.9	4.0	3.8	1.8	3.0	3.1	64	332	79	26	24
22	11	5.8	4.2	3.8	1.9	3.0	3.0	72	515	84	24	24
23	11	5.8	4.2	3.8	2.0	3.0	3.0	99	495	64	22	24
24	10	5.8	4.0	3.6	2.1	3.0	3.0	133	500	53	20	26
25	10	6.0	3.7	3.6	2.1	3.0	3.2	164	430	48	19	27
26	10	6.3	3.7	3.5	2.0	3.0	3.6	146	238	44	19	26
27	9.8	6.4	3.7	3.5	1.9	3.0	4.3	134	276	41	18	26
28	9.6	6.1	3.7	3.3	1.8	3.1	10	134	395	42	18	26
29	9.6	5.9	3.7	3.3	---	3.2	8.0	155	467	45	18	26
30	10	5.6	3.7	3.2	---	3.4	7.1	140	400	41	17	25
31	9.3	---	3.5	3.2	---	3.6	---	104	---	41	16	---
TOTAL	359.3	220.4	134.6	110.2	66.2	84.0	112.8	1767.0	9557	3715	769	609
MEAN	11.6	7.35	4.34	3.55	2.36	2.71	3.76	57.0	319	120	24.8	20.3
MAX	14	9.8	5.4	3.8	3.3	3.6	10	164	618	337	41	29
MIN	9.3	5.6	3.5	3.2	1.6	1.5	2.8	6.7	64	41	16	11
AC-FT	713	437	267	219	131	167	224	3500	18960	7370	1530	1210

CAL YR 1977 TOTAL 11581.5 MEAN 31.7 MAX 441 MIN 1.2 AC-FT 22970
WTR YR 1978 TOTAL 17504.5 MEAN 48.0 MAX 618 MIN 1.5 AC-FT 34720

YELLOWSTONE RIVER BASIN

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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 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)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
June 10	0730	1,350 38.2	5.03 1.533	June 23	0400	1,200 34.0	4.76 1.451
June 14	2400	*1,530 43.3	5.24 1.597	June 29	0430	981 27.8	4.42 1.347

Minimum daily discharge during period of operation, 33 ft³/s (0.93 m³/s) Apr. 6.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1							44	72	319	720	167	124
2							46	72	283	666	161	121
3							46	86	283	640	157	118
4							40	78	313	574	145	118
5							39	70	422	506	138	116
6							33	66	593	450	132	116
7							36	66	768	408	127	114
8							39	63	741	402	122	114
9							40	60	930	458	120	110
10							37	70	1210	426	118	109
11							37	79	824	370	112	124
12							35	73	586	349	108	134
13							34	70	671	322	115	124
14							36	103	1160	298	169	124
15							39	163	1290	275	167	127
16							37	225	1160	262	157	133
17							40	235	812	265	173	126
18							35	197	736	252	169	126
19							35	189	894	232	161	121
20							36	197	697	218	151	116
21							40	222	747	258	144	114
22							39	275	1030	272	140	114
23							36	343	1050	232	138	112
24							36	458	1050	201	136	114
25							40	500	988	189	134	112
26							43	482	705	177	133	108
27							70	472	626	167	133	103
28							87	468	780	171	130	102
29							75	492	888	185	128	100
30							74	478	812	169	127	99
31							---	388	---	177	126	---
TOTAL							1304	6812	23368	10291	4338	3493
MEAN							43.5	220	779	332	140	116
MAX							87	500	1290	720	173	134
MIN							33	60	283	167	108	99
AC-FT							2590	13510	46350	20410	8600	6930

YELLOWSTONE RIVER BASIN

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 1977 TO SEPTEMBER 1978

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	TUR- BID- ITY (JTU)	OXYGEN, DIS- SOLVED (MG/L)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	HARD- NESS (MG/L AS CAC03)
OCT 02...	1615	53	--	--	13.0	8	10.8	88	650
NOV 12...	1630	76	--	--	5.0	4	9.3	K48	470
DEC 11...	1500	105	--	--	.5	5	9.5	K30	490
JAN 04...	0830	E100	--	--	.0	1	11.7	27	430
FEB 04...	1500	E100	--	--	.0	1	9.8	K85	420
MAR 05...	1430	E80	--	--	.0	15	11.8	31	390
APR 01...	1515	118	--	--	13.0	500	9.3	K590	410
MAY 13...	1600	97	--	--	15.0	25	9.8	K130	290
JUN 10...	1600	2350	275	8.2	10.0	500	9.2	K960	110
JUL 22...	1540	186	750	8.6	18.0	20	10.0	250	290
AUG 19...	1530	121	1000	8.2	19.0	7	10.2	170	430
SEP 17...	0910	115	1000	8.1	12.0	30	10.8	150	430

E-Estimate.

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

DATE	HARD- NESS, NONCAR- BONATE (MG/L 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)	BICAR- BONATE (MG/L AS HCO3)	CAR- BONATE (MG/L AS CO3)	ALKA- LINITY (MG/L AS CAC03)
OCT 02...	470	160	59	130	2.2	4.0	220	0	180
NOV 12...	220	120	40	95	1.9	2.1	300	0	250
DEC 11...	280	180	8.5	74	1.5	2.1	260	0	210
JAN 04...	210	110	36	67	1.4	2.0	270	0	220
FEB 04...	220	110	35	60	1.3	1.1	250	0	200
MAR 05...	190	100	33	58	1.3	1.8	240	0	200
APR 01...	220	100	37	120	2.6	2.2	230	0	190
MAY 13...	130	73	27	52	1.3	1.5	200	0	160
JUN 10...	59	30	7.5	14	.6	1.7	62	0	51
JUL 22...	160	80	22	48	1.2	.3	160	0	130
AUG 19...	260	120	31	80	1.7	2.8	210	0	170
SEP 17...	240	120	32	74	1.6	2.3	230	0	190

YELLOWSTONE RIVER BASIN

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06279090 SHELL CREEK NEAR GREYBULL, WY--Continued

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

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, NITRATE DIS- SOLVED (MG/L AS N)	PHOS- PHORUS, TOTAL (MG/L AS P)
OCT									
02...	710	6.4	.6	11	1190	1.62	170	.36	.07
NOV									
12...	420	4.6	.5	9.9	844	1.15	173	.72	.00
DEC									
11...	410	3.2	.4	14	819	1.11	232	1.1	.01
JAN									
04...	340	6.3	.5	12	717	.98	194	.88	.00
FEB									
04...	310	13	.3	9.4	660	.90	--	.47	.01
MAR									
05...	290	4.7	.4	10	623	.85	--	.56	.23
APR									
01...	450	5.3	.5	9.4	847	1.15	270	.72	.26
MAY									
13...	230	3.0	.4	12	480	.65	126	.16	.12
JUN									
10...	76	3.8	.2	.0	200	.27	1270	.52	.93
JUL									
22...	260	3.7	.4	7.0	501	.68	252	.36	.06
AUG									
19...	420	3.3	.5	7.3	766	1.04	250	.29	.05
SEP									
17...	380	3.7	.4	8.5	737	1.00	229	.56	.10

YELLOWSTONE RIVER BASIN

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 December to March, 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.--50 years, 2,293 ft³/s (64.94 m³/s), 1,661,000 acre-ft/yr (2,048 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 known, 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, 20,700 ft³/s (586 m³/s) May 20, gage height, 9.89 ft (3.014 m); minimum daily, 470 ft³/s (13.3 m³/s) Nov. 21.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1210	870	730	740	870	1000	3070	4970	4930	7370	3590	1530
2	1280	860	730	720	880	1050	3000	4330	4350	7410	3640	1500
3	1220	860	720	700	880	1100	2930	3680	3880	7460	3680	1480
4	1270	890	710	730	880	1100	2830	3360	3730	7350	3520	1500
5	1210	900	700	780	880	1100	2780	4010	3700	6990	3370	1410
6	1200	890	670	820	880	1100	2750	3840	3880	6400	2950	1340
7	1190	870	650	850	880	1100	2720	3590	4610	6090	2900	1310
8	1170	860	630	850	880	1100	2670	3340	5070	6070	2740	1260
9	1110	840	610	850	880	1150	2720	2830	5190	6300	2540	1260
10	1060	820	600	860	900	1200	2690	2620	6590	6280	2200	1290
11	1040	860	620	860	900	1200	2590	2460	7020	6150	2160	1430
12	990	940	650	850	900	1200	2670	2500	5310	6000	2180	2420
13	960	920	690	850	900	1200	2660	2540	4370	5840	2180	2520
14	910	910	730	850	900	1200	2700	2580	5030	5650	2360	2320
15	910	900	790	850	900	1200	2720	2720	7100	5650	3520	2120
16	920	890	820	850	900	1300	2670	3290	7520	5670	2960	2050
17	930	870	840	850	900	1300	2640	4050	6680	5670	2780	2110
18	900	850	840	850	910	1300	2590	10800	5110	5610	2860	2380
19	900	830	830	850	940	1600	2610	17000	4750	5410	2820	3820
20	930	498	800	850	950	2050	2580	17900	4670	5210	2740	3120
21	930	470	800	850	950	2150	2540	7620	4040	5310	2610	2830
22	910	490	800	850	950	2100	2530	5730	4270	6190	2440	2770
23	900	540	800	850	950	2200	2480	5630	5130	5750	2360	2750
24	900	580	800	860	950	2280	2410	6760	5350	5510	2280	2740
25	900	640	800	860	950	2500	2360	7410	5550	5110	2220	2720
26	900	670	780	860	1000	2860	2020	7150	5190	4670	2150	2670
27	900	700	780	860	1000	2900	1950	6570	4060	4310	1830	2610
28	890	710	760	860	1000	2270	5880	6030	4020	3790	1750	2640
29	840	730	760	860	---	3000	8240	5590	5270	3610	1710	2690
30	870	730	760	860	---	3190	6220	5610	6740	3930	1700	2720
31	870	---	760	860	---	3100	---	5770	---	3710	1550	---
TOTAL	31120	23388	22960	25840	25660	53100	91220	172280	153110	176470	80290	65310
MEAN	1004	780	741	834	916	1713	3041	5557	5104	5693	2590	2177
MAX	1280	940	840	860	1000	3190	8240	17900	7520	7460	3680	3820
MIN	840	470	600	700	870	1000	1950	2460	3700	3610	1550	1260
AC-FT	61730	46390	45540	51250	50900	105300	180900	341700	303700	350000	159300	129500
CAL YR 1977 TOTAL	472841			1295		4140		937900				
WTR YR 1978 TOTAL	920748			2523		17900		1826000				

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 1977 TO SEPTEMBER 1978

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	TUR- BID- ITY (JTU)	OXYGEN, DIS- SOLVED (MG/L)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	HARD- NESS (MG/L AS CACO3)
OCT 03...	1015	1190	1100	--	10.0	600	8.8	140	400
NOV 13...	0900	920	1100	--	1.0	8	11.8	92	420
DEC 12...	1630	A650	1400	--	.0	7	10.6	76	500
JAN 04...	0920	A730	1200	--	.0	3	11.6	110	470
FEB 04...	1610	A880	1200	--	.0	45	10.5	K230	390
MAR 05...	1540	A1100	1150	--	.0	30	11.2	210	400
APR 01...	1645	3070	1150	--	13.0	140	9.5	270	350
MAY 13...	1700	2520	900	--	15.0	350	8.8	680	290
JUN 10...	1720	7300	430	8.3	14.0	650	8.9	K1600	140
JUL 23...	0815	5050	700	8.3	17.0	55	8.3	200	210
AUG 20...	0815	2720	820	8.2	15.0	40	8.5	260	260
SEP 17...	0945	2040	890	8.1	14.5	70	10.2	310	310

A-Daily mean discharge.

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

DATE	HARD- NESS, NONCAR- BONATE (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)	BICAR- BONATE (MG/L AS HCO3)	CAR- BONATE (MG/L AS CO3)	ALKA- LINITY (MG/L AS CACO3)
OCT 03...	200	95	40	150	3.3	5.7	250	0	200
NOV 13...	210	94	45	110	2.3	4.6	260	0	210
DEC 12...	250	140	36	160	3.1	5.9	300	0	250
JAN 04...	220	120	40	160	3.2	5.7	300	0	250
FEB 04...	160	96	38	140	3.1	3.9	280	0	230
MAR 05...	200	120	4.0	5.8	.1	4.6	240	0	200
APR 01...	150	90	31	130	3.0	4.4	240	0	200
MAY 13...	130	72	26	85	2.2	2.9	190	0	160
JUN 10...	42	36	11	36	1.3	1.5	120	0	98
JUL 23...	79	56	17	62	1.9	.3	160	0	140
AUG 20...	110	68	21	74	2.0	3.3	180	0	150
SEP 17...	140	84	25	86	2.1	3.6	210	0	170

YELLOWSTONE RIVER BASIN

06279500 BIGHORN RIVER AT KANE, WY--Continued

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

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, NITRATE DIS- SOLVED (MG/L AS N)	PHOS- PHORUS, TOTAL (MG/L AS P)
OCT 03...	450	33	.6	11	906	1.23	2910	.54	.00
NOV 13...	400	28	.6	9.3	824	1.12	2050	.54	.00
DEC 12...	510	35	.6	13	1050	1.43	1840	1.5	.00
JAN 04...	470	34	.8	12	998	1.36	1970	.84	.01
FEB 04...	420	40	.6	9.4	890	1.21	2110	.38	.08
MAR 05...	560	25	.6	10	1020	1.39	3030	.50	.59
APR 01...	230	14	.6	4.8	628	.85	5210	.47	.12
MAY 13...	300	14	.6	13	600	.82	4080	.43	.07
JUN 10...	110	1.1	.2	.0	320	.44	6310	.56	1.2
JUL 23...	200	8.1	.4	7.0	434	.59	5920	.99	.25
AUG 20...	250	11	.5	8.0	528	.72	3880	.61	.19
SEP 17...	280	15	.5	9.0	609	.83	3350	.50	.04

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	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)	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 19...	1400	860	10.0	.0	0	.00	.00	.0	.0	0	.00
MAY 11...	1145	2420	13.0	.0	0	.00	.00	.0	.0	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)	ENDRI- N, TOTAL (UG/L)	ENDRI- N, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)
OCT 19...	.0	.00	.1	.00	.0	.11	.00	.4	.00	.00	.1
MAY 11...	.0	.00	.0	.00	.0	.00	.00	.0	.00	.00	.0

DATE	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 MATT. (UG/KG)	LINDANE TOTAL (UG/L)	LINDANE TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	MALA- THION, TOTAL (UG/L)	METHYL PARA- THION, TOTAL (UG/L)	METHYL TRI- THION, TOTAL (UG/L)
OCT 19...	.00	.00	.0	.00	.1	.00	.0	.00	.00	.00
MAY 11...	.00	.00	.0	.00	.0	.00	.0	.00	.00	.00

DATE	PARA- THION, TOTAL (UG/L)	TOX- APHENE, TOTAL (UG/L)	TOXA- PHENE, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	TOTAL TRI- THION (UG/L)	2,4-D, TOTAL (UG/L)	2,4-D, TOTAL IN BOT- TOM MA- TERIAL (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 19...	.00	0	0	.00	.01	--	.00	--	.00	--
MAY 11...	.00	0	0	.00	.09	0	.00	0	.00	.0

YELLOWSTONE RIVER BASIN

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06279500 BIGHORN RIVER AT KANE, WY--Continued

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

		TOTAL DICAMBA (UG/L)		DICAMBA IN BOTTOM MA- TERIAL (UG/KG)		TOTAL PICLORAM (UG/L)		PICLORAM IN BOTTOM MA- TERIAL (UG/KG)					
DATE													
MAY 11...		.00		0		.01		0					
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 .500 MM	SED. SUSP. FALL DIAM. % FINER THAN 1.00 MM	
OCT 31...	1100	8.0	830	32	72	--	--	--	--	--	--	--	
FEB 16...	1145	.5	900	76	185	--	--	--	--	--	--	--	
APR 05...	1400	11.0	2800	951	7190	20	33	68	87	100	--	--	
MAY 02...	1330	10.5	4350	7060	82900	62	85	92	97	98	99	100	
20...	1350	9.0	20700	11700	654000	54	67	92	96	98	100	--	
JUL 27...	1250	22.0	4250	440	5050	--	--	--	--	--	--	--	

YELLOWSTONE RIVER BASIN

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 October to December and July, which are poor. Diversions for irrigation of about 450 acres (1.82 km²) above station.

AVERAGE DISCHARGE.--21 years, 430 ft³/s (12.18 m³/s), 311,500 acre-ft/yr (384 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 8,220 ft³/s (233 m³/s) June 15, 1963, gage height, 8.83 ft (2.691 m), from rating curve extended above 5,600 ft³/s (159 m³/s) on basis of slope-area measurement of peak flow; 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)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
June 9	2200	*3,950 112	6.14 1.871	June 23	2130	3,470 98.3	5.82 1.774
June 14	2300	3,500 99.1	5.84 1.780	June 29	2130	3,630 103	5.93 1.807

Minimum daily discharge, 53 ft³/s (1.50 m³/s) Jan. 1.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	127	86	78	53	63	71	255	204	594	2800	1110	309
2	120	90	80	54	67	69	222	218	645	2610	1030	309
3	122	90	80	55	72	67	162	292	767	2570	954	304
4	122	90	80	56	73	67	143	255	693	2380	877	300
5	120	92	78	60	73	72	133	229	877	2090	843	300
6	118	92	76	65	74	72	124	211	1330	2030	850	313
7	116	89	72	67	74	72	129	198	1660	1930	829	326
8	114	85	72	69	75	75	131	195	1890	2040	774	344
9	114	67	74	72	75	78	159	211	2610	2130	736	300
10	114	65	76	73	75	78	162	296	2610	2190	699	275
11	112	69	78	73	74	74	164	279	1580	2140	687	275
12	110	75	80	73	68	75	141	251	1230	2020	681	267
13	106	75	80	73	68	74	141	283	1780	2010	687	259
14	105	77	82	73	64	73	136	560	2610	2110	600	247
15	104	79	82	75	64	71	131	990	2880	2080	500	244
16	100	77	80	74	66	67	136	1110	2500	2100	516	229
17	98	74	78	74	66	74	133	736	1850	2020	500	222
18	98	73	74	75	74	79	122	600	1910	1770	441	251
19	98	67	70	73	64	83	122	549	1830	1640	391	236
20	98	68	68	73	66	86	138	657	1520	1520	367	232
21	94	67	68	69	66	85	136	843	2010	1520	377	222
22	94	68	70	66	68	96	127	1020	2570	1100	406	247
23	94	68	70	68	69	90	124	1070	2830	1050	411	225
24	94	70	70	74	71	85	112	1110	2940	1200	377	218
25	94	72	70	65	72	82	129	870	2660	1200	363	208
26	92	73	68	65	72	80	170	761	1880	1250	353	201
27	92	74	66	67	73	87	232	729	1980	1200	340	198
28	90	75	64	68	73	110	195	884	2530	1300	335	195
29	90	76	62	67	---	159	182	1030	3040	1600	326	191
30	90	77	55	63	---	218	188	836	2990	1300	318	185
31	90	---	55	61	---	218	---	681	---	1150	313	---
TOTAL	3230	2300	2256	2093	1959	2787	4579	18158	58796	56050	17991	7632
MEAN	104	76.7	72.8	67.5	70.0	89.9	153	586	1960	1808	580	254
MAX	127	92	82	75	75	218	255	1110	3040	2800	1110	344
MIN	90	65	55	53	63	67	112	195	594	1050	313	185
AC-FT	6410	4560	4470	4150	3890	5530	9080	36020	116600	111200	35690	15140

CAL YR 1977 TOTAL 78731 MEAN 216 MAX 2140 MIN 52 AC-FT 156200
WTR YR 1978 TOTAL 177831 MEAN 487 MAX 3040 MIN 53 AC-FT 352700

YELLOWSTONE RIVER BASIN

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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 right 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 to March, which are poor. Diversions for irrigation of about 11,000 acres (44.5 km²) above station.

AVERAGE DISCHARGE.--10 years (water years 1907, 1923-26, 1974-78), 456 ft³/s (12.91 m³/s), 330,400 acre-ft/yr (407 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 8,120 ft³/s (230 m³/s) July 3, 1975; maximum gage height, 7.39 ft (2.252 m) Jan. 12, 1977 (backwater from ice); minimum daily discharge, 2.8 ft³/s (0.079 m³/s) Oct. 24, 1977.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 4,520 ft³/s (128 m³/s) June 10, gage height, 5.98 ft (1.823 m); maximum gage height, 6.01 ft (1.832 m) Jan. 1 (backwater from ice); minimum daily discharge, 2.8 ft³/s (0.079 m³/s) Oct. 24.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	11	50	128	86	90	80	297	63	623	3090	847	31
2	6.0	79	142	92	92	82	311	72	524	2880	762	30
3	5.1	81	103	96	92	86	251	112	740	2800	688	28
4	7.0	77	89	98	90	94	213	120	609	2720	602	28
5	16	76	94	100	92	97	199	148	688	2270	543	27
6	25	76	96	100	92	97	169	185	1260	2240	543	27
7	32	76	110	100	92	94	162	175	1720	1950	543	28
8	30	87	110	100	90	92	150	172	1900	2240	495	34
9	29	100	105	98	90	92	150	188	2520	2240	437	25
10	29	100	110	96	90	94	172	315	3260	2270	399	21
11	14	100	115	94	82	96	178	293	1840	2320	368	19
12	10	98	115	92	78	96	165	243	1250	2130	353	18
13	13	100	115	92	74	96	145	213	1340	2100	339	17
14	18	103	110	94	74	98	139	421	2750	2130	315	16
15	18	112	108	94	76	98	136	940	3190	2240	209	14
16	10	115	105	94	78	96	133	1300	2940	2070	165	12
17	5.1	112	103	88	82	105	103	931	1960	2130	199	12
18	3.4	125	102	84	86	120	77	949	1830	1800	156	22
19	3.4	115	102	86	88	142	50	895	2070	1540	105	35
20	3.4	89	103	88	90	139	52	985	1490	1490	70	27
21	3.2	90	103	88	92	139	61	1160	1830	1500	58	27
22	3.0	90	102	86	94	142	47	1460	2600	1070	61	41
23	3.0	94	101	84	96	142	40	1460	2940	1000	83	32
24	2.8	105	100	86	96	139	37	1600	3210	1180	50	25
25	23	115	96	88	98	142	33	1230	3120	1180	34	18
26	47	130	96	88	98	139	25	1020	2000	1200	31	14
27	42	188	92	88	90	139	66	922	1820	1030	29	12
28	46	192	92	88	86	145	77	985	2390	1290	30	10
29	44	156	96	86	---	185	58	1260	3160	1520	32	9.1
30	44	142	94	88	---	247	60	1000	3210	1050	32	9.1
31	41	---	86	88	---	275	---	808	---	913	30	---
TOTAL	587.4	3173	3223	2830	2468	3828	3756	21625	60784	57583	8608	668.2
MEAN	18.9	106	104	91.3	88.1	123	125	698	2026	1858	278	22.3
MAX	47	192	142	100	98	275	311	1600	3260	3090	847	41
MIN	2.8	50	86	84	74	80	25	63	524	913	29	9.1
AC-FT	1170	6290	6390	5610	4900	7590	7450	42890	120600	114200	17070	1330
CAL YR 1977 TOTAL	63183.0				2280			125300				
WTR YR 1978 TOTAL	169133.6				3260			335500				

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 page .) 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); 36 years (water years 1943-78), 1,148 ft³/s (32.51 m³/s), 831,700 acre-ft/yr (1,025 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 14,700 ft³/s (416 m³/s) May 28, 1928, gage height, 10.62 ft (3.237 m), site and datum then in use, from rating curve extended above 11,000 ft³/s (312 m³/s); 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, 7,970 ft³/s (226 m³/s) July 2, 4, gage height, 8.72 ft (2.658 m); minimum daily, 159 ft³/s (4.50 m³/s) Oct. 18, Nov. 12, 13, 16.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	566	172	188	194	295	430	418	1120	1230	7610	2300	996
2	567	175	200	197	295	430	414	1020	1220	7830	2100	973
3	572	175	192	197	295	430	414	1030	1230	7750	1960	965
4	528	169	192	201	295	430	414	1030	1250	7350	1770	958
5	500	175	194	197	295	434	414	1030	1260	6270	1660	958
6	430	169	194	197	319	434	414	1030	1420	5660	1720	958
7	391	172	197	194	336	430	414	1030	1620	5590	1700	958
8	391	169	197	194	336	430	406	1030	1630	5590	1540	958
9	387	166	197	194	336	430	402	912	1910	5680	1410	958
10	383	162	197	194	336	426	406	821	2360	5740	1400	958
11	383	162	201	201	336	434	410	822	2320	5890	1350	928
12	368	159	201	204	336	418	418	821	2270	5830	1230	880
13	305	159	201	201	357	438	443	825	2510	5570	1160	860
14	278	162	204	201	372	430	625	884	2870	5180	1120	873
15	245	162	204	204	372	434	751	934	2900	5200	1120	887
16	214	159	204	226	372	434	781	1010	3080	5040	1120	887
17	184	162	204	226	372	431	787	1160	3800	5000	1130	887
18	159	162	207	239	372	432	775	1240	4200	4600	1140	900
19	162	162	204	226	372	430	781	1230	3940	4100	1140	914
20	172	162	204	226	370	430	775	1230	3430	3700	1140	900
21	169	162	217	226	390	426	763	1240	3210	3500	1070	900
22	169	169	201	226	400	426	763	1230	2940	3100	1040	900
23	172	181	197	248	390	426	763	1230	2950	2700	1040	900
24	172	181	197	265	390	422	763	1230	2970	2600	1030	900
25	175	181	197	265	390	422	907	1220	3000	2500	1000	900
26	175	184	197	262	390	418	995	1220	3010	2500	965	900
27	175	184	207	262	410	418	1130	1220	3160	2400	965	900
28	175	184	194	262	430	422	1220	1230	3780	2400	965	880
29	178	188	194	262	---	418	1220	1220	5160	2800	965	880
30	178	188	197	285	---	418	1220	1230	6530	2700	965	880
31	175	---	194	299	---	418	---	1230	---	2500	965	---
TOTAL	9098	5117	6174	6975	9959	13249	20406	33709	83160	144880	40180	27496
MEAN	293	171	199	225	356	427	680	1087	2772	4674	1296	917
MAX	572	188	217	299	430	438	1220	1240	6530	7830	2300	996
MIN	159	159	188	194	295	418	402	821	1220	2400	965	860
AC-FT	18050	10150	12250	13830	19750	26280	40480	66860	164900	287400	79700	54540
CAL YR 1977	TOTAL	198188	MEAN	543	MAX	1420	MIN	156	AC-FT	393100		
WTR YR 1978	TOTAL	400403	MEAN	1097	MAX	7830	MIN	159	AC-FT	794200		

06282000 SHOSHONE RIVER BELOW BUFFALO BILL RESERVOIR, WY--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1947-49, 1965 to current year.

PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: April 1947 to September 1949, April 1976 to current year.

INSTRUMENTATION.--Temperature recorder since April 1976.

REMARKS.--No temperature record Jan. 18-21, Feb. 19 to Mar. 1; clock stopped.

EXTREMES FOR PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: Maximum, 20.5°C Sept. 5-7, 1977; minimum daily, 0.0°C on many days during winter months.

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURES: Maximum, 18.5°C Oct. 1, 5-7; minimum recorded, 7.5°C Mar. 8.

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

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	TUR- BID- ITY (JTU)	OXYGEN, DIS- SOLVED (MG/L)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	HARD- NESS (MG/L AS CAC03)
OCT									
03...	1700	572	--	--	14.5	10	8.5	K9	230
NOV									
13...	1530	159	--	--	13.0	1	6.9	K6	520
DEC									
12...	1500	201	--	--	10.0	1	9.0	K5	610
FEB									
01...	0930	295	--	--	10.0	2	--	--	410
05...	1440	A295	--	--	7.0	1	9.4	K1	420
MAR									
06...	1520	A434	--	--	7.0	1	10.5	K1	340
APR									
02...	1300	414	--	--	9.5	1	10.1	<1	280
MAY									
14...	1410	935	--	--	11.0	6	10.3	K2	170
JUN									
11...	1430	2340	290	7.4	12.0	15	9.9	K5	100
JUL									
23...	1610	A2700	200	7.4	16.0	15	8.3	K4	64
AUG									
20...	1530	1140	370	6.3	15.0	10	8.4	K15	150
SEP									
17...	1510	887	350	6.3	15.5	10	8.8	K7	150

A-Daily mean discharge.

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

DATE	HARD- NESS, NONCAR- BONATE (MG/L 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)	BICAR- BONATE (MG/L AS HCO3)	CAR- BONATE (MG/L AS CO3)	ALKA- LINITY (MG/L AS CAC03)
OCT									
03...	58	68	16	18	.5	3.5	210	0	170
NOV									
13...	150	150	35	28	.5	7.3	450	0	370
DEC									
12...	270	180	39	31	.5	7.2	420	0	340
FEB									
01...	120	120	28	38	.8	5.6	350	0	290
05...	130	130	21	24	.5	4.3	360	0	300
MAR									
06...	110	100	21	31	.7	4.5	280	0	230
APR									
02...	67	81	18	82	2.1	4.2	260	0	210
MAY									
14...	31	51	11	27	.9	2.7	170	0	140
JUN									
11...	18	30	6.5	19	.8	1.1	100	0	82
JUL									
23...	2	19	3.9	8.7	.5	.1	76	0	62
AUG									
20...	60	50	8.9	8.8	.3	1.9	110	0	90
SEP									
17...	35	46	9.0	13	.5	2.0	140	0	110

YELLOWSTONE RIVER BASIN

06282000 SHOSHONE RIVER BELOW BUFFALO BILL RESERVOIR, WY--Continued

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

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, NITRATE DIS- SOLVED (MG/L AS N)	PHOS- PHORUS, TOTAL (MG/L AS P)
OCT 03...	82	6.1	.4	14	310	.42	479	.00	.00
NOV 13...	200	9.4	.9	15	665	.90	285	.05	.00
DEC 12...	330	7.8	.7	19	819	1.11	444	.27	.00
FEB 01...	170	9.0	.8	26	567	.77	452	.07	.00
05...	130	20	.8	15	710	.97	566	.09	.01
MAR 06...	160	7.9	.6	17	480	.65	562	.07	.15
APR 02...	120	2.8	.6	8.6	446	.61	499	.09	.04
MAY 14...	86	4.9	.3	8.0	280	.38	707	.09	.03
JUN 11...	50	4.1	.2	7.3	220	.30	1390	.32	.14
JUL 23...	15	1.5	.2	12	98	.13	714	.05	.09
AUG 20...	74	1.5	.3	12	212	.29	653	.11	.16
SEP 17...	55	3.7	.3	13	211	.29	505	.05	.10

DATE	TIME	PCB, TOTAL (UG/L)	PCB, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	NAPH- THA- LENES, POLY- CHLOR. TOTAL (UG/L)	ALDRIN, TOTAL (UG/L)	ALDRIN, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	CHLOR- DANE, TOTAL (UG/L)	CHLOR- DANE, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	DDD, TOTAL (UG/L)	DDD, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	DDE, TOTAL (UG/L)
OCT 03...	1700	.0	7	.00	.00	.0	.0	0	.00	.0	.00
MAY 14...	1410	.0	8	.00	.00	.0	.0	0	.00	.0	.00
SEP 17...	1510	.0	19	.00	.00	.0	.0	0	.00	.0	.00

DATE	DDE, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	DDT, TOTAL (UG/L)	DDT, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	DI- AZINON, TOTAL (UG/L)	DI- ELDRIN, TOTAL (UG/L)	DI- ELDRIN, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	ENDO- SULFAN, TOTAL (UG/L)	ENDRIN, TOTAL (UG/L)	ENDRIN, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	ETHION, TOTAL (UG/L)
OCT 03...	.0	.00	.0	.00	.00	.0	.00	.00	.0	.00
MAY 14...	.0	.00	.0	.00	.00	.0	.00	.00	.0	.00
SEP 17...	.0	.00	.0	.00	.00	.0	--	.00	.0	.00

06282000 SHOSHONE RIVER BELOW BUFFALO BILL RESERVOIR, WY--Continued

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

DATE	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)	METHYL PARA- THION, TOTAL (UG/L)	METHYL TRI- THION, TOTAL (UG/L)	MIREX, TOTAL (UG/L)
OCT 03...	.00	.0	.00	.0	.00	.0	.00	.00	.00	--
MAY 14...	.00	.0	.00	.0	.00	.0	.00	.00	.00	--
SEP 17...	.00	.0	.00	.0	.00	.0	.00	.00	.00	.00

DATE	PARA- THION, TOTAL (UG/L)	TOX- APHENE, TOTAL (UG/L)	TOXA- PHENE, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	TOTAL TRI- THION (UG/L)	2,4-D, TOTAL (UG/L)	2,4-D, TOTAL IN BOT- TOM MA- TERIAL (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 03...	.00	0	0	.00	.00	--	.00	--	.00	--
MAY 14...	.00	0	0	.00	.06	0	.00	0	.00	.0
SEP 17...	.00	0	0	.00	.13	0	.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)
MAY 14...	.00	0	.00	0
SEP 17...	.00	0	.00	0

YELLOWSTONE RIVER BASIN

06282000 SHOSHONE RIVER BELOW BUFFALO BILL RESERVOIR, WY--Continued

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	18.5	18.0	15.0	14.5	12.0	11.0	10.5	10.5	10.5	10.0	---	---
2	18.0	18.0	16.0	14.5	12.0	11.0	10.5	9.0	10.0	10.0	8.0	8.0
3	18.0	17.5	16.0	15.0	11.5	11.5	11.0	9.5	10.0	10.0	8.0	8.0
4	18.0	17.5	16.0	15.0	11.5	11.5	11.0	10.5	10.0	10.0	8.0	8.0
5	18.5	18.0	16.0	15.5	11.5	11.0	11.5	11.0	10.0	10.0	8.0	8.0
6	18.5	18.0	16.0	15.5	11.5	11.0	11.5	11.0	10.0	9.5	8.0	8.0
7	18.5	18.0	15.5	14.5	12.0	11.5	11.0	11.0	9.5	9.5	8.0	8.0
8	17.5	16.5	15.0	14.0	11.0	10.5	11.5	11.0	9.5	9.5	8.0	7.5
9	17.0	16.5	14.0	13.0	11.0	10.5	12.0	11.5	9.5	9.5	8.0	8.0
10	17.0	16.5	15.0	13.0	12.0	11.0	11.5	11.5	9.5	9.5	8.5	8.0
11	17.0	16.5	15.5	14.0	11.5	11.0	12.0	11.5	9.5	9.5	8.5	8.0
12	17.0	16.5	15.0	14.5	11.5	11.5	11.5	11.0	9.5	9.5	8.5	8.5
13	17.0	16.5	15.0	14.5	11.5	11.0	12.0	11.5	9.5	9.5	8.5	8.5
14	17.5	17.0	15.0	13.5	11.5	11.0	12.0	12.0	9.5	9.0	8.5	8.5
15	18.0	16.5	15.0	13.5	12.0	11.5	12.0	11.5	9.0	9.0	8.5	8.5
16	18.0	16.5	14.5	14.0	11.0	10.0	11.5	11.0	9.0	9.0	8.5	8.5
17	18.0	17.0	14.5	14.0	11.0	9.5	11.5	11.0	9.0	9.0	8.5	8.5
18	18.0	17.0	14.0	13.5	11.0	11.0	---	---	9.0	9.0	9.0	8.5
19	17.5	17.0	13.5	12.0	11.0	10.5	---	---	---	---	9.0	8.5
20	17.5	17.0	13.0	12.0	10.5	10.0	---	---	---	---	9.0	8.5
21	17.5	17.0	13.5	13.0	11.0	10.0	---	---	---	---	9.0	8.5
22	16.5	16.0	14.0	13.5	11.0	10.5	11.0	10.5	---	---	9.0	9.0
23	16.5	15.5	13.5	12.5	10.5	10.0	11.0	11.0	---	---	9.0	9.0
24	16.5	15.5	13.0	12.0	10.5	10.0	11.0	10.5	---	---	9.0	9.0
25	16.5	15.5	13.5	12.5	10.5	10.0	11.0	10.5	---	---	9.0	9.0
26	16.0	16.0	13.0	12.5	12.0	10.0	11.0	11.0	---	---	9.0	8.5
27	16.0	16.0	13.0	12.5	10.5	10.0	11.0	11.0	---	---	9.0	8.5
28	16.0	16.0	13.0	12.5	10.5	10.0	11.0	11.0	---	---	9.0	9.0
29	16.0	15.5	12.0	11.5	11.0	10.5	11.0	11.0	---	---	9.0	9.0
30	16.0	15.0	12.0	12.0	11.0	10.5	11.0	10.5	---	---	9.0	9.0
31	15.0	14.5	---	---	11.0	10.5	10.5	10.5	---	---	9.5	9.0
MONTH	18.5	14.5	16.0	11.5	12.0	9.5	12.0	9.0	10.5	9.0	9.5	7.5
DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER		
1	9.5	9.5	9.0	9.0	11.0	10.5	13.0	12.5	15.0	14.0	14.5	14.0
2	10.0	9.5	9.5	9.0	11.0	10.5	13.0	12.5	14.5	14.0	14.5	14.0
3	9.5	9.5	9.5	9.0	11.5	10.5	14.0	13.0	15.5	14.5	14.5	14.0
4	9.5	9.5	9.5	9.0	11.0	10.5	14.5	12.5	15.5	14.5	15.0	14.0
5	10.0	9.5	9.0	9.0	11.0	10.5	15.0	13.5	15.5	15.0	14.5	14.0
6	10.0	9.5	9.0	9.0	11.0	10.5	14.5	13.5	15.0	14.5	14.5	14.0
7	10.0	10.0	9.0	9.0	11.0	10.5	15.5	14.0	15.0	14.5	15.0	14.0
8	11.0	10.0	9.5	9.0	11.0	10.5	16.0	13.5	15.0	14.5	15.0	14.0
9	10.5	10.0	9.5	9.5	11.0	10.5	15.0	13.5	14.5	14.0	14.0	13.0
10	11.0	10.0	10.5	9.5	10.5	10.5	15.0	13.5	14.0	13.5	14.0	13.5
11	10.5	10.0	10.5	10.5	11.0	10.5	15.5	14.0	14.0	13.5	14.0	13.5
12	11.0	10.0	10.5	10.0	11.5	11.0	15.5	13.5	14.0	13.5	13.0	13.0
13	10.5	10.0	10.5	10.5	11.0	11.0	15.0	13.5	13.5	13.5	14.0	13.0
14	10.0	9.5	10.5	10.5	11.5	11.0	15.0	14.5	13.5	13.5	14.0	13.5
15	9.5	9.5	10.5	10.5	11.0	11.0	14.5	14.0	14.5	13.5	13.5	13.0
16	9.5	9.0	10.5	10.5	11.5	11.0	15.0	14.5	14.0	13.5	13.5	13.0
17	9.0	9.0	10.5	10.5	12.0	11.0	15.5	13.5	14.0	13.5	13.5	13.0
18	9.0	9.0	10.5	10.5	11.5	11.5	15.5	13.5	14.0	13.5	13.0	13.0
19	9.0	9.0	10.5	10.0	12.0	11.5	15.0	12.5	14.0	13.5	13.0	12.5
20	9.0	9.0	10.5	10.0	12.0	11.5	14.5	12.5	14.0	13.5	13.0	12.0
21	9.0	9.0	10.5	10.0	11.5	11.5	15.0	13.0	14.0	14.0	12.5	12.0
22	9.0	8.5	10.5	10.0	12.0	11.5	14.5	14.0	14.5	14.0	11.5	11.0
23	9.0	8.5	10.5	10.0	12.0	11.5	14.5	14.0	14.0	13.0	11.5	11.0
24	9.0	9.0	10.5	10.0	12.0	11.5	15.0	15.0	14.5	14.0	11.5	11.0
25	9.0	9.0	10.5	10.5	12.5	11.5	15.0	14.5	14.5	13.5	11.0	10.0
26	9.0	9.0	11.0	10.5	12.5	12.0	15.0	14.0	15.0	13.5	10.5	10.0
27	9.0	9.0	10.5	10.5	12.0	12.0	15.5	14.0	14.5	14.0	11.0	10.0
28	9.0	8.5	11.0	10.5	12.0	12.0	15.0	15.0	14.5	14.0	10.5	10.5
29	9.0	8.5	10.5	10.5	12.5	12.0	15.5	15.0	14.5	14.0	10.5	10.0
30	9.0	9.0	11.0	10.5	13.0	12.5	15.5	15.0	15.0	14.0	10.5	9.5
31	---	---	11.0	10.5	---	---	15.0	14.0	14.5	14.0	---	---
MONTH	11.0	8.5	11.0	9.0	13.0	10.5	16.0	12.5	15.5	13.0	15.0	9.5
YEAR	18.5	7.5										

YELLOWSTONE RIVER BASIN

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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 1977 TO SEPTEMBER 1978

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHUS)	PH (UNITS)	TEMPER- ATURE (DEG C)	TUR- BID- ITY (JTU)	OXYGEN, DIS- SOLVED (MG/L)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	HARD- NESS (MG/L AS CAC03)	HARD- NESS, NONCAR- BONATE (MG/L CAC03)
OCT 03...	1540	632	--	--	15.0	4	11.4	22	280	98
NOV 13...	1445	198	--	--	9.0	2	10.0	K8	510	210
DEC 12...	1400	173	--	--	7.0	5	11.5	K13	540	240
JAN 04...	1430	E173	--	--	5.0	2	10.8	K6	560	260
FEB 05...	1330	392	--	--	5.0	2	11.3	34	430	140
MAR 06...	1410	428	--	--	7.0	2	12.2	K2	340	110
APR 02...	1215	443	--	--	12.0	3	9.5	K12	300	86
MAY 14...	1300	800	--	--	13.0	25	10.5	26	210	49
JUN 11...	1310	2190	330	8.2	12.5	30	10.3	28	120	21
JUL 23...	1420	2410	260	7.7	17.0	20	8.6	45	84	15
AUG 20...	1400	1120	420	7.8	16.0	10	10.2	62	170	54
SEP 17...	1400	950	480	7.9	15.0	10	11.0	27	200	66

E-Estimate.

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)	BICAR- BONATE (MG/L AS HCO3)	CAR- BONATE (MG/L AS CO3)	ALKA- LITY (MG/L AS CAC03)	SULFATE DIS- SOLVED (MG/L AS SO4)
OCT 03...	77	21	46	1.2	4.0	220	--	180	190
NOV 13...	140	38	54	1.0	7.4	360	--	300	330
DEC 12...	150	41	71	1.3	7.6	370	--	300	340
JAN 04...	160	39	58	1.1	7.5	370	--	300	300
FEB 05...	120	31	48	1.0	6.0	350	--	290	230
MAR 06...	95	24	42	1.0	4.7	280	--	230	170
APR 02...	87	20	36	.9	4.1	260	--	210	150
MAY 14...	59	14	32	1.0	3.2	190	--	160	110
JUN 11...	34	8.4	23	.9	2.1	120	0	98	59
JUL 23...	24	5.9	15	.7	1.6	85	0	70	42
AUG 20...	48	12	28	.9	2.8	140	0	110	120
SEP 17...	56	14	27	.8	3.0	160	0	130	130

YELLOWSTONE RIVER BASIN

06282900 SHOSHONE RIVER ABOVE DRY CREEK, NEAR CODY, WY--Continued

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

DATE	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)	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, DIS- SOLVED (MG/L AS P)
OCT 03...	5.0	.5	15	468	.64	799	.18	.06	--
NOV 13...	8.3	.9	17	775	1.05	414	.48	.05	--
DEC 12...	8.9	.9	17	821	1.12	383	.54	.04	--
JAN 04...	9.7	.7	17	777	1.06	363	.55	.04	--
FEB 05...	7.4	.8	16	633	.86	670	.26	.06	--
MAR 06...	5.9	.5	17	498	.68	575	.15	.05	--
APR 02...	2.6	.6	13	442	.60	529	.08	.01	--
MAY 14...	4.1	.4	14	331	.45	715	.22	.11	.00
JUN 11...	2.5	.2	15	204	.28	1210	.12	.11	--
JUL 23...	1.8	.1	15	148	.20	963	.22	.08	--
AUG 20...	2.9	.3	16	300	.41	907	.17	.04	--
SEP 17...	3.1	.4	18	331	.45	849	.19	.09	--

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LOCATION.--Lat 44°42'32", long 108°45'31", in NW¼NE¼NE¼ sec.34, T.55 N., R.99 W., Park County, Hydrologic Unit 10080014, on left bank 25 ft (8 m) downstream from bridge on State Secondary Highway 1505, 0.7 mi (1.1 km) north of Willwood, and 3.0 mi (4.8 km) south of Powell.

GAGE.--Water-stage recorder. Altitude of gage is 4,300 ft (1,311 m), from topographic map.

REMARKS.--Records good except those for October and January, which are poor. Flow regulated by Buffalo Bill Reservoir. (See page .) Diversions above station for irrigation of about 92,500 acres (374 km²), of which about 46,800 acres (189 km²) are below station.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 12,100 ft³/s (343 m³/s) June 20, 1974, gage height, 10.43 ft (3.179 m); minimum daily, 95 ft³/s (2.69 m³/s) May 27, 1977.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 6,880 ft³/s (195 m³/s) July 2, gage height, 8.63 ft (2.630 m); minimum daily, 252 ft³/s (7.14 m³/s) Oct. 5.

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	263	400	328	335	360	494	543	1020	692	6270	1810	521
2	278	396	333	335	370	510	538	724	619	6630	1630	538
3	278	378	333	320	370	521	526	792	571	6600	1490	516
4	282	374	328	310	374	532	521	737	494	6290	1350	532
5	252	374	320	310	369	504	526	757	499	5340	1170	532
6	270	405	351	310	378	504	521	799	445	4640	1170	526
7	260	396	369	310	405	499	526	792	607	4640	1190	510
8	260	364	299	310	400	521	526	771	613	4680	974	548
9	255	364	320	310	396	543	521	771	829	4820	827	571
10	280	378	330	300	396	601	538	589	1400	4920	757	601
11	330	360	330	300	382	571	538	548	1350	5030	778	834
12	330	351	330	300	390	543	543	532	1590	5030	711	718
13	600	356	320	300	390	554	543	526	1520	4800	685	744
14	500	346	324	290	390	538	637	532	2040	4580	685	799
15	450	346	333	294	410	532	813	532	2050	4500	711	897
16	400	346	320	324	440	526	918	410	2190	4390	698	904
17	360	346	299	400	425	543	897	1060	2800	4350	744	862
18	330	346	315	378	455	661	862	2700	3420	4100	799	1150
19	300	320	299	400	472	643	806	2490	3290	3640	806	1170
20	360	333	299	420	430	673	692	1290	2690	3320	799	1070
21	430	330	360	400	435	649	692	1140	2560	3070	724	1050
22	420	330	360	350	472	577	679	1100	2200	2840	637	1020
23	410	340	307	350	472	554	655	995	2150	2400	637	1020
24	420	350	307	351	466	554	589	953	2160	2190	704	1010
25	430	356	315	346	472	554	589	939	2170	2050	625	988
26	420	364	356	364	460	560	560	918	2200	1940	543	953
27	410	346	364	346	472	554	543	876	2340	1880	532	911
28	420	338	351	346	460	548	862	876	2880	1840	560	883
29	410	338	364	346	---	538	764	799	4050	2260	516	876
30	410	328	382	360	---	532	785	778	5470	2250	499	876
31	410	---	342	360	---	532	---	737	---	2010	516	---
TOTAL	11228	10699	10288	10475	11711	17165	19253	28483	57889	123300	26277	24130
MEAN	362	357	332	338	418	554	642	919	1930	3977	848	804
MAX	600	405	382	420	472	673	918	2700	5470	6630	1810	1170
MIN	252	320	299	290	360	494	521	410	445	1840	499	510
AC-FT	22270	21220	20410	20780	23230	34050	38190	56500	114800	244600	52120	47860
CAL YR 1977	TOTAL	128109	MEAN	351	MAX	904	MIN	95	AC-FT	254100		
WTR YR 1978	TOTAL	350898	MEAN	961	MAX	6630	MIN	252	AC-FT	696000		

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).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--May 1958 to current year.

GAGE.--Water-stage recorder. Datum of gage is 4,073.67 ft (1,241.655 m), National Geodetic Vertical Datum of 1929. Prior to Nov. 12, 1965, at site 50 ft (15 m) upstream at present datum. Nov. 12, 1965, to June 13, 1968, at site 150 ft (46 m) upstream at datum 3.64 ft (1.109 m) higher.

REMARKS.--Records good except those for December to February and those for periods of no gage-height record, Nov. 20, 22-25, Dec. 7, 23, Dec. 28 to Jan. 7, Jan. 9 to Feb. 7, Feb. 17-19, June 17-23, July 31 to Aug. 15, which are poor. Flow regulated by Buffalo Bill Reservoir. (See page). Diversions above station for irrigation of about 143,000 acres (579 km²), of which about 37,000 acres (150 km²) are below station.

AVERAGE DISCHARGE.--20 years, 688 ft³/s (19.48 m³/s), 498,500 acre-ft/yr (615 hm³/yr)..

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 13,300 ft³/s (377 m³/s) July 1, 1967, gage height, 8.76 ft (2.670 m), from floodmark, site and datum then in use; minimum daily, 5.0 ft³/s (0.14 m³/s) May 25, 26, 1959.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 6,050 ft³/s (171 m³/s) July 2, gage height, 8.09 ft (2.466 m); minimum daily, 58 ft³/s (1.64 m³/s) June 6.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	190	290	354	320	430	495	530	1110	426	5260	1400	199
2	220	364	359	320	450	530	530	754	318	5740	1200	220
3	242	390	359	310	450	515	525	874	249	5780	1100	220
4	238	382	359	320	450	520	515	716	178	5620	1000	226
5	205	386	354	320	450	500	520	702	166	4820	900	229
6	214	408	370	330	450	495	515	778	58	4280	900	187
7	187	390	380	340	450	495	510	770	181	4300	900	157
8	187	368	320	340	430	495	515	754	208	4300	750	193
9	169	372	330	340	400	495	500	723	264	4470	640	199
10	193	382	370	350	380	576	515	530	917	4490	500	232
11	226	368	390	350	390	546	520	470	917	4580	520	540
12	223	368	380	350	420	535	520	455	1230	4490	450	440
13	422	368	370	350	450	535	530	422	1010	4260	380	426
14	334	359	340	340	450	530	576	413	1650	4000	320	460
15	302	359	382	330	450	520	723	445	1690	4040	350	564
16	249	359	364	360	470	520	858	249	1790	3920	290	558
17	235	354	334	400	450	525	850	790	2500	3840	342	940
18	196	359	346	450	460	624	826	2910	3200	3560	386	882
19	178	330	334	420	470	660	730	2980	3100	3220	400	1020
20	226	350	340	440	450	688	648	1310	2500	2900	390	842
21	306	364	350	470	440	738	716	1090	2300	2740	314	794
22	286	350	360	400	475	606	702	1070	2000	2430	242	770
23	286	350	350	400	475	564	688	1010	1900	2030	229	762
24	274	370	330	400	475	576	642	908	1720	1850	286	762
25	294	380	320	400	480	570	588	802	1650	1670	214	716
26	286	380	330	400	475	576	594	688	1700	1570	166	688
27	278	386	340	420	480	564	552	642	1780	1460	175	636
28	286	364	350	410	490	552	926	642	2260	1450	190	600
29	270	364	350	400	---	546	818	530	3390	1940	172	588
30	274	350	340	400	---	535	770	475	4510	1990	175	588
31	260	---	330	410	---	530	---	460	---	1700	187	---
TOTAL	7736	10964	10885	11590	12590	17156	18952	26472	45762	108700	15468	15638
MEAN	250	365	351	374	450	553	632	854	1525	3506	499	521
MAX	422	408	390	470	490	738	926	2980	4510	5780	1400	1020
MIN	169	290	320	310	380	495	500	249	58	1450	166	157
AC-FT	15340	21750	21590	22990	24970	34030	37590	52510	90770	215600	30680	31020
CAL YR 1977 TOTAL	92514.5			MEAN 253	MAX 880	MIN 9.5	AC-FT 183500					
WTR YR 1978 TOTAL	301913.0			MEAN 827	MAX 5780	MIN 58	AC-FT 598800					

YELLOWSTONE RIVER BASIN

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06284400 SHOSHONE RIVER NEAR GARLAND, WY--Continued

WATER-QUALITY RECORDS

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

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

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	TEMPER- ATURE (DEG C)
OCT				
04...	1610	234	720	8.0
NOV				
01...	1230	272	1300	5.0
MAR				
06...	1230	501	890	3.0
MAY				
03...	1600	771	610	14.5
JUL				
31...	1630	1730	420	19.0
SEP				
06...	1350	182	700	17.0

YELLOWSTONE RIVER BASIN

06284500 BITTER CREEK NEAR GARLAND, WY

LOCATION.--Lat 44°45'13", long 108°35'29", in SW $\frac{1}{4}$ SW $\frac{1}{4}$ SW $\frac{1}{4}$ 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 December to March, which are poor. Flow is mainly return flow from Garland Canal system of Shoshone irrigation project.

AVERAGE DISCHARGE.--16 years (water years 1951-53, 1958-60, 1969-78), 145 ft³/s (4.106 m³/s), 105,000 acre-ft/yr (129 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, 552 ft³/s (15.6 m³/s) May 18, gage height, 3.04 ft (0.927 m); minimum daily, 13 ft³/s (0.37 m³/s) Feb. 15.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	207	44	30	27	18	18	27	254	177	292	311	278
2	204	44	30	25	16	16	26	212	157	303	308	294
3	213	43	30	21	17	16	23	228	171	308	297	305
4	208	43	30	18	18	17	22	221	185	297	281	314
5	197	42	30	17	18	18	22	238	187	305	267	292
6	185	42	30	23	20	20	21	246	167	275	292	286
7	169	41	30	27	23	20	21	231	171	283	303	281
8	171	40	31	24	24	21	21	231	181	283	311	272
9	181	40	30	22	23	21	21	192	192	270	300	294
10	183	39	29	19	19	22	20	159	175	286	292	320
11	189	39	28	19	17	23	21	163	200	292	311	393
12	196	39	28	21	16	24	20	159	207	264	314	393
13	140	38	28	22	15	26	21	151	189	278	317	369
14	74	37	28	23	14	26	21	151	224	278	325	349
15	67	36	29	21	13	25	21	153	241	289	305	292
16	65	36	29	19	14	24	20	157	251	305	311	303
17	63	35	27	20	15	23	20	272	270	286	294	305
18	63	35	27	20	14	24	20	275	286	259	299	366
19	62	35	27	18	14	27	27	144	317	272	272	314
20	59	35	27	20	16	29	74	169	311	275	281	264
21	57	35	27	18	19	31	149	167	286	292	292	259
22	56	34	28	20	20	29	134	159	270	286	283	251
23	55	34	28	21	20	27	133	153	254	278	275	249
24	53	34	32	22	19	25	138	192	246	292	275	249
25	52	34	28	20	19	24	173	167	251	303	294	244
26	51	34	29	19	19	25	189	161	264	289	289	231
27	49	33	31	18	19	25	183	151	259	292	314	231
28	48	32	28	18	19	24	219	144	264	286	278	226
29	47	31	28	17	---	25	221	145	278	289	241	228
30	47	31	28	18	---	25	216	153	283	297	246	236
31	46	---	29	18	---	27	---	153	---	317	272	---
TOTAL	3457	1115	894	635	498	727	2244	5751	6914	8921	9040	8688
MEAN	112	37.2	28.8	20.5	17.8	23.5	74.8	186	230	286	292	290
MAX	213	44	32	27	24	31	221	275	317	317	325	393
MIN	46	31	27	17	13	16	20	144	157	259	241	226
AC-FT	6860	2210	1770	1260	988	1440	4450	11410	13710	17690	17930	17230
CAL YR 1977	TOTAL	37702	MEAN 103	MAX 294	MIN 15	AC-FT 74780						
WTR YR 1978	TOTAL	48884	MEAN 134	MAX 393	MIN 13	AC-FT 96960						

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 period.

EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum daily, 2,120 micromhos Jan. 22; minimum daily, 451 micromhos July 9.

WATER TEMPERATURES: Maximum, 24.5°C Aug. 1; minimum, 0.0°C on many days during December to March.

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

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHQS)	PH (UNITS)	TEMPER- ATURE (DEG C)	TUR- BID- ITY (JTU)	OXYGEN, DIS- SOLVED (MG/L)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	HARD- NESS (MG/L AS CAC03)	HARD- NESS, NONCAR- BONATE (MG/L CAC03)
OCT										
03...	1330	219	840	--	11.0	30	10.3	580	300	75
NOV										
13...	1215	38	1400	--	4.0	4	10.8	K150	350	140
DEC										
12...	1100	A28	1500	--	.5	15	12.6	250	370	68
JAN										
04...	1140	A18	1350	--	.0	7	11.0	K610	350	50
FEB										
05...	1045	A18	1700	--	.0	6	12.8	K3000	370	43
MAR										
06...	1100	A20	1600	--	1.5	50	13.0	K2400	370	64
APR										
02...	1030	A26	1900	--	9.0	5	14.8	74	410	130
MAY										
14...	1030	155	850	--	12.0	--	10.5	620	270	67
JUN										
11...	1030	238	740	8.4	12.0	100	10.3	430	220	36
JUL										
23...	1140	308	720	8.3	16.5	50	8.9	290	190	18
AUG										
20...	1130	289	700	8.0	16.0	40	9.0	K1100	210	34
SEP										
17...	1230	308	750	8.4	13.0	40	10.8	310	230	67

A-Daily mean discharge.

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)	BICAR- BONATE (MG/L AS HCO3)	CAR- BONATE (MG/L AS CO3)	ALKA- LITY (MG/L AS CAC03)	SULFATE DIS- SOLVED (MG/L AS SO4)
OCT									
03...	79	24	96	2.4	4.1	270	--	220	260
NOV									
13...	86	34	220	5.1	4.0	260	--	210	530
DEC									
12...	91	35	250	5.6	4.1	370	--	300	550
JAN									
04...	87	33	210	4.9	4.1	370	--	300	460
FEB									
05...	91	35	260	5.9	4.5	400	--	330	540
MAR									
06...	91	34	240	5.5	4.1	370	--	300	530
APR									
02...	96	41	300	6.5	3.9	340	--	280	690
MAY									
14...	61	29	95	2.5	3.6	250	--	210	230
JUN									
11...	57	18	87	2.6	4.4	220	0	180	190
JUL									
23...	50	16	83	2.6	3.3	210	0	170	160
AUG									
20...	56	18	84	2.5	3.3	220	0	180	190
SEP									
17...	61	19	82	2.4	3.4	200	0	160	220

YELLOWSTONE RIVER BASIN

06284500 BITTER CREEK NEAR GARLAND, WY--Continued

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

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, DIS- SOLVED TOTAL (MG/L AS P)	PHOS- PHORUS, DIS- SOLVED (MG/L AS P)
OCT 03...	7.5	.7	16	629	.86	372	1.9	.15	.06
NOV 13...	17	1.2	15	1060	1.44	109	4.5	.18	.13
DEC 12...	21	1.1	19	1170	1.59	88.5	4.4	.36	.25
JAN 04...	20	1.1	22	1040	1.41	50.5	4.7	.51	.43
FEB 05...	22	1.2	21	1190	1.62	57.8	4.8	.58	.53
MAR 06...	20	1.0	20	1140	1.55	61.6	4.2	.73	.39
APR 02...	21	1.0	9.7	1340	1.82	94.1	2.7	.18	.15
MAY 14...	8.3	.6	15	573	.78	240	1.6	.28	.03
JUN 11...	8.0	.7	16	502	.68	323	2.8	.49	.16
JUL 23...	6.4	.7	17	451	.61	375	2.4	.24	.11
AUG 20...	6.2	.7	18	495	.67	386	2.3	.18	.07
SEP 17...	6.6	.7	18	518	.70	431	2.0	.18	.10

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	931	1460	1640	1550	1590	1630	1460	730	497	659	675	715
2	928	1400	1670	1450	1640	1580	1630	836	778	611	630	729
3	904	1380	1620	1440	1610	1590	1660	1040	762	615	696	726
4	933	1400	1560	1450	1630	1520	1630	780	751	603	705	736
5	912	1430	1540	1650	1550	1490	1600	706	756	585	734	743
6	959	1390	1680	1620	1590	1490	1560	705	817	614	703	758
7	969	1400	1540	1630	1630	1550	1640	749	797	621	692	788
8	980	1520	1610	1630	1680	1540	1580	779	807	644	683	754
9	992	1420	1600	1540	1720	1630	1600	748	797	451	683	743
10	954	1420	1580	1580	1680	1640	1510	815	745	698	673	720
11	954	1470	1520	1570	1590	1730	1590	802	745	676	661	781
12	963	1510	1590	1550	1670	1870	1480	786	785	671	678	851
13	1010	1510	1690	1530	1660	2040	1490	800	887	636	692	808
14	1200	1500	1730	1540	1620	2040	1510	799	715	650	685	743
15	1220	1500	1680	1540	1600	1890	1490	744	713	660	719	766
16	1340	1540	1640	1570	1600	1870	1520	780	632	651	726	777
17	1370	1430	1690	1490	1620	1940	1600	790	638	642	725	761
18	1320	1510	1680	1520	1630	1860	1480	1100	623	690	716	782
19	1350	1440	1560	1580	1590	1900	1480	1120	589	670	706	869
20	1360	1420	1570	1570	1460	1860	887	1060	589	643	729	826
21	1370	1850	1570	1500	1480	1900	771	1010	589	664	681	842
22	1260	1480	1580	2120	1540	1940	671	911	620	707	714	826
23	1320	1720	1610	1530	1550	1930	667	799	640	717	739	806
24	1250	1570	1600	1530	1460	2040	696	808	660	682	735	777
25	1340	1590	1550	1540	1460	1670	686	803	660	668	719	798
26	1310	1640	1550	1520	1440	1660	636	827	664	669	691	800
27	1350	1790	1590	1450	1470	1630	653	821	707	687	685	793
28	1260	1580	1570	1500	1500	1640	1010	846	669	697	698	798
29	1400	1600	1530	1470	---	1600	691	803	639	728	764	766
30	1420	1620	1450	1580	---	1600	684	798	654	705	790	756
31	1460	---	1510	1580	---	1600	---	812	---	674	745	---
MEAN	1170	1520	1600	1560	1580	1740	1250	836	698	654	706	778
WTR YR 1978	MEAN	1170	MAX	2120	MIN	451						

YELLOWSTONE RIVER BASIN

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06284500 BITTER CREEK NEAR GARLAND, WY--Continued

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	12.0	3.0	3.0	.0	.5	.0	8.0	12.5	16.0	20.5	24.5	20.0
2	12.0	10.5	4.0	.5	.5	.0	12.0	9.0	18.0	15.5	19.5	22.0
3	9.0	7.5	5.0	.0	.5	.0	14.0	10.5	18.0	21.5	21.0	21.0
4	10.0	11.0	2.5	1.0	2.0	1.0	12.0	8.0	14.0	18.0	20.0	20.0
5	13.0	11.0	1.5	.5	1.5	1.5	12.0	8.0	19.5	14.0	22.0	19.5
6	12.0	10.0	.0	.5	1.5	1.0	13.0	9.5	20.0	14.0	15.5	20.5
7	10.5	9.0	.5	.5	2.0	2.0	6.0	10.0	20.0	14.0	16.0	20.5
8	13.0	4.0	.0	2.0	2.0	2.0	5.0	15.0	20.0	15.0	24.0	19.0
9	10.5	3.0	.0	1.0	2.0	4.0	9.0	14.5	20.5	20.0	15.5	18.0
10	10.0	5.0	1.0	1.0	1.5	6.5	15.0	15.0	14.0	19.0	16.0	16.0
11	11.0	6.5	1.5	.5	1.0	2.0	14.0	12.0	12.0	14.5	16.0	14.0
12	12.5	8.5	1.5	.5	2.0	2.5	14.5	9.5	18.0	14.0	19.0	11.0
13	13.0	7.0	1.0	.5	.5	7.5	16.5	19.5	13.0	15.0	16.0	11.5
14	14.5	6.0	2.5	.5	2.5	6.5	15.5	12.5	20.0	15.0	14.5	13.0
15	14.0	6.0	3.5	1.0	.0	2.5	18.5	12.5	19.0	21.0	12.5	12.0
16	13.5	7.5	3.0	.5	2.0	2.0	15.0	15.5	13.0	17.0	14.0	12.5
17	15.0	5.0	3.0	1.0	1.0	2.5	12.0	9.5	12.5	15.0	13.0	15.0
18	7.0	1.5	2.5	2.0	1.0	9.0	12.5	8.0	17.0	20.5	16.0	8.0
19	6.5	2.0	1.5	.0	1.5	2.5	18.5	11.5	13.5	20.0	14.0	12.0
20	12.0	1.0	2.0	.0	1.0	10.0	14.5	17.0	11.0	14.0	14.0	12.5
21	12.0	1.5	1.0	1.0	1.5	11.0	9.5	12.5	13.5	13.5	14.0	14.5
22	12.0	1.5	1.5	1.5	1.0	4.0	9.0	17.0	13.0	22.0	15.0	14.0
23	12.5	1.0	3.5	1.0	1.0	4.0	9.5	11.5	13.0	22.5	13.0	11.0
24	14.0	2.0	.5	.5	2.0	4.5	14.0	15.5	13.0	20.0	13.5	17.0
25	15.0	2.0	1.0	.5	3.0	3.5	15.5	17.0	17.0	22.5	13.5	12.5
26	14.0	6.5	.0	.5	1.5	15.0	16.5	17.5	14.0	22.0	13.0	13.0
27	14.0	4.0	.0	.5	1.0	15.5	12.5	15.0	17.5	22.0	14.0	17.0
28	13.0	3.0	.0	1.0	.5	17.0	10.5	18.0	22.0	17.0	12.5	15.5
29	12.0	3.5	1.0	1.0	---	17.0	15.0	19.0	20.0	20.5	15.0	16.0
30	10.0	1.5	.5	1.5	---	17.5	14.5	13.0	23.0	21.0	14.5	15.0
31	5.0	---	.5	.0	---	17.0	---	12.0	---	23.5	18.5	---
MEAN	12.0	5.0	1.5	.5	1.5	6.0	13.0	13.0	16.5	18.0	16.0	15.5
WTR YR 1978	MEAN	10.0		MAX	24.5	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 good except those for November to March, which are poor. Part of flow is return flow from areas irrigated by diversions from the Shoshone River.

AVERAGE DISCHARGE.--11 years (water years 1959, 1969-78), 28.2 ft³/s (0.799 m³/s), 20,430 acre-ft/yr (25.2 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, 2,340 ft³/s (66.3 m³/s) May 18, gage height, 7.47 ft (2.277 m); minimum daily, 0.83 ft³/s (0.024 m³/s) Mar. 2-4.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	22	2.8	2.6	1.5	.94	.90	2.3	203	45	48	58	46
2	24	2.8	2.5	1.4	.90	.83	1.6	127	45	49	53	44
3	24	2.8	2.2	1.2	.92	.83	1.6	97	38	48	59	49
4	26	3.1	2.2	1.4	1.0	.83	2.5	35	35	49	61	48
5	28	3.4	2.0	1.5	1.1	.90	2.8	45	41	51	59	48
6	34	3.4	1.8	1.6	1.2	1.1	2.8	72	30	51	51	39
7	34	3.4	1.9	1.6	1.3	1.1	1.8	49	40	51	53	35
8	23	3.1	1.4	1.6	1.2	1.1	1.6	44	38	49	45	39
9	12	3.1	1.9	1.5	1.2	1.1	1.6	44	36	43	49	41
10	12	3.4	1.7	1.4	1.1	.90	1.6	38	40	44	45	45
11	18	3.1	1.9	1.4	1.0	1.0	1.2	49	44	53	40	119
12	19	3.4	2.0	1.4	.94	1.1	1.1	45	43	56	33	84
13	18	3.1	2.2	1.3	.90	3.0	1.1	38	35	53	45	80
14	17	2.4	2.3	1.3	.88	3.6	1.2	39	41	58	56	56
15	31	2.8	2.8	1.3	.86	3.2	1.1	44	43	56	52	48
16	46	2.8	2.8	1.3	.86	2.9	1.2	33	38	56	52	44
17	49	2.3	2.6	1.3	.86	2.5	1.1	365	46	56	49	48
18	46	2.5	2.2	1.2	.86	10	1.1	1230	46	52	49	223
19	36	2.4	2.0	1.2	.90	46	1.1	438	51	49	53	152
20	32	2.0	2.0	1.2	1.0	82	1.1	82	59	44	51	84
21	17	1.9	2.0	1.2	1.1	92	4.3	72	56	58	53	58
22	4.7	2.0	2.0	1.2	1.1	48	32	69	48	64	41	53
23	3.4	2.1	2.0	1.1	1.1	13	33	62	44	56	36	49
24	3.4	2.2	1.7	1.1	1.0	20	26	69	52	52	35	49
25	2.8	2.3	1.5	1.1	1.0	20	30	56	51	51	34	51
26	2.8	2.4	1.5	1.0	.94	17	32	48	51	52	36	51
27	2.8	2.5	1.5	1.0	.94	11	35	48	53	51	41	49
28	3.1	2.6	1.7	1.1	.92	6.8	428	46	52	55	41	45
29	3.1	2.6	1.6	.96	---	5.1	74	45	51	64	45	39
30	3.1	2.6	1.6	.92	---	3.1	44	41	46	69	48	39
31	3.1	---	1.6	.92	---	2.5	---	40	---	65	48	---
TOTAL	600.3	81.7	62.2	39.20	28.02	403.39	769.8	3713	1338	1653	1471	1855
MEAN	19.4	2.72	2.01	1.26	1.00	13.0	25.7	120	44.6	53.3	47.5	61.8
MAX	49	3.4	2.8	1.6	1.3	92	428	1230	59	69	61	223
MIN	2.8	1.9	1.5	.92	.86	.83	1.1	33	30	43	33	35
AC-FT	1190	162	123	78	56	800	1530	7360	2650	3280	2920	3680
CAL YR 1977 TOTAL		5366.61		MEAN 14.7	MAX 91	MIN .10	AC-FT 10640					
WTR YR 1978 TOTAL		12014.61		MEAN 32.9	MAX 1230	MIN .83	AC-FT 23830					

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 period.

EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum daily, 5,760 micromhos Nov. 23; minimum daily, 291 micromhos July 20.

WATER TEMPERATURES: Maximum, 28.0°C June 30; minimum, 0.0°C on many days during December to March.

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

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	HARD- NESS (MG/L AS CACO3)	HARD- NESS, NONCAR- BONATE (MG/L AS CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)
OCT								
03...	1445	22	860	--	12.0	320	130	83
NOV								
13...	1315	3.1	4100	--	4.0	950	600	200
DEC								
12...	1230	A2.0	4500	--	.0	950	550	200
JAN								
04...	1230	A1.4	5000	--	.0	1000	600	210
FEB								
05...	1200	A1.1	5300	--	.0	970	560	190
MAR								
06...	1245	A1.1	5000	--	.0	1000	610	210
APR								
02...	1100	2.0	5000	--	12.5	910	570	200
MAY								
14...	1130	41	600	--	15.0	220	67	63
JUN								
11...	1130	51	570	8.6	14.0	160	32	42
JUL								
23...	1230	64	390	8.2	20.0	110	23	29
AUG								
20...	1220	52	490	8.5	17.0	180	63	48
SEP								
17...	1300	49	680	8.4	14.0	230	100	63

A-Daily mean discharge.

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)	BICAR- BONATE (MG/L AS HCO3)	CAR- BONATE (MG/L AS CO3)	ALKA- LINITY (MG/L AS CACO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)
OCT									
03...	28	90	2.2	4.2	240	--	200	310	6.8
NOV									
13...	110	760	11	8.1	430	--	350	2000	42
DEC									
12...	110	890	13	8.6	490	--	400	2300	47
JAN									
04...	120	920	13	9.0	510	--	420	2500	44
FEB									
05...	120	890	12	8.3	500	--	410	2300	46
MAR									
06...	120	900	12	9.1	500	--	410	2300	58
APR									
02...	100	910	13	8.0	420	--	340	2300	63
MAY									
14...	16	48	1.4	3.5	190	--	160	160	4.8
JUN									
11...	13	61	2.1	3.6	150	2	130	140	5.2
JUL									
23...	8.0	33	1.4	2.2	100	0	82	94	2.7
AUG									
20...	14	40	1.3	2.6	140	0	110	130	3.2
SEP									
17...	18	63	1.8	3.2	160	0	130	230	4.6

YELLOWSTONE RIVER BASIN

06284800 WHISTLE CREEK NEAR GARLAND, WY--Continued

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

DATE	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 TOTAL (MG/L AS P)	PHOS- PHORUS, DIS- SOLVED (MG/L AS P)
OCT								
03...	.5	12	654	.89	38.8	.33	.07	.00
NOV								
13...	.5	7.2	3360	4.57	28.1	4.4	.03	.02
DEC								
12...	.6	9.5	3830	5.21	20.7	4.4	.04	.01
JAN								
04...	.3	10	4090	5.56	15.5	4.8	.03	.01
FEB								
05...	.5	9.2	3830	5.21	11.4	4.3	.03	.01
MAR								
06...	.5	10	3870	5.26	11.5	4.3	.03	.03
APR								
02...	.5	7.9	3810	5.18	20.6	2.7	.02	.01
MAY								
14...	.4	13	403	.55	44.6	.18	.15	.00
JUN								
11...	.3	15	359	.49	49.4	.60	.31	.05
JUL								
23...	.2	14	234	.32	40.4	.43	.26	.10
AUG								
20...	.3	14	322	.44	45.2	.18	.09	.01
SEP								
17...	.4	14	476	.65	63.0	.21	.16	.08

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	996	4290	4790	4810	4420	4580	4200	638	781	584	312	539
2	912	4290	4670	5040	4910	4550	4560	698	505	614	328	543
3	933	4410	4960	4930	4720	4700	4540	605	516	316	333	526
4	933	4510	4620	4630	4880	4640	4750	595	623	570	348	558
5	954	4450	5060	4630	4780	4830	4770	552	561	470	507	545
6	793	4370	5010	4890	4730	4790	4980	552	494	501	532	557
7	795	4320	5000	4980	4840	4570	4770	756	530	501	519	723
8	901	4380	5200	5380	4930	4550	4940	639	526	440	548	546
9	1230	4380	4590	5400	5040	4650	4950	574	521	306	637	546
10	1430	4270	4690	4900	5040	4630	4930	548	551	476	640	578
11	1040	4210	4720	5260	4950	549	5140	591	550	489	643	811
12	1080	4210	4720	5260	4900	510	4970	601	643	494	760	636
13	1120	4270	4660	5150	4950	1800	5050	558	669	557	725	630
14	1130	4450	4660	5120	4760	814	5040	552	756	554	644	692
15	913	4620	4980	4990	4810	830	5110	552	757	514	707	735
16	944	4450	2280	4960	4880	951	4950	543	411	521	684	757
17	892	4440	2920	4900	4920	1070	5050	560	419	405	687	757
18	991	4340	3660	4900	4900	1470	5160	712	655	405	688	771
19	1000	5590	5050	4840	4850	1740	5150	872	703	379	717	591
20	1020	5630	5190	4610	4660	905	5030	900	357	291	726	726
21	1090	5610	5230	4720	4730	905	698	737	893	384	714	672
22	3660	5380	5190	4760	4720	602	705	731	367	317	708	668
23	3680	5760	5370	4780	4620	1570	664	630	402	317	719	648
24	3680	5620	5510	4810	4590	929	662	579	406	333	784	627
25	3910	4790	5430	4750	4590	924	546	540	495	365	779	620
26	3930	4610	4980	4750	4530	1520	510	536	336	381	779	615
27	4160	4520	4780	4770	4530	1890	497	737	483	510	702	631
28	4070	3300	4960	4780	4560	1970	686	567	485	517	707	625
29	4140	3820	4920	4650	---	3040	596	530	344	331	543	658
30	4330	4240	4880	4730	---	3130	596	510	840	295	530	680
31	4230	---	4820	4740	---	4200	---	519	---	312	546	---
MEAN	1960	4580	4760	4900	4780	2510	3470	620	553	434	619	640
WTR YR 1978	MEAN	2470	MAX	5760	MIN	291						

06284800 WHISTLE CREEK NEAR GARLAND, WY--Continued

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	12.5	6.0	1.5	1.0	.5	.0	19.0	13.0	17.0	24.0	24.0	22.0
2	14.0	6.0	1.0	.5	.5	.5	12.5	17.0	19.5	17.0	22.5	23.5
3	14.0	5.5	5.5	.5	2.0	.5	14.0	16.0	12.5	24.0	21.5	22.0
4	9.5	9.5	3.0	.5	2.0	1.0	7.0	10.0	14.0	22.0	21.5	22.5
5	11.0	10.5	.5	.0	1.0	1.0	7.5	9.0	21.5	14.5	24.5	22.0
6	9.0	10.0	.0	.0	1.0	1.0	10.0	8.5	22.5	14.5	17.5	22.5
7	9.5	9.5	.0	.5	1.0	1.5	6.0	9.5	22.5	15.0	18.0	17.5
8	12.0	9.0	.0	1.5	.5	1.5	5.5	16.0	22.0	22.0	21.0	22.5
9	9.5	8.0	.0	1.0	.5	1.0	10.0	17.0	16.0	24.0	17.5	20.0
10	5.0	8.5	1.0	1.0	.5	1.5	13.5	11.0	15.5	23.0	18.0	15.0
11	3.0	9.5	1.5	.5	.5	4.0	14.0	15.5	15.0	15.5	16.5	13.0
12	4.5	6.5	1.5	1.0	1.0	3.5	13.0	17.0	20.0	15.0	21.5	11.0
13	8.0	5.0	1.0	.0	1.0	2.0	14.5	21.0	14.0	25.0	16.5	11.5
14	8.5	5.0	1.0	.0	.5	2.0	16.0	21.5	23.5	17.0	15.5	11.0
15	8.5	5.5	2.0	.5	.5	2.0	17.5	12.5	22.0	25.0	12.5	11.5
16	9.0	6.5	2.5	.0	1.0	2.0	15.0	12.0	23.0	18.0	13.5	12.0
17	13.0	2.0	1.0	1.0	1.0	.5	11.5	9.0	20.0	25.0	12.5	11.0
18	8.0	5.0	1.0	1.0	.0	4.5	12.0	8.5	15.0	20.5	12.5	8.5
19	7.5	2.0	1.5	1.0	1.0	2.0	18.0	8.0	18.0	19.0	13.0	6.0
20	8.5	2.0	.5	1.0	1.0	2.5	16.0	10.0	14.0	17.5	14.0	13.0
21	9.0	2.0	.5	.5	1.0	1.0	10.0	12.5	13.5	15.0	14.5	14.0
22	9.0	1.5	1.0	1.5	1.0	2.5	9.0	14.0	15.0	20.0	13.0	15.0
23	12.5	2.0	.0	.5	1.5	2.0	6.5	20.0	15.0	24.0	13.0	16.5
24	6.0	3.0	.0	.5	1.5	2.5	13.5	15.0	16.5	23.0	13.5	18.0
25	7.0	2.0	1.0	1.0	1.0	2.0	15.0	19.5	13.5	25.0	13.0	13.0
26	5.5	3.0	1.0	1.0	1.0	12.5	17.0	19.5	16.0	24.5	13.5	13.0
27	14.0	4.5	.5	1.5	.5	11.5	12.0	15.5	12.0	26.0	13.0	19.0
28	13.5	2.0	.0	1.0	.5	13.5	12.5	15.5	25.0	19.5	13.5	15.5
29	10.5	2.0	.5	1.0	---	14.5	12.0	20.0	24.5	23.0	21.5	18.0
30	8.0	2.0	.5	.0	---	15.0	14.0	14.0	28.0	24.5	20.0	17.5
31	8.0	---	.5	.0	---	18.0	---	12.5	---	21.0	20.5	---
MEAN	9.5	5.0	1.0	.5	1.0	4.0	12.5	14.0	18.0	20.5	17.0	16.0
WTR YR 1978	MEAN	10.0		MAX	28.0		MIN	.0				

YELLOWSTONE RIVER BASIN

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.

REMARKS.--Records fair except those from November to February, which are poor. Flow regulated by Buffalo Bill Reservoir. (See page .) 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.--12 years, 1,058 ft³/s (29.96 m³/s), 766,500 acre-ft/yr (945 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 13,400 ft³/s (379 m³/s) July 1, 1967, gage height, 7.49 ft (2.283 m) present datum; maximum gage height, 9.09 ft (2.771 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, 7,680 ft³/s (217 m³/s) May 18, gage height, 6.25 ft (1.905 m); maximum gage height, 7.20 ft (2.195 m) Mar. 3 (backwater from ice); minimum daily discharge, 254 ft³/s (7.19 m³/s) June 6.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	418	418	450	440	600	510	610	1640	717	6520	2070	554
2	436	480	440	420	600	520	596	1580	574	6920	1860	625
3	442	493	440	420	610	520	581	1500	493	6880	1720	640
4	418	480	440	400	620	520	574	1060	394	6520	1590	670
5	418	474	460	390	620	520	574	1060	388	5770	1430	625
6	400	500	470	390	620	510	547	1170	254	4670	1260	560
7	382	480	460	390	640	510	547	1120	354	4780	1380	493
8	360	468	450	390	640	513	424	1080	394	4700	1090	526
9	337	468	470	390	620	540	533	994	424	4830	834	554
10	343	468	490	390	600	632	547	733	1240	4910	725	663
11	376	455	490	380	560	632	547	686	1290	5070	766	1270
12	376	461	470	380	560	632	533	655	1530	5090	725	1370
13	567	461	440	380	560	618	560	618	1310	4810	702	1360
14	455	474	430	380	560	596	603	603	2070	4570	791	1200
15	400	461	493	380	570	567	758	655	2180	4520	775	1240
16	400	461	436	450	580	567	949	412	2320	4480	750	1230
17	436	455	332	500	580	603	931	1300	2840	4440	825	1210
18	430	455	348	600	580	733	913	5350	3540	4290	878	1660
19	371	430	371	560	570	985	800	4340	3540	3890	922	1000
20	382	440	343	600	560	1000	783	1710	2890	3540	913	1590
21	455	450	343	620	560	1120	860	1430	2770	3330	886	1460
22	430	450	388	600	570	1020	895	1350	2280	3150	670	1430
23	424	460	436	550	560	702	886	1260	2170	2690	647	1380
24	418	460	418	540	550	758	843	1220	2160	2400	647	1370
25	424	460	420	560	540	783	709	1090	2220	2240	640	1320
26	430	470	430	570	520	800	783	949	2220	2040	526	1240
27	418	470	430	600	510	742	742	886	2260	1970	540	1170
28	424	460	440	610	510	686	2440	860	2680	1900	567	1120
29	424	460	440	610	---	647	1350	742	3910	2340	520	1080
30	418	450	440	610	---	632	1360	717	5600	2530	493	1110
31	394	---	440	600	---	618	---	725	---	2360	547	---
TOTAL	12806	13872	13348	15100	16170	20736	23778	39495	57012	128150	28689	31720
MEAN	413	462	431	487	578	669	793	1274	1900	4134	925	1057
MAX	567	500	493	620	640	1120	2440	5350	5600	6920	2070	1660
MIN	337	418	332	380	510	510	424	412	254	1900	493	493
AC-FT	25400	27520	26480	29950	32070	41130	47160	78340	113100	254200	56900	62920
CAL YR 1977 TOTAL	127604			350	MAX 940	MIN 27	AC-FT 253100					
WTR YR 1978 TOTAL	400876			MEAN 1098	MAX 6920	MIN 254	AC-FT 795100					

YELLOWSTONE RIVER BASIN

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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, 1,580 micromhos Apr. 15, 1977; 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 observed, 1,560 micromhos Nov. 14; minimum daily, 256 micromhos July 4.

WATER TEMPERATURES: Maximum 20.5°C July 29; minimum, 0.0°C on several days during November to February.

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

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	HARD- NESS (MG/L AS CACU3)	HARD- NESS, NONCAR- BONATE (MG/L CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)
OCT										
03...	1200	448	900	--	10.0	340	130	86	31	100
03...	1440	447	--	--	9.5	--	--	--	--	--
31...	1300	386	--	--	10.0	--	--	--	--	--
NOV										
13...	1030	461	1150	--	4.5	490	230	120	45	110
DEC										
12...	0915	A470	1200	--	.0	510	260	130	45	110
14...	1245	416	--	--	5.0	--	--	--	--	--
JAN										
04...	1030	A400	1350	--	.0	620	320	160	53	120
FEB										
05...	0900	A620	1300	--	.0	560	240	140	50	110
MAR										
06...	0900	A510	950	--	.0	380	140	100	31	74
16...	1450	568	--	--	3.0	--	--	--	--	--
APR										
02...	0900	618	940	--	8.0	360	130	97	29	86
03...	1145	582	--	--	8.0	--	--	--	--	--
MAY										
04...	1115	1140	--	--	12.0	--	--	--	--	--
14...	0900	--	740	--	13.5	270	99	74	21	72
JUN										
11...	0830	1300	570	8.4	11.0	180	51	49	15	52
21...	1230	2950	--	--	15.0	--	--	--	--	--
JUL										
06...	1430	4740	--	--	17.0	--	--	--	--	--
23...	0930	2740	450	8.3	16.0	140	37	42	9.3	38
AUG										
01...	1345	2130	--	--	20.0	--	--	--	--	--
20...	0930	922	690	8.2	14.5	230	71	58	20	68
SEP										
06...	1140	619	--	--	20.0	--	--	--	--	--
17...	1110	1210	650	8.2	13.0	240	78	64	20	64

A-Daily mean discharge.

YELLOWSTONE RIVER BASIN

06285100 SHOSHONE RIVER NEAR LOVELL, WY--Continued

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

DATE	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	BICAR- BONATE (MG/L AS HCO3)	CAR- BONATE (MG/L AS CO3)	ALKA- LINITY (MG/L AS CACO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SiO2)
OCT									
03...	2.4	4.7	260	--	210	320	17	.7	14
03...	--	--	--	--	--	--	--	--	--
31...	--	--	--	--	--	--	--	--	--
NOV									
13...	2.2	6.8	310	--	250	440	20	.9	14
DEC									
12...	2.1	7.1	300	--	250	400	23	.8	16
14...	--	--	--	--	--	--	--	--	--
JAN									
04...	2.1	8.2	360	--	300	480	29	1.1	19
FEB									
05...	2.0	7.3	390	--	320	400	21	1.0	18
MAR									
06...	1.7	5.0	290	--	240	280	12	.7	13
16...	--	--	--	--	--	--	--	--	--
APR									
02...	2.0	4.7	280	--	230	290	13	.6	12
03...	--	--	--	--	--	--	--	--	--
MAY									
04...	--	--	--	--	--	--	--	--	--
14...	1.9	3.8	210	--	170	220	13	.6	12
JUN									
11...	1.7	3.1	160	1	130	140	6.8	.4	15
21...	--	--	--	--	--	--	--	--	--
JUL									
06...	--	--	--	--	--	--	--	--	--
23...	1.4	2.3	130	0	110	100	4.4	.3	15
AUG									
01...	--	--	--	--	--	--	--	--	--
20...	2.0	3.2	190	0	160	190	8.2	.6	14
SEP									
06...	--	--	--	--	--	--	--	--	--
17...	1.8	3.4	200	0	160	210	8.9	.6	16

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, DIS- SOLVED (MG/L AS P)	SEDI- MENT, SUS- PENDED (MG/L)	SEDI- MENT DIS- CHARGE, SUS- PENDED (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
OCT									
03...	707	.96	855	1.2	.10	.00	--	--	--
03...	--	--	--	--	--	--	190	229	87
31...	--	--	--	--	--	--	156	163	--
NOV									
13...	917	1.25	1140	1.7	.08	.01	--	--	--
DEC									
12...	886	1.21	1120	1.4	.05	.02	--	--	--
14...	--	--	--	--	--	--	385	432	77
JAN									
04...	1060	1.44	1140	1.7	.04	.03	--	--	--
FEB									
05...	945	1.29	1580	1.3	.20	.04	--	--	--
MAR									
06...	662	.90	912	.66	.11	.03	--	--	--
16...	--	--	--	--	--	--	246	377	91
APR									
02...	673	.92	1120	.50	.01	.01	--	--	--
03...	--	--	--	--	--	--	144	226	88
MAY									
04...	--	--	--	--	--	--	1330	4090	84
14...	522	.71	--	.45	.16	.00	--	--	--
JUN									
11...	364	.50	1280	.74	.25	.09	--	--	--
21...	--	--	--	--	--	--	701	5580	45
JUL									
06...	--	--	--	--	--	--	799	10200	45
23...	279	.38	2060	.72	.13	.05	--	--	--
AUG									
01...	--	--	--	--	--	--	165	949	77
20...	460	.63	1150	1.0	.06	.02	--	--	--
SEP									
06...	--	--	--	--	--	--	82	137	96
17...	490	.67	1600	.97	.09	.11	--	--	--

06285100 SHOSHONE RIVER NEAR LOVELL, WY--Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1040	1250	1250	1400	1180	979	920	636	710	291	454	782
2	1040	1220	1260	1400	1170	984	925	714	715	271	466	779
3	972	1200	1260	1410	1080	909	920	738	776	266	492	768
4	993	1180	1270	933	1090	909	894	728	813	256	527	757
5	993	1220	1260	1110	1080	915	883	690	766	273	545	779
6	1020	1240	1310	1190	1110	875	865	650	890	286	571	806
7	1050	1200	1280	1200	1080	905	848	666	819	291	541	815
8	1020	1220	1280	1200	1100	895	826	705	778	313	572	815
9	1060	1230	1510	1080	1080	899	881	664	834	293	617	806
10	1090	1240	1320	1210	1100	941	837	673	581	290	661	780
11	1040	1240	1240	1140	1060	975	848	721	551	285	673	749
12	1020	1240	1150	1320	1140	983	846	697	532	281	656	782
13	965	1240	1310	1270	1140	999	831	715	540	278	682	748
14	1050	1560	1250	1300	1120	1020	808	698	461	286	689	744
15	1110	1310	1160	1180	1000	1040	765	665	427	281	709	732
16	1110	1220	1270	1350	1020	1040	688	754	419	276	725	705
17	1130	1250	1270	1190	1020	1020	660	708	395	296	708	697
18	1280	1270	1260	1180	1010	1040	647	755	360	286	694	709
19	1200	1180	1260	1200	804	966	631	892	337	307	677	646
20	1240	1460	1210	1190	985	994	650	924	367	333	638	695
21	1210	1310	1270	1200	967	933	678	813	350	368	649	700
22	1200	1320	1270	1210	965	994	650	742	380	368	703	689
23	1200	1310	1270	1280	941	1050	645	713	395	393	719	679
24	1220	1280	1260	1220	901	1010	614	700	376	419	739	629
25	1210	1270	1320	1200	936	951	665	679	386	414	722	660
26	1210	1210	1280	1180	936	874	720	668	381	425	754	682
27	1170	1350	1330	1140	936	946	669	657	385	428	768	678
28	1240	1310	1210	1160	948	949	614	672	360	428	809	697
29	1240	1300	1260	1150	---	954	709	654	325	408	825	714
30	1240	1300	1250	1150	---	970	612	705	311	403	821	714
31	1260	---	1280	1180	---	959	---	695	---	408	793	---
MEAN	1120	1270	1270	1210	1030	964	758	713	524	329	664	731
WTR YR 1978	MEAN	882	MAX	1560	MIN	256						

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	11.0	5.0	2.0	1.0	.5	.5	13.0	11.5	11.0	15.5	17.5	15.5
2	12.0	7.0	2.0	.0	1.0	.5	12.0	12.0	15.0	15.0	17.0	16.0
3	13.0	7.0	4.0	1.0	.5	.5	10.5	11.5	13.0	14.5	17.0	16.0
4	11.0	7.0	4.0	1.0	1.0	.5	11.0	9.0	14.5	15.5	17.0	17.0
5	11.0	7.0	1.0	1.0	1.0	1.0	11.0	9.0	15.0	14.5	17.0	17.0
6	10.0	7.0	1.0	1.0	1.0	1.0	11.0	7.0	17.0	14.5	18.0	17.5
7	10.0	6.0	1.0	1.0	1.0	3.0	11.0	7.0	16.0	15.0	18.0	18.0
8	10.0	4.0	1.0	.5	1.0	5.0	13.0	7.0	17.0	15.0	18.0	18.0
9	11.0	2.0	1.0	.5	1.0	6.5	9.0	12.0	16.0	15.0	18.0	14.0
10	9.0	5.0	1.0	1.0	1.0	8.0	10.0	12.5	15.0	15.0	18.0	14.5
11	9.0	5.0	1.0	.5	1.0	7.0	2.5	13.0	14.0	15.5	18.0	13.5
12	9.0	6.0	2.0	.5	1.0	4.5	10.0	12.0	13.0	16.0	18.0	11.0
13	8.0	6.0	2.0	.0	.5	7.0	11.0	12.0	14.5	15.5	17.0	10.0
14	12.0	6.0	2.0	.5	.5	6.0	11.5	13.0	15.0	16.0	15.0	11.0
15	11.0	5.0	1.0	.0	.5	6.0	13.0	17.0	17.0	16.0	17.0	12.0
16	11.0	5.0	3.0	.5	.5	6.0	12.0	13.0	14.0	17.0	15.0	13.0
17	12.0	3.0	2.0	1.0	.5	6.5	9.0	7.0	13.0	17.0	14.0	12.0
18	11.0	2.0	1.0	1.0	.0	6.0	8.0	6.5	13.0	16.0	13.0	8.5
19	11.0	.0	2.0	1.0	.0	5.5	11.0	9.0	13.0	16.0	14.0	9.0
20	12.0	1.0	1.5	.5	.0	8.0	11.5	13.0	12.0	15.0	20.0	11.0
21	12.0	1.0	.0	.5	1.0	7.5	9.0	12.0	14.0	14.5	17.0	11.0
22	11.0	2.0	2.0	1.0	1.0	5.5	9.0	12.0	17.0	15.0	17.0	13.0
23	10.0	1.0	2.0	1.0	1.0	8.0	9.0	15.0	17.5	17.0	14.5	14.0
24	10.0	1.0	1.5	1.0	.5	7.0	10.0	16.0	15.0	17.5	16.0	13.0
25	10.0	2.0	1.5	.5	.5	8.5	13.0	14.0	14.5	18.0	15.5	15.5
26	10.0	2.0	2.0	1.0	1.0	7.0	15.0	15.0	14.0	18.0	15.0	15.5
27	9.0	3.0	1.0	1.0	1.5	11.0	13.5	14.0	15.0	18.0	15.0	15.0
28	9.0	4.0	1.0	1.0	1.0	11.0	9.0	16.0	15.0	17.0	15.0	15.5
29	10.0	3.0	1.0	1.0	---	11.5	10.0	14.0	15.0	20.5	15.0	13.5
30	10.0	4.0	1.0	1.0	---	13.0	10.5	9.0	15.0	17.0	16.0	13.0
31	8.0	---	1.0	.5	---	13.0	---	10.0	---	18.0	15.5	---
MEAN	10.5	4.0	1.5	.5	1.0	6.0	10.5	11.5	14.5	16.0	16.5	14.0
WTR YR 1978	MEAN	9.0	MAX	20.5	MIN	.0						

LOCATION.--Lat 44°53'08", long 108°33'01", in NE4NE4NW4 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.

WATER-DISCHARGE RECORDS

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 518 ft³/s (14.7 m³/s) May 19, gage height, 5.32 ft (1.622 m); minimum daily, 9.0 ft³/s (0.25 m³/s) Feb. 11.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	125	28	23	14	14	13	47	149	110	105	88	119
2	119	28	25	14	14	12	40	182	106	105	93	119
3	111	28	25	13	14	12	36	165	86	105	113	114
4	89	28	24	13	14	11	32	146	88	100	132	118
5	85	30	23	12	14	12	30	145	94	90	123	113
6	90	28	23	13	14	13	28	159	92	86	114	104
7	106	28	23	12	14	15	27	174	103	87	115	105
8	118	27	22	15	14	14	27	187	128	88	107	105
9	116	24	21	15	14	15	27	181	130	86	103	108
10	114	27	20	15	12	18	24	152	129	86	98	107
11	117	26	20	15	9.0	20	23	124	133	86	108	159
12	122	28	20	16	13	21	21	121	93	87	107	268
13	128	28	20	16	12	46	21	117	82	96	115	292
14	76	28	21	16	12	47	21	123	79	102	136	271
15	38	27	22	15	12	38	21	116	105	93	152	249
16	31	26	23	16	12	33	21	118	129	90	156	217
17	31	24	21	16	12	32	23	196	126	90	157	202
18	30	26	21	15	12	45	21	297	111	80	149	217
19	28	18	17	15	12	59	20	370	111	72	146	251
20	28	17	17	16	12	77	20	356	134	67	148	221
21	26	16	16	15	14	96	24	191	121	78	147	224
22	25	16	18	14	15	77	50	142	108	75	149	186
23	26	22	18	14	15	55	115	114	100	82	134	169
24	26	22	12	14	14	52	74	154	92	81	131	164
25	26	22	12	14	14	50	52	191	102	64	124	161
26	25	26	13	15	13	60	52	182	109	64	125	155
27	25	25	14	15	13	62	75	144	111	63	133	152
28	26	24	14	15	13	61	142	122	101	68	126	149
29	29	25	14	15	---	54	143	104	94	74	118	149
30	30	25	14	14	---	50	143	122	98	75	111	150
31	30	---	14	14	---	49	---	109	---	75	111	---
TOTAL	1996	747	590	451	367.0	1219	1400	5153	3205	2600	3869	5118
MEAN	64.4	24.9	19.0	14.5	13.1	39.3	46.7	166	107	83.9	125	171
MAX	128	30	25	16	15	96	143	370	134	105	157	292
MIN	25	16	12	12	9.0	11	20	104	79	63	88	104
AC-FT	3960	1480	1170	895	728	2420	2780	10220	6360	5160	7670	10150
CAL YR 1977	TOTAL	15212.4	MEAN	41.7	MAX	128	MIN	7.4	AC-FT	30170		
WTR YR 1978	TOTAL	26715.0	MEAN	73.2	MAX	370	MIN	9.0	AC-FT	52990		

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 March 1978.

REMARKS.--Daily temperature readings from observer not available Mar. 18 to Sept. 30.

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, 3,550 micromhos Apr. 28; minimum daily, 879 micromhos May 25.

WATER TEMPERATURES: Maximum, not determined; minimum observed, 0.0°C on several days in March.

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

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	HARD- NESS (MG/L AS CACO3)	HARD- NESS, NONCAR- BONATE (MG/L CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)
OCT								
03...	1245	114	1350	--	10.0	550	320	130
NOV								
13...	1130	28	2600	--	3.0	1100	800	230
DEC								
12...	0950	20	3100	--	.5	1100	760	230
JAN								
04...	1100	12	3400	--	.0	1200	850	250
FEB								
05...	1000	14	3500	--	.5	1200	840	230
MAR								
06...	1000	A13	3200	--	.5	1100	760	220
APR								
02...	0945	40	2800	--	7.5	970	710	190
MAY								
14...	0945	122	1080	--	13.0	410	220	93
JUN								
11...	0940	152	1080	8.4	11.0	400	220	96
JUL								
23...	1030	89	1450	8.2	16.5	500	310	110
AUG								
20...	1030	157	1090	8.1	15.0	400	230	98
SEP								
17...	1145	205	1020	8.2	13.0	390	250	95

A-Daily mean discharge.

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)	BICAR- BONATE (MG/L AS HCO3)	CAR- BONATE (MG/L AS CO3)	ALKA- LINITY (MG/L AS CACO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)
OCT									
03...	55	160	3.0	4.6	280	--	230	620	16
NOV									
13...	130	350	4.6	5.9	380	--	310	1400	27
DEC									
12...	130	420	5.5	6.0	430	--	350	1500	29
JAN									
04...	140	440	5.5	6.2	430	--	350	1700	26
FEB									
05...	150	420	5.3	5.9	430	--	350	1600	26
MAR									
06...	130	340	4.5	7.2	400	--	330	1400	25
APR									
02...	120	380	5.3	5.2	310	--	250	1400	40
MAY									
14...	44	100	2.1	4.0	240	--	200	390	12
JUN									
11...	39	98	2.1	4.5	220	2	180	380	10
JUL									
23...	54	170	3.3	4.8	230	0	190	600	15
AUG									
20...	37	110	2.4	3.9	200	0	160	460	9.0
SEP									
17...	38	90	2.0	4.0	170	0	140	390	8.5

YELLOWSTONE RIVER BASIN

06285400 SAGE CREEK AT SIDON CANAL, NEAR DEAYER, WY--Continued

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

DATE	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, DIS- SOLVED (MG/L AS P)
OCT								
03...	.7	13	1140	1.55	351	.83	.09	.02
NOV								
13...	.9	11	2350	3.20	178	2.4	.06	.02
DEC								
12...	.8	13	2550	3.47	138	2.7	.05	.02
JAN								
04...	.8	13	2800	3.81	90.7	3.0	.06	.01
FEB								
05...	.9	13	2670	3.63	101	3.3	.08	.03
MAR								
06...	.8	12	2340	3.18	82.1	2.6	.11	.03
APR								
02...	.7	9.8	2300	3.13	248	1.2	.05	.02
MAY								
14...	.5	12	776	1.06	256	.52	.29	.00
JUN								
11...	.5	11	752	1.02	309	.67	.33	.05
JUL								
23...	.6	14	1090	1.48	262	.90	.18	.06
AUG								
20...	.5	15	835	1.14	354	.71	.13	.03
SEP								
17...	.5	14	726	.99	402	.57	.23	.12

06285400 SAGE CREEK AT SIDON CANAL, NEAR DEEVER, WY--Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1520	3070	3170	3290	3440	2980	2910	1910	1260	1180	1410	1090
2	1540	2960	3090	3270	3290	3040	2960	1940	1200	1390	1350	1070
3	1560	3060	3210	3300	3290	3060	2620	1770	1570	1400	1340	1180
4	1540	3080	3260	3320	3230	2980	2550	1280	1580	1550	1360	1160
5	1540	3160	3300	3300	3230	2920	2550	1210	1630	1420	1280	1170
6	1570	3080	3100	3300	3300	2820	2450	996	1730	1410	1300	1310
7	1580	3100	3380	3440	3260	2800	2570	981	1420	1360	1280	1310
8	1520	3100	3450	3270	3300	2810	2480	1150	1130	1330	1300	1340
9	1550	3110	3440	3100	3300	2900	2490	985	1280	1450	1330	1320
10	1530	3100	3260	3180	3370	2930	2740	1100	1280	1530	1430	1610
11	1540	2960	3260	3220	3210	3010	2710	1090	1220	1490	1380	1610
12	1460	2890	3210	3210	3180	2950	2800	1050	1440	1220	1300	1210
13	1470	2870	3150	3220	3220	2160	2880	1070	1450	1240	1340	1190
14	2560	3010	3060	3230	3230	2150	2950	1050	1630	1240	1310	1080
15	2600	3010	3110	3220	3200	3330	3030	1060	1290	1270	1160	1110
16	3060	3050	3170	3230	3320	3340	3160	1060	1080	1280	1120	1090
17	3060	3140	3510	3240	3340	2930	3130	1500	1240	1370	1100	1050
18	3120	2960	3240	3200	3270	2940	3060	1480	1250	1380	1130	1460
19	3120	3460	3280	3140	3220	3540	2920	1130	1240	1390	1120	1440
20	3120	3500	3020	3250	3140	2810	2840	1020	1180	1450	1050	1100
21	3110	2990	3190	3240	2990	2820	2760	1320	1260	1500	1030	1060
22	3070	3070	3190	3220	2940	2630	1530	1340	1310	1460	1050	1090
23	3080	3260	3180	3180	2970	2620	1000	1380	1360	1420	1100	1100
24	3140	3260	3530	3220	2980	3000	1000	1030	1420	1450	1100	1060
25	3110	3240	3170	3500	3000	3140	1690	879	1430	1510	1130	1130
26	3150	3260	3190	3430	2990	3110	1580	908	1410	1460	1090	1120
27	3170	3320	3190	3330	3020	2590	1120	1060	1360	1510	1090	1100
28	3150	3060	3360	3300	2990	2650	3550	1060	1230	1510	1160	1080
29	3140	3060	3260	3350	---	2520	1280	1120	1320	1560	1200	1090
30	3040	3230	3240	3350	---	2510	1270	1120	1300	1500	1290	1090
31	3060	---	3290	3360	---	2520	---	1100	---	1430	1260	---
MEAN	2410	3110	3240	3270	3190	2860	2420	1200	1350	1410	1220	1190
WTR YR 1978	MEAN	2230	MAX	3550	MIN	879						

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	12.0	7.0	1.0	.5	.5	.5	---	---	---	---	---	---
2	13.0	9.0	2.0	.5	.5	.0	7.5	---	---	---	---	---
3	12.0	12.0	3.0	.5	.5	.0	---	---	---	---	---	---
4	11.0	9.0	1.5	.5	.5	.0	---	---	---	---	---	---
5	11.0	9.0	1.0	.5	.5	1.5	---	---	---	---	---	---
6	10.0	8.0	.5	.5	.5	.5	---	---	---	---	---	---
7	11.0	8.0	.5	.5	.5	.5	---	---	---	---	---	---
8	9.0	6.0	.5	1.5	.5	.5	---	---	---	---	---	---
9	10.0	5.0	.5	.5	.5	.5	---	---	---	---	---	---
10	11.0	4.0	.5	.5	.5	.5	---	---	---	---	---	---
11	10.0	4.0	.5	.5	.5	.5	---	---	11.0	---	---	---
12	10.0	5.0	.5	.5	.5	.0	---	---	---	---	---	---
13	11.0	4.0	.5	.5	.5	1.0	---	---	---	---	---	---
14	11.0	3.0	.5	.5	.5	.5	---	13.0	---	---	---	---
15	10.0	3.0	1.5	.5	.5	.5	---	---	---	---	---	---
16	10.0	3.0	1.5	.5	.5	1.0	---	---	---	---	---	---
17	11.0	3.0	1.0	.5	.5	1.0	---	---	---	---	---	13.0
18	12.0	3.0	.5	.5	.5	---	---	---	---	---	---	---
19	12.0	2.0	.5	.5	.5	---	---	---	---	---	---	---
20	12.0	2.0	.5	.5	.5	---	---	---	---	---	15.0	---
21	12.0	1.5	.5	.5	.5	---	---	---	---	---	---	---
22	11.0	1.0	.5	1.0	.5	---	---	---	---	---	---	---
23	11.0	1.0	.5	.5	.5	---	---	---	---	16.5	---	---
24	12.0	1.0	.5	.5	.5	---	---	---	---	---	---	---
25	14.0	2.0	.5	.5	.5	---	---	---	---	---	---	---
26	13.0	3.0	.5	.5	.5	---	---	---	---	---	---	---
27	13.0	3.0	.5	.5	.5	---	---	---	---	---	---	---
28	14.0	2.5	.5	.5	.5	---	---	---	---	---	---	---
29	14.0	1.0	.5	.5	---	---	---	---	---	---	---	---
30	13.0	1.0	.5	.5	---	---	---	---	---	---	---	---
31	10.0	---	.5	.5	---	---	---	---	---	---	---	---
MEAN	11.5	4.0	1.0	.5	.5	.5	7.5	13.0	11.0	16.5	15.0	13.0
WTR YR 1978	MEAN	3.5	MAX	16.5	MIN	.0						

NOTE: NUMBER OF MISSING DAYS OF RECORD EXCEEDED 20% OF YEAR

YELLOWSTONE RIVER BASIN

06286200 SHOSHONE RIVER AT KANE, WY

LOCATION.--Lat 44°51'31", long 108°19'52", in NE&SE&SE 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 1977 TO SEPTEMBER 1978

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)	ALDRIN, TOTAL (UG/L)	ALDRIN, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	CHLOR- DANE, TOTAL (UG/L)	CHLOR- DANE, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	DDD, TOTAL (UG/L)	DDD, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)
OCT 19...	1430	11.0	.0	0	.00	.00	.0	.0	0	.00	.0
MAY 11...	1215	12.5	.0	0	.00	.00	.0	.0	0	.00	.2

DATE	DDE, TOTAL (UG/L)	DDE, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	DDT, TOTAL (UG/L)	DDT, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	DI- AZINON, TOTAL (UG/L)	DI- ELDRIN, TOTAL (UG/L)	DI- ELDRIN, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	ENDO- SULFAN, TOTAL (UG/L)	ENDRIN, TOTAL (UG/L)	ENDRIN, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)
OCT 19...	.00	.1	.00	.0	.00	.00	.0	.00	.00	.0
MAY 11...	.00	.1	.00	.1	.00	.00	.0	.00	.00	.0

DATE	ETHION, TOTAL (UG/L)	HEPTA- CHLOR, TOTAL (UG/L)	HEPTA- CHLOR, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	HEPTA- CHLOR, TOTAL EPOXIDE (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)	METHYL PARA- THION, TOTAL (UG/L)	METHYL TRI- THION, TOTAL (UG/L)
OCT 19...	.00	.00	.0	.00	.0	.00	.0	.00	.00	.00
MAY 11...	.00	.00	.0	.00	.0	.00	.0	.00	.00	.00

DATE	PARA- THION, TOTAL (UG/L)	TOX- APHENE, TOTAL (UG/L)	TOXA- PHENE, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	TOTAL TRI- THION (UG/L)	2,4-D, TOTAL (UG/L)	2,4-D, TOTAL IN BOT- TOM MA- TERIAL (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 19...	.00	0	0	.00	.01	--	.00	--	.00	--
MAY 11...	.00	0	0	.00	.00	0	.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)
MAY 11...	.00	0	.00	0

YELLOWSTONE RIVER BASIN

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06286258 BIG COULEE NEAR LOVELL, WY

LOCATION.--Lat 44°58'04", long 108°17'24", in SE¼NE¼NE¼ sec.34, T.58 N., R.95 W., Big Horn County, Hydrologic Unit 10080010, on right bank 300 ft (91 m) downstream from county road, 0.6 mi (1.0 km) upstream from mouth, and 10 mi (16 km) northeast of Lovell.

DRAINAGE AREA.--30.1 mi² (78.0 km²). Area at site used Aug. 31, 1972, to Apr. 23, 1974, 28.8 mi² (74.6 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--April 1970 to September 1978 (discontinued).

GAGE.--Water-stage recorder. Altitude of gage is 3,750 ft (1,143 m), from topographic map. Aug. 31, 1972, to Apr. 23, 1974, water-stage recorder at site 0.7 mi (1.1 km) upstream at different datum.

REMARKS.--Records poor.

AVERAGE DISCHARGE.--8 years, 0.087 ft³/s (2.46 dm³/s), 63 acre-ft/yr (77,700 m³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,840 ft³/s (52.1 m³/s) July 5, 1975, gage height, 5.54 ft (1.689 m), from rating curve extended above 17 ft³/s (0.48 m³/s) on basis of slope-area measurements at gage heights 3.60 ft (1.097 m), 4.66 ft (1.420 m), and 5.54 ft (1.689 m); no flow most of each year.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 10 ft³/s (0.28 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 3	0130	*110 3.12	a2.75 0.838	May 30	1430	17.2 0.48	2.24 0.683
May 17	0030	20 .57	2.27 .692	Sept. 11	0900	52 1.47	2.48 .756
May 24	1330	74 2.10	a2.59 .789				

a-From floodmarks.

No flow for most of year.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.00	.00	.00	.00	.20	.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	4.6	.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	4.7
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	.75	.00	.00	.00	.00
18	.00	.00	.00	.00	.00	.00	.00	.20	.00	.00	.00	.50
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	1.9	.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	.00	.00	.50	.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	.00
30	.00	.00	.00	.00	.00	.00	.47	.00	.00	.00	.00	.00
31	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
TOTAL	.00	.00	.00	.00	.00	.00	.47	7.65	.00	.50	.00	5.20
MEAN	.000	.000	.000	.000	.000	.000	.016	.25	.000	.016	.000	.17
MAX	.00	.00	.00	.00	.00	.00	.47	4.6	.00	.50	.00	4.7
MIN	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
AC-FT	.00	.00	.00	.00	.00	.00	.9	15	.00	1.0	.00	10

CAL YR 1977	TOTAL	18.93	MEAN	.052	MAX	8.8	MIN	.00	AC-FT	38
WTR YR 1978	TOTAL	13.82	MEAN	.038	MAX	4.7	MIN	.00	AC-FT	27

YELLOWSTONE RIVER BASIN

06286258 BIG COULEE NEAR LOVELL, WY--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1970 to September 1978 (discontinued).

PERIOD OF DAILY RECORD.--

SUSPENDED SEDIMENT DISCHARGE: April 1970 to September 1978 (discontinued).

EXTREMES FOR PERIOD OF DAILY RECORD.--

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

SEDIMENT DISCHARGE: Maximum daily, 57,100 tons (51,800 tonnes) July 5, 1975; 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 DISCHARGE: Maximum daily, 940 tons (853 tonnes) May 3; minimum daily, 0 tons on many days during year.

MONTHLY AND ANNUAL SUMMARY OF WATER AND SUSPENDED-SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

MONTH	DISCHARGE (CFS-DAYS)	RUNOFF (ACRE-FEET)	DISCHARGE (TONS)	SUSPENDED SEDIMENT			CONCENTRATION (MG/L)	
				DAILY DISCHARGE (TONS)			WEIGHTED MEAN	MAXIMUM OBSERVED
				MEAN	MAXIMUM	MINIMUM		
OCTOBER 1977...	0	0	0	0	0	0		
NOVEMBER.....	0	0	0	0	0	0		
DECEMBER.....	0	0	0	0	0	0		
JANUARY 1978...	0	0	0	0	0	0		
FEBRUARY.....	0	0	0	0	0	0		
MARCH.....	0	0	0	0	0	0		
APRIL.....	.47	.93	26	.87	26	0		
MAY.....	7.65	15	1,254.2	40	940	0		
JUNE.....	0	0	0	0	0	0		
JULY.....	.50	.99	29	.94	29	0		
AUGUST.....	0	0	0	0	0	0		
SEPTEMBER.....	5.2	10	849	28	820	0		
WATER YEAR...	13.82	27	2,158.2	5.9	940	0		

YELLOWSTONE RIVER BASIN

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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 81.0 (130.3 km).

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 at 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, 1,237,000 acre-ft (1.53 km³) July 13, elevation, 3,648.60 ft (1,112.093 m); minimum, 766,000 acre-ft (0.94 km³) Apr. 15, elevation, 3,599.15 ft (1,097.021 m).

MONTHEND ELEVATION AND CONTENTS AT 2400, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

Date	Elevation (feet)	Contents (acre-feet)	Change in contents (acre-feet)
Sept. 30	3,624.20	950,100	--
Oct. 31	3,628.58	990,000	+39,900
Nov. 30	3,631.01	1,014,000	+24,000
Dec. 31	3,627.62	980,900	-33,100
CAL YR 1977			+14,000
Jan. 31	3,620.43	918,400	-62,500
Feb. 28	3,610.09	840,000	-78,400
Mar. 31	3,603.07	791,600	-48,400
Apr. 30	3,607.34	820,800	+29,200
May. 31	3,640.11	1,117,000	+296,200
June 30	3,643.11	1,157,000	+40,000
July 31	3,644.27	1,173,000	+16,000
Aug. 31	3,633.38	1,039,000	-134,000
Sept. 30	3,635.41	1,061,000	+22,000
WTR YR 1978			+110,900

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 Yellowstone afterbay dam, 1,500 ft (460 m) downstream from Lime Kiln Creek, and 14 mi (23 km) southwest of St. Xavier.

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 Corps of Army 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.--Water-discharge records good except those for October through January, which are 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 km²) 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.--44 years, 3,603 ft³/s (102.0 m³/s), 2,610,000 acre-ft/yr (3.22 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, 11,600 ft³/s (329 m³/s) July 28; minimum daily, 562 ft³/s (15.9 m³/s) Oct. 28.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1550	909	1450	2100	2650	3400	4410	2830	7490	7440	8080	4450
2	1540	903	1440	2110	2650	3400	4410	2860	7540	7480	8090	3860
3	1440	905	1450	2110	2670	3480	4410	2830	7500	7980	7380	3870
4	1300	882	1450	2120	2780	3580	4420	2820	7500	8570	7360	3870
5	1290	891	1520	2130	2800	3580	4390	2810	7520	8590	7240	3880
6	1290	890	1580	2130	2820	3600	4410	1720	7470	8620	7340	3800
7	1290	884	1730	2130	2820	3590	4400	2270	7540	9840	7190	3870
8	1280	879	1730	2140	2830	3590	4420	2250	7530	11100	6360	3860
9	1280	884	1820	2150	2840	3590	4420	2260	7550	11100	6370	3200
10	1280	977	1810	2140	2850	3610	4400	2250	7540	11100	6410	3200
11	1280	931	1960	2140	2850	3610	4390	2250	7530	11100	6440	3200
12	1270	865	1970	2140	2860	3610	4340	2240	7530	11100	6460	3200
13	1270	857	1960	2150	2880	3620	4400	2240	7530	11100	6460	3200
14	1270	849	1980	2150	3010	3640	3610	2220	7530	11100	6460	3200
15	1260	851	1980	2210	3040	3640	3590	2230	7550	11100	6460	3200
16	1250	843	1990	2280	3060	3640	3590	2210	7550	11100	6460	3200
17	1250	841	2000	2280	3020	3640	3590	2240	7560	11100	6470	3200
18	1240	910	2000	2280	3100	3640	3580	2260	7550	11200	6460	3200
19	1230	1080	2000	2300	3100	3640	2930	1630	7520	11400	6460	3270
20	1230	1080	2000	2300	3140	3650	2900	1270	7530	11400	6460	3260
21	1230	1320	2010	2350	3230	3650	2910	1270	7510	11400	6460	3260
22	1220	1460	2010	2440	3230	3640	2890	1280	7530	11400	6450	3250
23	1220	1460	2020	2460	3230	3630	2890	1640	7430	11400	6390	3250
24	1210	1460	2040	2460	3240	3630	2880	2850	7450	11400	6370	3250
25	1210	1460	2030	2470	3310	3620	2880	4250	7470	11400	6380	3250
26	1200	1460	2040	2480	3390	3620	2860	5890	7460	11400	6380	3610
27	1190	1450	2030	2480	3380	3630	2870	6830	7430	11400	6340	3800
28	562	1460	2050	2570	3400	3620	2860	6920	7410	9830	6020	3820
29	965	1450	2050	2630	---	4280	2840	6920	7420	8230	5040	3820
30	937	1450	2070	2630	---	4410	2840	6950	7410	8080	4480	3850
31	915	---	2090	2640	---	4410	---	7470	---	8080	4460	---
TOTAL	37949	32541	58260	71100	84180	113890	109730	97990	225080	317540	201180	105150
MEAN	1224	1085	1879	2294	3006	3674	3658	3161	7503	10240	6490	3505
MAX	1550	1460	2090	2640	3400	4410	4420	7470	7560	11400	8090	4450
MIN	562	841	1440	2100	2650	3400	2840	1270	7410	7440	4460	3200
AC-FT	75270	64550	115600	141000	167000	225900	217600	194400	446400	629800	399000	208600
CAL YR 1977	TOTAL	738490		MEAN	2023	MAX	4580	MIN	562	AC-FT	1465000	
WTR YR 1978	TOTAL	1454590		MEAN	3985	MAX	11400	MIN	562	AC-FT	2885000	

YELLOWSTONE RIVER BASIN

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06287000 BIGHORN RIVER NEAR ST. XAVIER, MT--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1963 to current year.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: October 1966 to current year.

WATER TEMPERATURES: December 1962 to current year.

REMARKS.--Flow regulated since Nov. 3, 1965, by Bighorn Lake.

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, 1974.

WATER TEMPERATURES: Maximum, 24.5°C on several days during 1963-65; minimum, 0.0°C on many days during winter periods most years prior to 1966; minimum, 1.0°C at times during winter months since regulation by Bighorn Lake.

EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum, 1,160 micromhos Feb. 9, 11; minimum daily, 537 micromhos Aug. 23.

WATER TEMPERATURES: Maximum observed, 19.0°C Aug. 25, 28, Sept. 6, 7, 9; minimum, 2.0°C Feb. 27, Mar. 2.

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

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	TEMPER- ATURE (DEG C)	HARD- NESS (MG/L AS CACO3)	HARD- NESS, NONCAR- BONATE (MG/L CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	BICAR- BONATE (MG/L AS HCO3)
OCT												
12...	1050	1290	830	10.0	310	140	77	28	74	1.8	3.5	210
NOV												
16...	1020	847	1030	9.0	360	180	90	34	90	2.1	4.2	220
DEC												
12...	1000	1960	1030	7.5	360	180	90	32	94	2.2	4.2	220
JAN												
12...	1025	2110	1100	5.0	390	210	96	37	100	2.2	4.6	220
FEB												
16...	0900	3030	1140	3.0	410	210	100	38	110	2.4	4.5	240
MAR												
14...	1030	3640	1150	3.0	410	200	100	38	96	2.1	4.8	250
APR												
19...	1000	2950	1090	4.0	400	200	100	36	100	2.2	4.6	240
MAY												
16...	1030	2220	1070	6.5	370	180	94	34	96	2.2	4.9	240
JUN												
02...	0930	7560	1030	7.0	410	220	110	32	100	2.2	4.6	230
JUL												
13...	0940	10900	888	12.0	280	140	74	24	80	2.1	4.2	180
AUG												
09...	1020	6310	589	19.0	190	80	50	17	45	1.4	2.6	140
SEP												
20...	1430	3160	672	18.5	220	93	60	18	58	1.7	2.9	160

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 CONSTITU- ENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS 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)	PHOS- PHORUS, ORTHO, DIS- SOLVED (MG/L AS P)	IRON, DIS- SOLVED (UG/L AS FE)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)
OCT												
12...	290	12	.5	11	602	.82	2100	.43	.02	.01	40	0
NOV												
16...	340	12	.5	11	693	.94	1580	.69	.03	.01	10	10
DEC												
12...	340	13	.5	10	695	.95	3680	.61	.01	.04	30	8
JAN												
12...	390	20	.5	10	770	1.05	4390	.66	.02	.02	10	20
FEB												
16...	390	16	.6	11	792	1.08	6480	.71	.02	.01	0	10
MAR												
14...	380	17	.1	.2	760	1.03	7470	.03	.06	.01	10	0
APR												
19...	370	14	.5	8.6	755	1.03	6010	.63	.00	.01	10	10
MAY												
16...	360	14	.6	9.4	734	1.00	4400	.59	.02	.05	0	0
JUN												
02...	350	15	.5	8.8	738	1.00	15100	.93	.00	.01	0	0
JUL												
13...	280	11	.5	8.3	574	.78	16900	.64	.01	.00	10	10
AUG												
09...	170	6.3	.3	9.3	371	.50	6320	.34	.01	.02	<10	7
SEP												
20...	200	7.7	.3	10	437	.59	3730	.37	.00	.01	10	0

YELLOWSTONE RIVER BASIN

06287000 BIGHORN RIVER NEAR ST. XAVIER, MT--Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	875	960	999	1060	1120	1150	1110	1100	1060	929	688	581
2	880	959	994	1040	1150	1140	1090	1110	1040	941	672	601
3	873	949	1010	1020	1140	1140	1090	1100	1050	930	657	614
4	882	968	1020	1050	1100	1140	1100	1100	1040	924	648	618
5	879	981	1030	1060	1130	1140	1100	1100	1040	912	643	652
6	893	986	1050	1020	1110	1140	1100	1100	1040	912	628	669
7	866	992	1040	1020	1120	1140	1110	1090	1040	938	623	698
8	875	1010	1040	1060	1140	1140	1120	1070	1040	935	608	689
9	877	999	1040	1070	1160	1130	1110	1070	1040	917	592	689
10	847	1000	1040	1100	1150	1140	1110	1060	1020	922	595	710
11	862	1040	1010	1100	1160	1140	1100	1070	1020	911	597	732
12	859	1030	1000	1100	1150	1120	1090	1080	1020	900	577	700
13	859	1010	1010	1070	1140	1140	1100	1060	1020	903	572	708
14	884	1020	1010	1090	1130	1130	1110	1080	1020	887	572	720
15	876	1010	1020	1090	1140	1120	1110	1060	1020	887	553	731
16	866	1030	1020	1100	1140	1130	1110	1070	1000	887	569	739
17	881	995	1020	1120	1150	1120	1100	1070	1000	883	562	742
18	872	1000	1020	1090	1150	1070	1080	1050	990	880	553	770
19	879	1100	1020	1120	1150	1120	1090	1030	980	889	547	693
20	878	1200	1020	1130	1150	1090	1090	1020	980	880	550	669
21	894	1020	1030	1070	1150	1080	1110	1050	990	869	546	633
22	893	1020	1020	1080	1130	1110	1090	1080	980	863	540	631
23	887	1000	1020	1060	1130	1130	1080	1080	980	858	537	663
24	906	1030	1040	1100	1130	1120	1070	1090	990	850	540	703
25	914	1010	1040	1100	1150	1110	1080	1060	980	842	540	752
26	911	1030	1030	1100	1150	1100	1080	1060	970	829	546	773
27	915	997	1030	1110	1150	1060	1090	1060	960	818	543	792
28	1010	1010	1020	1120	1150	1090	1060	1060	950	790	547	800
29	935	1000	1030	1140	---	1100	1080	1080	940	726	551	826
30	948	999	1040	1140	---	1070	1090	1050	940	715	560	850
31	955	---	1070	1120	---	1090	---	1060	---	698	573	---
MEAN	891	1010	1030	1090	1140	1120	1100	1070	1000	872	582	705
WTR YR 1978 MEAN		965		MAX	1160		MIN	537				

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	8.5	8.0	7.5	4.5	3.5	2.5	3.0	5.0	6.0	10.0	17.5	18.0
2	10.0	8.5	7.5	4.0	4.0	2.0	4.0	5.0	7.0	10.0	16.5	18.0
3	9.5	10.0	8.5	4.5	4.0	2.5	3.5	4.5	6.5	10.0	17.0	18.0
4	9.0	9.0	---	4.0	4.0	2.5	4.0	4.0	7.0	11.0	17.5	18.0
5	9.5	10.0	6.5	4.5	4.0	3.0	4.0	4.5	6.5	10.5	17.5	18.5
6	9.5	9.0	6.0	5.0	4.0	2.5	3.5	5.0	7.5	10.5	17.5	19.0
7	9.0	9.0	5.5	4.0	4.0	---	3.5	---	7.0	10.0	17.5	19.0
8	9.5	8.5	---	4.5	---	3.0	3.5	5.0	8.5	10.0	18.0	18.5
9	9.0	8.5	4.0	4.5	3.5	3.0	2.5	---	8.0	10.5	18.0	19.0
10	8.5	9.0	5.0	4.5	3.5	3.0	3.5	6.0	7.5	11.0	17.5	---
11	9.5	10.0	7.0	5.0	3.5	3.0	---	5.0	8.0	11.5	18.0	16.0
12	10.0	10.0	7.5	5.0	---	2.5	3.0	5.0	8.0	11.5	18.0	16.5
13	10.0	9.5	6.5	4.5	3.0	3.0	---	6.5	8.0	12.0	17.5	17.5
14	9.5	9.0	7.0	4.5	3.5	2.5	4.5	6.0	9.0	12.0	17.5	17.5
15	9.5	9.0	7.0	4.0	3.5	2.0	3.5	7.0	8.0	12.0	18.0	18.5
16	10.0	8.5	6.0	---	3.0	2.5	4.0	5.0	8.0	12.5	17.5	18.0
17	9.5	8.0	6.0	4.0	3.5	3.0	---	4.5	8.5	12.5	17.0	18.0
18	10.0	---	5.5	4.0	---	3.0	3.5	---	8.5	13.0	18.0	16.0
19	10.0	---	5.0	4.0	---	3.0	4.0	---	---	12.5	18.5	17.5
20	10.0	---	4.0	4.0	---	3.5	4.5	7.0	8.5	13.0	18.0	17.5
21	9.5	7.0	4.5	4.0	3.5	3.5	3.5	7.0	9.0	13.5	18.0	17.0
22	9.0	7.5	5.5	4.0	3.5	2.5	3.5	7.5	9.0	---	18.0	18.0
23	10.0	7.0	5.0	4.0	3.5	3.0	4.0	7.0	9.0	13.5	18.0	17.5
24	10.0	7.0	4.5	3.0	3.0	3.0	5.0	6.5	10.0	14.0	18.0	18.0
25	10.0	8.0	4.5	---	2.5	3.0	5.0	6.5	---	14.0	19.0	17.0
26	9.0	8.0	5.0	---	3.0	3.0	5.5	---	10.0	15.0	18.5	16.5
27	9.5	8.0	4.0	4.0	2.0	4.0	4.0	---	10.0	15.0	18.0	16.5
28	11.0	8.5	5.5	---	2.5	4.0	4.0	7.0	10.0	15.0	19.0	15.0
29	9.5	8.0	5.0	4.0	---	3.5	4.5	7.0	10.5	17.0	18.5	15.0
30	9.5	8.0	4.5	3.5	---	4.0	5.0	6.0	10.5	16.5	18.0	15.0
31	8.0	---	4.5	3.5	---	3.5	---	5.5	---	17.0	18.0	---
MEAN	9.5	8.5	5.5	4.0	3.5	3.0	4.0	6.0	8.5	12.5	18.0	17.5
WTR YR 1978 MEAN		8.5		MAX	19.0		MIN	2.0				

YELLOWSTONE RIVER BASIN

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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, and 13 mi (21 km) southwest of Wyola.

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 4,450 ft (1,360 m), from topographic map.

REMARKS.--Records good. Diversions for irrigation of 163 acres (660,000 m²) above station.

AVERAGE DISCHARGE.--39 years, 158 ft³/s (4.475 m³/s), 114,500 acre-ft/yr (141 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 19	0115	794 22.5	3.09 0.942	June 10	0645	1,720 48.7	4.18 1.274
May 24	2030	1,120 31.7	3.53 1.076	June 15	0115	*1,790 50.7	4.24 1.292

Minimum discharge, 40 ft³/s (1.13 m³/s) Dec. 8, gage height, 0.83 ft (0.253 m).

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	93	73	77	50	54	66	76	157	639	800	241	152
2	89	85	78	54	60	58	76	152	589	761	238	149
3	88	81	77	64	70	51	76	164	578	705	231	147
4	88	83	76	78	72	64	72	159	616	674	222	145
5	86	82	55	79	72	67	73	152	767	622	216	145
6	86	81	50	74	72	68	71	145	954	600	213	145
7	92	79	46	69	72	67	72	142	1150	562	207	142
8	88	73	43	64	72	67	73	136	1170	556	204	142
9	88	64	44	66	71	66	77	142	1330	515	202	140
10	85	83	60	65	71	67	73	188	1540	485	199	138
11	78	82	88	66	67	67	73	225	1220	466	196	149
12	88	83	79	71	62	68	72	216	1040	442	193	147
13	88	81	77	71	56	68	71	216	1160	420	193	145
14	89	81	77	69	63	68	72	277	1530	398	213	145
15	85	81	76	68	67	67	74	433	1610	381	202	142
16	86	81	76	64	72	67	73	583	1380	372	190	145
17	85	77	74	62	72	68	77	530	1210	360	193	140
18	85	76	76	60	72	69	73	616	1150	344	185	149
19	85	65	73	58	79	69	73	711	1180	332	180	138
20	85	54	67	60	77	71	73	594	1030	325	177	136
21	85	50	66	63	77	69	77	600	1010	352	174	134
22	82	58	78	69	77	69	74	729	1110	321	172	134
23	82	66	74	73	77	68	72	868	1120	299	172	134
24	83	74	68	68	76	68	71	998	1150	288	167	134
25	82	89	66	69	74	67	73	954	1160	277	162	131
26	82	88	64	68	74	68	77	869	976	267	162	131
27	82	81	62	68	74	69	101	827	910	260	162	129
28	81	79	62	66	72	69	188	827	925	270	159	129
29	82	77	60	64	---	72	185	889	932	260	157	129
30	85	77	56	62	---	74	167	861	868	247	154	127
31	79	---	52	58	---	77	---	736	---	244	152	---
TOTAL	2642	2284	2077	2040	1974	2093	2555	15116	32004	13205	5888	4193
MEAN	85.2	76.1	67.0	65.8	70.5	67.5	85.2	488	1067	426	190	140
MAX	93	89	88	79	79	77	188	998	1610	800	241	152
MIN	78	50	43	50	54	51	71	136	578	244	152	127
AC-FT	5240	4530	4120	4050	3920	4150	5070	29980	63480	26190	11680	8320

CAL YR 1977 TOTAL 57604 MEAN 158 MIN 1000 AC-FT 114300
WTR YR 1978 TOTAL 86071 MEAN 236 MAX 1610 MIN 43 AC-FT 170700

YELLOWSTONE RIVER BASIN

06297480 TONGUE RIVER AT TONGUE CANYON CAMPGROUND, NEAR DAYTON, WY

LOCATION.--Lat 44°50'45", long 107°19'56", in SE¼NE¼NW¼ sec.10, T.56 N., R.87 W., Sheridan County, Hydrologic Unit 10090101, on left bank at footbridge, 0.2 mi (0.3 km) upstream from Tongue Canyon Campground, 1.0 mi (1.6 km) upstream from intake of Highline ditch, 2.1 mi (3.4 km) downstream from Sheep Creek, and 3.8 mi (6.1 km) southwest of Dayton.

DRAINAGE AREA.--202 mi² (523 km²).

PERIOD OF RECORD.--October 1974 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 4,210 ft (1,283 m), from topographic map.

REMARKS.--Records fair except those for periods of indefinite stage-discharge relation, May 28-30, June 5-25, which are poor. No diversions above station.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, about 2,750 ft³/s (77.9 m³/s) May 10, 1977, gage height, 4.3 ft (1.31 m), from floodmarks; maximum gage height, 4.50 ft (1.372 m) June 9, 1978; minimum daily discharge, 32 ft³/s (0.91 m³/s) Nov. 27, 1976.

EXTREMES FOR CURRENT YEAR.--Peak discharges 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 28	2200	a1,450 41.1	3.75 1.143	June 15	0100	a2,520 71.4	4.32 1.317
June 9	2400	a*2,730 77.3	4.50 1.372				

a-Estimated from peak discharges at 06298000 Tongue River near Dayton, 1.2 mi (1.9 km) downstream.

Minimum daily discharge, 34 ft³/s (0.96 m³/s) Nov. 9.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	99	43	58	45	48	54	67	220	880	928	258	120
2	88	74	57	56	56	47	70	220	825	869	282	115
3	86	71	56	57	55	47	69	245	858	825	252	113
4	84	72	55	55	54	58	59	220	976	759	232	113
5	83	74	45	55	54	59	66	200	1180	715	219	112
6	81	72	52	54	55	55	60	183	1480	660	212	112
7	88	70	60	53	51	52	65	156	1780	642	214	107
8	87	61	53	49	53	50	70	141	1760	588	197	107
9	81	34	72	56	53	52	84	165	2040	563	195	107
10	81	66	70	56	52	51	75	214	2380	528	191	107
11	58	71	62	54	53	47	74	247	1870	489	180	113
12	84	78	58	54	50	46	70	236	1560	456	173	124
13	90	72	55	54	45	49	72	214	1710	422	171	117
14	88	71	56	52	54	47	79	323	2140	400	200	117
15	81	70	56	53	55	45	81	484	2210	377	229	113
16	81	67	55	54	54	43	84	792	1980	370	195	113
17	80	64	50	53	52	48	94	693	1780	359	214	110
18	78	62	51	52	52	49	83	597	1630	342	207	120
19	75	63	53	48	54	48	80	535	1690	323	180	115
20	76	44	48	46	47	45	80	478	1440	323	162	107
21	76	49	50	48	55	44	90	542	1400	385	152	107
22	76	65	56	52	56	45	83	682	1500	389	148	112
23	74	69	54	54	58	45	78	880	1480	323	137	107
24	75	71	51	52	58	45	71	1080	1440	296	131	105
25	74	71	50	52	57	44	87	1170	1390	291	126	105
26	74	67	56	53	56	48	99	1140	1140	277	124	99
27	72	61	51	54	56	50	167	1140	1060	263	122	98
28	72	60	52	53	54	53	260	1190	1060	263	126	96
29	72	59	53	54	---	55	234	1250	1120	285	126	94
30	75	59	54	53	---	61	232	1200	1030	258	128	96
31	69	---	47	49	---	70	---	1000	---	247	122	---
TOTAL	2458	1930	1696	1630	1497	1552	2883	17837	44789	14215	5605	3281
MEAN	79.3	64.3	54.7	52.6	53.5	50.1	96.1	575	1493	459	181	109
MAX	99	78	72	57	58	70	260	1250	2380	928	282	124
MIN	58	34	45	45	45	43	59	141	825	247	122	94
AC-FT	4880	3830	3360	3230	2970	3080	5720	35380	88840	28200	11120	6510
CAL YR 1977	TOTAL	66248	MEAN 182	MAX 2030	MIN 33	AC-FT 131400						
WTR YR 1978	TOTAL	99373	MEAN 272	MAX 2380	MIN 34	AC-FT 197100						

YELLOWSTONE RIVER BASIN

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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 except those for period of no gage-height record, Aug. 23 to Sept. 24, which are fair. 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.--49 years (water years 1919-29, 1941-78), 190 ft³/s (5.381 m³/s), 137,700 acre-ft/yr (170 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 discharges 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 28	2245	1,440 40.8	4.49 1.369	June 15	0215	2,510 71.1	5.47 1.667
June 10	0115	*2,720 77.0	5.63 1.716				

Minimum daily discharge, 29 ft³/s (0.82 m³/s) Nov. 9.

CORRECTIONS.--The figures published in the 1977 report for Highline Ditch are in cubic feet per second and not acre-feet as annotated.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	77	40	55	46	45	47	67	215	845	945	230	109
2	65	65	54	55	53	41	70	215	796	888	260	104
3	69	63	54	57	52	41	69	241	836	817	220	102
4	77	64	52	56	51	53	59	217	946	761	197	102
5	74	64	42	54	51	54	65	195	1170	707	184	101
6	74	62	49	52	52	51	60	178	1470	665	176	101
7	80	60	57	50	48	48	64	153	1770	647	184	97
8	78	55	50	46	50	47	69	138	1750	607	167	98
9	74	29	69	53	50	50	83	162	2020	580	164	98
10	74	57	67	54	49	49	73	213	2360	531	161	98
11	56	60	60	52	50	46	72	247	1860	507	153	104
12	77	66	56	52	47	46	67	245	1550	479	148	115
13	84	62	56	51	42	49	67	238	1700	441	148	109
14	80	61	56	49	51	48	71	338	2130	413	184	109
15	72	60	55	50	52	46	74	547	2200	390	203	106
16	71	58	55	49	51	45	77	775	1960	376	173	106
17	70	53	52	51	49	50	85	689	1760	369	187	103
18	68	51	52	47	49	51	75	612	1610	343	181	113
19	66	52	51	46	51	50	70	556	1670	323	156	109
20	66	33	46	47	44	47	72	504	1420	314	145	101
21	67	38	48	48	51	46	85	569	1380	402	140	103
22	65	58	56	50	51	48	79	697	1490	391	140	109
23	64	62	55	50	51	48	72	885	1480	305	124	105
24	64	64	50	49	50	48	67	1110	1450	270	120	103
25	64	64	49	49	50	47	79	1210	1400	252	115	100
26	63	65	55	50	49	49	91	1170	1160	238	113	98
27	63	58	50	51	49	52	165	1180	1070	228	111	96
28	62	56	53	50	47	54	264	1200	1080	231	115	96
29	62	56	54	51	---	57	229	1290	1110	248	115	96
30	65	56	55	50	---	63	227	1170	1020	220	116	96
31	59	---	48	46	---	69	---	960	---	213	111	---
TOTAL	2150	1692	1661	1561	1385	1540	2767	18119	44463	14101	4941	3087
MEAN	69.4	56.4	53.6	50.4	49.5	49.7	92.2	584	1482	455	159	103
MAX	84	66	69	57	53	69	264	1290	2360	945	260	115
MIN	56	29	42	46	42	41	59	138	796	213	111	96
AC-FT	4260	3360	3290	3100	2750	3050	5490	35940	88190	27970	9800	6120
†	83	0	0	0	0	0	0	0	392	1,440	1,240	774

ADJUSTED FOR DIVERSION BY HIGHLINE DITCH

	MEAN	70.7	56.4	53.6	50.4	49.5	49.7	92.2	584	1,489	478	180	116
AC-FT	4,340	3,360	3,290	3,100	2,750	3,050	5,490	35,940	88,580	29,400	11,040	6,890	

UNADJUSTED

ADJUSTED

	CAL YR 1977	TOTAL 63,303	MEAN 173	MAX 1,980	MIN 29	AC-FT 125,600	MEAN 182	AC-FT 131,600
WTR YR 1978	TOTAL 97,467	MEAN 267	MAX 2,360	MIN 29	AC-FT 193,300	MEAN 272	AC-FT 197,200	

† Diversion, in acre-ft, above station by Highline ditch.

YELLOWSTONE RIVER BASIN

06298000 TONGUE RIVER NEAR DAYTON, WY--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1967 to current year.

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

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	TUR- BID- ITY (JTU)	OXYGEN DEMAND, BIO- CHEM- ICAL, 5 DAY (MG/L)	HARD- NESS (MG/L AS CACO3)	HARD- NESS, NONCAR- BONATE (MG/L CACO3)
OCT									
02...	1350	65	--	--	8.5	--	--	140	17
NOV									
12...	1330	64	--	--	4.0	1	3.6	130	2
DEC									
11...	1200	61	--	--	1.0	1	--	140	9
JAN									
03...	1100	56	--	--	.0	0	--	150	19
FEB									
04...	1215	50	--	--	1.5	0	--	160	21
MAR									
05...	1130	54	--	--	1.0	1	--	150	11
APR									
01...	1215	65	--	--	5.5	1	--	130	0
MAY									
13...	1315	213	--	--	7.0	3	--	100	0
JUN									
10...	1300	2310	140	7.8	6.0	20	--	58	17
JUL									
22...	1230	375	220	8.3	10.0	2	--	99	1
AUG									
19...	1140	156	240	8.1	10.0	1	--	120	5
SEP									
16...	1115	A106	240	8.3	9.5	1	--	130	35

A-Daily mean discharge.

DATE	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	BICAR- BONATE (MG/L AS HCO3)	CAR- BONATE (MG/L AS CO3)	ALKA- LINITY (MG/L AS CACO3)	SULFATE DIS- SOLVED (MG/L AS SO4)
OCT									
02...	33	13	2.8	.1	1.1	150	0	120	7.0
NOV									
12...	33	13	.7	.0	.7	150	3	130	4.0
DEC									
11...	36	12	2.4	.1	1.0	160	0	130	9.1
JAN									
03...	38	13	2.5	.1	.7	160	0	130	11
FEB									
04...	40	14	2.5	.1	.6	170	0	140	10
MAR									
05...	38	13	2.1	.1	6.7	170	0	140	7.6
APR									
01...	34	11	2.2	.1	.9	160	0	130	9.0
MAY									
13...	26	9.0	2.4	.1	.9	130	0	110	1.8
JUN									
10...	16	4.4	1.4	.1	1.1	50	0	41	19
JUL									
22...	28	7.3	.8	.0	.0	120	0	98	2.9
AUG									
19...	32	9.5	1.3	.1	.7	140	0	120	4.8
SEP									
16...	33	11	2.0	.1	.6	110	3	95	6.0

YELLOWSTONE RIVER BASIN

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06298000 TONGUE RIVER NEAR DAYTON, WY--Continued

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

DATE	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)	SOLIDS, DIS- SOLVED (TONS PER DAY)	NITRO- GEN, NITRATE DIS- SOLVED (MG/L AS N)	PHOS- PHORUS, TOTAL (MG/L AS P)
OCT								
02...	1.9	.1	6.6	142	.19	24.9	.07	.00
NOV								
12...	2.5	.2	6.3	138	.19	23.8	.16	.00
DEC								
11...	1.1	.2	11	155	.21	25.5	.36	.01
JAN								
03...	5.7	.2	9.9	164	.22	24.8	.36	.00
FEB								
04...	8.2	.1	6.6	167	.23	22.5	.23	.01
MAR								
05...	1.8	.1	6.4	160	.22	23.3	.23	.13
APR								
01...	1.8	.1	8.3	143	.19	25.1	.09	.09
MAY								
13...	1.7	.2	11	110	.15	63.3	.27	.01
JUN								
10...	.8	.1	.0	95	.13	593	.52	.17
JUL								
22...	1.5	.1	5.2	104	.14	105	.09	.07
AUG								
19...	1.5	.1	4.9	125	.17	52.7	.09	.02
SEP								
16...	1.8	.1	5.5	117	.16	33.5	.02	.09

YELLOWSTONE RIVER BASIN

06298000 TONGUE RIVER NEAR DAYTON, WY--Continued

QUALITATIVE AND ASSOCIATED QUANTITATIVE ANALYSES OF BIOLOGICAL DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
PERIPHYTON ANALYSESOCT. 2, 1977
1350 HOURS

PERIPHYTON IDENTIFICATION

ORGANISM NAME	COMMON NAME
CHLOROPHYTA	GREEN ALGAE
..CHLOROPHYCEAE	
..CHLOROCOCCALES	
...OOCYSTACEAE	
....SELENASTRUM	
..ULOTRICHIALES	
..CHAETOPHORACEAE	
...CHAETONEMA	
....PSEUDOUVELLA	
..ZYGNEMATALES	
..DESMIDIACEAE	PLACODERM DESMIDS
...CLOSTERIUM	
CHRYSTOPHYTA	
..BACILLARIOPHYCEAE	DIATOMS
..CENTRALES	CENTRIC
...COSCIDINODISCACEAE	
...MELOSIRA	
..PENNIALES	PENNATE
...ACHNANTHACEAE	
& ...ACHNANTHES	
...COCCONEIS	
..CYMBELLACEAE	
...AMPHORA	
...CYMBELLA	
...EPITHEMIA	
..DIATOMACEAE	
& ...DIATOMA	
..FRAGILARIACEAE	
...FRAGILARIA	
...HANNAEA	
...SYNEDRA	
..GOMPHONEMACEAE	
& ...GOMPHONEMA	
..NAVICULACEAE	NAVICULOID
...AMPHIPLEURA	
& ...NAVICULA	
...NEIDIUM	
...PINNULARIA	
..NITZSCHIAEAE	
...DENTICULA	
...NITZSCHIA	
..SURIRELLACEAE	
...CYMATOPLEURA	
CYANOPHYTA	BLUE-GREEN ALGAE
..CYANOPHYCEAE	
..CHROCOCCALES	COCCOID BLUE-GREENS
...CHROCOCCACEAE	
....AGMENELLUM	
..HORMOGONALES	FILAMENTOUS BL-GREEN
..NOSTOCACEAE	
...ANABAENA	
..OSCILLATORIAEAE	
...LYNGBYA	
...OSCILLATORIA	
..RIVULARIAEAE	
...CALOTHRIX	

NOTE: & - ESTIMATED DOMINANT ORGANISM; NOT ACTUALLY COUNTED
 SAMPLING METHOD: PLASTIC SLIDES, TIMED SAMPLING INTERVAL
 ANALYSIS METHOD: GLASS CHAMBER(12MM CIRC), 200-X MICROSCOPE

YELLOWSTONE RIVER BASIN

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06299500 WOLF CREEK AT WOLF, WY

LOCATION.--Lat 44°46'21", long 107°14'01", in NE&SW&NW¼ 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 19	0230	352 9.97	2.93 0.893	June 9	2130	*576 16.3	3.46 1.055
a	unknown	391 11.1	3.04 0.927				

a-Sometime during period May 25-29.

Minimum daily discharge during period of operation, 8.3 ft³/s (0.24 m³/s) Apr. 4, 6, 7, 24.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1							8.6	50	185	156	34	14
2							9.8	50	158	149	42	13
3							10	53	147	135	33	12
4							8.3	51	154	126	29	11
5							9.0	49	187	110	26	11
6							8.3	46	230	103	25	11
7							8.3	41	309	98	26	11
8							9.4	47	321	86	23	11
9							11	48	396	83	22	12
10							9.8	62	440	71	22	11
11							9.8	73	376	64	21	13
12							9.8	69	325	60	20	17
13							9.0	71	342	55	19	14
14							9.8	98	380	50	27	14
15							10	154	384	48	29	13
16							10	241	345	47	22	13
17							11	255	312	45	29	12
18							9.8	290	281	43	25	14
19							9.0	296	290	41	21	13
20							9.0	217	235	42	19	12
21							11	200	215	56	18	12
22							9.0	230	236	53	17	13
23							8.6	270	266	40	17	12
24							8.3	330	266	35	16	12
25							9.8	350	246	34	16	12
26							11	330	202	31	16	11
27							22	350	190	30	16	11
28							70	370	192	30	16	11
29							74	390	190	33	16	11
30							54	244	176	29	15	11
31							---	215	---	29	14	---
TOTAL	---	---	---	---	---	---	467.4	5540	7976	2012	691	368
MEAN	---	---	---	---	---	---	15.6	179	266	64.9	22.3	12.3
MAX	---	---	---	---	---	---	74	390	440	156	42	17
MIN	---	---	---	---	---	---	8.3	41	147	29	14	11
AC-FT	---	---	---	---	---	---	927	10990	15820	3990	1370	730

YELLOWSTONE RIVER BASIN

06299980 TONGUE RIVER AT MONARCH, WY

LOCATION.--Lat 44°54'08", long 107°01'49", in NW¼SW¼NW¼ sec.20, T.57 N., R.84 W., Sheridan County, Hydrologic Unit 10090101, at bridge on county road at Monarch, 0.6 mi (1.0 km) upstream from South Dry Creek, and 1.0 mi (1.6 km) upstream from bridge on Interstate Highway 90.

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

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

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	TUR- BID- ITY (JTU)	OXYGEN, DISSOLVED (MG/L)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	HARD- NESS (MG/L AS CACU3)	HARD- NESS, NONCAR- BONATE (MG/L CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)
OCT												
02...	1215	70	410	8.1	10.0	8	10.2	67	230	31	50	25
NOV												
12...	1145	60	440	7.9	4.0	2	10.4	K12	240	34	56	24
DEC												
11...	1030	114	470	7.7	.0	2	9.3	22	250	43	55	27
JAN												
03...	0930	85	470	7.6	.0	1	11.5	51	260	64	60	27
FEB												
04...	1100	90	460	7.6	.0	2	10.8	K88	240	42	56	24
MAR												
05...	1030	54	560	7.7	.0	2	11.6	22	270	50	61	29
APR												
01...	0950	189	520	8.2	6.0	40	10.6	42	250	68	55	27
MAY												
13...	1130	640	410	7.8	8.0	20	10.4	150	190	39	45	20
JUN												
10...	1215	2200	180	7.8	10.0	80	9.8	72	93	14	22	9.3
JUL												
22...	1110	450	320	8.2	12.0	4	9.2	100	150	21	38	14
AUG												
19...	1010	190	370	8.1	14.0	3	8.9	310	180	26	43	18
S29...	0930	134	415	--	15.5	--	--	--	--	--	--	--
SEP												
16...	1000	120	440	8.2	13.0	2	9.2	44	220	44	52	23

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

S-Seepage run data (see Explanation of Water-Quality Records).

DATE	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	BICAR- BONATE (MG/L AS HCU3)	CAR- BONATE (MG/L AS CO3)	ALKA- LINITY (MG/L AS CACO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, SUM OF CONSTITUENTS, DIS- SOLVED (MG/L)
OCT											
02...	15	.4	2.1	240	0	200	59	2.0	.2	7.8	280
NOV											
12...	13	.4	1.6	250	0	210	66	1.8	.2	8.1	294
DEC											
11...	14	.4	1.5	250	0	210	69	2.4	.1	9.3	302
JAN											
03...	14	.4	1.5	240	0	200	73	1.7	.1	.0	296
FEB											
04...	13	.4	1.4	240	0	200	58	1.6	.2	8.8	281
MAR											
05...	17	.4	1.7	270	0	220	85	1.9	.2	8.7	338
APR											
01...	28	.8	2.7	220	0	180	130	3.3	.2	6.6	362
MAY											
13...	14	.4	1.9	190	0	160	63	2.1	.1	7.8	248
JUN											
10...	3.1	.1	1.8	96	0	79	13	1.1	.1	7.1	105
JUL											
22...	7.0	.2	1.3	160	0	130	27	1.2	.1	7.9	176
AUG											
19...	10	.3	1.6	190	0	160	39	1.5	.2	6.4	214
29...	--	--	--	--	--	--	--	--	--	--	--
SEP											
16...	13	.4	2.5	220	0	180	61	2.9	.2	6.1	269

YELLOWSTONE RIVER BASIN

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06299980 TONGUE RIVER AT MONARCH, WY--Continued

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

DATE	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, 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)	CARBON, ORGANIC DIS- SOLVED (MG/L AS C)	CARBON, ORGANIC SUS- PENDED TOTAL (MG/L AS C)
OCT											
02...	.38	52.9	.09	.04	.48	.52	.61	2.7	.02	2.9	.6
NOV											
12...	.40	47.6	.08	.11	.27	.38	.46	2.0	.02	--	--
DEC											
11...	.41	93.0	.87	.08	.01	.09	.96	4.3	.00	--	--
JAN											
03...	.40	67.9	.23	.07	.44	.51	.74	3.3	.00	--	--
FEB											
04...	.38	68.3	.22	.03	.21	.24	.46	2.0	.02	--	--
MAR											
05...	.46	49.3	.20	.10	.08	.18	.38	1.7	.02	--	--
APR											
01...	.49	185	.10	.01	1.1	1.1	1.2	5.3	.03	--	--
MAY											
13...	.34	429	.56	.25	.64	.89	1.5	6.4	.05	6.1	.7
JUN											
10...	.14	624	.09	.09	.85	.94	1.0	4.6	.13	--	--
JUL											
22...	.24	214	.08	.00	.36	.36	.44	1.9	.00	--	--
AUG											
19...	.29	110	.02	.02	.34	.36	.38	1.7	.01	--	--
29...	--	--	--	--	--	--	--	--	--	--	--
SEP											
16...	.37	87.2	.03	.08	.46	.54	.57	2.5	.01	--	--

YELLOWSTONE RIVER BASIN

06299980 TONGUE RIVER AT MONARCH, WY--Continued

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

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, SUS- PENDE D 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)
OCT												
02...	1215	180	170	10	0	0	1	0	0	0	60	10
NOV												
12...	1145	--	--	--	--	--	--	--	--	--	50	--
DEC												
11...	1030	--	--	--	--	--	--	--	--	--	50	--
JAN												
03...	0930	--	--	--	--	--	--	--	--	--	60	--
FEB												
04...	1100	--	--	--	--	--	--	--	--	--	40	--
MAR												
05...	1030	--	--	--	--	--	--	--	--	--	40	--
APR												
01...	0950	--	--	--	--	--	--	--	--	--	70	--
MAY												
13...	1130	0	0	0	1	0	1	5	5	0	40	3
JUN												
10...	1215	--	--	--	--	--	--	--	--	--	40	--
JUL												
22...	1110	--	--	--	--	--	--	--	--	--	30	--
AUG												
19...	1010	--	--	--	--	--	--	--	--	--	40	--
SEP												
16...	1000	--	--	--	--	--	--	--	--	--	50	--

DATE	CADMIUM SUS- PENDE D 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 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												
02...	8	2	3	3	0	10	9	1	310	40	<100	<96
NOV												
12...	--	--	--	--	--	--	--	--	--	100	--	--
DEC												
11...	--	--	--	--	--	--	--	--	--	100	--	--
JAN												
03...	--	--	--	--	--	--	--	--	--	50	--	--
FEB												
04...	--	--	--	--	--	--	--	--	--	70	--	--
MAR												
05...	--	--	--	--	--	--	--	--	--	50	--	--
APR												
01...	--	--	--	--	--	--	--	--	--	490	--	--
MAY												
13...	1	2	10	0	10	6	5	1	800	10	13	7
JUN												
10...	--	--	--	--	--	--	--	--	--	140	--	--
JUL												
22...	--	--	--	--	--	--	--	--	--	130	--	--
AUG												
19...	--	--	--	--	--	--	--	--	--	330	--	--
SEP												
16...	--	--	--	--	--	--	--	--	--	280	--	--

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

[illegible][illegible]

YELLOWSTONE RIVER BASIN

06299980 TONGUE RIVER AT MONARCH, WY--Continued

QUALITATIVE AND ASSOCIATED QUANTITATIVE ANALYSES OF BIOLOGICAL DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

PERIPHYTON ANALYSES

NOV. 12, 1977
1145 HOURS

PERIPHYTON IDENTIFICATION

__ORGANISM__ NAME__	__COMMON__ NAME__
CHLOROPHYTA	GREEN ALGAE
.CHLOROPHYCEAE	
..ULOTRICHAELES	
...CHAEOTOPHORACEAE	
& ...STIGEOCLONIUM	
CHRYSOPHYTA	
.BACILLARIOPHYCEAE	DIATOMS
..PENNALES	PENNATE
...CYMBELLACEAE	
....AMPHORA	
....EPITHEMIA	
...DIATOMACEAE	
...DIATOMA	
...FRAGILARIACEAE	
...SYNEDRA	
...GOMPHONEMACEAE	
...GOMPHONEMA	
...NAVICULACEAE	NAVICULOID
...CALONEIS	
...GYROSIGMA	
...NAVICULA	
...SURIRELLACEAE	
...CYMATOPLEURA	

NOTE: & - ESTIMATED DOMINANT ORGANISM; NOT ACTUALLY COUNTED
 SAMPLING METHOD: PLASTIC SLIDES, TIMED SAMPLING INTERVAL
 ANALYSIS METHOD: SLIDE MOUNTING

MAY 13, 1978
1130 HOURS

PERIPHYTON IDENTIFICATION

__ORGANISM__ NAME__	__COMMON__ NAME__
CHRYSOPHYTA	
.BACILLARIOPHYCEAE	DIATOMS
..PENNALES	PENNATE
...FRAGILARIACEAE	
...HANNAEA	
...GOMPHONEMACEAE	
...GOMPHONEMA	
...NITZSCHACEAE	
& ...NITZSCHIA	
...SURIRELLACEAE	
...SURIRELLA	
EUGLENOPHYTA	EUGLENOIDS
.EUGLENOPHYCEAE	
..EUGLENALES	
...EUGLENACEAE	
...TRACHELOMONAS	

NOTE: & - ESTIMATED DOMINANT ORGANISM; NOT ACTUALLY COUNTED
 SAMPLING METHOD: PLASTIC SLIDES, TIMED SAMPLING INTERVAL
 ANALYSIS METHOD: GLASS CHAMBER(12MM CIRC), 200-X MICROSCOPE

06299980 TONGUE RIVER AT MONARCH, WY--Continued

QUALITATIVE AND ASSOCIATED QUANTITATIVE ANALYSES OF BIOLOGICAL DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

PERIPHYTON ANALYSES

JULY 22, 1978
1110 HOURS

PERIPHYTON IDENTIFICATION

ORGANISM NAME	COMMON NAME
CHLOROPHYTA	GREEN ALGAE
.CHLOROPHYCEAE	
..CHLOROCOCCALES	
...OOCYSTACEAE	
& ...OOCYSTIS	
CHRYSOPHYTA	
.BACILLARIOPHYCEAE	DIATOMS
..PENNALES	PENNATE
...FRAGILARIACEAE	
& ...SYNEDRA	
...GOMPHONEMACEAE	
& ...GOMPHONEMA	
...NAVICULACEAE	NAVICULOID
& ...NAVICULA	
EUGLENOPHYTA	EUGLENOIDS
.EUGLENOPHYCEAE	
..EUGLENALES	
...EUGLENACEAE	
& ...TRACHELOMONAS	

NOTE: & - ESTIMATED DOMINANT ORGANISM; NOT ACTUALLY COUNTED
 SAMPLING METHOD: PLASTIC SLIDES, TIMED SAMPLING INTERVAL
 ANALYSIS METHOD: GLASS CHAMBER(12MM CIRC), 200-X MICROSCOPE

AUG. 19, 1978
1010 HOURS

PERIPHYTON IDENTIFICATION

ORGANISM NAME	COMMON NAME
CHLOROPHYTA	GREEN ALGAE
.CHLOROPHYCEAE	
..ZYGNEMATALES	
...DESMIDIACEAE	PLACODERM DESMIDS
...COSMARUM	
CHRYSOPHYTA	
.BACILLARIOPHYCEAE	DIATOMS
..PENNALES	PENNATE
...ACHNANTHACEAE	
...ACHNANTHES	
& ...COCCONEIS	
...CYMBELLACEAE	
...AMPHORA	
...CYMBELLA	
...EPITHEMIA	
...RHOPALODIA	
...DIATOMACEAE	
...DIATOMA	
...FRAGILARIACEAE	
...HANNAEA	
& ...SYNEDRA	
...GOMPHONEMACEAE	
...GOMPHONEMA	
...NAVICULACEAE	NAVICULOID
& ...NAVICULA	
...NITZSCHIAEAE	
...NITZSCHIA	

NOTE: & - ESTIMATED DOMINANT ORGANISM; NOT ACTUALLY COUNTED
 SAMPLING METHOD: PLASTIC SLIDES, TIMED SAMPLING INTERVAL
 ANALYSIS METHOD: GLASS CHAMBER(12MM CIRC), 200-X MICROSCOPE

YELLOWSTONE RIVER BASIN

06300500 EAST FORK BIG GOOSE CREEK NEAR BIG HORN, WY

LOCATION.--Lat 44°32'18", long 107°13'33", in SE $\frac{1}{4}$ SE $\frac{1}{4}$ NW $\frac{1}{4}$ 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 fair. 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)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
June 9	2230	488 13.8	5.47 1.667	June 28	2330	421 11.9	5.27 1.606
June 14	2130	*556 15.8	5.64 1.719	July 9	0730	258 7.31	4.64 1.414
June 24	0130	457 12.9	5.39 1.643				

Minimum daily discharge during period of operation, 1.7 ft³/s (0.048 m³/s) Apr. 6.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1							2.1	8.7	56	264	48	13
2							2.3	8.7	52	254	44	13
3							2.1	8.6	56	253	38	12
4							2.0	8.1	72	220	33	12
5							2.0	8.0	119	180	30	12
6							1.7	8.0	183	148	29	11
7							2.0	8.1	212	141	27	11
8							2.5	9.2	214	162	26	11
9							2.5	9.9	314	218	25	11
10							2.3	10	350	166	25	10
11							2.4	10	212	157	23	12
12							2.3	10	154	145	21	14
13							2.2	11	251	120	21	16
14							2.6	17	423	109	26	15
15							2.7	37	440	102	32	17
16							2.7	68	300	100	28	20
17							2.7	77	250	121	33	19
18							2.7	59	200	96	34	21
19							2.4	48	170	78	29	19
20							2.7	40	160	75	27	18
21							2.8	41	217	110	24	17
22							2.9	56	323	98	21	16
23							2.8	91	331	67	21	15
24							2.8	135	363	58	20	16
25							3.2	127	339	56	18	16
26							4.7	103	208	54	17	15
27							7.6	94	202	49	17	15
28							7.8	89	280	51	17	14
29							7.6	108	336	58	17	14
30							8.2	114	310	48	16	13
31							---	76	---	47	14	---
TOTAL							97.3	1498.3	7097	3805	801	438
MEAN							3.24	48.3	237	123	25.8	14.6
MAX							8.2	135	440	264	48	21
MIN							1.7	8.0	52	47	14	10
AC-FT							193	2970	14080	7550	1590	869

YELLOWSTONE RIVER BASIN

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06301500 WEST FORK BIG GOOSE CREEK NEAR BIG HORN, WY

LOCATION.--Lat 44°36'47", long 107°17'49", in NW¼ Sec.30, T.55 N., R.86 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, 415 ft³/s (11.8 m³/s) occurred about June 17, gage height, 3.94 ft (1.201 m); minimum daily during period of operation, 3.6 ft³/s (0.10 m³/s) Apr. 5, 6.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1							4.6	5.1	104	322	81	40
2							4.3	5.1	99	287	78	39
3							4.0	5.3	94	258	76	38
4							3.8	5.4	90	229	70	38
5							3.6	5.4	103	217	64	37
6							3.6	5.6	152	191	62	36
7							3.8	9.5	183	172	56	38
8							4.0	12	200	176	44	45
9							4.0	8.3	230	169	44	51
10							4.0	6.5	260	149	43	46
11							4.0	6.1	240	162	41	46
12							3.9	5.9	230	154	43	44
13							4.0	6.1	220	138	43	42
14							4.0	6.7	280	118	45	56
15							4.0	8.0	330	103	56	52
16							3.9	8.9	370	99	55	46
17							3.9	8.3	390	102	60	44
18							3.9	7.8	370	100	63	44
19							3.9	38	380	93	70	42
20							3.9	97	310	86	64	42
21							3.9	86	287	106	62	39
22							4.0	81	305	118	63	50
23							3.9	77	287	99	35	61
24							3.8	79	307	82	38	26
25							4.0	100	345	73	56	20
26							4.2	110	310	69	42	13
27							5.1	114	264	64	42	11
28							5.6	114	278	54	41	12
29							5.1	116	315	67	41	22
30							5.1	114	350	64	41	23
31							---	110	---	60	41	---
TOTAL	---	---	---	---	---	---	123.8	1362.0	7683	4181	1660	1143
MEAN	---	---	---	---	---	---	4.13	43.9	256	135	53.5	38.1
MAX	---	---	---	---	---	---	5.6	116	390	322	81	61
MIN	---	---	---	---	---	---	3.6	5.1	90	54	35	11
AC-FT	---	---	---	---	---	---	246	2700	15240	8290	3290	2270

YELLOWSTONE RIVER BASIN

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, 1,100 ft³/s (31.2 m³/s) June 19, gage height, 3.95 ft (1.204 m); minimum daily during period of operation, 15 ft³/s (0.42 m³/s) Apr. 4.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1							17	94	535	742	87	32
2							20	89	510	640	89	34
3							20	91	505	565	82	32
4							15	87	505	515	72	31
5							16	85	515	515	53	30
6							17	74	640	458	51	30
7							17	66	718	382	47	32
8							18	79	736	320	27	35
9							20	87	766	316	24	43
10							19	116	869	312	26	40
11							20	129	848	312	26	46
12							21	120	772	286	26	47
13							20	125	754	280	28	43
14							21	172	834	283	45	65
15							22	269	876	254	57	72
16							22	379	918	232	44	61
17							24	365	1020	201	72	59
18							19	365	1010	172	63	64
19							18	362	1090	148	61	61
20							19	396	960	138	51	60
21							22	422	766	178	44	68
22							20	520	700	197	46	73
23							18	590	682	161	26	97
24							17	658	796	133	20	72
25							20	718	869	104	36	60
26							23	718	890	67	28	54
27							55	688	834	52	25	49
28							133	646	827	54	27	49
29							105	615	796	94	36	59
30							100	610	790	87	36	61
31							---	575	---	56	32	---
TOTAL	---	---	---	---	---	---	898	10310	23331	8254	1387	1559
MEAN	---	---	---	---	---	---	29.9	333	778	266	44.7	52.0
MAX	---	---	---	---	---	---	133	718	1090	742	89	97
MIN	---	---	---	---	---	---	15	66	505	52	20	30
AC-FT	---	---	---	---	---	---	1780	20450	46280	16370	2750	3090

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, 610 ft³/s (17.3 m³/s) June 9, gage height, 4.74 ft (1.445 m); minimum daily during period of operation, 16 ft³/s (0.45 m³/s) Apr. 3, 5, 6, 24.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1							20	165	319	276	81	68
2							18	176	286	277	88	69
3							16	182	276	241	81	69
4							18	196	286	218	76	71
5							16	206	324	194	80	80
6							16	225	380	196	82	80
7							17	252	462	193	81	78
8							19	252	465	188	74	80
9							23	250	510	232	75	85
10							20	210	565	182	72	84
11							19	182	492	170	69	94
12							20	189	415	138	64	93
13							18	181	430	146	64	90
14							19	191	518	138	81	84
15							19	265	535	131	82	80
16							20	390	465	129	71	92
17							22	415	448	114	72	99
18							20	425	432	97	69	107
19							19	415	398	92	69	104
20							19	352	333	98	66	104
21							21	352	342	151	64	102
22							18	400	414	158	62	99
23							17	478	420	133	61	98
24							16	541	432	121	61	97
25							18	556	419	104	60	98
26							21	512	315	70	60	102
27							39	482	308	69	60	100
28							162	452	346	70	60	99
29							206	440	357	75	65	98
30							191	428	315	70	66	97
31							---	366	---	72	68	---
TOTAL	---	---	---	---	---	---	1087	10126	12007	4543	2184	2701
MEAN	---	---	---	---	---	---	36.2	327	400	147	70.5	90.0
MAX	---	---	---	---	---	---	206	556	565	277	88	107
MIN	---	---	---	---	---	---	16	165	276	69	60	68
AC-FT	---	---	---	---	---	---	2160	20080	23820	9010	4330	5360

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.

WATER-DISCHARGE RECORDS

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.

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.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	90	91	68	66	58	53	140	388	1230	1040	121	104
2	91	95	69	66	60	58	134	336	1110	910	205	100
3	84	100	75	68	62	57	129	322	1070	815	208	90
4	82	95	74	68	63	60	118	436	1040	710	173	86
5	85	94	60	71	63	73	112	560	1060	705	147	86
6	91	91	60	74	63	78	105	660	1190	630	133	91
7	99	85	58	74	62	82	103	765	1340	570	123	97
8	95	88	58	63	61	86	104	825	1400	505	100	100
9	108	75	60	58	59	99	111	478	1430	545	85	114
10	121	80	62	66	53	113	109	500	1720	535	78	127
11	135	88	70	69	55	118	99	546	1660	510	76	169
12	122	84	74	69	55	117	98	514	1370	435	70	240
13	111	84	76	69	50	118	94	465	1250	390	70	198
14	111	81	80	65	54	116	92	536	1420	375	133	195
15	106	80	88	65	54	102	91	655	1560	321	188	205
16	110	82	90	63	58	98	89	1020	1600	288	157	188
17	107	79	90	59	57	115	90	1560	1640	258	163	190
18	105	76	77	63	56	208	86	4200	1540	220	169	235
19	105	70	78	59	59	248	82	3460	1570	185	163	228
20	103	50	69	55	63	249	81	1900	1450	188	155	225
21	103	54	66	58	66	242	94	1540	1180	252	137	228
22	106	58	70	59	75	218	105	1570	1140	342	125	225
23	105	58	68	63	72	164	89	1680	1100	285	125	230
24	101	60	65	63	77	164	78	1810	1210	235	119	228
25	102	62	60	61	72	154	78	1910	1290	192	104	200
26	98	62	65	61	59	162	80	1850	1300	151	100	188
27	97	72	66	63	65	189	118	1730	1160	123	96	182
28	99	69	66	63	63	174	514	1560	1140	100	106	182
29	98	69	64	63	---	150	650	1450	1170	123	103	188
30	98	72	62	62	---	153	482	1610	1100	143	106	198
31	96	---	60	56	---	155	---	1360	---	121	102	---
TOTAL	3164	2304	2148	1982	1714	4173	4355	38196	39440	12202	3940	5117
MEAN	102	76.8	69.3	63.9	61.2	135	145	1232	1315	394	127	171
MAX	135	100	90	74	77	249	650	4200	1720	1040	208	240
MIN	82	50	58	55	50	53	78	322	1040	100	70	86
AC-FT	6280	4570	4260	3930	3400	8280	8640	75760	78230	24200	7810	10150
CAL YR 1977	TOTAL	53090	MEAN 145	MAX 741	MIN 32	AC-FT 105300						
WTR YR 1978	TOTAL	118735	MEAN 325	MAX 4200	MIN 50	AC-FT 235500						

YELLOWSTONE RIVER BASIN

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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 1977 TO SEPTEMBER 1978

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	TUR- BID- ITY (JTU)	OXYGEN, DIS- SOLVED (MG/L)	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										
02...	0815	96	700	8.1	8.0	15	7.6	6.3	27000	390
NOV										
12...	0830	84	640	8.0	3.0	4	8.6	4.2	K18000	350
DEC										
10...	1630	A62	710	7.8	.0	4	11.2	4.7	34000	350
JAN										
02...	1600	66	730	7.7	.0	3	11.6	7.3	76000	340
FEB										
04...	0800	63	730	7.7	.0	5	12.2	3.2	30000	360
MAR										
04...	1600	60	800	7.9	1.0	3	11.4	6.6	73000	370
31...	1530	152	710	8.5	9.0	15	11.0	6.8	63000	350
MAY										
13...	0815	474	450	7.7	6.0	30	11.0	3.3	6400	190
JUN										
10...	0815	1730	165	8.3	9.0	40	10.5	3.0	4400	60
JUL										
22...	0830	362	450	8.1	12.0	30	9.5	3.2	94000	190
AUG										
18...	1630	169	600	8.3	17.5	7	9.2	3.2	69000	270
SEP										
16...	0730	185	510	8.2	13.0	20	8.3	3.2	26000	240

A-Daily mean discharge.

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

DATE	HARD- NESS, NONCAR- BONATE (MG/L CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	BICAR- BONATE (MG/L AS HCO3)	CAR- BONATE (MG/L AS CO3)	ALKA- LITY (MG/L AS CACO3)
OCT									
02...	120	75	50	36	.8	4.0	310	9	270
NOV									
12...	87	69	44	32	.7	2.5	320	0	260
DEC									
10...	79	68	44	32	.7	2.9	330	0	270
JAN									
02...	81	69	42	34	.8	2.8	310	3	260
FEB									
04...	110	72	43	23	.5	1.8	310	0	250
MAR									
04...	110	75	45	34	.8	3.0	320	0	260
31...	120	63	47	31	.7	3.2	280	0	230
MAY									
13...	51	38	24	15	.5	1.0	170	0	140
JUN									
10...	19	14	6.1	5.0	.3	1.0	50	0	41
JUL									
22...	42	39	22	16	.5	.2	180	0	150
AUG									
18...	65	57	32	24	.6	2.9	250	0	200
SEP									
16...	55	50	28	23	.6	2.5	225	0	180

YELLOWSTONE RIVER BASIN

06305500 GOOSE CREEK BELOW SHERIDAN, WY--Continued

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

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)	SOLIDS, SUSP. TOTAL, RESIDUE AT 110 DEG. C (MG/L)	NITRO- GEN, NITRATE DIS- SOLVED (MG/L AS N)
OCT									
02...	170	6.7	.4	10	519	.71	135	45	.38
NOV									
12...	150	5.2	.4	9.4	468	.64	106	4	.25
DEC									
10...	150	5.3	.4	16	483	.66	80.9	40	.70
JAN									
02...	140	14	.4	13	468	.64	83.4	12	.63
FEB									
04...	130	16	.3	12	470	.64	79.9	11	.88
MAR									
04...	180	13	.4	13	518	.70	83.9	7	.45
31...	190	5.3	.4	8.6	490	.67	201	29	.11
MAY									
13...	73	4.3	.3	16	240	.33	307	50	.36
JUN									
10...	21	4.9	.1	.0	100	.14	467	103	.45
JUL									
22...	59	4.1	.3	8.1	240	.33	235	74	.56
AUG									
18...	110	3.3	.4	6.4	358	.49	163	4	.38
SEP									
16...	100	3.7	.3	6.1	326	.44	163	37	.36

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)	CARBON, ORGANIC DIS- SOLVED (MG/L AS C)	CARBON, ORGANIC SUS- PENDED TOTAL (MG/L AS C)
OCT									
02...	.21	.30	.35	.65	.86	3.8	.12	4.4	1.1
NOV									
12...	.15	.36	.46	.82	.97	4.3	.15	--	--
DEC									
10...	.58	.97	.23	1.2	1.8	7.9	.32	--	--
JAN									
02...	.54	1.3	1.2	2.5	3.0	13	.37	--	--
FEB									
04...	.50	.53	.16	.69	1.2	5.3	.25	--	--
MAR									
04...	.49	.24	1.8	2.0	2.5	11	2.7	--	--
31...	.16	.34	.86	1.2	1.4	6.0	.53	--	--
MAY									
13...	.32	.18	.67	.85	1.2	5.2	.13	--	--
JUN									
10...	.12	.11	.87	.98	1.1	4.9	.17	6.0	1.4
JUL									
22...	.19	.02	.79	.81	1.0	4.4	.30	--	--
AUG									
18...	.06	.42	.78	1.2	1.3	5.6	.21	--	--
SEP									
16...	.11	.25	.66	.91	1.0	4.5	.15	--	--

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

[illegible][illegible]

YELLOWSTONE RIVER BASIN

06305500 GOOSE CREEK BELOW SHERIDAN, WY--Continued

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

[illegible][illegible]

YELLOWSTONE RIVER BASIN

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06305500 GOOSE CREEK BELOW SHERIDAN, WY--Continued

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

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. SIEVE DIAM. % FINER THAN .062 MM	SED. SUSP. FALL DIAM. % FINER THAN .004 MM
OCT							
12...	1530	10.0	128	20	6.9	83	--
NOV							
17...	1300	1.0	80	12	2.6	--	--
DEC							
16...	1530	.5	98	22	5.8	--	--
JAN							
23...	1600	.5	64	9	1.6	72	--
FEB							
21...	1705	.5	74	138	28	95	--
MAR							
22...	1610	4.5	196	236	125	97	--
APR							
20...	1900	11.5	86	14	3.3	--	--
MAY							
18...	1720	8.0	5540	1660	24800	--	45
19...	1030	--	3980	1240	13300	87	--
19...	1740	--	2960	1060	8470	83	--
21...	1010	--	2000	423	2280	71	--
JUN							
08...	1510	12.5	1380	123	458	57	--
JUL							
11...	1625	18.0	530	60	86	83	--
AUG							
07...	1550	24.0	127	32	11	--	--
SEP							
19...	1545	10.0	227	20	12	--	--

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 1.00 MM
OCT						
12...	--	--	--	--	--	--
NOV						
17...	--	--	--	--	--	--
DEC						
16...	--	--	--	--	--	--
JAN						
23...	--	--	--	--	--	--
FEB						
21...	--	--	--	--	--	--
MAR						
22...	--	--	--	--	--	--
APR						
20...	--	--	--	--	--	--
MAY						
18...	64	81	90	95	99	100
19...	--	--	--	--	--	--
19...	--	--	--	--	--	--
21...	--	--	--	--	--	--
JUN						
08...	--	--	--	--	--	--
JUL						
11...	--	--	--	--	--	--
AUG						
07...	--	--	--	--	--	--
SEP						
19...	--	--	--	--	--	--

YELLOWSTONE RIVER BASIN

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 and crest-stage gage. Altitude of gage is 3,680 ft (1,122 m), from topographic map.

REMARKS.--Water-discharge records poor except flows over 10 ft³/s (0.28 m³/s), which are good. Two small diversions above station.

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 Jan. 8, 1977.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 584 ft³/s (16.5 m³/s) May 18, gage height, 7.27 ft (2.216 m); minimum daily, 0.40 ft³/s (0.011 m³/s) Nov. 22, 23.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.99	1.3	1.2	.70	.99	.94	25	15	35	7.0	3.0	1.3
2	.99	1.3	1.3	.60	.99	.80	26	13	28	6.8	2.9	1.3
3	.99	1.2	1.3	.60	.99	.80	24	11	25	6.8	3.0	1.2
4	.94	1.2	1.2	.60	.99	.80	20	12	23	9.6	3.1	1.1
5	.84	1.2	.80	.71	.99	.80	17	17	21	7.4	2.7	1.1
6	.84	1.2	.60	.75	.99	.80	19	28	19	5.8	2.2	1.1
7	.84	1.2	.60	.75	1.1	.94	15	28	18	5.2	2.2	.99
8	.94	1.2	.60	.75	1.1	1.1	15	71	18	4.7	2.1	.99
9	1.3	1.2	.60	.71	.99	1.1	14	85	17	4.4	2.1	1.1
10	1.3	1.1	1.0	.71	.99	1.2	14	39	16	4.2	2.0	1.2
11	1.1	1.2	1.2	.71	.99	1.3	12	31	15	3.9	1.9	1.3
12	1.1	1.3	1.4	.75	.94	1.3	11	27	14	3.7	1.8	4.8
13	1.1	1.3	1.4	.80	.94	1.4	10	22	14	3.5	1.7	6.2
14	1.1	1.4	1.5	.75	.94	1.4	9.4	20	14	3.5	2.2	4.1
15	.99	1.3	1.6	.71	.94	1.3	12	18	15	3.5	3.1	2.4
16	.99	1.3	1.4	.71	.94	1.2	14	16	14	3.5	2.6	2.0
17	.99	1.3	1.3	.75	.94	1.2	15	29	13	3.5	2.3	1.9
18	.94	1.0	1.3	.80	.99	1.4	16	299	12	3.5	2.2	2.3
19	.94	1.0	1.3	.80	.99	1.7	11	323	11	3.5	2.1	4.3
20	.89	.80	1.3	.80	.99	2.9	9.6	142	12	4.0	2.0	4.2
21	.84	.60	1.3	.84	.99	4.4	9.2	74	11	4.5	1.8	3.7
22	.84	.40	1.2	.80	1.1	5.3	9.9	53	9.8	4.7	1.7	2.9
23	.84	.40	1.3	.80	1.1	6.1	9.2	46	9.4	4.3	1.6	2.3
24	.84	.60	1.2	.80	1.1	7.2	8.0	38	9.2	3.5	1.6	2.2
25	.84	.60	1.2	.89	1.1	7.7	7.5	33	9.6	3.3	1.5	2.0
26	.84	.80	1.1	.84	1.1	8.4	7.4	29	12	3.0	1.4	1.9
27	.84	1.1	1.0	.84	1.1	15	17	28	10	2.8	1.3	1.9
28	.84	1.1	.90	.89	.99	26	24	29	8.4	2.8	1.6	1.9
29	.84	1.2	.80	.89	---	28	30	30	7.6	3.1	1.7	1.7
30	.89	1.2	.80	.94	---	26	19	32	7.2	3.3	1.5	1.7
31	1.1	---	.70	.94	---	29	---	35	---	3.0	1.4	---
TOTAL	29.66	32.00	34.40	23.93	28.30	187.48	450.2	1673	448.2	136.3	64.3	67.08
MEAN	.96	1.07	1.11	.77	1.01	6.05	15.0	54.0	14.9	4.40	2.07	2.24
MAX	1.3	1.4	1.6	.94	1.1	29	30	323	35	9.6	3.1	6.2
MIN	.84	.40	.60	.60	.94	.80	7.4	11	7.2	2.8	1.3	.99
AC-FT	59	63	68	47	56	372	893	3320	889	270	128	133
CAL YR 1977	TOTAL	1668.93	MEAN 4.57	MAX 55	MIN .00	AC-FT 3310						
WTR YR 1978	TOTAL	3174.85	MEAN 8.70	MAX 323	MIN .40	AC-FT 6300						

YELLOWSTONE RIVER BASIN

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06306100 SQUIRREL CREEK NEAR DECKER, MT--Continued

WATER-QUALITY RECORDS

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

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

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	TUR- BID- ITY (JTU)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION)	OXYGEN DEMAND, BIO- CHEM- ICAL, 5 DAY (MG/L)	HARD- NESS (MG/L AS CaCO3)	HARD- NESS, NONCAR- BONATE (MG/L CaCO3)
OCT 20...	1145	.89	1360	8.5	8.0	3	9.6	93	1.2	740	290
DEC 19...	1310	1.3	1260	8.3	.0	7	11.8	92	.2	690	240
FEB 22...	1315	1.5	1480	8.2	.0	9	10.0	78	.5	720	270
MAR 28...	1645	29	687	8.2	4.0	500	10.2	89	5.8	350	140
APR 18...	1305	17	760	8.5	5.0	75	11.0	99	1.1	420	130
JUN 20...	1540	11	1200	8.1	14.0	9	9.6	107	2.6	620	300
JUL 18...	1325	3.7	1200	8.2	18.5	40	8.0	98	1.1	580	240
AUG 10...	0810	1.9	1130	--	16.0	15	8.0	93	.9	580	230
SEP 26...	1400	1.9	1240	8.3	14.0	1	8.8	97	1.4	640	260

DATE	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	BICAR- BONATE (MG/L AS HCO3)	CAR- BONATE (MG/L AS CO3)	ALKA- LINITY (MG/L AS CaCO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)
OCT 20...	98	120	54	.9	8.5	550	1	450	350	3.7	.5
DEC 19...	94	110	49	.8	7.1	540	0	440	330	3.1	.5
FEB 22...	91	120	63	1.0	7.7	550	0	450	370	3.4	.5
MAR 28...	58	50	18	.4	6.5	260	0	210	160	2.9	.3
APR 18...	74	56	18	.4	4.3	340	5	290	170	2.0	.2
JUN 20...	98	91	28	.5	5.6	390	0	320	290	3.1	.3
JUL 18...	82	90	36	.7	6.3	410	0	340	290	3.3	.3
AUG 10...	71	98	41	.7	7.6	430	--	350	310	2.7	.4
SEP 26...	92	100	44	.8	7.5	460	0	380	350	3.9	.4

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, 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)
OCT 20...	16	923	1.26	2.22	.00	.00	.33	.33	.33	1.5	.04
DEC 19...	14	874	1.19	3.07	.06	.02	.15	.17	.23	1.0	.00
FEB 22...	14	941	1.28	3.81	.14	.07	.11	.18	.32	1.4	.04
MAR 28...	7.7	432	.59	33.8	.49	.09	2.3	2.4	2.9	13	.63
APR 18...	9.4	507	.69	23.3	.11	.01	.71	.72	.83	3.7	.12
JUN 20...	11	719	.98	21.4	.16	.00	.29	.29	.45	2.0	.03
JUL 18...	16	726	.99	7.25	.33	.00	.55	.55	.88	3.9	.05
AUG 10...	11	754	1.03	3.87	.08	.07	.43	.50	.58	2.6	.03
SEP 26...	11	836	1.14	4.29	.03	.01	.43	.44	.47	2.1	.02

06306100 SQUIRREL CREEK NEAR DECKER, MT--Continued

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

DATE	TIME	ALUM- INUM, DIS- SOLVED	ARSENIC TOTAL	ARSENIC DIS- SOLVED	BERYL- LIUM, TOTAL RECOV- ERABLE	BERYL- LIUM, DIS- SOLVED	BORON, DIS- SOLVED	CADMIUM TOTAL RECOV- ERABLE	CADMIUM DIS- SOLVED	CHRO- MIUM, TOTAL RECOV- ERABLE	CHRO- MIUM, DIS- SOLVED
		(UG/L AS AL)	(UG/L AS AS)	(UG/L AS AS)	(UG/L AS BE)	(UG/L AS BE)	(UG/L AS B)	(UG/L AS CD)	(UG/L AS CD)	(UG/L AS CR)	(UG/L AS CR)
OCT 20...	1145	0	--	1	--	0	140	--	0	--	20
DEC 19...	1310	--	--	--	--	--	90	--	--	--	--
FEB 22...	1315	10	--	2	--	0	110	--	2	--	10
MAR 28...	1645	20	4	1	0	0	80	2	0	30	0
APR 18...	1305	0	--	2	--	0	70	--	0	--	0
JUN 20...	1540	--	--	--	--	--	80	--	--	--	--
JUL 18...	1325	10	--	4	--	0	90	--	2	--	0
AUG 10...	0810	--	--	--	--	--	110	--	--	--	--
SEP 26...	1400	--	--	--	--	--	130	--	--	--	--

DATE	COPPER, TOTAL 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, 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)
OCT 20...	--	2	--	70	--	1	--	70	--	20
DEC 19...	--	--	--	50	--	--	--	--	--	--
FEB 22...	--	1	--	110	--	12	--	80	--	130
MAR 28...	23	13	18000	60	17	1	40	40	650	80
APR 18...	--	0	--	30	--	8	--	40	--	20
JUN 20...	--	--	--	30	--	--	--	--	--	--
JUL 18...	--	5	--	20	--	14	--	60	--	40
AUG 10...	--	--	--	<10	--	--	--	--	--	--
SEP 26...	--	--	--	40	--	--	--	--	--	--

[illegible]

YELLOWSTONE RIVER BASIN

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06306100 SQUIRREL CREEK NEAR DECKER, MT--Continued

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

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. SIEVE DIAM. % FINER THAN .062 MM
OCT						
20...	1145	8.0	.89	5	.01	76
DEC						
19...	1310	.0	1.3	30	.11	--
FEB						
22...	1315	.0	1.5	21	.09	94
MAR						
28...	1645	4.0	29	970	76	97
APR						
18...	1305	5.0	17	130	6.0	98
JUN						
20...	1540	14.0	11	98	2.9	--
JUL						
18...	1325	18.5	3.7	89	.89	96
AUG						
10...	0810	16.0	1.9	73	.37	--
SEP						
26...	1400	14.0	1.9	16	.08	--

YELLOWSTONE RIVER BASIN

06306250 PRAIRIE DOG CREEK NEAR ACME, WY

LOCATION.--Lat 44°59'02", long 106°50'21", in NE¼SW¼ 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).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1970 to current year. Records for May 1965 to September 1970 in files of Office of Wyoming State Engineer.

GAGE.--Water-stage recorder. Altitude of gage is 3,450 ft (1,052 m), from topographic map.

REMARKS.--Records fair except those for winter period and periods of no gage-height record, May 19, 20, which are poor. Diversions for irrigation of about 13,600 acres (55.0 km²) above station, of which about 60 acres (243,000 m²) are below station. Flow supplemented by 3 transbasin diversions from North Piney Creek and South Piney Creek via Prairie Dog Creek ditch, Piney and Cruse ditch, and Mead-Coffeen ditch.

AVERAGE DISCHARGE.--8 years, 46.6 ft³/s (1.320 m³/s), 33,760 acre-ft/yr (41.6 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 3,940 ft³/s (112 m³/s) May 19, 1978, gage height, 12.60 ft (3.840 m), from floodmark, from rating curve extended above 670 ft³/s (19.0 m³/s) on basis of slope-area determination of peak flow; minimum daily, 6.3 ft³/s (0.18 m³/s) June 4, 5, 1976.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 3,940 ft³/s (112 m³/s) May 19, gage height, 12.60 ft (3.840 m), from floodmark, from rating curve extended above 670 ft³/s (19.0 m³/s) on basis of slope-area determination of peak flow; minimum daily, 9.0 ft³/s (0.26 m³/s) Dec. 8.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	43	30	36	10	12	12	57	148	227	47	27	41
2	43	27	35	10	14	10	49	97	197	43	31	39
3	49	27	34	13	21	10	45	75	173	40	35	41
4	51	26	34	16	24	10	42	69	154	35	40	38
5	46	26	29	20	23	10	39	126	138	32	39	36
6	44	26	16	20	24	10	34	245	126	24	41	27
7	46	26	16	17	25	12	32	281	117	21	40	24
8	47	26	9.0	15	25	15	31	310	111	21	38	27
9	57	24	14	15	23	19	30	342	108	28	34	29
10	58	25	19	16	21	24	30	298	102	32	35	31
11	56	29	30	19	19	29	30	217	96	39	39	33
12	53	29	40	22	17	35	30	171	90	42	38	41
13	42	28	43	21	16	39	30	147	86	40	37	61
14	43	28	48	19	15	43	30	123	79	36	40	57
15	43	28	52	18	14	48	30	106	71	33	50	55
16	43	27	50	17	14	61	30	94	67	28	56	50
17	40	28	47	17	14	177	29	117	65	29	56	43
18	37	27	43	17	14	197	30	826	61	23	56	45
19	35	25	27	16	15	244	28	3090	55	20	58	47
20	35	19	16	16	17	328	28	1530	50	21	60	53
21	35	14	16	16	19	321	29	681	49	27	58	51
22	34	14	17	18	20	292	29	501	47	38	60	47
23	34	21	18	20	21	343	32	404	51	48	63	44
24	35	32	17	22	19	157	37	347	41	48	65	43
25	35	37	17	24	17	95	33	290	38	40	58	41
26	33	36	17	25	19	88	29	248	36	38	52	40
27	33	35	17	25	17	93	29	221	39	28	43	38
28	31	36	17	21	15	108	142	204	37	20	40	38
29	31	38	17	16	---	103	148	187	35	18	43	38
30	31	39	15	12	---	89	189	182	41	18	42	37
31	31	---	12	12	---	75	---	216	---	23	42	---
TOTAL	1274	833	818.0	545	514	3097	1381	11893	2587	980	1416	1235
MEAN	41.1	27.8	26.4	17.6	18.4	99.9	46.0	384	86.2	31.6	45.7	41.2
MAX	58	39	52	25	25	343	189	3090	227	48	65	61
MIN	31	14	9.0	10	12	10	28	69	35	18	27	24
AC-FT	2530	1650	1620	1080	1020	6140	2740	23590	5130	1940	2810	2450
CAL YR 1977 TOTAL	13491.3			MEAN 37.0	MAX 215	MIN 8.6	AC-FT 26760					
WTR YR 1978 TOTAL	26573.0			MEAN 72.8	MAX 3090	MIN 9.0	AC-FT 52710					

YELLOWSTONE RIVER BASIN

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06306250 PRAIRIE DOG CREEK NEAR ACME, WY--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1976 to current year.

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

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	HARD- NESS (MG/L AS CACO3)	HARD- NESS, NONCAR- BONATE (MG/L CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)
AUG 29...	1200	42	1100	8.1	16.0	510	280	100	63	55	1.1	6.0
DATE	BICAR- BONATE (MG/L AS HCO3)	CAR- BONATE (MG/L AS CO3)	ALKA- LINITY (MG/L AS CACO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SiO2)	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)
AUG 29...	280	0	230	370	2.8	.2	11	803	746	1.01	84.6	.30
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, DIS- SOLVED (MG/L AS P)	BORON, DIS- SOLVED (UG/L AS B)	IRON, DIS- SOLVED (UG/L AS FE)	CARBON, ORGANIC DIS- SOLVED (MG/L AS C)	CARBON, ORGANIC SUS- PENDE TOTAL (MG/L AS C)	
AUG 29...	.03	.60	.63	.93	4.1	.11	.03	110	60	4.7	1.4	

YELLOWSTONE RIVER BASIN

06306300 TONGUE RIVER AT STATE LINE, NEAR DECKER, MT

LOCATION.--Lat 45°00'32", long 106°50'08", in NW¼NE¼ sec.33, T.9 S., R.40 E., Big Horn County, Hydrologic Unit 10090101, on left bank 1 mi (2 km) north of Wyoming-Montana State line, 1.4 mi (2.4 km) upstream from Badger Creek, and 1.4 mi (2.3 km) southeast of Decker.

DRAINAGE AREA.--1,477 mi² (3,825 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--August 1960 to current year. Records published as "near Decker" May 1928 to September 1938, not equivalent owing to intervening drainage area.

GAGE.--Water-stage recorder. Datum of gage is 3,429.14 ft (1,045.202 m) National Geodetic Vertical Datum of 1929 (levels by Army Corps of Engineers).

REMARKS.--Water-discharge 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.

AVERAGE DISCHARGE.--18 years, 526 ft³/s (14.90 m³/s), 381,100 acre-ft/yr (470 hm³/yr).

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, gage height, 1.83 ft (0.558 m).

EXTREMES FOR CURRENT YEAR.--Peak discharges 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)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
May 8	1415	3,210 90.9	6.93 2.112	June 11	0130	5,370 152	8.52 2.597
May 19	1200	*17,500 496	*14.25 4.343				

Minimum daily discharge, 60 ft³/s (1.70 m³/s) Nov. 21, 22.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	234	218	270	130	140	150	482	1100	3260	2470	355	282
2	253	203	270	130	140	150	438	932	2890	2280	425	281
3	250	212	270	140	150	150	416	851	2690	2090	534	273
4	240	221	280	140	160	150	387	900	2630	1880	492	255
5	247	218	220	150	170	160	343	1320	2800	1790	451	245
6	250	218	160	160	190	190	324	1760	3130	1640	420	236
7	247	215	170	150	190	220	309	1800	3620	1540	399	239
8	253	212	110	150	180	240	298	2790	4150	1420	383	244
9	253	209	70	150	160	320	298	2010	4210	1380	335	246
10	260	185	70	150	160	320	320	1460	4530	1410	339	262
11	257	194	140	170	160	310	298	1370	5170	1330	280	284
12	250	209	230	180	160	300	284	1350	4460	1200	245	415
13	243	212	230	180	160	300	270	1230	3840	1080	221	454
14	247	206	240	170	150	280	260	1240	3920	1020	232	399
15	247	206	230	170	140	280	260	1500	4500	944	378	399
16	243	200	230	160	140	300	263	2120	4730	838	395	390
17	243	197	230	160	150	360	257	2920	4460	785	352	373
18	242	194	210	160	160	360	263	7000	4230	722	379	419
19	243	180	200	150	180	360	250	15400	3910	640	377	480
20	243	108	200	150	190	380	240	8180	3890	609	352	462
21	240	60	200	150	200	400	234	4660	3410	640	332	447
22	237	60	190	160	190	400	263	3830	3170	875	318	450
23	240	70	190	160	180	370	263	3750	3190	814	314	443
24	237	120	190	160	180	400	240	3990	3140	667	302	443
25	234	120	180	160	170	469	221	4250	3210	558	291	425
26	230	200	180	150	160	515	221	4320	3160	487	274	406
27	230	200	180	150	160	578	247	4160	2850	425	274	392
28	227	260	180	150	150	588	957	3960	2680	391	284	385
29	227	280	180	140	---	529	1820	3820	2640	379	294	378
30	224	280	130	140	---	496	1400	3990	2630	391	278	387
31	227	---	130	140	---	492	---	3820	---	375	285	---
TOTAL	7498	5667	5960	4760	4620	10517	12126	101783	107100	33070	10590	10794
MEAN	242	189	192	154	165	339	404	3283	3570	1067	342	360
MAX	260	280	280	180	200	588	1820	15400	5170	2470	534	480
MIN	224	60	70	130	140	150	221	851	2630	375	221	236
AC-FT	14870	11240	11820	9440	9160	20860	24050	201900	212400	65590	21010	21410

CAL YR 1977 TOTAL 156099 MEAN 428 MAX 2860 MIN 60 AC-FT 309600
WTR YR 1978 TOTAL 314485 MEAN 862 MAX 15400 MIN 60 AC-FT 623800

06306300 TONGUE RIVER AT STATE LINE, NEAR DECKER, MT.--Continued

WATER-QUALITY RECORDS

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

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

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	TUR- BID- ITY (JTU)	OXYGEN, DIS- SOLVED (MG/L)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	HARD- NESS (MG/L AS CACO3)	HARD- NESS, NONCAR- BONATE (MG/L AS CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)
OCT												
02...	1030	253	740	8.2	9.0	7	10.8	120	370	120	75	45
NOV												
12...	1015	212	740	8.2	2.0	2	11.9	K52	380	120	76	47
DEC												
11...	0830	A140	850	8.0	.0	10	12.4	66	440	150	89	53
JAN												
03...	0800	A140	800	7.7	.0	2	11.2	160	420	140	92	46
FEB												
04...	0930	A160	820	7.6	.0	2	10.1	150	420	150	81	52
MAR												
05...	0830	A160	940	7.9	.0	10	13.3	130	420	150	84	51
APR												
01...	0845	492	720	8.2	8.0	70	10.2	K470	380	150	69	50
MAY												
13...	0915	1240	620	8.1	8.0	50	9.9	K1700	260	88	50	33
JUN												
10...	1030	4320	280	7.9	12.0	50	9.4	320	110	38	25	12
JUL												
22...	0945	882	550	8.3	13.5	15	8.9	130	230	66	50	25
AUG												
19...	0830	387	650	8.2	14.0	15	8.7	280	290	85	63	32
S29...	1455	305	700	--	20.5	--	--	--	--	--	--	--
SEP												
16...	0900	399	660	8.4	13.5	10	8.7	100	320	100	66	37

A-Daily mean discharge.

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

S-Seepage run data (see Explanation of Water-Quality Records).

DATE	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	BICAR- BONATE (MG/L AS HCO3)	CAR- BONATE (MG/L AS CO3)	ALKA- LINITY (MG/L AS CACO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)
OCT												
02...	39	.9	3.9	310	0	250	180	5.6	.3	5.3	506	.69
NOV												
12...	40	.9	3.3	310	6	260	200	4.1	.4	6.6	535	.73
DEC												
11...	43	.9	3.7	360	0	300	230	4.6	.4	13	619	.84
JAN												
03...	41	.9	3.2	340	0	280	190	9.0	.5	14	569	.77
FEB												
04...	40	.9	2.9	330	0	270	200	5.3	.7	13	560	.76
MAR												
05...	46	1.0	3.9	330	0	270	240	8.3	.4	12	610	.83
APR												
01...	42	.9	4.6	280	0	230	240	3.9	.4	9.4	561	.76
MAY												
13...	27	.7	2.3	210	0	170	150	2.1	.4	12	370	.50
JUN												
10...	8.6	.4	1.9	88	0	72	41	6.8	.1	.0	190	.26
JUL												
22...	22	.6	.2	200	0	160	99	4.1	.3	6.4	305	.41
AUG												
19...	28	.7	2.9	250	0	200	130	3.3	.4	5.4	386	.53
S29...	--	--	--	--	--	--	--	--	--	--	--	--
SEP												
16...	34	.8	3.6	250	9	220	180	3.7	.4	5.2	469	.64

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

[illegible]

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

[illegible]

YELLOWSTONE RIVER BASIN

06306300 TONGUE RIVER AT STATE LINE, NEAR DECKER, MT.--Continued

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

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											
02...	0	<50	<46	4	0	0	1	.3	40	30	10
NOV											
12...	--	--	--	--	--	--	--	--	--	--	--
DEC											
11...	--	--	--	--	--	--	--	--	--	--	--
JAN											
03...	--	--	--	--	--	--	--	--	--	--	--
FEB											
04...	--	--	--	--	--	--	--	--	--	--	--
MAR											
05...	--	--	--	--	--	--	--	--	--	--	--
APR											
01...	--	--	--	--	--	--	--	--	--	--	--
MAY											
13...	0	2	2	0	0	0	0	1.0	20	0	20
JUN											
10...	--	--	--	--	--	--	--	--	--	--	--
JUL											
22...	--	--	--	--	--	--	--	--	--	--	--
AUG											
19...	--	--	--	--	--	--	--	--	--	--	--
SEP											
16...	--	--	--	--	--	--	--	--	--	--	--

QUALITATIVE AND ASSOCIATED QUANTITATIVE ANALYSES OF BIOLOGICAL DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

PERIPHYTON ANALYSES

MAY 13, 1978
0915 HOURS

PERIPHYTON IDENTIFICATION

ORGANISM NAME	COMMON NAME
CHRYSTOPHYTA	
.BACILLARIOPHYCEAE	DIATOMS
..PENNALES	PENNATE
...NAVICULACEAE	NAVICULOID
&NAVICULA	
CYANOPHYTA	BLUE-GREEN ALGAE
.CYANOPHYCEAE	
..HORMOGONALES	FILAMENTOUS BL-GREEN
...OSCILLATORIACEAE	
&SPIRULINA	

NOTE: & - ESTIMATED DOMINANT ORGANISM; NOT ACTUALLY COUNTED
 SAMPLING METHOD: PLASTIC SLIDES, TIMED SAMPLING INTERVAL
 ANALYSIS METHOD: GLASS CHAMBER (12MM CIRC), 200-X MICROSCOPE

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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.

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 good except those for November to June, which are poor. No diversion above station.

AVERAGE DISCHARGE.--17 years, 34.2 ft³/s (0.969 m³/s), 24,780 acre-ft/yr (30.6 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, 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)	
May 16	2200	469	13.3	3.61	1.100	June 7	1830	602	17.0	4.02	1.225
May 24	1730	*641	18.2	4.13	1.259						

Minimum daily discharge, 4.3 ft³/s (0.12 m³/s) Mar. 3.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	7.3	5.7	6.2	5.4	4.4	4.7	18	78	310	43	15	8.5
2	6.7	5.9	6.2	5.4	4.7	4.5	18	78	287	39	16	8.2
3	6.7	6.2	6.2	5.3	5.1	4.3	15	78	280	36	15	8.2
4	6.7	5.9	6.2	5.4	5.0	4.6	14	78	301	32	14	8.5
5	6.4	5.9	6.2	5.5	4.9	4.8	14	74	375	31	14	8.5
6	6.2	5.8	6.2	5.6	4.9	5.0	15	52	440	31	13	8.2
7	7.3	5.9	6.2	5.4	4.9	5.2	17	42	497	30	12	8.5
8	7.3	5.5	6.2	5.0	4.9	4.9	20	54	478	28	12	8.5
9	6.7	5.0	5.7	4.9	4.9	5.2	22	63	466	32	12	8.5
10	6.4	5.5	5.9	4.9	4.7	5.4	17	67	451	27	12	8.2
11	6.7	6.0	5.9	5.2	4.6	4.7	17	88	357	24	11	10
12	7.0	6.4	5.9	5.4	4.5	5.2	15	90	310	23	11	11
13	7.6	6.1	5.4	5.3	4.5	5.2	13	98	322	22	11	11
14	7.6	6.0	5.7	5.2	4.6	5.2	14	160	332	20	13	10
15	7.0	5.9	5.9	5.2	4.6	5.2	17	264	291	19	15	9.4
16	6.4	5.8	5.7	5.2	4.6	5.4	20	363	241	28	12	8.8
17	6.4	5.5	5.7	5.2	4.7	5.7	19	392	200	25	11	9.1
18	6.2	5.1	5.9	5.2	4.9	6.2	18	325	168	19	11	15
19	5.9	4.7	5.9	5.2	5.0	6.4	17	269	155	18	11	13
20	5.9	4.5	5.7	5.2	5.2	6.7	18	241	132	18	10	11
21	6.4	4.7	5.7	4.9	5.4	7.0	20	239	115	30	10	11
22	6.4	4.9	5.9	4.9	5.4	7.0	20	279	100	25	9.8	12
23	6.2	5.2	5.9	4.9	5.7	6.4	19	393	90	18	9.8	12
24	6.2	5.5	5.9	4.7	5.7	5.9	21	502	86	17	9.4	11
25	5.9	5.8	5.4	4.4	5.4	7.3	23	491	79	16	9.1	10
26	5.7	6.4	5.4	4.6	4.9	6.4	35	482	66	15	9.1	9.1
27	5.7	6.2	5.7	4.9	4.9	6.7	60	472	60	15	9.1	8.8
28	5.7	6.2	5.7	4.7	4.9	7.9	67	451	57	16	9.1	8.5
29	5.7	5.7	5.7	4.6	---	9.1	78	478	52	17	8.8	8.5
30	6.2	6.2	5.7	4.5	---	11	78	431	47	16	9.1	8.5
31	5.9	---	5.7	4.4	---	14	---	355	---	15	8.8	---
TOTAL	200.4	170.1	181.6	156.6	137.9	193.2	759	7527	7145	745	353.1	291.5
MEAN	6.46	5.67	5.86	5.05	4.93	6.23	25.3	243	238	24.0	11.4	9.72
MAX	7.6	6.4	6.2	5.6	5.7	14	78	502	497	43	16	15
MIN	5.7	4.5	5.4	4.4	4.4	4.3	13	42	47	15	8.8	8.2
AC=FT	397	337	360	311	274	383	1510	14930	14170	1480	700	570

CAL YR 1977	TOTAL	12476.6	MEAN	34.2	MAX	526	MIN	3.6	AC-FT	24750
WTR YR 1978	TOTAL	17860.4	MEAN	48.9	MAX	502	MIN	4.3	AC-FT	35430

YELLOWSTONE RIVER BASIN

06309260 BUFFALO CREEK ABOVE NORTH FORK BUFFALO CREEK, NEAR ARMINTO, WY

LOCATION.--Lat 43°25'33", long 107°11'18", in SW¼NW¼NE¼ sec.20, T.40 N., R.86 W., Natrona County, Hydrologic Unit 10090201, on left bank 150 ft (46 m) downstream from South Fork, 0.8 mi (1.3 km) upstream from North Fork, and 17.5 mi (28.2 km) north of Armito.

DRAINAGE AREA.--8.80 mi² (22.8 km²).

PERIOD OF RECORD.--November 1974 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 7,660 ft (2,335 m), from topographic map.

REMARKS.--Records good except those prior to May 23, which are poor. No diversion above station.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 117 ft³/s (3.31 m³/s) June 18, 1975, gage height, 2.02 ft (0.616 m); maximum gage height, 3.55 ft (1.082 m) May 9, 1978 (backwater from snow); minimum daily discharge, 0.16 ft³/s (0.005 m³/s) Jan. 11, 1975.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 94 ft³/s (2.66 m³/s) May 23, gage height, 2.11 ft (0.643 m); maximum gage height, 3.55 ft (1.082 m) May 9 (backwater from snow); minimum daily discharge, 0.17 ft³/s (0.005 m³/s) Jan. 1, Mar. 15.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.40	.26	.27	.17	.25	.24	1.0	5.1	26	8.7	1.9	.72
2	.45	.27	.29	.19	.28	.24	1.2	5.9	25	8.0	2.3	.72
3	.40	.28	.32	.20	.29	.20	.91	7.0	24	7.0	1.9	.66
4	.36	.28	.32	.22	.28	.24	.78	6.2	28	6.2	1.6	.60
5	.32	.30	.32	.24	.32	.24	.78	5.6	35	5.9	1.4	.55
6	.32	.32	.29	.32	.32	.24	.84	4.8	41	6.4	1.4	.50
7	.45	.29	.33	.30	.36	.20	.98	4.3	46	6.4	1.3	.50
8	.41	.25	.32	.25	.40	.24	1.6	3.9	42	5.1	1.3	.50
9	.32	.21	.28	.25	.40	.24	1.5	5.2	41	6.4	1.3	.50
10	.27	.23	.32	.26	.36	.24	.84	5.9	38	4.9	1.3	.50
11	.22	.30	.32	.28	.28	.24	1.0	6.9	32	4.2	1.2	.66
12	.31	.36	.32	.28	.28	.24	.99	7.6	27	3.6	1.1	.72
13	.50	.33	.30	.24	.28	.24	.86	8.7	32	3.4	1.1	.78
14	.45	.32	.32	.28	.24	.20	.78	14	31	3.2	1.3	.72
15	.36	.30	.28	.28	.24	.17	1.0	29	31	3.1	1.7	.60
16	.32	.28	.32	.24	.20	.20	1.4	51	26	3.8	1.1	.55
17	.32	.26	.25	.28	.20	.24	1.1	56	23	3.8	1.1	.55
18	.32	.24	.23	.28	.29	.32	1.1	36	19	3.1	1.1	1.0
19	.32	.22	.21	.24	.36	.32	1.2	33	20	2.6	1.0	.98
20	.32	.18	.20	.24	.40	.32	1.6	34	17	2.6	.98	.98
21	.45	.20	.23	.24	.45	.32	1.8	38	16	6.9	.91	.84
22	.45	.22	.28	.22	.34	.32	2.0	51	15	4.0	.84	.91
23	.32	.23	.32	.25	.28	.28	1.6	60	14	2.6	.91	1.0
24	.32	.25	.29	.26	.32	.20	1.5	66	14	2.3	.78	.84
25	.36	.27	.26	.25	.32	.24	1.9	58	14	2.0	.78	.72
26	.32	.32	.27	.27	.28	.28	4.9	50	11	1.8	.72	.60
27	.32	.28	.22	.29	.28	.36	11	46	11	1.8	.78	.55
28	.32	.28	.20	.27	.24	.40	3.4	49	11	4.7	.84	.55
29	.32	.33	.21	.26	---	.50	4.6	51	11	3.1	1.5	.55
30	.30	.30	.20	.28	---	.60	5.1	42	9.5	2.2	1.0	.55
31	.28	---	.19	.27	---	.91	---	29	---	1.9	.78	---
TOTAL	10.90	8.16	8.48	7.90	8.54	9.26	59.26	870.1	730.5	131.7	37.22	20.40
MEAN	.35	.27	.27	.25	.31	.30	1.98	28.1	24.4	4.25	1.20	.68
MAX	.50	.36	.33	.32	.45	.91	11	66	46	8.7	2.3	1.0
MIN	.22	.18	.19	.17	.20	.17	.78	3.9	9.5	1.8	.72	.50
AC-FT	22	16	17	16	17	18	118	1730	1450	261	74	40
CAL YR 1977	TOTAL	1319.08	MEAN	3.61	MAX	59	MIN	.18	AC-FT	2620		
WTR YR 1978	TOTAL	1902.42	MEAN	5.21	MAX	66	MIN	.17	AC-FT	3770		

YELLOWSTONE RIVER BASIN

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06309270 NORTH FORK BUFFALO CREEK NEAR ARMINTO, WY

LOCATION.--Lat 43°26'11", long 107°10'58", in SE&SE&NE& sec.17, T.40 N., R.86 W., Natrona County, Hydrologic Unit 10090201, on right bank 1.3 mi (2.1 km) upstream from mouth and 18.5 mi (29.8 km) north of Arminto.

DRAINAGE AREA.--8.10 mi² (21.0 km²).

PERIOD OF RECORD.--November 1974 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 7,720 ft (2,353 m), from topographic map.

REMARKS.--Records fair except those for November to February and those for period of no gage-height record, July 15 to Aug. 21, which are poor. No diversion above station.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 201 ft³/s (5.69 m³/s) June 18, 1975, gage height, 2.64 ft (0.805 m); minimum daily, 0.52 ft³/s (0.015 m³/s) Jan. 1, 1975.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 115 ft³/s (3.26 m³/s) June 7, gage height, 2.25 ft (0.686 m); minimum daily, 0.86 ft³/s (0.024 m³/s) Feb. 19.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.8	1.0	1.0	.99	1.1	.89	2.3	7.2	38	9.7	3.8	2.2
2	1.5	1.2	1.1	1.0	1.1	.89	2.4	6.7	36	9.0	4.0	2.2
3	1.3	1.2	1.1	1.0	1.1	.89	1.8	8.1	37	8.4	3.9	2.0
4	1.3	1.1	1.1	1.1	1.0	.89	1.8	7.0	41	7.8	3.6	2.1
5	1.3	1.1	.99	1.1	1.0	.89	1.9	8.1	56	7.0	3.5	2.1
6	1.3	1.1	1.0	1.1	.96	.89	1.9	6.5	68	7.5	3.3	2.0
7	1.5	1.1	1.0	1.1	1.0	.89	2.3	5.4	84	7.0	3.1	2.0
8	1.4	1.0	1.0	1.0	1.0	.96	3.1	4.9	80	6.6	3.0	2.3
9	1.3	.98	.98	.99	1.0	.96	2.6	8.1	79	7.1	3.0	2.3
10	1.1	1.0	.99	1.0	1.1	.89	1.9	8.7	79	6.4	3.0	2.2
11	1.2	1.2	1.0	1.0	1.1	.96	2.4	9.7	56	6.0	2.8	2.4
12	1.5	1.2	.96	1.1	1.1	1.0	1.8	9.4	47	5.7	2.8	2.4
13	1.4	1.1	.99	1.1	1.1	1.1	1.8	10	64	5.5	2.8	2.6
14	1.3	1.1	1.1	1.0	1.1	1.1	1.9	17	59	5.1	3.2	2.3
15	1.2	1.1	1.1	1.1	1.0	1.1	2.2	34	51	4.8	3.7	2.0
16	1.1	1.1	1.1	1.1	1.0	1.1	2.8	51	41	6.8	3.1	2.0
17	1.1	1.0	1.1	1.1	1.0	1.2	1.6	52	35	6.3	2.8	2.3
18	1.1	.97	1.1	1.1	.96	1.2	1.8	39	30	4.8	2.8	3.1
19	1.1	.92	1.0	1.1	.86	1.3	2.3	32	28	4.5	2.8	2.8
20	1.1	.88	1.1	1.1	.89	1.3	2.5	28	24	4.5	2.6	2.4
21	1.2	.90	1.1	1.0	.89	1.4	2.8	31	22	6.9	2.6	2.6
22	1.1	.94	1.2	1.0	.89	1.4	3.0	44	21	6.1	2.6	2.4
23	1.1	.99	1.2	1.0	.89	1.4	2.6	67	20	4.8	2.6	2.3
24	1.1	1.0	1.1	1.0	.96	1.4	2.5	82	18	4.3	2.4	2.2
25	1.1	1.1	1.1	1.0	.96	1.4	3.1	86	17	4.1	2.4	2.0
26	1.1	1.2	1.1	1.1	.96	1.4	4.3	79	14	3.8	2.3	1.9
27	1.0	1.1	1.1	1.1	.96	1.4	6.4	70	12	3.7	2.4	1.9
28	1.0	1.0	1.1	1.0	.96	1.6	2.0	70	12	4.0	2.3	1.9
29	1.0	1.1	1.1	1.0	---	1.7	5.7	77	12	4.2	2.4	1.9
30	1.2	1.0	1.0	1.1	---	1.9	7.5	65	10	4.1	2.4	1.8
31	1.2	---	1.0	1.1	---	2.0	---	47	---	3.8	2.3	---
TOTAL	38.0	31.68	32.91	32.58	27.94	37.40	83.0	1070.8	1191	180.3	90.3	66.6
MEAN	1.23	1.06	1.06	1.05	1.00	1.21	2.77	34.5	39.7	5.82	2.91	2.22
MAX	1.8	1.2	1.2	1.1	1.1	2.0	7.5	86	84	9.7	4.0	3.1
MIN	1.0	.88	.96	.99	.86	.89	1.6	4.9	10	3.7	2.3	1.8
AC-FT	75	63	65	65	55	74	165	2120	2360	358	179	132

CAL YR 1977 TOTAL 2108.19 MEAN 5.78 MAX 87 MIN .64 AC-FT 4180
WTR YR 1978 TOTAL 2882.51 MEAN 7.90 MAX 86 MIN .86 AC-FT 5720

YELLOWSTONE RIVER BASIN

06309280 BUFFALO CREEK BELOW NORTH FORK BUFFALO CREEK, NEAR ARMINTO, WY

LOCATION.--Lat 43°25'08", long 107°09'59", in NE¼NW¼SE¼ sec.21, T.40 N., R.86 W., Natrona County, Hydrologic Unit 10090201, on left bank 0.3 mi (0.5 km) downstream from North Fork, 1.8 mi (2.9 km) upstream from Pine Creek, and 17.5 mi (28.2 km) north of Arimoto.

DRAINAGE AREA.--18.6 mi² (48.2 km²).

PERIOD OF RECORD.--November 1974 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 7,500 ft (2,286 m), from topographic map.

REMARKS.--Records poor. No diversion above station.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 295 ft³/s (8.35 m³/s) June 18, 1975, gage height, 2.16 ft (0.658 m); maximum gage height, 2.56 ft (0.780 m) Apr. 24, 1977 (backwater from snow); no flow for many days each year.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 189 ft³/s (5.35 m³/s) June 7, gage height, 2.05 ft (0.625 m); no flow for many days.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.00	.00	.00	.00	2.4	55	7.1	.00	.00
2	.00	.00	.00	.00	.00	.00	.00	1.9	51	5.8	.00	.00
3	.00	.00	.00	.00	.00	.00	.00	3.2	51	5.4	.00	.00
4	.00	.00	.00	.00	.00	.00	.00	2.6	58	4.2	.00	.00
5	.00	.00	.00	.00	.00	.00	.00	2.6	77	3.8	.00	.00
6	.00	.00	.00	.00	.00	.00	.00	.18	96	5.1	.00	.00
7	.00	.00	.00	.00	.00	.00	.00	.00	124	4.9	.00	.00
8	.00	.00	.00	.00	.00	.00	.00	.00	112	3.6	.00	.00
9	.00	.00	.00	.00	.00	.00	.00	.00	108	5.4	.00	.00
10	.00	.00	.00	.00	.00	.00	.00	.00	105	3.2	.00	.00
11	.00	.00	.00	.00	.00	.00	.00	5.0	78	2.5	.00	.00
12	.00	.00	.00	.00	.00	.00	.00	8.0	64	2.0	.00	.00
13	.00	.00	.00	.00	.00	.00	.00	13	85	1.8	.00	.00
14	.00	.00	.00	.00	.00	.00	.00	21	78	1.5	.00	.00
15	.00	.00	.00	.00	.00	.00	.00	65	64	1.2	.00	.00
16	.00	.00	.00	.00	.00	.00	.00	105	52	2.0	.00	.00
17	.00	.00	.00	.00	.00	.00	.00	98	46	2.8	.00	.00
18	.00	.00	.00	.00	.00	.00	.00	65	38	1.5	.00	.00
19	.00	.00	.00	.00	.00	.00	.00	55	37	.99	.00	.00
20	.00	.00	.00	.00	.00	.00	.00	52	32	.76	.00	.00
21	.00	.00	.00	.00	.00	.00	.00	59	28	6.3	.00	.00
22	.00	.00	.00	.00	.00	.00	.00	85	26	2.8	.00	.00
23	.00	.00	.00	.00	.00	.00	.00	127	24	1.0	.00	.00
24	.00	.00	.00	.00	.00	.00	.00	138	22	.41	.00	.00
25	.00	.00	.00	.00	.00	.00	.00	127	20	.15	.00	.00
26	.00	.00	.00	.00	.00	.00	.68	112	14	.00	.00	.00
27	.00	.00	.00	.00	.00	.00	4.4	96	11	.00	.00	.00
28	.00	.00	.00	.00	.00	.00	2.4	105	10	2.9	.00	.00
29	.00	.00	.00	.00	---	.00	2.6	112	9.4	.10	.00	.00
30	.00	.00	.00	.00	---	.00	2.0	92	8.4	.00	.00	.00
31	.00	---	.00	.00	---	.00	---	64	---	.00	.00	---
TOTAL	.00	.00	.00	.00	.00	.00	12.08	1616.88	1583.8	79.21	.00	.00
MEAN	.0000	.0000	.0000	.0000	.0000	.0000	.40	52.2	52.8	2.56	.0000	.0000
MAX	.00	.00	.00	.00	.00	.00	4.4	138	124	7.1	.00	.00
MIN	.00	.00	.00	.00	.00	.00	.00	.00	8.4	.00	.00	.00
AC=FT	.00	.00	.00	.00	.00	.00	24	3210	3140	157	.00	.00
CAL YR 1977	TOTAL	2152.18	MEAN 5.90	MAX 141	MIN .00	AC=FT 4270						
WTR YR 1978	TOTAL	3291.97	MEAN 9.02	MAX 138	MIN .00	AC=FT 6530						

YELLOWSTONE RIVER BASIN

203

06309450 BEAVER CREEK BELOW BAYER CREEK, NEAR BARNUM, WY

LOCATION (REVISED).---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. Prior to Mar. 30, 1978, at site 300 ft (91 m) downstream.

DRAINAGE AREA.--10.9 mi (28.2 km).

PERIOD OF RECORD.--November 1974 to current year.

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 December to June, which are poor. No diversion above station.

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.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 186 ft³/s (5.27 m³/s) July 6, gage height, 2.72 ft (0.829 m); maximum gage height, 2.93 ft (0.893 m) May 7 (backwater from snow); minimum daily discharge, 1.2 ft³/s (0.034 m³/s) Dec. 9.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.2	2.5	1.8	1.5	1.5	1.6	4.2	33	84	25	13	6.0
2	3.0	2.7	1.7	1.6	1.6	1.6	4.0	29	82	22	13	6.0
3	2.8	2.8	1.7	1.7	1.8	1.6	3.9	27	78	21	12	5.6
4	2.8	2.8	1.7	1.7	1.9	1.6	3.7	18	77	20	11	6.0
5	2.8	2.8	1.5	1.7	1.8	1.7	3.5	16	75	21	10	6.0
6	2.8	2.8	1.4	1.9	1.9	1.7	3.6	13	72	34	9.7	5.6
7	3.2	2.8	1.5	1.8	1.9	1.8	4.2	16	73	24	9.7	5.6
8	2.8	1.9	1.3	1.7	1.8	1.9	5.0	21	64	21	9.3	5.6
9	2.8	2.3	1.2	1.7	1.7	2.0	5.0	28	62	23	9.3	5.6
10	2.5	2.5	1.5	1.7	1.7	1.9	4.3	32	60	19	8.9	5.6
11	2.8	2.7	1.8	1.7	1.7	1.9	4.2	38	57	18	8.5	7.7
12	3.2	2.7	1.7	1.8	1.6	1.9	4.3	36	53	18	8.1	8.1
13	3.2	2.5	1.5	1.8	1.6	1.9	3.9	38	51	17	8.1	7.7
14	3.0	2.5	1.5	1.8	1.6	1.8	3.9	62	50	17	11	6.3
15	2.8	2.5	1.6	1.7	1.6	1.8	4.7	93	49	16	9.7	5.6
16	2.8	2.0	1.6	1.7	1.6	1.8	5.0	130	47	24	8.1	5.3
17	2.7	2.0	1.5	1.7	1.6	2.0	5.0	102	45	17	7.7	6.0
18	2.7	2.3	1.5	1.7	1.6	2.2	4.5	58	43	16	8.1	8.4
19	2.7	2.0	1.5	1.7	1.7	2.2	4.7	59	43	16	7.7	7.0
20	2.7	1.6	1.5	1.7	1.7	2.3	4.6	66	41	16	7.0	7.3
21	3.0	1.8	1.5	1.7	1.8	2.4	5.0	75	38	25	6.6	7.7
22	2.8	2.1	1.6	1.7	1.9	2.3	4.9	96	35	17	6.6	8.1
23	2.8	1.9	1.6	1.7	1.9	2.2	5.0	109	34	16	6.6	7.7
24	2.7	1.9	1.6	1.7	1.8	2.2	4.9	123	35	15	6.0	6.6
25	2.7	1.9	1.6	1.6	1.7	2.3	5.5	117	34	14	6.0	6.0
26	2.7	1.9	1.6	1.6	1.7	2.4	6.8	109	32	14	6.0	5.6
27	2.7	1.9	1.6	1.7	1.7	2.5	9.8	106	31	13	6.3	5.3
28	2.7	1.9	1.6	1.6	1.7	2.7	14	113	40	14	6.3	5.3
29	2.5	1.8	1.6	1.6	---	3.1	23	102	31	14	6.0	5.0
30	2.8	1.8	1.5	1.6	---	3.5	31	96	27	13	6.0	5.0
31	2.7	---	1.4	1.6	---	3.9	---	95	---	13	6.0	---
TOTAL	87.4	67.6	48.2	52.4	48.1	66.7	196.1	2056	1543	573	258.3	189.3
MEAN	2.82	2.25	1.55	1.69	1.72	2.15	6.54	66.3	51.4	18.5	8.33	6.31
MAX	3.2	2.8	1.8	1.9	1.9	3.9	31	130	84	34	13	8.4
MIN	2.5	1.6	1.2	1.5	1.5	1.6	3.5	13	27	13	6.0	5.0
AC-FT	173	134	96	104	95	132	389	4080	3060	1140	512	375
CAL YR 1977 TOTAL	2778.1			MEAN 7.61	MAX 66	MIN 1.2	AC-FT 5510					
WTR YR 1978 TOTAL	5186.1			MEAN 14.2	MAX 130	MIN 1.2	AC-FT 10290					

YELLOWSTONE RIVER BASIN

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.--November 1974 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 5,350 ft (1,631 m), from topographic map.

REMARKS.--Records good except those for May to July, which are poor. No diversion above station.

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, 797 ft³/s (22.6 m³/s) July 6, gage height, 5.94 ft (1.811 m), from floodmarks, from rating curve extended as explained above; minimum daily, 6.9 ft³/s (0.20 m³/s) Jan. 22-28.

REVISIONS.--The maximum discharges for previous water years have been revised, as shown in the following table. They supersede figures published in reports for 1975, 1976, and 1977.

Water Year	Date	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Water Year	Date	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
1975	June 18, 1975	154 4.36	2.00 0.610	1977	May 15, 1977	122 3.46	1.90 0.579
1976	May 29, 1976	95 2.69	1.67 .509				

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	10	9.4	9.4	7.8	7.1	8.4	13	55	98	36	23	16
2	10	10	9.4	7.6	7.5	8.1	13	40	95	32	23	16
3	10	10	9.4	7.6	7.5	7.8	12	42	98	30	23	15
4	10	9.8	9.4	8.1	7.8	8.1	10	36	100	29	21	15
5	10	9.8	9.4	7.8	7.8	8.1	10	29	101	31	21	15
6	9.8	9.8	9.4	7.8	7.8	8.1	10	12	97	97	21	15
7	10	9.8	9.4	7.8	7.8	8.1	12	31	100	40	21	15
8	9.8	8.7	9.0	7.8	7.5	8.1	14	33	93	30	21	15
9	9.4	7.8	8.3	7.8	7.5	8.1	14	44	89	33	21	15
10	9.4	8.4	10	7.8	7.5	8.1	12	48	88	27	21	14
11	8.7	9.8	9.8	7.8	7.5	8.1	12	56	86	26	21	16
12	10	9.8	9.1	7.8	7.5	8.4	12	56	80	25	20	17
13	10	9.8	8.7	7.8	7.5	8.4	11	56	77	26	20	16
14	10	9.4	8.7	7.8	7.8	8.1	11	74	74	25	22	16
15	10	9.4	8.4	7.8	7.8	7.8	13	116	70	24	24	14
16	10	9.1	8.1	7.8	8.1	7.8	14	161	67	28	22	14
17	10	8.1	7.8	7.8	7.8	7.8	14	164	65	28	20	14
18	10	8.7	8.1	7.5	7.8	8.1	12	112	61	26	21	18
19	9.8	8.7	8.1	7.5	7.8	8.1	13	107	62	25	20	15
20	9.8	8.2	8.1	7.2	7.8	8.1	12	107	60	25	18	16
21	10	7.9	8.1	7.2	7.8	8.1	14	112	55	32	18	16
22	10	9.1	8.1	6.9	7.8	8.4	13	137	54	29	18	16
23	9.8	9.4	8.1	6.9	7.8	7.8	14	160	51	25	18	16
24	9.8	9.4	8.1	6.9	8.1	7.8	12	180	51	23	17	15
25	9.8	9.4	8.1	6.9	8.1	7.8	14	177	53	23	17	15
26	9.8	9.8	8.1	6.9	8.1	8.1	16	163	47	23	17	14
27	9.4	9.8	8.1	6.9	8.1	8.4	21	149	46	22	17	14
28	9.4	9.4	8.1	6.9	8.1	8.7	18	143	58	22	17	14
29	9.4	9.4	8.1	7.2	---	9.4	31	115	44	23	17	14
30	9.4	9.4	8.1	7.2	---	10	40	119	39	22	16	15
31	9.1	---	8.1	7.5	---	12	---	112	---	21	16	---
TOTAL	302.6	277.5	267.1	232.1	217.1	258.2	437	2946	2159	908	612	456
MEAN	9.76	9.25	8.62	7.49	7.75	8.33	14.6	95.0	72.0	29.3	19.7	15.2
MAX	10	10	10	8.1	8.1	12	40	180	101	97	24	18
MIN	8.7	7.8	7.8	6.9	7.1	7.8	10	12	39	21	16	14
AC-FT	600	550	530	460	431	512	867	5840	4280	1800	1210	904

CAL YR 1977 TOTAL 5527.9 MEAN 15.1 MAX 78 MIN 7.5 AC-FT 10960
WTR YR 1978 TOTAL 9072.6 MEAN 24.9 MAX 180 MIN 6.9 AC-FT 18000

YELLOWSTONE RIVER BASIN

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 October to April, which are poor. No diversion above station.

AVERAGE DISCHARGE.--32 years, 14.8 ft³/s (0.419 m³/s), 10,720 acre-ft/yr (13.2 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.--Peak discharge above base of 190 ft³/s (5.38 m³/s) and maximum (*):

Date	Time	Discharge		Gage height	
		(ft ³ /s)	(m ³ /s)	(ft)	(m)
May 29	1730	276	7.82	3.37	1.027
June 9	2300	*393	11.1	3.76	1.146

Minimum daily discharge, 1.5 ft³/s (0.042 m³/s) Feb. 15-17, Mar. 3.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5.4	4.2	3.2	2.6	2.8	1.6	4.8	15	109	49	14	6.0
2	5.4	4.2	3.3	2.8	2.7	1.6	4.8	16	109	44	19	5.7
3	4.4	4.2	3.4	2.9	2.8	1.5	4.8	21	125	41	18	5.4
4	4.2	3.9	3.2	3.0	2.8	1.7	4.6	17	146	36	13	5.2
5	4.0	4.0	2.8	3.0	2.8	2.0	4.7	15	181	33	11	5.2
6	3.6	3.8	2.7	3.3	2.9	2.2	4.9	17	206	34	11	5.7
7	4.7	3.7	2.8	3.1	2.8	2.5	5.0	59	252	34	11	4.7
8	4.8	3.7	2.6	3.0	2.8	2.5	5.0	98	245	33	9.8	5.0
9	4.8	3.3	2.4	3.0	2.6	2.5	4.7	77	267	40	9.8	4.7
10	4.5	3.6	2.5	3.0	2.3	2.7	4.5	52	282	30	9.4	4.7
11	4.0	3.8	2.6	3.2	2.1	2.7	5.0	47	222	26	9.0	7.5
12	3.6	3.8	2.6	3.3	1.8	2.6	4.7	44	181	24	8.1	9.8
13	3.6	3.6	2.6	3.2	1.6	2.5	4.6	44	211	21	8.1	8.7
14	4.7	3.6	2.8	3.1	1.6	2.4	4.7	44	232	19	15	10
15	5.0	3.6	2.8	3.0	1.5	2.4	5.0	64	224	19	19	8.7
16	5.0	3.5	2.8	2.9	1.5	3.0	5.4	141	200	18	11	7.5
17	4.7	3.5	2.8	3.2	1.5	3.4	5.2	146	163	19	11	6.3
18	4.2	3.3	2.7	3.0	1.6	3.8	5.0	81	145	16	11	8.1
19	4.0	3.1	2.7	2.9	1.6	3.8	5.4	64	146	16	9.4	8.7
20	3.2	3.0	2.6	3.2	1.6	3.8	5.6	63	125	17	8.1	8.1
21	4.4	2.9	2.8	3.5	1.7	3.8	5.8	71	114	37	7.5	9.4
22	5.0	2.9	2.9	3.6	1.8	3.5	5.8	100	111	30	7.2	9.4
23	4.4	3.0	3.0	3.7	1.8	3.2	6.0	143	104	18	7.2	9.0
24	4.2	3.1	2.9	3.6	1.7	3.2	6.3	184	97	16	6.6	7.5
25	3.6	3.3	2.8	3.5	1.7	3.5	6.3	200	92	14	6.3	6.3
26	3.4	3.5	2.8	3.5	1.7	3.7	6.9	192	77	13	6.3	5.7
27	3.4	3.3	2.8	3.7	1.7	4.0	12	181	68	13	6.3	5.4
28	3.4	3.3	2.9	3.5	1.6	4.0	15	179	63	13	6.3	5.2
29	3.6	3.4	2.8	3.5	---	4.2	21	202	63	18	6.6	5.2
30	4.0	3.3	2.7	3.4	---	5.0	21	175	56	14	6.6	5.2
31	4.3	---	2.7	3.1	---	5.0	---	128	---	14	6.3	---
TOTAL	131.5	105.4	87.0	99.3	57.4	94.3	204.5	2880	4616	769	308.9	203.3
MEAN	4.24	3.51	2.81	3.20	2.05	3.04	6.82	92.9	154	24.8	9.96	6.78
MAX	5.4	4.2	3.4	3.7	2.9	5.0	21	202	282	49	19	10
MIN	3.2	2.9	2.4	2.6	1.5	1.5	4.5	15	56	13	6.3	4.7
AC=FT	261	209	173	197	114	187	406	5710	9160	1530	613	403
CAL YR 1977	TOTAL	4375.3	MEAN 12.0	MAX 170	MIN 1.1	AC=FT	8680					
WTR YR 1978	TOTAL	9556.6	MEAN 26.2	MAX 282	MIN 1.5	AC=FT	18960					

YELLOWSTONE RIVER BASIN

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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 are poor. Flow regulated by Dullknife Reservoir 2.1 mi (3.4 km) upstream, capacity, 4,350 acre-ft (5.36 hm³).

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, 340 ft³/s (9.63 m³/s) June 10, gage height, 4.03 ft (1.228 m); minimum daily, 0.86 ft³/s (0.024 m³/s) Oct. 13.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	16	1.5	1.3	1.4	1.3	1.7	2.6	5.4	202	54	36	15
2	16	1.6	1.3	1.4	1.3	1.7	3.0	19	196	46	37	15
3	16	1.8	1.3	1.4	1.3	1.7	2.9	32	196	43	37	15
4	9.4	1.7	1.3	1.4	1.3	1.7	2.7	31	138	42	37	15
5	1.6	1.7	1.3	1.4	1.3	1.7	2.5	29	160	38	36	15
6	1.6	1.6	1.3	1.4	1.3	1.7	2.7	28	214	37	36	7.3
7	1.9	1.6	1.3	1.4	1.3	1.8	2.8	29	217	37	37	5.4
8	1.6	1.5	1.3	1.4	1.4	1.8	3.0	29	217	30	37	5.4
9	1.5	1.4	1.3	1.4	1.4	1.6	3.0	29	258	18	37	9.1
10	1.4	1.5	1.3	1.4	1.4	1.6	2.9	30	262	31	37	22
11	1.2	1.5	1.3	1.4	1.4	1.5	2.9	31	217	26	36	23
12	1.0	1.5	1.4	1.4	1.4	1.5	3.2	32	190	23	36	23
13	.86	1.5	1.5	1.3	1.4	1.5	2.8	34	190	21	36	23
14	.98	1.5	1.5	1.4	1.5	1.5	2.8	41	169	19	39	23
15	1.1	1.4	1.5	1.3	1.5	1.5	3.5	52	193	18	39	22
16	1.3	1.5	1.4	1.3	1.5	1.5	3.8	63	187	18	37	22
17	1.4	1.5	1.4	1.3	1.5	1.5	3.2	68	148	18	37	17
18	1.4	1.4	1.4	1.3	1.5	1.6	3.8	46	125	16	37	13
19	1.4	1.4	1.4	1.3	1.5	1.7	3.2	48	129	16	36	13
20	1.4	1.4	1.4	1.3	1.5	1.7	3.0	56	121	16	33	13
21	1.7	1.3	1.4	1.3	1.5	1.5	3.0	65	108	29	31	14
22	1.5	1.3	1.4	1.3	1.5	1.6	3.0	106	108	35	31	14
23	1.4	1.3	1.4	1.3	1.5	1.5	2.9	140	80	21	31	13
24	1.4	1.3	1.4	1.3	1.5	1.5	3.7	166	77	15	32	13
25	1.3	1.3	1.4	1.3	1.6	1.5	2.9	211	84	13	31	10
26	1.3	1.3	1.4	1.3	1.6	1.5	4.6	241	77	11	25	4.4
27	1.4	1.3	1.4	1.3	1.7	1.6	7.3	252	67	11	15	4.4
28	1.5	1.3	1.4	1.4	1.7	1.8	6.2	227	65	11	15	4.6
29	1.6	1.3	1.4	1.4	---	2.0	7.1	241	66	17	15	4.6
30	1.7	1.3	1.4	1.4	---	2.3	6.5	241	62	30	15	4.9
31	1.6	---	1.4	1.4	---	2.6	---	211	---	36	15	---
TOTAL	95.44	43.5	42.6	42.0	40.6	51.9	107.5	2833.4	4523	796	989	403.1
MEAN	3.08	1.45	1.37	1.35	1.45	1.67	3.58	91.4	151	25.7	31.9	13.4
MAX	16	1.8	1.5	1.4	1.7	2.6	7.3	252	262	54	39	23
MIN	.86	1.3	1.3	1.3	1.3	1.5	2.5	5.4	62	11	15	4.4
AC-FT	189	86	84	83	81	103	213	5620	8970	1580	1960	800
CAL YR 1977	TOTAL	4402.15	MEAN 12.1	MAX 163	MIN .50	AC-FT 8730						
WTR YR 1978	TOTAL	9968.04	MEAN 27.3	MAX 262	MIN .86	AC-FT 19770						

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.--5 years, 35.3 ft³/s (1.000 m³/s), 25,560 acre-ft/yr (31.5 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 210 ft³/s (5.95 m³/s) on basis of comparison with station 1.2 mi (1.9 km) downstream; minimum daily, 13 ft³/s (0.37 m³/s) Feb. 5, 1975.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 535 ft³/s (15.2 m³/s) May 22, gage height, 5.70 ft (1.737 m); minimum daily, 17 ft³/s (0.48 m³/s) on many days.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	32	20	19	19	19	17	17	27	255	72	55	28
2	32	20	19	19	19	17	17	24	252	65	55	28
3	31	20	19	19	19	17	17	46	238	61	56	28
4	30	20	19	19	18	17	17	54	214	64	55	28
5	26	20	19	19	18	17	17	53	211	59	54	28
6	26	20	19	19	18	17	17	51	267	60	54	27
7	23	20	19	19	18	17	17	53	252	60	53	23
8	22	20	19	19	18	17	17	53	233	60	53	22
9	21	20	19	19	18	17	17	54	273	44	53	21
10	21	19	19	19	18	17	17	57	356	56	51	27
11	20	19	19	18	18	17	17	59	264	50	51	35
12	20	20	19	18	18	17	17	62	224	46	50	37
13	20	20	18	18	18	17	17	69	217	45	50	37
14	20	19	18	18	18	17	17	100	204	43	54	37
15	20	19	18	18	18	17	17	210	219	41	54	36
16	20	19	18	18	18	17	18	217	219	40	51	36
17	20	19	17	18	18	17	18	270	185	40	50	36
18	20	19	18	18	18	17	18	206	165	39	50	36
19	20	19	17	19	18	17	18	175	158	39	49	33
20	20	19	17	19	18	17	18	204	151	38	48	31
21	20	19	17	18	18	17	18	261	142	49	45	30
22	23	19	19	18	17	17	18	303	133	61	45	30
23	23	19	18	18	17	17	18	299	117	47	43	30
24	20	19	17	18	17	17	18	328	100	40	44	29
25	20	19	17	19	18	17	18	324	109	36	43	29
26	20	19	17	19	17	17	18	336	100	34	43	26
27	20	19	17	19	17	17	19	336	88	33	35	23
28	21	18	17	18	17	17	23	296	85	33	32	23
29	21	18	17	18	---	17	23	316	85	34	31	23
30	20	18	18	18	---	17	24	316	81	41	31	23
31	20	---	18	18	---	17	---	282	---	55	30	---
TOTAL	692	578	561	573	501	527	542	5441	5597	1485	1468	880
MEAN	22.3	19.3	18.1	18.5	17.9	17.0	18.1	176	187	47.9	47.4	29.3
MAX	32	20	19	19	19	17	24	336	356	72	56	37
MIN	20	18	17	18	17	17	17	24	81	33	30	21
AC-FT	1370	1150	1110	1140	994	1050	1080	10790	11100	2950	2910	1750

CAL YR 1977 TOTAL 11274 MEAN 30.9 MAX 163 MIN 16 AC-FT 22360
WTR YR 1978 TOTAL 18845 MEAN 51.6 MAX 356 MIN 17 AC-FT 37380

YELLOWSTONE RIVER BASIN

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06312500 POWDER RIVER NEAR KAYCEE, WY

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.

DRAINAGE AREA.--980 mi² (2,538 km²), approximately.

PERIOD OF RECORD.--Water years 1946-47, 1949-54, 1968 to current year.

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

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	TUR- BID- ITY (JTU)	OXYGEN, DIS- SOLVED (MG/L)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	HARD- NESS (MG/L AS CACO3)
OCT 05...	0950	76	--	--	8.0	20	10.6	K100	510
NOV 15...	1030	90	--	--	2.0	8	11.9	K52	460
DEC 14...	0930	120	--	--	.5	20	12.8	160	450
JAN 06...	0900	60	--	--	.5	25	11.6	260	470
FEB 07...	0915	88	--	--	.0	80	12.8	190	400
MAR 08...	0930	E1000	--	--	1.0	200	13.0	K70	350
APR 04...	0945	110	--	--	8.0	50	10.6	K140	440
MAY 16...	1000	1260	--	--	10.0	1500	9.3	K1200	230
JUN 13...	1030	1050	400	8.5	23.0	250	9.0	K100	180
JUL 25...	0940	80	1060	8.3	20.0	70	8.1	660	370
AUG 22...	0910	32	1180	8.1	17.5	25	8.2	K1400	440
SEP 30...	1715	22	1040	--	22.5	--	--	--	--
SEP 19...	1110	145	1110	8.1	7.5	1800	10.0	K2000	400

E-Estimate.

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

S-Seepage run data (see Explanation of Water-Quality Records).

DATE	HARD- NESS, NONCAR- BONATE (MG/L CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	BICAR- BONATE (MG/L AS HCO3)	CAR- BONATE (MG/L AS CO3)	ALKA- LINITY (MG/L AS CACO3)
OCT 05...	310	130	47	110	2.1	3.7	240	0	200
NOV 15...	270	100	49	93	1.9	2.7	230	0	190
DEC 14...	250	100	49	83	1.7	3.2	230	6	200
JAN 06...	260	120	42	50	1.0	2.7	260	0	210
FEB 07...	210	100	37	85	1.8	2.1	230	0	190
MAR 08...	190	91	31	90	2.1	3.5	200	0	160
APR 04...	260	110	40	83	1.7	2.7	220	0	180
MAY 16...	82	66	17	31	.9	2.5	180	0	150
JUN 13...	65	46	15	20	.7	2.0	140	0	120
JUL 25...	180	96	32	85	1.9	3.2	230	0	190
AUG 22...	250	120	36	96	2.0	3.2	230	0	190
SEP 30...	--	--	--	--	--	--	--	--	--
SEP 19...	240	100	33	110	2.4	3.7	200	0	160

YELLOWSTONE RIVER BASIN

06312500 POWDER RIVER NEAR KAYCEE, WY--Continued

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

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, NITRATE DIS- SOLVED (MG/L AS N)	PHOS- PHORUS, TOTAL (MG/L AS P)
OCT 05...	470	58	.4	8.2	938	1.28	192	.09	.00
NOV 15...	370	53	.5	7.4	793	1.08	193	.54	.00
DEC 14...	360	41	.4	13	786	1.07	255	4.1	.01
JAN 06...	270	55	.5	8.7	679	.92	110	.70	.05
FEB 07...	330	53	.5	9.5	730	.99	173	.45	.06
MAR 08...	340	15	.4	9.1	686	.93	1850	.72	2.8
APR 04...	360	42	.4	5.9	755	1.03	224	.36	.48
MAY 16...	100	38	.4	4.8	350	.48	1190	.79	.04
JUN 13...	92	9.6	.3	7.4	263	.36	746	.52	1.0
JUL 25...	330	32	1.0	5.0	647	.88	140	.75	.06
AUG 22...	410	44	.5	4.9	825	1.12	71.3	.02	.11
30...	--	--	--	--	--	--	--	--	--
SEP 19...	420	28	.8	5.7	801	1.09	314	.36	.09

YELLOWSTONE RIVER BASIN

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06313000 SOUTH FORK POWDER RIVER NEAR KAYCEE, WY

LOCATION.--Lat 43°37'10", long 106°34'36", in NE&SE& sec.9, T.42 N., R.81 W., Johnson County, Hydrologic Unit 10090203, at former gaging station, 200 ft (61 m) upstream from bridge on old U.S. Highway 87, 0.6 mi (1.0 km) upstream from bridge on Interstate Highway 25, 1.2 mi (1.9 km) upstream from Murphy Creek, 6.6 mi (10.6 km) southeast of Kaycee, and 7.0 mi (11.3 km) upstream from mouth.

DRAINAGE AREA.--1,150 mi² (2,980 km²), approximately.

PERIOD OF RECORD.--Water years 1949-53, 1968 to current year.

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

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	TUR- BID- ITY (JTU)	OXYGEN, DIS- SOLVED (MG/L)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	HARD- NESS (MG/L AS CACO3)
OCT 05...	0815	E3.6	--	--	7.0	35	10.8	K100	930
NOV 15...	0900	3.8	--	--	1.0	10	10.6	K4	990
DEC 14...	0800	E3.0	--	--	.0	160	12.9	K12	1100
JAN 06...	0745	E1.0	--	--	.0	4	11.5	K16	1300
FEB 07...	0800	E4.0	--	--	.0	140	10.4	K18	540
MAR 08...	0730	E1000	--	--	1.0	2000	10.9	210	450
APR 04...	0830	6.3	--	--	3.0	25	11.3	22	1200
MAY 16...	0845	E300	--	--	11.0	1500	9.4	620	590
JUN 13...	0840	11	4000	8.5	17.0	3	9.5	120	1200
JUL 25...	0745	12	2600	8.1	18.0	530	8.5	630	720
AUG 22...	0800	E1.0	4800	8.0	15.0	50	8.2	K120	1400
SEP 19...	1020	139	4000	8.0	5.0	24000	11.0	--	1300

E-Estimate.

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

DATE	HARD- NESS, NONCAR- BONATE (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)	BICAR- BONATE (MG/L AS HCO3)	CAR- BONATE (MG/L AS CO3)	ALKA- LITY (MG/L AS CACO3)
OCT 05...	780	250	77	410	5.8	9.3	180	0	150
NOV 15...	830	260	81	630	8.7	8.3	190	0	160
DEC 14...	920	330	79	480	6.2	11	220	0	180
JAN 06...	1100	380	95	660	7.8	8.5	290	0	240
FEB 07...	440	160	37	250	4.6	5.2	120	0	98
MAR 08...	350	140	25	210	4.3	6.1	130	0	110
APR 04...	1000	340	81	560	7.1	10	220	0	180
MAY 16...	490	170	40	310	5.6	7.2	120	0	98
JUN 13...	1100	32	82	590	13	12	170	0	140
JUL 25...	610	210	46	370	6.0	.8	140	0	120
AUG 22...	1300	410	94	580	6.7	13	160	0	130
SEP 19...	1100	360	96	590	7.1	10	260	0	210

YELLOWSTONE RIVER BASIN

06313000 SOUTH FORK POWDER RIVER NEAR KAYCEE, WY--Continued

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

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, NITRATE DIS- SOLVED (MG/L AS N)	PHOS- PHORUS, TOTAL (MG/L AS P)
OCT									
05...	1500	120	1.0	7.5	2460	3.35	23.9	1.1	.00
NOV									
15...	1900	210	1.1	6.1	3160	4.30	32.4	2.7	.00
DEC									
14...	1700	220	.8	10	2930	3.98	23.7	4.7	.02
JAN									
06...	2300	130	1.4	9.6	3700	5.03	9.99	2.0	.05
FEB									
07...	840	68	.9	5.8	1430	1.94	15.4	1.3	.17
MAR									
08...	760	16	.6	4.9	1230	1.67	3320	1.1	2.6
APR									
04...	1800	140	1.0	5.5	3100	4.22	52.7	2.7	.03
MAY									
16...	1100	56	1.2	4.5	1750	2.38	--	1.1	.29
JUN									
13...	2100	130	1.9	6.7	3040	4.13	90.3	1.4	.17
JUL									
25...	1300	43	1.2	4.0	2050	2.79	66.4	1.0	.08
AUG									
22...	2400	100	1.4	4.5	3680	5.00	--	.14	.06
SEP									
19...	2300	33	1.1	4.1	3530	4.80	1320	1.5	.05

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.

REMARKS.--Records poor. 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); no flow for many days each year.

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)
July 21	0700	*203 5.75	3.32 1.012

No flow for many days.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.00	.00	.10	.00	.28	.00	.10	.50	.00
2	.00	.00	.00	.00	.00	.00	.00	.17	.00	.00	.00	.00
3	.00	.00	.00	.00	.00	.00	.00	1.0	.00	.00	.00	.00
4	.00	.00	.00	.00	.00	.00	.00	4.2	.00	.00	.00	.00
5	.00	.00	.00	.00	.00	.47	.00	4.1	.00	.00	.00	.00
6	.00	.00	.00	.30	.00	1.7	.00	2.4	.00	.00	.00	.00
7	.00	.00	.00	.45	.00	2.2	.00	1.5	.10	.60	.00	.00
8	.00	.00	.00	.34	.00	2.9	.00	6.9	.00	.20	.00	.00
9	.00	.00	.00	.25	.00	2.6	.00	2.3	.00	3.0	.00	.00
10	.00	.00	.00	.29	.00	1.3	.00	.70	.00	.00	.00	.00
11	.00	.00	.00	.10	.00	.75	.00	.10	.00	.00	.00	.00
12	.00	.00	.00	.00	.00	.41	.00	.00	.00	.00	.00	.00
13	.00	.00	.00	.00	.00	.25	.00	.00	.00	.00	.00	.00
14	.00	.00	.00	.00	.00	.10	.00	.00	.00	.00	2.1	.00
15	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.43	.00
16	.00	.00	.00	.00	.00	.10	.00	3.0	.00	.77	.00	.00
17	.00	.00	.00	.00	.00	.20	.00	21	.20	.20	.00	.00
18	.00	.00	.00	.00	.00	.26	.00	30	.00	.00	.00	7.1
19	.00	.00	.00	.00	.00	.10	.00	1.9	.00	.00	.00	.00
20	.00	.00	.00	.00	.00	.00	.00	.60	.10	.30	.00	.00
21	.00	.00	.00	.00	.00	.00	.00	.30	.00	15	.00	.00
22	.00	.00	.00	.00	.00	.00	.25	.10	.00	.00	.00	.00
23	.00	.00	.00	.00	.40	.00	.00	.00	.00	.00	.00	.00
24	.00	.00	.00	.00	.46	.00	.00	.00	.00	.00	.00	.00
25	.00	.00	.00	.00	.20	.00	.00	.00	.00	.00	.00	.00
26	.00	.00	.00	.00	.40	.00	.00	.00	.00	.00	.00	.00
27	.00	.00	.00	.00	.20	.00	.10	.00	.00	.00	.00	.00
28	.00	.00	.00	.00	.00	.00	.80	.00	.00	2.9	.00	.00
29	.00	.00	.00	.00	---	.00	1.1	.00	.40	.00	.00	.00
30	.00	.00	.00	.00	---	.00	.57	.20	.60	.00	.00	.00
31	.00	---	.00	.00	---	.00	---	.00	---	.00	.00	---
TOTAL	.00	.00	.00	1.73	1.66	13.44	2.82	80.75	1.40	23.07	3.03	7.10
MEAN	.000	.000	.000	.056	.059	.43	.094	2.60	.047	.74	.098	.24
MAX	.00	.00	.00	.45	.46	2.9	1.1	30	.60	15	2.1	7.1
MIN	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
AC-FT	.00	.00	.00	3.4	3.3	27	5.6	160	2.8	46	6.0	14

CAL YR 1977 TOTAL 67.83 MEAN .19 MAX 14 MIN .00 AC-FT 135
WTR YR 1978 TOTAL 135.00 MEAN .37 MAX 30 MIN .00 AC-FT 268

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.

WATER-DISCHARGE RECORDS

REMARKS.--Records poor. No gage-height record Oct. 18 to Nov. 10, Dec. 8-12, Dec. 13 to Jan 17, Jan. 25 to Feb. 6, Mar. 2-4, May 4, 5, July 21, 22, 25-31, Aug. 2-4, Sept. 8-14, 20-30. Some regulation by Lower Salt Creek Reservoir, capacity, 2,710 acre-ft (3.34 hm³).

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, 12 ft³/s (0.34 m³/s) Aug. 21-25, Sept. 5, 6, 17, 18, 1976.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 10,200 ft³/s (289 m³/s) May 18, 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, 14 ft³/s (0.40 m³/s) Nov. 19.

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	245	30	31	26	28	38	31	46	66	54	149	25
2	63	29	30	28	29	33	28	38	53	43	73	25
3	41	29	30	32	32	47	28	41	49	34	41	23
4	35	29	29	34	36	28	28	145	48	30	32	23
5	37	28	25	35	33	35	27	275	49	28	26	23
6	36	29	22	37	38	444	26	198	46	32	26	23
7	39	29	26	35	41	545	26	152	47	174	27	23
8	35	28	24	32	36	916	26	388	57	53	26	23
9	34	27	20	31	33	839	24	297	43	365	31	23
10	39	31	22	29	35	604	28	231	38	92	27	23
11	39	29	26	31	33	191	23	181	37	48	26	23
12	35	30	28	34	30	131	25	64	36	33	25	24
13	34	28	28	33	27	64	26	34	33	29	24	24
14	31	29	33	31	30	51	26	25	32	26	22	24
15	30	29	38	31	29	44	27	19	31	26	76	24
16	28	31	34	30	30	47	24	32	31	26	29	24
17	26	30	31	32	29	47	24	1030	51	43	27	22
18	29	28	31	31	30	72	25	7610	38	28	26	123
19	29	14	29	29	30	65	26	1300	34	26	26	35
20	29	20	28	30	31	63	27	278	47	25	26	29
21	29	22	29	32	34	49	28	142	37	1280	26	28
22	29	27	30	34	37	44	37	109	34	316	27	27
23	29	42	31	32	47	44	37	92	33	68	26	27
24	29	53	30	29	55	41	35	80	31	32	26	27
25	28	49	28	29	43	43	34	61	32	28	26	27
26	27	55	28	30	41	42	32	57	30	27	26	27
27	28	38	27	30	39	38	37	54	30	27	26	26
28	29	34	29	30	36	35	61	57	30	80	26	26
29	29	35	30	30	---	33	213	56	134	120	26	26
30	29	34	31	30	---	32	67	56	212	35	26	26
31	28	---	29	29	---	30	---	73	---	40	26	---
TOTAL	1228	946	887	966	972	4735	1106	13221	1469	3268	1052	853
MEAN	39.6	31.5	28.6	31.2	34.7	153	36.9	426	49.0	105	33.9	28.4
MAX	245	55	38	37	55	916	213	7610	212	1280	149	123
MIN	26	14	20	26	27	27	23	19	30	25	22	22
AC-FT	2440	1880	1760	1920	1930	9390	2190	26220	2910	6480	2090	1690
CAL YR 1977	TOTAL	17597	MEAN 48.2	MAX	998	MIN 14	AC-FT	34900				
WTR YR 1978	TOTAL	30703	MEAN 84.1	MAX	7610	MIN 14	AC-FT	60900				

YELLOWSTONE RIVER BASIN

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06313400 SALT CREEK NEAR SUSSEX, WY--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1949, 1952, 1968 to current year.

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

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN DEMAND, BIO- CHEM- ICAL, 5 DAY (MG/L)	HARD- NESS (MG/L AS CACO3)	HARD- NESS, NONCAR- BONATE (MG/L CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)
OCT												
05...	1110	38	5500	8.3	8.0	9.8	6.2	400	0	92	40	1120
NOV												
15...	1200	29	6300	8.3	2.0	10.6	7.6	330	0	67	40	1300
DEC												
14...	1100	A33	6000	8.1	.0	2.9	6.5	400	0	83	48	1300
JAN												
06...	1045	A37	6200	7.9	.5	7.5	6.8	380	0	100	29	1400
FEB												
07...	1100	A41	6000	8.0	.0	3.3	6.8	290	0	71	28	1300
MAR												
08...	1100	A916	1700	8.1	1.5	9.8	6.6	240	84	55	26	300
APR												
04...	1100	26	7000	8.4	10.0	10.3	5.8	430	0	89	49	1400
MAY												
16...	1130	16	8000	8.1	14.0	8.8	7.1	510	0	100	64	1400
JUN												
13...	1200	33	7800	8.5	21.0	8.7	3.4	490	0	92	62	1600
JUL												
25...	1130	A28	5800	8.2	21.5	7.7	8.2	380	0	78	44	1200
AUG												
22...	1100	26	7800	8.7	17.0	7.2	4.8	270	0	50	35	1500
S31...	1120	27	6800	--	18.0	--	--	--	--	--	--	--
SEP												
19...	1230	34	6200	8.1	7.0	8.3	6.9	610	230	130	67	1200

A-Daily mean discharge.

S-Seepage run data (see Explanation of Water-Quality Records).

DATE	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	BICAR- BONATE (MG/L AS HCO3)	CAR- BONATE (MG/L AS CO3)	ALKA- LINITY (MG/L AS CACO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, RESIDUE AT 105 DEG. C, DIS- SOLVED (MG/L)	SOLIDS, SUM OF CONSTITUENTS, DIS- SOLVED (MG/L)
OCT											
05...	25	16	630	0	520	820	1000	1.6	22	--	3420
NOV											
15...	31	16	830	0	680	950	1100	1.8	25	--	3900
DEC											
14...	28	16	800	15	680	900	1100	1.8	27	--	3820
JAN											
06...	32	17	910	0	750	880	1200	2.2	27	--	4100
FEB											
07...	33	11	790	0	650	900	1100	1.8	22	--	7100
MAR											
08...	8.4	6.6	190	0	160	570	120	.7	5.0	--	1180
APR											
04...	30	16	820	0	670	890	1200	2.2	16	--	3010
MAY											
16...	27	14	740	0	610	1600	890	1.8	13	4350	4500
JUN											
13...	32	17	700	24	610	1400	1200	3.3	18	--	4790
JUL											
25...	27	15	590	0	480	1100	930	1.6	7.8	--	3680
AUG											
22...	40	17	840	12	710	1000	1400	2.7	21	--	4470
S31...	--	--	--	--	--	--	--	--	--	--	--
SEP											
19...	21	13	460	0	370	1900	550	1.4	6.6	--	4100

YELLOWSTONE RIVER BASIN

06313400 SALT CREEK NEAR SUSSEX, WY--Continued

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

DATE	SOLIDS, DIS- SOLVED (TONS PER AC-FT)	SOLIDS, DIS- SOLVED (TONS PER DAY)	SOLIDS, RESIDUE AT 105 DEG. C, SUS- PENDED (MG/L)	NITRO- GEN, NITRATE DIS- SOLVED (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)
OCT 05...	4.65	351	--	.05	.05	.11	1.2	1.3	1.4	6.0	.00
NOV 15...	5.30	305	--	.02	.09	.16	.31	.47	.56	2.5	.00
DEC 14...	5.20	340	--	.43	.02	.42	.17	.59	.61	2.7	.02
JAN 06...	5.58	410	--	.00	.07	.59	1.4	2.0	2.1	9.2	.12
FEB 07...	9.66	786	--	.02	.32	.40	.80	1.2	1.5	6.7	.31
MAR 08...	1.60	2920	--	.45	.31	.43	.77	1.2	1.5	6.7	3.3
APR 04...	4.09	211	--	.07	--	--	--	--	--	--	.09
MAY 16...	6.12	194	857	.09	.11	.20	1.8	2.0	2.1	9.3	.51
JUN 13...	6.51	427	--	.09	.05	.06	.91	.97	1.0	4.5	.00
JUL 25...	5.00	278	--	.18	.08	.13	2.9	3.0	3.1	14	.11
AUG 22...	6.08	314	--	.05	.02	.09	.86	.95	.97	4.3	.10
SEP 31...	--	--	--	--	--	--	--	--	--	--	--
SEP 19...	5.58	376	--	.68	.43	.44	15	15	15	68	.05

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)	BORON, DIS- SOLVED (UG/L AS B)	CADMIUM TOTAL RECOV- ERABLE (UG/L AS CD)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)
OCT 05...	1110	7500	5	0	1600	10	20	10	16000
NOV 15...	1200	--	--	--	1800	--	--	--	--
DEC 14...	1100	--	--	--	1800	--	--	--	--
JAN 06...	1045	1500	5	0	1900	2	10	11	3800
FEB 07...	1100	--	--	--	1700	--	--	--	--
MAR 08...	1100	--	--	--	410	--	--	--	--
APR 04...	1100	3600	5	0	1900	4	10	14	11000
MAY 16...	1130	--	--	--	1800	--	--	--	--
JUN 13...	1200	--	--	--	1800	--	--	--	--
JUL 25...	1130	18000	5	0	1600	4	20	33	25000
AUG 22...	1100	--	--	--	460	--	--	--	--
SEP 19...	1230	--	--	--	920	--	--	--	--

YELLOWSTONE RIVER BASIN

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06313400 SALT CREEK NEAR SUSSEX, WY--Continued

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

DATE	LEAD, TOTAL RECOV- ERABLE (UG/L AS PB)	LITHIUM TOTAL RECOV- ERABLE (UG/L AS LI)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)	MERCURY TOTAL RECOV- ERABLE (UG/L AS HG)	MOLYB- DENUM, TOTAL RECOV- ERABLE (UG/L AS MO)	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 05...	<100	310	160	.0	4	<50	1	80
NOV 15...	--	--	--	--	--	--	--	--
DEC 14...	--	--	--	--	--	--	--	--
JAN 06...	12	350	420	.0	0	13	1	60
FEB 07...	--	--	--	--	--	--	--	--
MAR 08...	--	--	--	--	--	--	--	--
APR 04...	15	340	230	.0	3	7	1	70
MAY 16...	--	--	--	--	--	--	--	--
JUN 13...	--	--	--	--	--	--	--	--
JUL 25...	33	270	450	.0	4	32	2	140
AUG 22...	--	--	--	--	--	--	--	--
SEP 19...	--	--	--	--	--	--	--	--

DATE	TIME	GROSS ALPHA, DIS- SOLVED (UG/L AS U-NAT)	GROSS ALPHA, TOTAL (UG/L AS U-NAT)	GROSS BETA, DIS- SOLVED (PCI/L AS CS-137)	GROSS BETA, TOTAL (PCI/L AS CS-137)	GROSS BETA, DIS- SOLVED (PCI/L AS SR/ YT-90)	GROSS BETA, TOTAL (PCI/L AS SR/ YT-90)	RADIUM 226, DIS- SOLVED, RADON METHOD (PCI/L)	URANIUM NATURAL DIS- SOLVED (UG/L AS U)
MAY 16...	1130	<50	43	<15	38	<14	38	.46	12

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 .500 MM
OCT 07...	1145	11.5	36	838	81	--	--	--	--	--	--
NOV 10...	1215	.5	31	576	48	--	--	--	--	--	--
DEC 12...	1115	.0	28	357	27	--	--	--	--	--	--
JAN 17...	1130	.0	34	338	31	--	--	--	--	--	--
FEB 15...	1215	.0	29	136	11	--	--	--	--	--	--
MAR 06...	1340	.0	355	4820	4620	56	78	92	98	100	--
09...	1300	7.0	698	33700	63500	29	47	74	96	100	--
28...	1420	17.0	41	1320	146	--	--	--	--	--	--
MAY 03...	1430	8.5	38	1200	123	--	--	--	--	--	--
08...	1200	6.0	435	15400	18100	37	55	77	93	100	--
23...	1115	--	96	1570	407	66	93	94	97	100	--
JUN 09...	1600	--	42	345	39	--	--	--	--	--	--
JUL 11...	1610	24.0	46	5700	708	87	97	97	97	98	100
31...	1615	28.5	27	472	34	--	--	--	--	--	--
SEP 15...	1040	13.0	25	204	14	--	--	--	--	--	--

YELLOWSTONE RIVER BASIN

06313500 POWDER RIVER AT SUSSEX, WY

LOCATION (REVISED).--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 September 1978.

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 fair except those for October to May, which are poor. Numerous small reservoirs and diversions for irrigation of about 17,000 acres (68.8 km²) above station.

AVERAGE DISCHARGE.--9 years (water years 1939, 1951-57, 1978), 188 ft³/s (5.324 m³/s), 136,200 acre-ft/yr (168 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 discharges 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)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Oct. 1	0330	2,480 70.2	6.00 1.829	May 19	a0200	*b24,000 680	c15.16 4.621
Mar. 8	1800	3,890 110	6.71 2.045	June 8	1830	2,030 57.5	4.72 1.439
May 11	--	unknown	--	July 22	0745	2,390 67.7	5.00 1.524

a-About.

b-From rating curve extended above 11,000 ft³/s (312 m³/s) on basis of contracted opening measurement of peak flow.

c-From floodmark.

Minimum daily discharge, 30 ft³/s (0.85 m³/s) Sept. 9.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1530	143	150	115	100	120	195	653	2040	653	280	55
2	670	143	145	110	105	115	190	728	1800	475	144	55
3	248	148	150	110	110	120	210	736	1510	390	123	47
4	125	163	150	110	115	140	220	1330	1400	332	122	43
5	125	155	150	115	125	250	205	1700	1370	287	94	43
6	130	150	140	115	150	500	200	1800	1530	269	88	38
7	125	145	145	115	170	800	190	1700	1750	726	89	35
8	130	135	135	110	190	3200	180	1600	1850	472	81	31
9	135	130	125	105	210	3070	170	1800	1770	789	77	30
10	125	130	120	110	190	2130	180	2500	1670	524	166	34
11	120	130	130	115	170	925	175	2300	1620	332	151	42
12	120	130	135	115	150	581	174	1800	1440	280	85	47
13	120	135	140	115	140	415	186	1300	1250	226	66	67
14	115	135	150	110	130	325	180	1000	1210	202	66	84
15	115	140	150	110	125	286	186	800	1160	142	282	79
16	115	140	150	110	125	192	235	1800	1110	138	268	65
17	120	140	150	110	130	210	204	5000	1100	246	122	289
18	120	135	145	110	135	339	204	9000	910	278	105	538
19	120	130	145	110	145	451	158	11900	840	152	116	457
20	120	125	145	110	155	407	158	3290	870	139	116	327
21	120	120	140	110	170	292	154	2440	747	485	116	248
22	120	125	140	110	190	253	210	2160	667	1860	111	183
23	125	130	140	110	180	241	183	2190	615	885	98	141
24	125	140	130	105	160	240	163	2420	571	440	92	121
25	130	140	125	105	140	230	154	2690	517	241	83	113
26	125	145	125	105	135	230	117	2770	517	167	78	106
27	120	145	120	100	125	220	109	2690	457	112	73	98
28	125	150	125	100	125	215	289	2420	405	84	78	88
29	130	150	120	100	---	210	629	2230	463	82	84	75
30	130	150	115	100	---	205	575	2200	1110	84	69	75
31	132	---	115	100	---	200	---	2200	---	114	61	---
TOTAL	5910	4177	4245	3375	4095	17112	6383	79147	34269	11606	3584	3654
MEAN	191	139	137	109	146	552	213	2553	1142	374	116	122
MAX	1530	163	150	115	210	3200	629	11900	2040	1860	282	538
MIN	115	120	115	100	100	115	109	653	405	82	61	30
AC-FT	11720	8290	8420	6690	8120	33940	12660	157000	67970	23020	7110	7250

WTR YR 1978 TOTAL 177557 MEAN 486 MAX 11900 MIN 30 AC-FT 352200

YELLOWSTONE RIVER BASIN

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06313500 POWDER RIVER AT SUSSEX, WY--Continued

LOCATION.--Lat 43°41'54", long 106°17'50", in NE¼SE¼NW¼ sec.13, T.43 N., R.79 W., Johnson County, Hydrologic Unit 10090202, at bridge on State Route 192 at former discharge station, 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.

PERIOD OF RECORD.--Water years 1949-53, 1967-68, 1976 to current year.

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

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	COLOR (PLAT- INUM- COBALT UNITS)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	STREP- TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)	HARD- NESS (MG/L AS CAC03)
OCT											
04...	1530	124	2730	8.4	10.0	--	8.7	--	--	--	--
NOV											
02...	0930	136	2580	8.4	3.5	6	11.0	96	31	110	520
30...	1245	150	2350	8.1	.0	--	10.8	87	K17	K350	510
DEC											
20...	1430	144	2780	7.7	.0	--	9.5	78	72	230	630
JAN											
19...	1345	98	2460	8.0	.0	--	7.3	58	120	110	500
FEB											
09...	1045	266	3050	8.4	.0	--	9.6	78	90	K15000	420
MAR											
08...	1430	2550	1630	8.0	.5	--	9.8	80	K310	K13000	320
APR											
12...	1145	186	2300	8.4	9.5	--	10.2	105	K33	46	480
MAY											
24...	1700	2530	1180	7.7	16.0	--	8.1	96	8400	560	350
JUN											
14...	1145	1090	825	8.1	19.0	--	8.3	101	K230	K300	240
JUL											
12...	1010	256	2270	8.3	23.0	--	7.3	99	K1300	3500	600
AUG											
02...	1130	152	2230	8.1	16.5	--	7.2	87	>32000	>58000	490
S30...	1930	67	4000	--	22.5	--	--	--	--	--	--
31...	1400	65	4180	8.2	20.5	--	7.6	99	73	48	510

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

S-Seepage run data (see Explanation of Water-Quality Records).

DATE	HARD- NESS, NONCAR- BONATE (MG/L 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)	BICAR- BONATE (MG/L AS HCO3)	CAR- BONATE (MG/L AS CO3)	ALKA- LINITY (MG/L AS CAC03)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)
OCT											
04...	--	--	--	--	--	--	340	3	290	--	--
NOV											
02...	210	120	53	380	7.3	6.7	360	5	300	570	310
30...	200	120	50	330	6.4	6.3	380	0	320	580	240
DEC											
20...	250	150	62	400	6.9	4.1	460	0	380	690	280
JAN											
19...	170	120	48	370	7.2	6.0	400	0	330	470	310
FEB											
09...	130	100	41	460	9.8	8.9	340	4	290	670	310
MAR											
08...	0	79	29	250	6.1	6.8	400	0	320	530	5.1
APR											
12...	200	110	49	350	7.0	8.0	330	5	290	540	320
MAY											
24...	0	86	32	130	3.0	4.3	600	0	490	410	41
JUN											
14...	100	63	21	90	2.5	2.8	170	0	140	200	62
JUL											
12...	340	150	55	310	5.5	7.3	320	0	260	770	170
AUG											
02...	96	120	47	310	6.1	8.1	480	0	390	750	170
30...	--	--	--	--	--	--	--	--	--	--	--
31...	120	110	58	660	13	12	480	0	390	740	660

YELLOWSTONE RIVER BASIN

06313500 POWDER RIVER AT SUSSEX, WY--Continued

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

DATE	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SID2)	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)	SOLIDS, SUSP. TOTAL, RESIDUE AT 110 DEG. C (MG/L)	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)
OCT 04...	--	--	--	--	--	--	--	--	--	--	--
NOV 02...	.9	11	1630	1640	2.23	602	310	.01	.02	.54	.56
30...	.8	12	1590	1530	2.08	620	--	.57	.08	.48	.56
DEC 20...	.8	13	1830	1830	2.49	712	--	.71	.10	.72	.82
JAN 19...	.8	14	1540	1540	2.09	407	--	.41	.08	1.1	1.2
FEB 09...	.8	11	1770	1770	2.41	1270	--	.89	.24	.86	1.1
MAR 08...	.6	5.2	1100	1100	1.50	7570	--	.53	.12	2.0	2.1
APR 12...	.6	10	1500	1560	2.12	783	--	.25	.00	.74	.74
MAY 24...	.4	8.4	816	1010	1.37	6900	--	.89	.08	4.9	5.0
JUN 14...	.3	9.0	525	532	.72	1570	--	.25	.01	1.3	1.3
JUL 12...	.7	9.8	1620	1630	2.22	1130	--	.33	.07	3.2	3.3
AUG 02...	.7	7.3	1610	1650	2.24	677	--	.29	.01	10	10
30...	--	--	--	--	--	--	--	--	--	--	--
31...	1.2	14	2710	2490	3.39	437	--	.03	.01	.82	.83

DATE	NITRO- GEN, TOTAL (MG/L AS N)	NITRO- GEN, TOTAL (MG/L AS NO3)	PHOS- PHORUS, TOTAL (MG/L AS P)	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)	PHYTO- PLANK- TON, TOTAL (CELLS PER ML)	PERI- PHYTON BIOMASS ASH WEIGHT G/SQ M	PERI- PHYTON BIOMASS TOTAL DRY WEIGHT G/SQ M	CHLOR-A PERI- PHYTON CHROMO- GRAPHIC FLUOROM (MG/M2)	CHLOR-B PERI- PHYTON CHROMO- GRAPHIC FLUOROM (MG/M2)
OCT 04...	--	--	--	--	--	--	--	--	--	--	--
NOV 02...	.57	2.5	.13	.01	5.6	1.8	4600	--	--	--	--
30...	1.1	5.0	.17	.00	4.2	1.5	430	3.78	4.25	.000	.000
DEC 20...	1.5	6.8	.14	.01	6.7	1.0	1700	--	--	--	--
JAN 19...	1.6	7.1	.09	.02	2.8	.8	300	--	--	--	--
FEB 09...	2.0	8.8	.23	.03	8.6	--	2800	--	--	--	--
MAR 08...	2.6	12	3.0	.04	10	>10	17000	--	--	--	--
APR 12...	.99	4.4	.21	.01	51	2.2	1900	--	--	--	--
MAY 24...	5.9	26	1.3	.09	6.4	1.3	44	--	--	--	--
JUN 14...	1.6	6.9	.74	.01	4.8	6.9	250	--	--	--	--
JUL 12...	3.6	16	.99	.02	5.5	.7	72	--	--	--	--
AUG 02...	10	46	1.8	.00	5.9	--	20000	--	--	--	--
30...	--	--	--	--	--	--	--	--	--	--	--
31...	.86	3.8	.11	.01	--	--	27	--	--	--	--

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

[illegible][illegible]

06313500 POWDER RIVER AT SUSSEX, WY--Continued

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

DATE	COPPER, DIS- SOLVED (UG/L AS CU)	COPPER, REC'D FM BOT- TOM MA- TERIAL (UG/G 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, DIS- SOLVED (UG/L AS PB)	LEAD, REC'D FM BOT- TOM MA- TERIAL (UG/G 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)
NOV 02...	2	3	8500	20	<100	0	10	130	120	160
30...	--	--	--	10	--	--	--	--	--	--
DEC 20...	--	--	--	1200	--	--	--	--	--	--
JAN 19...	--	--	--	20	--	--	--	--	--	--
FEB 09...	8	--	--	10	--	0	--	--	120	--
MAR 08...	--	--	--	210	--	--	--	--	--	--
APR 12...	--	--	--	70	--	--	--	--	--	--
MAY 24...	--	--	--	10	--	--	--	--	--	--
JUN 14...	--	--	--	50	--	--	--	--	--	--
JUL 12...	12	0	--	40	26	4	5	130	80	630
AUG 02...	5	--	--	20	--	3	--	--	80	--
31...	--	--	--	80	--	--	--	--	--	--

[illegible]

YELLOWSTONE RIVER BASIN

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06313500 POWDER RIVER AT SUSSEX, WY--Continued

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

DATE	NICKEL, DIS- SOLVED (UG/L AS NI)	NICKEL, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS NI)	SELE- NIUM, TOTAL (UG/L AS SE)	SELE- NIUM, DIS- SOLVED (UG/L AS SE)	SELE- NIUM, TOTAL IN BOT- TOM MA- TERIAL (UG/G)	SILVER, TOTAL RECOV- ERABLE (UG/L AS AG)	VANA- DIUM, DIS- SOLVED (UG/L AS V)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN)	ZINC, DIS- SOLVED (UG/L AS ZN)	ZINC, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS ZN)
NOV 02...	1	5	2	2	3	<10	4.2	50	10	11
30...	--	--	--	--	--	--	--	--	--	--
DEC 20...	--	--	--	--	--	--	--	--	--	--
JAN 19...	--	--	--	--	--	--	--	--	--	--
FEB 09...	2	--	--	5	--	--	2.0	--	10	--
MAR 08...	--	--	--	--	--	--	--	--	--	--
APR 12...	--	--	--	--	--	--	--	--	--	--
MAY 24...	--	--	--	--	--	--	--	--	--	--
JUN 14...	--	--	--	--	--	--	--	--	--	--
JUL 12...	4	5	3	3	0	--	.0	210	0	10
AUG 02...	3	--	--	2	--	--	.0	--	3	--
31...	--	--	--	--	--	--	--	--	--	--

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 ALPHA, DIS- SOLVED (PCI/L AS U-NAT)	GROSS ALPHA, SUSP. TOTAL (PCI/L AS U-NAT)
APR 12...	1145	<32	31	<5.9	13	<22	21
JUL 12...	1010	24	72	9.6	67	16	49
AUG 02...	1130	<22	300	13	270	<15	200

YELLOWSTONE RIVER BASIN

06313500 POWDER RIVER AT SUSSEX, WY--Continued

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

DATE	TIME	TEMPER- ATURE (DEG C)	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SEDI- MENT, SUS- PENDED (MG/L)	SEDI- MENT DIS- CHARGE, SUS- PENDED (T/DAY)	SED. SUSP. FALL DIAM. % FINER THAN .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
OCT											
04...	1530	10.0	124	2160	723	--	--	--	--	--	--
NOV											
01...	1620	6.5	142	606	232	--	--	--	--	--	--
30...	1245	.0	E150	804	326	--	--	--	--	--	--
DEC											
20...	1430	.0	144	370	144	--	--	--	--	--	--
JAN											
19...	1345	.0	98	286	76	--	--	--	--	--	--
FEB											
09...	1045	.0	265	629	450	--	--	--	--	--	--
MAR											
08...	1230	.5	2530	10500	71700	36	55	77	91	99	100
08...	1300	.5	--	12200	--	--	--	--	--	--	--
08...	1330	.5	--	12000	--	--	--	--	--	--	--
08...	1415	.5	--	23300	--	--	--	--	--	--	--
08...	1430	.5	2550	23800	164000	--	--	--	--	--	--
08...	1445	.5	--	19600	--	--	--	--	--	--	--
08...	1545	.5	--	15900	--	--	--	--	--	--	--
22...	0930	6.0	255	2100	1450	45	60	72	90	99	100
APR											
12...	1145	9.5	186	805	404	21	30	47	73	98	100
MAY											
19...	1200	9.0	10500	48600	1380000	31	48	81	95	100	--
24...	1700	16.0	2530	9560	65300	29	43	73	89	99	100
JUN											
14...	1145	19.0	1090	2260	6650	--	--	--	--	--	--
29...	1215	--	422	2220	2530	--	--	--	--	--	--
JUL											
12...	1010	23.0	256	2210	1530	--	--	--	--	--	--
AUG											
02...	1045	16.5	152	8410	3450	--	--	--	--	--	--
31...	1400	22.5	65	344	60	--	--	--	--	--	--

E-Estimate.

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
NOV							
01...	1620	6.5	142	0	2	37	74
APR							
12...	1145	9.5	186	13	75	99	100
JUL							
12...	1010	23.0	256	0	2	40	66

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 16.00 MM	BED MAT. SIEVE DIAM. % FINER THAN 32.00 MM
NOV						
01...	90	94	97	98	99	100
APR						
12...	--	--	--	--	--	--
JUL						
12...	85	93	99	100	--	--

06313500 POWDER RIVER AT SUSSEX, WY--Continued

QUALITATIVE AND ASSOCIATED QUANTITATIVE ANALYSES OF BIOLOGICAL DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

PHYTOPLANKTON ANALYSES

DATE TIME	NOV 2,77 0930	NOV 30,77 1245	DEC 20,77 1430	JAN 19,78 1345	FEB 9,78 1045	MAR 8,78 1430				
TOTAL CELLS/ML	4600	430	1700	300	2800	17000				
DIVERSITY: DIVISION	0.7	0.5	1.0	0.0	0.2	0.3				
..CLASS	0.7	0.5	1.0	0.0	0.2	0.3				
..ORDER	0.7	0.5	1.0	0.0	0.2	0.3				
...FAMILY	0.9	2.4	1.6	1.4	0.2	0.3				
....GENUS	0.9	2.4	1.7	1.4	0.2	0.3				
ORGANISM	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT
CHLOROPHYTA (GREEN ALGAE)										
..CHLOROPHYCEAE										
...CHLOROCOCCALES										
....CHARACIACEAE										
....SCHROEDERIA	65	1	--	-	--	-	--	-	--	-
....OOCYSTACEAE										
....ANKISTRODESMUS	--	-	--	-	--	-	--	-	--	-
....SELENASTRUM	--	-	--	-	--	-	--	-	--	-
....SCENEDESMACEAE										
....SCENEDESMUS	130	3	43	10	48	3	--	-	--	-
....VOLVOCALES										
....CHLAMYDOMONADACEAE										
....CHLAMYDOMONAS	--	-	--	-	--	-	--	-	--	-
....PHACOTACEAE										
....PHACOTUS	--	-	--	-	--	-	--	-	--	-
....ZYGNEATALES										
....DESMIDIACEAE										
....CLOSTERIUM	--	-	--	-	--	-	--	-	--	-
CHRYSTOPHYTA										
..BACILLARIOPHYCEAE										
..PENNALES										
...NAVICULACEAE										
....ENTOMONEIS	--	-	--	-	* 0		--	-	--	-
..CENTRALES										
...COSCINODISCACEAE										
....CYCLOTELLA	--	-	--	-	--	-	--	-	--	-
..PENNALES										
...ACHNANTHACEAE										
....RHOICOSPHEA	--	-	--	-	10	1	--	-	--	-
....CYMBELLACEAE										
....CYMBELLA	--	-	86#	20	57	3	60#	20	69	2
....FRAGILARIACEAE										
....HANNAEA	--	-	--	-	--	-	--	-	--	-
....SYNEDRA	--	-	43	10	38	2	--	-	--	-
....GOMPHONEMACEAE										
....GOMPHONEMA	--	-	--	-	10	1	--	-	--	-
....NAVICULACEAE										
....AMPHIPLEURA	--	-	--	-	--	-	--	-	--	-
....CALONEIS	--	-	--	-	10	1	--	-	--	-
....GYROSTIGMA	*	0	--	-	10	1	--	-	--	-
....NAVICULA	290	6	86#	20	100	6	180#	60	--	-
...NITZSCHACEAE										
....NITZSCHIA	65	1	130#	30	140	8	60#	20	--	-
....SURIRELLACEAE										
....SURIRELLA	98	2	43	10	48	3	--	-	--	-
CYANOPHYTA (BLUE-GREEN ALGAE)										
..CYANOPHYCEAE										
...HORMOGONALES										
....OSCILLATORIA										
....OSCILLATORIA	3900#	86	--	-	1200#	72	--	-	2800#	98
....SPIRULINA	--	-	--	-	10	1	--	-	--	-
EUGLENOPHYTA (EUGLENOIDS)										
..EUGLENOPHYCEAE										
..EUGLENALES										
...EUGLENACEAE										
....TRACHELOMONAS	--	-	--	-	--	-	--	-	--	-

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

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

QUALITATIVE AND ASSOCIATED QUANTITATIVE ANALYSES OF BIOLOGICAL DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

PHYTOPLANKTON ANALYSES

DATE TIME	APR 12,78 1145	MAY 24,78 1700	JUN 14,78 1145	JUL 12,78 1010	AUG 2,78 1130	AUG 31,78 1400
TOTAL CELLS/ML	1900	44	250	72	20000	27
DIVERSITY: DIVISION	1.4	0.0	0.8	0.7	0.5	0.0
..CLASS	1.4	0.0	0.8	0.7	0.5	0.0
...ORDER	1.5	0.0	1.6	0.7	0.5	0.9
...FAMILY	2.6	0.0	1.8	0.7	0.5	0.9
....GENUS	2.7	0.0	1.8	0.7	0.5	0.9
ORGANISM	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT
CHLOROPHYTA (GREEN ALGAE)						
..CHLOROPHYCEAE						
...CHLOROCOCCALES						
...CHARACIACEAE						
...SCHROEDERIA	--	-	--	-	--	-
...ODCISTACEAE						
...ANKISTRODESMUS	29	2	--	-	--	-
...SELENASTRUM	14	1	--	-	--	-
...SCENEDESMACEAE						
...SCENEDESMUS	--	-	--	-	--	-
...VOLVOCALES			93#	36	--	-
...CHLAMYDOMONADACEAE						
...CHLAMYDOMONAS	170	9	--	-	220	1
...PHACOTACEAE						
...PHACOTUS	--	-	--	-	--	-
...ZYGNEMATALES			93#	36	--	-
...DESMIDIACEAE						
...CLOSTERIUM	--	-	--	-	14#	20
CHRYSTOPHYTA						
..BACILLARIOPHYCEAE						
...PENNALES						
...NAVICULACEAE						
...ENTOMONEIS	--	-	--	-	--	-
...CENTRALES						
...COSCINODISCACEAE						
...CYCLOTELLA	14	1	--	-	--	-
...PENNALES						18#
...ACHNANTHACEAE						67
...RHOTICOSPHEA	--	-	--	-	--	-
...CYMBELLACEAE						
...CYMBELLA	130	7	--	-	--	-
...FRAGILARIACEAE						
...HANNAEA	14	1	--	-	--	-
...SYNEDRA	--	-	--	-	--	-
...GOMPHONEMACEAE						9#
...GOMPHONEMA	29	2	--	-	--	-
...NAVICULACEAE			23	9	--	-
...AMPHIPLEURA	14	1	--	-	--	-
...CALONEIS	14	1	--	-	--	-
...GYROSIGMA	--	-	--	-	--	-
...NAVICULA	190	10	44#	100	440	2
...NITZSCHIACEAE						
...NITZSCHIA	290#	15	--	-	440	2
...SURIRELLACEAE			46#	18	--	-
...SURIRELLA	270	15	--	-	--	-
CYANOPHYTA (BLUE-GREEN ALGAE)						
..CYANOPHYCEAE						
...HORMOGONALES						
...OSCILLATORIACEAE						
...OSCILLATORIA	690#	37	--	-	19000#	92
...SPIRULINA	--	-	--	-	--	-
EUGLENOPHYTA (EUGLENOTDS)						
..EUGLENOPHYCEAE						
...EUGLENALES						
...EUGLENACEAE						
...TRACHELOMONAS	--	-	--	-	57#	80

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

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

YELLOWSTONE RIVER BASIN

227

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.

AVERAGE DISCHARGE.--7 years, 3.13 ft³/s (0.089 m³/s), 2,270 acre-ft/yr (2.80 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,480 ft³/s (70.2 m³/s) June 22, 1976, gage height, 11.32 ft (3.450 m), from floodmarks, from rating curve extended above 975 ft³/s (27.6 m³/s) on basis of contracted-opening and flow-over-road measurement of peak flow, present site and datum; maximum gage height, 11.6 ft (3.54 m) May 26, 1962, 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)
Mar. 18	1800	536 15.2	6.85 2.088	May 27	1600	356 10.1	5.89 1.795
May 18	1600	*1,420 40.2	10.08 3.072	May 30	0330	586 16.6	7.10 2.164
May 24	0030	338 9.57	5.77 1.759	July 7	0100	438 12.4	6.36 1.939

No flow for many days.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.00	.00	.00	.00	.10	7.0	3.0	14	.00
2	.00	.00	.00	.00	.00	.00	.00	.00	3.0	2.0	14	.00
3	.00	.00	.00	.00	.00	.00	.00	.00	2.0	1.0	1.0	.00
4	.00	.00	.00	.00	.00	.00	.00	1.0	1.5	2.0	.50	.00
5	.00	.00	.00	.00	.00	.00	.00	2.0	1.2	1.0	.30	.00
6	.00	.00	.00	.00	.00	.00	.00	1.0	1.0	20	.20	.00
7	.00	.00	.00	.00	.00	.00	.00	12	1.0	94	.10	.00
8	.00	.00	.00	.00	.00	.00	.00	67	.80	1.0	.02	5.4
9	.00	.00	.00	.00	.00	30	.00	40	.60	.50	.00	.10
10	.00	.00	.00	.00	.00	75	.00	12	.40	.20	.00	.10
11	.00	.00	.00	.00	.00	142	.00	1.0	.20	.10	.00	.10
12	.00	.00	.00	.00	.00	109	.00	.50	.10	.05	.00	.50
13	.00	.00	.00	.00	.00	51	.00	.20	.10	.00	.00	.30
14	.00	.00	.00	.00	.00	20	.00	.10	.10	.00	.00	.20
15	.00	.00	.00	.00	.00	13	.00	.10	.10	.00	.20	.10
16	.00	.00	.00	.00	.00	12	.00	3.0	.10	.00	.10	.10
17	.00	.00	.00	.00	.00	150	.00	150	1.0	1.0	.05	.10
18	.00	.00	.00	.00	.00	314	.00	819	.50	.10	.00	25
19	.00	.00	.00	.00	.00	241	.00	458	.40	.00	.00	1.0
20	.00	.00	.00	.00	.00	134	.00	108	.40	3.1	.00	.00
21	.00	.00	.00	.00	.00	58	.00	47	.30	25	.00	.00
22	.00	.00	.00	.00	.00	16	.00	24	.20	2.0	.00	.00
23	.00	.00	.00	.00	.00	6.9	.00	19	.10	.50	.00	.00
24	.00	.00	.00	.00	.00	2.0	.00	97	.10	.10	.00	.00
25	.00	.00	.00	.00	.00	1.0	.00	5.0	.20	.05	.00	.00
26	.00	.00	.00	.00	.00	.40	.00	1.0	.10	.05	.00	.00
27	.00	.00	.00	.00	.00	.10	.00	103	.10	.05	.00	.00
28	.00	.00	.00	.00	.00	.05	1.0	30	.10	.00	.00	.00
29	.00	.00	.00	.00	---	.04	2.0	5.0	.20	.00	.00	.00
30	.00	.00	.00	.00	---	.03	.50	181	33	.00	.00	.00
31	.00	---	.00	.00	---	.01	---	24	---	6.1	.00	---
TOTAL	.00	.00	.00	.00	.00	1375.53	3.50	2211.00	55.90	162.90	30.47	33.00
MEAN	.000	.000	.000	.000	.000	44.4	.12	71.3	1.86	5.25	.98	1.10
MAX	.00	.00	.00	.00	.00	314	2.0	819	33	94	14	25
MIN	.00	.00	.00	.00	.00	.00	.00	.00	.10	.00	.00	.00
AC-FT	.00	.00	.00	.00	.00	2730	6.9	4390	111	323	60	65
CAL YR 1977	TOTAL	425.99	MEAN	1.17	MAX	122	MIN	.00	AC-FT	845		
WTR YR 1978	TOTAL	3872.30	MEAN	10.6	MAX	819	MIN	.00	AC-FT	7680		

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.--5 years, 26.5 ft³/s (0.750 m³/s), 19,200 acre-ft/yr (23.7 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 536 ft³/s (15.2 m³/s) May 24, 1978, gage height, 4.65 ft (1.417 m); minimum daily, 1.2 ft³/s (0.034 m³/s) Jan. 16, 1977.

EXTREMES FOR CURRENT YEAR.--Peak discharges 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)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
May 15	1830	508 14.4	4.58 1.396	June 11	0300	314 8.89	3.99 1.216
May 24	2030	*536 15.2	4.65 1.417	June 16	0130	281 7.96	3.87 1.180

Minimum daily discharge, 3.3 ft³/s (0.093 m³/s) Mar. 4, 7, 8.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	9.9	3.7	6.1	4.8	4.1	3.7	20	30	171	84	31	11
2	8.3	7.1	6.1	4.6	4.1	3.6	24	31	160	80	36	10
3	7.7	8.7	6.1	4.6	4.3	3.4	22	44	160	77	37	9.5
4	6.8	8.0	6.1	4.6	4.3	3.3	17	31	169	69	28	9.1
5	6.8	9.1	6.1	4.8	4.3	3.4	15	23	180	62	24	9.1
6	6.1	9.1	6.1	4.8	4.5	3.4	13	17	180	60	22	8.3
7	6.4	7.4	6.4	5.0	4.5	3.3	14	14	214	65	26	8.0
8	6.4	7.1	6.1	4.8	4.5	3.3	22	22	192	61	20	7.7
9	6.4	6.6	6.1	4.8	4.5	3.4	25	27	207	66	21	7.7
10	5.5	6.4	6.1	4.8	4.5	3.6	15	42	245	57	20	7.4
11	4.1	8.0	6.1	4.6	4.5	3.7	12	57	236	51	19	12
12	7.1	9.1	6.1	4.6	4.5	3.6	12	56	169	47	17	16
13	8.7	8.0	6.1	4.6	4.0	3.7	11	54	173	43	16	12
14	8.0	7.4	5.8	4.6	4.0	3.7	9.9	88	220	40	22	12
15	7.1	7.4	5.8	4.6	4.0	3.6	11	238	214	38	34	11
16	6.8	7.4	6.1	4.6	3.8	3.6	12	251	207	37	21	9.9
17	6.1	6.8	5.4	4.5	3.7	3.4	14	242	160	36	19	9.9
18	5.5	6.8	5.6	4.5	3.7	3.4	8.7	199	138	35	21	14
19	5.2	6.8	5.5	4.5	3.7	3.8	9.9	180	140	33	19	15
20	5.2	6.4	5.2	4.5	3.7	4.1	8.3	209	125	35	17	13
21	7.1	6.4	5.2	4.5	3.7	4.1	12	251	114	58	15	13
22	7.7	6.1	5.2	4.3	3.7	4.5	9.9	302	123	53	14	15
23	7.1	6.1	5.2	4.3	3.7	4.3	8.3	364	116	37	14	14
24	7.4	6.1	5.2	4.3	3.6	4.1	8.3	385	116	31	13	14
25	6.4	6.1	5.0	4.3	3.6	4.1	13	320	112	28	12	12
26	6.4	6.4	5.2	4.3	3.6	4.1	17	278	98	26	12	12
27	6.1	6.8	5.2	4.3	3.6	4.6	31	281	88	26	12	10
28	6.1	6.4	5.2	4.5	3.8	5.5	41	230	92	25	12	9.5
29	6.4	6.1	5.2	4.3	---	8.0	31	242	99	31	14	9.5
30	6.8	6.1	5.2	4.3	---	12	35	251	93	28	15	9.5
31	5.0	---	5.0	4.3	---	16	---	197	---	28	12	---
TOTAL	206.6	209.9	175.8	140.9	112.5	142.3	502.3	4956	4711	1447	615	331.1
MEAN	6.66	7.00	5.67	4.55	4.02	4.59	16.7	160	157	46.7	19.8	11.0
MAX	9.9	9.1	6.4	5.0	4.5	16	41	385	245	84	37	16
MIN	4.1	3.7	5.0	4.3	3.6	3.3	8.3	14	88	25	12	7.4
AC-FT	410	416	349	279	223	282	996	9830	9340	2870	1220	657

CAL YR 1977	TOTAL	4844.9	MEAN	13.3	MAX	180	MIN	1.2	AC-FT	9610
WTR YR 1978	TOTAL	13550.4	MEAN	37.1	MAX	385	MIN	3.3	AC-FT	26880

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 fair, except those for periods of indefinite stage-discharge relation, which are poor. No diversion above station.

AVERAGE DISCHARGE.--12 years (water years 1943-49, 1974-78), 25.9 ft³/s (0.734 m³/s), 18,760 acre-ft/yr (23.1 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 discharges 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)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
May 15	1900	530 15.0	*4.00 1.219	June 11	0330	332 9.40	3.30 1.006
May 23	2100	*560 15.9	3.97 1.210	June 16	0200	307 8.69	3.12 0.951

Minimum daily discharge, 3.4 ft³/s (0.096 m³/s) on many days.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	8.1	4.1	5.2	4.1	3.6	3.4	17	32	190	85	32	13
2	7.8	5.4	5.0	4.1	3.4	3.4	21	33	175	82	37	13
3	7.2	6.6	5.0	3.9	3.4	3.4	21	50	180	79	36	12
4	7.2	6.6	5.0	3.9	3.4	3.4	15	35	190	76	30	12
5	6.9	7.5	5.0	3.9	3.4	3.4	13	24	200	68	24	11
6	6.6	7.5	5.0	3.9	3.4	3.4	12	19	200	68	24	11
7	6.6	6.3	5.0	3.9	3.6	3.4	14	14	230	72	29	11
8	6.6	5.8	5.0	3.9	3.6	3.4	21	23	210	67	23	11
9	6.3	3.9	5.0	3.9	3.6	3.4	26	31	230	72	23	10
10	6.0	4.3	5.0	3.9	3.6	3.4	16	47	260	63	22	10
11	5.2	5.6	5.0	3.9	3.6	3.4	12	65	250	57	21	15
12	7.2	6.6	5.0	3.9	3.6	3.4	11	64	175	53	19	19
13	8.7	6.3	5.0	3.9	3.6	3.6	10	65	182	50	18	15
14	8.1	6.0	5.0	3.9	3.6	3.6	11	107	241	48	24	14
15	7.2	6.0	5.0	3.9	3.6	3.4	12	260	241	45	36	13
16	6.9	5.8	5.0	3.9	3.6	3.4	13	270	232	43	24	12
17	6.6	5.6	4.5	3.9	3.6	3.4	14	260	168	42	21	12
18	6.3	5.2	5.0	3.9	3.4	3.4	10	220	137	40	23	17
19	5.8	5.4	5.0	3.9	3.4	3.4	11	200	137	38	21	18
20	5.8	5.2	4.7	3.9	3.4	3.6	9.4	230	122	40	19	15
21	6.3	5.0	4.7	3.9	3.4	3.6	12	270	114	63	17	15
22	7.2	5.0	4.7	3.9	3.4	3.9	11	320	120	55	16	18
23	7.2	5.0	4.7	3.6	3.4	3.9	9.0	380	116	39	16	16
24	6.9	5.2	4.7	3.6	3.4	3.9	8.7	400	116	32	16	16
25	6.3	5.4	4.7	3.9	3.4	3.9	13	340	111	29	15	15
26	6.6	5.4	4.7	3.9	3.4	3.9	17	300	97	27	14	13
27	6.3	5.4	4.3	3.6	3.4	4.1	32	300	86	27	14	12
28	5.8	5.4	4.3	3.6	3.4	4.3	45	241	91	26	14	12
29	5.8	5.4	4.3	3.6	---	5.8	35	253	99	32	16	12
30	5.8	5.4	4.3	3.6	---	8.7	38	256	92	29	17	12
31	5.6	---	4.1	3.6	---	14	---	220	---	29	15	---
TOTAL	206.9	168.3	148.9	119.2	97.6	128.6	510.1	5329	4992	1576	676	405
MEAN	6.67	5.61	4.80	3.85	3.49	4.15	17.0	172	166	50.8	21.8	13.5
MAX	8.7	7.5	5.2	4.1	3.6	14	45	400	260	85	37	19
MIN	5.2	3.9	4.1	3.6	3.4	3.4	8.7	14	86	26	14	10
AC-FT	410	334	295	236	194	255	1010	10570	9900	3130	1340	803

CAL YR 1977 TOTAL 4963.6 MEAN 13.6 MAX 184 MIN 1.7 AC-FT 9850
WTR YR 1978 TOTAL 14357.6 MEAN 39.3 MAX 400 MIN 3.4 AC-FT 28480

YELLOWSTONE RIVER BASIN

06316400 CRAZY WOMAN CREEK AT UPPER STATION, NEAR ARVADA, WY

LOCATION (REVISED).--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 1978.

GAGE.--Water-stage recorder. Altitude of gage is 3,765 ft (1,148 m), from topographic map.

REMARKS.--Records good except those for winter period, which are poor. Diversions for irrigation of about 12,000 acres (48.6 km²) above station.

AVERAGE DISCHARGE.--8 years, 54.0 ft³/s (1.529 m³/s), 39,120 acre-ft/yr (48.2 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, and for many days in 1966.

EXTREMES FOR CURRENT YEAR.--Peak discharges 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)
Mar. 20	--	unknown	-- --
May 20	1645	*2,200 62.3	10.00 3.048

Minimum daily discharge, 6.4 ft³/s (0.18 m³/s) Oct. 1.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6.4	16	20	10	10	14	56	67	906	193	48	12
2	7.2	16	20	10	10	13	55	57	798	157	57	13
3	8.2	16	19	9.0	10	12	54	80	701	139	52	22
4	9.4	15	18	9.0	10	11	54	76	638	128	54	22
5	9.4	15	17	8.0	11	12	57	109	597	118	55	20
6	12	15	16	8.0	12	15	52	144	572	112	58	16
7	12	16	16	8.0	13	20	45	202	572	106	54	14
8	12	17	15	8.0	14	22	38	303	548	99	46	14
9	13	15	15	8.0	14	23	35	259	572	103	41	12
10	13	14	14	8.0	14	25	35	206	537	104	42	12
11	14	16	14	8.0	14	27	33	202	534	117	37	12
12	14	16	15	8.0	13	50	36	193	563	111	34	19
13	14	15	17	8.0	13	150	34	199	575	95	34	20
14	14	17	19	9.0	12	135	30	194	460	86	35	19
15	13	17	20	9.0	12	120	28	194	557	81	37	26
16	15	17	21	9.0	11	110	26	235	481	77	32	26
17	16	16	21	10	10	100	26	548	460	69	37	23
18	15	14	20	10	10	150	27	1010	462	61	48	26
19	15	12	20	11	10	300	28	1380	377	58	37	27
20	15	10	19	11	9.0	500	27	2030	320	52	30	30
21	15	8.0	18	11	10	347	27	1450	302	52	27	36
22	15	8.0	17	12	11	219	26	1170	289	51	25	34
23	15	8.0	16	12	12	144	23	1160	251	56	24	28
24	15	10	16	12	13	105	24	1110	239	83	21	28
25	16	14	15	12	14	91	25	1150	228	69	17	29
26	17	16	14	12	14	84	22	1110	208	54	15	28
27	16	16	14	12	14	81	21	1040	196	48	16	29
28	15	17	13	11	14	74	26	958	181	43	16	32
29	15	19	12	11	---	65	28	928	169	41	15	31
30	16	21	12	10	---	62	45	854	182	38	14	29
31	16	---	11	10	---	59	---	869	---	37	13	---
TOTAL	418.6	442.0	514	304.0	334.0	3140	1043	19487	13475	2638	1071	689
MEAN	13.5	14.7	16.6	9.81	11.9	101	34.8	629	449	85.1	34.5	23.0
MAX	17	21	21	12	14	500	57	2030	906	193	58	36
MIN	6.4	8.0	11	8.0	9.0	11	21	57	169	37	13	12
AC-FT	830	877	1020	603	662	6230	2070	38650	26730	5230	2120	1370

WTR YR 1978 TOTAL 43555.6 MEAN 119 MAX 2030 MIN 6.4 AC-FT 86390

06316400 CRAZY WOMAN CREEK AT UPPER STATION, NEAR ARVADA, WY--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1967 to current year.

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

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	COLOR (PLAT- INUM- COBALT UNITS)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	STREP- TOCOCCEI FECAL, KF AGAR (COLS. PER 100 ML)	HARD- NESS (MG/L AS CAC03)
OCT 05...	1230	9.0	3180	8.4	8.5	--	10.2	110	--	--	--
NOV 03...	1230	16	1720	8.5	6.5	17	11.2	104	32	180	770
29...	1545	19	2200	8.2	.5	--	11.4	92	36	120	1000
DEC 21...	1400	18	1620	7.9	.5	--	12.0	95	84	310	720
JAN 20...	1345	11	1530	7.7	.0	--	9.0	71	29	330	700
FEB 08...	1130	14	1420	7.8	.0	--	10.2	80	K13	310	660
MAR 07...	1000	20	1750	7.7	.0	--	9.7	77	K7	930	720
APR 11...	1100	33	1610	8.0	7.0	--	11.2	106	30	100	710
MAY 25...	1600	1109	525	7.7	9.0	--	7.9	92	K430	410	200
JUN 13...	1130	591	445	7.9	16.0	--	5.6	98	930	950	180
JUL 11...	0835	109	1280	8.3	21.0	--	7.5	98	K330	980	580
AUG 01...	1530	53	1920	8.1	23.0	--	7.1	95	320	290	840
S29...	1555	15	2220	--	20.5	--	--	--	--	--	--
S31...	1600	12	2350	8.3	21.0	--	9.5	122	300	K250	1100

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

S-Seepage run data (see Explanation of Water-Quality Records).

DATE	HARD- NESS, NONCAR- BONATE (MG/L 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)	BICAR- BONATE (MG/L AS HCO3)	CAR- BONATE (MG/L AS CO3)	ALKA- LINITY (MG/L AS CAC03)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)
OCT 05...	--	--	--	--	--	--	260	2	220	--	--
NOV 03...	540	160	89	130	2.0	4.2	270	8	235	760	9.3
29...	700	220	120	160	2.2	5.4	370	0	300	970	14
DEC 21...	470	150	84	120	1.9	2.3	300	0	240	660	8.6
JAN 20...	480	150	80	98	1.6	3.3	270	0	220	670	8.1
FEB 08...	460	140	76	99	1.7	3.4	250	0	210	620	7.6
MAR 07...	480	150	85	120	1.9	4.5	290	0	240	690	9.0
APR 11...	520	160	75	120	2.0	5.3	230	0	190	680	8.3
MAY 25...	0	47	21	36	1.1	3.0	450	0	370	180	3.2
JUN 13...	98	42	18	27	.9	2.0	100	0	82	150	2.5
JUL 11...	420	130	62	89	1.6	3.7	201	0	160	680	7.9
AUG 01...	620	190	89	170	2.6	5.4	270	0	220	930	15
29...	--	--	--	--	--	--	--	--	--	--	--
31...	870	230	120	180	2.4	5.9	280	0	220	1200	19

YELLOWSTONE RIVER BASIN

06316400 CRAZY WOMAN CREEK AT UPPER STATION, NEAR ARVADA, WY--Continued

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

DATE	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)	SOLIDS, SUSP. TOTAL, RESIDUE AT 110 DEG. C (MG/L)	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)
OCT 05...	--	--	--	--	--	--	--	--	--	--	--
NOV 03...	.3	6.3	1390	1300	1.77	56.2	37	.01	.03	.35	.38
29...	.4	11	1910	1680	2.28	86.2	--	.06	.08	.34	.42
DEC 21...	.3	12	1250	1190	1.62	57.8	--	.18	.07	.32	.39
JAN 20...	.3	14	1190	1160	1.58	34.5	--	.26	.06	.44	.50
FEB 08...	.3	14	1160	1080	1.47	40.8	--	.30	.14	.16	.30
MAR 07...	.3	12	1300	1210	1.65	65.3	--	.26	.21	.60	.81
APR 11...	.2	8.7	1250	1170	1.59	104	--	.04	.01	.74	.75
MAY 25...	.2	11	357	523	.71	1570	--	.20	.25	2.3	2.5
JUN 13...	.1	12	311	303	.41	484	--	.07	.03	1.2	1.2
JUL 11...	.2	12	986	1080	1.47	318	--	.01	.03	.68	.71
AUG 01...	.3	11	1640	1540	2.09	221	--	.03	.01	.74	.75
29...	--	--	--	--	--	--	--	--	--	--	--
31...	.3	4.8	2090	1900	2.58	65.7	--	.05	.02	.70	.72

DATE	NITRO- GEN, TOTAL (MG/L AS N)	NITRO- GEN, TOTAL (MG/L AS NO3)	PHOS- PHORUS, TOTAL (MG/L AS P)	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)	PHYTO- PLANK- TON, TOTAL (CELLS PER ML)	PERI- PHYTON BIOMASS ASH WEIGHT G/SQ M	PERI- PHYTON BIOMASS TOTAL DRY WEIGHT G/SQ M	CHLOR-A PERI- PHYTON CHROMO- GRAPHIC FLUOROM (MG/M2)	CHLOR-B PERI- PHYTON CHROMO- GRAPHIC FLUOROM (MG/M2)
OCT 05...	--	--	--	--	--	--	--	--	--	--	--
NOV 03...	.39	1.7	.05	.01	6.7	1.7	2600	--	--	--	--
29...	.48	2.1	.03	.01	7.8	.7	2100	.000	.000	.000	.000
DEC 21...	.57	2.5	.04	.00	7.4	.6	790	--	--	--	--
JAN 20...	.76	3.4	.04	.01	4.4	2.2	120	--	--	--	--
FEB 08...	.60	2.7	.05	.01	4.9	--	260	--	--	--	--
MAR 07...	1.1	4.7	.08	.02	7.3	.7	320	--	--	--	--
APR 11...	.79	3.5	.06	.01	9.0	1.4	4100	.236	.630	.040	.000
MAY 25...	2.7	12	.97	.02	13	3.2	920	--	--	--	--
JUN 13...	1.3	5.6	.03	.02	10	>5.0	830	--	--	--	--
JUL 11...	.72	3.2	.10	.00	9.6	1.3	6800	--	--	--	--
AUG 01...	.78	3.5	.05	.00	11	1.0	3800	--	--	--	--
29...	--	--	--	--	--	--	--	--	--	--	--
31...	.77	3.4	.03	.01	10	.9	2600	64.6	73.5	11.1	.000

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

[illegible]

YELLOWSTONE RIVER BASIN

06316400 CRAZY WOMAN CREEK AT UPPER STATION, NEAR ARVADA, WY--Continued

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

DATE	COPPER, DIS- SOLVED (UG/L AS CU)	COPPER, RECOV. FM BOT- TOM MA- TERIAL (UG/G 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, 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 DIS- SOLVED (UG/L AS LI)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)
NOV 03...	1	8	1100	30	<100	0	10	50	50	110
29...	--	--	--	20	--	--	--	--	--	--
DEC 21...	--	--	--	20	--	--	--	--	--	--
JAN 20...	--	--	--	20	--	--	--	--	--	--
FEB 08...	4	--	--	10	--	0	--	--	40	--
MAR 07...	--	--	--	40	--	--	--	--	--	--
APR 11...	0	8	--	20	5	3	0	40	40	800
MAY 25...	--	--	--	50	--	--	--	--	--	--
JUN 13...	--	--	--	100	--	--	--	--	--	--
JUL 11...	--	--	--	20	--	--	--	--	--	--
AUG 01...	4	--	--	<10	--	3	--	--	50	--
31...	--	--	--	20	--	--	--	--	--	--

[illegible]

YELLOWSTONE RIVER BASIN

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06316400 CRAZY WOMAN CREEK AT UPPER STATION, NEAR ARVADA, WY--Continued

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

DATE	NICKEL, DIS- SOLVED (UG/L AS NI)	NICKEL, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS NI)	SELE- NIUM, TOTAL (UG/L AS SE)	SELE- NIUM, DIS- SOLVED (UG/L AS SE)	SELE- NIUM, TOTAL IN BOT- TOM MA- TERIAL (UG/G)	SILVER, TOTAL RECOV- ERABLE (UG/L AS AG)	VANA- DIUM, DIS- SOLVED (UG/L AS V)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN)	ZINC, DIS- SOLVED (UG/L AS ZN)	ZINC, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS ZN)
NOV										
03...	1	10	1	2	3	<10	.0	10	10	15
29...	--	--	--	--	--	--	--	--	--	--
DEC										
21...	--	--	--	--	--	--	--	--	--	--
JAN										
20...	--	--	--	--	--	--	--	--	--	--
FEB										
08...	2	--	--	3	--	--	.0	--	10	--
MAR										
07...	--	--	--	--	--	--	--	--	--	--
APR										
11...	3	25	1	0	0	--	.0	10	10	12
MAY										
25...	--	--	--	--	--	--	--	--	--	--
JUN										
13...	--	--	--	--	--	--	--	--	--	--
JUL										
11...	--	--	--	--	--	--	--	--	--	--
AUG										
01...	3	--	--	1	--	--	.0	--	<3	--
31...	--	--	--	--	--	--	--	--	--	--

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 ALPHA, DIS- SOLVED (PCI/L AS U-NAT)	GROSS ALPHA, SUSP. TOTAL (PCI/L AS U-NAT)
APR							
11...	1100	<26	4.2	7.0	5.3	<18	2.9
AUG							
01...	1530	<26	3.3	<7.1	4.2	<18	2.2

YELLOWSTONE RIVER BASIN

06316400 CRAZY WOMAN CREEK AT UPPER STATION, NEAR ARVADA, WY--Continued

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

DATE	TIME	TEMPER- ATURE (DEG C)	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SEDI- MENT, SUS- PENDED (MG/L)	SEDI- MENT DIS- CHARGE, SUS- PENDED (T/DAY)	SED. SUSP. FALL DIAM. % FINER THAN .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
OCT 05...	1230	8.5	9.0	135	3.3	--	--	--	--	--	--	--
NOV 03...	1230	6.5	16	67	2.9	--	--	--	--	--	--	--
29...	1545	.5	19	170	8.7	--	--	--	--	--	--	--
DEC 21...	1400	.5	18	97	4.7	--	--	--	--	--	--	--
JAN 20...	1345	.0	11	111	3.3	--	--	--	--	--	--	--
FEB 08...	1130	.0	14	103	3.9	--	--	--	--	--	--	--
MAR 07...	1000	.0	20	134	7.2	--	--	--	--	--	--	--
21...	1500	4.0	269	4190	3040	46	67	89	96	99	100	--
APR 11...	1100	7.0	33	105	9.4	--	--	--	--	--	--	--
MAY 19...	1930	9.0	1640	2765	12200	62	76	86	92	97	99	100
25...	1600	9.0	1110	2280	6830	43	60	79	91	97	99	100
JUN 13...	1130	16.0	591	1080	1720	--	--	--	--	--	--	--
30...	1030	21.0	171	1030	476	--	--	--	--	--	--	--
JUL 11...	0835	21.0	109	215	63	--	--	--	--	--	--	--
AUG 01...	1530	23.0	53	134	19	--	--	--	--	--	--	--
31...	1600	21.0	13	79	2.8	--	--	--	--	--	--	--

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
NOV 03...	1230	6.5	16	3	3	7	18
APR 11...	1100	7.0	33	5	13	32	57

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
NOV 03...	32	37	42	52	58	80	100
APR 11...	72	80	89	95	97	100	--

06316400 CRAZY WOMAN CREEK AT UPPER STATION, NEAR ARVADA, WY--Continued

QUALITATIVE AND ASSOCIATED QUANTITATIVE ANALYSES OF BIOLOGICAL DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
PHYTOPLANKTON ANALYSES

DATE TIME	NOV 3,77 1230	NOV 29,77 1545	DEC 21,77 1400	JAN 20,78 1345	FEB 8,78 1130	MAR 7,78 1000		
TOTAL CELLS/ML	2600	2100	790	120	260	320		
DIVERSITY: DIVISION	1.5	0.4	1.3	0.0	0.6	0.6		
..CLASS	1.5	0.4	1.3	0.0	0.6	0.6		
...ORDER	2.1	0.4	1.4	0.0	0.6	0.9		
...FAMILY	2.6	0.6	1.8	0.0	0.6	2.3		
....GENUS	3.1	0.6	1.8	0.0	0.9	2.3		
ORGANISM	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT
CHLOROPHYTA (GREEN ALGAE)								
..CHLOROPHYCEAE								
...CHLOROCOCCALES								
...MICRACTINIACEAE								
....GOLENKINIA	--	-	--	-	--	-	--	-
....MICRACTINIUM	--	-	--	-	--	-	--	-
...OOCYSTACEAE								
....ANKISTRODESMUS	200	8	35	2	89	11	34	13
....CHODATELLA	--	-	--	-	--	-	--	-
....KIRCHNERIELLA	--	-	--	-	--	-	--	-
....OOCYSTIS	--	-	--	-	--	-	--	-
....SELENASTRUM	--	-	--	-	--	-	--	-
...SCENEDESMACEAE								
....ACTINASTRUM	--	-	--	-	--	-	--	-
....SCENEDESMUS	400#	15	--	-	--	-	--	-
....TETRASTRUM	160	6	--	-	--	-	--	-
...VOLVOCALES								
...CHLAMYDOMONADACEAE								
....CHLAMYDOMONAS	20	1	--	-	--	-	9	3
CHRYSOPHYTA								
..BACILLARIOPHYCEAE								
...CENTRALES								
...COSCINODISCACEAE								
....CYCLOTELLA	180	7	--	-	7	1	--	-
....MELOSIRA	79	3	--	-	--	-	--	-
....STEPHANODISCUS	320	12	--	-	--	-	--	-
...PENNALES								
...ACHNANTHACEAE								
....ACHNANTHES	--	-	--	-	--	-	--	-
....RHOICOSPHENIA	--	-	--	-	--	-	--	-
....CYMBELLACEAE								
....CYMBELLA	--	-	--	-	--	-	--	-
....EPITHEMIA	--	-	--	-	--	-	--	-
...DIATOMACEAE								
....DIATOMA	--	-	17	1	--	-	--	-
...FRAGILARIACEAE								
....SYNEDRA	--	-	--	-	110	14	--	-
...GOMPHONEMACEAE								
....GOMPHONEMA	--	-	--	-	--	-	--	-
...NAVICULACEAE								
....CALONEIS	--	-	--	-	7	1	--	-
....GYROSIGMA	--	-	--	-	--	-	--	-
...NAVICULA	120	5	52	2	30	4	--	-
...NITZSCHACEAE								
....CYLINDROTHECA	--	-	--	-	--	-	17	7
....NITZSCHIA	750#	29	1900#	92	66	8	120#	100
...SURIPELLACEAE								
....CYMATOPLEURA	--	-	--	-	--	-	--	-
....SURIPELLA	20	1	--	-	--	-	--	-
..CHRYSOPHYCEAE								
...CHRYSONOMADALES								
...OCHROMONADACEAE								
....OCHROMONAS	--	-	--	-	--	-	--	-
CRYPTOPHYTA (CRYPTOMONADS)								
..CRYPTOPHYCEAE								
...CRYPTOMONIDALES								
...CRYPTOCHRYSIDACEAE								
....CHROOMONAS	--	-	--	-	--	-	--	-
...CRYPTOMONODACEAE								
....CRYPTOMONAS	--	-	--	-	--	-	--	-
CYANOPHYTA (BLUE-GREEN ALGAE)								
..CYANOPHYCEAE								
...HORMOGONALES								
...OSCILLATORIACEAE								
....OSCILLATORIA	160	6	52	2	480#	61	--	-
EUGLENOPHYTA (EUGLENOIDS)								
..EUGLENOPHYCEAE								
...EUGLENALES								
...EUGLENACEAE								
....EUGLENA	--	-	--	-	--	-	--	-
....TRACHELOMONAS	180	7	17	1	--	-	--	-

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

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

QUALITATIVE AND ASSOCIATED QUANTITATIVE ANALYSES OF BIOLOGICAL DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
PHYTOPLANKTON ANALYSES

DATE TIME	APR 11,78 1100	MAY 25,78 1600	JUN 13,78 1130	JUL 11,78 0835	AUG 1,78 1530	AUG 31,78 1600				
TOTAL CELLS/ML	4100	920	830	6800	3800	2600				
DIVERSITY: DIVISION	1.0	0.5	0.9	0.8	1.3	1.1				
..CLASS	1.0	0.5	0.9	0.8	1.6	1.8				
...ORDER	1.7	0.5	1.3	1.7	2.0	1.9				
....FAMILY	1.9	0.7	2.9	1.9	2.6	2.4				
.....GENUS	1.9	0.7	2.9	1.9	2.7	2.5				
ORGANISM	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT
CHLOROPHYTA (GREEN ALGAE)										
..CHLOROPHYCEAE										
...CHLOROCOCCALES										
....MICRACTINIACEAE										
.....GOLENKINIA	--	-	--	-	--	-	34	1	--	-
....MICRACTINIUM	--	-	--	-	--	-	--	-	--	-
....OOCYSTACEAE										
.....ANKISTRODESMUS	170	4	--	-	23	3	680#	18	160	6
.....CHODATELLA	--	-	--	-	23	3	--	-	--	-
.....KIRCHNERIELLA	--	-	--	-	63	1	--	-	--	-
.....OOCYSTIS	--	-	--	-	--	-	68	2	--	-
.....SELENASTRUM	--	-	--	-	--	-	--	-	23	1
....SCENEDESMACEAE										
.....ACTINASTRUM	--	-	--	-	93	11	--	-	--	-
.....SCENEDESMUS	--	-	--	-	--	-	480	13	140	5
.....TETRASTRUM	--	-	--	-	510	7	--	-	--	-
...VOLVOCALES										
....CHLAMYDOMONADACEAE										
.....CHLAMYDOMONAS	200	5	--	-	--	-	820	12	170	5
CHRYSOPHYTA										
..BACILLARIOPHYCEAE										
...CENTRALES										
....COSCINODISCAEAE										
.....CYCLOTETRA	860#	21	--	-	93	11	3700#	54	100	3
.....MELOSIRA	--	-	--	-	--	-	--	-	--	-
....STEPHANODISCUS	--	-	--	-	--	-	--	-	--	-
...PENNALES										
....ACHNANTHACEAE										
.....ACHNANTHES	--	-	--	-	23	3	--	-	120	4
.....RHOICOSPHEA	--	-	--	-	--	-	--	-	--	-
....CYMBELLACEAE										
.....CYMBELLA	--	-	22	2	--	-	--	-	--	-
.....EPITHEMIA	--	-	--	-	23	3	--	-	--	-
....DIATOMACEAE										
.....DIATOMA	--	-	--	-	--	-	--	-	--	-
....FRAGILARIACEAE										
.....SYNEDRA	29	1	22	2	46	6	--	-	--	-
....GOMPHONEMACEAE										
.....GOMPHONEMA	--	-	--	-	69	8	63	1	--	-
....NAVICULACEAE										
.....CALONFIS	--	-	--	-	--	-	--	-	--	-
....GYROSIGMA	--	-	22	2	--	-	--	-	--	-
....NAVICULA	29	1	--	-	--	-	130	2	100	3
....NITZSCHACEAE										
.....CYLINDROTHECA	--	-	--	-	--	-	--	-	--	-
....NITZSCHIA	2300#	56	22	2	300#	36	1500#	22	1600#	41
....SURIPELLACEAE										
.....CYMATOPLEURA	--	-	--	-	--	-	--	-	23	1
....SURIPELLA	86	2	--	-	46	6	--	-	--	-
CHRYSOPHYCEAE										
...CHRYSONOMADALES										
....OCHROMONADACEAE										
.....OCHROMONAS	*	0	--	-	--	-	310	8	1200#	46
CRYPTOPHYTA (CRYPTOMONADS)										
..CRYPTOPHYCEAE										
...CRYPTOMONIDALES										
....CRYPTOCHRYSIDACEAE										
.....CHROOMONAS	--	-	--	-	--	-	100	3	--	-
....CRYPTOMONODACEAE										
.....CRYPTOMONAS	29	1	--	-	63	1	140	4	--	-
CYANOPHYTA (BLUE-GREEN ALGAE)										
..CYANOPHYCEAE										
...HORMOGONALES										
....OSCILLATORIACEAE										
.....OSCILLATORIA	--	-	830#	90	--	-	--	-	210	8
EUGLENOPHYTA (EUGLENOIDS)										
..EUGLENOPHYCEAE										
...EUGLENALES										
....EUGLENACEAE										
.....EUGLENA	--	-	--	-	--	-	34	1	23	1
....TRACHELOMONAS	400	10	--	-	--	-	--	-	23	1

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.--47 years (water years 1931-33, 1935-78), 283 ft³/s (8.015 m³/s), 205,000 acre-ft/yr (253 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.--Peak discharges above base of 2,800 ft³/s (79.3 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)
Mar. 11	unknown	unknown	b11.4 3.48	May 20	a0700	*32,500 920	b16.9 5.15
May 12	0830	3,540 100	6.99 2.131	June 29	0900	2,940 83.3	5.50 1.676

a-About.

b-From floodmarks.

Minimum daily discharge, 62 ft³/s (1.76 m³/s) Sept. 11.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	120	146	130	76	82	115	345	544	3620	1500	190	95
2	487	134	130	76	90	110	340	544	3240	1260	342	101
3	581	129	140	78	100	110	290	617	2860	900	390	110
4	300	120	130	80	105	120	315	792	2590	640	342	83
5	193	129	120	82	105	130	340	1060	2240	440	249	86
6	140	129	110	86	110	130	310	1870	2170	480	214	80
7	152	134	120	80	105	135	265	1900	2260	640	185	74
8	143	143	100	78	105	135	255	2070	2460	1040	160	83
9	143	131	80	80	100	140	245	1850	2540	1290	134	80
10	152	131	85	86	98	145	214	2030	2480	970	122	98
11	129	131	100	90	96	3000	222	2720	2410	1300	118	62
12	134	146	90	92	96	2500	222	3150	2410	970	110	86
13	129	134	85	92	100	2000	222	2310	2330	740	92	98
14	131	143	90	90	105	1600	230	1720	1900	560	146	95
15	129	168	85	86	110	1200	222	1320	1890	500	207	89
16	120	172	82	86	105	1100	240	1250	1920	400	138	86
17	131	168	80	90	110	1300	230	3280	1730	342	130	118
18	131	160	80	88	115	1600	226	8200	1720	263	200	185
19	131	140	78	86	120	2000	245	16700	1590	315	279	256
20	129	130	76	90	110	2500	235	22600	1510	333	195	288
21	129	120	78	90	130	2000	226	7210	1330	342	150	470
22	137	130	80	90	140	1700	230	4890	1310	342	142	460
23	131	134	84	88	140	1500	202	4210	1160	1460	160	200
24	129	126	82	86	130	1000	210	4010	800	1320	165	160
25	137	123	78	84	120	720	270	4000	900	880	146	150
26	143	131	78	88	120	500	210	4050	950	540	150	150
27	134	137	78	90	120	460	222	4190	1050	351	126	145
28	123	140	80	86	115	472	300	4100	1150	297	120	145
29	131	140	78	86	---	405	335	3910	1300	249	110	142
30	131	140	78	84	---	370	345	3940	1470	200	100	140
31	134	---	78	84	---	340	---	3730	---	165	95	---
TOTAL	5164	4139	2863	2648	3082	29537	7763	124767	57290	21029	5407	4415
MEAN	167	138	92.4	85.4	110	953	259	4025	1910	678	174	147
MAX	581	172	140	92	140	3000	345	22600	3620	1500	390	470
MIN	120	120	76	76	82	110	202	544	600	165	92	62
AC-FT	10240	8210	5680	5250	6110	58590	15400	247500	113600	41710	10720	8760
CAL YR 1977 TOTAL	88833.8			MEAN 243	MAX 3130	MIN 9.8	AC-FT 176200					
WTR YR 1978 TOTAL	268104.0			MEAN 735	MAX 22600	MIN 62	AC-FT 531800					

WATER-QUALITY RECORDS

LOCATION.--Samples collected at bridge on county road 0.1 mi (0.2 km) south of Arvada, 0.3 mi (0.5 km) upstream from Wild Horse Creek, and 0.5 mi (0.8 km) downstream from discharge station.

PERIOD OF RECORD.--Water years 1946-57, 1968 to current year.

PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: March 1949 to September 1957, October 1967 to current year.

SUSPENDED-SEDIMENT DISCHARGE: April 1946 to September 1957, October 1967 to September 1971, January 1975 to current year.

REMARKS.--No appreciable inflow between discharge station and sampling point except during periods of intense local rainfall. No sediment concentrations Nov. 12, 1977 to Mar. 19, 1978.

EXTREMES FOR PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: Maximum observed, 35.0°C Aug. 29, 1978; minimum, 0.0°C on many days during winter period.

SEDIMENT CONCENTRATIONS: Maximum daily mean, 113,000 mg/L July 19, 1954; minimum daily mean, no flow for many days most years.

SEDIMENT LOADS: Maximum daily, 2,810,000 tons (2,549,000 tonnes) May 20, 1978; minimum daily, 0 tons on many days most years.

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURES: Maximum observed, 35.0°C Aug. 29; minimum, 0.0°C on many days during November to March.

SEDIMENT CONCENTRATIONS: Maximum daily mean, 55,000 mg/L May 12; minimum daily mean, not determined.

SEDIMENT LOADS: Maximum daily, 2,810,000 tons (2,549,000 tonnes) May 20; minimum daily, not determined.

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

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	TUR- BID- ITY (JTU)	OXYGEN, DIS- SOLVED (MG/L)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	HARD- NESS (MG/L AS CACO3)	HARD- NESS, NONCAR- BONATE (MG/L CACO3)
OCT										
01...	1500	117	2600	--	9.5	3000	9.1	350	760	570
NOV										
11...	1200	A131	2200	--	1.0	3600	--	--	540	280
DEC										
10...	1130	A85	2800	--	.0	20	--	--	620	280
JAN										
02...	1200	A76	2900	--	.0	140	9.4	K120	700	350
FEB										
03...	1200	A100	2600	--	.0	--	--	--	490	160
MAR										
04...	1200	A120	2500	--	.0	1500	--	--	490	260
31...	1200	345	2700	--	11.0	500	9.5	K30	670	430
MAY										
12...	1230	3150	2400	--	11.0	7500	--	--	2800	2700
JUN										
09...	1100	2520	1090	8.3	18.0	750	--	--	320	200
JUL										
21...	1215	333	2300	8.3	15.5	650	8.3	280	530	330
AUG										
18...	1210	126	3000	8.2	15.0	--	--	--	650	450
SEP										
S01...	1215	92	3200	8.3	21.5	--	--	--	720	480
15...	1130	86	3700	8.4	15.0	--	--	--	790	570

A-Daily mean discharge.

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

S-Seepage run data (see Explanation of Water-Quality Records).

DATE	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	BICAR- BONATE (MG/L AS HCO3)	CAR- BONATE (MG/L AS CO3)	ALKA- LINITY (MG/L AS CACO3)	SULFATE DIS- SOLVED (MG/L AS SO4)
OCT									
01...	180	75	380	6.0	9.2	230	0	190	1100
NOV									
11...	120	57	370	7.0	7.4	320	0	260	690
DEC									
10...	140	62	420	7.4	7.2	410	0	340	810
JAN									
02...	170	66	470	7.8	7.0	430	0	350	840
FEB									
03...	140	37	390	7.6	5.7	400	0	330	610
MAR									
04...	100	36	400	8.7	6.0	280	0	230	670
31...	180	54	350	5.9	7.2	290	0	240	870
MAY									
12...	160	58	340	5.9	7.7	140	0	120	1200
JUN									
09...	83	27	100	2.4	4.1	150	0	120	350
JUL									
21...	130	47	330	6.3	.6	230	9	200	770
AUG									
18...	170	63	430	7.2	7.7	250	0	200	960
SEP									
01...	160	78	470	7.6	9.4	290	0	240	1000
15...	190	77	480	7.4	8.5	270	0	220	1000

YELLOWSTONE RIVER BASIN

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06317000 POWDER RIVER AT ARVADA, WY--Continued

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

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, 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, NITRATE DIS- SOLVED (MG/L AS N)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N)
OCT									
01...	210	1.0	5.6	--	2060	2.80	651	.36	--
NOV									
11...	270	.6	7.7	--	1680	2.28	594	.11	--
DEC									
10...	280	.8	12	--	1940	2.64	445	.59	--
JAN									
02...	310	1.0	15	--	2090	2.84	429	.63	--
FEB									
03...	270	1.2	13	--	1660	2.26	448	.47	--
MAR									
04...	260	.8	11	--	1620	2.20	525	.68	--
31...	200	.8	13	--	1820	2.48	1700	.77	--
MAY									
12...	64	1.0	9.2	--	1900	2.58	16200	1.1	--
JUN									
09...	3.7	.6	8.2	--	653	.89	4440	.54	--
JUL									
21...	190	.8	5.5	--	1590	2.16	1430	.41	--
AUG									
18...	270	1.1	7.3	--	2030	2.76	691	.27	--
SEP									
01...	390	.7	9.0	2420	2260	3.07	561	--	.02
15...	380	1.0	6.7	--	2280	3.10	529	.02	--

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, DIS- SOLVED (MG/L AS P)	BORON, DIS- SOLVED (UG/L AS B)	IRON, DIS- SOLVED (UG/L AS FE)
OCT									
01...	--	--	--	--	--	.02	--	--	--
NOV									
11...	--	--	--	--	--	.00	--	--	--
DEC									
10...	--	--	--	--	--	.00	--	--	--
JAN									
02...	--	--	--	--	--	.09	--	--	--
FEB									
03...	--	--	--	--	--	.11	--	--	--
MAR									
04...	--	--	--	--	--	.29	--	--	--
31...	--	--	--	--	--	.24	--	--	--
MAY									
12...	--	--	--	--	--	.00	--	--	--
JUN									
09...	--	--	--	--	--	1.9	--	--	--
JUL									
21...	--	--	--	--	--	.08	--	--	--
AUG									
18...	--	--	--	--	--	.44	--	--	--
SEP									
01...	.02	1.2	1.2	1.2	5.4	.39	.01	600	20
15...	--	--	--	--	--	.05	--	--	--

YELLOWSTONE RIVER BASIN

06317000 POWDER RIVER AT ARVADA, WY--Continued

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

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 .500 MM	SED. SUSP. FALL DIAM. % FINER THAN 1.00 MM
OCT												
11...	1650	7.5	152	4480	1840	58	81	87	96	100	--	--
MAR												
20...	1515	6.5	2120	17000	97300	28	41	65	87	98	100	--
30...	1315	14.5	370	3750	3750	38	52	62	79	87	98	100
APR												
11...	0945	10.0	222	1720	1030	32	43	65	88	98	100	--
MAY												
12...	1615	12.0	3310	51000	456000	41	60	83	94	97	98	100
19...	1305	9.0	16400	41500	1840000	39	57	81	95	100	--	--
20...	1435	13.0	17800	38700	1860000	41	61	83	94	99	100	--
21...	1415	18.5	5050	32000	436000	38	58	85	96	99	100	--
JUN												
05...	1515	18.0	2180	6050	35600	22	35	59	84	98	100	--
JUL												
05...	1800	21.0	470	4550	5770	58	76	85	94	96	98	100

DATE	TIME	TEMPER- ATURE (DEG C)	STREAM- FLOW, INSTAN- TANEOUS (CFS)	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
MAR							
30...	1315	14.5	370	12	12	39	84
MAY							
12...	1615	12.0	3310	4	5	10	26
JUL							
05...	1800	21.0	470	6	0	5	57
SEP							
05...	1555	--	--	--	0	1	43

DATE	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
MAR						
30...	98	100	--	--	--	--
MAY						
12...	56	91	95	97	99	100
JUL						
05...	89	95	97	98	100	--
SEP						
05...	77	89	92	96	98	100

YELLOWSTONE RIVER BASIN

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06317000 POWDER RIVER AT ARVADA, WY--Continued

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	9.0	2.0	.0	.0	.0	.0	13.0	11.0	12.0	27.0	---	---
2	12.0	2.0	.0	.0	.0	.0	---	16.0	17.0	---	18.0	---
3	18.0	7.0	.0	.0	.0	.0	12.0	14.0	17.0	---	---	---
4	5.0	4.0	.0	.0	.0	.0	14.0	8.0	19.0	---	26.0	---
5	13.0	5.0	.0	.0	.0	---	---	8.5	18.0	21.0	---	29.0
6	8.0	7.0	.0	.0	.0	---	---	6.5	22.0	23.0	---	---
7	11.0	2.0	.0	.0	.0	---	7.0	4.5	19.0	---	25.5	---
8	8.0	---	.0	.0	.0	---	10.0	---	20.0	25.0	---	---
9	6.0	---	.0	.0	.0	---	---	14.0	---	---	---	30.0
10	5.0	---	.0	.0	.0	---	---	12.5	20.0	23.0	---	30.0
11	7.5	4.5	.0	.0	.0	---	10.0	13.0	17.5	---	30.0	15.0
12	---	---	.0	.0	.0	---	5.0	12.0	29.0	---	28.0	---
13	6.0	---	.0	.0	.0	---	4.5	16.0	20.0	---	---	---
14	11.0	---	.0	.0	.0	---	7.0	20.0	23.0	---	15.0	---
15	6.0	---	.0	.0	.0	---	9.0	24.0	---	---	24.0	---
16	6.0	---	.0	.0	.0	---	8.0	16.0	---	---	23.0	---
17	12.0	---	.0	.0	.0	---	7.5	10.0	---	24.0	---	---
18	7.0	---	.0	.0	.0	---	4.5	8.5	---	23.0	---	---
19	7.0	---	.0	.0	.0	---	4.5	9.0	15.0	21.0	25.0	---
20	8.0	---	.0	.0	.0	6.5	2.0	13.0	20.0	17.0	---	---
21	9.0	---	.0	.0	.0	5.0	5.0	18.5	21.0	20.0	25.0	---
22	9.0	---	.0	.0	.0	5.0	---	19.0	---	20.0	22.0	---
23	12.0	---	.0	.0	.0	5.0	8.0	19.5	---	---	25.0	---
24	12.0	---	.0	.0	.0	6.0	4.0	18.0	25.0	---	30.0	---
25	7.0	---	.0	.0	.0	8.0	8.0	20.0	22.0	23.0	---	---
26	7.0	---	.0	.0	.0	13.0	11.0	18.0	24.0	26.0	25.0	---
27	5.0	---	.0	.0	.0	14.0	11.5	17.0	---	27.0	20.0	---
28	9.0	---	.0	.0	.0	12.0	10.5	19.0	---	---	23.0	---
29	8.0	---	.0	.0	---	17.0	10.5	16.0	---	25.0	35.0	---
30	9.0	---	.0	.0	---	14.5	13.0	13.0	---	24.0	30.0	---
31	5.0	---	.0	.0	---	13.0	---	13.5	---	25.5	32.0	---
MEAN	8.5	4.0	.0	.0	.0	7.5	8.5	14.5	20.0	23.0	25.5	26.0
WTR YR 1978	MEAN	9.5		MAX	35.0	MIN	.0					

06317000 POWDER RIVER AT ARVADA, WY--Continued

SUSPENDED-SEDIMENT DISCHARGE (TONS/DAY), WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

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	120	19500	6320	146	2350	926	130		
2	487	30000	39400	134	2350	850	130		
3	581	34000	53300	129	2500	871	140		
4	300	18500	15000	120	2400	778	130		
5	193	17900	9330	129	2350	819	120		
6	140	15400	5820	129	2250	784	110		
7	152	8600	3530	134	2300	832	120		
8	143	5500	2120	143	2700	1040	100		
9	143	4300	1660	131	2800	990	80		
10	152	4400	1810	131	2800	990	85		
11	129	4300	1500	131	2800	990	100		
12	134	3700	1340	146	---	---	90		
13	129	3200	1110	134	---	---	85		
14	131	2950	1040	143	---	---	90		
15	129	2900	1010	168	---	---	85		
16	120	2900	940	172	---	---	82		
17	131	2600	920	168	---	---	80		
18	131	2400	849	160	---	---	80		
19	131	2400	849	140	---	---	78		
20	129	2300	801	130	---	---	76		
21	129	2250	784	120	---	---	78		
22	137	2800	1040	130	---	---	80		
23	131	2800	990	134	---	---	84		
24	129	2700	940	126	---	---	82		
25	137	2900	1070	123	---	---	78		
26	143	2800	1080	131	---	---	78		
27	134	2200	796	137	---	---	78		
28	123	2100	697	140	---	---	80		
29	131	2200	778	140	---	---	78		
30	131	2150	760	140	---	---	78		
31	134	2300	832	---	---	---	78		
TOTAL	5164	---	158416	4139	---	9870	2863		
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)
JANUARY				FEBRUARY			MARCH		
1	76			82			115	---	---
2	76			90			110	---	---
3	78			100			110	---	---
4	80			105			120	---	---
5	82			105			130	---	---
6	86			110			130	---	---
7	80			105			135	---	---
8	78			105			135	---	---
9	80			100			140	---	---
10	86			98			145	---	---
11	90			96			3000	---	---
12	92			96			2500	---	---
13	92			100			2000	---	---
14	90			105			1600	---	---
15	86			110			1200	---	---
16	86			105			1100	---	---
17	90			110			1300	---	---
18	88			115			1600	---	---
19	86			120			2000	---	---
20	90			110			2500	21500	145000
21	90			130			2000	10700	57800
22	90			140			1700	7280	33400
23	88			140			1500	6000	24300
24	86			130			1000	4720	12700
25	84			120			720	4900	9530
26	88			120			500	4140	5590
27	90			120			460	3380	4200
28	86			115			472	4050	5160
29	86			---			405	3420	3740
30	84			---			370	3500	3500
31	84			---			340	3100	2850
TOTAL	2648			3082			29537	---	307770

06317000 POWDER RIVER AT ARVADA, WY--Continued

SUSPENDED-SEDIMENT DISCHARGE (TONS/DAY), WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DAY	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
APRIL			MAY			JUNE			
1	345	3200	2980	544	13500	19800	3620	23800	233000
2	340	3250	2980	544	11700	17200	3240	22300	195000
3	290	3050	2390	617	10500	17500	2860	13000	100000
4	315	2800	2380	792	10800	23100	2590	9900	69200
5	340	2700	2480	1060	14300	40900	2240	12200	73800
6	310	2550	2130	1870	32000	162000	2170	16900	99000
7	265	2480	1770	1900	33600	172000	2260	15800	96400
8	255	2500	1720	2070	36400	203000	2460	18600	124000
9	245	2500	1650	1850	35200	176000	2540	20800	143000
10	214	2040	1180	2030	41900	230000	2480	18300	123000
11	222	1740	1040	2720	50800	373000	2410	18400	120000
12	222	1800	1080	3150	55000	468000	2410	18800	122000
13	222	2160	1290	2310	49700	310000	2330	15400	96900
14	230	2200	1370	1720	35600	165000	1900	12100	62100
15	222	1760	1050	1320	23900	85200	1890	13200	67400
16	240	2670	1730	1250	19600	66100	1920	14400	74600
17	230	2080	1290	3280	42300	375000	1730	11500	53700
18	226	2240	1370	8200	37400	828000	1720	11500	53400
19	245	2630	1740	16700	43000	1940000	1590	9630	41300
20	235	2470	1570	22600	46000	2810000	1510	9540	38900
21	226	2070	1260	7210	34600	674000	1330	8010	28800
22	230	1930	1200	4890	36500	482000	1310	9200	32500
23	202	1960	1070	4210	38200	434000	1160	8300	26000
24	210	2130	1210	4010	35700	387000	800	7380	15900
25	270	2380	1740	4000	27800	300000	900	7110	17300
26	210	1650	936	4050	29500	323000	950	5940	15200
27	222	1800	1080	4190	27700	313000	1050	5500	15600
28	300	4700	3810	4100	24700	273000	1150	7800	24200
29	335	4500	4070	3910	23000	243000	1300	13700	48100
30	345	6500	6050	3940	22600	240000	1470	19500	77400
31	---	---	---	3730	22100	223000	---	---	---
TOTAL	7763	---	57616	124767	---	12373800	57290	---	2287700
DAY	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
JULY			AUGUST			SEPTEMBER			
1	1500	16600	67200	190	3100	1590	95	820	210
2	1260	13300	45200	342	11000	10200	101	730	199
3	900	8100	19700	390	12400	13100	110	630	187
4	640	5600	9680	342	8000	7390	83	560	125
5	440	5100	6060	249	3700	2490	86	510	118
6	480	5670	7350	214	12500	7220	80	480	104
7	640	11600	20000	185	2010	1000	74	460	92
8	1040	27900	78300	160	2000	864	83	620	139
9	1290	29600	103000	134	2180	789	80	640	138
10	970	19500	51100	122	2460	810	98	630	167
11	1300	20600	72300	118	2760	879	62	420	70
12	970	13200	34600	110	2320	689	86	460	107
13	740	11200	22400	92	1600	397	98	500	132
14	560	9990	15100	146	1460	576	95	500	128
15	500	10200	13800	207	1420	794	89	540	130
16	400	6390	6900	138	1520	566	86	650	151
17	342	6660	6150	130	1940	681	118	740	236
18	263	7020	4980	200	2820	1520	185	1120	559
19	315	7500	6380	279	3100	2340	256	1600	1110
20	333	8400	7550	195	2840	1500	288	1930	1500
21	342	5800	5360	150	2600	1050	470	2550	3240
22	342	4800	4430	142	1820	698	460	2450	3040
23	1460	33200	131000	160	1100	475	200	3040	1640
24	1320	38000	135000	165	1090	486	160	4420	1910
25	880	27100	64400	146	1010	398	150	5380	2180
26	540	17800	26000	150	960	389	150	4000	1620
27	351	10700	10100	126	910	310	145	2500	979
28	297	9400	7540	120	890	288	145	2100	822
29	249	5400	3630	110	760	226	142	2000	767
30	200	2800	1510	100	640	173	140	2000	756
31	165	1800	802	95	780	200	---	---	---
TOTAL	21029	---	987522	5407	---	60088	4415	---	22556
YEAR	268104		16265338						

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. 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.--52 years (water years 1898-99, 1918-27, 1939-78), 63.4 ft³/s (1.795 m³/s), 45,930 acre-ft/yr (56.6 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 23	2000	740 21.0	4.05 1.234	June 24	0830	550 15.6	3.67 1.119
June 10	0700	791 22.4	4.13 1.259	June 29	0600	473 13.4	3.49 1.064
June 16	0530	*868 24.6	4.24 1.292				

Minimum daily discharge, 12 ft³/s (0.34 m³/s) Mar. 11, 14, 15.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	30	13	17	14	13	13	44	65	326	394	139	42
2	26	26	16	14	13	13	61	59	299	366	126	40
3	24	22	16	14	14	13	50	68	296	363	119	38
4	23	22	16	14	14	13	32	66	296	322	100	37
5	23	22	16	14	14	13	32	57	313	268	85	36
6	23	21	16	14	13	13	28	50	394	248	80	35
7	24	20	17	14	13	13	30	40	510	236	77	34
8	23	18	17	13	13	13	43	57	482	242	72	34
9	22	13	16	14	13	13	48	62	555	265	69	34
10	23	14	18	14	13	13	31	91	704	254	68	33
11	18	20	17	14	13	12	27	116	575	242	65	40
12	25	24	17	14	13	13	24	117	363	245	62	46
13	26	21	16	14	13	13	23	126	326	228	60	40
14	26	19	16	14	13	12	26	185	630	215	80	39
15	24	18	16	14	14	12	27	344	698	215	114	38
16	22	17	17	14	14	13	27	348	698	212	85	36
17	22	16	15	14	14	13	32	464	464	223	80	36
18	21	16	16	14	14	14	25	486	352	212	83	50
19	21	16	16	14	14	15	25	468	359	190	74	53
20	20	16	16	14	14	14	21	464	309	180	65	48
21	21	15	16	14	13	16	27	530	268	262	60	47
22	22	16	16	14	13	17	26	580	386	259	57	48
23	21	17	16	14	13	15	23	656	428	204	55	46
24	20	18	16	14	13	14	22	650	482	176	51	46
25	22	18	16	14	13	13	29	620	478	141	49	44
26	22	20	15	14	13	16	33	540	370	128	47	43
27	22	18	15	14	13	19	63	525	284	117	47	42
28	21	17	14	14	13	24	116	437	340	116	48	41
29	21	17	14	13	---	32	75	478	424	130	48	41
30	22	17	14	13	---	40	66	505	414	116	47	41
31	21	---	14	13	---	50	---	406	---	117	44	---
TOTAL	701	547	493	430	373	517	1136	9660	12823	6886	2256	1228
MEAN	22.6	18.2	15.9	13.9	13.3	16.7	37.9	312	427	222	72.8	40.9
MAX	30	26	18	14	14	50	116	656	704	394	139	53
MIN	18	13	14	13	13	12	21	40	268	116	44	33
AC-FT	1390	1080	978	853	740	1030	2250	19160	25430	13660	4470	2440
CAL YR 1977 TOTAL	15322.6			42.0	MAX 511	MIN 4.0	AC-FT 30390					
WTR YR 1978 TOTAL	37050.0			MEAN 102	MAX 704	MIN 12	AC-FT 73490					

YELLOWSTONE RIVER BASIN

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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, 838 ft³/s (23.7 m³/s) May 18, gage height, 6.43 ft (1.960 m); minimum daily during period of operation, 8.3 ft³/s (0.24 m³/s) Apr. 24.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1							12	69	220	78	58	51
2							15	66	187	76	77	51
3							14	64	175	70	75	51
4							11	61	163	66	69	50
5							12	55	163	62	66	48
6							11	50	190	58	65	42
7							11	43	206	56	62	42
8							16	50	161	64	61	42
9							20	56	185	64	59	42
10							13	65	187	63	55	42
11							12	72	114	62	53	43
12							12	69	79	63	48	29
13							11	75	104	57	49	25
14							11	106	160	51	64	21
15							12	208	155	50	65	17
16							12	326	136	48	55	17
17							16	393	129	50	53	15
18							12	622	130	45	51	20
19							11	429	123	57	49	18
20							9.6	382	115	60	47	20
21							12	401	125	101	39	22
22							10	437	127	87	13	22
23							9.6	516	122	62	11	23
24							8.3	599	108	57	20	23
25							11	519	96	53	50	22
26							15	457	84	52	50	21
27							39	417	84	50	50	20
28							110	364	92	50	51	20
29							82	364	86	53	51	14
30							77	332	82	50	52	13
31							---	259	---	53	52	---
TOTAL	---	---	---	---	---	---	627.5	7926	4088	1868	1620	886
MEAN	---	---	---	---	---	---	20.9	256	136	60.3	52.3	29.5
MAX	---	---	---	---	---	---	110	622	220	101	77	51
MIN	---	---	---	---	---	---	8.3	43	79	45	11	13
AC-FT	---	---	---	---	---	---	1240	15720	8110	3710	3210	1760

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 current year (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.

COOPERATION.--Discharge measurements from April to October furnished by Office of Wyoming State Engineer.

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, 7.5 ft³/s (0.21 m³/s) July 31, 1977.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,620 ft³/s (45.9 m³/s) May 18, gage height, 6.00 ft (1.829 m); minimum daily, 22 ft³/s (0.62 m³/s) Oct. 4.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	28	41	45	36	35	39	119	156	677	463	113	60
2	25	44	46	37	38	37	141	137	601	435	115	60
3	23	46	47	38	38	34	135	144	581	466	129	60
4	22	46	47	39	37	36	92	168	589	381	104	59
5	25	44	45	41	37	37	88	187	593	314	89	59
6	34	45	44	40	39	37	82	221	641	266	78	51
7	42	46	47	38	37	38	83	225	818	256	75	48
8	36	46	44	37	37	39	92	242	790	254	67	45
9	39	38	42	38	37	42	119	194	862	298	71	46
10	41	48	46	38	36	41	89	216	1120	287	71	45
11	39	43	48	38	35	41	74	247	950	272	67	62
12	45	48	49	38	35	40	68	242	681	259	59	80
13	50	46	48	38	36	40	65	247	577	216	59	65
14	48	43	49	38	36	40	66	328	908	188	82	61
15	48	43	49	38	36	39	74	547	1030	174	142	56
16	46	44	49	37	36	43	72	849	1050	140	98	52
17	44	45	48	37	37	49	74	1270	697	148	83	56
18	43	45	47	37	38	50	65	1500	549	140	92	93
19	44	45	47	38	39	49	57	1200	561	118	83	87
20	43	40	46	38	41	49	54	1090	446	111	74	80
21	44	38	46	38	42	50	55	1140	410	222	65	80
22	44	41	47	38	43	60	58	1200	529	284	61	76
23	44	42	46	37	42	85	52	1290	577	188	56	72
24	44	43	45	37	40	82	48	1340	625	144	52	71
25	44	43	44	36	40	83	51	1270	621	113	48	74
26	43	47	45	37	40	114	54	1100	491	100	46	76
27	43	45	45	38	40	130	103	1060	366	90	51	75
28	42	44	43	37	39	122	318	894	418	92	58	72
29	42	47	42	37	---	126	189	885	509	99	66	71
30	44	48	41	36	---	131	164	955	498	93	66	70
31	45	---	39	35	---	148	---	777	---	94	62	---
TOTAL	1244	1324	1416	1165	1066	1951	2801	21321	19765	6705	2382	1962
MEAN	40.1	44.1	45.7	37.6	38.1	62.9	93.4	688	659	216	76.8	65.4
MAX	50	48	49	41	43	148	318	1500	1120	466	142	93
MIN	22	38	39	35	35	34	48	137	366	90	46	45
AC-FT	2470	2630	2810	2310	2110	3870	5560	42290	39200	13300	4720	3890
CAL YR 1977 TOTAL	24262.2			66.5	MAX 816	MIN 7.5	AC-FT 48120					
WTR YR 1978 TOTAL	63102.0			173	MAX 1500	MIN 22	AC-FT 125200					

YELLOWSTONE RIVER BASIN

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06320200 CLEAR CREEK BELOW ROCK CREEK, NEAR BUFFALO, WY--Continued

WATER-QUALITY RECORDS

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

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

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	TUR- BID- ITY (JTU)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN DEMAND, BIO- CHEM- ICAL, 5 DAY (MG/L)	HARD- NESS (MG/L AS CACO3)	HARD- NESS, NONCAR- BONATE (MG/L AS CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)
OCT												
04...	1545	22	1120	8.3	8.5	1	10.4	4.8	590	350	130	64
NOV												
14...	1730	43	860	8.2	4.5	2	9.5	4.4	440	250	100	47
DEC												
13...	1530	A48	850	7.8	.0	3	11.0	3.6	410	230	95	42
JAN												
05...	1715	A41	750	7.5	.0	2	11.4	2.3	350	180	82	35
FEB												
06...	1530	A39	900	7.6	.0	2	8.8	2.6	400	220	92	42
27...	1400	A40	1000	7.5	.0	4	10.0	--	480	270	110	49
MAR												
07...	1700	A38	860	7.7	.0	15	11.8	6.5	370	200	85	38
APR												
03...	1500	143	640	8.5	7.0	5	12.2	3.4	280	150	61	30
MAY												
15...	1630	497	280	7.6	13.0	10	10.0	4.0	110	52	26	11
JUN												
12...	1700	621	190	8.2	11.0	5	9.3	2.6	65	27	16	6.2
JUL												
24...	1730	136	400	8.4	20.5	1	9.8	3.4	160	84	37	17
AUG												
21...	1710	65	680	8.6	20.0	2	10.8	2.6	300	160	70	30
S29...	0850	68	735	--	14.5	--	--	--	--	--	--	--
SEP												
18...	1630	100	1020	8.5	13.0	4	9.8	2.8	490	330	110	52
27...	0930	79	700	7.5	9.0	--	9.0	--	310	--	74	30

A-Daily mean discharge.

S-Seepage run data (see Explanation of Water-Quality Records).

DATE	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	BICAR- BONATE (MG/L AS HCO3)	CAR- BONATE (MG/L AS CO3)	ALKA- LINITY (MG/L AS CACO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, RESIDUE AT 105 DEG. C, DIS- SOLVED (MG/L)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L)
OCT												
04...	73	1.3	4.1	290	0	240	480	7.3	.3	11	--	913
NOV												
14...	54	1.1	2.9	240	0	200	370	4.8	.2	11	--	708
DEC												
13...	47	1.0	2.5	220	0	180	320	5.2	.2	13	--	634
JAN												
05...	44	1.0	2.4	210	0	170	260	3.9	.2	13	--	544
FEB												
06...	44	1.0	2.6	220	0	180	290	4.1	.2	13	--	597
27...	53	1.1	3.1	250	0	210	350	5.1	.2	15	--	711
MAR												
07...	43	1.0	2.9	210	0	170	270	4.1	.2	11	--	558
APR												
03...	28	.7	3.3	150	0	120	220	3.8	.1	9.9	--	431
MAY												
15...	11	.5	1.7	71	0	58	70	1.9	.1	12	189	169
JUN												
12...	7.8	.4	1.5	47	0	39	39	1.9	.1	10	--	106
JUL												
24...	.19	.6	1.8	94	1	79	140	2.9	.1	8.9	--	274
AUG												
21...	35	.9	2.8	170	2	140	220	3.9	.1	9.8	--	458
29...	--	--	--	--	--	--	--	--	--	--	--	--
SEP												
18...	61	1.2	4.6	190	0	160	430	.0	.2	11	--	763
27...	38	.9	4.6	--	--	140	240	5.6	.1	9.5	--	--

YELLOWSTONE RIVER BASIN

06320200 CLEAR CREEK BELOW ROCK CREEK, NEAR BUFFALO, WY--Continued

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

DATE	SOLIDS, DIS- SOLVED (TONS PER AC-FT)	SOLIDS, DIS- SOLVED (TONS PER DAY)	SOLIDS, RESIDUE AT 105 DEG. C, SUS- PENDED (MG/L)	NITRO- GEN, NITRATE TOTAL (MG/L AS N)	NITRO- GEN, NITRITE TOTAL (MG/L AS N)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N)	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, ORGANIC DIS- SOLVED (MG/L AS N)
OCT 04...	1.24	54.2	--	--	--	.33	--	.18	--	--	.53	--
NOV 14...	.96	82.2	--	--	--	.07	--	.02	--	--	.31	--
DEC 13...	.86	82.2	--	--	--	.28	--	.26	--	--	.35	--
JAN 05...	.74	60.2	--	--	--	1.2	--	.49	--	--	.26	--
FEB 06...	.81	62.9	--	--	--	.25	--	.47	--	--	.12	--
27...	.97	76.8	--	--	--	.35	.32	.68	.51	.66	.07	.15
MAR 07...	.76	57.3	--	--	--	.30	--	.51	--	--	.79	--
APR 03...	.59	166	--	--	--	.15	--	.14	--	--	.68	--
MAY 15...	.23	227	44	--	--	.18	--	.13	--	--	.63	--
JUN 12...	.14	178	--	--	--	.13	--	.06	--	--	.65	--
JUL 24...	.37	101	--	--	--	.06	--	.00	--	--	.81	--
AUG 21...	.62	80.4	--	--	--	.10	--	.04	--	--	.87	--
29...	--	--	--	--	--	--	--	--	--	--	--	--
SEP 18...	1.04	206	--	--	--	.05	--	.07	--	--	.68	--
27...	--	--	--	.00	.00	.00	.01	.00	.02	.03	.49	.40

DATE	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC DIS. (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- PHATE, TOTAL (MG/L AS PO4)	PHOS- PHORUS, DIS- SOLVED (MG/L AS P)	PHOS- PHORUS, ORTHO, TOTAL (MG/L AS P)	PHOS- PHORUS, ORTHO, DIS- SOLVED (MG/L AS P)	PHOS- PHATE, ORTHO, DIS- SOLVED (MG/L AS PO4)	ALGAL GROWTH POTEN- TIAL, BOTTLE TEST (MG/L)
OCT 04...	.71	--	1.0	4.6	.28	--	--	--	--	--	--
NOV 14...	.33	--	.40	1.8	.13	--	--	--	--	--	--
DEC 13...	.61	--	.89	3.9	.13	--	--	--	--	--	--
JAN 05...	.75	--	2.0	8.6	.17	--	--	--	--	--	--
FEB 06...	.59	--	.84	3.7	.16	--	--	--	--	--	--
27...	.75	.66	1.1	4.9	.22	.67	.15	.19	.14	.43	29
MAR 07...	1.3	--	1.6	7.1	.29	--	--	--	--	--	--
APR 03...	.82	--	.97	4.3	.07	--	--	--	--	--	--
MAY 15...	.76	--	.94	4.2	.12	--	--	--	--	--	--
JUN 12...	.71	--	.84	3.7	.07	--	--	--	--	--	--
JUL 24...	.81	--	.87	3.9	.09	--	--	--	--	--	--
AUG 21...	.91	--	1.0	4.5	.08	--	--	--	--	--	--
29...	--	--	--	--	--	--	--	--	--	--	--
SEP 18...	.75	--	.80	3.5	.08	--	--	--	--	--	--
27...	.49	.42	.49	2.2	.06	--	.57	.02	.00	.00	.9

YELLOWSTONE RIVER BASIN

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06320200 CLEAR CREEK BELOW ROCK CREEK, NEAR BUFFALO, WY--Continued

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

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)	BORON, DIS- SOLVED (UG/L AS B)	CADMIUM TOTAL RECOV- ERABLE (UG/L AS CD)	CADMIUM DIS- SOLVED (UG/L AS CD)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR)
OCT 04...	1545	60	--	1	--	0	--	130	10	--	0
NOV 14...	1730	--	--	--	--	--	--	90	--	--	--
DEC 13...	1530	--	--	--	--	--	--	80	--	--	--
JAN 05...	1715	60	--	0	--	0	--	80	2	--	10
FEB 06...	1530	--	--	--	--	--	--	70	--	--	--
27...	1400	--	--	--	--	--	--	90	--	--	--
MAR 07...	1700	--	--	--	--	--	--	60	--	--	--
APR 03...	1500	260	--	1	--	0	--	70	2	--	0
MAY 15...	1630	--	--	--	--	--	--	50	--	--	--
JUN 12...	1700	--	--	--	--	--	--	40	--	--	--
JUL 24...	1730	290	--	--	--	10	--	40	4	--	0
AUG 21...	1710	--	--	--	--	--	--	80	--	--	--
SEP 18...	1630	--	5	--	1	--	0	110	--	5	--
27...	0930	--	--	--	--	--	--	90	--	--	--

DATE	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)	IRON, DIS- SOLVED (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)
OCT 04...	--	10	--	260	50	<100	--	20	--	60	--
NOV 14...	--	--	--	--	80	--	--	--	--	--	--
DEC 13...	--	--	--	--	110	--	--	--	--	--	--
JAN 05...	--	5	--	450	170	8	--	10	--	60	--
FEB 06...	--	--	--	--	100	--	--	--	--	--	--
27...	--	--	--	--	80	--	--	--	--	--	--
MAR 07...	--	--	--	--	100	--	--	--	--	--	--
APR 03...	--	2	--	600	700	17	--	7	--	80	--
MAY 15...	--	--	--	--	150	--	--	--	--	--	--
JUN 12...	--	--	--	--	140	--	--	--	--	--	--
JUL 24...	--	5	--	160	150	23	--	6	--	20	--
AUG 21...	--	--	--	--	550	--	--	--	--	--	--
SEP 18...	10	--	4	--	40	--	35	--	20	--	30
27...	--	--	--	--	20	--	--	--	--	--	--

YELLOWSTONE RIVER BASIN

06320200 CLEAR CREEK BELOW ROCK CREEK, NEAR BUFFALO, WY--Continued

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

DATE	MERCURY TOTAL RECOV- ERABLE (UG/L AS HG)	MERCURY DIS- SOLVED (UG/L AS HG)	MOLYB- DENUM, TOTAL RECOV- ERABLE (UG/L AS MO)	MOLYB- DENUM, TOTAL 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)
OCT 04...	.0	--	3	--	<50	--	0	--	--	20	--
NOV 14...	--	--	--	--	--	--	--	--	--	--	--
DEC 13...	--	--	--	--	--	--	--	--	--	--	--
JAN 05...	.0	--	0	--	3	--	1	--	--	30	--
FEB 06...	--	--	--	--	--	--	--	--	--	--	--
27...	--	--	--	--	--	--	--	--	--	--	--
MAR 07...	--	--	--	--	--	--	--	--	--	--	--
APR 03...	.0	--	2	--	4	--	0	--	--	20	--
MAY 15...	--	--	--	--	--	--	--	--	--	--	--
JUN 12...	--	--	--	--	--	--	--	--	--	--	--
JUL 24...	--	--	4	--	6	--	--	--	--	20	--
AUG 21...	--	--	--	--	--	--	--	--	--	--	--
SEP 18...	--	.0	--	0	--	7	--	0	.0	--	10
27...	--	--	--	--	--	--	--	--	--	--	--

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)
MAY 15...	1630	2.6	2.6	3.5	1.6	3.1	1.6	.07	.5

DATE	TIME	2,4-D, TOTAL (UG/L)	2,4-D, TOM MA- TERIAL (UG/KG)	2,4,5-T TOTAL (UG/L)	2,4,5-T TOM MA- TERIAL (UG/KG)	SILVEX, TOTAL (UG/L)	SILVEX, TOM MA- TERIAL (UG/KG)
MAY 15...	1630	.11	0	.00	0	.00	.0
JUL 24...	1730	.05	0	.00	0	.00	.0
AUG 21...	1710	.00	0	.00	0	.00	.0
SEP 18...	1630	.00	0	.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)
MAY 15...	.00	0	.00	0
JULY 24...	.00	0	.00	0
AUG 21...	.01	1.8	.01	0
SEP 18...	.00	0	.00	0

YELLOWSTONE RIVER BASIN

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06320200 CLEAR CREEK BELOW ROCK CREEK, NEAR BUFFALO, WY--Continued

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

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. SIEVE DIAM. % FINER THAN .062 MM
OCT						
18...	1530	6.5	42	10	1.1	--
NOV						
16...	1645	2.5	46	7	.87	--
DEC						
12...	1630	.0	A49	10	1.3	--
JAN						
12...	1600	.0	A38	18	1.8	--
FEB						
09...	1235	.0	A37	18	1.8	--
MAR						
17...	1515	.5	A49	20	2.6	--
APR						
06...	1400	9.0	82	4	.89	--
MAY						
17...	1300	4.0	1240	346	1160	--
19...	1440	8.0	1140	241	742	69
JUN						
02...	1445	10.0	561	74	112	--
JUL						
06...	1610	16.0	264	20	14	--
AUG						
09...	1325	24.0	74	4	.80	--
SEP						
06...	1000	16.0	53	7	1.0	--

A-Daily mean discharge.

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
APR							
06...	1400	9.0	82	3	9	39	57
AUG							
09...	1325	24.0	74	0	2	11	32
SEP							
06...	1000	16.0	53	1	2	11	30

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
APR							
06...	66	72	79	87	94	100	--
AUG							
09...	40	48	57	67	80	100	--
SEP							
06...	37	44	52	62	70	90	100

YELLOWSTONE RIVER BASIN

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 current year.

GAGE.--Water-stage recorder. Altitude of gage is 4,070 ft (1,241 m), from topographic map.

REMARKS.--Records fair except those for winter period and periods of no gage-height record, Feb. 16-18, Mar. 2, 3, 8-15, July 28 to Aug. 1, 5-7, 9, 19-29, 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, 4.2 ft³/s (0.12 m³/s) Aug. 1, 1977.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,740 ft³/s (49.3 m³/s) May 19, gage height, 9.07 ft (2.765 m); minimum daily, 16 ft³/s (0.45 m³/s) Oct. 7, 28.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	25	18	44	37	34	38	141	166	790	489	105	59
2	36	18	49	37	35	37	149	152	717	464	106	48
3	31	18	52	38	38	36	152	138	666	448	108	48
4	32	18	52	39	39	40	124	155	645	425	107	47
5	34	18	50	40	40	41	101	183	651	372	80	53
6	26	18	49	41	41	43	99	217	648	305	64	39
7	16	18	50	38	39	47	94	248	720	279	56	34
8	18	58	47	37	38	47	94	299	850	242	45	33
9	18	84	45	36	38	49	113	232	832	258	38	34
10	20	80	47	35	37	49	114	221	1040	294	34	42
11	20	72	52	36	35	49	92	238	1070	274	31	46
12	20	59	58	37	35	49	82	252	808	256	34	92
13	19	57	56	38	35	48	80	244	672	244	30	81
14	18	59	58	38	35	48	75	277	714	196	36	69
15	17	56	58	37	35	52	80	379	994	174	119	63
16	17	56	58	35	36	60	84	625	1070	152	125	58
17	17	54	56	35	36	62	81	1030	832	139	86	56
18	18	52	56	34	35	64	84	1450	678	146	81	82
19	18	36	54	33	35	66	76	1480	579	131	85	113
20	18	35	54	35	37	82	69	1170	553	121	80	96
21	18	34	58	37	39	90	64	1170	480	155	70	92
22	19	35	60	36	40	100	64	1230	458	323	65	88
23	18	36	62	35	41	100	66	1350	600	285	60	86
24	18	36	54	36	40	112	62	1460	627	183	52	81
25	19	38	52	38	40	131	58	1450	606	138	48	81
26	20	44	54	39	39	121	60	1180	588	118	44	83
27	19	43	50	40	40	149	68	1160	545	107	48	83
28	16	45	44	39	39	149	262	1020	432	96	53	82
29	18	48	42	39	---	144	238	934	453	98	59	80
30	19	47	42	38	---	150	174	994	489	96	69	78
31	18	---	41	36	---	157	---	888	---	96	66	---
TOTAL	640	1290	1604	1149	1051	2410	3100	21992	20807	7104	2084	2027
MEAN	20.6	43.0	51.7	37.1	37.5	77.7	103	709	694	229	67.2	67.6
MAX	36	84	62	41	41	157	262	1480	1070	489	125	113
MIN	16	18	41	33	34	36	58	138	432	96	30	33
AC-FT	1270	2560	3180	2280	2080	4780	6150	43620	41270	14090	4130	4020

CAL YR 1977 TOTAL 24528.4 MEAN 67.2 MAX 1040 MIN 4.2 AC-FT 48650
WTR YR 1978 TOTAL 65258.0 MEAN 179 MAX 1480 MIN 16 AC-FT 129400

YELLOWSTONE RIVER BASIN

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06320400 CLEAR CREEK AT UCROSS, WY--Continued

WATER-QUALITY RECORDS

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

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

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	TUR- BID- ITY (JTU)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN DEMAND, BIO- CHEM- ICAL, 5 DAY (MG/L)	HARD- NESS (MG/L AS CACO3)	HARD- NESS, NONCAR- BONATE (MG/L AS CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)
OCT												
04...	1300	31	1400	8.2	9.0	20	8.9	3.9	750	490	170	79
NOV												
14...	1430	51	1100	8.1	4.0	10	11.8	5.7	580	350	130	63
DEC												
13...	1430	A56	950	7.7	.0	10	11.2	3.6	460	250	100	50
JAN												
05...	1500	A40	980	7.4	.0	10	11.6	2.5	480	280	110	50
FEB												
06...	1400	A41	1000	7.5	.0	7	9.0	2.2	480	280	110	50
28...	0800	A39	750	7.9	.0	8	10.5	--	540	320	120	59
MAR												
07...	1545	A47	1020	7.5	.0	10	13.2	3.6	480	280	110	50
APR												
03...	1400	166	810	8.1	9.5	35	10.4	5.1	370	220	84	39
MAY												
15...	1515	427	380	7.5	14.0	95	9.6	5.6	150	65	34	15
JUN												
12...	1430	780	205	8.3	15.0	27	9.5	4.0	81	33	20	7.5
JUL												
24...	1500	160	600	8.9	22.0	3	9.8	5.6	260	150	61	26
AUG												
21...	1600	70	950	8.3	23.0	3	10.0	1.9	410	230	93	43
S29...	1125	57	1120	--	18.0	--	--	--	--	--	--	--
SEP												
18...	1545	82	1020	8.5	15.0	2	10.0	2.8	480	290	110	50

A-Daily mean discharge.

S-Seepage run data (See Explanation of Water-Quality Records).

DATE	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	BICAR- BONATE (MG/L AS HCO3)	CAR- BONATE (MG/L AS CO3)	ALKA- LINITY (MG/L AS CACO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, RESIDUE AT 105 DEG. C, DIS- SOLVED (MG/L)
OCT											
04...	96	1.5	6.2	320	0	260	670	8.3	.3	6.4	--
NOV											
14...	70	1.3	4.4	280	0	230	500	5.6	.2	10	--
DEC											
13...	59	1.2	3.3	250	0	210	360	5.6	.2	13	--
JAN											
05...	60	1.2	3.7	250	0	210	360	5.0	.3	14	--
FEB											
06...	57	1.1	3.3	250	0	210	360	4.7	.2	14	--
28...	62	1.2	3.6	270	0	220	400	5.0	.2	14	--
MAR											
07...	59	1.2	4.0	250	0	210	360	5.6	.2	12	--
APR											
03...	42	1.0	4.0	180	0	150	300	4.5	.1	8.8	--
MAY											
15...	16	.6	2.2	100	0	82	100	2.3	.1	12	278
JUN											
12...	9.8	.5	2.4	58	0	48	50	2.8	.1	10	--
JUL											
24...	31	.8	3.2	130	1	110	200	15	.1	9.5	--
AUG											
21...	53	1.1	4.2	220	0	180	350	4.5	.2	5.6	--
29...	--	--	--	--	--	--	--	--	--	--	--
SEP											
18...	59	1.2	4.6	230	0	190	400	9.7	.2	6.2	--

YELLOWSTONE RIVER BASIN

06320400 CLEAR CREEK AT UCROSS, WY--Continued

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

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- 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 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, ORGANIC DIS- SOLVED (MG/L AS N)
OCT 04...	1190	1.62	99.6	--	.01	--	.03	--	--	.60	--
NOV 14...	922	1.25	127	--	.04	--	.01	--	--	.60	--
DEC 13...	715	.97	108	--	.30	--	.25	--	--	.26	--
JAN 05...	726	.99	78.4	--	.48	--	.32	--	--	.40	--
FEB 06...	723	.98	80.0	--	.78	--	.35	--	--	.26	--
MAR 28...	800	1.09	84.2	--	.41	.40	.36	.34	.44	.23	.22
APR 07...	724	.98	91.9	--	.47	--	.43	--	--	.77	--
MAY 03...	572	.78	256	--	.13	--	.21	--	--	.30	--
JUN 15...	231	.31	266	260	.15	--	.12	--	--	.98	--
JUL 12...	131	.18	276	--	.09	--	.04	--	--	.61	--
AUG 24...	411	.56	178	--	.04	--	.00	--	--	.97	--
SEP 21...	663	.90	125	--	.06	--	.09	--	--	1.4	--
SEP 29...	--	--	--	--	--	--	--	--	--	--	--
SEP 18...	753	1.02	167	--	.01	--	.01	--	--	2.1	--

DATE	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC DIS- (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- PHATE, TOTAL (MG/L AS PO4)	PHOS- PHORUS, DIS- SOLVED (MG/L AS P)	PHOS- PHORUS, ORTHOD. TOTAL (MG/L AS P)	PHOS- PHORUS, ORTHOD. DIS- SOLVED (MG/L AS P)	PHOS- PHATE, ORTHOD. DIS- SOLVED (MG/L AS PO4)	ALGAL GROWTH POTEN- TIAL, BOTTLE TEST (MG/L)
OCT 04...	.63	--	.64	2.8	.06	--	--	--	--	--	--
NOV 14...	.61	--	.65	2.9	.08	--	--	--	--	--	--
DEC 13...	.51	--	.81	3.6	.08	--	--	--	--	--	--
JAN 05...	.72	--	1.2	5.3	.11	--	--	--	--	--	--
FEB 06...	.61	--	1.4	6.2	.11	--	--	--	--	--	--
MAR 28...	.59	.56	1.0	4.4	.13	.40	.09	.11	.10	.31	22
APR 07...	1.2	--	1.7	7.4	.12	--	--	--	--	--	--
MAY 03...	.51	--	.64	2.8	.02	--	--	--	--	--	--
JUN 15...	1.1	--	1.3	5.5	.22	--	--	--	--	--	--
JUL 12...	.65	--	.74	3.3	.07	--	--	--	--	--	--
AUG 24...	.97	--	1.0	4.5	.02	--	--	--	--	--	--
SEP 21...	1.5	--	1.6	6.9	.04	--	--	--	--	--	--
SEP 29...	--	--	--	--	--	--	--	--	--	--	--
SEP 18...	2.1	--	2.1	9.3	.02	--	--	--	--	--	--

YELLOWSTONE RIVER BASIN

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06320400 CLEAR CREEK AT UCROSS, WY--Continued

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

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)	BORON, DIS- SOLVED (UG/L AS B)	CADMIUM TOTAL RECOV- ERABLE (UG/L AS CD)	CADMIUM DIS- SOLVED (UG/L AS CD)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR)
OCT											
04...	1300	380	--	1	--	0	--	190	10	--	10
NOV											
14...	1430	--	--	--	--	--	--	130	--	--	--
DEC											
13...	1430	--	--	--	--	--	--	110	--	--	--
JAN											
05...	1500	280	--	1	--	0	--	110	3	--	10
FEB											
06...	1400	--	--	--	--	--	--	100	--	--	--
28...	0800	--	--	--	--	--	--	110	--	--	--
MAR											
07...	1545	--	--	--	--	--	--	90	--	--	--
APR											
03...	1400	3400	--	1	--	0	--	80	3	--	0
MAY											
15...	1515	--	--	--	--	--	--	50	--	--	--
JUN											
12...	1430	--	--	--	--	--	--	40	--	--	--
JUL											
24...	1500	90	--	--	--	0	--	70	12	--	0
AUG											
21...	1600	--	--	--	--	--	--	120	--	--	--
SEP											
18...	1545	--	0	--	1	--	0	120	--	5	--

DATE	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)	IRON, DIS- SOLVED (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)
OCT											
04...	--	10	--	920	50	<100	--	30	--	130	--
NOV											
14...	--	--	--	--	140	--	--	--	--	--	--
DEC											
13...	--	--	--	--	130	--	--	--	--	--	--
JAN											
05...	--	13	--	950	80	12	--	20	--	90	--
FEB											
06...	--	--	--	--	80	--	--	--	--	--	--
28...	--	--	--	--	30	--	--	--	--	--	--
MAR											
07...	--	--	--	--	90	--	--	--	--	--	--
APR											
03...	--	4	--	2100	580	10	--	10	--	140	--
MAY											
15...	--	--	--	--	160	--	--	--	--	--	--
JUN											
12...	--	--	--	--	130	--	--	--	--	--	--
JUL											
24...	--	16	--	340	160	29	--	20	--	30	--
AUG											
21...	--	--	--	--	570	--	--	--	--	--	--
SEP											
18...	0	--	4	--	50	--	26	--	30	--	30

YELLOWSTONE RIVER BASIN

06320400 CLEAR CREEK AT UCROSS, WY--Continued

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

DATE	MERCURY TOTAL RECOV- ERABLE (UG/L AS HG)	MERCURY DIS- SOLVED (UG/L AS HG)	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 SOLVED (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 04...	.0	--	2	--	<50	--	0	--	--	30	--
NOV 14...	--	--	--	--	--	--	--	--	--	--	--
DEC 13...	--	--	--	--	--	--	--	--	--	--	--
JAN 05...	.0	--	1	--	5	--	1	--	--	40	--
FEB 06...	--	--	--	--	--	--	--	--	--	--	--
MAR 28...	--	--	--	--	--	--	--	--	--	--	--
APR 07...	--	--	--	--	--	--	--	--	--	--	--
MAY 03...	.0	--	3	--	0	--	1	--	--	20	--
JUN 15...	--	--	--	--	--	--	--	--	--	--	--
JUL 12...	--	--	--	--	--	--	--	--	--	--	--
AUG 24...	--	--	2	--	10	--	--	--	--	50	--
SEP 21...	--	--	--	--	--	--	--	--	--	--	--
SEP 18...	--	.0	--	1	--	4	--	0	.0	--	0

DATE	TIME	GROSS ALPHA, DIS- SOLVED (UG/L AS U-NAT)	GROSS ALPHA, DIS- SOLVED (UG/L AS U-NAT)	GROSS BETA, DIS- SOLVED (PCI/L AS CS-137)	GROSS BETA, DIS- SOLVED (PCI/L AS CS-137)	GROSS BETA, DIS- SOLVED (PCI/L AS SR/ YT-90)	GROSS BETA, DIS- SOLVED (PCI/L AS SR/ YT-90)	RADIUM 226, DIS- SOLVED, RADON METHOD (PCI/L)	URANIUM NATURAL DIS- SOLVED (UG/L AS U)
MAY 15...	1515	<2.8	24	3.9	10	3.4	9.1	.09	1.5

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
APR 05...	1705	10.0	104	2	5	14	34
AUG 08...	1410	24.0	48	--	0	7	68
SEP 06...	1445	17.0	40	2	2	8	40

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
APR 05...	46	61	70	73	80	100	--
AUG 08...	82	88	91	93	96	98	100
SEP 06...	49	56	59	60	67	94	100

YELLOWSTONE RIVER BASIN

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06320400 CLEAR CREEK AT UCROSS, WY--Continued

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

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	SED. SUSP. FALL DIAM. % FINER THAN .004 MM
OCT							
11...	1825	6.0	20	33	1.8	--	--
NOV							
14...	1330	4.0	58	36	5.6	--	--
DEC							
14...	1435	.0	A58	36	5.6	--	--
JAN							
13...	1115	.0	A38	48	4.9	--	--
FEB							
15...	1515	.0	A35	82	7.7	--	--
MAR							
16...	1530	.0	A60	61	9.9	--	--
APR							
05...	1705	10.0	104	43	12	--	--
MAY							
08...	1810	8.0	279	294	221	--	--
19...	1545	10.0	1410	594	2260	--	37
20...	1830	10.5	1090	517	1520	57	--
21...	1640	12.0	1190	477	1530	65	--
JUN							
06...	1830	14.0	666	220	396	--	--
JUL							
06...	1240	20.0	301	54	44	--	--
AUG							
08...	1410	24.0	48	15	1.9	--	--
SEP							
06...	1445	17.0	40	10	1.1	--	--

A-Daily mean discharge.

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 1.00 MM
OCT						
11...	--	--	--	--	--	--
NOV						
14...	--	--	--	--	--	--
DEC						
14...	--	--	--	--	--	--
JAN						
13...	--	--	--	--	--	--
FEB						
15...	--	--	--	--	--	--
MAR						
16...	--	--	--	--	--	--
APR						
05...	--	--	--	--	--	--
MAY						
08...	--	--	--	--	--	--
19...	53	75	86	91	98	100
20...	--	--	--	--	--	--
21...	--	--	--	--	--	--
JUN						
06...	--	--	--	--	--	--
JUL						
06...	--	--	--	--	--	--
AUG						
08...	--	--	--	--	--	--
SEP						
06...	--	--	--	--	--	--

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. 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, 194 ft³/s (5.49 m³/s) July 22, gage height, 3.16 ft (0.963 m); minimum daily during period of operation, 2.0 ft³/s (0.057 m³/s) Aug. 23.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1										180	126	149
2										180	171	151
3										180	171	151
4										188	169	151
5										170	166	139
6										162	164	121
7										149	147	112
8										151	144	112
9										168	121	112
10										180	108	111
11										182	99	102
12										180	88	89
13										171	87	64
14										161	87	37
15										142	87	31
16										136	87	29
17										142	87	27
18										156	87	27
19										149	87	23
20										139	87	18
21										161	46	16
22										189	2.4	15
23										156	2.0	15
24										122	73	15
25										102	147	15
26										93	146	15
27										94	142	15
28										93	140	15
29										96	142	15
30										102	144	15
31										103	147	---
TOTAL										4577	3501.4	1907
MEAN										148	113	63.6
MAX										189	171	151
MIN										93	2.0	15
AC-FT										9080	6950	3780

06321000 SOUTH PINEY CREEK NEAR STORY, WY

LOCATION.--Lat 44°33'26", long 106°56'11", in NW¼NE¼NE¼ sec.23, T.53 N., R.84 W., Johnson County, Hydrologic Unit 10090206, Bighorn National Forest, on left bank 2.3 mi (3.7 km) southwest of Story and 3.3 mi (5.3 km) upstream from confluence with North Piney Creek.

DRAINAGE AREA.--69.4 mi² (179.7 km²).

PERIOD OF RECORD.--June 1951 to September 1974 (no winter records in water years 1972-74), November 1974 to current year.

REVISED RECORDS.--WSP 1916: Drainage area.

GAGE.--Water-stage recorder. Altitude of gage is 5,590 ft (1,704 m), from topographic map. Prior to Oct. 1, 1951, nonrecording gage at site 300 ft (91 m) upstream at different datum. Oct. 1, 1951, to July 9, 1970, at site 200 ft (61 m) downstream at datum 10.08 ft (3.072 m) lower.

REMARKS.--Records 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), and Kearny Lake, capacity, 1,860 acre-ft (2.29 hm³). Diversion above station into Rock Creek basin for irrigation.

AVERAGE DISCHARGE.--23 years (water years 1952-71, 1976-78), 77.4 ft³/s (2.192 m³/s), 56,080 acre-ft/yr (69.2 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,090 ft³/s (59.2 m³/s) June 15, 1963, gage height, 4.37 ft (1.332 m), site and datum then in use, from rating curve extended above 1,050 ft³/s (29.7 m³/s); maximum gage height, 6.55 ft (1.996 m) Mar. 30, 1977 (backwater from snow and ice); minimum daily discharge, 0.40 ft³/s (0.011 m³/s) Nov. 14, 1964.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 750 ft³/s (21.2 m³/s) June 24, maximum gage height, 3.75 ft (1.143 m) June 25; minimum daily discharge, 19 ft³/s (0.54 m³/s) Nov. 20, Mar. 15.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	72	26	28	25	26	24	29	77	195	575	214	125
2	69	30	28	26	26	23	29	72	180	540	261	125
3	63	29	28	26	25	23	27	70	165	495	290	125
4	40	29	27	26	25	23	24	68	165	470	305	125
5	38	29	24	26	26	23	25	60	175	405	315	125
6	36	29	24	26	25	25	23	56	205	335	315	110
7	37	30	27	26	26	25	24	49	270	300	305	100
8	37	26	26	25	26	25	27	45	300	280	300	98
9	36	21	24	25	26	25	29	51	330	295	280	96
10	37	32	27	25	26	23	25	63	360	295	260	94
11	35	33	29	25	26	22	25	64	360	320	255	94
12	37	33	29	25	25	22	23	62	345	320	260	94
13	38	31	28	25	25	22	22	64	380	310	280	85
14	37	30	28	25	26	21	23	76	510	300	300	62
15	36	29	28	25	25	19	23	99	625	280	295	57
16	35	27	28	25	26	20	24	138	695	260	295	56
17	35	25	26	25	25	23	25	175	625	260	295	55
18	36	22	28	25	25	22	22	190	550	270	290	57
19	32	21	26	23	26	22	22	215	505	250	285	55
20	29	19	25	24	26	22	22	160	535	245	280	45
21	29	20	29	23	27	22	24	150	540	265	280	40
22	29	25	30	26	26	22	24	155	655	295	230	39
23	29	29	29	26	26	20	22	165	700	275	175	37
24	29	30	29	25	25	20	21	180	625	230	120	35
25	29	31	28	26	25	20	24	190	645	210	140	34
26	30	31	28	25	25	20	26	170	605	200	130	34
27	29	30	26	26	25	22	40	215	530	211	130	33
28	29	29	27	25	25	22	102	300	505	214	125	34
29	29	29	26	25	---	25	100	290	545	214	125	37
30	29	29	27	25	---	29	90	260	575	204	125	37
31	28	---	26	25	---	33	---	220	---	184	130	---
TOTAL	1134	834	843	780	716	709	966	4149	13400	9307	7390	2143
MEAN	36.6	27.8	27.2	25.2	25.6	22.9	32.2	134	447	300	238	71.4
MAX	72	33	30	26	27	33	102	300	700	575	315	125
MIN	28	19	24	23	25	19	21	45	165	184	120	33
AC-FT	2250	1650	1670	1550	1420	1410	1920	8230	26580	18460	14660	4250
CAL YR 1977 TOTAL	27830.4			76.2	MAX 445	MIN 7.1	AC-FT 55200					
WTR YR 1978 TOTAL	42371.0			MEAN 116	MAX 700	MIN 19	AC-FT 84040					

YELLOWSTONE RIVER BASIN

06321020 MEAD-COFFEEN DITCH ABOVE FISH HATCHERY, NEAR STORY, WY

LOCATION.--Lat 44°33'41", long 106°55'45", in NE¼SW¼SW¼ sec.13, T.53 N., R.84 W., Sheridan County, Hydrologic Unit 10090206, on right bank upstream from ford, 0.3 mi (0.5 km) southwest of fish hatchery, 0.4 mi (0.6 km) downstream from intake, and 1.9 mi (3.1 km) southwest of Story.

PERIOD OF RECORD.--November 1974 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 5,510 ft (1,679 m), from topographic map.

REMARKS.--Records poor. No gage-height record Dec. 17 to Mar. 5, July 20 to Aug. 3. Ditch diverts water from South Piney Creek in NW¼NE¼NE¼ sec.23, T.53 N., R.84 W.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 41 ft³/s (1.16 m³/s) June 16, 1975, gage height, 2.26 ft (0.689 m); maximum gage height, 2.61 ft (0.796 m) Dec. 4, 1975 (backwater from ice); no flow at times most years.

EXTREMES FOR CURRENT YEAR.--Maximum daily discharge, 26 ft³/s (0.74 m³/s) Aug. 2, 3; maximum gage height, 2.02 ft (0.616 m) Nov. 28 (backwater from ice); no flow for many days.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.5	1.8	.71	.70	.50	.00	.44	.00	.29	.73	23	9.4
2	.34	1.7	.68	.70	.60	.00	.40	.00	.23	.75	26	9.4
3	.17	1.6	.71	.70	.60	.00	.44	.00	.26	3.6	26	9.4
4	.40	1.7	.68	.70	.60	.00	.39	.00	.27	12	24	9.4
5	.71	1.7	.26	.70	.60	.00	.38	.00	.30	10	24	8.2
6	1.7	1.7	.08	.90	.60	.00	.34	.00	.32	8.0	22	6.8
7	1.8	1.7	.08	.90	.60	.00	.36	.00	.30	5.2	20	5.9
8	1.9	1.9	.08	.90	.60	.00	.43	.00	.38	3.4	19	5.6
9	1.9	.50	.05	.90	.50	.00	.53	.00	.41	4.0	16	5.6
10	1.9	2.0	.05	.90	.40	.00	.55	.00	.18	4.5	16	5.6
11	1.9	2.0	.59	.90	.30	.00	.50	.00	.20	3.3	16	6.5
12	2.0	1.9	.71	.90	.20	.00	.46	.00	.10	2.1	16	7.5
13	2.0	1.9	.74	.90	.10	.00	.46	.00	.05	2.4	18	6.6
14	2.0	1.9	.74	.80	.10	.00	.49	.00	.06	2.0	18	5.2
15	2.0	1.9	.74	.60	.00	.00	.50	.00	.83	1.6	18	3.6
16	2.0	2.8	.74	.60	.00	.86	.51	.00	2.1	1.3	18	3.5
17	2.0	3.3	.70	.60	.00	.42	.44	.00	1.7	1.2	18	3.3
18	2.0	2.4	.70	.60	.00	.38	.37	.00	1.6	1.2	17	6.3
19	1.9	2.5	.70	.60	.00	.40	.34	.00	1.4	1.0	16	8.0
20	1.8	.10	.60	.60	.00	.44	.28	.00	1.6	1.1	16	4.6
21	1.9	.10	.60	.60	.00	.46	.31	.00	1.8	1.2	16	3.6
22	1.7	.14	.70	.60	.00	.45	.37	.00	1.8	1.4	14	3.2
23	1.4	2.0	.70	.60	.00	.42	.33	.00	1.4	1.2	11	2.9
24	1.5	2.0	.70	.60	.00	.40	.28	.00	.88	1.0	7.8	2.6
25	1.5	1.9	.70	.60	.00	.38	.32	.00	.61	1.0	11	2.1
26	1.5	2.0	.70	.60	.00	.42	.31	.00	.52	.90	9.9	1.1
27	1.7	1.8	.70	.60	.00	.42	.36	.14	.60	.80	9.4	.93
28	1.7	1.6	.70	.60	.00	.40	.07	.41	.87	.90	9.0	.95
29	1.7	2.0	.70	.60	---	.42	.00	.36	.89	1.0	8.6	1.7
30	1.7	1.7	.70	.50	---	.50	.00	.35	.81	1.2	8.6	1.7
31	1.6	---	.70	.50	---	.53	---	.31	---	10	9.4	---
TOTAL	52.82	52.24	17.94	21.50	6.30	7.30	10.96	1.57	22.76	89.98	501.7	151.18
MEAN	1.70	1.74	.58	.69	.23	.24	.37	.051	.76	2.90	16.2	5.04
MAX	4.5	3.3	.74	.90	.60	.86	.55	.41	2.1	12	26	9.4
MIN	.17	.10	.05	.50	.00	.00	.00	.00	.05	.73	7.8	.93
AC-FT	105	104	36	43	12	14	22	3.1	45	178	995	300

CAL YR 1977 TOTAL 1230.41 MEAN 3.37 MAX 16 MIN .00 AC-FT 2440
WTR YR 1978 TOTAL 936.25 MEAN 2.57 MAX 26 MIN .00 AC-FT 1860

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LOCATION.--Lat 44°34'07", long 106°55'23", in NE4SE4NW4 sec.13, T.53 N., R.84 W., Sheridan County, Hydrologic Unit 10090206, on right bank upstream from culvert in county road, 0.3 mi (0.5 km) northeast of fish hatchery, 1.1 mi (1.8 km) downstream from intake, and 1.4 mi (2.3 km) southwest of Story.

GAGE.--Water-stage recorder. Altitude of gage is 5,350 ft (1,631 m), from topographic map.

REMARKS.--Records fair except those for period of no gage-height record, Oct. 7 to Nov. 4, which are poor. Ditch diverts water from South Piney Creek in NW1/4NE1/4 sec.23, T.53 N., R.84 W. to supplement flow in North Piney Creek. Water can also be diverted into ditch from Spring Creek at the fish hatchery 0.3 mi (0.5 km) upstream.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 46 ft³/s (1.30 m³/s) June 16, 1975, gage height, 3.63 ft (1.106 m); minimum daily, 0.65 ft³/s (0.018 m³/s) Nov. 27, 1976.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 32 ft³/s (0.91 m³/s) Aug. 2, 4, 6, gage height, 2.95 ft (0.899 m); minimum daily, 1.9 ft³/s (0.054 m³/s) Nov. 20, 21.

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	10	3.0	4.4	4.5	4.3	4.2	4.8	3.0	3.7	5.2	26	16
2	3.8	3.0	4.4	4.5	4.2	4.1	4.8	2.3	3.2	5.2	29	16
3	2.9	3.0	4.3	4.4	4.3	4.1	4.7	2.7	3.0	7.4	29	16
4	3.5	3.0	4.2	4.4	4.4	4.0	4.5	2.7	2.9	15	30	16
5	5.3	3.0	2.9	4.5	4.4	3.4	4.4	2.5	2.8	14	30	15
6	5.5	3.0	2.8	4.4	4.5	4.1	4.2	2.8	2.8	12	30	14
7	5.0	3.0	3.8	4.4	4.4	4.5	4.3	2.7	2.8	10	29	12
8	5.0	3.0	3.8	4.4	4.5	4.5	4.5	2.8	3.0	8.6	28	12
9	5.0	3.0	3.4	4.4	4.6	4.5	4.7	3.2	3.2	9.2	26	12
10	5.0	5.0	3.7	4.4	4.6	4.4	4.8	3.6	3.2	9.9	23	12
11	5.0	5.0	4.2	4.3	4.6	4.2	3.9	4.0	3.1	8.5	21	13
12	5.0	4.0	4.3	4.2	4.5	4.3	2.6	4.2	2.9	7.2	22	13
13	6.0	4.0	4.1	4.4	4.5	4.4	2.3	4.3	2.8	7.6	23	11
14	6.0	3.0	4.2	4.4	4.5	4.3	2.4	4.4	3.0	7.4	24	5.9
15	6.0	3.4	4.4	4.4	4.3	3.6	2.6	3.6	4.2	6.9	23	4.4
16	5.0	3.1	4.4	4.4	4.1	3.6	2.5	4.0	8.4	6.7	22	4.0
17	5.0	2.8	4.5	4.4	4.2	4.2	2.4	5.9	9.0	6.4	22	4.0
18	6.0	2.3	4.6	4.4	4.3	4.5	2.4	8.4	8.6	6.4	21	6.7
19	5.0	2.3	4.5	4.5	4.4	4.2	2.5	13	7.7	6.3	21	7.6
20	5.0	1.9	3.7	4.3	4.1	4.2	2.4	7.2	7.8	6.3	21	5.8
21	4.0	1.9	4.0	4.1	4.4	4.2	2.5	5.6	8.9	6.5	21	4.6
22	4.0	3.2	4.6	4.3	4.5	4.1	2.6	4.9	8.8	6.8	20	4.3
23	4.0	4.8	4.7	4.5	4.5	4.0	2.7	4.4	8.0	6.5	17	4.1
24	4.0	5.2	4.6	4.4	4.5	3.7	2.9	4.1	7.5	6.2	14	3.8
25	4.0	5.4	4.4	4.5	4.5	3.7	3.1	3.8	6.5	5.4	17	3.1
26	5.0	5.5	4.6	4.4	4.5	3.8	3.2	3.5	5.3	4.5	16	2.0
27	4.0	5.0	4.7	4.3	4.4	3.8	3.7	3.3	5.1	4.2	16	2.1
28	4.0	3.8	4.6	4.2	4.3	4.0	5.6	4.0	5.3	4.9	15	2.3
29	4.0	4.5	4.6	4.3	---	4.1	5.1	4.0	5.2	5.9	15	3.5
30	4.0	4.4	4.6	4.2	---	4.7	4.2	4.2	5.2	6.3	15	3.7
31	4.0	---	4.5	4.3	---	4.9	---	3.9	---	13	16	---
TOTAL	150.0	107.5	130.5	135.5	123.3	128.3	107.3	133.0	153.9	236.4	682	249.9
MEAN	4.84	3.58	4.21	4.37	4.40	4.14	3.58	4.29	5.13	7.63	22.0	8.33
MAX	10	5.5	4.7	4.5	4.6	4.9	5.6	13	9.0	15	30	16
MIN	2.9	1.9	2.8	4.1	4.1	3.4	2.3	2.3	2.8	4.2	14	2.0
AC-FT	298	213	259	269	245	254	213	264	305	469	1350	496
CAL YR 1977	TOTAL	2663.04	MEAN	7.30	MAX	26	MIN	1.94	AC-FT	5280		
WTR YR 1978	TOTAL	2337.60	MEAN	6.40	MAX							

LOCATION.--Lat 44°33'29", long 106°55'50", in SW¼SW¼SW¼ sec.13, T.53 N., R.84 W., Sheridan County, Hydrologic Unit 10090206, on left bank 0.3 mi (0.5 km) downstream from intake of Mead-Coffeen ditch, 0.5 mi (0.8 km) upstream from intake of Big Piney Divide ditch, and 2.1 mi (3.4 km) southwest of Story.

GAGE.--Water-stage recorder. Altitude of gage is 5,520 ft (1,682 m), from topographic map.

REMARKS.--Records fair. 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), and Kearny Lake, capacity, 1,860 acre-ft (2.29 hm³). Diversions above station into Rock Creek basin for irrigation and by Mead-Coffeen ditch into North Piney Creek basin.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 741 ft³/s (21.0 m³/s) June 24, 1978, gage height, 3.54 ft (1.079 m); maximum gage height, 4.08 ft (1.244 m) Jan. 3, 1977 (backwater from ice); minimum daily discharge, 5.5 ft³/s (0.16 m³/s) Apr. 4, 1977.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 741 ft³/s (21.0 m³/s) June 24, gage height, 3.54 ft (1.079 m); maximum gage height, 3.85 ft (1.173 m) Nov. 26 (backwater from ice); minimum daily discharge, 8.1 ft³/s (0.23 m³/s) Mar. 23, 24.

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	48	18	16	14	12	10	12	62	192	552	175	98
2	55	20	16	15	13	9.0	12	58	176	517	225	96
3	50	19	16	15	12	9.0	11	55	160	471	245	98
4	26	19	15	13	11	9.0	9.9	54	160	439	257	98
5	22	19	14	12	11	9.0	10	46	172	374	266	94
6	22	18	14	12	11	10	9.9	42	202	307	270	85
7	24	19	14	12	11	9.0	9.9	36	266	274	262	78
8	24	17	14	13	11	8.7	12	32	293	253	253	78
9	23	13	13	14	10	8.7	13	38	326	270	236	78
10	24	18	14	13	11	8.7	11	48	353	270	217	76
11	22	19	16	12	10	10	10	48	353	297	213	78
12	24	20	15	12	10	10	9.9	46	336	297	217	80
13	24	19	14	11	10	10	9.3	49	374	288	240	68
14	23	19	15	12	11	10	9.9	64	497	279	257	50
15	22	18	15	12	10	10	9.9	90	604	257	253	48
16	22	18	14	12	11	9.9	10	132	669	240	249	45
17	22	16	13	12	10	9.3	11	163	596	240	249	44
18	21	15	13	12	10	9.0	9.6	172	524	249	244	44
19	19	13	12	10	10	8.7	9.3	189	478	229	232	36
20	17	12	12	12	10	8.7	9.6	146	510	220	236	31
21	18	12	15	11	10	9.0	10	138	524	245	236	28
22	18	14	15	11	10	8.4	10	146	628	275	199	28
23	18	15	15	13	10	8.1	9.3	160	669	245	140	27
24	18	15	15	12	10	8.1	9.0	176	596	210	90	26
25	18	16	14	12	9.9	8.4	10	176	620	190	111	24
26	18	17	13	12	10	8.4	12	163	580	180	102	25
27	18	17	15	14	9.9	9.0	24	213	504	190	100	25
28	18	17	16	13	10	9.3	81	293	484	190	98	26
29	18	17	15	12	---	10	81	283	524	190	96	29
30	19	16	15	12	---	12	73	257	552	185	96	30
31	18	---	14	12	---	13	---	213	---	155	98	---
TOTAL	733	505	447	384	294.8	290.4	528.5	3788	12922	8578	6162	1671
MEAN	23.6	16.8	14.4	12.4	10.5	9.37	17.6	122	431	277	199	55.7
MAX	55	20	16	15	13	13	81	293	669	552	270	98
MIN	17	12	12	10	9.9	8.1	9.0	32	160	155	90	24
AC-FT	1450	1000	887	762	585	576	1050	7510	25630	17010	12220	3310
CAL YR 1977	TOTAL	21282.0	MEAN	58.3	MAX	439	MIN	5.5	AC-FT	42210		
WTR YR 1978	TOTAL	36303.7	MEAN	99.5	MAX	669	MIN	8.1	AC-FT	72010		

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).

WATER-DISCHARGE RECORDS

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 fair. No diversion above station.

AVERAGE DISCHARGE.--27 years, 39.5 ft³/s (1.119 m³/s), 28,620 acre-ft/yr (35.3 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, 3.0 ft³/s (0.08 m³/s) Mar. 12, 1956, Jan. 20, 21, 24, 25, Mar. 3, 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. 29	0015	450 12.7	3.03 0.924	June 9	2030	*628 17.8	3.40 1.036
May 18	2315	459 13.0	3.04 .927	June 14	2115	549 15.5	3.24 .988
May 24	1915	481 13.6	3.09 .942				

Minimum daily discharge, 4.2 ft³/s (0.12 m³/s) Mar. 3.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	14	4.8	6.6	5.2	4.9	4.8	15	208	261	165	33	15
2	10	8.2	6.7	5.4	5.0	4.6	16	180	240	166	40	15
3	9.4	7.0	6.8	5.4	5.2	4.2	16	168	231	153	32	14
4	9.1	7.7	6.7	5.4	5.0	4.4	13	140	251	132	26	14
5	8.8	7.7	6.7	5.4	5.2	4.6	14	133	286	112	25	13
6	8.5	7.5	7.2	5.6	5.4	4.6	13	118	345	104	24	13
7	11	7.0	6.8	5.5	5.2	4.8	14	101	426	93	25	13
8	11	4.8	6.6	5.2	5.2	5.0	19	96	429	92	22	13
9	9.1	5.5	6.5	5.0	5.0	5.0	22	98	483	131	22	13
10	9.4	8.0	6.6	5.0	5.0	5.0	17	106	522	89	21	12
11	7.5	8.0	6.6	5.0	5.0	5.0	17	111	424	78	21	20
12	9.4	8.0	6.5	5.0	5.0	4.8	17	108	354	71	20	19
13	10	7.6	6.4	5.0	5.2	4.8	16	118	379	62	19	15
14	10	7.4	6.7	5.0	5.2	4.8	17	145	453	56	37	14
15	8.8	7.4	6.7	5.0	5.2	4.6	18	208	457	52	34	14
16	8.5	7.4	6.6	5.0	5.2	4.8	19	289	389	49	24	13
17	8.0	6.8	5.7	5.0	5.4	5.4	22	339	339	49	25	13
18	8.0	5.0	6.6	5.0	6.8	6.8	18	382	298	45	23	20
19	7.7	6.7	6.3	5.0	6.8	6.8	18	373	300	41	21	17
20	7.5	7.0	6.2	5.0	7.1	7.1	17	307	247	43	20	14
21	7.5	6.8	6.5	5.0	7.2	7.2	19	304	241	77	18	14
22	7.7	7.0	6.3	5.0	7.4	7.4	18	329	284	62	18	13
23	7.5	7.0	6.1	5.0	6.5	6.5	17	372	276	43	18	13
24	7.4	7.0	6.0	5.0	6.2	6.2	18	412	270	37	17	12
25	7.2	7.1	6.1	5.0	5.9	5.9	20	423	260	34	16	12
26	7.2	7.8	6.1	5.0	7.0	7.0	27	406	199	32	16	12
27	7.2	7.1	5.8	5.0	8.4	8.4	57	391	180	31	17	11
28	7.2	6.6	5.8	5.0	9.7	9.7	298	378	194	30	17	11
29	7.2	6.7	5.8	5.0	---	11	359	375	203	32	17	11
30	7.7	6.7	5.8	5.0	---	15	255	357	188	29	17	11
31	7.0	---	5.6	5.0	---	17	---	303	---	32	16	---
TOTAL	266.5	209.3	197.4	158.1	166.3	203.2	1426	7778	9409	2222	703	414
MEAN	8.60	6.98	6.37	5.10	5.94	6.55	47.5	251	314	71.7	22.7	13.8
MAX	14	8.2	7.2	5.6	9.7	17	359	423	522	166	40	20
MIN	7.0	4.8	5.6	5.0	4.9	4.2	13	96	180	29	16	11
AC-FT	529	415	392	314	330	403	2830	15430	18660	4410	1390	821

CAL YR 1977 TOTAL 14471.3 MEAN 39.6 MAX 437 MIN 4.8 AC-FT 28700
WTR YR 1978 TOTAL 23152.8 MEAN 63.4 MAX 522 MIN 4.2 AC-FT 45920

YELLOWSTONE RIVER BASIN

06321500 NORTH PINEY CREEK NEAR STORY, WY--Continued

WATER-QUALITY RECORDS

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

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

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SEDI- MENT, SUS- PENDE (MG/L)	SEDI- MENT DIS- CHARGE, SUS- PENDE (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
MAY					
19...	0900	375	174	176	72
20...	0935	290	53	41	61

YELLOWSTONE RIVER BASIN

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06321800 SPRING CREEK NEAR STORY, WY

LOCATION.--Lat 44°34'07", long 106°55'29", in NE¼SE¼NW¼ sec.13, T.53 N., R.84 W., Sheridan County, Hydrologic Unit 10090206, on right bank near upstream end of culvert in county road, 0.3 mi (0.5 km) northeast of fish hatchery, 1.4 mi (2.3 km) upstream from mouth, and 1.4 mi (2.3 km) southwest of Story.

PERIOD OF RECORD.--November 1974 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 5,340 ft (1,628 m), from topographic map.

REMARKS.--Records fair. Flow of the springs at the fish hatchery, the origin of Spring Creek, are directly affected by subsurface flow from South Piney Creek and the upper reaches of Mead-Coffeen ditch. Water can be diverted from the springs into Mead-Coffeen ditch below the fish hatchery.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 22 ft³/s (0.62 m³/s) May 19, 1978, gage height, 2.49 ft (0.759 m), from rating curve extended above 11 ft³/s (0.31 m³/s); minimum daily, 1.1 ft³/s (0.031 m³/s) Mar. 12, 1976.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 22 ft³/s (0.62 m³/s) May 19, gage height, 2.49 ft (0.759 m³/s), from rating curve extended above 11 ft³/s (0.31 m³/s); minimum daily, 2.8 ft³/s (0.079 m³/s) Nov. 9.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	7.9	3.2	4.2	4.4	4.6	4.3	5.1	5.7	4.4	7.4	4.7	7.5
2	4.2	3.4	4.2	4.4	4.9	4.4	5.0	5.2	4.2	7.5	5.3	7.5
3	3.4	3.2	4.2	4.4	4.8	4.4	4.7	4.7	3.9	7.4	5.8	7.3
4	3.6	3.2	4.2	4.5	4.8	4.5	4.5	4.4	3.6	7.3	6.2	7.3
5	4.9	3.3	2.9	4.5	4.8	4.7	4.5	4.1	3.6	7.1	6.4	7.4
6	4.6	3.3	3.1	4.4	4.8	5.2	4.3	3.7	3.6	6.2	6.5	7.3
7	4.4	3.3	4.8	4.4	4.8	5.1	4.4	3.0	3.9	5.6	6.4	7.2
8	4.2	3.2	4.5	4.4	4.8	5.0	4.4	3.3	4.1	5.4	6.3	7.1
9	3.8	2.8	4.4	4.5	4.7	5.1	4.6	3.4	4.4	5.5	6.3	7.0
10	3.7	4.9	5.3	4.5	4.9	5.1	4.5	4.1	4.5	5.5	8.0	6.8
11	3.6	4.9	5.0	4.5	4.9	4.8	4.9	4.6	4.4	5.6	9.1	7.1
12	3.4	4.8	4.4	4.6	4.8	5.0	5.5	4.7	4.2	5.5	9.1	7.0
13	3.6	4.5	4.2	4.6	4.9	5.0	5.4	5.0	4.1	5.4	9.3	6.9
14	3.4	4.5	4.3	4.7	5.1	4.9	5.7	5.4	4.9	5.4	9.6	6.1
15	3.6	4.5	4.4	4.8	5.2	3.6	5.7	6.2	6.7	5.4	9.3	5.7
16	3.6	4.4	4.4	4.8	5.2	4.1	5.6	6.7	7.8	5.2	9.7	5.6
17	4.6	3.7	4.4	4.7	5.1	4.9	5.7	8.6	8.0	5.1	9.7	5.3
18	5.4	3.1	4.4	4.6	5.0	5.1	5.3	13	7.7	5.1	9.6	5.7
19	4.4	3.8	4.3	4.6	5.3	5.0	4.9	18	7.4	5.3	9.3	6.3
20	3.4	2.9	3.5	4.5	4.6	5.1	4.8	12	7.4	5.2	9.2	6.0
21	3.4	3.5	4.4	4.4	4.9	4.9	5.0	8.1	7.4	5.3	9.3	5.8
22	3.6	5.0	4.7	4.7	4.9	4.8	5.0	6.0	8.3	5.4	8.9	5.6
23	3.3	6.4	4.5	4.8	4.9	4.6	4.5	4.9	9.3	5.5	8.5	5.3
24	3.3	7.0	4.4	4.8	4.9	4.4	4.0	4.4	9.3	5.2	7.2	5.3
25	3.2	7.0	4.6	4.8	4.9	4.5	4.3	4.1	9.1	4.9	7.4	5.3
26	3.3	6.1	4.6	4.8	5.0	4.6	4.4	3.7	8.7	4.5	7.4	5.4
27	3.7	4.7	4.3	4.8	4.9	4.6	5.4	3.6	7.9	4.2	7.3	5.1
28	3.7	5.2	4.4	4.8	4.6	4.7	7.7	5.1	7.1	4.0	7.3	4.9
29	3.8	4.5	4.4	4.8	---	4.9	7.3	5.3	7.2	4.3	7.3	4.9
30	3.8	4.4	4.4	4.8	---	4.9	6.1	5.3	7.4	4.4	7.4	4.8
31	3.6	---	4.4	4.7	---	5.2	---	4.7	---	4.3	7.5	---
TOTAL	122.4	128.7	134.2	143.0	137.0	147.4	153.2	181.0	184.5	170.1	241.3	186.5
MEAN	3.95	4.29	4.33	4.61	4.89	4.75	5.11	5.84	6.15	5.49	7.78	6.22
MAX	7.9	7.0	5.3	4.8	5.3	5.2	7.7	18	9.3	7.5	9.7	7.5
MIN	3.2	2.8	2.9	4.4	4.6	3.6	4.0	3.0	3.6	4.0	4.7	4.8
AC-FT	243	255	266	284	272	292	304	359	366	337	479	370

CAL YR 1977 TOTAL 1826.4 MEAN 5.00 MAX 11 MIN 1.3 AC-FT 3620
WTR YR 1978 TOTAL 1929.3 MEAN 5.29 MAX 18 MIN 2.8 AC-FT 3830

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).

WATER-DISCHARGE RECORDS

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.--38 years (water years 1941-78), 89.3 ft³/s (2.529 m³/s), 64,700 acre-ft/yr (79.8 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, 1,280 ft³/s (36.2 m³/s) May 19, gage height, 4.48 ft (1.366 m); minimum daily, 5.0 ft³/s (0.142 m³/s) Sept. 28.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	25	33	40	34	33	31	50	308	538	748	68	41
2	29	39	38	33	33	30	50	262	475	742	136	39
3	29	38	38	33	33	28	47	243	440	688	178	41
4	16	38	38	33	33	30	43	230	450	616	183	39
5	13	39	36	33	33	31	44	218	505	495	192	38
6	13	38	35	33	33	31	42	200	604	404	192	32
7	16	38	34	33	33	31	43	175	772	344	186	20
8	15	36	33	32	33	31	46	170	784	312	181	17
9	13	43	33	33	33	30	54	181	869	380	160	17
10	23	44	36	34	33	30	47	200	953	320	143	17
11	39	40	39	34	33	29	46	212	855	312	129	26
12	38	39	39	34	33	28	44	206	748	293	132	32
13	40	38	37	34	33	27	42	206	784	272	160	28
14	39	36	37	33	32	25	45	249	984	255	203	16
15	38	37	37	32	32	26	45	324	1140	215	189	13
16	37	36	37	32	32	28	45	460	1090	192	170	12
17	37	35	36	34	32	31	50	688	932	183	178	13
18	38	35	36	32	33	32	43	883	808	183	168	22
19	37	38	35	31	33	33	44	946	760	165	162	13
20	33	36	37	33	33	33	41	646	754	150	165	11
21	33	33	39	32	33	33	47	586	754	197	162	9.8
22	32	44	39	34	33	33	46	592	883	221	125	8.8
23	32	44	39	34	33	32	45	646	1020	178	86	8.4
24	31	44	39	33	33	31	42	712	1100	138	41	7.4
25	30	45	38	34	33	30	46	718	1100	106	53	6.2
26	30	48	38	34	33	35	51	664	932	88	48	5.9
27	30	44	36	34	33	40	85	688	766	74	48	5.6
28	30	41	35	35	32	42	468	766	736	74	46	5.0
29	30	40	35	34	---	46	562	760	796	62	46	8.0
30	33	40	36	33	---	49	392	748	778	52	46	17
31	37	---	35	33	---	54	---	610	---	55	46	---
TOTAL	916	1179	1140	1030	919	1020	2695	14497	24110	8514	4022	569.1
MEAN	29.5	39.3	36.8	33.2	32.8	32.9	89.8	468	804	275	130	19.0
MAX	40	48	40	35	33	54	562	946	1140	748	203	41
MIN	13	33	33	31	32	25	41	170	440	52	41	5.0
AC-FT	1820	2340	2260	2040	1820	2020	5350	28750	47820	16890	7980	1130

CAL YR 1977 TOTAL 29042.3 MEAN 79.6 MAX 930 MIN 2.2 AC-FT 57610
WTR YR 1978 TOTAL 60611.1 MEAN 166 MAX 1140 MIN 5.0 AC-FT 120200

YELLOWSTONE RIVER BASIN

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06323000 PINEY CREEK AT KEARNY, WY--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1951, 1976 to current year.

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

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	TUR- BID- ITY (JTU)	OXYGEN, DIS- SOLVED (MG/L)	HARD- NESS (MG/L AS CACO3)	HARD- NESS, NONCAR- BONATE (MG/L AS CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	
MAR 02...	0900	A30	150	7.9	.0	0	10.5	84	7	23	6.4	
A-Daily mean discharge.												
DATE	TIME	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	BICAR- BONATE (MG/L AS HCO3)	CAR- BONATE (MG/L AS CO3)	ALKA- LINITY (MG/L AS CACO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L)
MAR 02...	2.6	.1	.7	94	0	77	6.9	.6	.1	12	99	
DATE	TIME	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 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,AM- MONIA + ORGANIC DIS. (MG/L AS N)	
MAR 02...	.13	8.02	.13	.14	.02	.03	.04	1.2	.04	1.2	.07	
DATE	TIME	NITRO- GEN, TOTAL (MG/L AS N)	NITRO- GEN, TOTAL (MG/L AS NO3)	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHATE, TOTAL (MG/L AS PO4)	PHOS- PHURUS, DIS- SOLVED (MG/L AS P)	PHOS- PHURUS, URTHO. TOTAL (MG/L AS P)	PHOS- PHURUS, ORTHOPHOS- PHATE, DIS- SOLVED (MG/L AS P)	PHOS- PHATE, ORTHOPHOS- PHATE, DIS- SOLVED (MG/L AS PO4)	BORON, DIS- SOLVED (UG/L AS B)	IRON, DIS- SOLVED (UG/L AS FE)	ALGAL GROWTH POTEN- TIAL, BOTTLE TEST (MG/L)
MAR 02...	1.3	5.9	.02	.06	.02	.01	.02	.06	10	30	7.9	
DATE	TIME	SEDIMENT DIS- CHARGE, SUS- PENDED (T/DAY)	SEDIMENT DIS- CHARGE, SUS- PENDED (T/DAY)	SEDIMENT DIS- CHARGE, SUS- PENDED (T/DAY)	SEDIMENT DIS- CHARGE, SUS- PENDED (T/DAY)	SEDIMENT DIS- CHARGE, SUS- PENDED (T/DAY)	SEDIMENT DIS- CHARGE, SUS- PENDED (T/DAY)	SEDIMENT DIS- CHARGE, SUS- PENDED (T/DAY)	SEDIMENT DIS- CHARGE, SUS- PENDED (T/DAY)	SEDIMENT DIS- CHARGE, SUS- PENDED (T/DAY)	SEDIMENT DIS- CHARGE, SUS- PENDED (T/DAY)	
MAY 19...	0750	1010	225	614	57							
MAY 20...	0845	634	82	140	56							

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 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 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.--28 years (water years 1951-78), 90.2 ft³/s (2.554 m³/s), 65,350 acre-ft/yr (80.6 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.--Maximum stage known, 10.9 ft (3.32 m), present datum, June 1, 1929, from information by local resident. Stage may have been affected by backwater from bridge.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,260 ft³/s (35.7 m³/s) May 19, gage height, 5.30 ft (1.615 m); minimum daily, 14 ft³/s (0.40 m³/s) Nov. 16.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	46	15	19	17	16	20	66	142	690	724	46	60
2	48	16	20	18	17	19	64	142	594	707	91	53
3	48	16	21	18	17	19	60	137	559	682	182	53
4	46	16	21	18	17	20	49	151	544	606	179	50
5	33	15	19	19	16	20	46	176	586	508	149	48
6	27	14	19	21	18	22	46	245	640	395	149	47
7	29	15	18	20	17	24	42	272	774	329	151	35
8	28	19	17	19	17	26	42	325	812	272	149	26
9	26	19	17	19	16	26	42	272	853	325	144	24
10	26	18	18	18	16	25	40	248	993	298	142	25
11	24	20	20	18	16	25	38	265	917	265	131	29
12	24	27	19	19	16	24	35	321	795	251	131	53
13	24	22	19	19	16	24	35	310	778	248	135	43
14	22	21	21	18	16	24	34	345	912	225	161	39
15	21	21	20	18	16	24	38	368	1110	201	161	32
16	20	22	20	18	16	25	37	438	1130	176	161	30
17	20	22	19	18	17	26	36	602	998	163	163	27
18	20	20	18	18	18	26	34	1050	848	158	161	39
19	19	17	18	17	19	26	33	1120	761	151	161	39
20	19	16	18	18	20	26	32	724	753	142	156	34
21	19	16	20	19	21	28	31	635	740	171	156	34
22	19	17	19	18	23	27	44	640	799	232	151	30
23	20	18	19	18	22	26	43	724	923	190	126	30
24	20	19	18	18	21	26	41	761	993	149	70	30
25	19	20	18	18	20	32	47	774	1050	124	60	30
26	19	20	18	18	20	43	50	766	950	93	65	29
27	19	21	18	18	20	54	62	749	766	71	62	25
28	19	21	18	18	20	60	135	862	690	64	64	24
29	20	21	18	18	---	60	287	857	736	57	60	23
30	18	21	18	18	---	64	187	887	736	39	60	26
31	15	---	17	17	---	66	---	757	---	36	60	---
TOTAL	777	565	582	566	504	957	1776	16065	24430	8052	3837	1067
MEAN	25.1	18.8	18.8	18.3	18.0	30.9	59.2	518	814	260	124	35.6
MAX	48	27	21	21	23	66	287	1120	1130	724	182	60
MIN	15	14	17	17	16	19	31	137	544	36	46	23
AC-FT	1540	1120	1150	1120	1000	1900	3520	31860	48460	15970	7610	2120
CAL YR 1977 TOTAL	20950.8			MEAN 57.4	MAX 870	MIN 8.6	AC-FT 41560					
WTR YR 1978 TOTAL	59178.0			MEAN 162	MAX 1130	MIN 14	AC-FT 117400					

YELLOWSTONE RIVER BASIN

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06323500 PINEY CREEK AT UCROSS, WY--Continued

WATER-QUALITY RECORDS

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

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

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	TUR- BID- ITY (JTU)	OXYGEN, DIS- SOLVED (MG/L)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	HARD- NESS (MG/L AS CACO3)	HARD- NESS, NONCAR- BONATE (MG/L AS CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)
OCT												
04...	1415	47	440	8.1	8.5	2	10.0	50	210	67	48	21
NOV												
14...	1615	20	510	7.9	3.0	1	10.4	K16	250	73	57	27
DEC												
13...	1330	A19	560	7.6	.0	1	10.5	K12	270	79	61	28
JAN												
05...	1615	A19	530	7.4	.0	1	10.6	K6	250	65	57	27
FEB												
06...	1300	A18	570	7.6	.0	1	12.8	36	250	71	56	27
28...	0930	A20	300	8.0	.0	1	10.4	--	260	70	59	27
MAR												
07...	1430	A24	600	7.7	.0	1	10.4	43	260	76	58	27
APR												
03...	1330	61	800	8.6	9.0	3	11.7	K13	350	120	76	38
MAY												
15...	1430	372	280	8.3	13.0	15	11.8	110	120	19	29	11
JUN												
12...	1525	774	130	8.3	14.0	10	10.3	82	49	10	12	4.6
JUL												
24...	1620	144	260	8.3	22.0	0	10.1	140	92	19	21	9.5
AUG												
21...	1500	158	210	8.5	20.0	3	9.7	52	75	13	18	7.4
S29...	0925	59	375	--	16.0	--	--	--	--	--	--	--
SEP												
18...	1500	44	650	8.2	14.0	2	9.2	82	270	110	62	28

A-Daily mean discharge.

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

S-Seepage run data (see Explanation of Water-Quality Records).

DATE	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	BICAR- BONATE (MG/L AS HCO3)	CAR- BONATE (MG/L AS CO3)	ALKA- LINITY (MG/L AS CACO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, SUM OF CONSTITU- ENTS, DIS- SOLVED (MG/L)
OCT											
04...	23	.7	3.4	170	0	140	130	2.1	.1	7.4	319
NOV											
14...	33	.9	3.9	220	0	180	150	2.3	.1	10	392
DEC											
13...	32	.9	3.9	230	0	190	140	3.5	.1	12	394
JAN											
05...	30	.8	3.7	230	0	190	130	2.2	.3	12	376
FEB											
06...	28	.8	3.4	220	0	180	120	2.0	.2	12	357
28...	29	.8	3.3	230	0	190	120	1.8	.1	12	367
MAR											
07...	29	.8	3.6	220	--	180	120	2.0	.2	11	360
APR											
03...	50	1.2	5.8	260	8	230	220	3.5	.2	7.9	538
MAY											
15...	11	.4	1.8	120	0	98	43	1.2	.1	9.9	166
JUN											
12...	4.9	.3	1.4	47	0	39	20	1.1	.1	9.3	77
JUL											
24...	11	.5	1.8	88	0	72	42	1.3	.1	6.7	137
AUG											
21...	8.4	.4	1.7	76	0	62	31	1.4	.1	5.3	111
29...	--	--	--	--	--	--	--	--	--	--	--
SEP											
18...	39	1.0	5.4	200	0	160	180	3.4	.1	6.0	423

YELLOWSTONE RIVER BASIN

06323500 PINEY CREEK AT UCROSS, WY--Continued

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

DATE	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)	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,AM- MONIA + ORGANIC DIS. (MG/L AS N)
OCT											
04...	.43	40.5	.28	--	.09	--	--	.36	--	.45	--
NOV											
14...	.53	21.2	.11	--	.05	--	--	.23	--	.28	--
DEC											
13...	.54	20.2	.12	--	.11	--	--	.04	--	.15	--
JAN											
05...	.51	19.3	.25	--	.12	--	--	.24	--	.36	--
FEB											
06...	.49	17.4	.16	--	.02	--	--	.22	--	.24	--
28...	.50	19.8	.20	.18	.05	.04	.05	.08	.01	.13	.05
MAR											
07...	.49	23.3	.24	--	.13	--	--	.61	--	.74	--
APR											
03...	.73	88.6	.15	--	.05	--	--	1.5	--	1.5	--
MAY											
15...	.23	167	.05	--	.04	--	--	.81	--	.85	--
JUN											
12...	.10	161	.09	--	.11	--	--	.35	--	.46	--
JUL											
24...	.19	53.3	.08	--	.01	--	--	.83	--	.84	--
AUG											
21...	.15	47.4	.03	--	.13	--	--	.55	--	.68	--
29...	--	--	--	--	--	--	--	--	--	--	--
SEP											
18...	.58	50.3	.01	--	.07	--	--	.79	--	.86	--

DATE	NITRO- GEN, TOTAL (MG/L AS N)	NITRO- GEN, TOTAL (MG/L AS NO3)	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHATE, TOTAL (MG/L AS PO4)	PHOS- PHORUS, DIS- SOLVED (MG/L AS P)	PHOS- PHORUS, ORTHU. TOTAL (MG/L AS P)	PHOS- PHORUS, ORTHU. DIS- SOLVED (MG/L AS P)	PHOS- PHATE, ORTHU. DIS- SOLVED (MG/L AS PO4)	CARBON, ORGANIC DIS- SOLVED (MG/L AS C)	CARBON, ORGANIC SUS- PENDED TOTAL (MG/L AS C)	ALGAL GROWTH POTEN- TIAL, BOTTLE TEST (MG/L)
OCT											
04...	.73	3.2	.03	--	--	--	--	--	3.3	.6	--
NOV											
14...	.39	1.7	.02	--	--	--	--	--	--	--	--
DEC											
13...	.27	1.2	.00	--	--	--	--	--	--	--	--
JAN											
05...	.61	2.7	.01	--	--	--	--	--	--	--	--
FEB											
06...	.40	1.8	.02	--	--	--	--	--	--	--	--
28...	.33	1.5	.01	.03	.01	.01	.02	.06	--	--	5.8
MAR											
07...	.98	4.3	.03	--	--	--	--	--	--	--	--
APR											
03...	1.7	7.3	.02	--	--	--	--	--	--	--	--
MAY											
15...	.90	4.0	.07	--	--	--	--	--	--	--	--
JUN											
12...	.55	2.4	.02	--	--	--	--	--	6.2	.9	--
JUL											
24...	.92	4.1	.02	--	--	--	--	--	--	--	--
AUG											
21...	.71	3.1	.09	--	--	--	--	--	--	--	--
29...	--	--	--	--	--	--	--	--	--	--	--
SEP											
18...	.87	3.9	.05	--	--	--	--	--	--	--	--

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

[illegible]

YELLOWSTONE RIVER BASIN

06323500 PINEY CREEK AT UCROSS, WY--Continued

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

[illegible][illegible]

YELLOWSTONE RIVER BASIN

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06323500 PINEY CREEK AT UCROSS, WY--Continued

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

DATE	TIME	2,4-D, TOTAL (UG/L)	2,4-D, TOTAL IN BOT- TOM MA- TERIAL (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)
MAY							
15...	1430	.08	0	.00	0	.00	.0
JUL							
24...	1620	.00	0	.00	0	.00	.0
AUG							
21...	1500	.00	0	.00	0	.00	.0
SEP							
18...	1500	.00	0	.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)
MAY				
15...	.00	0	.12	0
JUL				
24...	.00	0	.03	0
AUG				
21...	.00	1.5	.00	0
SEP				
18...	.00	0	.00	0

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SEDI- MENT, SUS- PENDED (MG/L)	SEDI- MENT DIS- CHARGE, SUS- PENDED (T/DAY)	SED. SUSP. SIEVE DIAM. X FINER THAN .062 MM	SED. SUSP. FALL DIAM. X FINER THAN .004 MM	SED. SUSP. FALL DIAM. X FINER THAN .016 MM	SED. SUSP. FALL DIAM. X FINER THAN .062 MM	SED. SUSP. FALL DIAM. X FINER THAN .125 MM	SED. SUSP. FALL DIAM. X FINER THAN .250 MM	SED. SUSP. FALL DIAM. X FINER THAN .500 MM
MAY											
19...	1610	1090	217	639	--	49	68	84	90	97	100
20...	1800	680	183	336	58	--	--	--	--	--	--
21...	1610	614	162	269	61	--	--	--	--	--	--

YELLOWSTONE RIVER BASIN

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 fair 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.--39 years (water years 1940-78), 186 ft³/s (5.268 m³/s), 134,800 acre-ft/yr (166 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, 5,210 ft³/s (148 m³/s) May 18, gage height, 9.03 ft (2.752 m); minimum daily, 31 ft³/s (0.88 m³/s) Sept. 11.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	179	47	84	62	54	68	274	379	1670	1170	55	122
2	97	44	84	58	56	66	252	325	1520	1140	50	120
3	95	46	86	58	64	62	250	305	1360	1100	84	103
4	99	47	82	60	64	66	241	299	1280	1040	191	95
5	95	53	80	60	67	70	211	355	1260	927	213	93
6	86	51	78	64	70	70	180	453	1310	758	170	93
7	80	49	82	56	68	72	174	569	1400	621	154	78
8	71	54	80	52	66	76	163	772	1670	520	152	59
9	64	60	76	50	64	80	156	715	1710	453	150	50
10	63	92	80	50	62	78	176	544	1850	516	148	37
11	59	122	88	52	60	80	181	495	2130	488	146	31
12	58	116	94	56	60	80	151	546	1930	438	131	47
13	55	112	86	56	60	78	137	561	1580	408	126	99
14	56	101	88	54	59	76	130	548	1500	379	134	128
15	54	101	90	50	57	76	128	634	1640	331	171	117
16	50	106	88	49	56	80	128	787	2220	292	228	85
17	48	99	86	52	58	89	137	1840	2190	250	241	75
18	50	95	82	49	60	94	128	3660	1750	226	210	82
19	49	82	80	49	64	94	130	4440	1480	221	203	110
20	49	75	80	49	64	92	120	2960	1350	207	208	147
21	48	72	83	48	70	94	111	2170	1290	204	209	136
22	47	78	85	55	71	120	111	2040	1190	258	207	131
23	49	80	88	52	74	120	113	2100	1260	415	198	126
24	49	80	84	50	74	140	117	2240	1570	338	173	121
25	49	80	80	50	72	220	111	2320	1520	244	134	116
26	48	88	76	52	74	330	105	2270	1610	183	102	113
27	49	86	73	56	72	370	111	2070	1460	146	99	113
28	49	86	74	54	70	352	149	2020	1150	124	98	112
29	48	88	72	54	---	312	441	1930	1060	99	100	110
30	47	86	70	54	---	289	548	1900	1170	76	112	107
31	49	---	70	50	---	277	---	1980	---	68	126	---
TOTAL	1989	2376	2529	1661	1810	4171	5364	44227	46280	13640	4723	2956
MEAN	64.2	79.2	81.6	53.6	64.6	135	179	1427	1543	440	152	98.5
MAX	179	122	94	64	74	370	548	4440	2220	1170	241	147
MIN	47	44	70	48	54	62	105	299	1060	68	50	31
AC-FT	3950	4710	5020	3290	3590	8270	10640	87720	91800	27050	9370	5860
CAL YR 1977 TOTAL	43922				1570	12	AC-FT	87120				
WTR YR 1978 TOTAL	131726				4440	31	AC-FT	261300				

YELLOWSTONE RIVER BASIN

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06324000 CLEAR CREEK NEAR ARVADA, WY--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1949-54, 1967 to current year.

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

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	TUR- BID- ITY (JTU)	OXYGEN, DIS- SOLVED (MG/L)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	HARD- NESS (MG/L AS CACO3)	HARD- NESS, NONCAR- BONATE (MG/L CACO3)
OCT										
01...	1600	132	950	7.7	10.0	500	9.1	K60	440	310
NOV										
11...	1330	117	1190	8.1	3.0	15	11.0	K24	590	340
DEC										
10...	1230	A80	1250	7.7	.0	4	11.4	K17	470	220
JAN										
02...	1330	A58	1200	7.4	.0	5	10.8	31	620	360
FEB										
03...	1330	A64	1200	7.3	.0	6	11.0	50	550	310
MAR										
04...	1300	A66	1250	7.6	.0	5	11.6	31	540	300
31...	1300	289	1480	8.2	10.0	60	10.0	K22	610	380
MAY										
12...	1330	573	1000	8.1	9.0	75	9.9	150	360	200
JUN										
09...	1200	1650	280	8.3	15.0	55	9.7	K450	110	48
JUL										
21...	1330	207	800	8.3	16.5	7	9.1	92	280	170
AUG										
18...	1320	210	880	8.2	17.0	3	8.7	K64	350	190
S29...	1615	102	1040	--	20.0	--	--	--	--	--
SEP										
01...	1345	114	1100	8.2	22.0	--	--	--	450	--
15...	1230	122	1250	8.2	15.0	2	10.3	K30	490	280

A-Daily mean discharge.

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

S-Seepage run data (see Explanation of Water-Quality Records).

DATE	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	BICAR- BONATE (MG/L AS HCO3)	CAR- BONATE (MG/L AS CO3)	ALKA- LINITY (MG/L AS CACO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)
OCT										
01...	110	42	64	1.3	9.2	150	6	130	450	8.9
NOV										
11...	130	67	91	1.6	5.4	300	0	250	530	6.4
DEC										
10...	110	62	86	1.6	4.1	310	0	250	420	6.1
JAN										
02...	150	63	87	1.5	4.0	300	9	260	520	5.4
FEB										
03...	130	56	78	1.4	3.7	290	0	240	450	6.7
MAR										
04...	120	56	80	1.5	4.2	290	0	240	480	9.0
31...	120	73	120	2.1	6.3	280	0	230	630	6.0
MAY										
12...	68	45	68	1.6	2.9	190	0	160	340	4.3
JUN										
09...	23	8.5	17	.8	1.7	76	0	62	64	48
JUL										
21...	67	29	53	1.4	2.4	140	0	120	280	2.6
AUG										
18...	84	34	51	1.2	3.7	190	0	160	290	2.2
29...	--	--	--	--	--	--	--	--	--	--
SEP										
01...	100	49	64	1.3	4.8	--	--	200	400	3.7
15...	110	50	84	1.7	5.4	260	0	220	450	3.7

YELLOWSTONE RIVER BASIN

06324000 CLEAR CREEK NEAR ARVADA, WY--Continued

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

DATE	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)	SOLIDS, SUSP. TOTAL, RESIDUE AT 110 DEG. C (MG/L)	NITRO- GEN, NITRATE DIS- SOLVED (MG/L AS N)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N)
OCT										
01...	.4	4.3	--	768	1.04	274	466	.97	.87	.26
NOV										
11...	.4	7.7	--	979	1.33	309	31	.29	.24	.05
DEC										
10...	.4	12	--	851	1.16	184	39	.52	.54	.16
JAN										
02...	.5	14	--	1000	1.36	157	23	.72	.49	.14
FEB										
03...	.3	14	--	886	1.21	153	22	.79	.63	.21
MAR										
04...	.4	13	--	909	1.24	162	14	.61	.58	.07
31...	.5	12	--	1110	1.51	866	180	.36	.47	.08
MAY										
12...	.4	15	--	620	.84	959	318	.25	.27	.09
JUN										
09...	.2	8.7	--	211	.29	940	114	.63	.14	.12
JUL										
21...	.3	4.5	--	510	.69	285	19	.23	.14	.00
AUG										
18...	.3	.0	--	560	.76	318	2	.00	.02	.02
29...	--	--	--	--	--	--	--	--	--	--
SEP										
01...	.2	2.6	833	--	1.13	256	--	--	.09	.01
15...	.5	4.5	--	837	1.14	276	1	.09	.08	.04

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, DIS- SOLVED (MG/L AS P)	CARBON, ORGANIC TOTAL (MG/L AS C)	CARBON, ORGANIC DIS- SOLVED (MG/L AS C)	CARBON, ORGANIC SUS- PENDED TOTAL (MG/L AS C)
OCT									
01...	1.4	1.7	2.6	11	.00	--	--	9.2	<5.0
NOV									
11...	.56	.61	.85	3.8	.00	--	--	--	--
DEC									
10...	.06	.22	.76	3.4	.00	--	--	--	--
JAN									
02...	.51	.65	1.1	5.0	.03	--	--	--	--
FEB									
03...	.06	.27	.90	4.0	.04	--	--	--	--
MAR									
04...	.54	.61	1.2	5.3	.18	--	--	--	--
31...	1.0	1.1	1.6	7.0	.19	--	--	--	--
MAY									
12...	1.1	1.2	1.5	6.5	.08	--	--	--	--
JUN									
09...	1.2	1.3	1.4	6.4	.03	--	9.1	--	--
JUL									
21...	.58	.58	.72	3.2	.04	--	--	--	--
AUG									
18...	.59	.61	.63	2.8	.02	--	--	--	--
29...	--	--	--	--	--	--	--	--	--
SEP									
01...	.47	.48	.57	2.5	.02	.01	--	--	--
15...	.68	.72	.80	3.5	.03	--	--	--	--

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

[illegible][illegible]

06324000 CLEAR CREEK NEAR ARVADA, WY--Continued

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

[illegible][illegible]

YELLOWSTONE RIVER BASIN

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06324000 CLEAR CREEK NEAR ARVADA, WY--Continued

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

DATE	TIME	2,4-D, TOTAL (UG/L)	2,4-D, TOTAL IN BOT- TOM MA- TERIAL (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)
MAY							
12...	1330	.15	0	.00	0	.00	.0
JUL							
21...	1330	.00	0	.00	0	.00	.0
AUG							
18...	1320	.05	0	.00	0	.00	.0
SEP							
15...	1230	.00	0	.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)
MAY				
12...	.00	0	.06	0
JULY				
21...	.00	0	.14	0
AUG				
18...	.01	0	.06	0
SEP				
15...	.00	0	.00	0

DATE	TIME	TEMPER- ATURE (DEG C)	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SEDI- MENT, SUS- PENDEED (MG/L)	SEDI- MENT DIS- CHARGE, SUS- PENDEED (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM	SED. SUSP. FALL DIAM. % FINER THAN .004 MM
OCT							
11...	1240	7.0	60	52	8.4	--	--
NOV							
11...	1225	1.5	105	113	32	--	--
DEC							
13...	1245	.0	A86	88	20	--	--
JAN							
11...	1230	.0	A52	23	3.2	--	--
FEB							
15...	1000	.0	A57	54	8.3	--	--
MAR							
10...	1330	.0	A78	54	11	--	--
APR							
05...	1130	11.0	215	182	106	--	--
MAY							
12...	1010	9.0	561	800	1210	--	--
20...	1230	12.0	3020	1300	10600	--	34
21...	1240	12.5	2080	1170	6570	56	--
JUN							
06...	1230	12.5	1280	380	1310	--	--
JUL							
05...	1215	21.5	938	225	570	--	--
AUG							
07...	1110	23.5	156	20	8.4	--	--
SEP							
05...	1105	23.0	93	18	4.5	--	--

A-Daily mean discharge.

YELLOWSTONE RIVER BASIN

06324000 CLEAR CREEK NEAR ARVADA, WY--Continued

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

DATE		SED. SUSP. FALL. DIAM.					
		% FINER THAN .016 MM	% FINER THAN .062 MM	% FINER THAN .125 MM	% FINER THAN .250 MM	% FINER THAN .500 MM	% FINER THAN 1.00 MM
OCT							
11...		--	--	--	--	--	--
NOV							
11...		--	--	--	--	--	--
DEC							
13...		--	--	--	--	--	--
JAN							
11...		--	--	--	--	--	--
FEB							
15...		--	--	--	--	--	--
MAR							
10...		--	--	--	--	--	--
APR							
05...		--	--	--	--	--	--
MAY							
12...		--	--	--	--	--	--
20...		54	75	83	86	92	100
21...		--	--	--	--	--	--
JUN							
06...		--	--	--	--	--	--
JUL							
05...		--	--	--	--	--	--
AUG							
07...		--	--	--	--	--	--
SEP							
05...		--	--	--	--	--	--

DATE	TIME	TEMPER- ATURE (DEG C)	STREAM- FLOW, INSTAN- TANEOUS (CFS)	BED MAT. FALL. DIAM.			
				% FINER THAN .062 MM	% FINER THAN .125 MM	% FINER THAN .250 MM	% FINER THAN .500 MM
APR							
05...	1130	11.0	215	5	9	18	36
AUG							
07...	1110	23.5	156	1	2	10	34
SEP							
05...	1105	23.0	93	--	0	5	18

DATE	BED MAT. FALL. DIAM.						
	% FINER THAN 1.00 MM	% FINER THAN 2.00 MM	% FINER THAN 4.00 MM	% FINER THAN 8.00 MM	% FINER THAN 16.0 MM	% FINER THAN 32.0 MM	% FINER THAN 64.0 MM
APR							
05...	44	49	58	71	79	92	100
AUG							
07...	44	53	62	72	79	94	100
SEP							
05...	24	29	38	52	69	91	100

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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).

WATER-DISCHARGE RECORDS

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. 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.--Water-discharge records fair except those for winter period, which are poor. Some regulation by three reservoirs in Wyoming with combined usable capacity of 36,800 acre-ft (45.5 hm³). Diversions for irrigation of about 66,300 acres (268 km²) above station.

AVERAGE DISCHARGE.--47 years, 470 ft³/s (13.31 m³/s), 340,500 acre-ft/yr (420 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, 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.--Peak discharges above base of 3,700 ft.³/s (105 m³/s) and maximums (*):

Date	Time	Discharge		Gage height		Date	Time	Discharge		Gage height	
		(ft ³ /s)	(m ³ /s)	(ft)	(m)			(ft ³ /s)	(m ³ /s)	(ft)	(m)
Mar. 21	0015	5.520	156	6.12	1.865	May 20	2115	33.000	935	15.24	4.645

Minimum discharge, 54 ft³/s (1.53 m³/s) Nov. 19, gage height, 2.14 ft (0.652 m), result of freezeup.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	420	172	150	160	140	170	591	793	4730	2530	445	215
2	230	179	150	160	140	170	583	868	4400	2560	428	206
3	551	180	150	160	140	170	561	837	3880	2130	426	202
4	496	176	150	160	140	170	538	920	3490	1820	466	183
5	336	180	140	160	140	170	503	1180	3280	1550	495	170
6	268	179	130	160	140	180	467	1980	3170	1330	399	161
7	239	174	110	160	140	200	443	2510	3200	1040	349	152
8	233	186	100	150	140	230	428	3090	3530	1220	337	154
9	210	200	100	150	140	300	395	3140	3730	1320	318	146
10	201	208	100	150	140	500	372	2760	3830	1300	309	139
11	194	237	110	150	140	1100	376	2990	4000	1300	297	132
12	187	240	130	150	150	2500	374	3630	3920	1170	275	156
13	182	237	170	150	150	3000	361	3350	3610	887	264	153
14	177	230	180	150	150	2600	351	2890	3280	691	264	202
15	175	232	180	150	150	1930	349	2410	3360	564	294	208
16	174	237	180	150	150	1290	329	2140	3990	489	336	196
17	169	231	180	150	150	1170	329	4660	3740	428	381	169
18	170	230	170	150	160	1600	322	13000	3380	489	329	183
19	173	220	160	150	170	2960	336	20000	2970	489	326	201
20	172	200	160	150	180	3760	336	27500	2680	555	376	245
21	171	90	160	150	190	4380	317	15700	2490	574	342	281
22	167	90	160	150	190	3430	323	7260	2370	595	323	360
23	172	95	160	150	190	2110	310	5910	2330	982	311	340
24	171	95	160	150	190	1460	307	5490	2510	2260	286	298
25	172	120	160	150	190	1150	307	5520	2480	1500	269	274
26	176	140	160	150	180	1260	307	5470	2510	968	236	260
27	178	150	160	150	180	1390	297	5350	2310	726	224	252
28	179	150	160	150	180	1040	324	5540	1950	595	210	254
29	176	150	160	150	---	808	523	5160	1990	535	205	250
30	176	150	160	150	---	664	800	5050	2230	498	201	245
31	177	---	160	150	---	658	---	5060	---	471	207	---
TOTAL	6872	5358	4660	4720	4440	42520	12159	172158	95340	33566	9928	6387
MEAN	222	179	150	152	159	1372	405	5553	3178	1083	320	213
MAX	551	240	180	160	190	4380	800	27500	4730	2560	495	360
MIN	167	90	100	150	140	170	297	793	1950	428	201	132
AC=FT	13630	10630	9240	9360	8810	84340	24120	341500	189100	66580	19690	12670

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.

SUSPENDED SEDIMENT DISCHARGE: October 1974-77, March to September 1978.

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, 32.0°C July 7, 1951; minimum daily, (water years 1951-53, 1956-57, 1975-77), 0.0°C on many days during winter periods.

SEDIMENT CONCENTRATIONS: Maximum daily, 40,500 mg/L June 24, 1976; 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, 29.0°C Aug. 25.

SEDIMENT CONCENTRATIONS: Maximum daily, 35,800 mg/L May 12; minimum daily, 161 mg/L Sept. 17.

SEDIMENT LOADS: Maximum daily, 2,230,000 tons (2,023,000 tonnes) May 20; minimum daily, 67 tons (61 tonnes) Sept. 7.

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

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHUS)	PH (UNITS)	TEMPER- ATURE (DEG C)	TUR- BID- ITY (JTU)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION)	OXYGEN DEMAND, BIO- CHEM- ICAL, 5 DAY (MG/L)	HARD- NESS (MG/L AS CaCO3)
OCT										
12...	1045	197	2350	8.4	5.0	1900	11.2	99	2.6	680
NOV										
01...	1000	171	2440	8.3	4.0	800	11.4	98	1.6	610
DEC										
07...	1030	132	2150	8.1	.0	40	11.3	87	1.2	730
JAN										
04...	1130	154	2500	7.7	.0	120	7.5	58	--	750
FEB										
28...	1045	179	2250	7.7	.0	50	8.9	70	--	630
MAR										
15...	1230	1630	1400	8.3	.5	2200	11.8	93	--	400
APR										
12...	0930	386	2150	8.3	6.0	310	10.0	92	--	650
MAY										
02...	1045	877	1980	8.2	13.5	1300	9.4	102	--	510
JUN										
06...	1130	3210	960	8.2	19.5	900	7.9	99	--	330
JUL										
11...	1145	1000	1260	8.4	24.0	1200	7.2	99	--	390
AUG										
03...	0900	430	2560	8.4	16.5	970	8.2	95	--	760
SEP										
01...	1630	233	2150	8.2	25.5	--	--	--	--	610
13...	0930	152	2780	8.1	9.0	160	10.4	102	--	680

DATE	HARD- NESS, NONCAR- BONATE (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)	BICAR- BONATE (MG/L AS HCO3)	CAR- BONATE (MG/L AS CO3)	ALKA- LITY (MG/L AS CaCO3)
OCT									
12...	460	160	69	280	4.7	7.5	270	0	220
NOV									
01...	380	130	70	320	5.6	7.0	290	0	240
DEC									
07...	430	160	80	220	3.5	6.4	360	0	300
JAN									
04...	400	170	79	300	4.8	6.8	430	0	350
FEB									
28...	340	140	69	270	4.7	6.5	360	0	300
MAR									
15...	290	100	37	160	3.5	6.0	140	0	110
APR									
12...	410	150	67	250	4.3	6.9	290	0	240
MAY									
02...	320	120	52	250	4.8	6.4	240	0	200
JUN									
06...	170	80	31	86	2.1	4.0	190	0	160
JUL									
11...	240	97	37	140	3.1	4.6	190	0	160
AUG									
03...	580	190	69	310	4.9	7.6	220	1	180
SEP									
01...	400	130	69	230	4.1	6.9	260	0	220
13...	490	150	74	360	6.0	7.4	230	0	190

YELLOWSTONE RIVER BASIN

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06324500 POWDER RIVER AT MOORHEAD, MT--Continued

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

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, 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 TOTAL (MG/L AS N)
OCT									
12...	800	180	.6	5.9	--	1640	2.23	872	.17
NOV									
01...	730	220	.3	2.9	--	1620	2.20	748	.18
DEC									
07...	770	110	.2	11	--	1540	2.09	549	.45
JAN									
04...	720	200	.3	13	--	1700	2.31	707	.63
FEB									
28...	620	180	.5	13	--	1480	2.01	715	.74
MAR									
15...	520	58	.5	5.6	--	956	1.30	4210	.55
APR									
12...	710	150	.5	7.5	--	1490	2.03	1550	.20
MAY									
02...	590	160	.5	8.5	--	1310	1.78	3100	.18
JUN									
06...	310	32	.3	9.8	--	647	.88	5610	.31
JUL									
11...	430	77	.4	9.1	--	889	1.21	2400	.24
AUG									
03...	940	180	.7	8.0	--	1820	2.48	2110	.02
SEP									
01...	740	160	.4	5.2	1570	1470	2.00	925	.01
13...	870	230	.4	5.9	--	1810	2.46	743	.02

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, DIS- SOLVED (MG/L AS P)	CARBON, ORGANIC DIS- SOLVED (MG/L AS C)	CARBON, ORGANIC SUS- PENDED TOTAL (MG/L AS C)
OCT									
12...	.06	2.7	2.8	3.0	13	.00	--	--	--
NOV									
01...	.28	1.4	1.7	1.9	8.3	.81	--	--	--
DEC									
07...	.09	.45	.54	.99	4.4	.06	--	--	--
JAN									
04...	.15	1.1	1.2	1.8	8.1	.13	--	4.5	.7
FEB									
28...	.14	.32	.46	1.2	5.3	.09	--	--	--
MAR									
15...	.24	5.3	5.5	6.1	27	2.2	--	--	--
APR									
12...	.00	1.2	1.2	1.4	6.2	.37	--	--	--
MAY									
02...	.01	3.6	3.6	3.8	17	1.7	--	--	--
JUN									
06...	.08	2.7	2.8	3.1	14	1.6	--	--	--
JUL									
11...	.07	4.0	4.1	4.3	19	1.5	--	11	>5.0
AUG									
03...	.06	9.0	9.1	9.1	40	.77	--	--	--
SEP									
01...	.01	.88	.89	.90	4.0	.13	.01	--	--
13...	.01	.83	.84	.86	3.8	.17	--	--	--

YELLOWSTONE RIVER BASIN

06324500 POWDER RIVER AT MOORHEAD, MT--Continued

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

		ALUM- INUM, DIS- SOLVED (UG/L AS AL)	ARSENIC DIS- SOLVED (UG/L AS AS)	BERYL- LIUM, DIS- SOLVED (UG/L AS BE)	BORON, DIS- SOLVED (UG/L AS B)	CADMIUM DIS- SOLVED (UG/L AS CD)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR)	COPPER, DIS- SOLVED (UG/L AS CU)	IRON, DIS- SOLVED (UG/L AS FE)
DATE	TIME								
OCT 12...	1045	10	1	20	320	0	10	1	20
NOV 01...	1000	--	--	--	410	--	--	--	20
DEC 07...	1030	--	--	--	270	--	--	--	30
JAN 04...	1130	--	--	--	370	--	--	--	20
FEB 28...	1045	--	--	--	320	--	--	--	30
MAR 15...	1230	--	--	--	200	--	--	--	30
APR 12...	0930	--	--	--	260	--	--	--	40
MAY 02...	1045	--	--	--	280	--	--	--	40
JUN 06...	1130	--	--	--	100	--	--	--	30
JUL 11...	1145	--	--	--	160	--	--	--	30
AUG 03...	0900	--	--	--	310	--	--	--	20
SEP 01...	1630	--	--	--	300	--	--	--	20
13...	0930	--	--	--	380	--	--	--	30

[illegible]

YELLOWSTONE RIVER BASIN

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06324500 POWDER RIVER AT MOORHEAD, MT--Continued

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

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	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)	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 01...	1740	321	9.0	.0	0	.00	.00	.0	.0	0	.00
JUN 09...	1430	3800	18.0	.0	--	.00	.00	--	.0	--	.00
SEP 15...	1410	211	18.5	.0	0	.00	.00	.0	.0	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)	ENDRIN, TOTAL (UG/L)	ENDRIN, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)
OCT 01...	.0	.00	.0	.00	.0	.00	.00	.0	.00	.00	.0
JUN 09...	--	.00	--	.00	--	.00	.00	--	.00	.00	--
SEP 15...	.0	.00	.0	.00	.0	.00	.00	.0	--	.00	.0

DATE	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)	METHYL PARA- THION, TOTAL (UG/L)	METHYL THI- THION, TOTAL (UG/L)	MIREX, TOTAL (UG/L)
OCT 01...	.00	.00	.0	.00	.0	.00	.0	.00	.00	.00	--
JUN 09...	.00	.00	--	.00	--	.00	--	.00	.00	.00	--
SEP 15...	.00	.00	.0	.00	.0	.00	.0	.00	.00	.00	.00

DATE	PARA- THION, TOTAL (UG/L)	TOX- APHENE, TOTAL (UG/L)	TOXA- PHENE, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	TOTAL TRI- THION (UG/L)	2,4-D, TOTAL (UG/L)	2,4-D, TOTAL IN BOT- TOM MA- TERIAL (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 01...	.00	0	0	.00	.00	--	.00	--	.00	--
JUN 09...	.00	0	--	.00	.02	0	.00	0	.00	.0
SEP 15...	.00	0	0	.00	.00	0	.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	.01	0
SEP 15...	.00	0	.00	0

SUSPENDED-SEDIMENT DISCHARGE (TONS/DAY), WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DAY	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TUNS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TUNS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TUNS/DAY)
		OCTOBER			NOVEMBER			DECEMBER	
1	420			172			150		
2	230			179			150		
3	551			180			150		
4	496			176			150		
5	336			180			140		
6	268			179			130		
7	239			174			110		
8	233			186			100		
9	210			200			100		
10	201			208			100		
11	194			237			110		
12	187			240			130		
13	182			237			170		
14	177			230			180		
15	175			232			180		
16	174			237			180		
17	169			231			180		
18	170			230			170		
19	173			220			160		
20	172			200			160		
21	171			90			160		
22	167			90			160		
23	172			95			160		
24	171			95			160		
25	172			120			160		
26	176			140			160		
27	178			150			160		
28	179			150			160		
29	176			150			160		
30	176			150			160		
31	177			---			160		
TOTAL	6872			5358			4660		
DAY	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TUNS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TUNS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TUNS/DAY)
		JANUARY			FEBRUARY			MARCH	
1	160			140			170	---	---
2	160			140			170	---	---
3	160			140			170	---	---
4	160			140			170	---	---
5	160			140			170	---	---
6	160			140			180	---	---
7	160			140			200	---	---
8	150			140			230	---	---
9	150			140			300	---	---
10	150			140			500	---	---
11	150			140			1100	---	---
12	150			150			2500	---	---
13	150			150			3000	---	---
14	150			150			2600	---	---
15	150			150			1930	---	---
16	150			150			1290	3260	11400
17	150			150			1170	3390	10700
18	150			160			1600	21400	92400
19	150			170			2960	32300	258000
20	150			180			3760	27100	275000
21	150			190			4380	17500	207000
22	150			190			3430	9860	91300
23	150			190			2110	6810	38800
24	150			190			1460	5570	22000
25	150			190			1150	6360	19700
26	150			180			1260	4770	16200
27	150			180			1390	4610	17300
28	150			180			1040	3290	9240
29	150			---			808	3180	6940
30	150			---			664	2540	4550
31	150			---			658	2440	4330
TOTAL	4720			4440			42520	---	1084860

06324500 POWDER RIVER AT MOORHEAD, MT--Continued

SUSPENDED-SEDIMENT DISCHARGE (TONS/DAY), WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DAY	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TUNS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TUNS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TUNS/DAY)
APRIL			MAY			JUNE			
1	591	2440	3890	793	3820	8180	4730	7680	98100
2	583	1660	2610	868	4620	10800	4400	6780	80500
3	561	1360	2060	837	5540	12500	3880	6380	66800
4	538	1490	2160	920	6270	15600	3490	6020	56700
5	503	1350	1830	1180	6180	19700	3280	5390	47700
6	467	1150	1450	1980	12600	67400	3170	4190	35900
7	443	1040	1240	2510	20400	138000	3200	4610	39800
8	428	1030	1190	3090	20600	172000	3530	5450	51900
9	395	902	962	3140	15900	135000	3730	5630	56700
10	372	883	887	2760	13600	101000	3830	5400	55800
11	376	837	850	2990	21200	171000	4000	5520	59600
12	374	782	790	3630	35800	351000	3920	4300	45500
13	361	681	664	3350	41000	371000	3610	4780	46600
14	351	718	680	2890	31900	249000	3280	4000	35400
15	349	754	710	2410	19700	128000	3360	4650	42200
16	329	718	638	2140	14500	83800	3990	5870	63200
17	329	708	629	4660	15200	191000	3740	3480	35100
18	322	662	576	13000	23200	814000	3380	3420	31200
19	336	782	709	20000	22300	1200000	2970	3010	24100
20	336	782	709	27500	30100	2230000	2680	2990	21600
21	317	736	630	15700	32300	1280000	2490	2640	17700
22	323	736	642	7260	20300	398000	2370	3240	20700
23	310	782	655	5910	15900	254000	2330	2360	14800
24	307	745	618	5490	11300	168000	2510	2050	13900
25	307	690	572	5520	9990	149000	2480	2290	15300
26	307	718	595	5470	10500	155000	2510	1480	10000
27	297	662	531	5350	10400	150000	2310	1520	9480
28	324	791	692	5540	11200	168000	1950	1600	8420
29	523	3460	5530	5160	9830	137000	1990	1460	7840
30	800	4080	8810	5050	9810	134000	2230	3520	21200
31	---	---	---	5060	10200	139000	---	---	---
TOTAL	12159	---	44509	172158	---	9600980	95340	---	1133740
DAY	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TUNS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TUNS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TUNS/DAY)
JULY			AUGUST			SEPTEMBER			
1	2530	6230	42600	445	1200	1440	215	325	189
2	2560	6930	47900	428	1010	1170	206	289	161
3	2130	4050	23300	426	2100	2420	202	257	140
4	1820	4180	20500	466	3590	4520	183	228	113
5	1550	3290	13800	495	2840	3800	170	206	95
6	1330	2490	8940	399	1640	1770	161	190	83
7	1040	1970	5530	349	966	910	152	163	67
8	1220	2150	7080	337	966	879	154	163	68
9	1320	5790	20600	318	874	750	146	207	82
10	1300	4980	17500	309	681	568	139	243	91
11	1300	5160	18100	297	451	362	132	279	99
12	1170	5170	16300	275	478	355	156	313	132
13	887	5980	14300	264	497	354	153	343	142
14	691	5460	10200	264	469	334	202	335	183
15	564	3660	5570	294	543	431	208	311	175
16	489	2390	3160	336	626	568	196	227	120
17	428	1500	1730	381	662	681	169	161	73
18	489	1210	1600	329	736	654	183	197	97
19	489	890	1180	326	745	656	201	270	147
20	555	1160	1740	376	1340	1360	245	417	276
21	574	1150	1780	342	921	850	281	778	590
22	595	1340	2150	323	684	597	360	2810	2730
23	962	3300	10600	311	660	554	340	2710	2490
24	2260	19600	120000	286	604	466	298	2330	1870
25	1500	17600	71300	269	481	349	274	3410	2520
26	968	16300	42600	236	501	319	260	3730	2620
27	726	8830	17300	224	543	328	252	2820	1920
28	595	8000	12900	210	435	247	254	1680	1150
29	535	5340	7710	205	427	236	250	1280	864
30	498	2550	3430	201	413	224	245	910	602
31	471	1830	2330	207	361	202	---	---	---
TOTAL	33566	---	573730	9928	---	28354	6387	---	19889
YEAR	398108		12486062						

YELLOWSTONE RIVER BASIN

06324890 LITTLE POWDER RIVER BELOW CORRAL CREEK, NEAR WESTON, WY
(Formerly published as Little Powder River below Corral Creek, near Gillette)

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 September 1978.

GAGE.--Water-stage recorder. Altitude of gage is 3,980 ft (1,213 km), from topographic map.

REMARKS.--Records fair except those for December to March, and those above 200 ft³/s (5.66 m³/s), which are poor. Small diversions for irrigation of hay meadows above station. Flow occasionally affected by contributions from mine dewatering.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 2,410 ft³/s (68.3 m³/s) May 18, 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 for many days.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.38	.30	.35	.10	.00	.10	13	3.6	50	1.0	.20	.00
2	.06	.30	.40	.10	.00	.10	11	3.4	33	1.0	.27	.00
3	.00	.34	.25	.10	.00	.10	8.7	4.7	25	.93	1.3	.00
4	.00	.38	.20	.20	.00	.05	7.3	27	20	.77	2.4	.00
5	.00	.34	.15	.30	.00	.05	5.5	63	17	.93	1.1	.00
6	.00	.38	.10	.20	.00	.05	3.9	71	14	.85	.18	.00
7	.01	.42	.05	.20	.00	.05	3.2	75	12	.70	.08	.00
8	.03	.38	.05	.20	.00	.10	2.8	250	8.5	.70	.07	.00
9	.02	.42	.05	.20	.00	.10	2.8	368	7.1	.57	.08	.00
10	.01	.46	.05	.20	.00	.50	2.9	168	6.0	.57	.31	.00
11	.00	.50	.10	.25	.00	5.0	2.8	78	4.8	.40	2.4	.00
12	.00	.54	.15	.21	.00	10	2.5	39	4.3	.29	.98	.00
13	.00	.54	.35	.21	.00	20	2.2	24	3.8	.23	.25	.00
14	.02	.54	.45	.34	.00	50	2.4	19	3.1	.21	.19	.00
15	.03	.54	.60	.21	.00	45	2.3	14	2.8	.17	.19	.00
16	.01	.58	.80	.15	.00	42	2.3	10	2.7	.15	.18	.00
17	.00	.58	.70	.10	.00	40	2.2	80	2.5	.14	.16	.00
18	.00	.50	.60	.05	.00	420	2.2	1620	2.1	.15	.13	.00
19	.00	.30	.55	.10	.00	957	2.1	1000	1.9	.14	.47	.00
20	.00	.10	.50	.20	.00	710	2.2	251	1.9	.15	.99	.00
21	.00	.05	.40	.20	.06	418	2.2	123	1.8	.31	.53	.00
22	.00	.05	.40	.20	.08	293	2.3	62	1.5	.77	.26	.00
23	.02	.05	.35	.15	.08	153	2.4	36	1.5	.63	.16	.00
24	.10	.10	.35	.15	.10	78	2.4	39	1.4	.37	.10	.00
25	.10	.10	.30	.10	.08	90	2.3	26	1.3	.25	.09	.00
26	.10	.15	.25	.10	.08	112	2.2	19	1.2	.18	.04	.00
27	.08	.20	.20	.10	.10	125	1.9	36	1.0	.12	.03	.00
28	.10	.25	.20	.05	.10	78	2.1	124	.63	.09	.03	.00
29	.21	.30	.20	.05	---	36	3.1	88	.51	.10	.01	.00
30	.21	.30	.15	.03	---	22	2.9	73	.73	.14	.01	.00
31	.21	---	.15	.01	---	16	---	81	---	.15	.00	---
TOTAL	1.70	9.99	9.40	4.76	.68	3721.20	108.1	4875.7	234.07	13.16	13.19	.00
MEAN	.055	.33	.30	.15	.024	120	3.60	157	7.80	.42	.43	.000
MAX	.38	.58	.80	.34	.10	957	13	1620	50	1.0	2.4	.00
MIN	.00	.05	.05	.01	.00	.05	1.9	3.4	.51	.09	.00	.00
AC-FT	3.4	20	19	9.4	1.3	7380	214	9670	464	26	26	.00

WTR YR 1978 TOTAL 8991.95 MEAN 24.6 MAX 1620 MIN .00 AC-FT 17840

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 September 1978.

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

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	STREP- TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)	HARD- NESS (MG/L AS CACO3)	HARD- NESS, NONCAR- BONATE (MG/L CACO3)
OCT 28...	0930	.08	2780	7.9	6.5	7.9	73	K18	200	1300	1000
NOV 29...	1400	.32	3130	7.9	.0	16.8	133	33	430	1600	1200
DEC 19...	1345	.54	2250	7.6	.0	9.5	75	21	310	1200	910
JAN 12...	1200	.29	2790	8.0	.0	8.0	--	K62	60	1300	950
MAR 10...	0900	.25	2080	7.6	.0	7.6	60	270	K22000	980	700
APR 04...	1000	7.4	1990	7.9	8.5	8.4	83	15	120	990	750
MAY 16...	1430	10	2890	7.5	17.0	9.6	116	110	66	1500	1100
JUN 16...	0845	2.8	3200	8.0	17.0	6.8	82	110	1600	1600	1200
JUL 13...	1400	.22	2880	8.1	24.0	11.5	158	26	260	1400	1100
AUG 01...	0900	.21	2530	7.8	18.0	5.4	66	85	K13000	1200	950
S30...	1000	.01	2430	7.8	15.0	8.4	61	140	160	1200	1000

K-Results based on colony count outside the acceptable range (non-ideal colony count).
 S-Seepage run data (see Explanation of Water-Quality Records),

DATE	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	BICAR- BONATE (MG/L AS HCO3)	CAR- BONATE (MG/L AS CO3)	ALKA- LINITY (MG/L AS CACO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)
OCT 28...	280	150	170	2.0	40	340	0	280	1400	9.2	.7
NOV 29...	370	170	170	1.8	50	460	0	380	1600	9.6	1.0
DEC 19...	280	120	120	1.5	31	350	0	290	1200	6.2	.9
JAN 12...	290	130	140	1.7	34	430	0	350	1300	6.6	.8
MAR 10...	230	98	120	1.7	31	340	0	280	940	7.4	.7
APR 04...	200	120	140	1.9	20	290	0	240	1000	16	.4
MAY 16...	240	210	220	2.5	26	490	0	400	1500	23	.6
JUN 16...	290	220	230	2.5	30	460	0	380	1200	21	.7
JUL 13...	280	170	190	2.2	38	350	0	290	1400	20	.8
AUG 01...	250	140	180	2.3	39	300	0	250	1300	15	.7
30...	250	130	140	1.8	40	250	0	200	1200	20	.7

YELLOWSTONE RIVER BASIN

06324890 LITTLE POWDER RIVER BELOW CORRAL CREEK, NEAR WESTON, WY--Continued

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

DATE	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)	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)
OCT 28...	12	2340	2230	3.03	.48	.03	.06	.48	.54	.57
NOV 29...	22	2770	2620	3.56	2.26	.04	.04	.33	.37	.41
DEC 19...	20	1940	1950	2.65	2.84	.01	.07	.17	.24	.25
JAN 12...	22	2160	2140	2.91	1.68	.05	.31	.55	.86	.91
MAR 10...	12	1710	1610	2.19	1.09	.15	.41	1.3	1.7	1.9
APR 04...	9.4	1700	1650	2.24	33.1	.01	.01	.61	.62	.63
MAY 16...	7.9	2530	2470	3.36	66.7	.01	.01	.83	.84	.85
JUN 16...	8.5	2920	2230	3.03	16.9	.00	.01	.58	.59	.59
JUL 13...	10	2490	2280	3.10	1.35	.00	.03	.69	.72	.72
AUG 01...	4.0	2290	2080	2.83	1.18	.01	.00	.54	.54	.55
30...	1.9	2110	1910	2.60	.07	.01	.01	1.2	1.2	1.2

DATE	NITRO- GEN, TOTAL (MG/L AS NO3)	PHOS- PHORUS, TOTAL (MG/L AS P)	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)	PHYTO- PLANK- TON, TOTAL (CELLS PER ML)	PERI- PHYTON BIOMASS ASH WEIGHT G/SQ M	PERI- PHYTON BIOMASS TOTAL DRY WEIGHT G/SQ M	CHLOR-A PERI- PHYTON CHROMO- GRAPHIC FLUOROM (MG/M2)	CHLOR-B PERI- PHYTON CHROMO- GRAPHIC FLUOROM (MG/M2)
OCT 28...	2.5	.04	.02	9.3	--	1800	--	--	--	--
NOV 29...	1.8	.00	.00	9.0	--	200	2.44	2.99	.720	.000
DEC 19...	1.1	.02	.00	6.6	1.0	840	--	--	--	--
JAN 12...	4.0	.03	.02	--	--	380	--	--	--	--
MAR 10...	8.2	.08	.02	12	1.2	490	--	--	--	--
APR 04...	2.8	.06	.03	9.3	--	370	--	--	--	--
MAY 16...	3.8	.03	.00	12	.6	2000	.630	1.26	.570	.110
JUN 16...	2.6	.02	.00	13	.5	900	--	--	--	--
JUL 13...	3.2	.02	.01	11	.3	400	--	--	--	--
AUG 01...	2.4	.01	.00	9.1	--	140	--	--	--	--
30...	5.4	.05	.02	9.3	1.1	46	1.89	2.60	3.46	.610

06324890 LITTLE POWDER RIVER BELOW CORRAL CREEK, NEAR WESTON, WY--Continued

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

DATE	TIME	ALUM- INUM, DIS- SOLVED (UG/L AS AL)	ARSENIC 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, DIS- SOLVED (UG/L AS BA)	BARIUM, FM BOT- TOM MA- TERIAL (UG/G AS BA)	BERYL- LIUM, TOTAL RECOV- ERABLE (UG/L AS BE)	BERYL- LIUM, DIS- SOLVED (UG/L AS BE)
OCT 28...	0930	10	1	1	21	300	100	100	0	20
NOV 29...	1400	--	--	--	--	--	--	--	--	--
DEC 19...	1345	--	--	--	--	--	--	--	--	--
JAN 12...	1200	--	--	--	--	--	--	--	--	--
MAR 10...	0900	--	--	--	--	--	--	--	--	--
APR 04...	1000	--	--	--	--	--	--	--	--	--
MAY 16...	1430	--	--	--	--	--	--	--	--	--
JUN 16...	0845	--	--	--	--	--	--	--	--	--
JUL 13...	1400	0	1	1	3	200	100	110	10	0
AUG 01...	0900	0	--	1	--	--	100	--	--	0
30...	1000	--	--	--	--	--	--	--	--	--

DATE	BERYL- LIUM, RECOV. FM BOT- TOM MA- TERIAL (UG/G)	BORON, DIS- SOLVED (UG/L AS B)	CADMIUM TOTAL 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, DIS- SOLVED (UG/L AS CR)	CHRO- MIUM, RECOV. FM BOT- TOM MA- TERIAL (UG/G)	COBALT, TOTAL RECOV- ERABLE (UG/L AS CO)	COBALT, DIS- SOLVED (UG/L AS CO)
OCT 28...	0	1100	10	0	1	0	0	2	<50	0
NOV 29...	--	1600	--	--	--	--	--	--	--	--
DEC 19...	--	1000	--	--	--	--	--	--	--	--
JAN 12...	--	1000	--	--	--	--	--	--	--	--
MAR 10...	--	800	--	--	--	--	--	--	--	--
APR 04...	--	490	--	--	--	--	--	--	--	--
MAY 16...	--	610	--	--	--	--	--	--	--	--
JUN 16...	--	830	--	--	--	--	--	--	--	--
JUL 13...	1	1200	0	1	0	10	0	3	2	1
AUG 01...	--	1200	--	1	--	--	10	--	--	0
30...	--	1200	--	--	--	--	--	--	--	--

DATE	COBALT, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CO)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU)	COPPER, DIS- SOLVED (UG/L AS CU)	COPPER, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CU)	IRON, DIS- SOLVED (UG/L AS FE)	LEAD, TOTAL 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 DIS- SOLVED (UG/L AS LI)
OCT 28...	10	<10	2	8	30	<100	1	10	110	100
NOV 29...	--	--	--	--	30	--	--	--	--	--
DEC 19...	--	--	--	--	40	--	--	--	--	--
JAN 12...	--	--	--	--	30	--	--	--	--	--
MAR 10...	--	--	--	--	90	--	--	--	--	--
APR 04...	--	--	--	--	40	--	--	--	--	--
MAY 16...	--	--	--	--	20	--	--	--	--	--
JUN 16...	--	--	--	--	50	--	--	--	--	--
JUL 13...	5	6	7	10	70	3	4	5	120	120
AUG 01...	--	--	4	--	40	--	0	--	--	120
30...	--	--	--	--	50	--	--	--	--	--

YELLOWSTONE RIVER BASIN

06324890 LITTLE POWDER RIVER BELOW CORRAL CREEK, NEAR WESTON, WY--Continued

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

DATE	MANGA- NESE, TOTAL RECOV- ERABLE (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 DIS- SOLVED (UG/L AS HG)	MERCURY FM BOT- TOM MA- TERIAL (UG/L AS HG)	MOLYB- DENUM, TOTAL RECOV- ERABLE (UG/L AS MO)	MOLYB- DENUM, DIS- SOLVED (UG/L AS MO)	MOLYB- DENUM, RECOV. FM BOT- TOM MA- TERIAL (UG/G)	NICKEL, TOTAL RECOV- ERABLE (UG/L AS NI)
OCT 28...	80	80	1400	.0	.0	.04	8	3	1	<50
NOV 29...	--	--	--	--	--	--	--	--	--	--
DEC 19...	--	--	--	--	--	--	--	--	--	--
JAN 12...	--	--	--	--	--	--	--	--	--	--
MAR 10...	--	--	--	--	--	--	--	--	--	--
APR 04...	--	--	--	--	--	--	--	--	--	--
MAY 16...	--	--	--	--	--	--	--	--	--	--
JUN 16...	--	--	--	--	--	--	--	--	--	--
JUL 13...	20	20	640	.0	.0	.10	6	6	1	6
AUG 01...	--	60	--	--	.0	--	--	2	--	--
30...	--	--	--	--	--	--	--	--	--	--

DATE	NICKEL, DIS- SOLVED (UG/L AS NI)	NICKEL, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS NI)	SELE- NIUM, TOTAL (UG/L AS SE)	SELE- NIUM, DIS- SOLVED (UG/L AS SE)	SELE- NIUM, TOTAL IN BOT- TOM MA- TERIAL (UG/G)	VANA- DIUM, DIS- SOLVED (UG/L AS V)	ZINC, TOTAL 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 28...	1	5	0	0	1	.7	10	10	14
NOV 29...	--	--	--	--	--	--	--	--	--
DEC 19...	--	--	--	--	--	--	--	--	--
JAN 12...	--	--	--	--	--	--	--	--	--
MAR 10...	--	--	--	--	--	--	--	--	--
APR 04...	--	--	--	--	--	--	--	--	--
MAY 16...	--	--	--	--	--	--	--	--	--
JUN 16...	--	--	--	--	--	--	--	--	--
JUL 13...	2	15	0	0	0	.0	10	10	32
AUG 01...	4	--	--	0	--	.0	--	20	--
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 ALPHA, DIS- SOLVED (PCI/L AS U-NAT)	GROSS ALPHA, SUSP. TOTAL (PCI/L AS U-NAT)
APR 04...	1000	<19	1.1	26	4.1	<13	.7
AUG 01...	0900	<36	<.4	24	.6	<24	<.3

YELLOWSTONE RIVER BASIN

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06324890 LITTLE POWDER RIVER BELOW CORRAL CREEK, NEAR WESTON, WY--Continued

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

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
OCT								
26...	1655	10.0	.08	46	.01	--	--	--
NOV								
29...	1400	.0	.32	32	.03	--	--	--
DEC								
19...	1345	.0	.54	56	.08	--	--	--
JAN								
12...	1200	.0	.30	171	.14	--	--	--
MAR								
10...	0900	.0	.25	145	.10	--	--	--
14...	1600	3.0	49	53	7.0	97	99	100
21...	1030	3.0	402	188	204	--	--	--
23...	0845	2.5	170	114	52	--	--	--
APR								
04...	0945	8.5	7.4	80	1.6	--	--	--
MAY								
16...	1430	17.0	10	30	.81	--	--	--
JUN								
16...	0845	17.0	2.8	51	.39	--	--	--
JUL								
13...	1400	24.0	.22	25	.01	--	--	--
AUG								
01...	0900	18.0	.21	19	.01	--	--	--
30...	1000	15.0	.01	35	.00	--	--	--

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
APR							
04...	0945	8.5	7.4	15	17	20	24

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
APR						
04...	26	33	45	62	77	100

06324890 LITTLE POWDER RIVER BELOW CORRAL CREEK, NEAR WESTON, WY--Continued

QUALITATIVE AND ASSOCIATED QUANTITATIVE ANALYSES OF BIOLOGICAL DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

PHYTOPLANKTON ANALYSES

DATE TIME	OCT 28,77 0930	NOV 29,77 1400	DEC 19,77 1345	JAN 12,78 1200	MAR 10,78 0900	APR 4,78 1000						
TOTAL CELLS/ML	1800	200	840	380	490	370						
DIVERSITY: DIVISION	1.8	1.2	0.2	1.7	1.0	1.3						
..CLASS	2.0	1.7	0.4	2.0	1.0	1.3						
..ORDER	2.3	1.7	0.4	2.1	1.0	1.5						
...FAMILY	2.3	2.0	0.4	2.4	1.4	1.8						
....GENUS	2.4	2.0	0.4	2.4	1.4	1.8						
ORGANISM	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT		
CHLOROPHYTA (GREEN ALGAE)												
..CHLOROPHYCEAE												
...CHLOROCOCCALES												
...COELASTRACEAE												
....COELASTRUM	91	5	--	--	--	--	--	--	--	--		
...OOCYSTACEAE												
....ANKISTRODESMUS	15	1	--	--	9	1	--	--	--	--		
....DICTYOSPHAERIUM	--	--	--	--	--	--	100#	27	--	--		
...OOCYSTIS	--	--	--	--	--	--	--	--	--	--		
...SCENEDESMACEAE												
....SCENEDESMUS	--	--	--	--	--	--	--	--	--	--		
...TETRASPORALES							35	9	--	--		
...COCCOMYXACEAE												
....ELAKATOTHRIX	--	--	--	--	--	--	--	--	17	3		
...VOLVOCALES												
...CHLAMYDOMONADACEAE												
....CARTERIA	--	--	--	--	--	--	--	--	--	--		
....CHLAMYDOMONAS	880#	49	58#	29	--	--	--	--	--	14	4	
...ZYGNEMATALES												
...DESMIDIACEAE												
...CLOSTERIUM	--	--	--	--	--	--	--	--	--	--		
CHRYSOPHYTA												
..BACILLARIOPHYCEAE												
...CENTRALES												
...COSCINODISCAEAE												
....CYCLOTELLA	--	--	--	--	4	1	--	--	--	14	4	
....MELOSIRA	--	--	--	--	--	--	17	5	--	--	--	
....STEPHANODISCUS	--	--	--	--	--	--	--	--	--	--	--	
...PENNALES												
...ACHNANTHACEAE												
....ACHNANTHES	--	--	--	--	--	--	--	--	--	--	--	
...COCCONEIS	--	--	12	6	--	--	--	--	--	--	--	
...RHOICOSPHEA	--	--	--	--	--	--	--	--	--	--	--	
...DIATOMACEAE												
....DIATOMA	--	--	--	--	--	--	--	--	--	--	--	
...FRAGILARIACEAE												
....SYNEDRA	240	14	--	--	4	1	--	--	59	12	54	15
...GOMPHONEMATAEAE												
....GOMPHONEMA	--	--	--	--	--	--	--	--	--	--	--	--
...NAVICULACEAE												
....NAVICULA	--	--	--	--	4	1	35	9	59	12	27	7
...NITZSCHIAEAE												
....NITZSCHIA	--	--	17	9	17	2	--	--	17	3	14	4
..CHRYSOPHYCEAE												
...CHRYSONOMADALES												
...OCHROMONADACEAE												
....DINOBRYON	--	--	6	3	--	--	--	--	--	--	--	--
...OCHROMONAS	--	--	--	--	--	--	35	9	--	--	--	--
...UROGLENA	120	7	--	--	--	--	--	--	--	--	--	--
...SYNURACEAE												
....SYNURA	--	--	93#	47	800#	94	--	--	--	--	--	--
CRYPTOPHYTA (CRYPTOMONADS)												
..CRYPTOPHYCEAE												
...CRYPTOMONIDALES												
...CRYPTOCHRYSIDACEAE												
....CHROOMONAS	46	3	--	--	--	--	17	5	--	--	--	--
...CRYPTOMONODACEAE												
....CRYPTOMONAS	46	3	6	3	--	--	--	--	--	--	230#	63
CYANOPHYTA (BLUE-GREEN ALGAE)												
..CYANOPHYCEAE												
...CHROOCOCCALES												
...CHROOCOCCACEAE												
....ANACYSTIS	--	--	--	--	--	--	--	--	--	--	--	--
...HORMOGONALES												
...NOSTOCACEAE												
....ANABAENA	120	7	--	--	--	--	--	--	--	--	--	--
...OSCILLATORIACEAE												
....OSCILLATORIA	--	--	--	--	--	--	140#	36	330#	69	--	--

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

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

06324890 LITTLE POWDER RIVER BELOW CORRAL CREEK, NEAR WESTON, WY--Continued

QUALITATIVE AND ASSOCIATED QUANTITATIVE ANALYSES OF BIOLOGICAL DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

PHYTOPLANKTON ANALYSES

DATE TIME	OCT 28,77 0930		NOV 29,77 1400		DEC 19,77 1345		JAN 12,78 1200		MAR 10,78 0900		APR 4,78 1000	
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	30	2	--	-	--	-	--	-	--	-	--	-
.....TRACHELOMONAS	200	11	--	-	--	-	--	-	--	-	14	4
PYRRHOPHYTA (FIRE ALGAE)												
..DINOPHYCEAE												
...PERIDINIALES												
....GLFNODINIACEAE												
.....GLENODINIUM	--	-	6	3	--	-	--	-	--	-	--	-
...PERIDINIACEAE												
.....PERIDINIUM	--	-	--	-	9	1	--	-	--	-	--	-

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

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

06324890 LITTLE POWDER RIVER BELOW CORRAL CREEK, NEAR WESTON, WY--Continued

QUALITATIVE AND ASSOCIATED QUANTITATIVE ANALYSES OF BIOLOGICAL DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

PHYTOPLANKTON ANALYSES

DATE TIME	MAY 16,78 1430	JUN 16,78 0845	JUL 13,78 1400	AUG 1,78 0900	AUG 30,78 1000
TOTAL CELLS/ML	2000	900	400	140	46
DIVERSITY: DIVISION	1.9	1.5	1.2	1.3	1.9
..CLASS	1.9	1.5	1.2	1.8	1.9
..ORDER	2.4	2.3	2.0	1.8	2.2
...FAMILY	2.8	2.8	2.8	2.2	2.5
....GENUS	3.2	2.8	3.1	2.2	2.5

ORGANISM	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT
CHLOROPHYTA (GREEN ALGAE)										
..CHLOROPHYCEAE										
...CHLOROCOCCALES										
...COELASTRACEAE										
...COELASTRUM	--	-	--	-	--	-	--	-	--	-
...ODCYSTACEAE										
....ANKISTRODESMUS	--	-	69	8	14	4	--	-	--	-
....DICTYOSPHAERIUM	--	-	--	-	--	-	--	-	--	-
....ODCYSTIS	220	11	--	-	--	-	--	-	--	-
...SCENEDESMACEAE										
....SCENEDESMUS	--	-	--	-	57	14	--	-	--	-
..TETRASPORALES										
...COCCOMYXACEAE										
...ELAKATOTHRIX	--	-	--	-	--	-	--	-	--	-
..VOLVOCALES										
...CHLAMYDOMONADACEAE										
....CARTERIA	110	6	--	-	--	-	--	-	--	-
....CHLAMYDOMONAS	90	4	120	13	--	-	41#	30	5	12
..ZYGNEMATALES										
...DESMIDIACEAE										
....CLOSTERIUM	--	-	--	-	14	4	--	-	--	-
CHRYSTOPHYTA										
..BACILLARIOPHYCEAE										
...CENTRALES										
...COSCINODISCAEAE										
...CYCLOTELLA	110	6	190#	21	86#	21	--	-	5	12
....MELOSIRA	--	-	--	-	--	-	--	-	--	-
....STEPHANODISCUS	45	2	--	-	--	-	--	-	--	-
..PENNALES										
...ACHNANTHACEAE										
....ACHNANTHES	--	-	--	-	14	4	--	-	--	-
...COCCONEIS	--	-	--	-	57	14	41#	30	--	-
...RHOICOSPHEA	--	-	--	-	14	4	--	-	--	-
..DIATOMACEAE										
....DIATOMA	45	2	23	3	--	-	--	-	--	-
...FRAGILARIACEAE										
....SYNEDRA	160	8	--	-	--	-	--	-	--	-
...GOMPHONEMACEAE										
....GOMPHONEMA	--	-	--	-	14	4	--	-	--	-
...NAVICULACEAE										
....NAVICULA	160	8	120	13	72#	18	14	10	8#	18
...NITZSCHACEAE										
....NITZSCHIA	130	7	230#	26	14	4	--	-	5	12
..CHRYSTOPHYCEAE										
...CHRYSDOMONADALES										
...OCHROMONADACEAE										
....DINORRYON	--	-	--	-	--	-	--	-	--	-
....OCHROMONAS	--	-	--	-	--	-	28#	20	--	-
...UROGLENA	--	-	--	-	--	-	--	-	--	-
..SYNURACEAE										
....SYNURA	--	-	--	-	--	-	--	-	--	-
CRYPTOPHYTA (CRYPTOMONADS)										
..CRYPTOPHYCEAE										
...CRYPTOMONIDALES										
...CRYPTOCHRYSIDACEAE										
...CHROOMONAS	--	-	--	-	--	-	--	-	--	-
...CRYPTOMONODACEAE										
....CRYPTOMONAS	--	-	--	-	43	11	--	-	11#	24
CYANOPHYTA (BLUE-GREEN ALGAE)										
..CYANOPHYCEAE										
...CHROCOCCALES										
...CHROCOCCACEAE										
....ANACYSTIS	270	13	--	-	--	-	--	-	--	-
...HORMOGONALES										
...NOSTOCACEAE										
....ANABAENA	--	-	--	-	--	-	--	-	--	-
...OSCILLATORIACEAE										
....OSCILLATORIA	--	-	69	8	--	-	--	-	--	-

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

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

06324890 LITTLE POWDER RIVER BELOW CORRAL CREEK, NEAR WESTON, WY--Continued

QUALITATIVE AND ASSOCIATED QUANTITATIVE ANALYSES OF BIOLOGICAL DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

PHYTOPLANKTON ANALYSES

DATE TIME	MAY 16,78 1430		JUN 16,78 0845		JUL 13,78 1400		AUG 1,78 0900		AUG 30,78 1000	
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	130	7	--	-	--	-	14	10	11#	24
.....TRACHELOMONAS	540#	27	93	10	--	-	--	-	--	-
PYRRHOPHYTA (FIRE ALGAE)										
..DINOPHYCEAE										
...PERIDINIALES										
....GLENODINIACEAE										
.....GLENODINIUM	--	-	--	-	--	-	--	-	--	-
....PERIDINIACEAE										
.....PERIDINIUM	--	-	--	-	--	-	--	-	--	-

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

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

YELLOWSTONE RIVER BASIN

06324925 LITTLE POWDER RIVER NEAR WESTON, WY

LOCATION.--Lat 44°38'51", long 105°18'37", in NE&NE&SE¼ 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 1978.

GAGE.--Water-stage recorder. Altitude of gage is 3,680 ft (1,122 m), from topographic map.

REMARKS.--Records good except those for winter period, which are poor. Small diversions for irrigation of hay meadows above station. Flow occasionally affected by contributions from mine dewatering.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 4,460 ft³/s (126 m³/s) May 19, gage height, 13.32 ft (4.060 m); minimum daily, 0.10 ft³/s (0.003 m³/s) Nov. 9, 21, Dec. 9, 10.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	120	.54	.40	.92	.47	.50	49	14	173	41	7.2	.85
2	119	.54	.50	.99	.40	.40	38	13	100	18	4.2	.87
3	59	.54	.50	.80	.54	.20	33	14	71	12	4.0	.78
4	29	.62	.50	.80	.49	.30	28	78	53	7.7	3.7	.67
5	12	.65	.40	.80	.57	.35	23	280	49	4.9	3.7	.70
6	6.7	.53	.30	.80	.48	.40	20	235	34	4.0	3.5	.69
7	13	.19	.30	.76	.71	.40	18	246	27	3.4	2.7	.55
8	21	.20	.20	.63	.80	.50	16	993	37	3.3	2.3	.58
9	26	.10	.10	.63	.71	.50	15	1600	21	3.1	2.6	.69
10	13	.20	.10	.63	.54	.60	13	990	17	3.0	2.4	.71
11	9.6	.30	.20	.63	.54	1.0	13	357	15	2.8	2.0	.65
12	4.7	.35	.30	.63	.54	20	20	138	14	2.4	1.7	.80
13	4.2	.80	.30	.63	.54	90	13	76	12	2.3	1.5	.90
14	2.7	1.2	.30	.54	.62	80	11	56	10	2.1	1.3	.90
15	1.9	1.3	.30	.54	.90	100	14	41	9.1	1.7	1.6	.81
16	1.5	1.3	.20	.54	.62	120	14	30	13	1.7	1.3	.62
17	1.1	1.2	10	.66	.62	110	12	182	9.4	1.7	1.1	.59
18	1.2	1.1	8.5	.66	.62	400	12	3130	8.4	2.0	1.0	1.2
19	1.2	.80	7.0	.54	.62	2560	13	2850	7.2	1.7	.90	5.7
20	1.1	.40	4.0	.67	.62	2390	12	983	6.2	1.9	.80	1.8
21	1.0	.10	3.0	.71	.47	1480	12	318	5.9	2.4	.80	1.1
22	.90	.20	3.5	.54	.47	1050	12	155	11	14	.71	.65
23	.90	.20	3.7	.49	.54	573	14	101	7.3	7.2	.90	.48
24	.90	.20	3.2	.48	.54	221	14	99	7.1	4.4	.90	.36
25	.71	.20	2.8	.54	.54	154	11	75	7.1	4.9	1.0	.35
26	.33	.30	2.4	.52	.50	156	9.9	62	6.6	5.5	1.0	.33
27	.40	.30	2.2	.47	.50	208	9.4	107	5.4	9.1	1.0	.36
28	.40	.30	2.0	.42	.50	191	10	154	4.7	5.3	1.1	.36
29	.40	.35	1.6	.40	---	125	22	172	4.5	4.0	1.2	.28
30	.40	.40	1.2	.47	---	91	18	294	8.4	3.5	.95	.33
31	.54	---	1.0	.51	---	67	---	380	---	5.8	.83	---
TOTAL	454.78	15.41	61.00	19.35	16.01	10191.15	519.3	14223	754.3	186.8	59.89	25.66
MEAN	14.7	.51	1.97	.62	.57	329	17.3	459	25.1	6.03	1.93	.86
MAX	120	1.3	10	.99	.90	2560	49	3130	173	41	7.2	5.7
MIN	.33	.10	.10	.40	.40	.20	9.4	13	4.5	1.7	.71	.28
AC-FT	902	31	121	38	32	20210	1030	28210	1500	371	119	51
WTR YR 1978	TOTAL	26526.65	MEAN	72.7	MAX	3130	MIN	.10	AC-FT	52620		

06324925 LITTLE POWDER RIVER NEAR WESTON, WY--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1969, 1975 to current year.

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

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	TUR- BID- ITY (JTU)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION)	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											
26...	1300	.32	1640	8.3	9.5	--	10.0	100	K26	200	310
NOV											
29...	1000	.34	3660	8.1	.0	--	14.5	114	18	2600	560
DEC											
19...	1415	6.9	1220	8.1	.0	--	12.2	95	290	K13000	280
JAN											
11...	1400	.63	3530	8.2	.0	--	13.0	102	K7	310	--
FEB											
07...	0945	.60	3730	8.4	.5	--	11.6	95	K19	66	950
MAR											
14...	1010	80	378	7.6	.0	--	11.5	91	K100	320000	87
APR											
04...	1515	28	1800	8.0	12.0	--	9.1	97	K4	160	550
MAY											
09...	0930	1840	535	7.8	6.0	--	10.2	94	K2500	--	130
16...	1000	31	3000	7.3	15.5	110	7.5	--	--	--	1100
JUN											
12...	1630	14	3270	8.3	19.5	--	8.5	108	80	96	1100
JUL											
14...	0900	2.3	3700	8.1	20.5	--	6.3	81	180	140	900
AUG											
04...	0815	3.9	3170	8.2	16.5	--	7.1	86	480	740	760
S30...	1130	.75	3950	8.1	16.0	--	7.5	90	55	K30	890

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

S-Seepage run data (see Explanation of Water-Quality Records).

DATE	HARD- NESS, NONCAR- BONATE (MG/L CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	BICAR- BONATE (MG/L AS HCO3)	CAR- BONATE (MG/L AS CO3)	ALKA- LINITY (MG/L AS CACO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)
OCT											
26...	15	68	35	260	6.4	9.2	360	0	290	550	7.4
NOV											
29...	27	150	45	590	11	15	650	0	530	1600	15
DEC											
19...	110	57	34	170	4.4	7.5	210	0	170	460	6.1
JAN											
11...	--	--	--	--	--	--	620	0	500	--	--
FEB											
07...	340	200	110	580	8.2	18	700	19	610	1500	9.7
MAR											
14...	30	19	9.6	39	1.8	8.3	70	0	57	100	5.0
APR											
04...	310	110	68	220	4.1	10	290	0	240	710	15
MAY											
09...	70	26	15	59	2.3	5.8	73	0	60	190	3.8
16...	750	180	150	300	4.0	20	390	0	320	1300	19
JUN											
12...	650	200	150	420	5.5	19	550	0	450	1500	16
JUL											
14...	440	180	110	610	8.8	19	560	0	460	1700	15
AUG											
04...	370	140	100	510	8.0	17	470	0	380	1400	37
30...	430	160	120	660	9.6	21	560	0	460	1800	23

YELLOWSTONE RIVER BASIN

06324925 LITTLE POWDER RIVER NEAR WESTON, WY--Continued

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

DATE	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)	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)
OCT 26...	.5	11	1120	1120	1.52	.97	.02	--	.05	--	--
NOV 29...	--	--	2660	--	3.62	2.44	.02	--	.01	--	--
DEC 19...	.3	7.6	838	846	1.15	15.8	.05	--	.04	--	--
JAN 11...	--	--	--	--	--	--	--	--	--	--	--
FEB 07...	.7	15	2890	2800	3.81	4.54	.25	--	.35	--	--
MAR 14...	.1	5.9	242	222	.30	48.0	.47	--	.39	--	--
APR 04...	.2	10	1320	1290	1.75	97.5	.02	--	.01	--	--
MAY 09...	.2	6.0	357	342	.47	1700	.29	--	.04	--	--
16...	.5	9.5	--	2170	2.95	182	.00	.02	.01	.01	.01
JUN 12...	.6	7.6	2740	2590	3.52	97.9	.03	--	.03	--	--
JUL 14...	.7	10	3020	2920	3.97	18.1	.01	--	.03	--	--
AUG 04...	.5	9.0	2510	2450	3.33	25.8	.01	--	.00	--	--
30...	.7	8.7	3160	3070	4.18	6.22	.00	--	.01	--	--

DATE	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,AM- MONIA + ORGANIC DIS. (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- PHATE, TOTAL (MG/L AS PO4)	PHOS- PHORUS, DIS- SOLVED (MG/L AS P)	PHOS- PHORUS, ORTHO. TOTAL (MG/L AS P)
OCT 26...	.62	--	.67	--	.69	3.1	.06	--	.02	--
NOV 29...	.55	--	.56	--	.58	2.6	.02	--	.01	--
DEC 19...	.96	--	1.0	--	1.1	4.6	.10	--	.05	--
JAN 11...	--	--	--	--	--	--	--	--	--	--
FEB 07...	.17	--	.52	--	.77	3.4	.02	--	.01	--
MAR 14...	1.9	--	2.3	--	2.8	12	.28	--	.19	--
APR 04...	.69	--	.70	--	.72	3.2	.03	--	.02	--
MAY 09...	4.6	--	4.6	--	4.9	22	.46	--	.02	--
16...	.88	.74	.89	.75	.89	3.9	.10	.31	.03	.01
JUN 12...	.93	--	.96	--	.99	4.4	.03	--	.01	--
JUL 14...	.72	--	.75	--	.76	3.4	.03	--	.00	--
AUG 04...	.83	--	.83	--	.84	3.7	.04	--	.00	--
30...	.99	--	1.0	--	1.0	4.4	.03	--	.02	--

YELLOWSTONE RIVER BASIN

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06324925 LITTLE POWDER RIVER NEAR WESTON, WY--Continued
WATER-QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	PHOS- PHORUS, ORTHO, DIS- SOLVED (MG/L AS P)	PHOS- PHATE, ORTHO, DIS- SOLVED (MG/L AS P04)	CARBON, ORGANIC DIS- SOLVED (MG/L AS C)	CARBON, ORGANIC SUS- PENDE TOTAL (MG/L AS C)	PHYTO- PLANK- TON, TOTAL (CELLS PER ML)	PERI- PHYTON BIOMASS TOTAL ASH WEIGHT G/SQ M	PERI- PHYTON BIOMASS TOTAL DRY WEIGHT G/SQ M	CHLOR-A PERI- PHYTON CHROMO- GRAPHIC FLUOROM (MG/M2)	CHLOR-B PERI- PHYTON CHROMO- GRAPHIC FLUOROM (MG/M2)	ALGAL GROWTH POTEN- TIAL, BOTTLE TEST (MG/L)
OCT 26...	--	--	9.0	9.5	580	--	--	--	--	--
NOV 29...	--	--	10	.7	210	19.2	21.1	.780	.250	--
DEC 19...	--	--	16	1.5	580	--	--	--	--	--
JAN 11...	--	--	--	--	57	--	--	--	--	--
FEB 07...	--	--	7.4	--	35	.079	.630	.080	.000	--
MAR 14...	--	--	19	4.5	41	--	--	--	--	--
APR 04...	--	--	11	2.4	590	--	--	--	--	--
MAY 09...	--	--	6.9	>10	0	--	--	--	--	--
16...	.00	.00	--	--	--	--	--	--	--	.7
JUN 12...	--	--	12	1.2	880	--	--	--	--	--
JUL 14...	.01	.03	10	.6	1400	--	--	--	--	--
AUG 04...	--	--	13	.9	360	--	--	--	--	--
30...	--	--	10	1.0	520	53.6	60.5	6.88	.000	--

DATE	TIME	ALUM- INUM, DIS- SOLVED (UG/L AS AL)	ARSENIC TOTAL (UG/L AS AS)	ARSENIC DIS- SOLVED (UG/L AS AS)	ARSENIC TOTAL IN BOT- TOM MA- TERIAL (UG/G AS AS)	BARIIUM, TOTAL RECOV- ERABLE (UG/L AS BA)	BARIIUM, DIS- SOLVED (UG/L AS BA)	BARIIUM, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS BA)	BERYL- LIUM, TOTAL RECOV- ERABLE (UG/L AS BE)	BERYL- LIUM, DIS- SOLVED (UG/L AS BE)
OCT 26...	1300	0	1	1	45	200	0	80	0	20
NOV 29...	1000	--	--	--	--	--	--	--	--	--
DEC 19...	1415	--	--	--	--	--	--	--	--	--
FEB 07...	0945	10	--	1	--	--	300	--	--	0
MAR 14...	1010	--	--	--	--	--	--	--	--	--
APR 04...	1515	--	--	--	--	--	--	--	--	--
MAY 09...	0930	--	--	--	--	--	--	--	--	--
16...	1000	--	--	--	--	--	--	--	--	--
JUN 12...	1630	--	--	--	--	--	--	--	--	--
JUL 14...	0900	0	2	1	53	300	200	100	10	0
AUG 04...	0815	20	--	2	--	--	100	--	--	0
30...	1130	--	--	--	--	--	--	--	--	--

DATE	BERYL- LIUM, RECOV. FM BOT- TOM MA- TERIAL (UG/G)	BORON, DIS- SOLVED (UG/L AS B)	CADMIUM TOTAL 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, DIS- SOLVED (UG/L AS CR)	CHRO- MIUM, RECOV. FM BOT- TOM MA- TERIAL (UG/G)	COBALT, TOTAL RECOV- ERABLE (UG/L AS CO)	COBALT, DIS- SOLVED (UG/L AS CO)
OCT 26...	0	110	<10	0	1	10	10	3	<50	0
NOV 29...	--	170	--	--	--	--	--	--	--	--
DEC 19...	--	170	--	--	--	--	--	--	--	--
FEB 07...	--	280	--	1	--	--	0	--	--	1
MAR 14...	--	120	--	--	--	--	--	--	--	--
APR 04...	--	210	--	--	--	--	--	--	--	--
MAY 09...	--	70	--	--	--	--	--	--	--	--
16...	--	340	--	--	--	--	--	--	--	--
JUN 12...	--	400	--	--	--	--	--	--	--	--
JUL 14...	1	270	0	1	0	0	0	2	2	2
AUG 04...	--	190	--	1	--	--	0	--	--	0
30...	--	220	--	--	--	--	--	--	--	--

YELLOWSTONE RIVER BASIN

06324925 LITTLE POWDER RIVER NEAR WESTON, WY--Continued
WATER-QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	COBALT, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CO)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU)	COPPER, DIS- SOLVED (UG/L AS CU)	COPPER, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CU)	IRON, DIS- SOLVED (UG/L AS FE)	LEAD, TOTAL 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 DIS- SOLVED (UG/L AS LI)
DCT 26...	5	<10	4	4	30	<100	2	10	20	10
NOV 29...	--	--	--	--	30	--	--	--	--	--
DEC 19...	--	--	--	--	180	--	--	--	--	--
FEB 07...	--	--	1	--	40	--	2	--	--	60
MAR 14...	--	--	--	--	110	--	--	--	--	--
APR 04...	--	--	--	--	50	--	--	--	--	--
MAY 09...	--	--	--	--	90	--	--	--	--	--
16...	--	--	--	--	20	--	--	--	--	--
JUN 12...	--	--	--	--	30	--	--	--	--	--
JUL 14...	10	5	6	0	30	4	2	30	50	60
AUG 04...	--	--	5	--	20	--	2	--	--	50
30...	--	--	--	--	30	--	--	--	--	--

[illegible][illegible]

YELLOWSTONE RIVER BASIN

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06324925 LITTLE POWDER RIVER NEAR WESTON, WY--Continued

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

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 ALPHA, DIS- SOLVED (PCI/L AS U-NAT)	GROSS ALPHA, SUSP. TOTAL (PCI/L AS U-NAT)
APR 04...	1515	28	6.5	23	5.9	19	4.4
AUG 04...	0815	<31	3.2	22	4.3	<21	2.2
30...	1130	<37	1.5	<16	4.4	<25	1.0

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	SED. SUSP. FALL DIAM. % FINER THAN .004 MM	SED. SUSP. FALL DIAM. % FINER THAN .016 MM	SED. SUSP. FALL DIAM. % FINER THAN .062 MM
OCT 26...	1300	9.5	.32	121	.10	--	--	--	--
NOV 29...	1000	.0	.34	48	.04	--	--	--	--
DEC 19...	1415	.0	6.9	212	3.9	--	--	--	--
JAN 11...	1400	.0	.63	278	.47	--	--	--	--
FEB 07...	0945	.5	.60	78	.13	--	--	--	--
MAR 14...	0830	.0	80	527	114	--	97	99	100
20...	1740	4.5	2210	869	5190	--	--	--	--
23...	1130	4.0	543	719	1050	--	--	--	--
APR 04...	1445	12.0	28	167	13	--	--	--	--
MAY 09...	0930	6.0	1840	4500	22400	--	90	98	100
16...	1000	15.5	31	400	33	96	--	--	--
19...	1030	10.0	4250	9130	105000	--	90	98	100
JUN 12...	1630	19.5	14	186	7.0	--	--	--	--
JUL 14...	0900	20.5	2.3	162	1.0	--	--	--	--
AUG 04...	0815	16.5	3.8	270	2.8	--	--	--	--
30...	1130	18.0	.77	210	.44	--	--	--	--

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
OCT 26...	1300	9.5	.32	--	--	0	1	4
APR 04...	1445	12.0	28	8	10	11	12	14
MAY 09...	0930	6.0	1840	36	52	59	63	72
16...	1000	15.5	31	--	1	2	3	4

DATE	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	BED MAT. SIEVE DIAM. % FINER THAN 128 MM
OCT 26...	9	19	40	60	84	100	--
APR 04...	20	32	58	69	88	100	--
MAY 09...	81	91	95	99	100	--	--
16...	6	9	14	22	32	44	100

06324925 LITTLE POWDER RIVER NEAR WESTON, WY--Continued

QUALITATIVE AND ASSOCIATED QUANTITATIVE ANALYSES OF BIOLOGICAL DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

PHYTOPLANKTON ANALYSES

DATE TIME	OCT 26,77 1300	NOV 29,77 1000	DEC 19,77 1415	JAN 11,78 1400	FEB 7,78 0945	MAR 14,78 1010				
TOTAL CELLS/ML	580	210	580	57	35	41				
DIVERSITY: DIVISION	1.8	1.2	0.0	0.9	0.0	0.0				
..CLASS	1.8	1.5	0.0	0.9	0.0	0.0				
...ORDER	2.2	1.9	1.0	1.2	0.0	0.0				
...FAMILY	2.7	2.0	1.0	1.7	1.5	0.0				
....GENUS	3.1	0.0	1.0	1.7	2.0	0.0				
ORGANISM	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT
CHLOROPHYTA (GREEN ALGAE)										
..CHLOROPHYCEAE										
...CHLOROCOCCALES										
...HYDRODICTYACEAE										
....PEDIASTRUM	130#	22	--	-	--	-	--	-	--	-
....OOCYSTACEAE										
....ANKISTRODESMUS	8	1	27	13	--	-	32#	56	--	-
....DICTYOSPHAERIUM	32	5	--	-	--	-	--	-	--	-
....OOCYSTIS	--	-	--	-	--	-	--	-	--	-
....SELENASTRUM	--	-	--	-	--	-	--	-	--	-
....SCENEDESMACEAE										
....ACTINASTRUM	--	-	--	-	--	-	6	11	--	-
....CRUCIGENIA	--	-	--	-	--	-	--	-	--	-
....SCENEDESMUS	32	5	--	-	--	-	--	-	--	-
...TETRASPORALES										
...COCCOMYXACEAE										
...ELAKATOTHRIX	16	3	--	-	--	-	--	-	--	-
...VOLVOCALES										
...CHLAMYDOMONADACEAE	--	-	95#	45	--	-	--	-	--	-
...CHLAMYDOMONAS	48	8	--	-	--	-	--	-	--	-
...VOLVOCAEAE										
...GONIUM	--	-	--	-	--	-	--	-	--	-
...ZYGNEATALES										
...DESMIDIACEAE										
...CLOSTERIUM	--	-	--	-	--	-	--	-	--	-
CHRYSTOPHYTA										
..BACILLARIOPHYCEAE										
...CENTRALES										
...COSCINODISCAEAE										
....CYCLOTELLA	--	-	--	-	290#	50	13#	22	--	-
....STEPHANODISCUS	--	-	--	-	--	-	--	-	--	-
...PENNALES										
...ACHNANTHACEAE										
...ACHNANTHES	--	-	--	-	--	-	9#	25	--	-
...COCCONEIS	--	-	7	3	--	-	9#	25	--	-
...CYMBELLACEAE										
...CYMBELLA	--	-	--	-	290#	50	--	-	--	-
...FRAGILARIACEAE										
...SYNEDRA	56	10	--	-	--	-	--	-	41#	100
...GOMPHONEMATAEAE										
....GOMPHONEMA	--	-	--	-	--	-	9#	25	--	-
...NAVICULACEAE										
...CALONEIS	--	-	--	-	--	-	--	-	--	-
...NAVICULA	8	1	--	-	--	-	--	-	--	-
...NITZSCHIAEAE										
....NITZSCHIA	--	-	7	3	--	-	6	11	--	-
...SURIPELLACEAE										
....SURIPELLA	--	-	--	-	--	-	9#	25	--	-
..CHRYSTOPHYCEAE										
...CHRYSOMONADALES										
...CHROMULINACEAE										
...CHRYSOCOCCUS	--	-	61#	29	--	-	--	-	--	-
...OCHROMONADACEAE										
....DINOBYRON	--	-	--	-	--	-	--	-	--	-
CRYPTOPHYTA (CRYPTOMONADS)										
..CRYPTOPHYCEAE										
...CRYPTOMONIDALES										
...CRYPTOMONODACEAE										
....CRYPTOMONAS	72	12	--	-	--	-	--	-	--	-

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 1977 TO SEPTEMBER 1978

PHYTOPLANKTON ANALYSES

DATE TIME	OCT 26,77 1300		NOV 29,77 1000		DEC 19,77 1415		JAN 11,78 1400		FEB 7,78 0945		MAR 14,78 1010	
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	--	-	--	-	--	-	--	-	--	-	--	-
..HORMOGONALES												
..OSCILLATORIACEAE												
....OSCILLATORIA	--	-	--	-	--	-	--	-	--	-	--	-
....SPIRULINA	--	-	--	-	--	-	--	-	--	-	--	-
..RIVULARIACEAE												
..RAPHIDIOPSIS	--	-	--	-	--	-	--	-	--	-	--	-
..CHROOCOCCALES												
..CHROOCOCCACEAE												
....DACTYLOCOCCOPSIS	--	-	--	-	--	-	--	-	--	-	--	-
EUGLENOPHYTA (EUGLENOIDS)												
..EUGLENOPHYCEAE												
..EUGLENALES												
..EUGLENACEAE												
....EUGLENA	100# 18		14 6		--	-	--	-	--	-	--	-
....TRACHELONAS	80 14		--	-	--	-	--	-	--	-	--	-

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 1977 TO SEPTEMBER 1978

PHYTOPLANKTON ANALYSES

DATE TIME	APR 4,78 1515	MAY 9,78 0930	JUN 12,78 1630	JUL 14,78 0900	AUG 4,78 0815	AUG 30,78 1130				
TOTAL CELLS/ML	590	0	880	1400	360	520				
DIVERSITY: DIVISION	2.0	0.0	1.0	1.2	1.3	1.6				
..CLASS	2.0	0.0	1.0	1.2	1.3	1.7				
..ORDER	2.3	0.0	1.0	1.4	1.3	2.2				
...FAMILY	2.7	0.0	1.0	1.5	2.2	3.0				
....GENUS	2.8	0.0	1.3	1.8	2.2	3.2				
ORGANISM	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT
CHLOROPHYTA (GREEN ALGAE)										
..CHLOROPHYCEAE										
...CHLOROCOCCALES										
...HYDRODICTYACEAE										
...PEDIASTRUM	--	-	--	-	--	-	--	-	31	6
...OOCYSTACEAE										
...ANKISTRODESUS	57	10	--	-	570#	64	43	3	110#	31
...DICTYOSPHAERIUM	--	-	--	-	--	-	--	-	--	-
...OOCYSTIS	--	-	--	-	60	7	--	-	--	-
...SELENASTRUM	--	-	--	-	--	-	100	7	--	-
...SCENEDESMACEAE										
...ACTINASTRUM	--	-	--	-	--	-	--	-	--	-
...CRUCIGENIA	--	-	--	-	--	-	--	-	18	3
...SCENEDESMUS	--	-	--	-	--	-	--	-	110#	31
...TETRASPORALES									35	7
...COCCOMYXACEAE										
...ELAKATOTHRIX	--	-	--	-	--	-	--	-	--	-
...VOLVOCALES										
...CHLAMYDOMONADACEAE	--	-	--	-	--	-	--	-	--	-
...CHLAMYDOMONAS	110#	20	--	-	--	-	--	-	22	4
...VOLVOCAEAE										
...GONIUM	57	10	--	-	--	-	--	-	--	-
...ZYGNEATALES										
...DESMIDIACEAE										
...CLOSTERIUM	--	-	--	-	57	4	--	-	--	-
CHRYSOPHYTA										
..BACILLARIOPHYCEAE										
...CENTRALES										
...COSCINODISCACEAE										
...CYCLOTELLA	--	-	--	-	14	1	--	-	97#	19
...STEPHANODISCUS	--	-	--	-	--	-	--	-	4	1
...PENNALES										
...ACHNANTHACEAE										
...ACHNANTHES	--	-	--	-	--	-	--	-	--	-
...COCCONEIS	--	-	--	-	57	4	--	-	--	-
...CYMBELLACEAE										
...CYMBELLA	--	-	--	-	--	-	--	-	--	-
...FRAGILARIACEAE										
...SYNEDRA	--	-	--	-	--	-	--	-	--	-
...GOMPHONEMACEAE										
...GOMPHONEMA	--	-	--	-	--	-	--	-	--	-
...NAVICULACEAE										
...CALONEIS	--	-	--	-	29	2	--	-	--	-
...NAVICULA	14	2	--	-	14	1	28	8	13	3
...NITZSCHACEAE										
...NITZSCHIA	100#	17	--	-	14	1	55#	15	4	1
...SURIPELLACEAE										
...SURIPELLA	--	-	--	-	15	2	--	-	13	3
..CHRYSOPHYCEAE										
...CHRYSOMONADALES										
...CHROMULINACEAE										
...CHRYSOCOCCUS	--	-	--	-	--	-	--	-	--	-
...OCHROMONADACEAE										
...DINOBRYON	--	-	--	-	--	-	--	-	4	1
CRYPTOPHYTA (CRYPTOMONADS)										
..CRYPTOPHYCEAE										
...CRYPTOMONIDALES										
...CRYPTOMONODACEAE										
...CRYPTOMONAS	29	5	--	-	--	-	--	-	--	-

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 1977 TO SEPTEMBER 1978

PHYTOPLANKTON ANALYSES

DATE TIME	APR 4,78 1515		MAY 9,78 0930		JUN 12,78 1630		JUL 14,78 0900		AUG 4,78 0815		AUG 30,78 1130	
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	--	-	--	-	--	-	43	3	--	-	26	5
...HORMOGONALES												
...OSCILLATORIAEAE												
....OSCILLATORIA	170#	29	--	-	--	-	--	-	--	-	--	-
....SPIRULINA	--	-	--	-	--	-	--	-	--	-	13	3
...RIVULARIAEAE												
...RAPHIDIOPSIS	--	-	--	-	--	-	--	-	--	-	9	2
..CHROOCOCCALES												
...CHROOCOCCACEAE												
....DACTYLOCOCCOPSIS	--	-	--	-	--	-	--	-	--	-	35	7
EUGLENOPHYTA (EUGLENOIDS)												
..EUGLENOPHYCEAE												
...EUGLENALES												
....EUGLENACEAE												
.....EUGLENA	29	5	--	-	--	-	57	4	55#	15	26	5
....TRACHELOMONAS	14	2	--	-	240#	27	960#	69	--	-	--	-

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

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.

GAGE.--Water-stage recorder. Altitude of gage is 3,410 ft (1,039 m), from topographic map.

REMARKS.--Records good except those for October to March, which are poor. Diversion above station for irrigation of about 80 acres (32 hm²) 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.--6 years, 30.8 ft³/s (0.872 m³/s), 22,310 acre-ft/yr (27.5 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)
Oct. 2	unknown	215 6.09	5.12 1.561	May 19	0530	*5,300 150	11.62 3.542
Mar. 20	0930	4,720 133	a*11.63 3.545	June 1	0230	668 18.9	6.56 1.999
May 10	0200	2,070 58.6	8.91 2.716	June 22	1930	139 3.94	4.41 1.344

a-Backwater from ice.

Minimum daily discharge, 0.26 ft³/s (0.007 m³/s) Oct. 27.

REVISIONS.--The maximum discharge for the water year 1976 has been revised to 622 ft³/s (17.6 m³/s) June 19, 1976, gage height, 6.54 ft (1.993 m), superseding figure published in the report for 1976.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	53	1.5	1.3	2.2	1.7	1.7	130	33	436	22	11	3.4
2	190	1.2	1.3	2.4	1.9	1.6	104	25	227	46	13	3.2
3	84	.75	1.5	2.5	2.2	1.5	94	23	170	36	12	2.8
4	67	1.4	1.3	2.7	2.3	1.7	84	30	139	24	11	2.8
5	40	.85	1.1	2.9	2.2	1.9	74	166	124	23	9.5	2.8
6	35	.75	1.0	3.1	2.3	1.9	67	389	112	20	9.2	2.4
7	37	.85	1.3	2.6	2.3	2.1	61	299	95	20	8.9	2.2
8	38	1.5	1.1	2.1	2.1	2.3	58	916	90	18	9.2	2.4
9	36	.85	.95	2.0	2.1	2.5	53	1710	92	18	8.9	2.5
10	40	1.4	1.2	2.0	2.0	2.7	45	1660	75	17	8.3	2.5
11	36	.85	1.5	2.1	1.9	2.5	41	932	66	16	8.0	2.5
12	36	1.1	1.8	2.3	1.9	2.9	38	382	61	16	7.1	3.0
13	35	.96	1.7	2.2	1.8	3.1	42	225	58	15	6.1	3.6
14	33	1.2	2.1	2.1	1.8	83	36	161	50	14	6.7	3.6
15	21	1.3	2.3	2.0	1.9	118	34	125	43	14	7.4	3.6
16	10	1.3	2.1	1.8	1.9	170	31	103	41	13	6.7	3.4
17	7.5	1.1	2.4	2.0	2.0	140	33	124	42	12	5.8	3.2
18	4.7	.85	4.6	1.8	2.0	340	31	2800	40	12	5.4	2.8
19	1.5	.68	7.5	1.7	2.1	1400	30	5000	35	12	5.2	3.0
20	1.4	.56	9.0	1.9	2.1	4410	29	2840	33	12	5.2	3.0
21	.75	.60	8.3	2.2	2.2	4480	28	1090	32	12	4.6	4.9
22	.75	.76	5.5	2.1	2.3	2780	28	526	53	12	4.1	3.2
23	1.2	.94	5.1	2.2	2.2	1560	28	299	58	12	4.1	2.4
24	1.2	1.2	3.9	2.1	2.0	812	27	234	39	20	4.1	2.2
25	.85	1.3	4.0	2.0	1.8	538	28	222	43	11	4.1	1.8
26	.43	1.5	4.4	2.0	1.9	478	24	181	37	10	4.1	1.7
27	.26	1.4	4.6	2.1	2.0	491	22	172	34	10	3.9	1.7
28	.50	1.4	4.3	2.0	1.8	456	22	213	30	12	3.9	1.7
29	.43	1.5	3.9	2.1	---	329	22	205	27	12	3.9	1.7
30	.37	1.4	3.2	1.9	---	222	31	290	24	11	3.9	1.6
31	.85	---	2.6	1.8	---	168	---	427	---	11	3.6	---
TOTAL	813.69	32.95	96.85	66.9	56.7	19003.4	1375	21802	2406	513	208.9	81.6
MEAN	26.2	1.10	3.12	2.16	2.03	613	45.8	703	80.2	16.5	6.74	2.72
MAX	190	1.5	9.0	3.1	2.3	4480	130	5000	436	46	13	4.9
MIN	.26	.56	.95	1.7	1.7	1.5	22	23	24	10	3.6	1.6
AC-FT	1610	65	192	133	112	37690	2730	43240	4770	1020	414	162
CAL YR 1977	TOTAL	4132.22	MEAN	11.3	MAX	253	MIN	.00	AC-FT	8200		
WTR YR 1978	TOTAL	46456.99	MEAN	127	MAX	5000	MIN	.26	AC-FT	92150		

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 1977 TO SEPTEMBER 1978

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	TUR- BID- ITY (JTU)	OXYGEN, DIS- SOLVED (MG/L)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	HARD- NESS (MG/L AS CACO3)	HARD- NESS, NONCAR- BONATE (MG/L CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)
OCT 01...	1115	A53	880	7.9	9.0	220	9.2	240	250	130	55	27
NOV 11...	0930	.96	2180	8.0	1.0	20	11.8	K20	730	400	150	87
DEC 10...	0900	A1.2	2800	8.0	.0	10	12.2	K2	1000	600	220	120
JAN 02...	0930	A2.4	2200	7.6	.0	40	11.6	K4	680	340	140	79
FEB 03...	0930	A2.2	3500	8.0	.0	15	11.8	29	1000	540	210	120
MAR 04...	0930	A1.7	3400	8.0	.0	20	13.2	K12	990	530	200	120
31...	0930	175	1020	7.8	12.0	150	8.4	K4	350	210	66	46
MAY 12...	0945	393	1450	7.9	10.0	300	8.8	K410	550	410	94	76
16...	1200	103	2600	7.6	16.5	100	7.9	--	930	650	160	130
JUN 09...	0830	100	3000	8.3	17.0	60	8.4	210	990	630	200	120
JUL 21...	0945	12	3800	8.2	17.0	15	8.2	110	1000	630	190	130
AUG 18...	0930	5.4	3500	8.1	17.0	10	7.6	140	980	620	180	130
S30...	1230	3.4	3850	--	20.5	--	--	--	--	--	--	--
SEP 15...	0930	3.6	4000	8.2	14.0	8	8.6	K32	980	660	180	130

A-Daily mean discharge.

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

S-Seepage run data (see Explanation of Water-Quality Records).

DATE	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	BICAR- BONATE (MG/L AS HCO3)	CAR- BONATE (MG/L AS CO3)	ALKA- LINITY (MG/L AS CACO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, SUM OF CONSTITU- ENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)
OCT 01...	100	2.8	8.7	150	0	120	340	11	.3	6.3	622	.85
NOV 11...	330	5.3	18	400	0	330	1100	9.3	.6	11	1900	2.58
DEC 10...	500	6.7	19	540	0	440	1600	15	.8	14	2760	3.75
JAN 02...	340	5.7	16	410	0	340	1000	12	.4	12	1800	2.45
FEB 03...	480	6.5	19	580	0	480	1500	20	.7	15	2650	3.60
MAR 04...	450	6.2	17	570	0	470	1400	13	.7	14	2500	3.40
31...	120	2.8	11	180	0	150	470	9.6	.2	8.6	821	1.12
MAY 12...	120	2.2	13	170	0	140	620	9.8	.3	9.5	1030	1.40
16...	290	4.1	19	350	0	290	1200	19	.4	12	2000	2.72
JUN 09...	370	5.1	22	440	0	360	1400	18	.5	8.3	2360	3.21
JUL 21...	530	7.3	21	460	0	380	1700	15	.6	13	2830	3.85
AUG 18...	570	7.9	23	440	0	360	1800	9.2	.7	12	2940	4.00
30...	--	--	--	--	--	--	--	--	--	--	--	--
SEP 15...	570	7.9	25	400	0	330	1800	21	.6	10	2930	3.98

YELLOWSTONE RIVER BASIN

06324970 LITTLE POWDER RIVER ABOVE DRY CREEK, NEAR WESTON, WY--Continued

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

DATE	SOLIDS, DIS- SOLVED (TONS PER DAY)	NITRO- GEN, NITRATE DIS- SOLVED (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 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, ORGANIC DIS- SOLVED (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC DIS. (MG/L AS N)
OCT											
01...	89.0	--	.22	--	.72	--	--	.08	--	.80	--
NOV											
11...	4.92	--	.01	--	.03	--	--	.69	--	.72	--
DEC											
10...	8.94	--	.06	--	.04	--	--	1.1	--	1.1	--
JAN											
02...	11.7	--	.13	--	.12	--	--	.83	--	.95	--
FEB											
03...	15.7	--	.24	--	.25	--	--	.00	--	.21	--
MAR											
04...	11.5	--	.48	--	.13	--	--	.54	--	.67	--
31...	388	--	.58	--	.10	--	--	1.7	--	1.8	--
MAY											
12...	1090	--	.06	--	.09	--	--	1.3	--	1.4	--
16...	556	--	.00	.04	.03	.01	.01	.80	.51	.83	.52
JUN											
09...	637	.02	.03	--	.06	--	--	.94	--	1.0	--
JUL											
21...	91.7	--	.02	--	.00	--	--	.59	--	.59	--
AUG											
18...	42.9	--	.02	--	.02	--	--	.79	--	.81	--
30...	--	--	--	--	--	--	--	--	--	--	--
SEP											
15...	28.5	--	.02	--	.01	--	--	.55	--	.56	--

DATE	NITRO- GEN, TOTAL (MG/L AS N)	NITRO- GEN, TOTAL (MG/L AS NO3)	PHOS- PHURUS, TOTAL (MG/L AS P)	PHOS- PHATE, TOTAL (MG/L AS PO4)	PHOS- PHURUS, DIS- SOLVED (MG/L AS P)	PHOS- PHURUS, ORTHO, TOTAL (MG/L AS P)	PHOS- PHURUS, ORTHO, DIS- SOLVED (MG/L AS P)	PHOS- PHATE, ORTHO, DIS- SOLVED (MG/L AS PO4)	CARBON, ORGANIC DIS- SOLVED (MG/L AS C)	CARBON, ORGANIC SUS- PENDED TOTAL (MG/L AS C)	ALGAL GROWTH POTEN- TIAL, BOTTLE TEST (MG/L)
OCT											
01...	1.0	4.5	.11	--	--	--	--	--	8.5	2.8	--
NOV											
11...	.73	3.2	.06	--	--	--	--	--	--	--	--
DEC											
10...	1.2	5.1	.09	--	--	--	--	--	--	--	--
JAN											
02...	1.1	4.8	.03	--	--	--	--	--	--	--	--
FEB											
03...	.45	2.0	.03	--	--	--	--	--	--	--	--
MAR											
04...	1.2	5.1	.04	--	--	--	--	--	--	--	--
31...	2.4	11	.18	--	--	--	--	--	13	2.2	--
MAY											
12...	1.5	6.5	.20	--	--	--	--	--	--	--	--
16...	.83	3.7	.10	.31	.03	.01	.00	.00	--	--	.7
JUN											
09...	1.0	4.6	.04	--	--	--	--	--	--	--	--
JUL											
21...	.61	2.7	.01	--	--	--	--	--	--	--	--
AUG											
18...	.83	3.7	.02	--	--	--	--	--	--	--	--
30...	--	--	--	--	--	--	--	--	--	--	--
SEP											
15...	.58	2.6	.05	--	--	--	--	--	--	--	--

YELLOWSTONE RIVER BASIN

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06324970 LITTLE POWDER RIVER ABOVE DRY CREEK, NEAR WESTON, WY--Continued

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

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)
OCT 01...	1115	5900	5900	0	4	4	0	0	0	0	100	10
NOV 11...	0930	--	--	--	--	--	--	--	--	--	170	--
DEC 10...	0900	--	--	--	--	--	--	--	--	--	210	--
JAN 02...	0930	--	--	--	--	--	--	--	--	--	200	--
FEB 03...	0930	--	--	--	--	--	--	--	--	--	200	--
MAR 04...	0930	--	--	--	--	--	--	--	--	--	210	--
31...	0930	3600	3600	20	2	1	1	0	0	0	200	3
MAY 12...	0945	--	--	--	--	--	--	--	--	--	180	--
16...	1200	--	--	--	--	--	--	--	--	--	260	--
JUN 09...	0830	--	--	--	--	--	--	--	--	--	290	--
JUL 21...	0945	--	--	--	--	--	--	--	--	--	250	--
AUG 18...	0930	--	--	--	--	--	--	--	--	--	240	--
SEP 15...	0930	--	--	--	--	--	--	--	--	--	240	--

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, DIS- SOLVED (UG/L AS FE)	LEAD, TOTAL RECOV- ERABLE (UG/L AS PB)	LEAD, SUS- PENDE RECOV- ERABLE (UG/L AS PB)
OCT 01...	7	3	7	7	0	20	17	3	6200	40	<100	<95
NOV 11...	--	--	--	--	--	--	--	--	--	110	--	--
DEC 10...	--	--	--	--	--	--	--	--	--	110	--	--
JAN 02...	--	--	--	--	--	--	--	--	--	110	--	--
FEB 03...	--	--	--	--	--	--	--	--	--	80	--	--
MAR 04...	--	--	--	--	--	--	--	--	--	50	--	--
31...	1	2	10	10	0	13	9	4	4100	50	15	6
MAY 12...	--	--	--	--	--	--	--	--	--	200	--	--
16...	--	--	--	--	--	--	--	--	--	20	--	--
JUN 09...	--	--	--	--	--	--	--	--	--	90	--	--
JUL 21...	--	--	--	--	--	--	--	--	--	150	--	--
AUG 18...	--	--	--	--	--	--	--	--	--	450	--	--
SEP 15...	--	--	--	--	--	--	--	--	--	200	--	--

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

[illegible]

06324970 LITTLE POWDER RIVER ABOVE DRY CREEK, NEAR WESTON, WY--Continued
WATER-QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	TEMPER- ATURE (DEG C)	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SEDI- MENT, SUS- PENDED (MG/L)	SEDI- MENT DIS- CHARGE, SUS- PENDED (T/DAY)	SED. SUSP. FALL DIAM. % FINER THAN .004 MM	SED. SUSP. FALL DIAM. % FINER THAN .016 MM	SED. SUSP. FALL DIAM. % FINER THAN .062 MM	
NOV 08...	0920	2.0	1.1	174	.52	--	--	--	
DEC 07...	0940	.0	1.3	182	.64	--	--	--	
JAN 10...	1010	.0	2.0	134	.72	--	--	--	
FEB 09...	1050	.0	3.7	112	1.1	--	--	--	
MAR 21...	1730	4.5	4210	--	--	70	84	93	
23...	1145	4.0	1610	--	--	78	92	100	
28...	1400	7.5	431	946	1100	--	--	--	
APR 03...	1720	10.5	90	224	54	--	--	--	
MAY 09...	1245	4.5	1750	--	--	76	84	--	
16...	1200	16.5	103	377	105	--	--	--	
JUN 23...	1150	21.0	54	4220	615	--	--	--	
JUL 20...	0910	18.5	12	72	2.3	--	--	--	
AUG 09...	1845	29.5	8.6	63	1.5	--	--	--	
SEP 06...	1015	21.0	2.5	70	.47	--	--	--	
		SED. SUSP. FALL DIAM. % FINER THAN .125 MM	SED. SUSP. FALL DIAM. % FINER THAN .250 MM	SED. SUSP. SIEVE DIAM. % FINER THAN .062 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
NOV 08...	--	--	--	--	--	--	--	--	--
DEC 07...	--	--	--	--	--	--	--	--	--
JAN 10...	--	--	--	--	--	--	--	--	--
FEB 09...	--	--	--	--	--	--	--	--	--
MAR 21...	98	100	--	--	--	--	--	--	--
23...	--	--	--	--	--	--	--	--	--
28...	--	--	--	--	--	--	--	--	--
APR 03...	--	--	--	--	--	--	--	--	--
MAY 09...	--	--	96	97	98	99	99	100	100
16...	--	--	99	--	--	--	--	--	--
JUN 23...	--	--	--	--	--	--	--	--	--
JUL 20...	--	--	--	--	--	--	--	--	--
AUG 09...	--	--	--	--	--	--	--	--	--
SEP 06...	--	--	--	--	--	--	--	--	--
				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	
MAY 16...	1200	16.5	103	--	--	--	--		0
AUG 09...	1845	29.5	8.6	1	1	4	6		12
		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	BED MAT. SIEVE DIAM. % FINER THAN 128 MM	
MAY 16...	1	6	16	25	34	61	100		
AUG 09...	18	27	43	62	84	100	--		

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, 147,280 acre-ft (182 hm³) June 27, elevation, 5,803.35 ft (1,768.861 m); minimum daily, 71,980 acre-ft (88.6 hm³) Oct. 3, elevation, 5,776.15 ft (1,760.571 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 daily contents, 825,220 acre-ft (1,020 hm³) July 13, elevation, 4,726.17 ft (1,440.537 m); minimum daily, 427,280 acre-ft (527 hm³) May 8, elevation, 4,701.51 ft (1,433.020 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, 7,680 acre-ft (9.47 hm³) June 26, elevation, 6,413.23 ft (1,954.753 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 daily contents, 444,460 acre-ft (548 hm³) July 4, elevation, 5,363.00 ft (1,634.642 m); minimum daily, 178,310 acre-ft (220 hm³) Oct. 12, elevation, 5,312.70 ft (1,619.311 m).

Reservoirs in Yellowstone River basin in Wyoming--Continued

MONTHEND ELEVATION AND CONTENTS, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978			
Date	Elevation (feet)	Contents (acre-feet)	Change in contents (acre-feet)
06224500 BULL LAKE			
Sept. 30	5,776.40	72,480	-
Oct. 31	5,777.29	74,640	+2,160
Nov. 30	5,777.81	75,920	+1,280
Dec. 31	5,778.78	78,310	+2,390
CAL YR 1977	-	-	+22,270
Jan. 31	5,779.49	80,080	+1,770
Feb. 28	5,779.74	80,710	+630
Mar. 31	5,779.75	80,740	+30
Apr. 30	5,779.20	79,360	-1,380
May 31	5,785.65	96,020	+16,660
June 30	5,803.25	146,970	+50,950
July 31	5,803.00	146,190	-780
Aug. 31	5,798.75	133,910	-12,280
Sept. 30	5,790.05	108,000	-25,910
WTR YR 1978	-	-	+35,520
06258900 BOYSEN RESERVOIR			
Sept. 30	4,704.98	472,980	-
Oct. 31	4,706.71	497,000	+24,020
Nov. 30	4,708.26	519,170	+22,170
Dec. 31	4,709.51	537,500	+18,330
CAL YR 1977	-	-	-102,180
Jan. 31	4,710.21	547,910	+10,410
Feb. 28	4,710.40	550,760	+2,850
Mar. 31	4,709.32	534,680	-16,080
Apr. 30	4,702.20	436,100	-98,580
May 31	4,708.70	525,580	+89,480
June 30	4,724.42	790,750	+265,170
July 31	4,725.25	806,950	+16,200
Aug. 31	4,722.67	757,360	-49,590
Sept. 30	4,721.82	741,500	-15,860
WTR YR 1978	-	-	+268,520
06260300 ANCHOR RESERVOIR			
Sept. 30	Dry	0	-
Oct. 31	Dry	0	0
Nov. 30	Dry	0	0
Dec. 31	Dry	0	0
CAL YR 1977	-	-	0
Jan. 31	Dry	0	0
Feb. 28	Dry	0	0
Mar. 31	Dry	0	0
Apr. 30	Dry	0	0
May 31	6,381.15	1,920	+1,920
June 30	6,411.92	7,350	+5,430
July 31	6,386.48	2,540	-4,810
Aug. 31	Dry	0	-2,540
Sept. 30	Dry	0	0
WTR YR 1978	-	-	0
06281500 BUFFALO BILL RESERVOIR			
Sept. 30	5,314.58	185,200	-
Oct. 31	5,313.85	182,500	-2,700
Nov. 30	5,315.90	190,160	+7,660
Dec. 31	5,317.39	195,890	+5,730
CAL YR 1977	-	-	-48,710
Jan. 31	5,318.48	200,160	+4,270
Feb. 28	5,317.60	196,700	-3,460
Mar. 31	5,318.34	199,600	+2,900
Apr. 30	5,316.79	193,570	-6,030
May 31	5,333.43	266,970	+73,400
June 30	5,362.58	441,550	+174,580
July 31	5,361.50	434,140	-7,410
Aug. 31	5,355.05	391,410	-42,730
Sept. 30	5,348.15	348,370	-43,040
WTR YR 1978	-	-	+163,170

CHEYENNE RIVER BASIN

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 1978.

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 CURRENT YEAR.--Maximum discharge, 6,600 ft³/s (187 m³/s) May 18, 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; minimum daily, 0.13 ft³/s (0.004 m³/s) Dec. 21.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.23	.17	.18	.16	.17	.17	1.6	7.4	42	7.2	19	2.5
2	.16	.17	.18	.16	.17	.17	1.6	7.9	38	6.5	29	2.3
3	.15	.17	.21	.16	.16	.17	1.4	7.5	35	6.0	16	2.1
4	.15	.17	.19	.16	.16	1.0	1.7	9.6	32	4.1	13	1.9
5	.15	.17	.19	.15	.17	3.0	2.3	14	31	2.5	11	1.7
6	.16	.17	.19	.15	.16	10	2.0	17	26	1.3	10	1.5
7	.16	.17	.19	.15	.16	50	1.7	28	25	1.6	11	1.3
8	.16	.17	.18	.15	.17	70	2.0	78	20	.96	10	1.1
9	.15	.17	.18	.15	.17	50	2.0	60	16	3.6	9.2	.90
10	.17	.17	.17	.15	.17	40	1.9	43	14	2.5	8.7	.70
11	.16	.18	.18	.15	.16	50	2.0	38	12	1.1	7.3	.50
12	.16	.18	.17	.15	.17	46	2.0	141	9.7	.32	7.0	.16
13	.16	.18	.17	.15	.17	25	1.6	72	7.7	.25	6.3	.16
14	.16	.18	.20	.15	.17	12	1.1	40	6.8	.37	6.8	.16
15	.16	.17	.30	.15	.17	5.7	1.3	27	5.9	1.6	9.7	.16
16	.16	.18	.20	.15	.17	5.9	1.5	19	5.9	2.7	6.1	.16
17	.16	.18	.18	.15	.17	10	1.4	465	5.7	4.4	5.6	.16
18	.17	.18	.17	.15	.17	31	1.4	2560	4.7	9.0	5.6	.16
19	.17	.18	.17	.15	.17	24	2.2	1930	3.5	11	5.4	.16
20	.17	.18	.16	.15	.17	16	2.1	358	3.3	99	5.0	.15
21	.17	.18	.13	.16	.17	36	2.0	190	3.2	1580	4.5	.15
22	.17	.18	.14	.16	.17	24	2.2	151	2.7	224	4.5	.15
23	.17	.18	.14	.14	.17	20	1.9	117	2.3	56	4.3	.15
24	.17	.21	.14	.15	.17	20	1.5	95	4.2	35	3.9	.15
25	.17	.30	.15	.16	.17	17	1.3	81	19	24	3.6	.15
26	.17	.19	.15	.17	.17	13	1.2	70	8.4	20	3.4	.15
27	.17	.21	.15	.17	.17	10	2.7	64	8.1	18	3.0	.15
28	.17	.21	.15	.16	.17	8.4	3.5	58	7.8	16	3.2	.15
29	.17	.18	.16	.16	---	4.7	4.2	53	17	18	3.2	.15
30	.17	.18	.16	.16	---	2.8	5.0	50	8.4	18	3.2	.15
31	.17	---	.16	.17	---	1.9	---	46	---	20	2.8	---
TOTAL	5.14	5.51	5.39	4.80	4.71	607.91	60.3	6897.4	425.3	2195.00	241.3	19.43
MEAN	.17	.18	.17	.15	.17	19.6	2.01	222	14.2	70.8	7.78	.65
MAX	.23	.30	.30	.17	.17	70	5.0	2560	42	1580	29	2.5
MIN	.15	.17	.13	.14	.16	.17	1.1	7.4	2.3	.25	2.8	.15
AC-FT	10	11	11	9.5	9.3	1210	120	13680	844	4350	479	39

WTR YR 1978 TOTAL 10472.19 MEAN 28.7 MAX 2560 MIN .13 AC-FT 20770

06364700 ANTELOPE CREEK NEAR TECKLA, WY--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--October 1977 to September 1978.

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

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	COLOR (PLAT- INUM- COBALT UNITS)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	STREP- TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)	HARD- NESS (MG/L AS CAC03)	HARD- NESS, NONCAR- BONATE (MG/L CAC03)
OCT												
03...	1615	.15	2120	7.9	21.5	--	6.1	80	--	--	--	--
NOV												
04...	1210	.18	2650	8.0	14.0	10	8.6	98	17	44	1200	760
DEC												
21...	1010	.13	2450	7.4	1.0	--	11.7	97	K10	120	1000	610
JAN												
18...	1400	.15	2480	8.0	1.5	--	11.6	102	K3	70	1000	590
FEB												
10...	0915	.19	2330	7.9	.5	--	10.7	88	K5	<1	1000	590
MAR												
09...	1110	37	435	7.7	.0	--	11.2	91	K19	>58000	140	84
APR												
13...	1300	1.6	2200	8.1	18.0	--	7.4	91	20	K7	940	640
20...	0810	--	--	--	--	--	--	--	--	--	--	--
MAY												
11...	1000	33	1380	8.3	16.5	--	9.1	99	140	--	560	310
JUN												
15...	1045	5.7	2300	8.2	22.0	--	7.1	95	34	40	930	670
JUL												
13...	0900	.71	2330	8.2	20.0	--	7.3	94	57	21	930	620
AUG												
03...	1000	15	1680	8.2	16.5	--	7.5	90	1300	700	640	440
SEP												
12...	1230	.12	2250	8.0	16.0	--	8.0	95	K10	44	1000	610

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)	BICAR- BONATE (MG/L AS HCO3)	CAR- BONATE (MG/L AS CO3)	ALKA- LINITY (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)	SILICA, DIS- SOLVED (MG/L AS SiO2)
OCT												
03...	--	--	--	--	--	470	0	380	--	--	--	--
NOV												
04...	280	110	230	2.9	18	480	0	390	1200	20	.6	20
DEC												
21...	250	100	200	2.7	21	480	0	390	1000	16	.7	20
JAN												
18...	240	98	200	2.7	16	500	0	410	950	14	.7	20
FEB												
10...	250	96	200	2.7	16	500	0	410	960	18	.6	19
MAR												
09...	33	13	28	1.0	5.5	68	0	56	150	3.7	.2	4.7
APR												
13...	240	83	200	2.8	14	370	0	310	1000	23	.5	14
20...	--	--	--	--	--	--	--	--	--	--	--	--
MAY												
11...	140	50	120	2.2	9.6	300	0	250	510	17	.4	11
JUN												
15...	230	86	230	3.3	14	320	0	260	1100	31	.5	13
JUL												
13...	230	86	220	3.1	16	380	0	310	1000	19	.7	17
AUG												
03...	160	58	150	2.6	11	240	0	190	750	16	.4	9.3
SEP												
12...	260	89	190	2.6	19	480	0	390	960	16	.7	20

CHEYENNE RIVER BASIN

06364700 ANTELOPE CREEK NEAR TECKLA, WY--Continued

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

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)	SOLIDS, SUSP. TOTAL, RESIDUE AT 110 DEG. C (MG/L)	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)
OCT 03...	--	--	--	--	--	--	--	--	--	--	--
NOV 04...	2220	2120	2.88	1.03	7	.03	.04	.30	.34	.37	1.6
DEC 21...	2050	1840	2.50	.65	--	.04	.09	.25	.34	.38	1.7
JAN 18...	1900	1790	2.43	.73	--	.04	.08	.15	.23	.27	1.2
FEB 10...	1920	1810	2.46	.93	--	.05	.04	.12	.16	.21	.93
MAR 09...	286	272	.37	27.2	--	.29	.08	1.4	1.5	1.8	7.9
APR 13...	1790	1760	2.39	7.60	--	.01	.00	.22	.22	.23	1.0
20...	--	--	--	--	--	--	--	--	--	--	--
MAY 11...	1040	1010	1.37	90.0	--	.00	.01	.61	.62	.62	2.7
JUN 15...	1960	1860	2.53	28.6	--	.02	.01	.66	.67	.69	3.1
JUL 13...	1910	1780	2.42	3.41	--	.01	.00	.42	.42	.43	1.9
AUG 03...	1370	1270	1.73	51.8	--	.02	.01	.48	.49	.51	2.3
SEP 12...	1940	1790	2.43	.58	--	.00	.00	.51	.51	.51	2.3

DATE	PHOS- PHORUS, TOTAL (MG/L AS P)	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)	CARBON, ORGANIC DIS- SOLVED (MG/L AS C)	CARBON, ORGANIC SUS- PENDE 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	CHLOR-A PERI- PHYTON CHROMO- GRAPHIC FLUOROM (MG/M2)	CHLOR-B PERI- PHYTON CHROMO- GRAPHIC FLUOROM (MG/M2)
OCT 03...	--	--	--	--	--	--	--	--	--	--	--
NOV 04...	.01	.01	--	--	6.0	.5	200	--	--	--	--
DEC 21...	.02	.02	--	--	6.4	.2	130	6.46	7.87	2.00	.000
JAN 18...	.01	.01	--	--	7.5	.2	350	--	--	--	--
FEB 10...	.01	.01	--	--	6.3	.6	180	--	--	--	--
MAR 09...	.27	.10	--	--	13	3.0	2100	--	--	--	--
APR 13...	.01	.00	--	--	5.5	.5	550	--	--	--	--
20...	--	--	--	--	--	--	--	5.83	8.35	.600	.000
MAY 11...	.05	.00	--	--	5.9	1.2	720	--	--	--	--
JUN 15...	.00	.01	--	--	6.9	.3	650	--	--	--	--
JUL 13...	.01	.00	.00	.00	6.4	.2	270	--	--	--	--
AUG 03...	.06	.00	--	--	7.1	.6	1100	--	--	--	--
SEP 12...	.01	.01	--	--	7.3	.9	2500	--	--	--	--

06364700 ANTELOPE CREEK NEAR TECKLA, WY--Continued

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

DATE	TIME	ALUM- INUM, DIS- SOLVED (UG/L AS AL)	ARSENIC TOTAL (UG/L AS AS)	ARSENIC DIS- SOLVED (UG/L AS AS)	ARSENIC TOTAL (UG/G AS AS)	BARIUM, TOTAL RECOV- ERABLE (UG/L AS BA)	BARIUM, DIS- SOLVED (UG/L AS BA)	BARIUM, FM BOT- TOM MA- TERIAL (UG/G AS BA)	BERYL- LIUM, TOTAL RECOV- ERABLE (UG/L AS BE)	BERYL- LIUM, DIS- SOLVED (UG/L AS BE)	BERYL- LIUM, FM BOT- TOM MA- TERIAL (UG/G AS BE)
NOV											
04...	1210	10	1	0	4	200	100	30	0	0	0
DEC											
21...	1010	--	--	--	--	--	--	--	--	--	--
JAN											
18...	1400	--	--	--	--	--	--	--	--	--	--
FEB											
10...	0915	10	--	1	--	--	300	--	--	0	--
MAR											
09...	1110	--	--	--	--	--	--	--	--	--	--
APR											
13...	1300	--	--	--	--	--	--	--	--	--	--
MAY											
11...	1000	0	5	1	4	200	100	10	0	0	0
JUN											
15...	1045	--	--	--	--	--	--	--	--	--	--
JUL											
13...	0900	--	--	--	--	--	--	--	--	--	--
AUG											
03...	1000	10	--	1	--	--	90	--	--	<1	--
SEP											
12...	1230	--	--	--	--	--	--	--	--	--	--

DATE	BORON, DIS- SOLVED (UG/L AS B)	CADMIUM TOTAL 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, DIS- SOLVED (UG/L AS CR)	CHRO- MIUM, FM BOT- TOM MA- TERIAL (UG/G AS CR)	COBALT, TOTAL RECOV- ERABLE (UG/L AS CO)	COBALT, DIS- SOLVED (UG/L AS CO)	COBALT, FM BOT- TOM MA- TERIAL (UG/G AS CO)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU)
NOV											
04...	220	<10	0	<1	4	20	1	0	0	<5	<10
DEC											
21...	220	--	--	--	--	--	--	--	--	--	--
JAN											
18...	240	--	--	--	--	--	--	--	--	--	--
FEB											
10...	230	--	0	--	--	10	--	--	0	--	--
MAR											
09...	50	--	--	--	--	--	--	--	--	--	--
APR											
13...	110	--	--	--	--	--	--	--	--	--	--
MAY											
11...	80	2	1	0	10	10	2	4	1	2	7
JUN											
15...	120	--	--	--	--	--	--	--	--	--	--
JUL											
13...	180	--	--	--	--	--	--	--	--	--	--
AUG											
03...	90	--	2	--	--	0	--	--	0	--	--
SEP											
12...	320	--	--	--	--	--	--	--	--	--	--

DATE	COPPER, DIS- SOLVED (UG/L AS CU)	COPPER, FM BOT- TOM MA- TERIAL (UG/G 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, DIS- SOLVED (UG/L AS PB)	LEAD, FM BOT- TOM MA- TERIAL (UG/G 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)
NOV										
04...	1	2	110	30	<100	1	<10	50	50	410
DEC										
21...	--	--	--	50	--	--	--	--	--	--
JAN										
18...	--	--	--	20	--	--	--	--	--	--
FEB										
10...	0	--	--	280	--	0	--	--	50	--
MAR										
09...	--	--	--	60	--	--	--	--	--	--
APR										
13...	--	--	--	340	--	--	--	--	--	--
MAY										
11...	7	2	--	30	35	6	0	40	40	70
JUN										
15...	--	--	--	20	--	--	--	--	--	--
JUL										
13...	--	--	--	40	--	--	--	--	--	--
AUG										
03...	4	--	--	<10	--	4	--	--	30	--
SEP										
12...	--	--	--	20	--	--	--	--	--	--

CHEYENNE RIVER BASIN

06364700 ANTELOPE CREEK NEAR TECKLA, WY--Continued

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

DATE	MANGA- NESE, SUS- PENDED 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 DIS- SOLVED (UG/L AS HG)	MERCURY RECOV. FM BOT- TOM MA- TERIAL (UG/L AS HG)	MOLYB- DENUM, TOTAL RECOV- ERABLE (UG/L AS MO)	MOLYB- DENUM, DIS- SOLVED (UG/L AS MO)	MOLYB- DENUM, RECOV. FM BOT- TOM MA- TERIAL (UG/G)	NICKEL, TOTAL RECOV- ERABLE (UG/L AS NI)
NOV 04...	0	450	3300	.1	.0	.00	1	1	0	<50
DEC 21...	--	--	--	--	--	--	--	--	--	--
JAN 18...	--	--	--	--	--	--	--	--	--	--
FEB 10...	--	470	--	--	.0	--	--	4	--	--
MAR 09...	--	--	--	--	--	--	--	--	--	--
APR 13...	--	--	--	--	--	--	--	--	--	--
MAY 11...	--	20	160	.0	.0	.01	3	0	--	1
JUN 15...	--	--	--	--	--	--	--	--	--	--
JUL 13...	--	--	--	--	--	--	--	--	--	--
AUG 03...	--	10	--	--	.0	--	--	0	--	--
SEP 12...	--	--	--	--	--	--	--	--	--	--

DATE	NICKEL, DIS- SOLVED (UG/L AS NI)	NICKEL, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS NI)	SELE- NIUM, TOTAL (UG/L AS SE)	SELE- NIUM, DIS- SOLVED (UG/L AS SE)	SELE- NIUM, TOTAL IN BOT- TOM MA- TERIAL (UG/G)	SILVER, TOTAL RECOV- ERABLE (UG/L AS AG)	VANA- DIUM, DIS- SOLVED (UG/L AS V)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN)	ZINC, DIS- SOLVED (UG/L AS ZN)	ZINC, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS ZN)
NOV 04...	2	<5	0	0	2	<10	.0	10	10	7
DEC 21...	--	--	--	--	--	--	--	--	--	--
JAN 18...	--	--	--	--	--	--	--	--	--	--
FEB 10...	2	--	--	0	--	--	.0	--	10	--
MAR 09...	--	--	--	--	--	--	--	--	--	--
APR 13...	--	--	--	--	--	--	--	--	--	--
MAY 11...	1	1	0	0	0	--	.0	30	20	7
JUN 15...	--	--	--	--	--	--	--	--	--	--
JUL 13...	--	--	--	--	--	--	--	--	--	--
AUG 03...	2	--	--	0	--	--	.0	--	20	--
SEP 12...	--	--	--	--	--	--	--	--	--	--

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 ALPHA, DIS- SOLVED (PCI/L AS U-NAT)	GROSS ALPHA, SUSP. TOTAL (PCI/L AS U-NAT)
APR 13...	1300	<50	<.4	13	1.4	<34	<.3
MAY 11...	1000	20	2.7	15	5.1	14	1.8
AUG 03...	1000	M17	1.6	16	2.1	M12	1.1

CHEYENNE RIVER BASIN

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06364700 ANTELOPE CREEK NEAR TECKLA, WY--Continued

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

DATE	TIME	TEMPER- ATURE (DEG C)	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SEDI- MENT, SUS- PENDED (MG/L)	SEDI- MENT DIS- CHARGE, SUS- PENDED (T/DAY)	SED. SUSP. FALL DIAM. % FINER THAN .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
OCT											
03...	1615	21.5	.15	60	.02	--	--	--	--	--	--
NOV											
04...	1210	14.0	.18	56	.03	--	--	--	--	--	--
DEC											
21...	1010	1.0	.13	65	.02	--	--	--	--	--	--
JAN											
18...	1400	1.5	.15	31	.01	--	--	--	--	--	--
FEB											
10...	0915	.5	.19	52	.03	--	--	--	--	--	--
MAR											
09...	1110	.0	37	452	45	65	80	83	87	98	100
22...	1345	11.5	23	1130	70	--	--	--	--	--	--
APR											
13...	1300	18.0	1.6	5	.02	--	--	--	--	--	--
MAY											
11...	1000	16.5	33	194	17	--	--	--	--	--	--
25...	1230	18.0	80	147	32	--	--	--	--	--	--
JUN											
15...	1045	22.0	5.4	17	.25	--	--	--	--	--	--
JUL											
13...	0900	20.0	.71	38	.07	--	--	--	--	--	--
AUG											
03...	1000	16.5	15	262	11	--	--	--	--	--	--
SEP											
12...	1230	16.0	.12	37	.01	--	--	--	--	--	--

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
MAR												
09...	1110	.0	37	1	3	12	78	96	98	99	100	--
APR												
13...	1300	18.0	1.6	1	2	13	86	92	96	99	100	--
MAY												
11...	1000	16.5	33	--	0	2	46	79	90	96	99	100

QUALITATIVE AND ASSOCIATED QUANTITATIVE ANALYSES OF BIOLOGICAL DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

PHYTOPLANKTON ANALYSES

DATE TIME	NOV 4,77 1210	DEC 21,77 1010	JAN 18,78 1400	FEB 10,78 0915	MAR 9,78 1110	APR 13,78 1300				
TOTAL CELLS/ML	200	130	350	180	2100	550				
DIVERSITY: DIVISION	1.2	1.1	1.3	0.6	0.5	0.3				
..CLASS	1.4	1.1	1.3	0.6	0.5	0.3				
..ORDER	1.7	1.7	1.6	0.6	0.5	0.3				
...FAMILY	2.6	2.0	1.7	1.4	1.5	1.9				
....GENUS	2.6	2.0	1.8	1.5	1.6	1.9				
ORGANISM	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT
CHLOROPHYTA (GREEN ALGAE)										
..CHLOROPHYCEAE										
...CHLOROCOCCALES										
....CHARACIACEAE										
....SCHROEDERIA	--	-	5	4	--	-	--	-	--	-
....MICRACTINIACEAE										
....MICRACTINIUM	--	-	--	-	--	-	--	-	--	-
....DOCYSTACEAE										
....ANKISTRODESMUS	--	-	--	-	--	-	--	-	--	-
....DICTYOSPHAERIUM	--	-	--	-	--	-	--	-	--	-
....KIRCHNERIELLA	5	3	--	-	--	-	--	-	--	-
....DOCYSTIS	--	-	--	-	200#	57	--	-	--	-
....SCENEDESMACEAE										
....ACTINASTRUM	--	-	--	-	--	-	--	-	--	-
....SCENEDESMUS	22	11	--	-	--	-	--	-	--	-
..TETRASPORALES										
...COCCOMYXACEAE										
....ELAKATOTHRIX	32#	16	--	-	--	-	--	-	--	-
....VOLVOCALES										
...CHLAMYDOMONADACEAE										
....CARTERIA	--	-	--	-	12	3	--	-	--	-
....CHLAMYDOMONAS	--	-	--	-	6	2	10	6	--	-
..ZYGNEATALES									27	5
...DESMIDIACEAE										
....CLOSTERIUM	--	-	--	-	--	-	--	-	--	-
CHRYSOPHYTA										
..BACILLARIOPHYCEAE										
...CENTRALES										
...COSCINODISCAEAE										
....CYCLOTELLA	--	-	--	-	--	-	--	-	--	-
..PENNALES										
...ACHNANTHACEAE										
....ACHNANTHES	--	-	--	-	17	5	10	6	--	-
....COCCONEIS	--	-	--	-	--	-	5	3	--	-
....CYMBELLACEAE										
....AMPHORA	--	-	--	-	--	-	--	-	14	1
....CYMBELLA	--	-	--	-	--	-	--	-	--	-
....DIATOMACEAE										
....DIATOMA	--	-	16	13	--	-	--	-	--	-
....FRAGILARIACEAE										
....SYNEDRA	54#	27	--	-	--	-	--	-	180#	32
...GOMPHONEMATAEAE										
....GOMPHONEMA	11	5	--	-	47	13	5	3	14	1
....NAVICULACEAE										
....CALONEIS	--	-	--	-	--	-	--	-	86	4
....NAVICULA	54#	27	--	-	--	-	140#	74	43	2
....PINNULARIA	--	-	--	-	--	-	--	-	--	-
....STAURONEIS	--	-	--	-	--	-	--	-	--	-
...NITZSCHIIACEAE										
....CYLINDROTHECA	--	-	--	-	--	-	--	-	*	0
....HANTZSCHIA	--	-	--	-	--	-	--	-	14	1
....NITZSCHIA	--	-	21#	17	--	-	5	3	29	1
....SURIPELLACEAE									250#	45
....SURIPELLA	--	-	--	-	--	-	--	-	--	-
..CHRYSOPHYCEAE									41	7
...CHRYSDOMONADALES										
...OCHROMONADACEAE										
....OCHROMONAS	5	3	--	-	--	-	--	-	--	-
CRYPTOPHYTA (CRYPTOMONADS)										
..CRYPTOPHYCEAE										
...CRYPTOMONIDALES										
...CRYPTOMONODACEAE										
....CRYPTOMONAS	16	8	--	-	--	-	10	6	--	-

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 1977 TO SEPTEMBER 1978

PHYTOPLANKTON ANALYSES

DATE TIME	NOV 4,77 1210		DEC 21,77 1010		JAN 18,78 1400		FEB 10,78 0915		MAR 9,78 1110		APR 13,78 1300	
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	--	-	32#	25	--	-	--	-	--	-	--	-
...HORMOGONALES												
...NOSTOCACEAE												
...NODULARIA	--	-	--	-	--	-	--	-	900#	43	--	-
...OSCILLATORIACEAE												
...OSCILLATORIA	--	-	53#	42	70#	20	--	-	990#	47	--	-
EUGLENOPHYTA (EUGLENOIDS)												
..EUGLENOPHYCEAE												
..EUGLENALES												
...EUGLENACEAE												
....TRACHELOMONAS	--	-	--	-	--	-	--	-	--	-	--	-
PYRRHOPHYTA (FIRE ALGAE)												
..DINOPHYCEAE												
..PERIDINIALES												
...UNKNOWN FAMILY												
....UNKNOWN GENUS	--	-	--	-	--	-	--	-	--	-	--	-

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

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

CHEYENNE RIVER BASIN

06364700 ANTELOPE CREEK NEAR TECKLA, WY--Continued

QUALITATIVE AND ASSOCIATED QUANTITATIVE ANALYSES OF BIOLOGICAL DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

PHYTOPLANKTON ANALYSES

DATE TIME	MAY 11,78 1000	JUN 15,78 1045	JUL 13,78 0900	AUG 3,78 1000	SEP 12,78 1230
TOTAL CELLS/ML	720	650	270	1100	2500
DIVERSITY: DIVISION	1.1	1.3	1.5	1.1	1.1
..CLASS	1.1	1.3	1.5	1.4	1.1
...ORDER	1.1	1.9	1.6	1.8	1.2
...FAMILY	1.8	2.4	1.8	2.8	1.6
....GENUS	1.9	2.4	1.8	2.9	1.6

ORGANISM	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT
CHLOROPHYTA (GREEN ALGAE)										
..CHLOROPHYCEAE										
...CHLOROCOCCALES										
...CHARACIACEAE										
....SCHROEDERIA	--	-	--	-	--	-	--	-	--	-
....MICRACTINIACEAE										
....MICRACTINIUM	--	-	--	-	--	-	280# 24	--	--	-
....OOCYSTACEAE										
....ANKISTRODESMUS	--	-	46	7	--	-	14	1	--	-
....DICTYOSPHAERIUM	--	-	--	-	--	-	220# 19	--	--	-
....KIRCHNERIELLA	--	-	--	-	--	-	--	-	--	-
....OOCYSTIS	--	-	--	-	--	-	--	-	--	-
....SCENEDESMACEAE										
....ACTINASTRUM	--	-	--	-	--	-	110	10	--	-
....SCENEDESMUS	--	-	--	-	--	-	--	-	--	-
....TETRASPORALES										
...COCCOMYXACEAE										
...ELAKATOTHRIX	--	-	--	-	--	-	--	-	--	-
...VOLVOCALES										
...CHLAMYDOMONADACEAE										
....CARTERIA	--	-	23	4	--	-	14	1	14	1
....CHLAMYDOMONAS	14	2	--	-	--	-	14	1	--	-
...ZYGNEMATALES										
...DESMIDIACEAE										
...CLOSTERIUM	--	-	--	-	29	11	--	-	--	-
CHRYSTOPHYTA										
..BACILLARIOPHYCEAE										
...CENTRALES										
...COSCINODISCAEAE										
...CYCLOTELLA	--	-	93	14	14	5	97	8	28	1
...PENNALES										
...ACHNANTHACEAE										
...ACHNANTHES	--	-	23	4	--	-	--	-	--	-
...COCCONEIS	--	-	--	-	--	-	--	-	--	-
...CYMBELLACEAE										
....AMPHORA	--	-	--	-	--	-	--	-	--	-
....CYMBELLA	27	4	--	-	--	-	--	-	--	-
...DIATOMACEAE										
....DIATOMA	--	-	--	-	--	-	--	-	--	-
...FRAGILARIACEAE										
....SYNEDRA	230# 32		69	11	--	-	--	-	28	1
...GOMPHONEMATAEAE										
....GOMPHONEMA	--	-	--	-	--	-	--	-	--	-
...NAVICULACEAE										
....CALONEIS	--	-	--	-	--	-	28	2	--	-
....NAVICULA	95	13	--	-	29	11	28	2	240	10
...PINNULARIA	14	2	--	-	--	-	--	-	--	-
...STAURONEIS	14	2	--	-	--	-	--	-	--	-
...NITZSCHACEAE										
....CYLINDROTHECA	--	-	--	-	--	-	--	-	--	-
....HANTZSCHIA	--	-	--	-	--	-	--	-	--	-
....NITZSCHIA	--	-	210# 32		14	5	250# 22		460# 19	
...SURIPELLACEAE										
....SURIPELLA	--	-	--	-	--	-	--	-	--	-
...CHRYSTOPHYCEAE										
...CHRYSONOMADALES										
...OCHROMONADACEAE										
....OCHROMONAS	--	-	--	-	--	-	69	6	--	-
CRYPTOPHYTA (CRYPTOMONADS)										
..CRYPTOPHYCEAE										
...CRYPTOMONIDALES										
...CRYPTOMONADACEAE										
....CRYPTOMONAS	--	-	--	-	14	5	--	-	14	1

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 1977 TO SEPTEMBER 1978

PHYTOPLANKTON ANALYSES

DATE TIME	MAY 11,78 1000		JUN 15,78 1045		JUL 13,78 0900		AUG 3,78 1000		SEP 12,78 1230	
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	330#	45	--	-	--	-	--	-	42	2
...HORMOGONALES										
...NOSTOCACEAE										
...NODULARIA	--	-	--	-	--	-	--	-	--	-
...OSCILLATORIACEAE										
...OSCILLATORIA	--	-	190#	29	--	-	--	-	1600#	66
EUGLENOPHYTA (EUGLENOIDS)										
..EUGLENOPHYCEAE										
..EUGLENALES										
...EUGLENACEAE										
....TRACHELOMONAS	--	-	--	-	170#	63	--	-	28	1
PYRRHOPHYTA (FIRE ALGAE)										
..DINOPHYCEAE										
..PERIDINIALES										
...UNKNOWN FAMILY										
....UNKNOWN GENUS	--	-	--	-	--	-	28	2	--	-

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 current year.

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 poor. No gage-height record Jan. 8 to Mar 14, June 9-13.

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, 1,010 ft³/s (28.6 m³/s) May 18, gage height, 4.01 ft (1.222 m); no flow for several days.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.05	.05	.04	.00	.00	.00	.18	.95	1.6	.09	.07	.01
2	.05	.08	.24	.01	.00	.00	.21	.58	1.2	.05	.07	.00
3	.04	.07	.50	.03	.02	.00	.18	.58	.84	.02	.09	.00
4	.04	.08	.19	.06	.04	.00	.18	1.2	.68	.00	.08	.00
5	.03	.08	.01	.07	.05	.01	.18	3.6	.63	.00	.06	.00
6	.04	.08	.00	.04	.08	2.6	.16	4.7	.50	.00	.03	.00
7	.10	.08	.01	.00	.06	14	.14	6.8	.54	.01	.02	.00
8	.10	.04	.00	.00	.05	29	.16	8.9	.58	.01	.01	.00
9	.08	.02	.01	.00	.03	26	.16	9.2	.40	.01	.00	.00
10	.08	.12	.03	.00	.02	18	.16	32	.31	.04	.00	.00
11	.08	.14	.08	.00	.01	9.2	.21	24	.25	.01	.00	.00
12	.08	.16	.21	.00	.00	5.4	.14	5.6	.20	.00	.01	.00
13	.07	.14	.30	.00	.00	3.4	.14	2.9	.17	.00	.00	.00
14	.05	.12	.34	.00	.00	2.6	.16	1.8	.09	.00	.00	.00
15	.04	.10	.12	.00	.00	1.9	.46	1.1	.06	.00	.01	.01
16	.04	.07	.10	.00	.00	1.7	.38	13	.04	.00	.01	.00
17	.04	.06	.07	.00	.00	2.0	.35	61	.14	.00	.00	.00
18	.04	.04	.02	.00	.00	1.4	.29	631	.21	.00	.01	.01
19	.04	.00	.01	.00	.00	1.8	.23	146	.09	.00	.04	.01
20	.04	.00	.01	.00	.00	.78	.26	16	.07	.00	.02	.01
21	.08	.00	.02	.00	.01	.58	.23	7.3	.07	20	.01	.02
22	.19	.08	.04	.00	.02	.46	.26	5.1	.05	65	.00	.02
23	.16	.14	.02	.00	.03	.58	.32	3.8	.04	23	.00	.01
24	.10	.21	.01	.00	.04	.54	.23	2.7	.04	7.9	.00	.01
25	.10	.42	.01	.00	.01	.54	.21	1.8	.08	1.5	.00	.01
26	.08	.42	.01	.00	.01	.38	.16	1.4	.04	.29	.00	.01
27	.07	.16	.02	.00	.01	.35	.18	1.1	.04	.07	.01	.01
28	.07	.10	.02	.00	.00	.32	.63	1.1	.05	.03	.09	.01
29	.07	.09	.04	.00	---	.29	1.3	.89	.07	.07	.09	.01
30	.07	.07	.01	.00	---	.21	.89	2.0	.09	.07	.05	.02
31	.07	---	.00	.00	---	.18	---	1.7	---	.06	.03	---
TOTAL	2.19	3.22	2.49	.21	.49	124.22	8.74	999.80	9.17	118.23	.81	.18
MEAN	.071	.11	.080	.007	.018	4.01	.29	32.3	.31	3.81	.026	.006
MAX	.19	.42	.50	.07	.08	29	1.3	631	1.6	65	.09	.02
MIN	.03	.00	.00	.00	.00	.00	.14	.58	.04	.00	.00	.00
AC-FT	4.3	6.4	4.9	.4	1.0	246	17	1980	18	235	1.6	.4

CAL YR 1977 TOTAL 91.99 MEAN .25 MAX 16 MIN .00 AC-FT 182
WTR YR 1978 TOTAL 1264.75 MEAN 3.48 MAX 631 MIN .00 AC-FT 2520

CHEYENNE RIVER BASIN

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06365300 DRY FORK CHEYENNE RIVER NEAR BILL, WY--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--February 1977 to current year.

REMARKS.--No flow was observed Oct. 5, Aug. 22.

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

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	TUR- BID- ITY (JTU)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN DEMAND, BIO- CHEM- ICAL, 5 DAY (MG/L)	HARD- NESS (MG/L AS CACO3)	HARD- NESS, NONCAR- BONATE (MG/L AS CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)
NOV 15...	1600	.10	1350	7.9	4.0	5	10.4	4.8	820	500	180	89
JAN 06...	1430	A.04	2200	7.9	.0	8	10.6	7.0	--	--	290	--
APR 04...	1400	.18	1850	8.1	12.0	3	9.7	4.8	880	510	200	92
MAY 16...	1530	.68	1280	7.9	22.0	9	8.4	4.0	610	330	140	63
JUL 25...	1410	1.3	630	7.6	24.0	320	7.1	6.2	260	110	71	20
SEP 19...	1500	.01	1150	8.1	9.0	6	10.7	2.0	570	290	110	72

A-Daily mean discharge.

DATE	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	BICAR- BONATE (MG/L AS HCO3)	CAR- BONATE (MG/L AS CO3)	ALKA- LINITY (MG/L AS CACO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, RESIDUE AT 105 DEG. C, DIS- SOLVED (MG/L)
NOV 15...	73	1.1	15	390	0	320	570	19	.5	13	1200
JAN 06...	100	--	23	760	0	620	870	24	.7	29	--
APR 04...	68	1.0	9.7	450	0	370	600	13	.5	10	--
MAY 16...	38	.7	10	340	0	280	380	9.4	.5	4.6	--
JUL 25...	--	--	9.7	180	0	150	110	7.4	.5	9.2	--
SEP 19...	52	.9	15	340	0	280	390	6.9	.3	9.5	--

DATE	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)	SOLIDS, DIS- SOLVED (TONS PER DAY)	SOLIDS, RESIDUE AT 105 DEG. C, SUS- PENDED (MG/L)	NITRO- GEN, 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)
NOV 15...	1150	1.56	.31	2	.04	.04	.43	.47	.51	2.3	.01
JAN 06...	--	--	--	--	.12	.10	1.7	1.8	1.9	8.5	.06
APR 04...	1220	1.66	.59	--	.06	.04	.62	.66	.72	3.2	.02
MAY 16...	813	1.11	1.49	--	.05	.14	.83	.97	1.0	4.5	.04
JUL 25...	--	--	--	--	.06	.09	2.0	2.1	2.2	9.6	.15
SEP 19...	824	1.12	.02	--	.04	.13	.71	.84	.88	3.9	.03

CHEYENNE RIVER BASIN

06365300 DRY FORK CHEYENNE RIVER NEAR BILL, WY--Continued

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

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)	BORON, DIS- SOLVED (UG/L AS B)	CADMIUM TOTAL RECOV- ERABLE (UG/L AS CD)	CADMIUM DIS- SOLVED (UG/L AS CD)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR)
NOV 15...	1600	40	--	1	--	0	--	130	5	--	10
JAN 06...	1430	40	--	2	--	0	--	220	4	--	0
APR 04...	1400	100	0	1	1	0	0	130	3	2	10
MAY 16...	1530	--	--	--	--	--	--	150	--	--	--
JUL 25...	1410	4800	--	2	--	0	--	90	3	--	10
SEP 19...	1500	--	--	--	--	--	--	130	--	--	--

DATE	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)	IRON, DIS- SOLVED (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)
NOV 15...	--	6	--	320	120	4	--	30	--	20	--
JAN 06...	--	5	--	840	120	8	--	60	--	4500	--
APR 04...	0	4	3	380	20	5	16	30	30	50	50
MAY 16...	--	--	--	--	120	--	--	--	--	--	--
JUL 25...	--	18	--	3300	1200	21	--	20	--	90	--
SEP 19...	--	--	--	--	190	--	--	--	--	--	--

DATE	MERCURY TOTAL RECOV- ERABLE (UG/L AS HG)	MERCURY DIS- SOLVED (UG/L AS HG)	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 RECOV- ERABLE (UG/L AS SE)	SELE- NIUM, DIS- SOLVED (UG/L AS SE)	VANA- DIUM, TOTAL RECOV- ERABLE (UG/L AS V)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN)	ZINC, DIS- SOLVED (UG/L AS ZN)
NOV 15...	.2	--	1	--	6	--	0	--	--	30	--
JAN 06...	.0	--	0	--	8	--	0	--	--	20	--
APR 04...	.0	.0	4	1	1	4	0	0	.0	30	10
MAY 16...	--	--	--	--	--	--	--	--	--	--	--
JUL 25...	.1	--	3	--	13	--	2	--	--	60	--
SEP 19...	--	--	--	--	--	--	--	--	--	--	--

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 (PCI/L AS METHOD)	URANIUM NATURAL DIS- SOLVED (UG/L AS U)
NOV 15...	1600	<17	<.4	19	1.3	17	1.4	.22	10

DATE	TIME	TEMPER- ATURE (DEG C)	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SEDI- MENT, SUS- PENDE (MG/L)	SEDI- MENT 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
MAR 10...	1200	2.5	17	711	33	--	--	--
MAR 13...	1135	.5	3.4	377	3.5	--	--	--
MAR 14...	1435	1.0	2.5	291	2.0	--	--	--
MAR 23...	1000	1.0	.60	48	.08	--	--	--
APR 18...	1100	7.0	.30	42	.03	--	--	--
MAY 18...	1300	5.0	870	15300	35900	83	99	100
MAY 19...	1350	9.0	65	8750	1540	95	100	--

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 current year.

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 poor. No gage-height record Nov. 21 to Dec. 6, Dec. 9 to Mar. 6, June 8-15, Sept. 14-21.

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, 11,800 ft³/s (334 m³/s) May 18, 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.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.5	.10	.13	.06	.07	.24	5.4	5.8	61	40	66	.85
2	.23	.10	.18	.10	.13	.20	5.4	7.4	55	28	122	.26
3	.01	.09	.23	.12	.21	.13	4.5	8.6	53	26	40	.17
4	.00	.10	.21	.17	.25	.18	4.2	11	46	24	20	.14
5	.00	.10	.12	.24	.23	.24	4.2	17	41	20	14	.12
6	.00	.12	.05	.30	.24	1.0	4.2	38	53	19	11	.10
7	.01	.12	.07	.26	.23	48	3.2	82	61	40	7.5	.08
8	.00	.12	.06	.19	.21	330	3.8	313	34	22	5.1	.07
9	.00	.10	.04	.13	.18	609	2.7	252	30	28	4.4	.07
10	.01	.12	.07	.12	.16	761	2.9	122	24	30	3.8	.07
11	.01	.17	.21	.14	.12	186	2.7	74	21	23	3.2	.07
12	.01	.20	.29	.19	.10	149	1.6	122	17	19	2.5	.07
13	.02	.17	.27	.17	.07	84	1.8	119	14	16	1.9	.07
14	.02	.14	.35	.17	.05	39	1.6	68	13	14	2.5	.08
15	.03	.05	.42	.14	.07	22	2.0	48	11	13	182	.08
16	.02	.05	.46	.10	.07	16	2.0	107	9.6	12	26	.08
17	.03	.06	.38	.13	.09	14	1.6	2580	11	11	6.6	.08
18	.04	.06	.32	.10	.17	54	.95	9610	11	10	5.8	.09
19	.05	.04	.27	.08	.23	50	.95	3230	9.4	10	6.6	.09
20	.05	.02	.23	.11	.24	27	1.5	934	8.9	113	3.8	.09
21	.07	.02	.28	.15	.30	29	1.8	477	31	1810	1.7	.09
22	.09	.04	.30	.17	.39	32	1.8	311	61	964	1.6	.10
23	.09	.04	.29	.16	.42	26	1.8	207	63	217	1.6	.12
24	.09	.05	.22	.13	.38	23	1.6	138	78	86	1.2	.12
25	.06	.06	.20	.10	.31	18	1.3	86	63	51	1.1	.14
26	.07	.19	.21	.10	.32	16	1.1	63	63	32	.75	.14
27	.07	.18	.19	.14	.34	14	1.2	193	44	22	.58	.12
28	.09	.15	.21	.12	.33	13	4.2	164	36	14	.66	.12
29	.09	.18	.20	.14	---	10	6.3	84	34	15	.66	.14
30	.10	.16	.18	.12	---	8.6	9.3	82	55	57	.75	.14
31	.10	---	.10	.08	---	6.3	---	71	---	28	2.3	---
TOTAL	3.96	3.10	6.74	4.43	5.91	2586.89	87.60	19624.8	1111.9	3814	547.60	3.96
MEAN	.13	.10	.22	.14	.21	83.4	2.92	633	37.1	123	17.7	.13
MAX	2.5	.20	.46	.30	.42	761	9.3	9610	78	1810	182	.85
MIN	.00	.02	.04	.06	.05	.13	.95	5.8	8.9	10	.58	.07
AC-FT	7.9	6.1	13	8.8	12	5130	174	38930	2210	7570	1090	7.9
CAL YR 1977	TOTAL	1368.10	MEAN	3.75	MAX	431	MIN	.00	AC-FT	2710		
WTR YR 1978	TOTAL	27800.89	MEAN	76.2	MAX	9610	MIN	.00	AC-FT	55140		

CHEYENNE RIVER BASIN

06365900 CHEYENNE RIVER NEAR DULL CENTER, WY--Continued

WATER-QUALITY RECORDS

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

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

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	TUR- BID- ITY (JTU)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN DEMAND, BIO- CHEM- ICAL, 5 DAY (MG/L)	HARD- NESS (MG/L AS CAC03)	HARD- NESS, NONCAR- BONATE (MG/L CAC03)	CALCIUM DIS- SOLVED (MG/L AS CA)
NOV 09...	1030	A.10	2600	8.0	1.0	9	11.4	3.5	1200	920	290
DEC 30...	1430	A.18	3500	7.5	.0	15	9.8	2.1	1600	1100	360
FEB 01...	1030	A.07	2800	7.3	.0	20	6.1	1.6	1100	740	250
MAR 28...	1430	14	1600	8.7	20.0	70	8.0	4.6	680	440	170
MAY 10...	1000	128	910	7.9	11.0	950	9.8	3.4	320	200	80
15...	1700	39	1400	8.3	26.0	130	--	--	520	300	130
JUN 06...	1530	36	2100	8.1	25.0	40	7.5	2.2	800	570	210
JUL 19...	0915	10	3500	7.8	18.0	20	9.0	3.5	1400	1100	320
AUG 16...	1000	28	930	7.8	18.0	1300	8.3	5.6	340	240	84
S30...	1300	.76	2500	--	27.5	--	--	--	--	--	--
SEP 13...	1030	.07	3400	8.0	14.5	3	9.0	1.2	1300	1000	310

A-Daily mean discharge.

S-Seepage run data (see Explanation of Water-Quality Records).

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)	BICAR- BONATE (MG/L AS HCO3)	CAR- BONATE (MG/L AS CO3)	ALKA- LINITY (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)	SILICA, DIS- SOLVED (MG/L AS SiO2)
NOV 09...	120	280	3.5	18	360	0	300	1400	24	.6	13
DEC 30...	160	400	4.4	22	510	0	420	1900	33	.7	18
FEB 01...	110	290	3.8	17	410	0	340	1300	25	.6	15
MAR 28...	62	160	2.7	10	290	0	240	720	14	.5	11
MAY 10...	29	77	1.9	7.2	150	0	120	330	8.0	.3	7.8
15...	48	100	1.9	11	270	0	220	470	13	.5	13
JUN 06...	67	210	3.2	13	280	0	230	940	22	.5	12
JUL 19...	140	340	4.0	18	370	0	300	1700	38	.6	17
AUG 16...	31	74	1.8	9.3	120	0	98	1390	15	.4	8.7
S30...	--	--	--	--	--	--	--	--	--	--	--
SEP 13...	130	340	4.1	18	350	0	290	1600	34	.5	15

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 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, ORGANIC DIS- SOLVED (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N)
NOV 09...	2320	3.16	.63	.01	--	.08	--	--	.36	--	.44
DEC 30...	3150	4.28	1.53	.06	--	.08	--	--	2.1	--	2.2
FEB 01...	2210	3.01	.42	.06	--	.15	--	--	.08	--	.23
MAR 28...	1290	1.75	48.8	.12	--	.06	--	--	.73	--	.79
MAY 10...	613	.83	212	.15	--	.23	--	--	2.0	--	2.2
15...	919	1.25	96.8	.80	.01	.57	.01	.01	.39	.36	.96
JUN 06...	1610	2.19	157	.05	--	.09	--	--	.66	--	.75
JUL 19...	2760	3.75	74.5	.01	--	.00	--	--	.82	--	.82
AUG 16...	672	.91	50.8	.12	--	.02	--	--	2.0	--	2.0
S30...	--	--	--	--	--	--	--	--	--	--	--
SEP 13...	2620	3.56	.50	.01	--	.04	--	--	.45	--	.49

CHEYENNE RIVER BASIN

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06365900 CHEYENNE RIVER NEAR DULL CENTER, WY--Continued

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

DATE	NITRO- GEN, AM- MONIA + ORGANIC DIS. (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- PHATE, TOTAL (MG/L AS PO4)	PHOS- PHURUS, DIS- SOLVED (MG/L AS P)	PHOS- PHURUS, ORTHO. TOTAL (MG/L AS P)	PHOS- PHURUS, ORTHO. DIS- SOLVED (MG/L AS P)	PHOS- PHATE, ORTHO. DIS- SOLVED (MG/L AS PO4)	ALGAL GROWTH POTEN- TIAL, BOTTLE TEST (MG/L)
NOV 09...	--	.45	2.0	.02	--	--	--	--	--	--
DEC 30...	--	2.3	10	.00	--	--	--	--	--	--
FEB 01...	--	.29	1.3	.04	--	--	--	--	--	--
MAR 28...	--	.91	4.0	.02	--	--	--	--	--	--
MAY 10...	--	2.4	10	.60	--	--	--	--	--	--
15...	.37	1.8	7.8	.13	.40	.04	.01	.00	.00	5.6
JUN 06...	--	.80	3.5	.04	--	--	--	--	--	--
JUL 19...	--	.83	3.7	.07	--	--	--	--	--	--
AUG 16...	--	2.1	9.4	.40	--	--	--	--	--	--
30...	--	--	--	--	--	--	--	--	--	--
SEP 13...	--	.50	2.2	.04	--	--	--	--	--	--

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)	BORON, DIS- SOLVED (UG/L AS B)	CADMIUM TOTAL RECOV- ERABLE (UG/L AS CD)	CADMIUM DIS- SOLVED (UG/L AS CD)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR)
NOV 09...	1030	--	--	--	--	--	--	110	--	--	--
DEC 30...	1430	300	10	1	1	0	0	130	3	3	10
FEB 01...	1030	--	--	--	--	--	--	100	--	--	--
MAR 28...	1430	1200	--	1	--	0	--	90	2	--	0
MAY 10...	1000	--	--	--	--	--	--	60	--	--	--
15...	1700	--	--	--	--	--	--	90	--	--	--
JUN 06...	1530	--	--	--	--	--	--	110	--	--	--
JUL 19...	0915	400	--	1	--	10	--	130	5	--	10
AUG 16...	1000	--	--	--	--	--	--	80	--	--	--
SEP 13...	1030	--	--	--	--	--	--	110	--	--	--

DATE	CHRO- MIUM, DIS- SOLVED (UG/L AS CR)	CUPPER, TOTAL 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, 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)
NOV 09...	--	--	--	--	60	--	--	--	--	--	--
DEC 30...	0	11	2	510	20	5	10	50	50	600	600
FEB 01...	--	--	--	--	80	--	--	--	--	--	--
MAR 28...	--	6	--	1400	160	15	--	30	--	80	--
MAY 10...	--	--	--	--	100	--	--	--	--	--	--
15...	--	--	--	--	10	--	--	--	--	--	--
JUN 06...	--	--	--	--	100	--	--	--	--	--	--
JUL 19...	--	6	--	580	120	22	--	40	--	300	--
AUG 16...	--	--	--	--	540	--	--	--	--	--	--
SEP 13...	--	--	--	--	330	--	--	--	--	--	--

CHEYENNE RIVER BASIN

06365900 CHEYENNE RIVER NEAR DULL CENTER, WY--Continued

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

DATE	MERCURY TOTAL RECOV- ERABLE (UG/L AS HG)	MERCURY DIS- SOLVED (UG/L AS HG)	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 SOLVED (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)
NOV 09...	--	--	--	--	--	--	--	--	--	--	--
DEC 30...	.0	.0	2	1	7	1	0	0	.0	20	30
FEB 01...	--	--	--	--	--	--	--	--	--	--	--
MAR 28...	.0	--	6	--	3	--	0	--	--	30	--
MAY 10...	--	--	--	--	--	--	--	--	--	--	--
15...	--	--	--	--	--	--	--	--	--	--	--
JUN 06...	--	--	--	--	--	--	--	--	--	--	--
JUL 19...	.0	--	4	--	9	--	0	--	--	30	--
AUG 16...	--	--	--	--	--	--	--	--	--	--	--
SEP 13...	--	--	--	--	--	--	--	--	--	--	--

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. SIEVE DIAM. % FINER THAN .062 MM	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
DEC 06...	1100	.0	A.05	79	.01	--	--	--	--	--	--	--
FEB 28...	1215	.0	A.30	92	.07	--	--	--	--	--	--	--
MAR 11...	1545	4.0	131	--	--	--	68	87	100	--	--	--
13...	1620	5.0	74	--	--	--	79	96	100	--	--	--
23...	1535	4.0	26	718	50	--	--	--	--	--	--	--
APR 05...	1100	11.5	4.9	106	1.4	--	--	--	--	--	--	--
MAY 08...	1840	7.0	313	9030	7630	--	58	76	90	93	99	100
15...	1700	26.0	39	317	33	98	--	--	--	--	--	--
17...	1530	10.0	2030	8920	48900	--	--	--	--	--	--	--
JUN 16...	1345	24.5	8.9	132	3.2	--	--	--	--	--	--	--
JUL 21...	1315	--	1730	11200	52300	--	--	--	--	--	--	--
AUG 07...	1300	28.5	7.5	115	2.3	--	--	--	--	--	--	--

A-Daily mean discharge.

DATE	TIME	TEMPER- ATURE (DEG C)	STREAM- FLOW, INSTAN- TANEOUS (CFS)	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
MAY 08...	1840	7.0	313	4	2	8	52	64
15...	1700	26.0	39	--	5	8	21	35
AUG 07...	1300	28.5	7.5	--	0	1	53	88

DATE	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 08...	77	84	89	94	97	100	--
15...	43	46	51	63	78	84	100
AUG 07...	96	98	99	100	--	--	--

CHEYENNE RIVER BASIN

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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 1978.

GAGE.--Water-stage recorder. Altitude of gage is 4,400 ft (1,341 m), from topographic map.

REMARKS.--Records poor. Numerous small stockwater reservoirs above station.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 3,030 ft³/s (85.8 m³/s) May 18, 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.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.11	.00	.01	.00	.00	.00	.35	.04	3.1	.25	22	.05
2	2.8	.00	.01	.00	.00	.00	.29	.05	3.2	.17	5.8	.04
3	1.9	.00	.01	.00	.00	.00	.16	.07	4.6	.11	2.9	.04
4	1.0	.00	.01	.00	.00	.00	.06	.09	3.7	.07	1.7	.03
5	.55	.00	.00	.00	.00	.00	.05	.40	3.2	.05	1.1	.02
6	.29	.00	.00	.00	.00	.00	.04	8.2	2.3	.13	.80	.02
7	.25	.01	.00	.00	.00	.10	.02	17	2.1	8.7	.52	.01
8	.11	.01	.00	.00	.00	2.0	.03	175	2.0	3.7	.29	.01
9	.07	.00	.00	.00	.00	10	.02	138	1.8	2.0	.21	.00
10	.05	.00	.00	.00	.00	25	.01	43	1.7	1.7	.29	.00
11	.05	.01	.01	.00	.00	30	.02	10	1.3	.83	.26	.00
12	.04	.02	.02	.00	.00	25	.01	4.5	1.3	.38	.17	.00
13	.04	.02	.02	.00	.00	20	.01	2.7	1.3	.18	.15	.00
14	.03	.02	.02	.00	.00	17	.01	1.6	1.2	.14	4.0	.00
15	.03	.02	.03	.00	.00	15	.01	1.4	1.1	.07	55	.00
16	.02	.02	.04	.00	.00	12	.01	.72	.94	.04	21	.00
17	.02	.02	.04	.00	.00	14	.01	408	1.1	.03	8.7	.00
18	.02	.02	.05	.00	.00	70	.01	1570	.95	.03	4.4	.00
19	.02	.02	.05	.00	.00	47	.00	748	.80	.02	3.1	.00
20	.02	.01	.04	.00	.00	17	.00	202	.73	.04	2.0	.00
21	.02	.01	.04	.00	.00	9.4	.00	51	.65	21	1.3	.00
22	.02	.01	.04	.00	.00	6.5	.01	22	.55	128	.86	.00
23	.02	.01	.04	.00	.00	4.4	.01	16	.49	34	.72	.00
24	.01	.02	.04	.00	.00	2.9	.01	12	.45	11	.50	.00
25	.01	.02	.04	.00	.00	2.3	.01	9.2	.41	5.4	.40	.00
26	.01	.02	.03	.00	.00	1.8	.01	6.8	.32	3.3	.17	.00
27	.00	.02	.03	.00	.00	1.3	.01	29	.29	2.3	.17	.00
28	.00	.02	.03	.00	.00	1.0	.02	29	.25	1.6	.14	.00
29	.00	.02	.03	.00	---	.80	.02	6.0	.21	1.5	.11	.00
30	.00	.02	.02	.00	---	.60	.02	4.3	.25	.93	.07	.00
31	.00	---	.01	.00	---	.45	---	3.8	---	26	.07	---
TOTAL	7.51	.37	.71	.00	.00	335.55	1.24	3519.87	42.29	253.67	138.90	.22
MEAN	.24	.012	.023	.000	.000	10.8	.041	114	1.41	8.18	4.48	.007
MAX	2.8	.02	.05	.00	.00	70	.35	1570	4.6	128	55	.05
MIN	.00	.00	.00	.00	.00	.00	.00	.04	.21	.02	.07	.00
AC-FT	15	.7	1.4	.00	.00	666	2.5	6980	84	503	276	.4

WTR YR 1978 TOTAL 4300.33 MEAN 11.8 MAX 1570 MIN .00 AC-FT 8530

CHEYENNE RIVER BASIN

06375600 LITTLE THUNDER CREEK NEAR HAMPSHIRE, WY--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--September 1977 to current year.

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

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION)	BICAR- BONATE (MG/L AS HCO3)	CAR- BONATE (MG/L AS CO3)	ALKA- LINITY (MG/L AS CACO3)	SEDI- MENT, SUS- PENDED (MG/L)	SEDI- MENT DIS- CHARGE, SUS- PENDED (T/DAY)
SEP 30...	0940	.04	350	7.4	13.5	6.0	67	73	0	60	1650	.18

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	STREP- TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)	HARD- NESS (MG/L AS CACO3)	HARD- NESS, NONCAR- BONATE (MG/L AS CACO3)
DEC 21...	0945	.04	1800	7.8	.0	--	--	61	K2200	470	170
MAR 15...	1245	18	272	7.4	.0	13.8	110	K25	K15000	95	55
APR 20...	1110	.01	--	--	5.0	--	--	--	--	--	--
MAY 11...	1130	10	700	7.6	12.0	8.7	96	1500	--	270	190
JUN 28...	1300	.31	3370	8.1	26.0	7.6	109	24	44	880	500
JUL 26...	1430	3.3	785	8.0	25.5	6.7	97	460	230	310	210
AUG 16...	1600	16	240	7.5	18.0	--	--	--	--	--	--

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)	BICAR- BONATE (MG/L AS HCO3)	CAR- BONATE (MG/L AS CO3)	ALKA- LINITY (MG/L AS CACO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLD- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)
DEC 21...	96	57	260	5.2	17	370	0	300	690	12	.6
MAR 15...	22	9.7	15	.7	6.6	49	0	40	82	2.0	.1
APR 20...	--	--	--	--	--	--	--	--	--	--	--
MAY 11...	56	32	44	1.2	10	98	0	80	270	4.1	.3
JUN 28...	170	110	540	7.9	22	470	0	380	1600	24	.9
JUL 26...	76	30	49	1.2	11	120	0	99	300	4.0	.4
AUG 16...	160	--	--	--	--	57	0	47	230	42	.3

DATE	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, RESIDUE AT 180 TUENTS, DIS- SOLVED (MG/L)	SOLIDS, SUM OF CUNSTI- 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, ORGANIC TOTAL (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO- GEN, TOTAL (MG/L AS N)
DEC 21...	6.3	1330	1320	1.80	.14	.09	.21	.78	.99	1.1
MAR 15...	4.8	176	167	.23	8.12	.28	.16	1.4	1.6	1.9
APR 20...	--	--	--	--	--	--	--	--	--	--
MAY 11...	6.4	489	472	.64	12.9	.11	.05	1.5	1.5	1.6
JUN 28...	5.7	2770	2700	3.67	2.26	.05	.05	.58	.63	.68
JUL 26...	5.4	557	535	.73	4.77	.05	.00	.78	.78	.83
AUG 16...	4.8	150	--	.20	6.64	.33	1.8	1.1	2.9	3.2

06375600 LITTLE THUNDER CREEK NEAR HAMPSHIRE, WY--Continued

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

DATE	NITRO- GEN, TOTAL (MG/L AS NO3)	PHOS- PHORUS, TOTAL (MG/L AS P)	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)	PHYTO- PLANK- TON, TOTAL (CELLS PER ML)	PERI- PHYTON BIOMASS ASH WEIGHT G/SQ M	PERI- PHYTON BIOMASS TOTAL DRY WEIGHT G/SQ M	CHLOR-A PERI- PHYTON CHROMO- GRAPHIC FLUOROM (MG/M2)	CHLOR-B PERI- PHYTON CHROMO- GRAPHIC FLUOROM (MG/M2)
DEC 21...	4.8	.08	.02	12	1.2	930	--	--	--	--
MAR 15...	8.3	.33	.10	16	4.3	750	--	--	--	--
APR 20...	--	--	--	--	--	--	15.7	16.1	.860	.050
MAY 11...	7.1	.28	.01	10	4.4	3400	--	--	--	--
JUN 28...	3.0	.02	.00	14	.6	3200	--	--	--	--
JUL 26...	3.7	.08	.00	5.7	.8	1400	--	--	--	--
AUG 16...	14	.49	.02	7.1	>5.0	220	--	--	--	--

DATE	TIME	ALUM- INUM, DIS- SOLVED (UG/L AS AL)	ARSENIC 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, DIS- SOLVED (UG/L AS BA)	BARIUM, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS BA)	BERYL- LIUM, TOTAL RECOV- ERABLE (UG/L AS BE)	BERYL- LIUM, DIS- SOLVED (UG/L AS BE)	BERYL- LIUM, RECOV. FM BOT- TOM MA- TERIAL (UG/G)	BORON, DIS- SOLVED (UG/L AS B)
DEC 21...	0945	--	--	--	--	--	--	--	--	--	--	110
MAR 15...	1245	--	--	--	--	--	--	--	--	--	--	90
MAY 11...	1130	0	3	2	8	300	200	40	0	0	2	170
JUN 28...	1300	--	--	--	--	--	--	--	--	--	--	220
JUL 26...	1430	--	--	--	--	--	--	--	--	--	--	170
AUG 16...	1600	230	--	1	--	--	100	--	--	10	--	90

DATE	CADMIUM TOTAL 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, DIS- SOLVED (UG/L AS CR)	CHRO- MIUM, RECOV. FM BOT- TOM MA- TERIAL (UG/G)	COBALT, TOTAL RECOV- ERABLE (UG/L AS CO)	COBALT, DIS- SOLVED (UG/L AS CO)	COBALT, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CO)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU)	COPPER, DIS- SOLVED (UG/L AS CU)	COPPER, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CU)
DEC 21...	--	--	--	--	--	--	--	--	--	--	--	--
MAR 15...	--	--	--	--	--	--	--	--	--	--	--	--
MAY 11...	0	1	0	0	0	6	5	2	6	25	2	11
JUN 28...	--	--	--	--	--	--	--	--	--	--	--	--
JUL 26...	--	--	--	--	--	--	--	--	--	--	--	--
AUG 16...	--	2	--	--	0	--	--	3	--	--	26	--

DATE	IRON, DIS- SOLVED (UG/L AS FE)	LEAD, TOTAL 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 DIS- SOLVED (UG/L AS LI)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	MANGA- NESE, RECOV. FM BOT- TOM MA- TERIAL (UG/G)	MERCURY DIS- SOLVED (UG/L AS HG)	MERCURY RECOV. FM BOT- TOM MA- TERIAL (UG/L AS HG)	MOLYB- DENUM, TOTAL RECOV- ERABLE (UG/L AS MO)
DEC 21...	50	--	--	--	--	--	--	--	--	--	--	--
MAR 15...	90	--	--	--	--	--	--	--	--	--	--	--
MAY 11...	20	21	4	0	30	20	140	30	190	.0	.02	3
JUN 28...	30	--	--	--	--	--	--	--	--	--	--	--
JUL 26...	40	--	--	--	--	--	--	--	--	--	--	--
AUG 16...	310	--	0	--	--	10	--	0	--	.1	--	--

CHEYENNE RIVER BASIN

06375600 LITTLE THUNDER CREEK NEAR HAMPSHIRE, WY--Continued

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

DATE	MOLYB- DENUM, DIS- SOLVED (UG/L AS MO)	MOLYB- DENUM, RECOV. FM BOT- TOM MA- TERIAL (UG/G)	NICKEL, TOTAL RECOV- ERABLE (UG/L AS NI)	NICKEL, DIS- SOLVED (UG/L AS NI)	NICKEL, FM BOT- TOM MA- TERIAL (UG/G AS NI)	SELE- NIUM, TOTAL (UG/L AS SE)	SELE- NIUM, DIS- SOLVED (UG/L AS SE)	SELE- NIUM, TOTAL (UG/G)	VANA- DIUM, DIS- SOLVED (UG/L AS V)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN)	ZINC, DIS- SOLVED (UG/L AS ZN)	ZINC, FM BOT- TOM MA- TERIAL (UG/G AS ZN)
DEC 21...	--	--	--	--	--	--	--	--	--	--	--	--
MAR 15...	--	--	--	--	--	--	--	--	--	--	--	--
MAY 11...	0	0	18	4	10	1	1	0	1.0	80	10	29
JUN 28...	--	--	--	--	--	--	--	--	--	--	--	--
JUL 26...	--	--	--	--	--	--	--	--	--	--	--	--
AUG 16...	0	--	--	5	--	--	0	--	1.0	--	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 ALPHA, DIS- SOLVED (PCI/L AS U-NAT)	GROSS ALPHA, SUSP. TOTAL (PCI/L AS U-NAT)
MAY 11...	1130	<5.9	42	16	41	<4.0	29
AUG 16...	1600	3.1	150	7.1	110	2.1	100

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
DEC 21...	0945	.0	.04	84	.01	--	--	--
MAR 15...	1245	.0	18	494	24	86	98	100
MAR 23...	1445	3.5	4.3	308	3.6	--	--	--
MAY 07...	0645	--	16	2330	101	--	--	--
MAY 08...	1015	--	97	3100	812	--	--	--
MAY 11...	1045	12.0	10	976	26	94	96	100
MAY 20...	1430	12.0	178	1150	553	89	99	100
JUN 28...	1300	26.0	.31	76	.06	--	--	--
JUL 26...	1430	25.5	3.3	200	1.8	--	--	--
AUG 16...	1430	18.0	17	3120	143	--	--	--

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
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MAY 11...	1045	12.0	10	27	32	40	43
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DATE	TIME	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
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MAY 11...	47	55	64	75	84	96	100
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06375600 LITTLE THUNDER CREEK NEAR HAMPSHIRE, WY--Continued

QUALITATIVE AND ASSOCIATED QUANTITATIVE ANALYSES OF BIOLOGICAL DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

PHYTOPLANKTON ANALYSES

DATE TIME	DEC 21,77 0945	MAR 15,78 1245	MAY 11,78 1130	JUN 28,78 1300	JUL 26,78 1430	AUG 16,78 1600				
TOTAL CELLS/ML	930	750	3400	3200	1400	220				
DIVERSITY: DIVISION	0.4	1.0	1.3	1.0	1.6	0.0				
..CLASS	0.4	1.0	1.3	1.0	1.6	0.0				
..ORDER	1.3	1.1	1.9	1.1	1.7	0.0				
...FAMILY	1.6	1.3	1.9	1.2	2.0	0.0				
....GENUS	1.6	2.0	1.9	1.3	2.4	0.0				
ORGANISM	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT
CHLOROPHYTA (GREEN ALGAE)										
..CHLOROPHYCEAE										
...CHLOROCOCCALES										
...MICRACTINIACEAE										
....GOLENKINIA	72	8	--	-	--	-	--	-	--	-
...OOCYSTACEAE										
....ANKISTRODESMUS	290#	31	29	4	--	-	300	9	140	10
....SELENASTRUM	--	-	--	-	--	-	43	1	--	-
...SCENEDESMACEAE										
....ACTINASTRUM	--	-	--	-	--	-			110	8
...SCENEDESMUS	--	-	--	-	--	-			220#	16
...VOLVOCALES										
...CHLAMYDOMONADACEAE										
....CHLAMYDOMONAS	500#	54	14	2	--	-	29	1	28	2
CHRYSOPHYTA										
..BACILLARIOPHYCEAE										
...CENTRALES										
...COSCINODISCAEAE										
...CYCLOTELLA	--	-	--	-	1100#	33	29	1	520#	39
..PENNALES										
...FRAGILARIACEAE										
....FRAGILARIA	--	-	--	-	--	-	29	1	--	-
...GOMPHONEMATACEAE										
....GOMPHONEMA	--	-	14	2	--	-	29	1	--	-
...NAVICULACEAE										
....DIPLONEIS	--	-	--	-	--	-	29	1	--	-
...NAVICULA	--	-	43	6	860#	25	*	0	--	-
...NITZSCHIAEAE										
....NITZSCHIA	--	-	86	12	--	-	86	3	--	-
CRYPTOPHYTA (CRYPTOMONADS)										
..CRYPTOPHYCEAE										
...CRYPTOMONADALES										
....CRYPTOMONADACEAE										
....CRYPTOMONAS	--	-	--	-	--	-	*	0	--	-
CYANOPHYTA (BLUE-GREEN ALGAE)										
..CYANOPHYCEAE										
...CHROOCOCCALES										
...CHROOCOCCACEAE										
...ANACYSTIS	--	-	--	-	1100#	33	--	-	--	-
..HORMOGONALES										
...OSCILLATORIACEAE										
....LYNGBYA	--	-	200#	27	--	-	--	-	--	-
...OSCILLATORIA	--	-	360#	48	--	-	2500#	79	--	-
EUGLENOPHYTA (EUGLENOIDS)										
..EUGLENOPHYCEAE										
...EUGLENALES										
...EUGLENACEAE										
....EUGLENA	--	-	--	-	--	-	--	-	170	12
....LEPOCINCLIS	--	-	--	-	--	-	29	1	--	-
...TRACHELOMONAS	72	8	--	-	290	8	29	1	170	12

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

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

CHEYENNE RIVER BASIN

06376300 BLACK THUNDER CREEK NEAR HAMPSHIRE, WY

LOCATION.--Lat 43°34'51", long 104°43'04", in NW¼NW¼ sec.31, T.42 N., R.65 W., Weston County, Hydrologic Unit 10120103, on right bank 20 ft (6 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.

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 poor. There are many small stock ponds above station. No diversion above station.

AVERAGE DISCHARGE.--6 years, 10.4 ft³/s (0.295 m³/s), 7,530 acre-ft/yr (9.28 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 5,050 ft³/s (143 m³/s) May 18, 1978, gage height, 14.49 ft (4.307 m), from floodmark; no flow for many days each year.

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)		Date	Time	Discharge (ft ³ /s) (m ³ /s)		Gage height (ft) (m)	
Mar. 12	1600	a300	8.50	a7.18	2.188	July 7	2230	717	20.3	9.92	3.024
Mar. 19	2000	757	21.4	10.11	3.082	July 22	2200	892	25.3	11.07	3.374
May 9	2000	841	23.8	10.83	3.301	Aug. 1	0330	496	14.0	8.27	2.521
May 18	2230	*5,050	143	b14.13	4.307	Aug. 16	0300	357	10.1	7.21	2.198

a-About.

b-From floodmark.

No flow for many days.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.33	.00	.00	.00	.00	.00	1.6	.00	7.4	2.1	229	.00
2	72	.00	.00	.00	.00	.00	1.2	.00	6.4	2.7	18	.00
3	17	.00	.00	.00	.00	.00	.45	.00	6.2	7.2	7.4	.00
4	6.0	.00	.00	.00	.00	.00	.09	.00	7.2	7.2	4.4	.00
5	2.6	.00	.00	.00	.00	.00	.01	.00	6.2	5.1	2.9	.00
6	1.2	.00	.00	.00	.00	.00	.00	3.8	5.1	4.9	1.9	.00
7	.55	.00	.00	.00	.00	.00	.00	70	4.0	187	2.1	.00
8	.37	.00	.00	.00	.00	.00	.00	224	3.8	129	1.8	.00
9	.26	.00	.00	.00	.00	.00	.00	701	3.8	14	1.4	.00
10	.13	.00	.00	.00	.00	17	.00	448	3.4	7.2	1.4	.00
11	.09	.00	.00	.00	.00	186	.00	115	2.7	6.0	1.9	.00
12	.06	.00	.00	.00	.00	290	.00	43	2.4	4.9	3.6	.00
13	.04	.00	.00	.00	.00	232	.00	13	2.3	2.7	4.4	.00
14	.03	.00	.00	.00	.00	97	.00	6.6	2.1	1.9	3.4	.00
15	.02	.00	.00	.00	.00	63	.00	3.6	2.6	1.2	64	.00
16	.01	.00	.00	.00	.00	56	.00	1.8	2.7	.90	155	.00
17	.00	.00	.00	.00	.00	66	.00	284	2.9	.74	17	.00
18	.00	.00	.00	.00	.00	531	.00	2400	4.4	.59	8.2	.00
19	.00	.00	.00	.00	.00	656	.00	2850	4.6	.21	5.1	.00
20	.00	.00	.00	.00	.00	249	.00	586	4.2	.10	3.6	.00
21	.00	.00	.00	.00	.00	181	.00	146	3.8	173	2.7	.00
22	.00	.00	.00	.00	.00	110	.00	60	3.8	832	2.3	.00
23	.00	.00	.00	.00	.00	56	.00	53	3.1	173	2.1	.00
24	.00	.00	.00	.00	.00	25	.00	33	2.7	26	1.9	.00
25	.00	.00	.00	.00	.00	9.1	.00	25	2.7	13	1.5	.00
26	.00	.00	.00	.00	.00	7.5	.00	21	2.0	8.0	1.3	.00
27	.00	.00	.00	.00	.00	23	.00	18	2.1	5.7	1.1	.00
28	.00	.00	.00	.00	.00	23	.00	64	2.4	4.2	1.2	.00
29	.00	.00	.00	.00	---	13	.00	26	2.7	3.8	.59	.00
30	.00	.00	.00	.00	---	5.6	.00	13	2.6	3.4	.09	.00
31	.00	---	.00	.00	---	3.8	---	10	---	46	.00	---
TOTAL	100.69	.00	.00	.00	.00	2900.00	3.35	8218.80	112.3	1673.74	551.28	.00
MEAN	3.25	.000	.000	.000	.000	93.5	.11	265	3.74	54.0	17.8	.000
MAX	72	.00	.00	.00	.00	656	1.6	2850	7.4	832	229	.00
MIN	.00	.00	.00	.00	.00	.00	.00	.00	2.0	.10	.00	.00
AC-FT	200	.00	.00	.00	.00	5750	6.6	16300	223	3320	1090	.00
CAL YR 1977 TOTAL	2264.13			MEAN 6.20		MAX 304	MIN .00	AC-FT 4490				
WTR YR 1978 TOTAL	13560.16			MEAN 37.2		MAX 2850	MIN .00	AC-FT 26900				

CHEYENNE RIVER BASIN

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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 1978.

GAGE.--Water-stage recorder and sharp-crested weir. Altitude of gage is 3,950 ft (1,200 m), from topographic map.

REMARKS.--Records fair. Numerous small stock ponds above station. Diversions for irrigation of about 300 acres (1.21 km²) above station.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 166 ft³/s (4.70 m³/s) May 18, gage height, 4.08 ft (1.244 m); no flow for many days.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.00	.00	.00	8.8	.58	16	.10	.06	.01
2	.00	.00	.00	.00	.00	.00	7.7	.50	15	.08	.04	.66
3	.00	.00	.00	.00	.00	.00	7.3	.43	14	.31	.06	1.5
4	.00	.00	.00	.00	.00	.00	6.7	.50	14	.36	.22	.72
5	.00	.00	.00	.00	.00	.00	5.7	.77	13	.43	.31	.31
6	.00	.00	.00	.00	.00	.00	3.7	1.1	12	.72	.22	.10
7	.00	.00	.00	.00	.00	.00	1.4	5.3	11	47	.12	.04
8	.00	.00	.00	.00	.00	.00	.58	5.3	9.0	13	.06	.02
9	.00	.00	.00	.00	.00	.00	3.1	3.7	6.9	4.9	.04	.01
10	.00	.00	.00	.00	.00	.00	6.7	2.0	4.9	1.8	.03	.00
11	.00	.00	.00	.00	.00	.00	5.5	1.2	3.2	.77	.02	.00
12	.00	.00	.00	.00	.00	.00	2.0	.82	2.2	.43	.02	.00
13	.00	.00	.00	.00	.00	.00	1.0	.63	1.6	.18	.01	.00
14	.00	.00	.00	.00	.00	.00	.54	.50	1.0	.10	.01	.00
15	.00	.00	.00	.00	.00	.00	.58	.31	.94	.07	.08	.00
16	.00	.00	.00	.00	.00	.00	.58	.18	.67	.06	.10	.00
17	.00	.00	.00	.00	.00	.50	.43	4.9	4.7	.04	.10	.00
18	.00	.00	.00	.00	.00	2.0	.50	90	1.8	.04	.07	.00
19	.00	.00	.00	.00	.00	3.0	.50	115	.83	.03	.05	.00
20	.00	.00	.00	.00	.00	3.0	.31	108	.50	.02	.03	.00
21	.00	.00	.00	.00	.00	2.5	.31	74	.31	.94	.03	.01
22	.00	.00	.00	.00	.00	1.8	.50	55	.22	11	.02	.01
23	.00	.00	.00	.00	.00	6.7	.54	46	.10	14	.02	.01
24	.00	.00	.00	.00	.00	4.7	.36	38	.10	7.5	.02	.01
25	.00	.00	.00	.00	.00	2.8	.31	33	.10	3.4	.01	.01
26	.00	.00	.00	.00	.00	2.9	.26	28	.10	.88	.01	.01
27	.00	.00	.00	.00	.00	2.6	.36	23	.12	.18	.01	.00
28	.00	.00	.00	.00	.00	2.1	.72	28	.18	.05	.01	.00
29	.00	.00	.00	.00	.00	3.0	.72	22	.18	.06	.00	.62
30	.00	.00	.00	.00	.00	10	.63	20	.18	.04	.00	.05
31	.00	.00	.00	.00	.00	10	.00	19	.00	.08	.01	.00
TOTAL	.00	.00	.00	.00	.00	57.60	68.33	727.72	134.83	108.57	1.79	4.10
MEAN	.000	.000	.000	.000	.000	1.86	2.28	23.5	4.49	3.50	.058	.14
MAX	.00	.00	.00	.00	.00	10	8.8	115	16	47	.31	1.5
MIN	.00	.00	.00	.00	.00	.00	.26	.18	.10	.02	.00	.00
AC-FT	.00	.00	.00	.00	.00	114	136	1440	267	215	3.6	8.1
WTR YR 1978	TOTAL	1102.94	MEAN	3.02	MAX	115	MIN	.00	AC-FT	2190		

CHEYENNE RIVER BASIN
06378300 LODGEPOLE CREEK NEAR HAMPSHIRE, WY--Continued
WATER-QUALITY RECORDS

PERIOD OF RECORD.--October 1977 to September 1978.

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

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	STREP- TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)	HARD- NESS (MG/L AS CACO3)	HARD- NESS, NONCAR- BONATE (MG/L CACO3)
MAR 23...	1715	6.7	1020	8.0	1.0	10.5	87	1600	13000	46	0
APR 07...	1030	1.5	920	8.4	10.0	--	--	<1	340	77	0
20...	1445	--	--	--	--	--	--	--	--	--	--
MAY 12...	0815	.81	1950	8.5	10.0	7.8	81	K30	--	130	0
JUN 28...	0930	.17	1470	8.5	22.0	7.7	103	K8	130	150	0
JUL 26...	0930	.82	695	8.0	22.5	6.3	83	240	480	80	0
AUG 16...	1000	.10	1200	8.4	21.5	--	--	540	190	80	0

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)	BICAR- BONATE (MG/L AS HCO3)	CAR- BONATE (MG/L AS CO3)	ALKA- LINITY (MG/L AS CACO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)
MAR 23...	9.8	5.1	210	14	3.1	290	0	240	240	6.2	.2
APR 07...	17	8.5	200	9.9	6.1	340	2	280	210	6.5	.2
20...	--	--	--	--	--	--	--	--	--	--	--
MAY 12...	24	16	460	18	7.6	600	8	520	520	12	.3
JUN 28...	31	17	320	11	7.1	470	7	390	360	7.2	.4
JUL 26...	22	6.1	130	6.3	5.6	240	0	200	140	3.6	1.1
AUG 16...	18	8.6	240	12	6.0	390	7	340	240	6.3	1.3

DATE	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)	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)
MAR 23...	3.8	636	622	.85	11.3	.11	.32	.98	1.3	1.4
APR 07...	6.4	619	624	.85	2.53	.02	.06	1.7	1.8	1.8
20...	--	--	--	--	--	--	--	--	--	--
MAY 12...	6.8	1340	1350	1.84	2.95	.00	.13	2.1	2.2	2.2
JUN 28...	.4	1020	982	1.34	.45	.05	.05	.83	.88	.93
JUL 26...	3.9	438	431	.59	.95	.01	.01	1.1	1.1	1.1
AUG 16...	1.1	748	721	.98	.19	.02	.09	1.2	1.3	1.3

DATE	NITRO- GEN, TOTAL (MG/L AS NO3)	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHORUS, DIS- SOLVED (MG/L AS P)	CARBON, ORGANIC DIS- SOLVED (MG/L AS C)	CARBON, ORGANIC SUS- PENDEED TOTAL (MG/L AS C)	PHYTO- PLANK- TON, TOTAL (CELLS PER ML)	PERI- PHYTON BIOMASS TOTAL G/SQ M	PERI- PHYTON BIOMASS TOTAL G/SQ M	CHLOR-A PERI- PHYTON CHROMO- GRAPHIC FLUOROM (MG/M2)	CHLOR-B PERI- PHYTON CHROMO- GRAPHIC FLUOROM (MG/M2)
MAR 23...	6.2	.32	.11	9.4	4.6	16000	--	--	--	--
APR 07...	8.1	.20	.03	15	6.5	5600	--	--	--	--
20...	--	--	--	--	--	--	.157	.236	.000	.000
MAY 12...	9.7	.26	.06	13	--	8900	--	--	--	--
JUN 28...	4.1	.07	.01	13	--	2800	--	--	--	--
JUL 26...	4.9	.13	.02	6.3	1.8	4400	--	--	--	--
AUG 16...	5.8	.12	.02	7.9	3.7	6600	--	--	--	--

CHEYENNE RIVER BASIN

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06378300 LODGEPOLE CREEK NEAR HAMPSHIRE, WY--Continued

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

DATE	TIME	ALUM- INUM, DIS- SOLVED (UG/L AS AL)	ARSENIC 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, DIS- SOLVED (UG/L AS BA)	BARIUM, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS BA)	BERYL- LIUM, TOTAL RECOV- ERABLE (UG/L AS BE)	BERYL- LIUM, DIS- SOLVED (UG/L AS BE)
MAR 23...	1715	210	7	1	73	300	200	5400	0	0
APR 07...	1030	--	--	--	--	--	--	--	--	--
MAY 12...	0815	--	--	--	--	--	--	--	--	--
JUN 28...	0930	--	--	--	--	--	--	--	--	--
JUL 26...	0930	--	--	--	--	--	--	--	--	--
AUG 16...	1000	60	--	2	--	--	60	--	--	<1

DATE	BERYL- LIUM, RECOV. FM BOT- TOM MA- TERIAL (UG/G)	BORON, DIS- SOLVED (UG/L AS B)	CADMIUM TOTAL 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, DIS- SOLVED (UG/L AS CR)	CHRO- MIUM, RECOV. FM BOT- TOM MA- TERIAL (UG/G)	COBALT, TOTAL RECOV- ERABLE (UG/L AS CO)	COBALT, DIS- SOLVED (UG/L AS CO)
MAR 23...	10	60	0	6	3	0	0	40	0	0
APR 07...	--	100	--	--	--	--	--	--	--	--
MAY 12...	--	120	--	--	--	--	--	--	--	--
JUN 28...	--	110	--	--	--	--	--	--	--	--
JUL 26...	--	60	--	--	--	--	--	--	--	--
AUG 16...	--	100	--	2	--	--	0	--	--	3

DATE	COBALT, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CO)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU)	COPPER, DIS- SOLVED (UG/L AS CU)	COPPER, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CU)	IRON, DIS- SOLVED (UG/L AS FE)	LEAD, TOTAL 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 DIS- SOLVED (UG/L AS LI)
MAR 23...	20	4	4	8	270	1	34	40	10	10
APR 07...	--	--	--	--	120	--	--	--	--	--
MAY 12...	--	--	--	--	220	--	--	--	--	--
JUN 28...	--	--	--	--	40	--	--	--	--	--
JUL 26...	--	--	--	--	70	--	--	--	--	--
AUG 16...	--	--	20	--	50	--	0	--	--	7

DATE	MANGA- NESE, TOTAL RECOV- ERABLE (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 DIS- SOLVED (UG/L AS HG)	MERCURY RECOV. FM BOT- TOM MA- TERIAL (UG/L AS HG)	MOLYB- DENUM, TOTAL RECOV- ERABLE (UG/L AS MO)	MOLYB- DENUM, DIS- SOLVED (UG/L AS MO)	MOLYB- DENUM, RECOV. FM BOT- TOM MA- TERIAL (UG/G)	NICKEL, TOTAL RECOV- ERABLE (UG/L AS NI)
MAR 23...	80	70	23000	.0	.0	.02	5	0	0	0
APR 07...	--	--	--	--	--	--	--	--	--	--
MAY 12...	--	--	--	--	--	--	--	--	--	--
JUN 28...	--	--	--	--	--	--	--	--	--	--
JUL 26...	--	--	--	--	--	--	--	--	--	--
AUG 16...	--	10	--	--	.1	--	--	3	--	--

CHEYENNE RIVER BASIN

06378300 LODGEPOLE CREEK NEAR HAMPSHIRE, WY--Continued

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

DATE	NICKEL, DIS- SOLVED (UG/L AS NI)	NICKEL, FM BOT- TOM MA- TERIAL (UG/G AS NI)	SELE- NIUM, TOTAL (UG/L AS SE)	SELE- NIUM, DIS- SOLVED (UG/L AS SE)	SELE- NIUM, TOTAL IN BOT- TOM MA- TERIAL (UG/G)	VANA- DIUM, DIS- SOLVED (UG/L AS V)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN)	ZINC, DIS- SOLVED (UG/L AS ZN)	ZINC, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS ZN)
MAR 23...	1	27	4	0	0	2.0	10	10	140
APR 07...	--	--	--	--	--	--	--	--	--
MAY 12...	--	--	--	--	--	--	--	--	--
JUN 28...	--	--	--	--	--	--	--	--	--
JUL 26...	--	--	--	--	--	--	--	--	--
AUG 16...	5	--	--	0	--	.3	--	10	--

DATE	TIME	GROSS ALPHA, DIS- SOLVED TOTAL (UG/L AS U-NAT)	GROSS ALPHA, SUSP. TOTAL (UG/L AS U-NAT)	GROSS BETA, DIS- SOLVED TOTAL (PCI/L AS CS-137)	GROSS BETA, SUSP. TOTAL (PCI/L AS CS-137)	GROSS ALPHA, DIS- SOLVED TOTAL (PCI/L AS U-NAT)	GROSS ALPHA, SUSP. TOTAL (PCI/L AS U-NAT)
MAR 23...	1715	13	18	19	44	8.8	12
AUG 16...	1000	<6.1	.6	8.9	1.4	<4.1	.4

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
MAR 23...	1715	1.0	6.6	270	4.8	--	--	--
APR 07...	1030	10.0	1.5	104	.42	--	--	--
MAY 12...	0815	10.0	.81	220	.48	--	--	--
MAY 19...	1045	10.0	160	413	178	75	95	100
JUN 28...	0930	22.0	.17	36	.02	--	--	--
JUL 26...	0930	22.5	.82	99	.22	--	--	--
AUG 16...	1000	21.5	.10	58	.02	--	--	--

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
MAR 23...	1715	1.0	6.6	7	10	15	16

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
MAR 23...	19	26	46	78	96	100

06378300 LODGEPOLE CREEK NEAR HAMPSHIRE, WY--Continued

QUALITATIVE AND ASSOCIATED QUANTITATIVE ANALYSES OF BIOLOGICAL DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

PHYTOPLANKTON ANALYSES

DATE TIME	MAR 23,78 1715	APR 7,78 1030	MAY 12,78 0815	JUN 28,78 0930	JUL 26,78 0930	AUG 16,78 1000				
TOTAL CELLS/ML	16000	5600	8900	2800	4400	6600				
DIVERSITY: DIVISION	1.3	1.4	1.4	0.6	1.8	1.6				
..CLASS	1.3	1.4	1.4	0.6	1.8	1.6				
...ORDER	1.5	2.1	1.8	0.7	2.2	2.1				
...FAMILY	1.6	2.3	2.0	0.7	2.4	2.2				
....GENUS	1.6	2.7	2.6	1.7	3.4	2.5				
ORGANISM	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT
CHLOROPHYTA (GREEN ALGAE)										
..CHLOROPHYCEAE										
...CHLOROCOCCALES										
...CHARACIACEAE										
...SCHROEDERIA	--	-	--	-	--	-	--	-	40	1
...OOCYSTACEAE										
...ANKISTRODESMUS	2300	15	1700#	30	1300	15	930#	33	270	6
...CHODATELLA	290	2	--	-	62	1	--	-	--	-
...DICTYOSPHAERIUM	--	-	--	-	--	-	--	-	890#	20
...KIRCHNERIELLA	--	-	--	-	680	8	--	-	110	3
...OOCYSTIS	--	-	--	-	810	9	100	4	89	2
...SELENASTRUM	--	-	--	-	--	-	1500#	54	--	-
...TETRAEDRON	--	-	--	-	--	-	--	-	44	1
...SCENEDESMACEAE										
...CRUCIGENIA	--	-	--	-	--	-	--	-	89	2
...SCENEDESMUS	--	-	70	1	250	3	--	-	89	2
...TETRASPORALES										
...COCCOMYXACEAE										
...ELAKATOTHRIX	--	-	--	-	--	-	--	-	44	1
...VOLVOCALES										
...CHLAMYDOMONADACEAE										
...CHLAMYDOMONAS	1200	7	140	3	250	3	25	1	44	1
...VOLVOCAEAE										
...EUDORINA	--	-	1700#	30	--	-	--	-	--	-
CHRYSTOPHYTA										
..BACILLARIOPHYCEAE										
...CENTRALES										
...COSCINODISCAEAE										
...CYCLOTELLA	--	-	140	3	62	1	50	2	89	2
...PENNALES										
...ACHNANTHACEAE										
...ACHNANTHES	580	4	--	-	--	-	--	-	--	-
...CYMBELLACEAE	290	2	--	-	--	-	--	-	--	-
...EPITHEMIA										
...FRAGILARIACEAE	--	-	--	-	--	-	--	-	--	-
...SYNEORA										
...NAVICULACEAE	--	-	--	-	--	-	--	-	81	1
...NAVICULA	--	-	70	1	--	-	--	-	22	1
...NITZSCHACEAE	--	-	70	1	--	-	76	3	22	1
...NITZSCHIA	--	-	70	1	--	-	76	3	22	1
...SURIRELLACEAE										
...SURIRELLA	--	-	35	1	62	1	--	-	--	-
..XANTHOPHYCEAE										
...HETEROCOCCALES										
...CHLOROTHECIACEAE										
...OPHTOCYTIUM	--	-	--	-	--	-	--	-	44	1
CYANOPHYTA (BLUE-GREEN ALGAE)										
..CYANOPHYCEAE										
...CHROOCOCCALES										
...CHROOCOCCACEAE										
...AGMENELLUM	--	-	--	-	--	-	100	4	--	-
...ANACYSTIS	--	-	--	-	4200#	47	--	-	310	7
...HORMOGONALES										
...OSCILLATORIACEAE										
...OSCILLATORIA	10000#	67	280	5	430	5	--	-	980#	22
EUGLENOPHYTA (EUGLENOIDS)										
..EUGLENOPHYCEAE										
...EUGLENALES										
...EUGLENACEAE										
...EUGLENA	--	-	700	13	560	6	--	-	560	13
...LEPOCINCLIS	--	-	--	-	--	-	--	-	380	9
...PHACUS	--	-	280	5	120	1	--	-	67	2
...TRACHELOMONAS	580	4	390	7	120	1	25	1	240	6
...TRACHELOMONAS									320	5
PYRRHOPHYTA (FIRE ALGAE)										
..DINOPHYCEAE										
...GYMNODINIALES										
...GYMNODINIACEAE										
...GYMNODINIUM	--	-	--	-	--	-	--	-	--	-
...PERTIDINIALES										
...GLENODINIACEAE										
...GLENODINIUM	--	-	--	-	--	-	--	-	22	1

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

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

CHEYENNE RIVER BASIN

06386000 LANCE CREEK NEAR RIVERVIEW, WY

LOCATION.--Lat 43°22', long 104°16', in 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, 6.0 mi (9.7 km) southwest of Riverview, and 34 mi (55 km) south of Newcastle.

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. Prior to Aug. 14, 1948, nonrecording gage at same site and datum.

REMARKS.--Records poor. No gage-height record Oct. 4 to Feb. 21, Feb. 26 to Mar. 11, Mar. 15-19, Apr. 26 to May 6, July 18-21, 27-29, Aug. 2-10. 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.--28 years, 25.8 ft³/s (0.731 m³/s), 18,690 acre-ft/yr (23.0 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); no flow for many days each year.

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)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Mar. 9	1930	a1,930 54.7	b6.6 2.01	May 28	1530	1,270 36.0	4.98 1.518
May 9	2100	756 21.4	4.38 1.335	July 23	0200	2,890 81.8	6.66 2.030
May 19	0630	*7,190 204	9.43 2.874	July 29	1800	1,740 49.3	5.37 1.637

a-About.

b-From floodmark.

No flow for many days.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	45	.16	.18	.00	.00	.30	20	26	96	30	209	14
2	32	.17	.21	.00	.00	.15	19	20	69	78	170	13
3	52	.17	.26	.00	.00	.10	15	19	60	37	150	12
4	29	.18	.23	.00	.00	.30	10	19	54	23	110	11
5	16	.19	.17	.00	.00	.80	13	20	50	19	70	6.4
6	6.2	.20	.10	.00	.00	1.5	12	28	48	23	48	6.4
7	3.2	.20	.11	.00	.00	2.6	7.4	86	45	61	42	7.0
8	2.0	.21	.11	.00	.00	6.0	7.8	162	41	25	36	6.4
9	1.3	.21	.10	.00	.00	370	9.3	597	39	19	33	6.0
10	.86	.22	.12	.00	.00	1250	8.1	392	35	49	30	6.0
11	.69	.23	.24	.00	.00	778	9.3	140	34	69	25	5.7
12	.61	.26	.28	.00	.00	516	8.1	75	30	33	23	5.1
13	.55	.23	.27	.00	.00	385	8.1	50	27	22	21	4.5
14	.49	.22	.35	.00	.00	240	8.1	43	27	18	21	3.1
15	.46	.21	.43	.00	.00	146	9.7	36	26	15	30	2.7
16	.40	.20	.47	.00	.00	95	9.3	33	27	14	330	2.6
17	.35	.17	.39	.00	.00	77	9.7	97	38	14	178	2.2
18	.32	.14	.32	.00	.00	150	8.9	4370	103	14	93	2.4
19	.29	.11	.26	.00	.00	119	7.8	6070	56	14	64	2.7
20	.26	.08	.23	.00	.00	99	7.4	2440	40	14	54	2.6
21	.23	.06	.27	.00	.10	70	7.8	596	37	33	44	2.6
22	.21	.08	.30	.00	.30	35	7.8	361	36	1470	38	2.2
23	.19	.08	.28	.00	.45	36	6.7	304	33	1050	35	2.1
24	.16	.10	.21	.00	.53	32	6.4	259	30	236	32	1.8
25	.15	.11	.15	.00	.43	27	6.4	173	50	125	27	1.2
26	.13	.23	.17	.00	.50	27	6.0	131	50	99	24	1.2
27	.10	.22	.14	.00	.57	24	6.7	111	37	63	22	1.0
28	.10	.20	.15	.00	.42	25	10	528	27	43	20	1.0
29	.10	.22	.17	.00	---	24	8.0	362	19	641	18	1.0
30	.10	.20	.11	.00	---	22	17	149	22	774	18	1.0
31	.13	---	.05	.00	---	21	---	110	---	407	19	---
TOTAL	193.58	5.26	6.83	.00	3.30	4579.75	290.8	17807	1286	5532	2034	136.9
MEAN	6.24	.18	.22	.000	.12	148	9.69	574	42.9	178	65.6	4.56
MAX	52	.26	.47	.00	.57	1250	20	6070	103	1470	330	14
MIN	.10	.06	.05	.00	.00	.10	6.0	19	19	14	18	1.0
AC-FT	384	10	14	.00	6.5	9080	577	35320	2550	10970	4030	272
CAL YR 1977	TOTAL	1093.41	MEAN	3.00	MAX	264	MIN	.00	AC-FT	2170		
WTR YR 1978	TOTAL	31875.42	MEAN	87.3	MAX	6070	MIN	.00	AC-FT	63220		

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 1977 TO SEPTEMBER 1978

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	TUR- BID- ITY (JTU)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN DEMAND, BIO- CHEM- ICAL, 5 DAY (MG/L)	HARD- NESS (MG/L AS CACO3)	HARD- NESS, NONCAR- BONATE (MG/L CACO3)
NOV 09...	1400	A.21	4000	8.1	4.0	9	10.5	3.4	1200	820
DEC 31...	0815	A.05	5000	7.4	.0	40	8.3	2.3	1400	980
MAR 29...	0900	24	2800	8.1	10.0	90	9.9	2.9	680	390
MAY 10...	1400	330	560	7.9	13.0	4500	9.1	5.3	180	99
JUN 07...	1200	47	2800	8.3	15.0	65	9.1	2.9	690	410
07...	1430	44	2900	7.6	21.0	60	7.8	--	750	470
JUL 19...	1250	A14	3000	8.1	22.0	30	9.2	3.4	750	440
AUG 16...	1315	609	1050	7.8	20.0	12000	7.0	7.0	290	100
S30...	1530	17	2900	8.3	26.5	--	--	--	770	500
SEP 13...	1320	4.5	3600	8.1	17.0	5	8.2	2.1	840	510

A-Daily mean discharge.

S-Seepage run data (See Explanation of Water-Quality Records).

DATE	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	BICAR- BONATE (MG/L AS HCO3)	CAR- BONATE (MG/L AS CO3)	ALKA- LINITY (MG/L AS CACO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)
NOV 09...	290	110	680	8.6	14	440	0	360	2000	89
DEC 31...	340	130	810	9.5	14	490	0	400	2500	120
MAR 29...	180	55	400	6.7	17	350	0	290	970	150
MAY 10...	44	17	44	1.4	6.3	98	0	80	190	9.9
JUN 07...	190	52	380	6.3	15	340	0	280	980	120
07...	180	73	380	6.0	17	340	0	280	1100	120
JUL 19...	190	66	440	7.0	14	370	0	300	1200	100
AUG 16...	77	24	110	2.8	9.6	230	0	190	290	27
30...	190	71	440	6.9	18	330	0	270	1200	130
SEP 13...	210	77	530	8.0	13	400	0	330	1400	110

DATE	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, RESIDUE AT 105 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)	SOLIDS, RESIDUE AT 105 DEG. C, SUS- PENDED (MG/L)	NITRO- GEN, NITRATE DIS- SOLVED (MG/L AS N)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N)
NOV 09...	.5	13	--	--	3410	4.64	1.93	--	--	.01
DEC 31...	.5	16	--	--	4170	5.67	.56	--	--	.10
MAR 29...	.9	16	--	--	1960	2.67	127	--	--	.11
MAY 10...	.4	6.4	--	--	394	.50	327	7630	--	.82
JUN 07...	.7	14	--	--	1920	2.61	244	--	.02	.04
07...	.7	14	--	--	2050	2.79	244	--	--	.01
JUL 19...	.7	17	--	--	2210	3.01	83.5	--	--	.03
AUG 16...	.7	10	--	--	662	.90	1090	--	--	.87
30...	.6	14	2340	--	2230	3.03	102	--	--	.04
SEP 13...	.6	15	--	--	2550	3.47	31.0	--	--	.01

CHEYENNE RIVER BASIN

06386000 LANCE CREEK NEAR RIVERVIEW, WY--Continued

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

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, ORGANIC DIS- SOLVED (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC DIS- SOLVED (MG/L AS N)	NITRO- GEN, TOTAL (MG/L AS N)	NITRO- GEN, TOTAL (MG/L AS NO3)
NOV 09...	--	.05	--	--	.55	--	.60	--	.61	2.7
DEC 31...	--	.06	--	--	1.1	--	1.2	--	1.3	5.8
MAR 29...	--	.10	--	--	1.2	--	1.3	--	1.4	6.2
MAY 10...	--	.22	--	--	8.2	--	8.4	--	9.2	41
JUN 07...	--	.11	--	--	.99	--	1.1	--	1.1	5.0
JUL 07...	.04	.01	.00	.00	.91	.32	.92	.32	.93	4.1
JUL 19...	--	.01	--	--	.99	--	1.0	--	1.0	4.6
AUG 16...	--	.71	--	--	19	--	20	--	21	92
SEP 30...	--	.02	--	--	.52	--	.54	--	.58	2.6
SEP 13...	--	.08	--	--	.65	--	.73	--	.74	3.3

DATE	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHATE, TOTAL (MG/L AS PO4)	PHOS- PHORUS, DIS- SOLVED (MG/L AS P)	PHOS- PHORUS, ORTHOPHOSPHATE TOTAL (MG/L AS P)	PHOS- PHORUS, ORTHOPHOSPHATE DIS- SOLVED (MG/L AS P)	PHOS- PHATE, ORTHOPHOSPHATE DIS- SOLVED (MG/L AS PO4)	CARBON, ORGANIC DIS- SOLVED (MG/L AS C)	CARBON, ORGANIC SUS- PENDE TOTAL (MG/L AS C)	ALGAL GROWTH POTEN- TIAL, BOTTLE TEST (MG/L)
NOV 09...	.02	--	--	--	--	--	--	--	--
DEC 31...	.03	--	--	--	--	--	--	--	--
MAR 29...	.02	--	--	--	--	--	--	--	--
MAY 10...	1.8	--	--	--	--	--	--	--	--
JUN 07...	.05	--	--	--	--	--	--	--	--
JUL 07...	.04	.12	.00	.01	.00	.00	--	--	.4
JUL 19...	.04	--	--	--	--	--	--	--	--
AUG 16...	4.1	--	--	--	--	--	--	--	--
SEP 30...	.02	--	.08	--	--	--	6.8	.4	--
SEP 13...	.03	--	--	--	--	--	--	--	--

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)	BORON, DIS- SOLVED (UG/L AS B)	CADMIUM TOTAL RECOV- ERABLE (UG/L AS CD)	CADMIUM DIS- SOLVED (UG/L AS CD)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR)
NOV 09...	1400	--	--	--	--	--	--	200	--	--	--
DEC 31...	0815	460	0	1	1	0	10	190	3	3	10
MAR 29...	0900	--	--	1	--	0	--	300	1	--	0
MAY 10...	1400	--	--	--	--	--	--	120	--	--	--
JUN 07...	1200	--	--	--	--	--	--	200	--	--	--
JUL 07...	1430	--	--	--	--	--	--	210	--	--	--
JUL 19...	1250	620	--	2	--	10	--	190	4	--	0
AUG 16...	1315	--	--	--	--	--	--	120	--	--	--
SEP 30...	1530	--	--	--	--	--	--	190	--	--	--
SEP 13...	1320	--	--	--	--	--	--	190	--	--	--

CHEYENNE RIVER BASIN

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06386000 LANCE CREEK NEAR RIVERVIEW, WY--Continued

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

DATE	CHROMIUM, 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)	IRON, DIS- SOLVED (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)
NOV 09...	--	--	--	--	80	--	--	--	--	--	--
DEC 31...	0	11	1	800	0	10	5	90	80	100	100
MAR 29...	--	6	--	2200	120	6	--	180	--	420	--
MAY 10...	--	--	--	--	110	--	--	--	--	--	--
JUN 07...	--	--	--	--	110	--	--	--	--	--	--
JUN 07...	--	--	--	--	20	--	--	--	--	--	--
JUL 19...	--	8	--	920	110	7	--	70	--	280	--
AUG 16...	--	--	--	--	660	--	--	--	--	--	--
AUG 30...	--	--	--	--	200	--	--	--	--	--	--
SEP 13...	--	--	--	--	170	--	--	--	--	--	--

DATE	MERCURY TOTAL RECOV- ERABLE (UG/L AS HG)	MERCURY DIS- SOLVED (UG/L AS HG)	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 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, DIS- SOLVED (UG/L AS ZN)
NOV 09...	--	--	--	--	--	--	--	--	--	--	--
DEC 31...	.0	.0	2	0	7	0	1	1	.6	20	10
MAR 29...	.0	--	8	--	4	--	0	--	--	30	--
MAY 10...	--	--	--	--	--	--	--	--	--	--	--
JUN 07...	--	--	--	--	--	--	--	--	--	--	--
JUN 07...	--	--	--	--	--	--	--	--	--	--	--
JUL 19...	.0	--	3	--	9	--	0	--	--	30	--
AUG 16...	--	--	--	--	--	--	--	--	--	--	--
AUG 30...	--	--	--	--	--	--	--	--	--	--	--
SEP 13...	--	--	--	--	--	--	--	--	--	--	--

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)
MAY 10...	1400	8.4	270	9.7	270	8.3	250	.16	4.8

CHEYENNE RIVER BASIN

06386000 LANCE CREEK NEAR RIVERVIEW, WY--Continued

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

DATE	TIME	TEMPER- ATURE (DEG C)	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SEDI- MENT, SUS- PENDED (MG/L)	SEDI- MENT DIS- CHARGE, SUS- PENDED (T/DAY)	SED. SUSP. FALL DIAM. % FINER THAN .004 MM	SED. SUSP. FALL DIAM. % FINER THAN .016 MM	SED. SUSP. FALL DIAM. % FINER THAN .062 MM
NOV 09...	1705	.5	.22	60	.04	--	--	--
MAR 10...	1200	.5	1310	4800	17000	66	93	100
11...	1750	.5	739	--	--	74	98	100
19...	1520	9.5	99	--	--	56	69	--
APR 11...	1315	--	9.7	122	3.2	--	--	--
MAY 08...	1220	5.0	168	5160	2340	81	97	100
10...	0730	8.0	445	--	--	79	97	99
10...	0950	9.5	402	10200	11100	80	96	100
JUN 15...	1605	29.0	27	83	6.1	--	--	--
JUL 17...	1700	29.0	14	228	8.6	--	--	--
AUG 10...	1745	31.0	34	191	18	--	--	--

DATE	SED. SUSP. FALL DIAM. % FINER THAN .125 MM	SED. SUSP. SIEVE DIAM. % FINER THAN .062 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
NOV 09...	--	--	--	--	--	--	--
MAR 10...	--	--	--	--	--	--	--
11...	--	--	--	--	--	--	--
19...	--	70	70	70	74	85	97
APR 11...	--	--	--	--	--	--	--
MAY 08...	--	--	--	--	--	--	--
10...	100	--	--	--	--	--	--
10...	--	--	--	--	--	--	--
JUN 15...	--	--	--	--	--	--	--
JUL 17...	--	--	--	--	--	--	--
AUG 10...	--	--	--	--	--	--	--

DATE	TIME	TEMPER- ATURE (DEG C)	STREAM- FLOW, INSTAN- TANEOUS (CFS)	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
APR 11...	1315	--	9.7	2	1	2	9	34
MAY 08...	1220	5.0	168	4	2	2	3	24
JUN 07...	1430	21.0	16	--	0	0	7	34
AUG 10...	1745	31.0	34	--	--	0	4	26

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
APR 11...	59	73	89	97	99	100	--
MAY 08...	62	69	83	92	96	100	--
JUN 07...	44	54	70	82	90	100	--
AUG 10...	50	65	80	92	96	99	100

CHEYENNE RIVER BASIN

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06386500 CHEYENNE RIVER NEAR RIVERVIEW, WY

LOCATION.--Lat 43°25', long 104°08', in N½ sec.25, T.40 N., R.61 W., Niobrara County, Hydrologic Unit 10120106, at former gaging station, at old highway bridge, 1.8 mi (2.9 km) downstream from Robbers Roost Creek, 3.2 mi (5.1 km) east of Riverview, and 30 mi (48 km) south of Newcastle.

DRAINAGE AREA.--5,270 mi² (13,650 km²), approximately.

PERIOD OF RECORD.--Water years 1951-54, 1969-70, 1972 to current year.

REMARKS.--No flow was observed Dec. 31, Feb. 1, Mar. 3. Published as South Fork Cheyenne River near Spencer prior to October 1951. Published as Cheyenne River near Spencer prior to October 1976.

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

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	TUR- BID- ITY (JTU)	OXYGEN, DIS- SOLVED (MG/L)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	HARD- NESS (MG/L AS CAC03)	HARD- NESS, NONCAR- BONATE (MG/L AS CAC03)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)
NOV 09...	1515	E.20	4600	8.1	3.5	3	10.6	46	1500	1100	360	140
MAR 29...	1115	70	1950	8.4	10.5	180	9.6	K24	490	260	120	45
MAY 10...	1530	E800	560	7.8	13.0	3000	8.9	--	160	77	39	15
JUN 07...	1330	176	2300	8.4	22.0	50	7.7	K50	630	370	170	51
JUL 19...	1420	27	3100	8.2	26.5	35	8.8	K350	730	450	170	73
AUG 16...	1440	E100	1800	8.0	22.0	1000	7.4	K3500	460	280	120	39
SEP 13...	1500	9.5	3600	8.3	21.0	2	7.3	--	650	370	180	48

E-Estimate.

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)	BICAR- BONATE (MG/L AS HC03)	CAR- BONATE (MG/L AS CO3)	ALKA- LINITY (MG/L AS CAC03)	SULFATE DIS- SOLVED (MG/L AS SU4)	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 105 DEG. C, DIS- SOLVED (MG/L)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L)
NOV 09...	870	9.9	13	410	0	340	2700	95	.4	11	--	4390
MAR 29...	240	4.7	10	270	0	220	680	58	.6	10	1400	1300
MAY 10...	50	1.7	5.9	100	0	82	180	7.0	.5	5.7	--	353
JUN 07...	340	5.9	14	310	9	270	990	57	.6	12	--	1800
JUL 19...	470	7.6	13	330	0	270	1300	80	.7	15	--	2280
AUG 16...	260	5.3	12	220	0	180	720	88	.7	9.0	--	1360
SEP 13...	540	9.2	14	340	0	280	1500	73	.6	13	--	2540

DATE	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, 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)	CARBON, ORGANIC DIS- SOLVED (MG/L AS C)	CARBON, ORGANIC SUS- PENDE TOTAL (MG/L AS C)
NOV 09...	5.97	2.37	--	.01	.09	.42	.51	.52	2.3	.00	--	--
MAR 29...	1.77	246	400	.23	.09	1.1	1.2	1.4	6.3	.03	8.7	1.8
MAY 10...	.48	762	--	.88	.09	8.8	8.9	9.8	43	1.7	--	--
JUN 07...	2.45	855	--	.07	.11	.99	1.1	1.2	5.2	.06	--	--
JUL 19...	3.10	166	--	.02	.01	1.1	1.1	1.1	5.0	.04	--	--
AUG 16...	1.85	367	--	.18	.41	4.8	5.2	5.4	24	1.9	--	--
SEP 13...	3.45	65.2	--	.02	.08	.83	.91	.93	4.1	.02	--	--

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

[illegible]

CHEYENNE RIVER BASIN

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06386500 CHEYENNE RIVER NEAR RIVERVIEW, WY--Continued

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

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)
NOV 09...	--	--	--	--	--	--	--	--	--	--	--
MAR 29...	4	7	1	6	1	1	0	.0	50	40	10
MAY 10...	--	--	--	--	--	--	--	--	--	--	--
JUN 07...	--	--	--	--	--	--	--	--	--	--	--
JUL 19...	--	--	--	--	--	--	--	--	--	--	--
AUG 16...	--	--	--	--	--	--	--	--	--	--	--
SEP 13...	--	--	--	--	--	--	--	--	--	--	--

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)
MAR 29...	1115	47	25	25	22	22	19	.18	15

CHEYENNE RIVER BASIN

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 good except those for winter periods, which are poor.

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, 1976.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 10 ft³/s (0.28 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 10	2030	13 0.37	4.97 1.515	July 21	unknown	*16 0.45	5.12 1.561
May 18	2230	11 0.31	4.87 1.484				

Minimum daily discharge, 0.86 ft³/s (0.024 m³/s) Dec. 28 to Jan. 5.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.6	1.3	.90	.86	1.3	1.5	1.4	2.6	3.1	2.7	2.9	3.0
2	1.5	1.3	.90	.86	1.3	1.5	1.5	2.6	2.9	2.8	2.9	3.0
3	1.5	1.3	1.0	.86	1.3	1.5	1.5	2.6	2.9	2.7	2.9	3.0
4	1.4	1.3	1.1	.86	1.3	1.5	1.5	2.9	2.8	2.7	2.8	3.0
5	1.4	1.3	1.3	.86	1.3	1.5	1.5	2.9	2.8	2.7	2.8	2.9
6	1.4	1.3	1.3	.88	1.3	1.5	1.6	2.9	2.8	2.7	2.9	2.9
7	1.5	1.3	1.3	.90	1.3	1.5	1.6	2.9	2.6	2.7	2.9	2.9
8	1.5	1.3	1.3	.92	1.3	1.5	1.6	3.0	2.6	2.8	2.9	2.9
9	1.5	1.3	1.3	.94	1.3	1.5	1.7	3.0	2.6	2.8	2.9	3.0
10	1.5	1.3	1.3	1.0	1.3	1.5	1.7	4.8	2.6	2.8	2.9	3.0
11	1.4	1.4	1.3	1.1	1.3	1.5	1.7	5.2	2.6	2.8	2.9	3.1
12	1.4	1.4	1.3	1.1	1.3	1.5	1.7	3.8	2.6	2.8	2.9	3.0
13	1.4	1.4	1.3	1.1	1.3	1.5	1.7	3.4	2.6	2.8	2.9	3.1
14	1.4	1.4	1.3	1.1	1.3	1.5	1.7	3.3	2.6	2.8	2.9	3.0
15	1.4	1.4	1.4	1.1	1.3	1.5	1.8	3.1	2.6	2.8	2.9	3.0
16	1.4	1.4	1.4	1.1	1.3	1.5	1.8	3.0	2.6	2.8	2.9	2.9
17	1.3	1.4	1.3	1.2	1.3	1.5	1.8	3.3	2.6	2.8	2.9	2.9
18	1.3	1.4	1.1	1.2	1.3	1.5	1.8	5.6	2.6	2.8	2.9	2.9
19	1.3	1.3	1.1	1.2	1.3	1.5	1.8	6.0	2.6	2.8	2.9	2.8
20	1.3	1.1	1.1	1.2	1.4	1.5	1.9	3.9	2.6	3.5	2.8	2.7
21	1.3	1.0	1.1	1.2	1.4	1.5	2.0	3.7	2.6	5.0	2.8	2.6
22	1.4	.96	1.0	1.3	1.4	1.5	2.1	3.5	2.6	4.0	2.9	2.6
23	1.4	.94	.96	1.3	1.4	1.5	2.1	3.3	2.6	3.3	2.9	2.5
24	1.4	.92	.94	1.3	1.4	1.5	2.1	3.2	2.6	3.1	2.8	2.5
25	1.3	.90	.92	1.3	1.4	1.4	2.2	3.1	2.6	3.0	2.9	2.5
26	1.3	.90	.90	1.3	1.4	1.4	2.3	3.2	2.6	3.0	2.9	2.4
27	1.3	.90	.88	1.3	1.4	1.4	2.4	3.2	2.6	2.9	2.9	2.4
28	1.3	.90	.86	1.3	1.4	1.5	2.6	3.3	2.6	2.9	2.9	2.3
29	1.3	.90	.86	1.3	---	1.5	2.6	3.1	2.6	2.9	2.9	2.3
30	1.3	.90	.86	1.3	---	1.4	2.6	3.2	2.7	2.9	2.9	2.3
31	1.3	---	.86	1.5	---	1.4	---	3.1	---	3.0	3.1	---
TOTAL	43.0	35.82	34.44	34.54	37.3	46.0	56.3	106.7	79.8	92.1	89.6	83.4
MEAN	1.39	1.19	1.11	1.11	1.33	1.48	1.88	3.44	2.66	2.97	2.89	2.78
MAX	1.6	1.4	1.4	1.3	1.4	1.5	2.6	6.0	3.1	5.0	3.1	3.1
MIN	1.3	.90	.86	.86	1.3	1.4	1.4	2.6	2.6	2.7	2.8	2.3
AC-FT	85	71	68	69	74	91	112	212	158	183	178	165
CAL YR 1977	TOTAL 419.46	MEAN 1.15	MAX 2.0	MIN .42	AC-FT 832							
WTR YR 1978	TOTAL 739.00	MEAN 2.02	MAX 6.0	MIN .86	AC-FT 1470							

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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.

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, 6.2 ft³/s (0.18 m³/s) May 27, 28, 31, 1977.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	16	14	15	13	14	14	14	13	11	10	11	13
2	14	14	15	13	14	14	14	13	11	10	10	13
3	14	14	15	13	14	14	14	13	11	10	10	13
4	14	14	15	13	14	14	14	13	11	10	10	13
5	14	14	14	13	14	14	14	13	11	10	10	13
6	14	14	14	13	14	14	14	13	11	9.8	10	13
7	14	14	14	13	14	14	14	13	11	9.8	10	13
8	13	14	14	13	14	14	14	13	11	9.8	10	13
9	13	14	14	13	14	14	14	13	11	9.8	10	13
10	13	14	14	13	14	14	14	13	11	9.8	10	13
11	13	14	14	13	14	14	14	13	11	9.6	11	13
12	13	14	14	13	14	14	14	13	11	9.6	11	13
13	13	14	14	13	14	14	14	13	11	9.6	11	13
14	13	14	14	13	14	14	14	13	11	9.6	11	13
15	13	14	14	13	14	14	14	13	11	9.6	11	13
16	13	15	13	13	14	14	14	12	16	9.4	11	13
17	13	15	13	13	14	14	14	12	14	9.4	11	13
18	13	15	13	13	14	14	14	12	13	9.4	12	13
19	13	15	13	13	14	14	14	12	12	9.4	12	13
20	13	15	13	13	14	14	14	12	11	9.4	12	13
21	13	15	13	13	14	14	14	12	10	9.4	12	13
22	13	15	13	13	14	14	14	12	10	9.4	12	13
23	13	15	13	13	14	14	14	12	10	9.4	12	13
24	14	15	13	13	14	14	14	12	10	9.4	12	13
25	14	15	13	13	14	14	14	12	10	9.4	12	13
26	14	15	13	13	14	14	14	11	10	9.4	13	13
27	14	15	13	13	14	14	14	11	10	9.4	13	13
28	14	15	13	13	14	14	14	11	10	9.4	13	13
29	14	15	13	13	---	14	14	11	10	9.4	13	13
30	14	15	13	13	---	14	13	11	10	9.4	13	13
31	14	---	13	13	---	14	---	11	---	9.4	13	---
TOTAL	420	435	422	403	392	434	419	381	331	297.4	352	390
MEAN	13.5	14.5	13.6	13.0	14.0	14.0	14.0	12.3	11.0	9.59	11.4	13.0
MAX	16	15	15	13	14	14	14	13	16	10	13	13
MIN	13	14	13	13	14	14	13	11	10	9.4	10	13
AC-FT	833	863	837	799	778	861	831	756	657	590	698	774
CAL YR 1977	TOTAL	4543.6	MEAN	12.4	MAX	27	MIN	6.2	AC-FT	9010		
WTR YR 1978	TOTAL	4676.4	MEAN	12.8	MAX	16	MIN	9.4	AC-FT	9280		

CHEYENNE RIVER BASIN

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 October to March, which are poor. No gage-height record Feb. 14 to Mar. 22. 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.--34 years (water years 1945-78), 32.9 ft³/s (0.932 m³/s), 23,840 acre-ft/yr (29.4 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 most years.

EXTREMES FOR CURRENT YEAR.--Peak discharges 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)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Mar. 23	0630	a720 20.4	ab9.66 2.944	May 19	2400	*3,870 110	c16.37 4.990
May 11	0300	838 23.7	8.69 2.649	May 28	0400	1,210 34.3	10.53 3.210

a-About.

b-Backwater from ice.

c-From floodmark.

Minimum daily discharge, 0.06 ft³/s (0.002 m³/s) Oct. 5, 6.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.50	3.1	13	15	12	14	172	53	109	5.0	35	1.5
2	.30	3.9	12	15	13	13	123	27	79	4.2	30	1.5
3	.19	3.9	14	17	14	12	92	23	59	5.6	32	2.4
4	.11	3.4	11	18	15	13	63	37	48	4.7	34	2.6
5	.06	3.4	8.4	19	15	14	45	57	41	4.2	27	2.4
6	.06	3.4	7.2	21	15	14	37	49	35	5.6	21	2.1
7	.08	3.4	8.2	19	15	15	28	230	29	6.1	17	1.9
8	.08	3.1	7.3	16	14	17	26	206	30	6.7	15	1.5
9	.08	6.1	6.3	17	14	21	14	245	34	12	14	6.4
10	.19	19	7.9	17	13	26	24	571	32	11	12	7.0
11	.43	18	9.1	18	12	28	21	618	29	9.7	11	7.5
12	.15	18	11	19	12	30	17	194	21	8.4	12	7.8
13	.15	16	10	17	11	31	16	88	14	8.1	12	8.1
14	.15	15	12	17	11	33	15	50	13	7.8	12	8.4
15	.11	15	14	16	12	35	18	36	12	7.5	28	8.4
16	.08	16	15	14	12	35	17	29	11	8.1	16	8.1
17	.11	16	23	15	13	41	16	33	13	10	15	8.1
18	.11	16	24	14	13	48	14	1320	12	10	18	8.4
19	.11	13	22	13	15	61	12	1930	11	7.1	40	8.8
20	.11	10	19	14	15	76	13	2780	11	10	28	8.8
21	.15	7.3	21	15	16	215	17	804	9.7	27	18	9.1
22	.15	8.4	25	16	17	490	22	236	19	120	14	8.8
23	.19	9.4	24	15	18	640	18	187	16	83	12	8.8
24	.11	11	21	14	17	400	16	154	15	144	9.4	8.8
25	.15	13	21	13	15	293	14	109	14	128	6.7	7.8
26	.15	16	20	14	15	243	13	81	6.1	75	6.1	7.2
27	.15	18	19	14	15	286	12	231	5.8	45	7.0	7.0
28	.24	16	16	14	14	336	14	914	5.3	32	5.0	6.7
29	.36	15	17	15	---	303	18	220	5.0	26	2.1	6.7
30	.30	14	18	14	---	260	20	176	5.0	23	2.1	7.2
31	.43	---	16	13	---	208	---	161	---	24	1.7	---
TOTAL	5.54	333.8	472.4	488	393	4251	947	11849	743.9	878.8	513.1	189.8
MEAN	.18	11.1	15.2	15.7	14.0	137	31.6	382	24.8	28.3	16.6	6.33
MAX	.50	19	25	21	18	640	172	2780	109	144	40	9.1
MIN	.06	3.1	6.3	13	11	12	12	23	5.0	4.2	1.7	1.5
AC-FT	11	662	937	968	780	8430	1880	23500	1480	1740	1020	376

CAL YR 1977 TOTAL 5952.28 MEAN 16.3 MAX 443 MIN .00 AC-FT 11810
WTR YR 1978 TOTAL 21065.34 MEAN 57.7 MAX 2780 MIN .06 AC-FT 41780

WATER-QUALITY RECORDS

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

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	TUR- BID- ITY (JTU)	OXYGEN, DIS- SOLVED (MG/L)	HARD- NESS (MG/L AS CACO3)	HARD- NESS, NONCAR- BONATE (MG/L CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)
OCT 06...	0930	.04	--	--	8.0	--	--	1800	1700	490	130
NOV 09...	1525	3.1	--	--	1.0	--	--	1750	1600	470	140
DEC 08...	1600	7.3	--	--	.0	--	--	1800	1600	500	130
JAN 11...	1615	18	--	--	.5	--	--	1700	1500	450	130
FEB 08...	1015	14	--	--	.0	--	--	1650	1400	480	110
MAR 22...	1200	480	--	--	2.0	--	--	260	170	68	21
APR 06...	1125	39	--	--	10.0	--	--	720	580	190	57
MAY 10...	1700	683	--	--	10.5	--	--	450	340	57	20
JUN 07...	1630	28	5100	6.9	21.0	100	8.6	940	700	220	94
JUN 15...	1200	12	--	--	23.0	--	--	1700	1500	350	200
JUL 18...	0900	9.0	--	--	21.5	--	--	1300	1200	380	93
AUG 10...	1330	12	--	--	29.5	--	--	1500	1400	400	120
SEP 08...	0825	1.8	--	--	20.0	--	--	1900	1800	510	150
SEP 13...	1610	8.0	--	--	16.0	--	--	--	--	--	--

[illegible]

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

[illegible]

06394000 BEAVER CREEK NEAR NEWCASTLE, WY--Continued

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

DATE	2,4-D, TOTAL (UG/L)	2,4-D, TOTAL IN BOT- TOM MA- TERIAL (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)	ALGAL GROWTH POTEN- TIAL, BOTTLE TEST (MG/L)	SEDI- MENT, SUS- PENDE (MG/L)	SEDI- MENT DIS- CHARGE, SUS- PENDE (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
OCT										
06...	--	--	--	--	--	--	--	--	--	--
NOV										
09...	--	--	--	--	--	--	--	--	--	--
DEC										
08...	--	--	--	--	--	--	--	31	.61	--
JAN										
11...	--	--	--	--	--	--	--	--	--	--
FEB										
08...	--	--	--	--	--	--	--	--	--	--
MAR										
22...	--	--	--	--	--	--	--	--	--	--
APR										
06...	--	--	--	--	--	--	--	--	--	--
MAY										
10...	.17	0	.00	0	.00	.0	--	--	--	--
JUN										
07...	--	--	--	--	--	--	.4	100	7.6	87
15...	--	--	--	--	--	--	--	--	--	--
JUL										
18...	--	--	--	--	--	--	--	--	--	--
AUG										
10...	--	--	--	--	--	--	--	--	--	--
SEP										
08...	--	--	--	--	--	--	--	--	--	--
13...	.00	0	.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)
MAY				
10...	.00	0	.00	0
SEP				
13...	.00	0	.00	0

CHEYENNE RIVER BASIN

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 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.--36 years, 103 ft³/s (2.917 m³/s), 74,260 acre-ft/yr (91.6 hm³/yr); median of yearly mean discharges, 76 ft³/s (2.15 m³/s), 55,100 acre-ft/yr (68 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)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Mar. 20	1500	1,700 48.1	5.34 1.628	May 29	0300	2,640 74.8	4.82 1.469
May 10	1430	2,280 64.6	5.47 1.667	July 23	0600	5,860 166	6.57 2.003
May 20	0600	*28,000 793	13.65 4.161	July 30	0730	2,130 60.3	4.17 1.271

Minimum daily discharge, 0.50 ft³/s (0.014 m³/s) Nov. 22.

REVISIONS.--Revised daily discharges, in cubic feet per second, for September 1977 are given below. These figures supersede those published in the report for 1977.

Sept. 12... 2.4	Sept. 16... 3.6	Sept. 19... 3.0	Sept. 22... 3.6	Sept. 25... 104	Sept. 28... 23
13... 3.6	17... 3.6	20... 3.0	23... 289	26... 166	29... 18
14... 3.6	18... 3.6	21... 2.4	24... 46	27... 43	30... 21
15... 3.6					

Month	Total	Mean	Max	Min	Ac-ft
September 1977	780.2	26.0	289	1.6	1,550
Wtr Yr 1977	9,939.66	27.2	1,130	0	19,720

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	27	.72	18	4.5	3.0	9.0	189	34	588	109	850	68
2	95	.80	15	4.5	4.0	8.0	148	64	480	123	702	43
3	48	.90	17	5.0	5.0	7.0	114	43	394	213	702	35
4	68	2.4	15	5.5	6.0	6.0	93	53	349	120	633	29
5	27	4.2	12	7.0	7.0	7.0	72	86	325	100	588	27
6	17	4.8	7.0	7.0	6.0	8.0	60	81	293	92	436	24
7	12	4.8	5.0	6.0	6.0	10	57	106	271	109	447	21
8	8.4	4.5	4.0	5.0	6.0	11	38	438	246	206	237	19
9	7.2	3.0	3.5	4.5	6.0	13	28	540	241	145	325	18
10	11	3.5	3.0	4.0	6.0	20	30	1660	246	202	409	17
11	6.6	7.0	3.5	4.0	6.0	50	28	1900	233	229	325	20
12	5.4	17	5.0	4.0	6.0	100	27	1080	198	213	254	21
13	4.2	20	7.0	4.0	6.0	200	27	333	169	148	218	21
14	2.7	19	9.0	4.0	6.0	400	28	206	152	114	198	20
15	2.7	18	10	3.9	6.0	600	31	173	139	97	221	20
16	2.7	19	9.0	3.9	5.5	500	31	142	139	82	225	19
17	2.4	17	8.0	3.9	5.0	350	33	125	169	75	480	20
18	2.1	15	8.0	3.8	6.0	300	30	4650	194	64	452	20
19	1.9	8.0	8.0	3.8	8.0	450	27	12200	271	57	307	20
20	2.1	4.0	8.0	3.7	9.0	986	27	24000	194	55	246	19
21	1.9	2.0	8.0	3.6	10	928	25	7080	162	75	169	20
22	1.6	.50	9.0	3.5	11	716	24	2090	145	1290	132	19
23	1.9	2.0	10	3.5	13	681	27	1510	132	4610	105	19
24	1.4	4.0	9.0	3.5	15	674	28	1370	448	1750	87	18
25	1.3	8.0	7.0	3.5	13	600	25	984	376	1010	70	17
26	1.3	14	6.0	3.3	12	374	23	775	210	647	62	17
27	1.0	18	5.5	3.2	11	269	22	701	172	469	56	15
28	1.0	20	5.0	3.2	10	318	24	1820	136	389	52	14
29	1.2	20	4.5	3.1	---	318	28	1960	114	354	48	14
30	1.3	20	4.5	3.0	---	289	40	1040	103	1460	43	13
31	.90	---	4.5	3.0	---	231	---	709	---	1070	64	---
TOTAL	368.20	282.12	248.0	128.4	213.5	9433.0	1384	67953	7289	15677	9143	667
MEAN	11.9	9.40	8.00	4.14	7.63	304	46.1	2192	243	506	295	22.2
MAX	95	20	18	7.0	15	986	189	24000	588	4610	850	68
MIN	.90	.50	3.0	3.0	3.0	6.0	22	34	103	55	43	13
AC-FT	730	560	492	255	423	18710	2750	134800	14460	31100	18140	1320

CAL YR 1977 TOTAL 10202.73 MEAN 28.0 MAX 1130 MIN .00 AC-FT 20240
WTR YR 1978 TOTAL 112786.22 MEAN 309 MAX 24000 MIN .50 AC-FT 223700

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.

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 March and May, which are poor. No diversions above station. Several small stockwater reservoirs above station.

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, 4,100 ft³/s (116 m³/s) May 18, 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 during year.

REVISIONS.--Revised figures of discharge, in cubic feet per second, for water year 1977 are given below. These figures supersede those published in the report for 1977.

June 13..... 102

Month	Total	Mean	Max	Min	Ac-Ft
June 1977	123.58	4.12	102	0	245
Wtr Yr 1977	160.97	0.44	102	0	319

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.01	.00	.00	.00	.00	.00	9.5	3.0	5.3	22	.83	.00
2	.00	.00	.00	.00	.00	.00	7.2	3.7	4.9	11	.93	.01
3	.00	.00	.00	.00	.00	.00	5.6	4.0	4.6	4.9	.65	.00
4	.00	.00	.00	.00	.00	.00	4.9	6.0	4.3	2.7	.65	.00
5	.00	.00	.00	.00	.00	.00	4.3	4.9	4.3	2.1	.65	.00
6	.00	.00	.00	.00	.00	.00	3.7	3.7	3.4	1.7	.57	.00
7	.00	.00	.00	.00	.00	.00	3.4	4.0	2.7	1.4	.57	.00
8	.00	.00	.00	.00	.00	.00	3.2	12	3.0	1.4	.50	.00
9	.00	.00	.00	.00	.00	.00	2.7	18	1.6	1.4	.40	.00
10	.00	.00	.00	.00	.00	.00	2.5	19	.93	1.6	.23	.00
11	.00	.00	.00	.00	.00	.00	2.3	18	1.6	1.4	.19	.00
12	.00	.00	.00	.00	.00	.50	2.3	18	1.9	1.2	.13	.00
13	.00	.00	.20	.00	.00	4.0	2.3	17	1.9	1.0	.06	.00
14	.00	.00	.06	.00	.00	9.0	2.3	16	1.7	.83	.05	.00
15	.00	.00	.00	.00	.00	5.6	2.3	16	1.6	.74	.13	.00
16	.00	.00	.00	.00	.00	4.3	2.5	16	1.4	.65	.05	.00
17	.00	.00	.00	.00	.00	13	3.0	34	1.6	.57	.03	.00
18	.00	.00	.00	.00	.00	77	3.0	949	1.6	.37	.02	.00
19	.00	.00	.00	.00	.00	54	3.0	1060	1.6	.23	.02	.00
20	.00	.00	.00	.00	.00	36	3.4	261	1.6	.37	.01	.00
21	.00	.00	.00	.00	.00	24	3.3	88	1.6	1.4	.03	.00
22	.00	.00	.00	.00	.00	46	3.2	47	1.6	12	.03	.00
23	.00	.00	.00	.00	.00	38	3.2	32	1.6	10	.05	.00
24	.00	.00	.00	.00	.00	28	3.2	24	1.6	16	.06	.00
25	.00	.00	.00	.00	.00	27	3.2	16	1.4	8.2	.06	.00
26	.00	.00	.00	.00	.00	25	3.0	12	1.2	4.0	.06	.00
27	.00	.00	.00	.00	.00	23	3.0	9.0	1.0	3.0	.05	.00
28	.00	.00	.00	.00	.00	21	3.2	7.2	1.0	1.9	.06	.00
29	.00	.00	.00	.00	.00	20	3.4	6.8	1.8	1.0	.02	.00
30	.00	.00	.00	.00	.00	20	3.4	6.4	40	1.0	.02	.00
31	.00	---	.00	.00	---	14	---	6.0	---	1.0	.01	---
TOTAL	.01	.00	.26	.00	.00	489.40	105.5	2737.7	104.33	117.06	7.12	.01
MEAN	.000	.000	.008	.000	.000	15.8	3.52	88.3	3.48	3.78	.23	.000
MAX	.01	.00	.20	.00	.00	77	9.5	1060	.40	.22	.93	.01
MIN	.00	.00	.00	.00	.00	.00	2.3	3.0	.93	.23	.01	.00
AC-FT	.02	.00	.5	.00	.00	971	209	5430	207	232	14	.02
CAL YR 1977 TOTAL	161.05	MEAN	.44	MAX	102	MIN	.00	AC-FT	319			
WTR YR 1978 TOTAL	3561.39	MEAN	9.76	MAX	1060	MIN	.00	AC-FT	7060			

06425720 BELLE FOURCHE RIVER BELOW RATTLESNAKE 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 from April 1977 to current year.

REMARKS.--Sampler failed to identify time at which samples were taken. No flow was observed Feb. 2, Mar. 3.

EXTREMES FOR PERIOD OF RECORD.--

SEDIMENT LOAD: Maximum daily, 2,780 tons (2,520 tonnes) May 19, 1978; minimum daily, 0 tons on many days each year.

EXTREMES FOR CURRENT YEAR.--

SEDIMENT LOAD: Maximum daily, 2,780 tons (2,520 tonnes) May 19; minimum daily, 0 tons on many days during year.

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

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	TUR- BID- ITY (JTU)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN DEMAND, BIO- CHEM- ICAL, 5 DAY (MG/L)	HARD- NESS (MG/L AS CACO3)	HARD- NESS, NONCAR- BONATE (MG/L CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)
OCT 01...	0800	.32	2300	8.0	8.0	100	8.8	4.0	1100	830	240	120
NOV 10...	1515	.02	2600	7.9	4.0	10	17.4	5.1	1300	900	290	130
DEC 09...	1400	A.01	2200	8.0	.0	7	10.8	3.0	1600	1200	370	170
JAN 01...	1145	A.02	3100	7.3	.0	9	9.2	3.1	1500	1100	340	160
MAR 30...	1515	23	1100	7.6	15.0	65	9.3	5.1	350	250	82	36
MAY 11...	1650	45	1100	8.0	13.0	250	8.8	3.4	360	250	84	37
JUN 08...	1630	A3.3	3000	8.4	25.0	25	9.0	3.6	1200	920	270	130
JUL 20...	1700	1.8	2300	8.1	21.0	15	8.7	2.7	1000	840	250	100
AUG 17...	1620	.32	2500	8.1	18.0	10	9.8	1.9	1200	960	280	110
SEP 14...	1715	3.4	3100	8.2	18.0	3	9.7	2.6	1500	1300	350	140
S26...	0755	.68	3290	--	12.0	--	--	--	--	--	--	--

A-Daily mean discharge.

S-Seepage run data (see Explanation of Water-Quality Records).

[illegible]

06425720 BELLE FOURCHE RIVER BELOW RATTLESNAKE CREEK, NEAR PINEY, WY--Continued

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

DATE	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, NITRATE DIS- SOLVED (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)
OCT 01...	2.67	1.69	1600	--	.44	.34	.39	.73	1.2	5.2	.10
NOV 10...	3.02	.12	--	--	.24	.11	.57	.68	.92	4.1	.04
DEC 09...	4.04	.08	--	--	.39	.20	1.4	1.6	2.0	8.8	.03
JAN 01...	3.84	.15	--	--	.58	.35	.85	1.2	1.8	7.9	.00
MAR 30...	1.02	46.8	--	--	.08	.10	.88	.98	1.1	4.7	.14
MAY 11...	1.02	91.2	--	--	.11	.11	1.2	1.3	1.4	6.2	.20
JUN 08...	3.32	21.7	--	.05	.07	.06	1.2	1.3	1.4	6.1	.01
JUL 20...	2.43	8.70	--	--	14	.06	1.4	1.5	16	69	.04
AUG 17...	2.65	1.68	--	--	27	.05	1.2	1.2	28	120	.02
SEP 14...	3.30	22.3	--	--	47	.04	.34	.38	47	210	.15
26...	--	--	--	--	--	--	--	--	--	--	--

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)	BORON, DIS- SOLVED (UG/L AS B)	CADMIUM TOTAL RECOV- ERABLE (UG/L AS CD)	CADMIUM DIS- SOLVED (UG/L AS CD)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR)
OCT 01...	0800	1600	--	4	--	0	--	290	10	--	5
NOV 10...	1515	--	--	--	--	--	--	350	--	--	--
DEC 09...	1400	--	--	--	--	--	--	160	--	--	--
JAN 01...	1145	40	20	1	1	0	0	360	3	3	10
MAR 30...	1515	1400	20	1	1	0	0	110	3	1	10
MAY 11...	1650	--	--	--	--	--	--	110	--	--	--
JUN 08...	1630	--	--	--	--	--	--	150	--	--	--
JUL 20...	1700	370	--	2	--	10	--	590	3	--	10
AUG 17...	1620	--	--	--	--	--	--	900	--	--	--
SEP 14...	1715	--	--	--	--	--	--	1700	--	--	--

DATE	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)	IRON, DIS- SOLVED (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)
OCT 01...	--	20	--	2000	50	<100	--	50	--	290	--
NOV 10...	--	--	--	--	90	--	--	--	--	--	--
DEC 09...	--	--	--	--	60	--	--	--	--	--	--
JAN 01...	0	3	3	630	0	8	1	80	80	2000	2000
MAR 30...	0	8	3	2000	30	6	0	30	40	220	220
MAY 11...	--	--	--	--	150	--	--	--	--	--	--
JUN 08...	--	--	--	--	80	--	--	--	--	--	--
JUL 20...	--	11	--	490	160	16	--	90	--	120	--
AUG 17...	--	--	--	--	800	--	--	--	--	--	--
SEP 14...	--	--	--	--	580	--	--	--	--	--	--

CHEYENNE RIVER BASIN

06425720 BELLE FOURCHE RIVER BELOW RATTLESNAKE CREEK, NEAR PINEY, WY--Continued

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

DATE	MERCURY TOTAL RECOV- ERABLE (UG/L AS HG)	MERCURY DIS- SOLVED (UG/L AS HG)	MOLYB- DENUM, TOTAL RECOV- ERABLE (UG/L AS MO)	MOLYB- DENUM, TOTAL DIS- SOLVED (UG/L AS MO)	NICKEL, TOTAL RECOV- ERABLE (UG/L AS NI)	NICKEL, TOTAL DIS- SOLVED (UG/L AS NI)	SELE- NIUM, TOTAL (UG/L AS SE)	SELE- NIUM, TOTAL DIS- SOLVED (UG/L AS SE)	VANA- DIUM, DIS- SOLVED (UG/L AS V)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN)	ZINC, TOTAL DIS- SOLVED (UG/L AS ZN)
OCT 01...	.0	--	2	--	<50	--	1	--	--	50	--
NOV 10...	--	--	--	--	--	--	--	--	--	--	--
DEC 09...	--	--	--	--	--	--	--	--	--	--	--
JAN 01...	.1	.0	3	1	5	4	1	1	.0	20	20
MAR 30...	.0	.0	5	3	7	2	4	2	1.0	40	20
MAY 11...	--	--	--	--	--	--	--	--	--	--	--
JUN 08...	--	--	--	--	--	--	--	--	--	--	--
JUL 20...	.0	--	7	--	9	--	13	--	--	40	--
AUG 17...	--	--	--	--	--	--	--	--	--	--	--
SEP 14...	--	--	--	--	--	--	--	--	--	--	--

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)
OCT 01...	0800	<29	91	45	93	37	76	.30	6.6

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
MAR 19...	1010	1.0	217	1380	809	68	88	100
21...	1300	4.0	58	1680	263	84	98	100

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 01...	1550	8.0	5.0	4	7	18	31
AUG 09...	0930	19.5	4.2	2	2	5	12

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 01...	39	52	70	86	94	98	100
AUG 09...	20	28	45	66	85	98	100

06425720 BELLE FOURCHE RIVER BELOW RATTLESNAKE CREEK, NEAR PINEY, WY--Continued

SUSPENDED-SEDIMENT DISCHARGE (TONS/DAY), WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

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	.01		.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	.20		.05
14	.00		.00	.00		.00	.06		.01
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
TOTAL	0.01		0.00	0.00		0.00	0.26		0.06
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)
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	.50		.07
13	.00		.00	.00		.00	4.0		.54
14	.00		.00	.00		.00	9.0		1.2
15	.00		.00	.00		.00	5.6		.76
16	.00		.00	.00		.00	4.3		.38
17	.00		.00	.00		.00	13		1.9
18	.00		.00	.00		.00	77		36
19	.00		.00	.00		.00	54		20
20	.00		.00	.00		.00	36		10
21	.00		.00	.00		.00	24		5.3
22	.00		.00	.00		.00	46		15
23	.00		.00	.00		.00	38		11
24	.00		.00	.00		.00	28		6.8
25	.00		.00	.00		.00	27		6.4
26	.00		.00	.00		.00	25		5.6
27	.00		.00	.00		.00	23		4.9
28	.00		.00	.00		.00	21		4.2
29	.00		.00	---			20		3.9
30	.00		.00	---			20		3.9
31	.00		.00	---			14		2.2
TOTAL	0.00		0.00	0.00		0.00	489.40		140.05

CHEYENNE RIVER BASIN

06425720 BELLE FOURCHE RIVER BELOW RATTLESNAKE CREEK, NEAR PINEY, WY--Continued

SUSPENDED-SEDIMENT DISCHARGE (TONS/DAY), WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

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	9.5		1.1	3.0		.34	5.3		1.9
2	7.2		.82	3.7		.42	4.9		1.8
3	5.6		.64	4.0		.45	4.6		1.8
4	4.9		.56	6.0		.68	4.3		1.8
5	4.3		.49	4.9		.56	4.3		1.8
6	3.7		.42	3.7		.48	3.4		1.6
7	3.4		.39	4.0		.45	2.7		1.5
8	3.2		.36	12		1.7	3.0		1.7
9	2.7		.31	18		3.3	1.6		.91
10	2.5		.28	19		3.6	.93		.53
11	2.3		.26	18		3.3	1.6		.91
12	2.3		.26	18		3.3	1.9		1.1
13	2.3		.26	17		3.0	1.9		1.1
14	2.3		.26	16		2.7	1.7		.96
15	2.3		.26	16		2.7	1.6		.91
16	2.5		.28	16		2.7	1.4		1.3
17	3.0		.34	34		9.4	1.6		1.4
18	3.0		.34	949		2320	1.6		1.4
19	3.0		.34	1060		2780	1.6		1.4
20	3.4		.39	261		273	1.6		1.4
21	3.3		.37	88		45	1.6		1.4
22	3.2		.36	47		16	1.6		1.4
23	3.2		.36	32		8.5	1.6		1.4
24	3.2		.36	24		5.3	1.6		1.4
25	3.2		.36	16		3.9	1.4		1.3
26	3.0		.34	12		3.0	1.2		1.1
27	3.0		.34	9.0		2.5	1.0		.89
28	3.2		.36	7.2		2.2	1.0		.89
29	3.4		.39	6.8		2.1	1.8		1.6
30	3.4		.39	6.4		2.0	40		12
31	---			6.0		1.9	---		
TOTAL	105.5		11.99	2737.7		5504.48	104.33		50.60
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)
JULY			AUGUST			SEPTEMBER			
1	22		4.6	.83		.25	.00		.00
2	11		1.4	.93		.28	.01		.00
3	4.9		1.0	.65		.20	.00		.00
4	2.7		.85	.65		.20	.00		.00
5	2.1		.73	.65		.20	.00		.00
6	1.7		.63	.57		.17	.00		.00
7	1.4		.57	.57		.17	.00		.00
8	1.4		.57	.50		.15	.00		.00
9	1.4		.57	.40		.12	.00		.00
10	1.6		.65	.23		.06	.00		.00
11	1.4		.59	.19		.05	.00		.00
12	1.2		.49	.13		.04	.00		.00
13	1.0		.40	.06		.02	.00		.00
14	.83		.34	.05		.01	.00		.00
15	.74		.30	.13		.04	.00		.00
16	.65		.26	.05		.01	.00		.00
17	.57		.23	.03		.01	.00		.00
18	.37		.15	.02		.01	.00		.00
19	.23		.09	.02		.01	.00		.00
20	.37		.15	.01		.00	.00		.00
21	1.4		.56	.03		.01	.00		.00
22	12		1.7	.03		.01	.00		.00
23	10		1.2	.05		.01	.00		.00
24	16		2.7	.06		.01	.00		.00
25	8.2		2.5	.06		.01	.00		.00
26	4.0		1.2	.06		.01	.00		.00
27	3.0		.92	.05		.01	.00		.00
28	1.9		.58	.06		.01	.00		.00
29	1.0		.31	.02		.01	.00		.00
30	1.0		.31	.02		.01	.00		.00
31	1.0		.31	.01		.00	---		.00
TOTAL	117.06		26.86	7.12		2.10	0.01		0.00
YEAR	3561.39		5736.14						

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 good except those for December to June, which are poor. Several small stockwater and soil conservation reservoirs above station.

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, about 5,630 ft³/s (159 m³/s) May 18, gage height, about 16.3 ft (4.97 m), from floodmarks caused by dam failure; no flow for several days during year.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.3	.00	.05	.02	.01	.04	12	2.8	6.9	15	2.3	2.6
2	12	.00	.04	.04	.00	.02	8.5	2.6	6.1	12	1.9	3.2
3	2.3	.00	.04	.05	.00	.00	6.9	2.8	5.6	8.1	2.3	3.7
4	.65	.01	.05	.10	.00	.10	5.6	3.9	5.0	5.0	2.3	3.4
5	.41	.02	.04	.13	.00	.22	5.0	7.2	4.9	3.7	2.1	3.2
6	.17	.02	.02	.14	.00	.30	4.4	9.2	4.0	23	1.9	2.6
7	.12	.02	.03	.10	.00	1.4	3.9	21	3.2	68	1.8	3.0
8	.08	.03	.02	.08	.00	5.3	3.9	73	3.3	11	2.1	3.4
9	.08	.02	.01	.06	.00	14	3.4	144	1.8	14	1.8	2.6
10	.07	.02	.01	.04	.00	25	3.0	155	1.1	5.0	1.3	2.6
11	.05	.03	.02	.06	.00	32	2.8	52	1.8	3.9	.97	3.4
12	.07	.03	.03	.08	.00	28	2.8	24	2.0	2.8	1.1	3.0
13	.04	.03	.04	.06	.00	51	2.6	20	2.0	2.4	1.3	3.0
14	.02	.03	.07	.06	.00	61	2.6	17	1.9	1.9	1.4	3.0
15	.02	.02	.20	.05	.00	43	2.6	15	1.6	1.8	1.5	3.0
16	.13	.04	.20	.03	.00	26	2.8	14	1.4	1.5	1.3	2.6
17	.07	.02	.12	.05	.00	77	2.8	166	1.6	.97	.41	2.8
18	.02	.03	.07	.03	.02	396	2.8	2150	1.6	1.1	.17	3.0
19	.01	.02	.04	.02	.04	304	2.8	957	1.6	1.4	.20	3.0
20	.01	.01	.03	.04	.04	137	2.8	296	1.6	1.8	.72	2.8
21	.25	.01	.07	.06	.08	78	2.8	99	1.6	175	1.6	2.6
22	.10	.02	.10	.08	.18	77	3.4	54	1.5	94	1.9	2.1
23	.04	.03	.09	.07	.16	73	3.0	37	1.6	14	.97	.72
24	.03	.03	.05	.06	.12	33	3.0	28	1.6	8.1	1.2	.24
25	.02	.04	.06	.04	.10	35	2.8	18	1.4	7.2	2.1	.17
26	.01	.05	.08	.03	.10	32	2.6	14	1.2	5.0	2.4	.65
27	.01	.05	.06	.04	.11	30	2.6	11	1.0	4.4	2.4	2.3
28	.01	.05	.09	.04	.07	28	2.8	9.4	1.0	3.2	2.6	1.8
29	.01	.04	.09	.05	---	24	3.4	8.5	1.8	2.8	2.8	1.2
30	.01	.05	.08	.04	---	22	3.4	8.7	75	2.8	2.6	1.6
31	.01	---	.04	.02	---	18	---	7.7	---	2.6	2.8	---
TOTAL	20.12	.77	1.94	1.77	1.03	1651.38	113.8	4427.8	146.7	503.47	52.24	73.28
MEAN	.65	.026	.063	.057	.037	53.3	3.79	143	4.89	16.2	1.69	2.44
MAX	12	.05	.20	.14	.18	396	12	2150	75	175	2.8	3.7
MIN	.01	.00	.01	.02	.00	.00	2.6	2.6	1.0	.97	.17	.17
AC-FT	40	1.5	3.8	3.5	2.0	3280	226	8780	291	999	104	145
CAL YR 1977 TOTAL	642.76			MEAN 1.76	MAX 204	MIN .00	AC-FT 1270					
WTR YR 1978 TOTAL	6994.30			MEAN 19.2	MAX 2150	MIN .00	AC-FT 13870					

CHEYENNE RIVER BASIN

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 from April 1977 to current year.

REMARKS.--Sampler failed to identify time at which samples were taken. No flow was observed Oct. 1, Nov. 10, Dec. 9, Jan. 1, Feb. 2, Sept. 14.

EXTREMES FOR PERIOD OF RECORD. --

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 LOAD: Maximum daily, 40,100 tons (36,400 tonnes) May 18; minimum daily, 0 tons on many days during year.

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

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	TUR- BID- ITY (JTU)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN DEMAND, BIO- CHEM- ICAL, 5 DAY (MG/L)	HARD- NESS (MG/L AS CACO3)	HARD- NESS, NONCAR- BONATE (MG/L CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)
MAR 30...	1345	20	1100	7.5	14.0	20	12.0	5.8	380	290	95	35
MAY 11...	1745	A18	1750	8.1	14.0	15	9.4	3.4	640	510	150	65
JUN 08...	1740	2.3	3800	8.1	22.5	25	8.2	3.4	1600	1300	340	180
JUL 20...	1800	.27	4100	8.1	22.0	2	8.7	4.4	1500	1300	290	200
AUG 17...	1730	.03	4000	8.0	18.0	5	10.5	2.2	1500	1200	290	190
SEP 26...	0645	E.001	6250	--	10.0	--	--	--	--	--	--	--

A-Daily mean discharge.

E-Estimate.

S-Seepage run data (see Explanation of Water-Quality Records).

[illegible][illegible]

06425780 BELLE FOURCHE RIVER ABOVE DRY CREEK, NEAR PINEY, WY--Continued

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

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)	BORON, DIS- SOLVED (UG/L AS B)	CADMIUM TOTAL RECOV- ERABLE (UG/L AS CD)	CADMIUM DIS- SOLVED (UG/L AS CD)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR)
MAR 30...	1345	560	20	1	1	0	0	80	3	2	10
MAY 11...	1745	280	--	2	--	0	--	90	2	--	10
JUN 08...	1740	--	--	--	--	--	--	160	--	--	--
JUL 20...	1800	100	--	4	--	10	--	200	2	--	20
AUG 17...	1730	--	--	--	--	--	--	180	--	--	--

DATE	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)	IRON, DIS- SOLVED (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)
MAR 30...	0	7	3	860	30	13	5	30	40	270	220
MAY 11...	--	7	--	880	120	9	--	50	--	250	--
JUN 08...	--	--	--	--	120	--	--	--	--	--	--
JUL 20...	--	7	--	280	200	10	--	130	--	720	--
AUG 17...	--	--	--	--	410	--	--	--	--	--	--

DATE	MERCURY TOTAL RECOV- ERABLE (UG/L AS HG)	MERCURY DIS- SOLVED (UG/L AS HG)	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 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, DIS- SOLVED (UG/L AS ZN)
MAR 30...	.0	.0	5	3	4	2	4	2	.0	40	20
MAY 11...	.0	--	3	--	1	--	0	--	--	30	--
JUN 08...	--	--	--	--	--	--	--	--	--	--	--
JUL 20...	.0	--	6	--	9	--	0	--	--	30	--
AUG 17...	--	--	--	--	--	--	--	--	--	--	--

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, METHOD (PCI/L)	URANIUM NATURAL DIS- SOLVED (UG/L AS U)
MAR 30...	1345	<8.7	1.0	13	2.1	11	2.2	.08	1.7

CHEYENNE RIVER BASIN

06425780 BELLE FOURCHE RIVER ABOVE DRY CREEK, NEAR PINEY, WY--Continued

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

DATE	TIME	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
MAY 18...	1750	1060	927	2650	66	81	100

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 01...	1240	8.0	2.7	27	36	53	70
AUG 09...	1300	22.0	.43	8	10	14	24

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 01...	79	85	90	94	98	100	--
AUG 09...	30	35	43	55	72	80	100

06425780 BELLE FOURCHE RIVER ABOVE DRY CREEK, NEAR PINEY, WY--Continued

SUSPENDED-SEDIMENT DISCHARGE (TONS/DAY), WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

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	3.3		.48	.00		.00	.05		.00
2	12		4.6	.00		.00	.04		.00
3	2.3		.26	.00		.00	.04		.00
4	.65		.09	.01		.00	.05		.00
5	.41		.06	.02		.00	.04		.00
6	.17		.02	.02		.00	.02		.00
7	.12		.02	.02		.00	.03		.00
8	.08		.01	.03		.00	.02		.00
9	.08		.01	.02		.00	.01		.00
10	.07		.01	.02		.00	.01		.00
11	.05		.01	.03		.00	.02		.00
12	.07		.01	.03		.00	.03		.00
13	.04		.01	.03		.00	.04		.00
14	.02		.00	.03		.00	.07		.01
15	.02		.00	.02		.00	.20		.02
16	.13		.02	.04		.00	.20		.02
17	.07		.01	.02		.00	.12		.01
18	.02		.00	.03		.00	.07		.01
19	.01		.00	.02		.00	.04		.00
20	.01		.00	.01		.00	.03		.00
21	.25		.03	.01		.00	.07		.01
22	.10		.01	.02		.00	.10		.01
23	.04		.01	.03		.00	.09		.01
24	.03		.00	.03		.00	.05		.00
25	.02		.00	.04		.00	.06		.00
26	.01		.00	.05		.01	.08		.01
27	.01		.00	.05		.01	.06		.00
28	.01		.00	.05		.00	.09		.01
29	.01		.00	.04		.00	.09		.01
30	.01		.00	.05		.01	.08		.01
31	.01		.00	---			.04		.00
TOTAL	20.12		5.67	0.77		0.03	1.94		0.14
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)
JANUARY				FEBRUARY			MARCH		
1	.02		.00	.01		.00	.04		.00
2	.04		.00	.00		.00	.02		.00
3	.05		.00	.00		.00	.00		.00
4	.10		.01	.00		.00	.10		.01
5	.13		.01	.00		.00	.22		.02
6	.14		.01	.00		.00	.30		.04
7	.10		.01	.00		.00	1.4		.11
8	.08		.01	.00		.00	5.3		1.1
9	.06		.00	.00		.00	14		6.1
10	.04		.00	.00		.00	25		17
11	.06		.00	.00		.00	32		26
12	.08		.01	.00		.00	28		20
13	.06		.00	.00		.00	51		58
14	.06		.00	.00		.00	61		79
15	.05		.00	.00		.00	43		43
16	.03		.00	.00		.00	26		18
17	.05		.00	.00		.00	77		119
18	.03		.00	.02		.00	396		2090
19	.02		.00	.04		.00	304		1310
20	.04		.00	.04		.00	137		326
21	.06		.00	.08		.01	78		122
22	.08		.01	.18		.02	77		119
23	.07		.01	.16		.02	73		109
24	.06		.00	.12		.01	33		27
25	.04		.00	.10		.01	35		30
26	.03		.00	.10		.01	32		26
27	.04		.00	.11		.01	30		23
28	.04		.00	.07		.01	28		20
29	.05		.00	---			24		16
30	.04		.00	---			22		13
31	.02		.00	---			18		9.4
TOTAL	1.77		0.08	1.03		0.10	1651.38		4627.78

06425780 BELLE FOURCHE RIVER ABOVE DRY CREEK, NEAR PINEY, WY--Continued

SUSPENDED-SEDIMENT DISCHARGE (TONS/DAY), WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

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	12		4.6	2.8		.36	6.9		1.8
2	8.5		2.5	2.6		.32	6.1		1.4
3	6.9		1.8	2.8		.36	5.6		1.2
4	5.6		1.2	3.9		.65	5.0		1.0
5	5.0		1.0	7.2		1.9	4.9		.97
6	4.4		.80	9.2		2.9	4.0		.68
7	3.9		.65	21		12	3.2		.46
8	3.9		.65	73		109	3.3		.49
9	3.4		.51	144		356	1.8		.17
10	3.0		.41	155		405	1.1		.07
11	2.8		.36	52		60	1.8		.17
12	2.8		.36	24		16	2.0		.20
13	2.6		.32	20		11	2.0		.20
14	2.6		.32	17		8.5	1.9		.18
15	2.6		.32	15		6.8	1.6		.14
16	2.8		.36	14		6.1	1.4		.11
17	2.8		.36	166		456	1.6		.14
18	2.8		.36	2150		40100	1.6		.14
19	2.8		.36	957		9750	1.6		.14
20	2.8		.36	296		1250	1.6		.14
21	2.8		.36	99		185	1.6		.14
22	3.4		.51	54		64	1.5		.12
23	3.0		.41	37		33	1.6		.14
24	3.0		.41	28		20	1.6		.14
25	2.8		.36	18		9.5	1.4		.11
26	2.6		.32	14		6.1	1.2		.08
27	2.6		.32	11		4.0	1.0		.06
28	2.8		.36	9.4		3.0	1.0		.06
29	3.4		.51	8.5		2.5	1.8		.17
30	3.4		.51	8.7		2.6	75		114
31	---			7.7		2.1	---		
TOTAL	113.8		21.67	4427.8		52884.69	146.7		124.82
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)
JULY			AUGUST			SEPTEMBER			
1	15		6.8	2.3		.26	2.6		.32
2	12		4.6	1.9		.18	3.2		.46
3	8.1		2.3	2.3		.26	3.7		.59
4	5.0		1.0	2.3		.26	3.4		.51
5	3.7		.59	2.1		.22	3.2		.46
6	23		14	1.9		.18	2.6		.32
7	68		96	1.8		.17	3.0		.41
8	11		4.0	2.1		.22	3.4		.51
9	14		6.1	1.8		.17	2.6		.32
10	5.0		1.0	1.3		.10	2.6		.32
11	3.9		.65	.97		.06	3.4		.51
12	2.8		.36	1.1		.07	3.0		.41
13	2.4		.28	1.3		.10	3.0		.41
14	1.9		.18	1.4		.11	3.0		.41
15	1.8		.17	1.5		.12	3.0		.41
16	1.5		.12	1.3		.10	2.6		.32
17	.97		.06	.41		.05	2.8		.36
18	1.1		.07	.17		.02	3.0		.41
19	1.4		.11	.20		.02	3.0		.41
20	1.8		.17	.72		.08	2.8		.36
21	175		501	1.6		.14	2.6		.32
22	94		169	1.9		.18	2.1		.22
23	14		6.1	.97		.06	.72		.08
24	8.1		2.3	1.2		.08	.24		.02
25	7.2		1.9	2.1		.22	.17		.02
26	5.0		1.0	2.4		.28	.65		.08
27	4.4		.80	2.4		.28	2.3		.26
28	3.2		.46	2.6		.32	1.8		.17
29	2.8		.36	2.8		.36	1.2		.08
30	2.8		.36	2.6		.32	1.6		.14
31	2.6		.32	2.8		.36	---		
TOTAL	503.47		822.16	52.24		5.35	73.28		9.62
YEAR	6994.30		58502.11						

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 September 1978.

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 fair. Numerous small reservoirs above station. Flow occasionally affected by contributions from mine dewatering.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 2,170 ft³/s (61.5 m³/s) May 19, gage height, 8.66 ft (2.640 m); no flow for many days.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	9.8	.00	.00	.00	.00	.00	.99	.12	7.3	4.7	1.9	2.0
2	.21	.00	.00	.00	.00	.00	.77	.06	5.4	3.0	2.2	1.9
3	.01	.00	.00	.00	.00	.00	.57	.03	4.5	2.2	2.4	1.7
4	.00	.00	.00	.00	.00	.00	.49	.12	5.6	1.7	2.3	1.5
5	.00	.00	.00	.00	.00	.00	.35	.56	5.4	1.5	2.1	1.4
6	.00	.00	.00	.00	.00	.00	.31	1.4	3.6	1.3	1.6	1.5
7	.00	.00	.00	.00	.00	.00	.30	8.3	2.7	1.7	2.0	1.4
8	.00	.00	.00	.00	.00	.00	.34	32	2.9	1.3	2.0	1.4
9	.00	.00	.00	.00	.00	.30	.35	45	1.9	4.3	1.7	1.3
10	.00	.00	.00	.00	.00	5.0	.31	41	1.8	1.3	2.2	1.3
11	.00	.00	.00	.00	.00	20	.27	11	1.7	.86	2.3	1.3
12	.00	.00	.00	.00	.00	16	.27	4.7	1.4	.60	2.2	1.9
13	.00	.00	.00	.00	.00	13	.19	2.5	1.3	.50	2.2	1.9
14	.00	.00	.00	.00	.00	10	.11	1.7	1.1	.66	2.1	1.8
15	.00	.00	.00	.00	.00	11	.11	1.2	.94	.50	2.3	1.8
16	.00	.00	.00	.00	.00	12	.16	.90	.79	.33	1.8	1.8
17	.00	.00	.00	.00	.00	15	.23	29	.94	.14	2.4	2.4
18	.00	.00	.00	.00	.00	50	.37	766	1.2	.08	2.4	2.5
19	.00	.00	.00	.00	.00	45	.23	1500	1.3	.06	2.4	2.5
20	.00	.00	.00	.00	.00	100	.09	339	1.3	.06	2.3	2.6
21	.00	.00	.00	.00	.00	72	.03	130	1.1	1.9	2.1	2.7
22	.00	.00	.00	.00	.00	48	.12	83	10	1.0	2.0	2.6
23	.00	.00	.00	.00	.00	25	.49	65	35	.79	2.2	1.5
24	.00	.00	.00	.00	.00	9.0	.38	42	30	.38	2.2	1.8
25	.00	.00	.00	.00	.00	8.0	.13	30	20	.15	2.0	1.9
26	.00	.00	.00	.00	.00	5.4	.03	21	14	.06	2.0	2.3
27	.00	.00	.00	.00	.00	3.0	.00	27	11	.02	2.3	2.5
28	.00	.00	.00	.00	.00	2.5	.07	17	8.3	.00	2.4	2.4
29	.00	.00	.00	.00	---	2.3	.26	14	14	.12	1.9	2.8
30	.00	.00	.00	.00	---	1.6	.24	13	21	1.4	2.1	2.4
31	.00	---	.00	.00	---	1.2	---	9.4	---	1.7	2.0	---
TOTAL	10.02	.00	.00	.00	.00	475.30	8.56	3235.99	217.47	34.31	66.0	58.8
MEAN	.32	.000	.000	.000	.000	15.3	.29	104	7.25	1.11	2.13	1.96
MAX	9.8	.00	.00	.000	.00	100	.99	1500	35	4.7	2.4	2.8
MIN	.00	.00	.00	.00	.00	.00	.00	.03	.79	.00	1.6	1.3
AC-FT	20	.00	.00	.00	.00	943	17	6420	431	68	131	117

WTR YR 1978 TOTAL 4106.45 MEAN 11.3 MAX 1500 MIN .00 AC-FT 8150

CHEYENNE RIVER BASIN

06425900 CABALLO CREEK AT MOUTH, NEAR PINEY, WY--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--October 1977 to September 1978.

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

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	STREP- TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)	HARD- NESS (MG/L AS CACO3)	HARD- NESS, NONCAR- BONATE (MG/L CACO3)
MAR											
17...	0930	13	420	7.5	.0	10.1	81	K3	330	160	100
22...	1830	44	320	6.1	6.0	8.2	77	120	310	120	76
APR											
05...	1115	.35	1650	8.0	9.5	9.7	100	K6	K10	650	450
MAY											
10...	1335	45	1000	8.1	16.5	7.9	95	67	--	410	320
JUN											
27...	0900	12	930	8.0	18.5	6.5	81	140	630	370	210
JUL											
25...	0825	.19	2340	8.1	19.0	6.6	84	140	280	900	630
AUG											
15...	1530	2.4	2400	8.3	22.0	11.4	152	69	63	1200	1000
SEP											
12...	1200	2.0	2280	8.1	12.5	9.7	107	110	160	1200	1000
S26...	0955	2.3	2650	--	12.5	--	--	--	--	--	--

K-Results based on colony count outside the acceptable range (non-ideal colony count).
S-Seepage run data (see Explanation of Water-Quality Records).

[illegible][illegible]

06425900 CABALLO CREEK AT MOUTH, NEAR PINEY, WY--Continued

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

DATE	NITRO- GEN, TOTAL (MG/L AS NO3)	PHOS- PHORUS, TOTAL (MG/L AS P)	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)	PHYTO- PLANK- TON, TOTAL (CELLS PER ML)	PERI- PHYTON BIOMASS ASH WEIGHT G/SQ M	PERI- PHYTON BIOMASS TOTAL DRY WEIGHT G/SQ M	CHLOR-A PERI- PHYTON CHROMO- GRAPHIC FLUOROM (MG/M2)	CHLOR-B PERI- PHYTON CHROMO- GRAPHIC FLUOROM (MG/M2)
MAR 17...	4.7	.24	.17	18	1.4	33000	--	--	--	--
MAR 22...	6.3	.35	.25	12	2.1	1400	--	--	--	--
APR 05...	2.7	.04	.02	8.9	.8	1800	.236	.315	.000	.000
MAY 10...	4.1	.07	.02	8.3	.8	21000	--	--	--	--
JUN 27...	3.6	.05	.01	9.3	.9	650	--	--	--	--
JUL 25...	4.5	.02	.01	6.3	.2	1700	--	--	--	--
AUG 15...	4.2	.01	.00	6.2	.5	280	--	--	--	--
SEP 12...	1.9	.02	.01	7.4	.5	170	3.94	5.67	3.56	.580
SEP 26...	--	--	--	--	--	--	--	--	--	--

DATE	TIME	ALUM- INUM, DIS- SOLVED (UG/L AS AL)	ARSENIC 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, DIS- SOLVED (UG/L AS BA)	BARIUM, FM BOT- TOM MA- TERIAL (UG/G AS BA)	BERYL- LIUM, TOTAL RECOV- ERABLE (UG/L AS BE)	BERYL- LIUM, DIS- SOLVED (UG/L AS BE)
MAR 17...	0930	--	--	--	--	--	--	--	--	--
MAR 22...	1830	50	1	2	11	200	100	1000	0	0
APR 05...	1115	--	--	--	--	--	--	--	--	--
MAY 10...	1335	--	--	--	--	--	--	--	--	--
JUN 27...	0900	--	--	--	--	--	--	--	--	--
JUL 25...	0825	--	--	--	--	--	--	--	--	--
AUG 15...	1530	0	--	1	--	--	100	--	--	0
SEP 12...	1200	--	--	--	--	--	--	--	--	--

DATE	BERYL- LIUM, RECOV. FM BOT- TOM MA- TERIAL (UG/G)	BORON, DIS- SOLVED (UG/L AS B)	CADMIUM TOTAL 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, DIS- SOLVED (UG/L AS CR)	CHRO- MIUM, RECOV. FM BOT- TOM MA- TERIAL (UG/G)	COBALT, TOTAL RECOV- ERABLE (UG/L AS CO)	COBALT, DIS- SOLVED (UG/L AS CO)
MAR 17...	--	120	--	--	--	--	--	--	--	--
MAR 22...	10	110	0	3	1	10	0	60	1	0
APR 05...	--	220	--	--	--	--	--	--	--	--
MAY 10...	--	160	--	--	--	--	--	--	--	--
JUN 27...	--	120	--	--	--	--	--	--	--	--
JUL 25...	--	340	--	--	--	--	--	--	--	--
AUG 15...	--	1000	--	1	--	--	0	--	--	2
SEP 12...	--	1000	--	--	--	--	--	--	--	--

CHEYENNE RIVER BASIN

06425900 CABALLO CREEK AT MOUTH, NEAR PINEY, WY--Continued

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

DATE	COBALT, REC OV. FM BOT- TOM MA- TERIAL (UG/G AS CO)	COPPER, TOTAL REC OV- ERABLE (UG/L AS CU)	COPPER, DIS- SOLVED (UG/L AS CU)	COPPER, REC OV. FM BOT- TOM MA- TERIAL (UG/G AS CU)	IRON, DIS- SOLVED (UG/L AS FE)	LEAD, TOTAL REC OV- ERABLE (UG/L AS PB)	LEAD, DIS- SOLVED (UG/L AS PB)	LEAD, REC OV. FM BOT- TOM MA- TERIAL (UG/G AS PB)	LITHIUM TOTAL REC OV- ERABLE (UG/L AS LI)	LITHIUM DIS- SOLVED (UG/L AS LI)
MAR 17...	--	--	--	--	100	--	--	--	--	--
MAR 22...	5	6	2	10	120	2	0	30	6	2
APR 05...	--	--	--	--	60	--	--	--	--	--
MAY 10...	--	--	--	--	10	--	--	--	--	--
JUN 27...	--	--	--	--	30	--	--	--	--	--
JUL 25...	--	--	--	--	40	--	--	--	--	--
AUG 15...	--	--	1	--	20	--	0	--	--	110
SEP 12...	--	--	--	--	20	--	--	--	--	--

DATE	MANGA- NESE, TOTAL REC OV- ERABLE (UG/L AS MN)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	MANGA- NESE, REC OV. FM BOT- TOM MA- TERIAL (UG/G)	MERCURY TOTAL REC OV- ERABLE (UG/L AS HG)	MERCURY DIS- SOLVED (UG/L AS HG)	MERCURY REC OV. FM BOT- TOM MA- TERIAL (UG/L AS HG)	MOLYB- DENUM, TOTAL REC OV- ERABLE (UG/L AS MO)	MOLYB- DENUM, DIS- SOLVED (UG/L AS MO)	MOLYB- DENUM, REC OV. FM BOT- TOM MA- TERIAL (UG/G)	NICKEL, TOTAL REC OV- ERABLE (UG/L AS NI)
MAR 17...	--	--	--	--	--	--	--	--	--	--
MAR 22...	70	50	3300	.0	.0	.07	0	0	1	5
APR 05...	--	--	--	--	--	--	--	--	--	--
MAY 10...	--	--	--	--	--	--	--	--	--	--
JUN 27...	--	--	--	--	--	--	--	--	--	--
JUL 25...	--	--	--	--	--	--	--	--	--	--
AUG 15...	--	10	--	--	.1	--	--	4	--	--
SEP 12...	--	--	--	--	--	--	--	--	--	--

DATE	NICKEL, DIS- SOLVED (UG/L AS NI)	NICKEL, REC OV. FM BOT- TOM MA- TERIAL (UG/G AS NI)	SELE- NIUM, TOTAL (UG/L AS SE)	SELE- NIUM, DIS- SOLVED (UG/L AS SE)	SELE- NIUM, TOTAL IN BOT- TOM MA- TERIAL (UG/G)	VANA- DIUM, DIS- SOLVED (UG/L AS V)	ZINC, TOTAL REC OV- ERABLE (UG/L AS ZN)	ZINC, DIS- SOLVED (UG/L AS ZN)	ZINC, REC OV. FM BOT- TOM MA- TERIAL (UG/G AS ZN)
MAR 17...	--	--	--	--	--	--	--	--	--
MAR 22...	2	27	1	0	0	2.0	20	10	300
APR 05...	--	--	--	--	--	--	--	--	--
MAY 10...	--	--	--	--	--	--	--	--	--
JUN 27...	--	--	--	--	--	--	--	--	--
JUL 25...	--	--	--	--	--	--	--	--	--
AUG 15...	3	--	--	0	--	.0	--	10	--
SEP 12...	--	--	--	--	--	--	--	--	--

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 ALPHA, DIS- SOLVED (PCI/L AS U-NAT)	GROSS ALPHA, SUSP. TOTAL (PCI/L AS U-NAT)
MAR 22...	1830	<2.6	7.2	19	18	<1.8	4.9
AUG 15...	1530	<19	<.4	35	<.4	<13	<.3

CHEYENNE RIVER BASIN

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06425900 CABALLO CREEK AT MOUTH, NEAR PINEY, WY--Continued

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

DATE	TIME	TEMPER- ATURE (DEG C)	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SEDI- MENT, SUS- PENDED (MG/L)	SEDI- MENT DIS- CHARGE, SUS- PENDED (T/DAY)	SED. SUSP. FALL DIAM. % FINER THAN .004 MM	SED. SUSP. FALL DIAM. % FINER THAN .016 MM	SED. SUSP. FALL DIAM. % FINER THAN .062 MM
MAR								
17...	0930	.0	13	35	1.2	--	--	--
22...	1805	6.0	43	92	11	--	--	--
APR								
05...	1115	9.5	.35	5	.00	--	--	--
MAY								
10...	1335	16.5	45	28	3.4	--	--	--
18...	1900	9.0	1040	1300	3650	82	95	100
JUN								
27...	0900	18.5	12	23	.75	--	--	--
JUL								
25...	0825	19.0	.19	27	.01	--	--	--
AUG								
15...	1530	22.0	2.4	19	.12	--	--	--
27...	2200	--	5.4	584	8.5	--	--	--
SEP								
12...	1200	12.5	2.2	6	.04	--	--	--

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
MAR											
22...	1805	6.0	43	81	92	97	98	99	99	99	100

CHEYENNE RIVER BASIN
06425900 CABALLO CREEK AT MOUTH, NEAR PINEY, WY--Continued
QUALITATIVE AND ASSOCIATED QUANTITATIVE ANALYSES OF BIOLOGICAL DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
PHYTOPLANKTON ANALYSES

DATE TIME	MAR 17,78 0930	MAR 22,78 1830	APR 5,78 1115	MAY 10,78 1335
TOTAL CELLS/ML	33000	1400	1800	21000
DIVERSITY: DIVISION	0.1	0.7	1.7	0.4
..CLASS	0.1	0.7	1.7	0.4
..ORDER	0.1	0.8	2.3	0.5
...FAMILY	0.1	0.0	2.5	0.6
....GENUS	0.1	0.0	2.6	0.6

ORGANISM	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT
CHLOROPHYTA (GREEN ALGAE)								
..CHLOROPHYCEAE								
...CHLOROCOCCALES								
...CHARACIACEAE								
...SCHROEDERIA	--	-	40	3	--	-	*	0
...COELASTRACEAE								
...COELASTRUM	--	-	--	-	--	-	--	-
...ODCSTACEAE								
...ANKISTRODESMUS	*	0	80	6	140	8	*	0
...KIRCHNERIELLA	--	-	--	-	--	-	--	-
...SELENASTRUM	--	-	--	-	--	-	*	0
...TREUBARIA	--	-	--	-	--	-	--	-
...SCENEDESMACEAE								
...CRUCIGENIA	--	-	--	-	--	-	--	-
...SCENEDESMUS	--	-	--	-	58	3	--	-
...VOLVOCALES								
...CHLAMYDOMONADACEAE								
...CHLAMYDOMONAS	*	0	20	1	58	3	120	1
CHRYSOPHYTA								
..BACILLARIOPHYCEAE								
...CENTRALES								
...COSCINODISCAEAE								
...CYCLOTELLA	*	0	--	-	830#	45	230	1
...STEPHANODISCUS	--	-	--	-	--	-	--	-
..PENNALES								
...ACHNANTHACEAE								
...COCCONEIS	--	-	--	-	--	-	--	-
...DIATOMACEAE								
...DIATOMA	--	-	--	-	*	0	--	-
...FRAGILARIACEAE								
...SYNEDRA	--	-	--	-	14	1	*	0
...NAVICULACEAE								
...DIPLONEIS	--	-	--	-	--	-	--	-
...GYROSIGMA	--	-	--	-	--	-	--	-
...NAVICULA	*	0	20	1	29	2	160	1
...NITZSCHIAEAE								
...NITZSCHIA	--	-	40	3	230	13	140	1
..CHRYSOPHYCEAE								
...CHRYSONOMADALES								
...OCHROMONADACEAE								
...DINOBYTON	--	-	--	-	--	-	*	0
...OCHROMONAS	--	-	--	-	14	1	--	-
CRYPTOPHYTA (CRYPTOMONADS)								
..CRYPTOPHYCEAE								
...CRYPTOMONADALES								
...CRYPTOMONADACEAE								
...CRYPTOMONAS	--	-	--	-	43	2	--	-
CYANOPHYTA (BLUE-GREEN ALGAE)								
..CYANOPHYCEAE								
...CHROOCOCCALES								
...CHROOCOCCACEAE								
...ANACYSTIS	--	-	--	-	--	-	210	1
...HORMOGONALES								
...NOSTOCACEAE								
...ANABAENA	--	-	--	-	--	-	120	1
...NOSTOC	--	-	280#	20	--	-	--	-
...OSCILLATORIACEAE								
...OSCILLATORIA	33000#	99	800#	57	230	13	19000#	93
...HORMOGONALES	--	-	120	9	--	-	--	-
EUGLENOPHYTA (EUGLENOIDS)								
..EUGLENOPHYCEAE								
...EUGLENALES								
...EUGLENACEAE								
...EUGLENA	--	-	--	-	160	9	--	-
...TRACHELOMONAS	--	-	--	-	29	2	140	1
PYRRHOPHYTA (FIRE ALGAE)								
..DINOPHYCEAE								
...GYMNODINIALES								
...GYMNODINIACEAE								
...GYMNODINIUM	--	-	--	-	--	-	--	-
...PERIDINIALES								
...PERIDINIACEAE								
...PERIDINIUM	*	0	--	-	--	-	--	-

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--Continued

QUALITATIVE AND ASSOCIATED QUANTITATIVE ANALYSES OF BIOLOGICAL DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

PHYTOPLANKTON ANALYSES

DATE	JUNE 27, 78	
TIME	0900	
TOTAL CELLS/ML	650	
DIVERSITY: DIVISION	1.6	
..CLASS	1.8	
...ORDER	2.4	
...FAMILY	3.0	
....GENERA	3.2	
ORGANISM	CELLS /ML	PER- CENT
CHLOROPHYTA (GREEN ALGAE)		
..CHLOROPHYCEAE		
...CHLOROCOCCALES		
...OOCYSTACEAE		
....ANKISTRODESMUS	29	4
...SCENEDESMACEAE		
...SCENEDESMUS	14	2
..VOLVOCALES		
...CHLAMYDOMONADACEAE		
....CHLAMYDOMONAS	29	4
CHRYSTOPHYTA		
..BACILLARIOPHYCEAE (DIATOMS)		
...CENTRALES (CENTRIC)		
...COSCINODISCACEAE		
....CYCLOTELLA	130#	20
..PENNALES (PENNATE)		
...GOMPHONEMACEAE		
....GOMPHONEMA	14	2
...NAVICULACEAE (NAVICULOID)		
....CALONEIS	29	4
....NAVICULA	86	13
...NITZSCHACEAE		
....NITZSCHIA	110#	18
CYANOPHYTA (BLUE-GREEN ALGAE)		
..CYANOPHYCEAE		
...CHROCOCCOCCALES (COCCOID BLUE-GREENS)		
...CHROCOCCOCCAEAE		
....ANACYSTIS	100#	16
EUGLENOPHYTA (EUGLENOIDS)		
..CRYPTOPHYCEAE (CRYPTOMONADS)		
...CRYPTOMONIDALES		
...CRYPTOMONODACEAE		
....CRYPTOMONAS	57	9
..EUGLENOPHYCEAE		
...EUGLENALES		
...EUGLENACEAE		
....EUGLENA	29	4
....PHACUS	14	2

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

CHEYENNE RIVER BASIN
06425900 CABALLO CREEK AT MOUTH, NEAR PINEY, WY--Continued
QUALITATIVE AND ASSOCIATED QUANTITATIVE ANALYSES OF BIOLOGICAL DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
PHYTOPLANKTON ANALYSES

DATE TIME	JUL 25,78 0825	AUG 15,78 1530	SEP 13,78 1200
TOTAL CELLS/ML	1700	280	170
DIVERSITY: DIVISION	1.6	2.0	0.7
..CLASS	1.8	2.0	0.7
..ORDER	2.2	2.5	0.7
...FAMILY	2.6	3.1	0.8
....GENUS	3.1	3.2	1.6

ORGANISM	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT
CHLOROPHYTA (GREEN ALGAE)						
..CHLOROPHYCEAE						
...CHLOROCOCCALES						
....CHARACIACEAE						
....SCHROEDERIA	--	-	--	-	--	-
....COELASTRACEAE						
....COELASTRUM	--	-	43# 15		--	-
....OOCYSTACEAE						
....ANKISTRODESMUS	310# 18		14 5		--	-
....KIRCHNERIELLA	220 13		--	-	--	-
....SELENASTRUM	--	-	--	-	--	-
....TREUBARIA	22 1		--	-	--	-
....SCENEDESMACEAE						
....CRUCIGENIA	89 5		--	-	58# 33	
....SCENEDESMUS	44 3		36 13		86# 50	
....VOLVOCALES						
...CHLAMYDOMONADACEAE						
....CHLAMYDOMONAS	44 3		7 3		--	-
CHRYSTOPHYTA						
..BACILLARIOPHYCEAE						
...CENTRALES						
...COSCINUDISCACEAE						
....CYCLOTELLA	490# 29		41 15		--	-
....STEPHANODISCUS	--	-	2 1		--	-
..PENNALES						
...ACHNANTHACEAE						
....COCCONEIS	22 1		2 1		14 8	
...DIATOMACEAE						
....DIATOMA	--	-	--	-	--	-
...FRAGILARIACEAE						
....SYNEDRA	--	-	--	-	--	-
...NAVICULACEAE						
....DIPLONEIS	22 1		--	-	--	-
....GYROSIGMA	--	-	2 1		--	-
....NAVICULA	--	-	2 1		--	-
...NITZSCHIA						
....NITZSCHIA	89 5		46# 16		14 8	
..CHRYSTOPHYCEAE						
...CHRYSDOMONADALES						
....OCHROMONADACEAE						
....DINOBYRON	--	-	--	-	--	-
....OCHROMONAS	89 5		--	-	--	-
CRYPTOPHYTA (CRYPTOMONADS)						
..CRYPTOPHYCEAE						
...CRYPTOMONADALES						
....CRYPTOMONADACEAE						
....CRYPTOMONAS	67 4		36 13		--	-
CYANOPHYTA (BLUE-GREEN ALGAE)						
..CYANOPHYCEAE						
...CHROOCOCCALES						
....CHROOCOCCACEAE						
....ANACYSTIS	--	-	--	-	--	-
...HORMOGONALES						
...NOSTOCACEAE						
....ANABAENA	--	-	--	-	--	-
...NOSTOC	--	-	--	-	--	-
...OSCILLATORIACEAE						
....OSCILLATORIA	200 12		43# 15		--	-
...HORMOGONALES	--	-	--	-	--	-
EUGLENOPHYTA (EUGLENOIDS)						
..EUGLENOPHYCEAE						
...EUGLENALES						
....EUGLENACEAE						
....EUGLENA	--	-	5 2		--	-
...TRACHELOMONAS	--	-	2 1		--	-
PYRRHOPHYTA (FIRE ALGAE)						
..DINOPHYCEAE						
...GYMNODINIALES						
....GYMNODINIACEAE						
....GYMNODINIUM	--	-	2 1		--	-
...PERIDINIALES						
....PERIDINIACEAE						
....PERIDINIUM	--	-	--	-	--	-

NOTE: # - DOMINANT ORGANISM; EQUAL TO OR GREATER THAN 15%
* - OBSERVED ORGANISM, MAY NOT HAVE BEEN COUNTED; LESS THAN 1/2%

CHEYENNE RIVER BASIN

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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 September 1978.

GAGE.--Water-stage recorder. Altitude of gage is 4,234 ft (1,290 km), from topographic map.

REMARKS.--Records good.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 293 ft³/s (8.30 m³/s) Mar. 20, gage height, 5.88 ft (1.792 m); no flow for many days.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.54	.00	.00	.00	.00	.00	.56	.00	1.9	2.4	.00	.00
2	.00	.00	.00	.00	.00	.00	.47	.00	1.6	10	.02	.00
3	.00	.00	.00	.00	.00	.00	.34	.00	1.1	4.2	.02	.00
4	.00	.00	.00	.00	.00	.00	.31	.00	1.2	2.0	.00	.00
5	.00	.00	.00	.00	.00	.00	.24	.22	.95	1.0	.00	.00
6	.00	.00	.00	.00	.00	.00	.17	1.1	.78	.51	.00	.00
7	.00	.00	.00	.00	.00	.00	.15	2.6	.65	.27	.00	.00
8	.00	.00	.00	.00	.00	.00	.02	5.7	.50	.44	.00	.00
9	.00	.00	.00	.00	.00	.00	.00	4.6	.38	.64	.00	.00
10	.00	.00	.00	.00	.00	.00	.00	3.4	.25	2.3	.00	.00
11	.00	.00	.00	.00	.00	.00	.00	2.4	.18	1.6	.00	.00
12	.00	.00	.00	.00	.00	1.0	.00	1.7	.10	.60	.00	.00
13	.00	.00	.00	.00	.00	3.0	.00	1.1	.04	.22	.00	.00
14	.00	.00	.00	.00	.00	3.0	.00	.84	.00	.09	.00	.00
15	.00	.00	.00	.00	.00	3.0	.00	.59	.00	.00	.00	.00
16	.00	.00	.00	.00	.00	2.5	.00	.33	.00	.00	.00	.00
17	.00	.00	.00	.00	.00	10	.00	2.6	.00	.00	.00	.00
18	.00	.00	.00	.00	.00	60	.00	62	.00	.00	.00	.00
19	.00	.00	.00	.00	.00	174	.00	159	.00	.00	.00	.00
20	.00	.00	.00	.00	.00	213	.00	39	.00	.00	.00	.00
21	.00	.00	.00	.00	.00	137	.00	15	.00	.03	.00	.00
22	.00	.00	.00	.00	.00	73	.00	6.7	.00	.04	.00	.00
23	.00	.00	.00	.00	.00	31	.00	4.0	.00	.00	.00	.00
24	.00	.00	.00	.00	.00	11	.00	2.7	.00	.11	.00	.00
25	.00	.00	.00	.00	.00	5.4	.00	2.2	.00	.22	.00	.00
26	.00	.00	.00	.00	.00	3.0	.00	1.6	.00	2.5	.00	.00
27	.00	.00	.00	.00	.00	2.0	.00	3.3	.00	1.4	.00	.00
28	.00	.00	.00	.00	.00	1.5	.00	5.2	.00	.63	.00	.00
29	.00	.00	.00	.00	---	1.2	.00	3.8	.00	.25	.00	.00
30	.00	.00	.00	.00	---	.78	.00	3.8	.00	.09	.00	.00
31	.00	---	.00	.00	---	.62	---	2.2	---	.01	.00	---
TOTAL	.54	.00	.00	.00	.00	736.00	2.26	337.68	9.63	31.55	.04	.00
MEAN	.017	.000	.000	.000	.000	23.7	.075	10.9	.32	1.02	.001	.000
MAX	.54	.00	.00	.00	.00	213	.56	159	1.9	10	.02	.00
MIN	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
AC-FT	1.1	.00	.00	.00	.00	1460	4.5	670	19	63	.08	.00

WTR YR 1978 TOTAL 1117.70 MEAN 3.06 MAX 213 MIN .00 AC-FT 2220

06425950 RAVEN CREEK NEAR MOORCROFT, WY--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--October 1977 to September 1978.

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

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION)	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)
MAR										
21...	1750	120	190	7.4	1.0	--	--	K30	1300	61
22...	1510	85	--	--	7.0	--	--	--	--	--
MAY										
12...	1035	1.7	4000	8.3	10.0	8.9	93	420	--	1300
25...	1915	2.0	--	--	15.0	--	--	--	--	--

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

[illegible][illegible][illegible][illegible]

CHEYENNE RIVER BASIN

06425950 RAVEN CREEK NEAR MOORCROFT, WY--Continued

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

DATE	BERYL- LIUM, RECOV. FM BOT- TOM MA- TERIAL (UG/G)	BORON, DIS- SOLVED (UG/L AS B)	CADMIUM TOTAL RECOV- ERABLE (UG/L AS CD)	CADMIUM DIS- SOLVED (UG/L AS CD)	CADMIUM RECOV. FM BOT- TOM MA- TERIAL (UG/L AS CD)	CHRO- MIUM, RECOV- ERABLE (UG/L AS CR)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR)	CHRO- MIUM, RECOV. FM BOT- TOM MA- TERIAL (UG/G)	COBALT, TOTAL RECOV- ERABLE (UG/L AS CO)	COBALT, DIS- SOLVED (UG/L AS CO)
MAR 21...	--	90	0	7	--	20	0	--	1	0
MAR 22...	10	--	--	--	1	--	--	70	--	--
MAY 12...	--	210	--	--	--	--	--	--	--	--

DATE	COBALT, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CO)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU)	COPPER, DIS- SOLVED (UG/L AS CU)	COPPER, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CU)	IRON, DIS- SOLVED (UG/L AS FE)	LEAD, TOTAL 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 DIS- SOLVED (UG/L AS LI)
MAR 21...	--	5	6	--	130	1	10	--	2	3
MAR 22...	5	--	--	10	--	--	--	20	--	--
MAY 12...	--	--	--	--	30	--	--	--	--	--

DATE	MANGA- NESE, TOTAL RECOV- ERABLE (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 DIS- SOLVED (UG/L AS HG)	MERCURY RECOV. FM BOT- TOM MA- TERIAL (UG/L AS HG)	MOLYB- DENUM, TOTAL RECOV- ERABLE (UG/L AS MO)	MOLYB- DENUM, DIS- SOLVED (UG/L AS MO)	MOLYB- DENUM, RECOV. FM BOT- TOM MA- TERIAL (UG/G)	NICKEL, TOTAL RECOV- ERABLE (UG/L AS NI)
MAR 21...	60	20	--	.0	.0	--	5	0	--	4
MAR 22...	--	--	4900	--	--	<.02	--	--	1	--
MAY 12...	--	--	--	--	--	--	--	--	--	--

DATE	NICKEL, RECOV. FM BOT- TOM MA- TERIAL (UG/L AS NI)	NICKEL, DIS- SOLVED (UG/L AS NI)	SELE- NIUM, TOTAL RECOV- ERABLE (UG/L AS SE)	SELE- NIUM, DIS- SOLVED (UG/L AS SE)	SELE- NIUM, TOTAL IN BOT- TOM MA- TERIAL (UG/G)	VANA- DIUM, DIS- SOLVED (UG/L AS V)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN)	ZINC, DIS- SOLVED (UG/L AS ZN)	ZINC, RECOV. FM BOT- TOM MA- TERIAL (UG/G)
MAR 21...	3	--	1	0	--	2.0	20	30	--
MAR 22...	--	5	--	--	0	--	--	--	360
MAY 12...	--	--	--	--	--	--	--	--	--

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 ALPHA, DIS- SOLVED (PCI/L AS U-NAT)	GROSS ALPHA, SUSP. TOTAL (PCI/L AS U-NAT)
MAR 22...	1510	2.4	2.3	12	3.1	1.6	1.6

DATE	TIME	TEMPER- ATURE (DEG C)	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SEDIMENT DIS- CHARGE, SUS- PENDE (MG/L)	SEDIMENT DIS- CHARGE, SUS- PENDE (T/DAY)
OCT 01...	0300	--	1.8	208	1.0
MAR 21...	1750	1.0	120	63	20
MAR 22...	1510	7.0	85	42	9.6
MAY 12...	1035	10.0	1.7	51	.23
MAY 25...	1915	15.0	2.0	26	.14
MAY 27...	1800	--	1.8	10900	53

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
MAR 22...	1510	7.0	85	77	92	98	99	100

CHEYENNE RIVER BASIN

06425950 RAVEN CREEK NEAR MOORCROFT, WY--Continued

QUALITATIVE AND ASSOCIATED QUANTITATIVE ANALYSES OF BIOLOGICAL DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

PHYTOPLANKTON ANALYSES

DATE TIME	MAR 21,78 1750	MAY 12,78 1035
TOTAL CELLS/ML	5100	610
DIVERSITY: DIVISION	0.2	0.7
..CLASS	0.2	0.7
..ORDER	0.2	0.7
...FAMILY	0.3	0.7
....GENUS	0.3	0.7

ORGANISM	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT
CHLOROPHYTA (GREEN ALGAE)				
..CHLOROPHYCEAE				
..CHLOROCOCCALES				
...OOCYSTACEAE				
....ANKISTRODESMUS	--	-	27	4
..VOLVOCALES				
...CHLAMYDOMONADACEAE				
....CHLAMYDOMONAS	*	0	--	-
CHRYSOPHYTA				
..BACILLARIOPHYCEAE				
..CENTRALES				
...COSCINODISCAEAE				
....CYCLOTELLA	--	-	14	2
..PENNALES				
...CYMBELLACEAE				
....CYMBELLA	*	0	--	-
...FRAGILARIACEAE				
....SYNEDRA	--	-	14	2
...NAVICULACEAE				
....NAVICULA	85	2	--	-
...NITZSCHIAEAE				
....HANTZSCHIA	*	0	--	-
....NITZSCHIA	43	1	--	-
CYANOPHYTA (BLUE-GREEN ALGAE)				
..CYANOPHYCEAE				
..HORMOGONALES				
...NOSTOCACEAE				
....ANABAENA	--	-	540#	89
...OSCILLATORIACEAE				
....OSCILLATORIA	5000#	97	--	-
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%

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 1978.

GAGE.--Water-stage recorder and sharp-crested weir. Altitude of gage is 4,200 ft (1,280 m), from topographic map.

REMARKS.--Records fair except those for November to April, June and July, which are poor. Numerous small reservoirs and diversions for irrigation of hay meadows above station. Flow occasionally affected by contributions from mine dewatering.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 3,950 ft³/s (112 m³/s) May 19, gage height, 14.60 ft (4.450 m); minimum daily, 0.03 ft³/s (0.001 m³/s) Sept. 16, 17.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	9.6	.56	1.0	.25	.60	.30	17	9.6	85	12	.33	.11
2	9.6	1.0	1.0	.25	.70	.20	9.0	12	42	4.6	.35	.11
3	34	1.0	1.0	.30	1.0	.15	6.5	12	26	1.3	.37	.13
4	12	.64	1.0	.30	1.8	1.0	12	14	19	.71	.37	.11
5	6.1	.56	.80	.35	2.0	3.5	11	55	17	.62	.35	.09
6	5.0	.95	.60	.35	1.8	3.4	6.5	120	14	.98	.35	.08
7	5.0	1.5	.40	.40	1.7	3.0	4.8	138	12	.67	.33	.09
8	5.0	1.5	.35	.45	1.6	2.7	4.6	298	11	.69	.27	.10
9	4.8	.86	.30	.50	1.5	2.3	5.4	497	9.6	.87	.31	.10
10	2.8	.80	.15	.55	1.3	2.2	2.8	468	8.8	.64	.33	.10
11	1.9	.90	.20	.70	1.1	3.0	1.1	205	8.0	.53	.27	.12
12	1.6	1.1	.40	.80	1.0	5.0	1.3	103	7.6	.46	.21	.12
13	1.3	1.0	.50	.80	.90	10	6.5	42	5.7	.47	.17	.11
14	1.3	.64	.70	.75	.80	75	5.9	29	3.5	.39	.15	.10
15	1.1	.70	.90	.70	.70	65	4.4	20	3.2	.48	.19	.11
16	.62	.60	1.4	.60	.80	50	1.9	19	3.2	.44	.15	.03
17	.33	.60	2.0	.55	1.0	100	1.6	38	3.5	.47	.14	.03
18	.31	.60	3.0	.50	1.1	250	5.7	1670	13	.60	.11	.08
19	.29	.50	3.7	.50	1.2	1530	6.1	2530	3.5	.44	.11	.12
20	.22	.40	3.8	.50	1.4	902	6.7	579	3.0	.49	.13	.07
21	.51	.35	3.7	.50	1.3	638	6.9	222	1.7	1.4	.15	.09
22	.49	.30	3.3	.50	1.2	369	9.9	129	1.1	1.3	.17	.14
23	.35	.35	2.8	.50	1.2	211	9.0	72	.86	.60	.18	.09
24	.24	.40	2.2	.45	1.1	100	7.1	49	.40	.47	.14	.07
25	.14	.40	1.5	.40	.90	85	6.3	39	.44	.40	.14	.09
26	.10	.51	1.2	.40	.80	81	4.4	33	.44	.35	.15	.07
27	.12	.59	.90	.40	.60	77	4.4	29	.40	.33	.12	.09
28	.12	.64	.60	.40	.40	57	5.9	25	1.7	.33	.14	.09
29	.54	.95	.50	.40	---	39	7.8	24	3.0	.27	.14	.09
30	1.2	.95	.40	.40	---	28	8.3	128	8.5	.33	.12	.19
31	.86	---	.30	.40	---	22	---	162	---	.37	.12	---
TOTAL	107.54	21.85	40.60	14.85	31.50	4715.75	190.8	7770.6	317.14	34.00	6.56	2.92
MEAN	3.47	.73	1.31	.48	1.13	152	6.36	251	10.6	1.10	.21	.097
MAX	34	1.5	3.8	.80	2.0	1530	17	2530	85	12	.37	.19
MIN	.10	.30	.15	.25	.40	.15	1.1	9.6	.40	.27	.11	.03
AC-FT	213	43	81	29	62	9350	378	15410	629	67	13	5.8

WTR YR 1978 TOTAL 13254.11 MEAN 36.3 MAX 2530 MIN .03 AC-FT 26290

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 1976 TO SEPTEMBER 1977

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION)	BICAR- BONATE (MG/L AS HCO3)	CAR- BONATE (MG/L AS CO3)	ALKA- LINITY (MG/L AS CACO3)	SEDI- MENT, SUS- PENDED (MG/L)	SEDI- MENT DIS- CHARGE, SUS- PENDED (T/DAY)
SEP 29...	0820	.03	2290	8.4	14.0	5.5	54	600	8	510	224	.02

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

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	TUR- BID- ITY (JTU)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION)	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 27...	1400	.12	1830	8.2	12.0	--	15.2	152	K30	220	470
NOV 29...	0930	.92	3300	7.6	.5	--	9.4	76	K3	360	1100
DEC 20...	0925	3.8	3250	8.0	.0	--	11.3	91	16	1100	960
JAN 13...	1130	.88	3750	7.3	.0	--	7.6	60	K3	48	980
FEB 08...	1100	1.6	3200	8.0	.5	--	10.6	86	86	K25	830
MAR 16...	1450	35	740	7.5	.5	--	10.2	84	91	20000	250
APR 06...	0900	6.8	1560	8.1	7.0	--	11.3	109	K16	200	590
MAY 10...	0900	476	820	7.8	6.0	--	8.6	80	870	--	330
JUN 08...	1030	11	2700	7.1	17.5	30	6.7	--	--	--	1000
JUN 27...	1245	.26	2970	8.3	25.5	--	9.2	119	83	110	690
JUL 25...	1225	.39	3950	8.4	26.5	--	9.9	138	230	180	1200
AUG 15...	1130	.19	4100	8.1	17.0	--	9.2	112	590	780	970
SEP 13...	0900	.12	4880	8.3	13.5	--	8.4	93	220	350	910
SEP 26...	0700	.07	5290	--	13.0	--	--	--	--	--	--

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

S-Seepage run data (see Explanation of Water-Quality Records).

[illegible]

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

[illegible]

CHEYENNE RIVER BASIN

06426400 DONKEY CREEK NEAR MOORCROFT, WY--Continued

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

[illegible][illegible]

CHEYENNE RIVER BASIN

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06426400 DONKEY CREEK NEAR MOORCROFT, WY--Continued

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

DATE	BERYL- LIUM, RECOV. FM BOT- TOM MA- TERIAL (UG/G)	BORON, DIS- SOLVED (UG/L AS B)	CADMIUM TOTAL 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, DIS- SOLVED (UG/L AS CR)	CHRO- MIUM, RECOV. FM BOT- TOM MA- TERIAL (UG/G)	COBALT, TOTAL RECOV- ERABLE (UG/L AS CO)	COBALT, DIS- SOLVED (UG/L AS CO)
OCT 27...	0	190	<10	0	1	5	10	3	<50	0
NOV 29...	--	440	--	--	--	--	--	--	--	--
DEC 20...	--	530	--	--	--	--	--	--	--	--
JAN 13...	--	490	--	--	--	--	--	--	--	--
FEB 08...	--	470	--	1	--	--	10	--	--	1
MAR 16...	--	150	--	--	--	--	--	--	--	--
APR 06...	--	190	--	--	--	--	--	--	--	--
MAY 10...	--	110	--	--	--	--	--	--	--	--
JUN 08...	--	310	--	--	--	--	--	--	--	--
27...	--	240	--	--	--	--	--	--	--	--
JUL 25...	0	370	0	0	5	20	10	6	0	0
AUG 15...	--	320	--	1	--	--	0	--	--	3
SEP 13...	--	260	--	--	--	--	--	--	--	--

DATE	COBALT, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CO)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU)	COPPER, DIS- SOLVED (UG/L AS CU)	COPPER, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CU)	IRON, DIS- SOLVED (UG/L AS FE)	LEAD, TOTAL 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 DIS- SOLVED (UG/L AS LI)
OCT 27...	5	<10	1	9	20	<100	1	20	30	30
NOV 29...	--	--	--	--	30	--	--	--	--	--
DEC 20...	--	--	--	--	70	--	--	--	--	--
JAN 13...	--	--	--	--	40	--	--	--	--	--
FEB 08...	--	--	2	--	60	--	2	--	--	60
MAR 16...	--	--	--	--	110	--	--	--	--	--
APR 06...	--	--	--	--	40	--	--	--	--	--
MAY 10...	--	--	--	--	20	--	--	--	--	--
JUN 08...	--	--	--	--	30	--	--	--	--	--
27...	--	--	--	--	40	--	--	--	--	--
JUL 25...	140	10	8	120	30	3	0	100	70	70
AUG 15...	--	--	3	--	50	--	0	--	--	70
SEP 13...	--	--	--	--	20	--	--	--	--	--

CHEYENNE RIVER BASIN

06426400 DONKEY CREEK NEAR MOORCROFT, WY--Continued

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

DATE	MANGA- NESE, TOTAL RECOV- ERABLE (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 DIS- SOLVED (UG/L AS HG)	MERCURY RECOV. FM BOT- TOM MA- TERIAL (UG/L AS HG)	MOLYB- DENUM, TOTAL RECOV- ERABLE (UG/L AS MO)	MOLYB- DENUM, DIS- SOLVED (UG/L AS MO)	MOLYB- DENUM, RECOV. FM BOT- TOM MA- TERIAL (UG/G)	NICKEL, TOTAL RECOV- ERABLE (UG/L AS NI)
OCT 27...	350	280	110	.0	.0	.02	5	1	1	<50
NOV 29...	--	--	--	--	--	--	--	--	--	--
DEC 20...	--	--	--	--	--	--	--	--	--	--
JAN 13...	--	--	--	--	--	--	--	--	--	--
FEB 08...	--	480	--	--	.0	--	--	0	--	--
MAR 16...	--	--	--	--	--	--	--	--	--	--
APR 06...	--	--	--	--	--	--	--	--	--	--
MAY 10...	--	--	--	--	--	--	--	--	--	--
JUN 08...	--	--	--	--	--	--	--	--	--	--
JUL 27...	--	--	--	--	--	--	--	--	--	--
AUG 25...	340	210	340	.0	.0	.10	14	5	3	7
SEP 15...	--	180	--	--	.1	--	--	6	--	--
SEP 13...	--	--	--	--	--	--	--	--	--	--

DATE	NICKEL, DIS- SOLVED (UG/L AS NI)	NICKEL, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS NI)	SELE- NIUM, TOTAL (UG/L AS SE)	SELE- NIUM, DIS- SOLVED (UG/L AS SE)	SELE- NIUM, TOTAL IN BOT- TOM MA- TERIAL (UG/G)	VANA- DIUM, DIS- SOLVED (UG/L AS V)	ZINC, TOTAL 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 27...	2	5	0	0	1	1.1	30	10	12
NOV 29...	--	--	--	--	--	--	--	--	--
DEC 20...	--	--	--	--	--	--	--	--	--
JAN 13...	--	--	--	--	--	--	--	--	--
FEB 08...	4	--	--	1	--	5.0	--	10	--
MAR 16...	--	--	--	--	--	--	--	--	--
APR 06...	--	--	--	--	--	--	--	--	--
MAY 10...	--	--	--	--	--	--	--	--	--
JUN 08...	--	--	--	--	--	--	--	--	--
JUL 27...	--	--	--	--	--	--	--	--	--
AUG 25...	2	100	1	1	0	.0	20	20	190
SEP 15...	4	--	--	0	--	.0	--	20	--
SEP 13...	--	--	--	--	--	--	--	--	--

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 ALPHA, DIS- SOLVED (PCI/L AS U-NAT)	GROSS ALPHA, SUSP. TOTAL (PCI/L AS U-NAT)
APR 06...	0900	<11	3.4	16	2.3	<7.5	2.3
AUG 15...	1130	<34	.9	20	3.8	<23	.6

06426400 DONKEY CREEK NEAR MOORCROFT, WY--Continued

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

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	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
OCT												
01...	0245	--	2.6	526	3.7	--	--	--	--	--	--	--
02...	2345	--	37	141	14	--	--	--	--	--	--	--
27...	1400	12.0	.12	74	.02	--	--	--	--	--	--	--
NOV												
29...	0930	.5	.92	69	.17	--	--	--	--	--	--	--
DEC												
20...	0925	.0	3.8	33	.34	--	--	--	--	--	--	--
JAN												
13...	1130	.0	.88	164	.39	--	--	--	--	--	--	--
FEB												
08...	1100	.5	1.6	21	.09	--	--	--	--	--	--	--
MAR												
16...	1450	.5	35	115	11	--	--	--	--	--	--	--
21...	1020	3.0	662	556	994	--	--	--	--	--	--	--
APR												
06...	0900	7.0	6.8	77	1.4	--	--	--	--	--	--	--
MAY												
05...	1600	--	106	2340	670	--	--	--	--	--	--	--
08...	1350	--	331	6040	5400	--	--	--	--	--	--	--
10...	0900	6.0	476	970	1250	--	41	50	76	96	100	--
18...	1600	10.0	2530	2080	14200	--	72	80	86	94	100	--
20...	1430	11.0	482	708	921	--	49	60	76	91	99	100
30...	1240	--	119	3060	983	--	--	--	--	--	--	--
JUN												
08...	1030	17.5	11	196	5.8	92	--	--	--	--	--	--
27...	1245	25.5	.26	215	.15	--	--	--	--	--	--	--
JUL												
25...	1225	26.5	.39	211	.22	--	--	--	--	--	--	--
AUG												
15...	1130	17.0	.19	141	.07	--	--	--	--	--	--	--
SEP												
12...	0900	13.5	.12	50	.02	--	--	--	--	--	--	--

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
OCT								
27...	1400	12.0	.12	48	59	69	73	76
APR								
06...	0900	7.0	6.8	20	36	60	67	71
MAY								
10...	0900	6.0	476	48	82	96	97	98
JUN								
08...	1030	17.5	11	9	13	19	20	20

DATE	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	BED MAT. SIEVE DIAM. % FINER THAN 128 MM
OCT							
27...	83	92	97	100	--	--	--
APR							
06...	76	83	90	96	100	--	--
MAY							
10...	99	100	--	--	--	--	--
JUN							
08...	21	23	25	28	40	80	100

CHEYENNE RIVER BASIN

06426400 DONKEY CREEK NEAR MOORCROFT, WY--Continued

QUALITATIVE AND ASSOCIATED QUANTITATIVE ANALYSES OF BIOLOGICAL DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

PHYTOPLANKTON ANALYSES

DATE TIME	OCT 27,77 1400	NOV 29,77 0930	DEC 20,77 0925	JAN 13,78 1130	FEB 8,78 1100	MAR 16,78 1450
TOTAL CELLS/ML	3000	780	640	210	130	1700
DIVERSITY: DIVISION	1.3	1.7	1.6	2.0	0.0	1.3
..CLASS	1.3	1.7	1.6	2.0	0.0	1.3
..ORDER	1.3	2.0	2.0	2.2	0.9	1.7
...FAMILY	1.8	2.2	2.3	2.7	2.1	1.8
....GENUS	2.7	2.7	2.4	3.0	2.1	1.9

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
CHLOROPHYTA (GREEN ALGAE)												
..CHLOROPHYCEAE												
...CHLOROCOCCALES												
...CHARACIACEAE												
....SCHROEDERIA	51	2	--	-	18	3	--	-	--	-	--	-
....MICRACTINIACEAE												
....GOLENKINIA	--	-	--	-	--	-	--	-	--	-	--	-
....OOCYSTACEAE												
....ANKISTRODESMUS	350	12	54	7	18	3	24	11	--	-	26	1
....CHODATELLA	--	-	--	-	--	-	--	-	--	-	--	-
....DICTYOSPHAERIUM	100	3	--	-	--	-	--	-	--	-	--	-
....KIRCHNERIELLA	--	-	8	1	--	-	--	-	--	-	--	-
....OOCYSTIS	--	-	46	6	18	3	--	-	--	-	--	-
....SELENASTRUM	130	4	--	-	--	-	--	-	--	-	--	-
....TREUBARIA	--	-	--	-	--	-	--	-	--	-	*	0
....SCENEDESMACEAE												
....ACTINASTRUM	--	-	--	-	--	-	--	-	--	-	--	-
....CRUCIGENIA	200	7	31	4	--	-	--	-	--	-	--	-
....SCENEDESMUS	200	7	31	4	35	6	24	11	--	-	69	4
...VOLVOCALES												
...CHLAMYDOMONADACEAE												
....CHLAMYDOMONAS	--	-	77	10	18	3	--	-	--	-	43	2
CHRYSOPHYTA												
..BACILLARIOPHYCEAE												
...CENTRALES												
...CHAETOCERACEAE												
....CHAETOCEROS	--	-	--	-	--	-	--	-	--	-	--	-
...COSCINODISCACEAE												
....CYCLOTELLA	--	-	77	10	300#	46	24	11	48#	36	550#	32
....STEPHANODISCUS	--	-	--	-	--	-	--	-	--	-	--	-
...PENNALES												
...ACHNANTHACEAE												
....COCCONEIS	--	-	--	-	--	-	--	-	--	-	17	1
....CYMBELLACEAE												
....EPITHEMIA	--	-	--	-	--	-	--	-	12	9	--	-
....FRAGILARIACEAE												
....ASTERIONELLA	--	-	--	-	--	-	--	-	36#	27	--	-
....SYNEDRA	51	2	--	-	--	-	--	-	--	-	17	1
....GOMPHONEMATACEAE												
....GOMPHONEMA	--	-	--	-	--	-	--	-	--	-	--	-
....NAVICULACEAE												
....CALONEIS	--	-	--	-	--	-	--	-	--	-	--	-
....GYROSIGMA	25	1	--	-	6	1	--	-	--	-	*	0
....NAVICULA	25	1	--	-	--	-	6	3	18	14	60	3
....PINNULARIA	--	-	--	-	6	1	6	3	--	-	--	-
....NITZSCHIIACEAE												
....NITZSCHIA	--	-	--	-	24	4	12	6	18	14	26	1
....SURIPELLACEAE												
....SURIPELLA	--	-	--	-	--	-	6	3	--	-	--	-
..XANTHOPHYCEAE												
...HETEROCOCCALES												
...CENTRITRACTACEAE												
....CENTRITRACTUS	--	-	--	-	--	-	--	-	--	-	--	-
...CHLOROTHECIACEAE												
....OPHIOCYTIUM	--	-	--	-	--	-	--	-	--	-	--	-
CRYPTOPHYTA (CRYPTOMONADS)												
..CRYPTOPHYCEAE												
...CRYPTOMONIDALES												
...CRYPTOMONODACEAE												
....CRYPTOMONAS	130	4	38	5	180#	28	--	-	--	-	--	-

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 1977 TO SEPTEMBER 1978

PHYTOPLANKTON ANALYSES

DATE TIME	OCT 27,77 1400		NOV 29,77 0930		DEC 20,77 0925		JAN 13,78 1130		FER 8,78 1100		MAR 16,78 1450	
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	--	-	--	-	--	-	--	-	--	-	--	-
....COCCOCHLORIS	--	-	--	-	--	-	--	-	--	-	--	-
...HORMOGONALES												
...NOSTOCACEAE												
....ANABAENA	--	-	--	-	--	-	--	-	--	-	--	-
....ANABAENOPSIS	--	-	--	-	--	-	--	-	--	-	--	-
....APHANIZOMENON	--	-	--	-	--	-	--	-	--	-	--	-
...OSCILLATORIACEAE												
....LYNGBYA	--	-	--	-	--	-	--	-	--	-	--	-
....OSCILLATORIA	--	-	--	-	--	-	--	-	--	-	910#	52
EUGLENOPHYTA (EUGLENOIDS)												
..EUGLENOPHYCEAE												
...EUGLENALES												
...EUGLENACEAE												
....EUGLENA	410	13	31	4	12	2	18	9	--	-	--	-
....PHACUS	51	2	--	-	--	-	--	-	--	-	--	-
....TRACHELOMONAS	1300#	43	370#	47	18	3	42#	20	--	-	--	-
PYRRHOPHYTA (FIRE ALGAE)												
..DINOPHYCEAE												
...PERIDINIALES												
...GLENODINIACEAE												
....GLENODINIUM	--	-	--	-	--	-	--	-	--	-	--	-
...PERIDINIACEAE												
....PERIDINIUM	--	-	23	3	--	-	48#	23	--	-	--	-

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 1977 TO SEPTEMBER 1978

PHYTOPLANKTON ANALYSES

DATE TIME	APR 6,78 0900	MAY 10,78 0900	JUN 27,78 1245	JUL 25,78 1225	AUG 15,78 1130	SEP 13,78 0900				
TOTAL CELLS/ML	8700	2400	5000	150000	66000	22000				
DIVERSITY: DIVISION	1.4	0.9	0.7	0.9	0.7	1.5				
..CLASS	1.4	0.9	0.7	0.9	0.7	1.5				
..ORDER	1.5	1.0	1.0	0.9	0.9	1.7				
...FAMILY	1.5	2.1	1.8	1.7	1.2	2.0				
....GENUS	1.6	2.5	1.8	2.3	1.4	2.6				
ORGANISM	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT
CHLOROPHYTA (GREEN ALGAE)										
..CHLOROPHYCEAE										
...CHLOROCOCCALES										
...CHARACIACEAE										
....SCHROEDERIA	--	-	--	-	--	-	*	0	--	-
....MICRACTINIACEAE										
....GOLINKINIA	--	-	--	-	--	-	*	0	--	-
...OOCYSTACEAE										
....ANKISTRODESMUS	--	-	27	1	98	2	3900	3	2100	3
....CHODATELLA	--	-	--	-	--	-	--	-	1000	5
....DICTYOSPHAERIUM	--	-	68	3	--	-	5000	3	820	4
....KIRCHNERIELLA	--	-	--	-	--	-	--	-	740	1
...OOCYSTIS	--	-	--	-	--	-	--	-	400	1
....SELENASTRUM	--	-	--	-	--	-	*	0	--	-
....TREUBARIA	--	-	--	-	--	-	*	0	410	2
...SCENEDESMACEAE									*	0
....ACTINASTRUM	--	-	--	-	200	4	3000	2	5400	8
....CRUCIGENIA	--	-	--	-	--	-	--	-	1100	2
...SCENEDESMUS	--	-	--	-	--	-	--	-	1100	2
..VOLVOCALES										
...CHLAMYDOMONADACEAE										
...CHLAMYDOMONAS	4200#	48	14	1	150	3	--	-	--	-
CHRYSOPHYTA										
..BACILLARIOPHYCEAE										
...CENTRALES										
...CHAETOCERACEAE										
...CHAETOCEROS	--	-	--	-	--	-	--	-	5500#	24
...COSCINODISCACEAE										
...CYCLOTELLA	3500#	40	27	1	98	2	1300	1	*	0
...STEPHANODISCUS	--	-	--	-	--	-	--	-	*	0
...PENNALES										
...ACHNANTHACEAE										
...COCCONEIS	--	-	14	1	--	-	--	-	--	-
...CYMBELLACEAE										
...EPITHEMIA	--	-	27	1	--	-	--	-	--	-
...FRAGILARIACEAE										
...ASTERIONELLA	--	-	--	-	--	-	--	-	--	-
...SYNEDRA	81	1	68	3	--	-	--	-	--	-
...GOMPHONEMACEAE										
...GOMPHONEMA	--	-	82	3	--	-	--	-	--	-
...NAVICULACEAE										
....CALONEIS	--	-	27	1	--	-	--	-	--	-
....GYROSIGMA	--	-	14	1	--	-	--	-	--	-
....NAVICULA	81	1	27	1	1300#	26	860	1	*	0
....PINNULARIA	--	-	--	-	--	-	--	-	--	-
...NITZSCHACEAE										
....NITZSCHIA	--	-	41	2	2900#	58	5400	4	*	0
...SURIRELLACEAE									720	3
....SURITRELLA	--	-	--	-	--	-	--	-	--	-
...XANTHOPHYCEAE										
...HETEROCOCCALES										
...CENTRITRACTACEAE										
...CENTRITRACTIUS	--	-	--	-	--	-	*	0	--	-
...CHLOROTHECIACEAE										
...OPHIOCYTIUM	--	-	--	-	--	-	--	-	*	0
CRYPTOPHYTA (CRYPTOMONADS)										
..CRYPTOPHYCEAE										
...CRYPTOMONIDALES										
...CRYPTOMONODACEAE										
...CRYPTOMONAS	--	-	--	-	49	1	--	-	--	-

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 1977 TO SEPTEMBER 1978

PHYTOPLANKTON ANALYSES

DATE TIME	APR 6,78 0900		MAY 10,78 0900		JUN 27,78 1245		JUL 25,78 1225		AUG 15,78 1130		SEP 13,78 0900	
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	--	-	--	-	--	-	--	-	1200	2	--	-
....COCCOCHLORIS	--	-	--	-	--	-	--	-	*	0	--	-
..HORMOGONALES												
...NOSTOCACEAE												
....ANABAENA	--	-	770#	32	--	-	16000	11	400	1	--	-
....ANABAENOPSIS	--	-	--	-	--	-	77000#	51	940	1	--	-
....APHANIZOMENON	--	-	190	8	--	-	--	-	--	-	--	-
...OSCILLATORIA												
....LYNGBYA	--	-	--	-	--	-	--	-	51000#	78	8400#	38
....OSCILLATORIA	--	-	960#	40	--	-	32000#	21	--	-	2500	11
EUGLENOPHYTA (EUGLENOIDS)												
..EUGLENOPHYCEAE												
...EUGLENALES												
....EUGLENACEAE												
....EUGLENA	330	4	--	-	200	4	1300	1	*	0	--	-
....PHACUS	--	-	--	-	--	-	*	0	*	0	--	-
....TRACHELOMONAS	570	7	14	1	--	-	1500	1	*	0	620	3
PYRRHOPHYTA (FIRE ALGAE)												
..DINOPHYCEAE												
...PERIDINIALES												
....GLENODINIACEAE												
....GLENODINIUM	--	-	--	-	--	-	860	1	--	-	--	-
...PERIDINIACEAE												
....PERIDINIUM	--	-	--	-	--	-	--	-	--	-	--	-

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

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

CHEYENNE RIVER BASIN

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 October to May, 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.--30 years, 24.2 ft³/s (0.685 m³/s), 17,530 acre-ft/yr (21.6 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 discharges 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)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Mar. 19	unknown	3,310 93.7	12.72 3.877	May 19	0300	*15,300 433	14.60 4.450
May 9	2300	1,620 45.9	11.24 3.426	July 23	0700	662 18.7	8.36 2.548

a-From floodmark.

Minimum daily, 0.02 ft³/s (0.001 m³/s) Oct. 21.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	80	.24	2.2	.24	.60	.81	65	14	168	173	13	7.7
2	231	.50	2.3	.27	.70	.78	52	16	113	114	14	7.0
3	60	.66	2.5	.30	.84	.76	39	17	93	56	15	6.5
4	35	.84	2.5	.43	.92	.88	33	19	79	42	14	7.9
5	15	.93	2.2	.50	1.0	.95	35	26	71	32	13	10
6	5.8	.93	1.7	.66	1.0	1.0	27	204	65	30	13	9.2
7	3.3	.84	1.6	.66	.91	1.1	24	247	59	27	12	8.4
8	3.0	1.0	1.6	.75	.86	1.2	21	635	55	39	12	7.9
9	2.5	.90	1.5	.66	.79	1.4	20	1200	51	62	10	7.9
10	1.5	.94	1.6	.66	.71	1.9	19	1460	48	53	17	7.2
11	.84	1.0	1.7	.66	.65	4.1	17	825	44	44	22	7.9
12	.58	1.0	1.9	.84	.60	20	16	330	41	28	12	9.4
13	.50	1.1	1.9	.84	.54	34	14	190	38	23	10	8.4
14	.50	1.1	2.2	.84	.52	80	17	130	34	19	10	8.9
15	.50	1.2	2.3	.74	.56	120	16	100	31	16	10	10
16	.50	1.4	2.3	.84	.56	160	15	82	28	15	55	9.2
17	.36	1.9	3.1	.84	.62	305	14	340	27	15	32	9.2
18	.19	1.7	4.0	.70	.68	860	15	8900	34	14	16	8.9
19	.09	1.4	4.5	.60	.76	2800	15	10300	30	13	11	9.2
20	.05	.88	3.8	.62	.73	2440	14	3860	27	13	9.4	9.2
21	.02	.70	3.3	.64	.86	1810	14	1500	27	17	7.9	9.4
22	.09	.76	2.8	.66	1.0	1060	17	551	27	306	6.5	9.2
23	.19	.82	2.4	.93	1.1	524	17	325	25	471	6.3	8.7
24	.30	.89	2.0	.86	.95	291	15	239	30	118	6.3	9.2
25	.30	1.0	1.5	.72	.85	195	14	180	43	44	6.3	8.4
26	.30	1.2	1.5	.76	.79	184	14	144	37	29	7.0	6.7
27	.19	1.5	1.0	.86	.95	199	13	130	32	24	12	5.2
28	.09	1.5	.84	.79	.88	179	12	183	28	21	26	5.0
29	.09	1.5	.66	.85	---	134	14	185	28	18	8.9	4.4
30	.09	1.7	.50	.74	---	96	14	142	31	16	11	4.6
31	.14	---	.37	.68	---	78	---	286	---	14	8.7	---
TOTAL	443.01	32.03	64.27	21.14	21.93	11583.88	632	32760	1444	1906	427.3	240.8
MEAN	14.3	1.07	2.07	.68	.78	374	21.1	1057	48.1	61.5	13.8	8.03
MAX	231	1.9	4.5	.93	1.1	2800	65	10300	168	471	55	10
MIN	.02	.24	.37	.24	.52	.76	12	14	25	13	6.3	4.4
AC-FT	879	64	127	42	43	22980	1250	64980	2860	3780	848	478
CAL YR 1977 TOTAL	4501.70			MEAN 12.3	MAX 380	MIN .00	AC-FT 8930					
WTR YR 1978 TOTAL	49576.36			MEAN 136	MAX 10300	MIN .02	AC-FT 98330					

06426500 BELLE FOURCHE RIVER BELOW MOORCROFT, WY--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1947-57, 1975 to current year.

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

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	TUR- BID- ITY (JTU)	OXYGEN, DIS- SOLVED (MG/L)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	HARD- NESS (MG/L AS CAC03)	HARD- NESS, NONCAR- BONATE (MG/L AS CAC03)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)
NOV												
10...	1300	A.94	1400	8.1	3.0	45	11.2	84	440	140	77	59
DEC												
09...	1200	1.5	2000	8.0	.0	15	10.8	K32	980	520	180	130
JAN												
01...	0830	A.24	2600	7.7	.0	25	11.0	26	750	290	140	97
FEB												
02...	1230	A.70	3500	7.7	.0	7	8.2	K900	850	210	160	110
MAR												
03...	1530	A.76	3200	7.5	.0	8	7.6	310	790	270	150	100
30...	1100	102	740	7.5	11.0	250	10.6	460	220	98	44	27
MAY												
11...	1400	825	610	7.7	12.0	950	8.2	K920	200	130	44	23
JUN												
08...	1200	55	2700	6.7	16.5	40	7.7	--	940	600	180	120
08...	1330	55	2400	8.2	19.0	30	8.2	210	860	520	180	100
JUL												
20...	1450	15	2400	8.1	21.0	65	8.0	140	730	370	160	80
AUG												
17...	1330	28	1250	8.0	18.0	1400	7.0	K1500	360	200	80	40
SEP												
14...	1510	8.7	3000	8.2	15.0	5	12.0	46	1100	790	240	110

A-Daily mean discharge.

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)	BICAR- BONATE (MG/L AS HCO3)	CAR- BONATE (MG/L AS CO3)	ALKA- LINITY (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)	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, SUM OF CONSTITU- ENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TUNS PER AC-FT)
NOV												
10...	220	4.6	12	360	0	300	510	56	.5	6.3	1120	1.52
DEC												
09...	440	6.1	18	570	0	470	1300	150	.8	5.2	2510	3.41
JAN												
01...	420	6.7	17	560	0	460	980	120	.2	9.0	2060	2.80
FEB												
02...	570	8.5	17	780	0	640	1100	180	1.3	16	2540	3.45
MAR												
03...	460	7.1	16	630	0	520	1000	180	1.6	15	2230	3.03
30...	87	2.5	6.6	150	0	120	270	10	.2	6.2	525	.71
MAY												
11...	42	1.3	6.0	92	0	75	200	12	.3	5.9	379	.52
JUN												
08...	300	4.3	13	420	0	340	1100	42	.5	6.9	1970	2.68
08...	310	4.6	14	420	0	330	1100	44	.5	6.9	1960	2.67
JUL												
20...	340	5.5	11	440	0	360	980	45	.6	10	1840	2.50
AUG												
17...	--	--	9.1	200	0	160	540	200	.5	6.2	--	--
SEP												
14...	320	4.3	24	320	0	260	1400	70	.6	4.9	2330	3.17

CHEYENNE RIVER BASIN

06426500 BELLE FOURCHE RIVER BELOW MOORCROFT, WY--Continued

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

DATE	SOLIDS, DIS- SOLVED (TONS PER DAY)	NITRO- GEN, NITRATE DIS- SOLVED (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 DIS- SOLVED (MG/L AS N)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS NH4)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N)	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,AM- MONIA + ORGANIC DIS. (MG/L AS N)
NOV 10...	2.84	--	.01	--	.07	--	--	.62	--	.69	--
DEC 09...	10.2	--	.04	--	.13	--	--	1.1	--	1.2	--
JAN 01...	1.33	--	.34	--	2.5	--	--	1.8	--	4.3	--
FEB 02...	4.80	--	.52	--	6.3	--	--	.40	--	6.7	--
MAR 03...	4.58	--	.93	--	1.6	--	--	2.8	--	4.4	--
30...	145	--	.12	--	.31	--	--	1.3	--	1.6	--
MAY 11...	844	--	.15	--	.19	--	--	2.0	--	2.2	--
JUN 08...	293	--	.01	.18	.00	.00	.00	.91	.64	.91	.64
08...	291	.20	.20	--	.12	--	--	1.1	--	1.2	--
JUL 20...	74.5	--	.03	--	.04	--	--	1.2	--	1.2	--
AUG 17...	--	--	.08	--	.31	--	--	2.7	--	3.0	--
SEP 14...	54.7	--	4.3	--	.00	--	--	.96	--	.96	--

[illegible][illegible]

CHEYENNE RIVER BASIN

06426500 BELLE FOURCHE RIVER BELOW MOORCROFT, WY--Continued

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

DATE	TIME	2,4-D, TOTAL (UG/L)	2,4-D, TOTAL IN BOT- TOM MA- TERIAL (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)
MAY 11...	1400	.59	0	.00	0	.00	.0
JUL 20...	1450	.00	0	.00	0	.00	.0
AUG 17...	1330	.02	0	.00	0	.00	.0
SEP 14...	1510	.00	0	.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)
MAY 11...	.00	0	.01	0
JUL 20...	.00	0	.00	0
AUG 17...	.00	0	.00	0
SEP 14...	.00	0	.00	0

DATE	TIME	TEMPER- ATURE (DEG C)	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SEDI- MENT, SUS- PENDED (MG/L)	SEDI- MENT DIS- CHARGE, SUS- PENDED (T/DAY)	SED. SUSP. FALL DIAM. % FINER THAN .004 MM	SED. SUSP. FALL DIAM. % FINER THAN .016 MM	SED. SUSP. FALL DIAM. % FINER THAN .062 MM
DOCT 04...	1530	10.0	2.0	2340	13	--	--	--
NOV 08...	1240	4.0	1.2	108	.35	--	--	--
DEC 07...	1345	.0	1.3	49	.17	--	--	--
JAN 10...	1425	.0	1.2	151	.49	--	--	--
FEB 08...	1650	.0	1.3	9	.03	--	--	--
MAR 20...	1130	.5	2400	1120	7260	82	97	100
MAR 22...	1510	4.5	869	--	--	80	99	100
APR 04...	0945	8.5	33	188	17	--	--	--
MAY 09...	1800	6.0	1470	3020	12000	71	84	100
JUN 14...	1245	23.0	34	136	12	--	--	--
JUL 19...	1335	20.0	13	214	7.5	--	--	--
AUG 08...	1600	27.0	12	89	2.9	--	--	--
SEP 06...	1450	23.0	8.6	102	2.4	--	--	--

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
JUN 08...	1200	16.5	55	46	52	66	76
AUG 08...	1600	27.0	12	5	7	12	26

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
JUN 08...	86	96	100	--	--	--	--
AUG 08...	37	48	64	82	91	99	100

06426500 BELLE FOURCHE RIVER BELOW MOORCROFT, WY--Continued

QUALITATIVE AND ASSOCIATED QUANTITATIVE ANALYSES OF BIOLOGICAL DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

PERIPHYTON ANALYSES

JUNE 8, 1978
1330 HOURS

PERIPHYTON IDENTIFICATION

ORGANISM NAME	COMMON NAME
CHRYSTOPHYTA	
.BACILLARIOPHYCEAE	DIATOMS
..PENNALES	PENNATE
...ACHNANTHACEAE	
....COCCONEIS	
...NAVICULACEAE	NAVICULOID
& ...NAVICULA	
...NITZSCHACEAE	
& ...NITZSCHIA	
...SURIPELLACEAE	
...SURIPELLA	

NOTE: & - ESTIMATED DOMINANT ORGANISM; NOT ACTUALLY COUNTED
 SAMPLING METHOD: PLASTIC SLIDES, TIMED SAMPLING INTERVAL
 ANALYSIS METHOD: GLASS CHAMBER(12MM CIRC), 200-X MICROSCOPE

JULY 20, 1978
1450 HOURS

PERIPHYTON IDENTIFICATION

ORGANISM NAME	COMMON NAME
CHRYSTOPHYTA	
.BACILLARIOPHYCEAE	DIATOMS
..PENNALES	PENNATE
...ACHNANTHACEAE	
....COCCONEIS	
...CYMBELLACEAE	
....CYMBELLA	
...FRAGILARIACEAE	
....SYNEDRA	
...NAVICULACEAE	NAVICULOID
....GYROSIGMA	
...NAVICULA	
...NITZSCHACEAE	
& ...NITZSCHIA	
EUGLENOPHYTA	EUGLENUIDS
.EUGLENOPHYCEAE	
..EUGLENALES	
...EUGLENACEAE	
....TRACHELUMONAS	

NOTE: & - ESTIMATED DOMINANT ORGANISM; NOT ACTUALLY COUNTED
 SAMPLING METHOD: PLASTIC SLIDES, TIMED SAMPLING INTERVAL
 ANALYSIS METHOD: GLASS CHAMBER(12MM CIRC), 200-X MICROSCOPE

AUG. 17, 1978
1330 HOURS

PERIPHYTON IDENTIFICATION

ORGANISM NAME	COMMON NAME
CHLOROPHYTA	GREEN ALGAE
.CHLOROPHYCEAE	
..CLADOPHORALES	
...CLADOPHORACEAE	
& ...CLADOPHORA	
CHRYSTOPHYTA	
.BACILLARIOPHYCEAE	DIATOMS
..PENNALES	PENNATE
...ACHNANTHACEAE	
& ...COCCONEIS	
...NITZSCHACEAE	
& ...NITZSCHIA	
...SURIPELLACEAE	
...SURIPELLA	

NOTE: & - ESTIMATED DOMINANT ORGANISM; NOT ACTUALLY COUNTED
 SAMPLING METHOD: PLASTIC SLIDES, TIMED SAMPLING INTERVAL
 ANALYSIS METHOD: GLASS CHAMBER(12MM CIRC), 200-X MICROSCOPE

CHEYENNE RIVER BASIN

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). 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, 210,200 acre-ft (259 hm³) May 21, elevation, 4,100.38 ft (1,249.796 m); minimum daily, 112,000 acre-ft (138 hm³) Nov. 28-30, elevation, 4,087.64 (1,245.913 m).

MONTHEND ELEVATION AND CONTENTS, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

Date	Elevation (feet)	Contents (acre-feet)	Change in contents (acre-feet)
Sept. 30	4,087.89	113,500	-
Oct. 31	4,088.00	114,100	+600
Nov. 30	4,087.64	112,000	-2,100
Dec. 31	4,087.67	112,200	+200
CAL YR 1977	-	-	-18,800
Jan. 31	4,087.68	112,300	+100
Feb. 28	4,087.75	112,700	+400
Mar. 31	4,093.64	152,100	+39,400
Apr. 30	4,093.78	153,100	+1,000
May 31	4,098.22	189,900	+36,800
June 30	4,096.24	172,700	-17,200
July 31	4,096.17	172,100	-600
Aug. 31	4,095.32	165,200	-6,900
Sept. 30	4,094.51	158,800	-6,400
WTR YR 1978	-	-	+45,300

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	1290	2.0	71	37
2	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	1280	2.0	71	37
3	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	1270	2.0	62	37
4	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	1260	2.0	34	37
5	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	1260	2.0	34	37
6	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	1260	2.0	34	37
7	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	1260	2.0	34	37
8	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	591	2.0	34	37
9	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	57	37
10	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	77	37
11	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	77	37
12	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	77	37
13	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	77	37
14	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	77	23
15	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	77	11
16	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	77	11
17	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	77	11
18	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	77	11
19	2.0	2.0	2.0	2.0	2.0	2.0	2.0	220	2.0	2.0	77	11
20	2.0	2.0	2.0	2.0	2.0	2.0	2.0	511	2.0	36	77	11
21	2.0	2.0	2.0	2.0	2.0	2.0	2.0	782	2.0	82	77	11
22	2.0	2.0	2.0	2.0	2.0	2.0	2.0	1010	2.0	78	77	11
23	2.0	2.0	2.0	2.0	2.0	2.0	2.0	1220	2.0	73	77	11
24	2.0	2.0	2.0	2.0	2.0	2.0	2.0	1350	2.0	73	77	11
25	2.0	2.0	2.0	2.0	2.0	2.0	2.0	1320	2.0	72	77	11
26	2.0	2.0	2.0	2.0	2.0	2.0	2.0	1300	2.0	71	77	11
27	2.0	2.0	2.0	2.0	2.0	2.0	2.0	1300	2.0	70	77	11
28	2.0	2.0	2.0	2.0	2.0	2.0	2.0	1300	2.0	70	77	11
29	2.0	2.0	2.0	2.0	---	2.0	2.0	1300	2.0	70	77	11
30	2.0	2.0	2.0	2.0	---	2.0	2.0	1290	2.0	71	77	11
31	2.0	---	2.0	2.0	---	2.0	---	1290	---	70	58	---
TOTAL	62.0	60.0	62.0	62.0	56.0	62.0	60.0	14229.0	9515.0	874.0	2106	680
MEAN	2.00	2.00	2.00	2.00	2.00	2.00	2.00	459	317	28.2	67.9	22.7
MAX	2.0	2.0	2.0	2.0	2.0	2.0	2.0	1350	1290	82	77	37
MIN	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	34	11
AC-FT	123	119	123	123	111	123	119	28220	18870	1730	4180	1350
CAL YR 1977	TOTAL	12549.0	MEAN	34.4	MAX	308	MIN	2.0	AC-FT	24890		
WTR YR 1978	TOTAL	27828.0	MEAN	76.2	MAX	1350	MIN	2.0	AC-FT	55200		

CHEYENNE RIVER BASIN

06427850 BELLE FOURCHE RIVER AT DEVILS TOWER, WY

LOCATION.--Lat 44°35'22", long 104°42'12", in NW¼SE¼SE¼ 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 1977 TO SEPTEMBER 1978

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	TUR- BID- ITY (JTU)	HARD- NESS (MG/L AS CAC03)	HARD- NESS, NONCAR- BONATE (MG/L CAC03)
NOV								
10...	1115	9.6	--	--	1.5	4	690	500
DEC								
09...	0930	E8.0	--	--	.0	2	610	400
31...	1530	E10	--	--	.0	2	1000	750
FEB								
02...	1100	E6.0	--	--	.0	1	1000	750
MAR								
03...	1415	E8.0	--	--	.0	2	910	780
30...	0915	E470	--	--	7.0	250	270	180
MAY								
11...	1200	E570	--	--	11.0	350	300	220
JUN								
08...	1130	E1100	770	8.2	14.0	45	210	87
JUL								
20...	1210	19	1600	8.2	19.0	10	700	540
AUG								
17...	1130	90	950	8.3	18.5	10	330	200
SEP								
14...	1315	44	1000	8.3	15.0	3	310	160

E-Estimate.

DATE	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	BICAR- BONATE (MG/L AS HCO3)	CAR- BONATE (MG/L AS CO3)	ALKA- LINITY (MG/L AS CAC03)	SULFATE DIS- SOLVED (MG/L AS SO4)
NOV									
10...	180	60	140	2.3	8.3	230	0	190	780
DEC									
09...	280	76	140	1.9	8.2	260	0	210	950
31...	280	70	130	1.8	7.5	300	0	250	960
FEB									
02...	300	69	120	1.6	6.6	310	0	250	950
MAR									
03...	260	64	120	1.7	.2	160	0	130	940
30...	62	27	27	.7	5.9	110	0	90	230
MAY									
11...	71	30	50	1.3	4.7	100	0	82	320
JUN									
08...	52	20	76	2.3	8.1	150	0	120	250
JUL									
20...	190	51	120	2.0	7.7	200	0	160	740
AUG									
17...	85	28	85	2.0	7.4	160	0	130	390
SEP									
14...	78	27	95	2.4	6.5	180	0	150	330

06427850 BELLE FOURCHE RIVER AT DEVILS TOWER, WY--Continued

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

DATE	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUD- 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, NITRATE DIS- SOLVED (MG/L AS N)	PHOS- PHORUS, TOTAL (MG/L AS P)
NOV 10...	10	.8	7.0	1300	1.77	33.7	.00	.00
DEC 09...	11	.7	17	1630	2.22	35.2	.02	.00
31...	13	.7	13	1630	2.22	44.0	.07	.01
FEB 02...	8.9	.7	10	1610	2.19	--	.27	.00
MAR 03...	10	.6	13	1500	2.04	--	.27	.07
30...	6.0	.3	6.1	417	.57	--	.29	.39
MAY 11...	4.3	.4	8.5	540	.73	831	.52	.03
JUN 08...	12	.6	1.6	494	.67	--	.25	.04
JUL 20...	5.6	.7	3.8	1220	1.66	62.6	.07	.04
AUG 17...	6.7	.6	.0	679	.92	165	.02	.04
SEP 14...	11	.5	1.8	638	.87	75.8	.00	.02

DATE	TIME	2,4-D, TOTAL (UG/L)	2,4-D, TOTAL IN BOT- TOM MA- TERIAL (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)
MAY 11...	1200	.10	0	.00	0	.00	.0
JUL 20...	1210	.00	0	.00	0	.00	.0
AUG 17...	1130	.05	0	.00	0	.00	.0
SEP 14...	1315	.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)
MAY 11...	.00	0	.18	0
JULY 20...	.00	0	.00	0
AUG 17	.00	0	.02	0
SEP... 14...	.00	--	.00	--

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, SD, 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, which are poor. Diversions above station for irrigation of about 5,400 acres (2,200 hm²). Flow regulated by Keyhole Reservoir, usable capacity, 191,600 acre-ft (236 hm³), 143 mi (230 km) upstream, since Oct. 25, 1952 (see sta 06427000).

AVERAGE DISCHARGE.--32 years, 92.6 ft³/s (2.622 m³/s), 67,090 acre-ft/yr (82.7 hm³/yr); median of yearly mean discharges, 93 ft³/s (2.63 m³/s), 67,400 acre-ft/yr (83 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, 2,100 ft³/s (59.5 m³/s) May 20, gage height, 11.24 ft (3.426 m); minimum daily, 15 ft³/s (0.42 m³/s) Dec. 9.

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

DAY	UCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	133	23	21	18	19	18	524	257	1610	120	104	92
2	148	24	21	18	19	18	394	196	1580	119	107	86
3	63	24	23	18	19	18	311	169	1550	230	102	82
4	79	25	23	18	22	18	253	387	1520	203	104	71
5	94	26	21	19	22	20	214	859	1510	157	108	60
6	78	26	21	20	22	20	181	813	1500	134	101	53
7	101	26	23	19	20	30	156	859	1480	115	89	50
8	144	26	20	18	20	40	138	1560	1490	112	78	48
9	63	22	15	18	20	60	120	1120	1500	112	72	47
10	54	22	18	18	20	60	106	1010	1110	105	71	45
11	49	29	21	19	20	80	99	1680	416	115	69	46
12	51	28	22	19	19	150	94	1820	321	108	65	48
13	51	27	23	19	19	300	89	1090	280	96	92	51
14	49	29	24	19	18	500	85	734	252	90	95	53
15	47	26	24	19	17	550	81	549	232	85	96	52
16	44	26	23	18	17	540	82	444	246	84	99	51
17	41	22	22	18	17	474	77	383	213	78	79	51
18	39	20	22	17	18	834	80	536	214	70	93	49
19	36	20	21	17	19	945	93	1050	196	67	97	41
20	35	18	21	18	18	1110	91	1650	181	67	99	38
21	34	16	21	18	20	1000	81	1980	173	101	96	37
22	33	17	21	19	20	824	77	1530	172	95	92	36
23	31	18	20	19	20	713	77	1280	166	81	89	34
24	30	19	19	19	20	842	89	1460	151	136	89	33
25	29	20	19	18	19	670	88	1440	144	156	89	32
26	28	25	19	18	18	515	91	1530	134	134	86	31
27	27	25	18	18	18	669	97	1540	131	120	86	30
28	24	25	20	19	18	830	101	1560	127	110	82	30
29	24	25	20	19	---	921	133	1550	124	108	82	29
30	24	24	19	19	---	779	222	1570	122	104	86	29
31	23	---	18	18	---	618	---	1620	---	106	91	---
TOTAL	1706	703	643	571	538	14166	4324	34226	18845	3518	2788	1435
MEAN	55.0	23.4	20.7	18.4	19.2	457	144	1104	628	113	89.9	47.8
MAX	148	29	24	20	22	1110	524	1980	1610	230	108	92
MIN	23	16	15	17	17	18	77	169	122	67	65	29
AC-FT	3380	1390	1280	1130	1070	28100	8580	67890	37380	6980	5530	2850
CAL YR 1977	TOTAL	30259	MEAN	82.9	MAX	870	MIN 12	AC-FT	60020			
WTP YR 1978	TOTAL	83463	MEAN	229	MAX	1980	MIN 15	AC-FT	165500			

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 1977 TO SEPTEMBER 1978

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	TUR- BID- ITY (JTU)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN DEMAND, BIO- CHEM- ICAL, 5 DAY (MG/L)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	HARD- NESS (MG/L AS CAC03)	HARD- NESS, NONCAR- BONATE (MG/L CAC03)	CALCIUM DIS- SOLVED (MG/L AS CA)
OCT												
04...	1430	106	--	--	12.0	--	--	--	--	--	--	--
NOV												
01...	1715	23	2100	--	6.0	--	--	--	--	--	--	--
09...	0730	20	--	--	.0	--	--	--	--	1100	950	240
10...	0900	24	1700	8.0	2.0	7	12.8	3.0	130	970	810	260
DEC												
01...	1215	21	--	--	.5	--	--	--	--	--	--	--
08...	0830	A20	--	--	.0	--	--	--	--	1200	950	330
08...	1400	--	1900	7.7	.0	4	12.2	3.4	K20	1200	950	330
31...	1300	A18	2100	7.4	.0	15	11.6	3.0	K6	1200	960	320
JAN												
02...	1530	19	--	--	.0	--	--	--	--	--	--	--
FEB												
02...	0830	A19	2200	7.3	.0	3	11.2	1.6	31	1200	950	370
08...	1345	20	--	--	.0	--	--	--	--	1100	860	310
27...	1645	18	--	--	.0	--	--	--	--	--	--	--
MAR												
03...	1200	A18	2100	7.3	.0	2	13.2	2.1	28	1100	950	310
27...	1300	673	860	--	9.5	--	--	--	--	--	--	--
29...	1530	829	570	7.5	10.0	900	11.2	6.1	K130	250	140	60
MAY												
04...	0930	175	970	--	10.5	--	--	--	--	--	--	--
11...	0915	1500	900	7.5	12.0	600	8.8	5.1	K1100	580	470	78
JUN												
02...	1000	1600	900	--	18.0	--	--	--	--	--	--	--
08...	0930	1600	850	8.2	18.0	180	7.8	3.0	K300	260	130	66
JUL												
11...	1530	117	2000	--	27.0	--	--	--	--	--	--	--
20...	0910	70	1850	8.0	18.0	25	8.0	2.0	180	800	690	220
AUG												
09...	0810	72	1560	--	21.0	--	--	--	--	--	--	--
17...	0830	70	1500	8.1	18.0	15	8.0	1.5	K540	580	440	160
SEP												
05...	1615	59	1750	--	25.0	--	--	--	--	--	--	--
14...	0930	60	1550	8.2	12.0	10	9.4	2.6	84	690	540	190

A-Daily mean discharge.

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)	BICAR- BONATE (MG/L AS HC03)	CAR- BONATE (MG/L AS CO3)	ALKA- LINITY (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)	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, SUM OF CONSTITU- ENTS, DIS- SOLVED (MG/L)
OCT												
04...	--	--	--	--	--	--	--	--	--	--	--	--
NOV												
01...	--	--	--	--	--	--	--	--	--	--	--	--
09...	110	120	1.6	8.1	180	0	150	1100	8.6	.8	6.3	1650
10...	75	130	1.8	8.4	200	0	160	1100	13	.8	6.5	1650
DEC												
01...	--	--	--	--	--	--	--	--	--	--	--	--
08...	85	140	1.8	9.2	310	0	250	1200	16	.8	11	1900
08...	86	140	1.8	9.5	300	0	250	1200	11	.8	12	1900
31...	86	140	1.8	8.6	290	0	240	1100	9.7	.9	11	1860
JAN												
02...	--	--	--	--	--	--	--	--	--	--	--	--
FEB												
02...	56	130	1.7	7.8	310	0	250	1100	11	.9	12	1880
08...	83	130	1.7	5.6	290	0	240	1100	13	.9	12	1800
27...	--	--	--	--	--	--	--	--	--	--	--	--
MAR												
03...	73	130	1.7	8.5	180	0	150	1100	13	.8	13	1860
27...	--	--	--	--	--	--	--	--	--	--	--	--
29...	24	39	1.1	5.6	130	0	100	230	5.3	.4	8.9	438
MAY												
04...	--	--	--	--	--	--	--	--	--	--	--	--
11...	23	73	1.9	6.3	130	0	110	370	1.1	.6	3.0	623
JUN												
02...	--	--	--	--	--	--	--	--	--	--	--	--
08...	22	73	2.0	7.7	160	0	130	270	10	.6	2.6	533
JUL												
11...	--	--	--	--	--	--	--	--	--	--	--	--
20...	63	130	2.0	9.3	130	0	110	940	5.6	.9	5.1	1440
AUG												
09...	--	--	--	--	--	--	--	--	--	--	--	--
17...	45	100	1.8	8.9	170	0	140	660	6.7	.9	4.8	1070
SEP												
05...	--	--	--	--	--	--	--	--	--	--	--	--
14...	50	110	1.8	7.5	180	0	140	760	13	.8	3.5	1220

06428500 BELLE FOURCHE RIVER AT WYOMING-SOUTH DAKOTA STATE LINE--Continued

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

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- 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)
NOV											
10...	--	--	--	--	--	--	--	--	--	--	--
DEC											
08...	--	--	--	--	--	--	--	--	--	--	--
31...	--	--	--	--	--	--	--	--	--	--	--
FEB											
02...	--	--	--	--	--	--	--	--	--	--	--
MAR											
03...	--	--	--	--	--	--	--	--	--	--	--
29...	6	60	20	40	2000	2000	10	.0	.0	.0	4
JUL											
20...	--	--	--	--	--	--	--	--	--	--	--
AUG											
17...	--	--	--	--	--	--	--	--	--	--	--
SEP											
14...	--	--	--	--	--	--	--	--	--	--	--

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 (UG/L AS SE)	SELE- NIUM, SUS- PENDE RECOV- ERABLE (UG/L AS SE)	SELE- NIUM, DIS- SOLVED (UG/L AS SE)	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											
10...	--	--	--	--	--	--	--	--	--	--	--
DEC											
08...	--	--	--	--	--	--	--	--	--	--	--
31...	--	--	--	--	--	--	--	--	--	--	--
FEB											
02...	--	--	--	--	--	--	--	--	--	--	--
MAR											
03...	--	--	--	--	--	--	--	--	--	--	--
29...	2	2	40	34	6	4	0	5	180	180	0
JUL											
20...	--	--	--	--	--	--	--	--	--	--	--
AUG											
17...	--	--	--	--	--	--	--	--	--	--	--
SEP											
14...	--	--	--	--	--	--	--	--	--	--	--

DATE	TIME	2,4-D, TOTAL IN BOT- TOM MA- TERIAL (UG/L)	2,4-D, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	2,4,5-T TOTAL IN BOT- TOM MA- TERIAL (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)
MAY							
11...	0915	.32	0	.00	0	.00	.0
SEP							
14...	0930	.00	0	.00	0	.00	.0

DATE	TOTAL DICAMBA (UG/L)	TOTAL DICAMBA IN BOT- TOM MA- TERIAL (UG/KG)	TOTAL PICLORAM (UG/L)	TOTAL PICLORAM IN BOT- TOM MA- TERIAL (UG/KG)
MAY				
11...	.00	0	.13	0
SEP				
14...	.00	0	.00	0

CHEYENNE RIVER BASIN

06428500 BELLE FOURCHE RIVER AT WYOMING-SOUTH DAKOTA STATE LINE--Continued

QUALITATIVE AND ASSOCIATED QUANTITATIVE ANALYSES OF BIOLOGICAL DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

PERIPHYTON ANALYSES

OCT. 2, 1977
1350 HOURS

PERIPHYTON IDENTIFICATION

ORGANISM NAME	COMMON NAME
CHLOROPHYTA	GREEN ALGAE
.CHLOROPHYCEAE	
..CHLOROCOCCALES	
...OOCYSTACEAE	
....SELENASTRUM	
..ULOTRICHALES	
...CHAETOPHORACEAE	
....CHAETONEMA	
....PSEUDOUVELLA	
..ZYGNEMATALES	
...DESMIDIACEAE	PLACODERM DESMIDS
....CLOSTERIUM	
CHRYSTOPHYTA	
.BACILLARIOPHYCEAE	DIATOMS
..CENTRALES	CENTRIC
...COSCINODISCACEAE	
....MELOSIRA	
..PENNALES	PENNATE
...ACHNANTHACEAE	
& ...ACHNANTHES	
...COCCONEIS	
..CYMBELLACEAE	
....AMPHORA	
....CYMBELLA	
....EPITHEMIA	
...DIATOMACEAE	
& ...DIATOMA	
...FRAGILARIACEAE	
...FRAGILARIA	
...HANNAEA	
...SYNEDRA	
...GOMPHONEMATACEAE	
& ...GOMPHONEMA	
...NAVICULACEAE	NAVICULOID
...AMPHIPLEURA	
& ...NAVICULA	
...NEIDIUM	
...PINNULARIA	
...NITZSCHACEAE	
...DENTICULA	
...NITZSCHIA	
...SURIPELLACEAE	
...CYMATOPLEURA	
CYANOPHYTA	BLUE-GREEN ALGAE
.CYANOPHYCEAE	
..CHROCOCCALES	COCCOID BLUE-GREENS
...CHROCOCCACEAE	
....ACMENELLUM	
..HORMOGONALES	FILAMENTOUS BL-GREEN
...NOSTOCACEAE	
....ANABAENA	
...OSCILLATORIACEAE	
....LYNGBYA	
...OSCILLATORIA	
...RIVULARIACEAE	
...CALOTHRIX	

NOTE: & - ESTIMATED DOMINANT ORGANISM; NOT ACTUALLY COUNTED
 SAMPLING METHOD: PLASTIC SLIDES, TIMED SAMPLING INTERVAL
 ANALYSIS METHOD: GLASS CHAMBER(12MM CIRC), 200-X MICROSCOPE

06428500 BELLE FOURCHE RIVER AT WYOMING-SOUTH DAKOTA STATE LINE--Continued

QUALITATIVE AND ASSOCIATED QUANTITATIVE ANALYSES OF BIOLOGICAL DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

PERIPHYTON ANALYSES

NOV. 10, 1977
0900 HOURS

PERIPHYTON IDENTIFICATION

__ORGANISM__NAME__	__COMMON__NAME__
CHRYSOPHYTA	
.BACILLARIOPHYCEAE	DIATOMS
..PENNALES	PENNATE
...ACHNANTHACEAE	
...COCCONEIS	
...GOMPHONEMACEAE	
&GOMPHONEMA	
...NITZSCHACEAE	
&NITZSCHIA	
...SURIRELLACEAE	
....SURIRELLA	

NOTE: & - ESTIMATED DOMINANT ORGANISM; NOT ACTUALLY COUNTED
 SAMPLING METHOD: PLASTIC SLIDES, TIMED SAMPLING INTERVAL
 ANALYSIS METHOD: SLIDE MOUNTING

JUNE 8, 1978
0930 HOURS

PERIPHYTON IDENTIFICATION

NO ORGANISMS REPORTED

JULY 20, 1978
0910 HOURS

PERIPHYTON IDENTIFICATION

NO ORGANISMS REPORTED

AUG. 17, 1978
0830 HOURS

PERIPHYTON IDENTIFICATION

__ORGANISM__NAME__	__COMMON__NAME__
CHLOROPHYTA	GREEN ALGAE
.CHLOROPHYCEAE	
..OEDOGONIALES	
...OEDOGONIAEAE	
&OEDOGONIUM	
CHRYSOPHYTA	
.BACILLARIOPHYCEAE	DIATOMS
..PENNALES	PENNATE
...GOMPHONEMACEAE	
....GOMPHONEMA	
...NITZSCHACEAE	
&NITZSCHIA	

NOTE: & - ESTIMATED DOMINANT ORGANISM; NOT ACTUALLY COUNTED
 SAMPLING METHOD: PLASTIC SLIDES, TIMED SAMPLING INTERVAL
 ANALYSIS METHOD: GLASS CHAMBER(12MM CIRC), 200-X MICROSCOPE

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.

EXTREMES FOR PERIOD OF RECORD:--Maximum discharge, 12 ft³/s (0.34 m³/s) July 1, 1978, gage height, 4.91 ft (1.497 m); maximum gage height, 6.77 ft (2.063 m) Apr. 4, 1975 (backwater from snow); minimum daily discharge, 2.0 ft³/s (0.057 m³/s) Mar. 28, 1975.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 12 ft³/s (0.34 m³/s) July 1, gage height, 4.91 ft (1.497 m); maximum gage height, 5.85 ft (1.783 m) Jan. 5 (backwater from ice); minimum daily discharge, 2.8 ft³/s (0.079 m³/s) Apr. 18.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6.0	5.6	4.9	4.4	5.0	5.0	5.2	4.8	5.9	6.5	4.4	4.6
2	6.0	5.2	4.8	4.6	5.0	4.6	5.2	4.6	6.1	5.5	4.3	4.4
3	6.0	5.2	4.7	4.8	5.0	4.3	5.0	4.8	6.1	5.2	4.4	4.4
4	6.0	4.8	4.6	5.2	5.2	4.4	5.2	5.0	5.9	5.2	4.3	4.4
5	6.0	4.4	4.5	5.2	5.2	4.6	5.0	4.8	5.9	5.2	4.3	4.4
6	6.0	4.4	4.4	5.0	5.2	5.0	5.0	4.8	5.7	5.2	4.3	4.4
7	6.0	4.2	4.2	4.8	5.0	4.8	5.2	4.8	5.7	5.2	4.4	4.1
8	6.0	4.2	4.0	4.8	5.0	5.0	5.0	3.5	5.9	5.7	4.4	4.1
9	6.0	4.4	4.1	4.4	5.0	5.0	5.2	4.5	5.7	5.5	4.4	4.1
10	6.0	4.4	4.1	4.2	5.0	5.2	5.2	5.2	5.7	5.2	4.4	4.1
11	6.0	4.6	4.2	4.2	5.0	4.8	5.2	5.2	5.7	5.2	4.4	4.1
12	5.4	4.7	4.2	4.2	5.0	5.0	5.5	5.5	5.5	5.2	4.4	4.1
13	5.4	4.8	4.2	4.4	4.5	4.6	5.7	5.2	5.2	5.2	4.3	4.1
14	5.6	4.9	4.3	4.6	4.0	4.8	5.2	5.0	5.5	5.0	4.4	4.1
15	5.6	5.1	4.3	4.8	3.9	5.2	5.2	5.0	5.7	5.0	4.4	4.3
16	5.6	5.2	4.3	4.8	4.1	5.0	5.2	5.0	5.7	5.2	4.4	4.1
17	5.6	5.2	4.3	4.8	4.2	5.2	5.2	5.5	5.7	5.2	4.4	4.1
18	5.4	5.0	4.2	5.2	4.4	5.2	2.8	5.9	5.5	4.8	4.4	4.6
19	5.4	4.8	4.1	4.8	4.6	5.0	4.0	6.1	5.5	5.0	4.4	4.4
20	5.4	4.6	4.0	5.0	4.7	4.8	5.0	5.7	5.2	5.2	4.4	4.3
21	5.4	4.7	3.9	5.4	4.7	4.8	5.5	5.7	5.2	5.4	4.3	4.4
22	5.4	5.0	3.8	5.8	5.0	4.8	5.5	5.9	5.2	4.8	4.4	4.8
23	5.2	5.1	4.0	5.5	5.2	4.8	5.2	5.9	5.2	4.8	4.4	4.6
24	5.4	5.2	4.0	5.2	5.2	4.8	5.0	5.9	5.0	4.6	4.4	4.6
25	5.2	5.2	3.8	3.9	4.8	4.8	5.2	5.9	5.2	4.8	4.3	4.6
26	5.4	5.2	4.0	4.0	5.2	4.8	5.0	5.9	5.5	4.8	4.3	4.6
27	5.4	5.2	4.1	4.3	5.2	5.2	5.2	5.9	5.5	4.8	4.6	4.6
28	5.2	5.1	4.3	4.6	5.0	5.2	5.2	5.9	5.2	4.8	4.6	4.8
29	5.0	5.0	4.5	4.8	---	5.0	5.2	5.9	5.2	4.8	4.6	4.8
30	5.0	4.9	4.4	4.9	---	5.2	4.8	6.1	5.5	4.6	4.6	4.8
31	5.0	---	4.4	5.0	---	4.8	---	5.9	---	4.4	4.6	---
TOTAL	173.0	146.3	131.6	147.6	135.3	151.7	152.0	165.8	166.5	158.0	136.6	131.8
MEAN	5.58	4.88	4.25	4.76	4.83	4.89	5.07	5.35	5.55	5.10	4.41	4.39
MAX	6.0	5.6	4.9	5.8	5.2	5.2	5.7	6.1	6.1	6.5	4.6	4.8
MIN	5.0	4.2	3.8	3.9	3.9	4.3	2.8	3.5	5.0	4.4	4.3	4.1
AC-FT	343	290	261	293	268	301	301	329	330	313	271	261
CAL YR 1977	TOTAL	1775.8		MEAN 4.87	MAX 6.8	MIN 2.9	AC-FT 3520					

413

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.

REMARKS. - - Records good.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 96 ft³/s (2.72 m³/s) Apr. 29, 1978, gage height, 5.73 ft (1.746 m); minimum daily, 22 ft³/s (0.62 m³/s) Feb. 1 to Mar. 2, 1978.

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, 96 ft³/s (2.72 m³/s) Apr. 29, gage height, 5.73 ft (1.746 m); minimum daily, 22 ft³/s (0.62 m³/s) Feb. 1 to Mar. 2.

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	30	28	26	24	22	22	26	47	39	34	31	29
2	28	28	26	23	22	22	27	39	39	33	30	29
3	29	28	26	23	22	23	26	34	39	31	30	28
4	27	29	26	23	22	23	26	38	38	31	30	29
5	27	28	25	23	22	24	26	36	38	31	28	29
6	27	28	25	23	22	26	26	34	39	31	28	29
7	29	29	25	23	22	25	26	37	39	31	28	29
8	28	29	25	23	22	26	26	37	39	31	28	29
9	28	29	25	23	22	26	27	38	38	31	28	29
10	28	28	25	23	22	26	27	42	38	29	28	28
11	28	28	25	23	22	26	28	66	37	30	28	28
12	28	29	25	23	22	26	28	65	36	30	28	28
13	28	28	25	23	22	26	28	58	37	31	28	28
14	28	28	26	23	22	28	28	54	37	32	28	28
15	28	29	26	23	22	28	27	55	37	32	29	28
16	29	29	26	23	22	30	28	50	36	32	28	28
17	29	29	26	23	22	29	28	48	36	32	28	28
18	29	29	25	23	22	29	29	48	36	31	28	28
19	30	29	25	23	22	29	29	48	36	31	28	28
20	30	29	25	23	22	30	29	49	34	31	28	28
21	30	29	24	23	22	30	29	48	35	33	28	28
22	30	28	24	23	22	30	29	45	35	32	28	28
23	30	29	24	23	22	31	29	43	35	31	28	28
24	30	28	24	23	22	31	30	41	35	31	28	28
25	29	28	24	23	22	31	30	39	34	31	28	28
26	28	27	24	23	22	30	31	39	34	31	28	28
27	28	27	24	23	22	28	32	39	34	30	28	28
28	28	26	24	23	22	25	32	38	33	30	29	28
29	28	26	24	23	---	25	73	39	33	31	29	28
30	28	26	24	23	---	26	65	40	34	31	29	28
31	28	---	24	23	---	26	---	39	---	30	29	---
TOTAL	885	845	772	714	616	837	925	1373	1090	966	882	848
MEAN	28.5	28.2	24.9	23.0	22.0	27.0	30.8	44.3	36.3	31.2	28.5	28.3
MAX	30	29	26	24	22	31	73	66	39	34	31	29
MIN	27	26	24	23	22	22	26	34	33	29	28	28
AC-FT	1760	1680	1530	1420	1220	1660	1830	2720	2160	1920	1750	1680
CAL YR 1977	TOTAL	10416	MEAN 28.5	MAX 43	MIN 24	AC-FT	20660					
WTR YR 1978	TOTAL	10753	MEAN 29.5	MAX 73	MIN 22	AC-FT	21330					

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.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6.9	8.7	.00	.00	.00	.00	.00	.00	.00	8.8	4.3	11
2	6.9	9.1	.00	.00	.00	.00	.00	.00	.00	8.3	4.4	8.8
3	7.5	9.4	.00	.00	.00	.00	.00	.00	.00	8.5	4.5	9.5
4	8.1	10	.00	.00	.00	.00	.00	.24	.00	9.0	4.4	9.8
5	9.5	9.5	.00	.00	.00	.00	.00	.05	.00	9.5	4.2	9.5
6	10	9.7	.00	.00	.00	.00	.00	.00	.00	10	4.1	9.1
7	11	9.1	.00	.00	.00	.00	.00	.42	.00	11	3.9	11
8	11	.74	.00	.00	.00	.00	.00	.66	.00	11	4.9	11
9	12	.00	.00	.00	.00	.00	.00	.05	.00	12	5.8	10
10	14	.00	.00	.00	.00	.00	.00	.00	.00	12	8.1	10
11	17	.00	.00	.00	.00	.00	.00	.00	.00	12	8.4	11
12	18	.00	.00	.00	.00	.00	.00	.00	.00	13	6.9	11
13	19	.00	.00	.00	.00	.00	.00	.00	.00	13	6.2	11
14	13	.00	.00	.00	.00	.00	.00	.00	.00	13	6.3	12
15	10	.00	.00	.00	.00	.00	.00	.00	.00	12	5.7	12
16	11	.00	.00	.00	.00	.00	.00	.00	3.7	13	6.0	12
17	13	.00	.00	.00	.00	.00	.00	.00	5.5	13	5.2	11
18	15	.00	.00	.00	.00	.00	.00	.00	5.8	9.7	4.7	10
19	15	.00	.00	.00	.00	.00	.00	.00	6.3	9.7	8.1	13
20	15	.00	.00	.00	.00	.00	.00	.00	6.6	10	12	14
21	17	.00	.00	.00	.00	.00	.00	.00	6.7	10	12	15
22	19	.00	.00	.00	.00	.00	.00	.00	6.7	11	12	16
23	21	.00	.00	.00	.00	.00	.00	.00	5.7	11	11	15
24	22	.00	.00	.00	.00	.00	.00	.00	5.7	12	11	15
25	21	.00	.00	.00	.00	.00	.00	.00	5.8	12	11	16
26	13	.00	.00	.00	.00	.00	.00	.00	5.8	8.9	13	17
27	7.4	.00	.00	.00	.00	.00	.00	.00	5.8	7.5	15	19
28	7.2	.00	.00	.00	.00	.00	.00	.00	5.7	7.8	14	15
29	6.4	.00	.00	.00	.00	.00	.00	.00	6.6	6.7	13	8.4
30	7.0	.00	.00	.00	.00	.00	.00	.00	7.8	4.0	13	8.3
31	8.7	---	.00	.00	---	.00	---	.00	---	4.1	13	---
TOTAL	392.6	66.24	.00	.00	.00	.00	.00	1.42	90.20	313.5	256.1	361.4
MEAN	12.7	2.21	.000	.000	.000	.000	.000	.046	3.01	10.1	8.26	12.0
MAX	22	10	.00	.00	.00	.00	.00	.66	7.8	13	15	19
MIN	6.4	.00	.00	.00	.00	.00	.00	.00	.00	4.0	3.9	8.3
AC-FT	779	131	.00	.00	.00	.00	.00	2.8	179	622	508	717
CAL YR 1977	TOTAL	1873.08	MEAN 5.13	MAX 34	MIN .00	AC-FT 3720						
WTR YR 1978	TOTAL	1481.46	MEAN 4.06	MAX 22	MIN .00	AC-FT 2940						

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.--26 years, 37.0 ft³/s (1.048 m³/s), 26,810 acre-ft/yr (33.1 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.--Peak discharges above base of 150 ft³/s (4.25 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)	
Mar. 19	0300	260	7.36	4.14	1.262	May 11	1115	*360	10.2	4.80	1.463
Apr. 29	1745	186	5.27	3.72	1.134	May 20	0230	188	5.32	3.80	1.158

Minimum daily discharge, 23 ft³/s (0.65 m³/s) July 15, Aug. 28-30.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	35	31	41	37	38	37	47	87	62	45	40	26
2	30	30	42	39	39	37	47	60	62	40	40	26
3	30	30	42	42	38	37	46	53	61	39	39	31
4	31	30	42	36	37	37	46	64	57	39	41	29
5	31	30	41	36	37	37	43	62	55	38	40	29
6	31	30	40	37	38	36	41	76	54	35	40	28
7	35	31	38	36	38	37	40	84	55	30	39	28
8	33	41	36	35	38	38	41	89	54	30	38	28
9	33	40	34	35	38	55	40	84	55	30	34	30
10	34	40	36	35	37	96	39	115	56	29	32	27
11	34	40	37	36	38	91	40	264	55	25	32	24
12	34	40	37	36	38	84	39	220	52	25	32	25
13	33	40	36	36	37	60	40	170	53	28	33	25
14	33	40	37	36	37	50	39	137	54	28	39	31
15	32	40	37	36	37	48	38	120	54	23	44	31
16	33	40	38	35	37	48	37	101	50	24	39	30
17	33	41	37	36	37	86	37	91	49	26	36	31
18	32	41	37	36	37	140	40	98	49	28	34	34
19	32	40	37	36	38	146	38	149	49	28	29	30
20	32	37	36	35	38	75	37	163	48	29	28	30
21	33	36	36	36	38	56	40	127	48	35	27	30
22	33	40	37	37	37	53	43	105	49	35	28	29
23	32	40	37	37	38	53	41	87	48	35	28	29
24	32	39	36	37	38	52	42	76	49	39	27	29
25	32	39	36	37	37	50	41	69	50	39	27	28
26	33	41	36	36	37	48	37	65	48	43	29	28
27	33	41	36	36	38	48	37	63	48	45	27	29
28	35	41	36	37	37	48	40	65	46	44	23	28
29	34	41	36	37	---	48	118	62	42	43	23	28
30	33	41	35	37	---	47	135	64	43	47	23	28
31	31	---	35	37	---	47	---	62	---	41	25	---
TOTAL	1012	1131	1157	1130	1052	1825	1389	3132	1555	1065	1016	859
MEAN	32.6	37.7	37.3	36.5	37.6	58.9	46.3	101	51.8	34.4	32.8	28.6
MAX	35	41	42	42	39	146	135	264	62	47	44	34
MIN	30	30	34	35	37	36	37	53	42	23	23	24
AC-FT	2010	2240	2290	2240	2090	3620	2760	6210	3080	2110	2020	1700

CAL YR 1977	TOTAL	13531.0	MEAN 37.1	MAX 79	MIN 9.6	AC-FT 26840
WTR YR 1978	TOTAL	16323.0	MEAN 44.7	MAX 264	MIN 23	AC-FT 32380

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 1977 TO SEPTEMBER 1978

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
OCT										
05...	1000	9.0	32	23	2.0	--	--	--	--	--
NOV										
09...	0945	4.0	36	24	2.3	--	--	--	--	--
DEC										
08...	1015	.0	A36	34	3.3	--	--	--	--	--
JAN										
11...	1145	.5	50	44	5.9	--	--	--	--	--
FEB										
08...	1245	.0	37	15	1.5	--	--	--	--	--
MAR										
10...	1750	6.0	198	1360	727	11	31	82	96	100
APR										
04...	1345	12.5	46	56	7.0	--	--	--	--	--
MAY										
10...	1130	7.5	122	288	95	--	--	--	--	--
JUN										
14...	1720	21.0	.56	27	.04	--	--	--	--	--
JUL										
19...	0730	15.5	28	66	5.0	--	--	--	--	--
AUG										
07...	1800	20.0	40	17	1.8	--	--	--	--	--
SEP										
07...	0900	15.5	27	20	1.5	--	--	--	--	--

A-Daily mean discharge.

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
JUN								
14...	1720	21.0	.56	1	1	2	3	5
AUG								
07...	1800	20.0	40	2	4	8	16	19

DATE	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	BED MAT. SIEVE DIAM. % FINER THAN 128 MM
JUN							
14...	7	10	16	28	50	82	100
AUG							
07...	22	25	31	41	66	92	100

LOCATION. --Lat 42°39'33", long 104°03'54", in SE4SW4 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.

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.--23 years, 4.15 ft³/s (0.118 m³/s), 3,010 acre-ft/yr (3.71 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.--Maximum discharge, 12 ft³/s (0.34 m³/s) Mar. 13, gage height, 1.63 ft (0.497 m), no peak above base of 20 ft³/s (0.57 m³/s); minimum daily, 0.61 ft³/s (0.017 m³/s) Aug. 13.

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.8	1.9	2.0	2.4	2.3	2.7	4.5	4.1	4.0	2.7	1.9	1.7
2	2.5	1.7	1.9	2.4	2.1	2.5	4.1	4.1	4.0	2.2	1.6	1.4
3	2.2	1.6	1.9	2.2	2.1	2.5	3.5	3.9	3.8	2.0	1.6	1.4
4	2.2	1.6	1.9	2.2	2.2	3.1	3.9	3.9	3.8	1.8	1.4	1.4
5	2.2	1.6	1.9	2.1	2.2	3.2	4.7	4.7	3.8	1.6	1.1	1.3
6	2.2	1.6	1.9	2.1	2.4	2.9	4.5	5.1	3.6	1.8	.91	1.2
7	2.2	1.6	1.9	2.1	2.4	2.9	4.3	6.4	3.6	1.7	.91	1.1
8	2.2	1.8	1.9	2.0	2.5	3.2	3.9	7.6	3.6	1.2	.79	1.0
9	2.2	2.0	1.9	2.0	2.5	3.5	3.7	6.1	3.5	1.6	.85	1.2
10	2.1	2.2	1.8	2.0	2.4	3.5	3.4	7.3	3.2	2.1	.79	1.2
11	2.1	2.2	1.7	2.0	2.5	3.1	3.2	7.3	3.1	1.8	.79	1.2
12	2.0	2.4	1.8	2.1	2.4	3.1	3.1	7.0	2.8	1.6	.67	1.2
13	2.0	2.4	1.8	2.1	2.4	4.7	3.1	6.1	2.7	1.4	.61	1.3
14	2.0	2.6	1.9	2.2	2.2	5.5	3.2	5.8	2.5	1.5	.85	1.4
15	2.0	2.8	2.0	2.2	2.4	4.3	3.2	5.5	2.4	1.3	.97	1.4
16	2.1	3.0	2.0	2.2	2.2	3.4	3.2	5.3	2.2	1.2	.79	1.3
17	2.1	3.0	1.8	2.4	2.1	3.7	3.2	5.5	2.2	2.7	.73	1.4
18	2.1	2.8	1.8	2.4	2.2	4.5	4.1	8.2	2.1	1.0	.70	1.5
19	2.1	2.8	1.9	2.4	2.1	4.3	3.7	6.1	2.1	1.1	.79	1.4
20	2.0	2.7	2.0	2.4	1.9	5.1	3.5	5.3	2.2	1.1	.79	1.4
21	2.1	2.7	2.0	2.5	1.4	5.3	3.5	5.3	2.2	2.2	.79	1.4
22	2.2	2.6	2.0	2.5	2.6	5.3	3.7	5.5	2.4	2.2	.85	1.3
23	2.2	2.5	2.1	2.5	2.9	5.3	3.4	5.3	2.7	1.6	.91	1.3
24	2.2	2.4	2.2	2.5	2.8	4.7	3.4	5.1	2.5	1.3	.97	1.3
25	2.2	2.3	2.4	2.3	2.8	4.5	3.2	4.9	2.8	1.2	.97	1.3
26	2.0	2.2	2.4	2.0	2.8	3.9	3.2	4.5	2.5	1.2	1.1	1.3
27	2.0	2.1	2.5	2.7	2.9	5.3	3.5	4.3	2.7	1.2	1.2	1.4
28	2.0	2.1	2.4	2.8	2.8	6.4	4.3	4.3	2.5	2.0	1.2	1.4
29	2.0	2.0	2.4	2.8	---	7.3	4.1	4.3	2.8	3.9	1.4	1.5
30	2.0	2.0	2.5	2.8	---	6.1	4.1	4.2	2.9	2.0	1.7	1.6
31	1.9	---	2.4	2.5	---	4.9	---	4.2	---	1.8	1.8	---
TOTAL	66.1	67.2	63.0	71.8	66.5	130.7	110.4	167.2	87.2	54.0	32.43	40.2
MEAN	2.13	2.24	2.03	2.32	2.38	4.22	3.68	5.39	2.91	1.74	1.05	1.34
MAX	2.8	3.0	2.5	2.8	2.9	7.3	4.7	8.2	4.0	3.9	1.9	1.7
MIN	1.9	1.6	1.7	2.0	1.4	2.5	3.1	3.9	2.1	1.0	.61	1.0
AC-FT	131	133	125	142	132	259	219	332	173	107	64	80
CAL YR 1977	TOTAL	1314.57	MEAN	3.60	MAX	233	MIN	.85	AC-FT	2610		
WTR YR 1978	TOTAL	956.7										

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 (see elsewhere in this report).

AVERAGE DISCHARGE.--63 years, 429 ft³/s (12.15 m³/s), 310,800 acre-ft/yr (383 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, 8.84 ft (2.694 m) Apr. 9, 1962, ice jam; minimum daily discharge, 19 ft³/s (0.54 m³/s) July 17-19, 1934.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 2,850 ft³/s (80.7 m³/s) June 18, gage height, 5.57 ft (1.698 m); Minimum daily, 50 ft³/s (1.42 m³/s) Nov. 10, 11.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	70	93	65	90	100	100	550	563	1470	2540	553	145
2	68	110	65	90	100	100	700	515	1430	2650	565	138
3	66	102	70	90	100	100	871	489	1290	2380	532	131
4	64	109	70	90	100	100	708	617	1330	1890	464	128
5	62	100	75	90	100	100	688	681	1750	1600	414	124
6	66	98	75	90	100	100	605	605	1800	1420	372	124
7	78	95	80	90	100	100	610	475	1730	1270	350	119
8	94	85	80	90	100	100	673	432	1740	1210	342	114
9	110	60	80	90	100	100	798	397	1770	1190	345	110
10	100	50	80	90	100	110	653	382	1760	1160	331	108
11	90	50	85	95	100	110	517	397	1860	1200	298	114
12	85	55	85	95	100	110	498	441	2210	1480	282	130
13	82	60	85	100	100	110	527	452	2560	1740	299	130
14	80	60	85	100	100	110	554	462	2620	1720	364	126
15	76	65	85	100	100	115	610	551	2620	1500	428	117
16	84	70	90	100	100	115	627	714	2680	1300	411	108
17	80	68	90	100	100	120	606	1050	2760	1270	332	101
18	80	65	85	100	95	120	527	1470	2810	1370	267	98
19	80	65	85	100	95	120	449	1800	2690	1450	251	105
20	80	60	85	100	95	130	432	1550	2440	1310	240	136
21	81	55	90	100	95	130	449	1430	2290	1240	224	166
22	93	55	90	100	95	130	466	1500	2130	1160	215	181
23	99	60	90	100	95	130	404	1590	2040	1030	222	182
24	93	60	90	100	95	140	362	1670	2090	900	215	171
25	94	60	90	100	95	150	365	1660	2220	806	212	156
26	97	60	90	100	95	160	443	1570	2400	743	204	141
27	93	60	90	100	95	180	555	1550	2450	679	195	129
28	90	60	90	100	95	210	652	1450	2250	611	182	121
29	89	60	90	100	---	250	647	1480	2120	568	170	112
30	94	60	90	100	---	300	579	1410	2290	605	160	101
31	93	---	90	100	---	400	---	1400	---	622	152	---
TOTAL	2611	2110	2590	2990	2745	4350	17125	30753	63600	40614	9591	3866
MEAN	84.2	70.3	83.5	96.5	98.0	140	571	992	2120	1310	309	129
MAX	110	110	90	100	100	400	871	1800	2810	2650	565	182
MIN	62	50	65	90	95	100	362	382	1290	568	152	98
AC-FT	5180	4190	5140	5930	5440	8630	33970	61000	126200	80560	19020	7670

CAL YR 1977	TOTAL	43248	MEAN 118	MAX 1030	MIN 23	AC-FT 85780
WTR YR 1978	TOTAL	182945	MEAN 501	MAX 2810	MIN 50	AC-FT 362900

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 1977 TO SEPTEMBER 1978

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	TUR- BID- ITY (JTU)	OXYGEN, DIS- SOLVED (MG/L)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	HARD- NESS (MG/L AS CACO3)
OCT									
10...	0930	112	--	--	2.0	3	10.8	27	130
DEC									
02...	1545	A65	--	--	.0	3	9.8	K16	130
23...	1200	A90	--	--	.0	2	10.8	K11	180
JAN									
17...	1030	A100	--	--	.0	2	9.7	K10	120
FEB									
14...	0930	A100	--	--	.0	2	11.0	36	120
MAR									
13...	0900	A110	--	--	.0	3	11.6	K4	120
APR									
27...	0815	510	--	--	7.5	8	9.3	K9	88
MAY									
22...	0820	1480	--	--	7.0	20	8.4	K210	100
JUN									
15...	0900	2880	240	8.1	14.0	6	7.3	120	90
JUL									
31...	0830	795	175	7.8	14.5	6	7.5	46	66
AUG									
29...	0830	162	220	7.9	9.0	2	8.3	56	73
SEP									
26...	0830	130	215	7.8	7.0	2	8.0	--	90

A-Daily mean discharge.

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

DATE	HARD- NESS, NONCAR- BONATE (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)	BICAR- BONATE (MG/L AS HCO3)	CAR- BONATE (MG/L AS CO3)	ALKA- LINITY (MG/L AS CACO3)
OCT									
10...	7	35	9.2	18	.7	2.1	150	0	120
DEC									
02...	7	36	11	9.9	.4	1.6	150	0	120
23...	8	50	12	24	.8	2.7	210	0	170
JAN									
17...	5	35	6.4	15	.6	1.7	140	0	120
FEB									
14...	5	31	10	15	.6	1.7	140	0	120
MAR									
13...	0	34	8.5	18	.7	1.2	150	0	120
APR									
27...	0	29	7.9	15	.6	2.1	110	0	90
MAY									
22...	2	28	8.1	23	1.0	2.8	120	0	98
JUN									
15...	0	26	6.2	11	.5	2.5	120	0	98
JUL									
31...	1	19	4.6	8.0	.4	.1	79	0	65
AUG									
29...	0	21	5.1	7.7	.4	1.0	90	0	74
SEP									
26...	8	26	6.2	13	.6	1.4	100	0	82

PLATTE RIVER BASIN

06620000 NORTH PLATTE RIVER NEAR NORTHGATE, CO--Continued

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

DATE	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLOR- IDE, DIS- SOLVED (MG/L AS CL)	FLUOR- IDE, 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, NITRATE DIS- SOLVED (MG/L AS N)	PHOS- PHORUS, TOTAL (MG/L AS P)
OCT 10...	26	5.6	.6	9.4	181	.25	54.7	.00	.00
DEC 02...	29	3.7	.5	13	181	.25	31.8	.09	.00
23...	38	7.8	.7	19	258	.35	62.7	.07	.00
JAN 17...	25	1.8	.5	22	177	.24	47.8	.09	.01
FEB 14...	25	5.3	.4	14	172	.23	46.4	.05	.04
MAR 13...	25	1.8	.5	15	178	.24	52.9	.05	.06
APR 27...	22	1.7	.9	.1	185	.25	255	.07	.00
MAY 22...	48	4.5	.5	6.1	180	.24	719	.27	.01
JUN 15...	16	1.1	.4	11	134	.18	1040	.52	.09
JUL 31...	12	1.5	.4	3.9	91	.12	195	.47	.19
AUG 29...	15	.0	.5	5.6	146	.20	63.9	.02	.08
SEP 26...	34	1.5	.4	.8	131	.18	46.0	.00	.06

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	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)	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 10...	0930	112	2.0	.0	0	.00	.00	.0	.0	0	.00
NOV 07...	1430	110	6.0	--	--	--	--	--	--	--	--
MAY 22...	0820	1480	7.0	.0	0	.00	.00	.0	.0	0	.00
JUL 31...	0830	795	14.5	--	--	--	--	--	--	--	--
AUG 29...	0830	162	9.0	--	--	--	--	--	--	--	--
SEP 26...	0830	130	7.0	.0	--	.00	.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)	ENDRIN, TOTAL (UG/L)	ENDRIN, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)
OCT 10...	.0	.00	.0	.00	.0	.00	.00	.0	.00	.00	.0
NOV 07...	--	--	--	--	--	--	--	--	--	--	--
MAY 22...	.0	.00	.0	.00	.0	.00	.00	.0	.00	.00	.0
JUL 31...	--	--	--	--	--	--	--	--	--	--	--
AUG 29...	--	--	--	--	--	--	--	--	--	--	--
SEP 26...	--	.00	--	.00	--	.00	.00	--	.00	.00	--

06620000 NORTH PLATTE RIVER NEAR NORTHGATE, CO--Continued

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

DATE	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)	METHYL PARA- THION, TOTAL (UG/L)	METHYL TRI- THION, TOTAL (UG/L)	MIREX, TOTAL (UG/L)
OCT 10...	.00	.00	.0	.00	.0	.00	.0	.00	.00	.00	--
NOV 07...	--	--	--	--	--	--	--	--	--	--	--
MAY 22...	.00	.00	.0	.00	.0	.00	.0	.00	.00	.00	--
JUL 31...	--	--	--	--	--	--	--	--	--	--	--
AUG 29...	--	--	--	--	--	--	--	--	--	--	--
SEP 26...	.00	.00	--	.00	--	.00	--	.00	.00	.00	.00

DATE	PARA- THION, TOTAL (UG/L)	TOX- APHENE, TOTAL (UG/L)	TOXA- PHENE, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	TOTAL TRI- THION (UG/L)	2,4-D, TOTAL (UG/L)	2,4-D, TOTAL IN BOT- TOM MA- TERIAL (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...	.00	0	0	.00	.00	--	.00	--	.00	--
NOV 07...	--	--	--	--	.09	0	.00	0	.00	.0
MAY 22...	.00	0	0	.00	.00	0	.00	0	.00	.0
JUL 31...	--	--	--	--	.04	0	.00	0	.00	.0
AUG 29...	--	--	--	--	.00	0	.00	0	.00	.0
SEP 26...	.00	0	--	.00	.00	4	.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)
NOV 07...	.00	0	.00	0
MAY 22...	.00	0	.00	0
JUL 31...	.00	0	.00	0
AUG 29...	.00	0	.00	0
SEP 26...	.00	0	.00	0.7

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.

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, which are poor. No diversion above station.

AVERAGE DISCHARGE.--18 years, 50.5 ft³/s (1.430 m³/s), 36,590 acre-ft/yr (45.1 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 discharge above base of 350 ft³/s (9.91 m³/s) and maximum (*):

Date	Time	Discharge		Gage height	
		(ft ³ /s)	(m ³ /s)	(ft)	(m)
June 15	2200	*805	22.8	3.57	1.088

Minimum daily discharge, 7.2 ft³/s (0.20 m³/s) Nov. 9.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	9.0	10	7.9	7.8	9.2	8.4	13	29	231	236	22	9.6
2	8.7	10	7.9	7.9	9.3	8.3	13	29	258	196	20	9.0
3	9.0	10	8.0	8.0	9.4	8.2	13	33	286	193	19	8.7
4	8.7	11	8.0	8.0	9.5	8.2	13	30	266	165	18	14
5	8.4	11	8.0	8.1	9.6	8.3	14	26	237	153	16	16
6	9.0	11	8.1	8.1	9.6	8.4	15	24	266	150	16	16
7	18	9.7	8.1	8.2	9.7	8.5	15	23	336	153	17	15
8	12	7.9	8.2	8.2	9.7	8.6	15	20	356	150	16	14
9	11	7.2	8.3	8.3	9.7	8.6	15	24	432	143	18	13
10	10	7.6	8.4	8.3	9.8	8.6	15	26	483	140	15	12
11	9.7	8.2	8.4	8.4	9.8	8.6	15	31	409	140	14	16
12	11	8.4	8.4	8.5	9.7	8.5	15	30	375	134	14	13
13	10	8.5	8.4	8.6	9.6	8.4	16	33	420	113	18	12
14	10	8.5	8.4	8.6	9.4	8.2	16	53	480	100	24	10
15	10	8.4	8.4	8.7	9.1	8.2	17	89	585	89	21	9.9
16	9.7	8.3	8.4	8.6	8.7	8.6	17	135	545	82	15	8.7
17	9.7	8.2	8.3	8.6	8.2	8.9	17	140	445	82	13	9.3
18	9.4	8.1	8.3	8.6	7.8	9.4	16	104	398	67	14	15
19	9.4	8.0	8.2	8.5	7.9	9.8	16	98	398	57	16	13
20	9.0	7.9	8.1	8.6	8.0	10	17	96	380	64	14	13
21	10	7.7	8.1	8.6	8.2	10	18	109	380	49	13	13
22	12	7.8	8.2	8.6	8.3	9.9	18	145	406	48	12	16
23	11	7.9	8.2	8.5	8.4	9.9	17	198	445	34	13	17
24	11	8.1	8.2	8.3	8.4	10	16	231	450	28	12	14
25	10	8.2	8.2	8.4	8.4	10	20	246	455	25	11	12
26	10	8.3	8.2	8.5	8.4	11	28	249	375	23	11	11
27	9.7	8.3	8.3	8.7	8.4	11	32	243	321	22	11	9.6
28	9.4	8.2	8.3	8.8	8.4	12	27	219	290	21	10	9.3
29	9.4	8.1	8.1	8.9	---	12	28	237	254	66	10	9.0
30	11	7.9	7.9	8.9	---	13	31	266	276	43	10	8.7
31	9.7	---	7.8	9.0	---	13	---	231	---	25	9.6	---
TOTAL	314.9	258.4	253.7	261.8	250.6	294.5	538	3447	11238	2991	462.6	366.8
MEAN	10.2	8.61	8.18	8.45	8.95	9.50	17.9	111	375	96.5	14.9	12.2
MAX	18	11	8.4	9.0	9.8	13	32	266	585	236	24	17
MIN	8.4	7.2	7.8	7.8	7.8	8.2	13	20	231	21	9.6	8.7
AC-FT	625	513	503	519	497	584	1070	6840	22290	5930	918	728
CAL YR 1977	TOTAL	11004.8	MEAN	30.2	MAX	274	MIN	6.8	AC-FT	21830		
WTR YR 1978	TOTAL	20677.3	MEAN	56.7	MAX	585	MIN	7.2	AC-FT	41010		

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 (no winter records since 1972).

GAGE.--Water-stage recorder. Altitude of gage is 8,100 ft (2,469 m), from topographic map.

REMARKS.--No records for 1978 water year. 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.

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). Area at mouth, 265 mi² (686 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.--14 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.--Peak discharge above base of 750 ft³/s (212 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
June 15	2200	*1,330 37.7	4.93 1.503

Minimum daily discharge, 10 ft³/s (0.28 m³/s) Nov. 21.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	20	20	18	16	20	19	35	68	530	824	92	29
2	20	24	20	15	20	20	33	72	566	812	95	27
3	20	22	22	15	20	20	32	80	590	776	79	27
4	20	22	22	16	20	20	34	76	675	698	75	26
5	19	24	22	16	18	18	32	67	675	620	67	26
6	24	23	25	16	20	19	32	62	650	566	64	25
7	49	22	26	17	20	20	33	56	716	544	61	24
8	33	15	26	17	19	18	35	50	776	512	58	25
9	26	11	25	17	18	18	37	47	872	482	56	24
10	23	12	24	17	20	18	38	55	1060	458	54	23
11	20	13	23	18	20	17	39	67	1090	458	51	33
12	24	13	24	18	18	17	38	69	1000	470	51	36
13	23	14	23	18	18	17	37	77	1040	386	54	33
14	22	13	23	18	18	17	38	122	1090	347	68	30
15	22	13	22	18	19	17	40	204	1140	319	71	27
16	21	12	20	18	18	17	40	316	1180	298	55	26
17	20	12	21	18	18	17	42	319	1080	283	47	24
18	20	11	23	18	19	18	40	230	998	258	47	32
19	19	11	23	17	19	18	40	190	974	228	50	33
20	18	11	22	17	20	18	40	208	944	212	43	33
21	19	10	23	18	20	19	45	262	962	194	43	32
22	21	11	23	18	20	20	40	344	1000	172	40	40
23	20	13	23	18	20	20	38	430	1050	152	40	45
24	20	14	22	17	20	21	38	526	1090	136	38	40
25	20	15	23	18	21	22	47	540	1090	124	38	35
26	19	17	22	18	20	23	60	522	986	117	37	32
27	18	18	22	19	19	25	76	508	932	110	35	29
28	18	18	22	20	19	26	70	458	926	101	32	27
29	19	17	16	20	---	29	67	482	890	121	32	25
30	24	16	14	20	---	35	69	576	854	121	30	24
31	19	---	15	20	---	33	---	540	---	98	29	---
TOTAL	680	467	679	546	541	636	1285	7623	27426	10997	1632	892
MEAN	21.9	15.6	21.9	17.6	19.3	20.5	42.8	246	914	355	52.6	29.7
MAX	49	24	26	20	21	35	76	576	1180	824	95	45
MIN	18	10	14	15	18	17	32	47	530	98	29	23
AC-FT	1350	926	1350	1080	1070	1260	2550	15120	54400	21810	3240	1770
CAL YR 1977 TOTAL	18641			51.1			454		36970			
WTR YR 1978 TOTAL	53404			146			1180		105900			

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 1977 TO SEPTEMBER 1978

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHUS)	PH (UNITS)	TEMPER- ATURE (DEG C)	TUR- BID- ITY (JTU)	OXYGEN, DIS- SOLVED (MG/L)	COLI- FORM, TOTAL, IMMED. (COLS. PER 100 ML)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	STREP- TOCOCCI FECAL, (COLS. PER 100 ML)
NOV										
01...	1300	32	68	6.8	.5	--	10.3	K4	<1	K9
17...	1050	9.7	74	7.5	.0	--	10.6	K8	<1	K9
JAN										
13...	1345	18	70	8.2	.0	--	10.8	18	<1	K4
MAR										
21...	1500	19	72	7.6	.0	--	10.6	38	K2	45
APR										
21...	1000	51	45	7.9	1.0	2	10.0	<1	<1	K1
JUN										
06...	1700	723	65	7.9	7.0	--	9.8	K96	K1	K7
22...	1330	933	<50	7.8	8.0	--	8.8	27	K2	K3
JUL										
21...	1230	186	55	6.9	13.0	--	7.8	36	K3	K10
AUG										
23...	1230	39	67	7.1	12.5	--	8.0	52	K4	K7
SEP										
29...	1230	25	140	7.2	7.0	--	9.1	13	<1	<1

DATE	HARD- NESS (MG/L AS CACO3)	HARD- NESS, NONCAR- BONATE (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)	BICAR- BONATE (MG/L AS HCO3)	CAR- BONATE (MG/L AS CO3)
NOV									
01...	28	1	8.3	1.8	2.9	.2	.9	33	0
17...	31	0	9.0	2.0	2.6	.2	.8	37	0
JAN									
13...	28	1	8.5	1.7	2.2	.2	.9	33	0
MAR									
21...	28	0	8.3	1.8	2.4	.2	.8	34	0
APR									
21...	27	1	7.2	2.1	2.3	.2	.7	31	0
JUN									
06...	14	1	4.1	.8	1.6	.2	.5	--	--
22...	13	2	3.9	.8	1.3	.2	.5	--	--
JUL									
21...	16	0	4.8	.9	1.6	.2	.6	--	--
AUG									
23...	27	3	8.3	1.5	2.2	.2	.9	--	--
SEP									
29...	28	2	8.4	1.7	2.0	.2	.8	--	--

DATE	ALKA- LINITY (MG/L AS CACO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, RESIDUE AT 105 DEG. C, DIS- SOLVED (MG/L)	SOLIDS, SUM OF CONSTITUENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)
NOV									
01...	27	6.8	.2	.1	12	42	47	49	.07
17...	30	2.6	.4	.1	14	54	--	50	.07
JAN									
13...	27	3.4	.4	.1	13	50	--	46	.06
MAR									
21...	28	4.3	.2	.1	12	46	--	47	.06
APR									
21...	25	5.8	.5	.1	10	46	--	44	.06
JUN									
06...	13	4.8	.5	.1	8.7	28	--	29	.04
22...	11	4.4	.7	.0	7.0	34	--	25	.03
JUL									
21...	16	2.2	.4	.1	10	33	--	30	.04
AUG									
23...	24	3.4	.3	.1	10	39	--	41	.06
SEP									
29...	26	3.1	.5	.1	10	42	--	42	.06

PLATTE RIVER BASIN

06623800 ENCAMPMENT RIVER ABOVE HOG PARK CREEK, NEAR ENCAMPMENT, WY--Continued

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

DATE	SOLIDS, DIS- SOLVED (TUNS PER DAY)	SOLIDS, RESIDUE AT 105 DEG. C, SUS- PENDE (MG/L)	NITRO- GEN, NITRATE TOTAL (MG/L AS N)	NITRO- GEN, NITRITE TOTAL (MG/L AS N)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N)	PHOS- PHORUS, TOTAL (MG/L AS P)	CYANIDE TOTAL (MG/L AS CN)	SEDI- MENT, SUS- PENDE (MG/L)	SEDI- MENT DIS- CHARGE, SUS- PENDE (T/DAY)
NOV									
01...	4.23	1	--	--	.02	.01	.00	2	.17
17...	1.31	--	--	--	.01	.00	--	2	.05
JAN									
13...	2.24	--	--	--	.06	.02	--	3	.15
MAR									
21...	2.41	--	--	--	.07	.11	--	3	.15
APR									
21...	6.06	--	.04	.01	.05	.02	--	--	--
JUN									
06...	56.6	--	--	--	.00	.01	--	21	41
22...	63.0	--	--	--	.01	.03	--	--	--
JUL									
21...	15.1	--	--	--	.02	.01	.00	5	2.5
AUG									
23...	4.36	--	--	--	.00	.01	--	8	.85
SEP									
29...	2.86	--	--	--	.01	.02	--	2	.14

DATE	TIME	ARSENIC TOTAL (UG/L AS AS)	BARIUM, TOTAL RECOV- ERABLE (UG/L AS BA)	CADMIUM TOTAL RECOV- ERABLE (UG/L AS CD)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)
NOV							
01...	1300	1	0	<10	10	<10	140
JUL							
21...	1230	0	300	1	0	4	120

DATE	LEAD, TOTAL RECOV- ERABLE (UG/L AS PB)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)	MERCURY TOTAL RECOV- ERABLE (UG/L AS HG)	SELE- NIUM, TOTAL (UG/L AS SE)	SILVER, TOTAL RECOV- ERABLE (UG/L AS AG)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN)
NOV						
01...	<100	8	.8	0	<10	30
JUL						
21...	9	0	.5	0	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 SR/ YT-90)	GROSS BETA, SUSP. TOTAL (PCI/L AS SR/ YT-90)	RADIUM 226, DIS- SOLVED, RADON METHOD (PCI/L)	URANIUM DIS- SOLVED, EXTRAC- TION (UG/L)
NOV									
01...	1300	<.6	<.4	1.8	.5	2400	.5	.06	.13

PLATTE RIVER BASIN

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06623800 ENCAMPMENT RIVER ABOVE HOG PARK CREEK, NEAR ENCAMPMENT, WY--Continued

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

DATE	TIME	PCB, TOTAL (UG/L)	PCB, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	NAPH- THA- LENES, POLY- CHLOR. TOTAL (UG/L)	ALDRIN, TOTAL (UG/L)	ALDRIN, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	CHLOR- DANE, TOTAL (UG/L)	CHLOR- DANE, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	DDD, TOTAL (UG/L)	DDD, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)
NOV 01...	1300	.0	0	.00	.00	.0	.0	0	.00	.0

DATE	DDE, TOTAL (UG/L)	DDE, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	DDT, TOTAL (UG/L)	DDT, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	DI- AZINON, TOTAL (UG/L)	DI- ELDRIN TOTAL (UG/L)	DI- ELDRIN, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	ENDO- SULFAN, TOTAL (UG/L)	ENDRIN, TOTAL (UG/L)	ENDRIN, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)
NOV 01...	.00	.0	.00	.0	.00	.00	.0	.00	.00	.0

DATE	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)	METHYL PARA- THION, TOTAL (UG/L)
NOV 01...	.00	.00	.0	.00	.0	.00	.0	.00	.00

DATE	METHYL TRI- THION, TOTAL (UG/L)	MIREX, TOTAL (UG/L)	PARA- THION, TOTAL (UG/L)	TOX- APHENE, TOTAL (UG/L)	TOXA- PHENE, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	TOTAL TRI- THION (UG/L)	2,4-D, TOTAL (UG/L)	2,4,5-T TOTAL (UG/L)	SILVEX, TOTAL (UG/L)
NOV 01...	.00	.00	.00	0	0	.00	.00	.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.--38 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.--Peak discharge above base of 1,700 ft³/s (48.1 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
June 16	0630	*2,940 83.3	6.46 1.969

Minimum daily discharge, 28 ft³/s (0.79 m³/s) Oct. 1, Feb. 17.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	28	51	47	48	64	37	113	191	1210	1420	143	32
2	32	55	47	48	65	37	113	182	1240	1340	148	30
3	34	63	48	49	65	37	106	218	1220	1270	136	30
4	30	64	49	51	66	38	93	233	1440	1160	128	30
5	32	64	50	53	66	40	100	213	1510	1010	120	32
6	34	66	52	54	65	43	95	193	1420	910	116	31
7	42	66	53	56	58	47	97	181	1490	846	115	32
8	63	63	54	58	41	51	111	176	1600	806	106	30
9	44	59	55	59	37	55	123	151	1760	753	95	31
10	37	42	56	60	35	56	109	166	2250	723	78	31
11	34	55	56	62	33	55	111	182	2690	727	74	32
12	46	64	57	63	32	57	109	194	2410	780	72	41
13	63	59	58	64	32	56	109	191	2320	634	78	47
14	61	59	58	65	31	52	111	256	2490	544	96	45
15	64	61	58	66	30	64	116	378	2520	506	122	43
16	61	57	58	66	29	72	120	601	2680	486	100	42
17	59	55	56	66	28	61	124	821	2540	451	79	40
18	57	45	54	65	29	59	114	959	2210	411	79	54
19	51	40	52	64	30	61	107	723	2100	365	84	61
20	51	32	50	64	31	66	111	621	1970	356	79	99
21	57	30	49	64	32	66	121	666	1890	312	74	97
22	66	33	49	64	33	72	120	832	1980	294	75	96
23	59	37	50	61	34	74	113	1030	2060	265	76	100
24	35	42	51	58	35	70	109	1240	2160	235	49	95
25	44	46	52	60	36	64	120	1340	2320	210	48	81
26	55	50	53	61	37	65	146	1250	2070	191	50	61
27	55	52	54	62	37	66	190	1260	1710	179	49	57
28	53	52	54	62	37	70	190	1120	1670	151	46	52
29	52	51	50	63	---	75	173	1070	1620	167	40	49
30	56	49	45	63	---	82	189	1270	1510	182	37	47
31	66	---	50	64	---	95	---	1250	---	159	33	---
TOTAL	1521	1562	1625	1863	1148	1843	3663	19158	58060	17843	2625	1548
MEAN	49.1	52.1	52.4	60.1	41.0	59.5	122	618	1935	576	84.7	51.6
MAX	66	66	58	66	66	95	190	1340	2690	1420	148	100
MIN	28	30	45	48	28	37	93	151	1210	151	33	30
AC-FT	3020	3100	3220	3700	2280	3660	7270	38000	115200	35390	5210	3070

CAL YR 1977	TOTAL	37375	MEAN 102	MAX 718	MIN 20	AC-FT 74130
WTR YR 1978	TOTAL	112459	MEAN 308	MAX 2690	MIN 28	AC-FT 223100

PLATTE RIVER BASIN

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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 1977 TO SEPTEMBER 1978

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	TUR- BID- ITY (JTU)	OXYGEN, DIS- SOLVED (MG/L)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	HARD- NESS (MG/L AS CACO3)
OCT 10...	1140	37	--	--	5.0	1	10.4	46	160
DEC 02...	1415	A47	--	--	2.0	3	10.5	K6	140
23...	1030	A50	--	--	.0	2	11.5	K10	120
JAN 17...	1200	A66	--	--	.5	1	10.6	52	120
FEB 14...	1045	A31	--	--	.0	1	10.8	K12	120
MAR 13...	1030	55	--	--	1.0	1	11.0	K14	120
APR 27...	0945	194	--	--	5.0	5	10.3	K18	66
MAY 22...	1000	844	--	--	4.0	4	10.0	21	21
JUN 15...	1030	2620	45	8.5	10.0	4	9.9	72	18
JUL 31...	1030	159	200	7.7	14.0	2	8.2	--	61
AUG 29...	1030	39	330	7.8	11.5	2	8.5	54	120
SEP 26...	1015	63	270	7.8	8.0	2	8.8	--	100

A-Daily mean discharge.

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

DATE	HARD- NESS, NONCAR- BONATE (MG/L CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	BICAR- BONATE (MG/L AS HCO3)	CAR- BONATE (MG/L AS CO3)	ALKA- LINITY (MG/L AS CACO3)
OCT 10...	70	53	7.0	24	.8	3.6	110	0	90
DEC 02...	33	44	7.0	22	.8	2.9	130	0	110
23...	30	38	5.1	16	.6	2.0	110	0	90
JAN 17...	30	39	5.4	17	.7	2.2	110	0	90
FEB 14...	30	33	8.4	18	.7	2.2	110	0	90
MAR 13...	30	40	5.7	17	.7	2.0	110	0	90
APR 27...	15	20	6.5	6.7	.3	1.2	62	0	51
MAY 22...	2	6.4	1.2	5.2	.5	.8	23	0	19
JUN 15...	2	5.4	1.1	1.6	.2	1.3	20	0	16
JUL 31...	4	19	3.4	9.1	.5	1.4	70	0	57
AUG 29...	5	39	5.3	19	.8	2.8	140	0	120
SEP 26...	2	33	4.5	15	.6	2.1	120	0	98

PLATTE RIVER BASIN

06625000 ENCAMPMENT RIVER AT MOUTH, NEAR ENCAMPMENT, WY--Continued

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

DATE	SULFATE DIS- SOLVED (MG/L AS SO ₄)	CHLORIDE, DIS- SOLVED (MG/L AS CL)	FLUORIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SiO ₂)	SOLIDS, SUM OF CONSTITUENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)	SOLIDS, DIS- SOLVED (TONS PER DAY)	NITROGEN, NITRATE DIS- SOLVED (MG/L AS N)	PHOSPHORUS, TOTAL (MG/L AS P)
OCT 10...	49	13	.5	31	236	.32	23.6	.20	.01
DEC 02...	53	17	.4	27	236	.32	29.9	.38	.01
23...	43	15	.4	24	197	.27	26.6	.27	.00
JAN 17...	53	9.0	.3	39	218	.30	38.8	.23	.01
FEB 14...	40	12	.5	24	195	.27	16.3	.16	.03
MAR 13...	45	12	.3	21	199	.27	29.6	.18	.05
APR 27...	18	1.7	--	--	--	--	62.3	.09	.00
MAY 22...	12	.0	.2	4.7	54	.07	123	.16	.00
JUN 15...	3.9	1.9	.2	6.9	33	.04	233	.11	.02
JUL 31...	18	3.3	.2	15	103	.14	44.2	.05	.02
AUG 29...	30	6.7	.5	24	198	.27	20.9	.27	.07
SEP 26...	32	4.4	.4	20	170	.23	28.9	.11	.02

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)	2,4,5-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)
NOV 07...	1145	68	5.0	.10	0	.01	0	.00	.0
MAY 22...	1000	844	4.0	.00	0	.00	0	.00	.0
JUL 31...	1030	159	14.0	.00	0	.00	0	.00	.0
AUG 29...	1030	39	11.5	.00	0	.00	0	.00	.0
SEP 26...	1015	63	8.0	.00	8	.00	0	.00	4.0

DATE	TOTAL DICAMBA (UG/L)	DICAMBA IN BOTTOM MA- TERIAL (UG/KG)	TOTAL PICLORAM (UG/L)	PICLORAM IN BOTTOM MA- TERIAL (UG/KG)
NOV 07...	.00	0	.06	0
MAY 22...	.00	0	.00	0
JUL 31...	.00	0	.00	0
AUG 29...	.00	0	.00	0
SEP 26...	.00	2.6	.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 current year (no winter records).

GAGE.--Water-stage recorder. Altitude of gage is 6,650 ft (2,027 m), from topographic map.

REMARKS.--Records fair. 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, 462 ft³/s (13.1 m³/s) July 25, 1977, gage height, 10.12 ft (3.085 m); no flow July 10, Aug. 30 to Sept. 13, 1977, July 27, 28, Aug. 2-12, Aug. 19 to Sept. 17, 1978.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of June 5, 1972, reached a discharge of 1,800 ft³/s (51.0 m³/s), gage height, 11.71 ft (3.569 m) from floodmarks, by slope-area measurement of peak flow.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 275 ft³/s (7.79 m³/s) June 5, gage height, 8.19 ft (2.496 m); no flow July 27, 28, Aug. 2-12, Aug. 19 to Sept. 17.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.69	1.4				---	30	7.5	15	10	.02	.00
2	.76	1.5				---	27	5.8	15	9.8	.00	.00
3	.90	1.4				---	22	5.2	15	9.2	.00	.00
4	.90	1.9				---	11	5.2	36	8.5	.00	.00
5	.83	1.8				---	9.4	5.4	117	8.3	.00	.00
6	7.8	1.7				---	8.7	5.4	36	8.5	.00	.00
7	62	1.6				---	8.7	5.8	24	8.7	.00	.00
8	12	1.7				---	11	7.3	22	7.6	.00	.00
9	6.0	1.4				---	9.8	7.2	22	7.5	.00	.00
10	3.6	1.2				---	7.5	6.4	18	5.0	.00	.00
11	2.6	1.6				---	5.5	6.7	16	2.4	.00	.00
12	2.3	2.1				---	5.7	5.1	16	1.9	.00	.00
13	1.9	2.4				---	5.4	4.7	16	1.8	3.0	.00
14	1.7	2.5				---	4.8	5.1	14	1.7	5.8	.00
15	1.5	---				---	5.7	23	13	1.4	4.6	.00
16	.90	---				---	7.5	27	13	1.3	1.6	.00
17	.76	---				---	6.8	32	14	1.2	.14	.00
18	.83	---				---	12	6.0	43	.76	.02	.01
19	.90	---				---	43	3.9	82	.48	.00	.32
20	.90	---				---	47	4.1	55	.34	.00	.11
21	1.1	---				---	42	4.0	41	13	8.0	.00
22	14	---				---	51	4.1	37	13	5.3	.00
23	2.9	---				---	28	3.5	33	13	.14	.00
24	1.1	---				---	21	3.1	30	12	.02	.00
25	1.2	---				---	18	3.1	30	12	2.1	.00
26	1.0	---				---	19	3.9	29	12	.62	.00
27	.76	---				---	24	4.8	24	11	.00	.00
28	.83	---				---	24	5.7	19	11	.00	.00
29	.83	---				---	27	6.2	15	13	2.6	.00
30	.83	---				---	29	6.2	17	11	13	.00
31	.83	---				---	31	---	18	---	.76	.00
TOTAL	135.15	---				---	245.1	637.8	584	128.92	15.18	1.53
MEAN	4.36	---				---	8.17	20.6	19.5	4.16	.49	.051
MAX	62	---				---	30	82	117	13	5.8	.32
MIN	.69	---				---	3.1	4.7	11	.00	.00	.00
AC-FT	268	---				---	486	1270	1160	256	30	3.0

PLATTE RIVER BASIN

06628800 SAGE CREEK NEAR SARATOGA, WY--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1973 to current year.

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

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	TEMPER- ATURE (DEG C)	HARD- NESS (MG/L AS CACO3)	HARD- NESS, NONCAR- BONATE (MG/L CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	BICAR- BONATE (MG/L AS HCO3)
OCT											
27...	1515	.76	7.0	1200	1000	200	180	400	4.9	9.4	210
NOV											
15...	0950	.40	.0	1000	590	180	140	320	4.3	7.9	500
MAR											
17...	1245	6.5	.0	570	410	110	73	170	3.1	4.5	200
APR											
19...	1545	3.7	9.0	690	510	150	77	240	4.0	5.6	220
MAY											
25...	1715	30	12.0	290	170	76	28	61	1.5	4.0	150
JUN											
21...	1930	13	22.0	310	150	80	26	51	1.3	.4	200
JUL											
18...	1445	1.1	24.0	650	600	140	73	2.2	.0	6.4	54
AUG											
15...	1645	6.0	15.0	540	400	150	40	140	2.6	7.3	170
SEP											
26...	1600	.05	16.5	2400	2200	370	360	950	8.4	16	230

DATE	CAR- BONATE (MG/L AS CO3)	ALKA- LITY (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 SIU2)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)	SOLIDS, DIS- SOLVED (TONS PER DAY)	NITRO- GEN, NITRATE DIS- SOLVED (MG/L AS N)	PHOS- PHORUS, TOTAL (MG/L AS P)
OCT											
27...	0	170	1900	56	.9	5.2	2800	3.81	5.75	.52	.00
NOV											
15...	0	410	1300	43	.8	9.5	2210	3.01	2.39	.59	.00
MAR											
17...	0	160	700	28	.6	13	1190	1.62	20.9	.54	.09
APR											
19...	0	180	940	28	.7	5.2	1560	2.12	15.6	.07	.10
MAY											
25...	0	120	280	12	.5	12	373	.51	30.2	.29	.37
JUN											
21...	0	170	250	5.3	.4	14	526	.72	18.5	.02	.13
JUL											
18...	5	53	570	26	.7	12	862	1.17	2.56	.00	.03
AUG											
15...	0	140	640	12	.5	1.9	1090	1.48	17.7	2.2	.58
SEP											
26...	0	190	4100	110	1.3	.0	6020	8.19	.81	.68	.03

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					
27...	1515	7.0	.76	138	.28
NOV					
15...	0950	.0	.40	176	.19
MAR					
17...	1245	.0	6.5	295	5.2
APR					
19...	1545	9.0	3.7	155	1.5
MAY					
25...	1715	12.0	30	570	46
JUN					
21...	1930	22.0	13	190	6.7
JUL					
18...	1445	24.0	1.1	78	.23
AUG					
15...	1645	15.0	6.0	896	15
SEP					
26...	1600	16.5	.05	66	.01

PLATTE RIVER BASIN

433

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, Oct. 20-25, Jan. 2-17, Feb. 18 to Mar. 17, Aug. 6-21, Sept. 1-5, 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.--21 years, 40.1 ft³/s (1.136 m³/s), 29,050 acre-ft/yr (35.8 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 (1.911 m); minimum daily, 1.5 ft³/s (0.042 m³/s) Sept. 11, 12, 1959.

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)
May 10	1900	575 16.3	4.20 1.280	May 19	2130	*853 24.2	5.21 1.588
May 17	0300	464 13.1	3.73 1.137	May 30	0830	409 11.6	3.48 1.061

Minimum daily discharge, 3.0 ft³/s (0.085 m³/s) Nov. 17.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.1	5.6	4.0	7.2	8.0	8.2	76	172	218	84	26	15
2	4.8	6.6	4.1	7.0	8.1	8.2	68	112	232	73	23	14
3	4.8	7.2	4.2	7.1	8.2	8.1	44	129	234	59	22	14
4	4.8	6.9	4.3	7.2	8.3	8.0	51	129	260	50	21	14
5	5.0	6.6	4.4	7.3	8.4	8.2	53	105	234	46	20	13
6	6.3	6.9	4.6	7.5	8.4	8.3	53	87	226	44	19	13
7	13	6.9	4.8	7.6	8.5	8.5	66	91	260	46	20	12
8	8.2	6.3	5.1	7.7	8.5	8.6	117	83	254	32	19	12
9	6.3	4.6	5.6	7.8	8.4	8.7	108	104	242	23	20	12
10	6.0	6.0	6.6	7.9	8.3	8.8	71	265	256	22	18	12
11	6.9	6.9	7.2	8.0	8.2	8.8	63	311	242	26	16	15
12	6.3	7.6	7.6	8.0	8.2	8.7	74	224	192	27	16	19
13	6.3	6.3	7.6	8.0	7.6	8.6	68	158	178	20	21	16
14	6.3	6.0	8.2	8.0	7.2	8.4	65	214	194	18	27	16
15	6.0	5.0	9.5	8.0	7.2	8.5	75	266	192	16	26	15
16	6.0	3.5	7.6	8.0	7.2	8.6	86	308	192	17	23	13
17	6.0	3.0	7.6	8.0	7.2	8.6	76	296	170	24	18	14
18	6.0	5.3	7.9	7.9	7.0	8.6	57	200	162	20	20	26
19	6.0	5.0	7.9	8.2	7.1	9.5	48	393	149	27	21	24
20	6.0	4.3	7.2	9.1	7.2	11	55	349	143	32	19	24
21	6.2	3.5	6.6	8.6	7.3	14	61	293	132	29	18	25
22	6.3	3.6	7.6	8.2	7.4	18	47	285	131	39	17	25
23	6.3	3.7	8.2	7.7	7.6	18	41	316	122	30	18	23
24	6.2	3.9	9.5	7.0	7.7	16	39	314	118	28	16	21
25	6.1	4.0	9.1	7.1	7.8	17	62	293	120	30	16	20
26	6.0	4.1	8.2	7.2	7.9	18	100	240	115	25	22	19
27	6.0	4.2	7.9	7.4	8.0	20	125	244	98	23	20	17
28	6.3	4.2	7.6	7.6	8.1	24	117	234	91	21	19	15
29	6.3	4.2	7.6	7.7	---	28	140	226	105	26	20	14
30	7.9	4.2	7.6	7.8	---	36	122	330	98	42	19	14
31	7.2	---	7.2	7.9	---	50	---	248	---	28	16	---
TOTAL	195.9	156.1	213.1	239.7	219.0	431.9	2228	7019	5360	1027	616	506
MEAN	6.32	5.20	6.87	7.73	7.82	13.9	74.3	226	179	33.1	19.9	16.9
MAX	13	7.6	9.5	9.1	8.5	50	140	393	260	84	27	26
MIN	4.1	3.0	4.0	7.0	7.0	8.0	39	83	91	16	16	12
AC-FT	389	310	423	475	434	857	4420	13920	10630	2040	1220	1000

CAL YR 1977	TOTAL	8062.5	MEAN 22.1	MAX 331	MIN 2.1	AC-FT 15990
WTR YR 1978	TOTAL	18211.7	MEAN 49.9	MAX 393	MIN 3.0	AC-FT 36120

PLATTE RIVER BASIN

06630000 NORTH PLATTE RIVER ABOVE SEMINOLE 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 Seminole 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.--Nine discharge measurements furnished by Bureau of Reclamation.

AVERAGE DISCHARGE.--39 years, 1,100 ft³/s (31.15 m³/s), 797,000 acre-ft/yr (983 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, 9,780 ft³/s (277 m³/s) June 17, gage height, 8.03 ft (2.448 m); minimum daily, 150 ft³/s (4.25 m³/s) Oct. 1.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	150	301	320	325	340	330	1140	1270	4880	5730	1060	315
2	162	294	320	325	345	330	1780	1210	4840	5690	982	301
3	156	280	315	325	345	330	1800	1080	4790	5550	930	294
4	156	287	315	330	345	330	1430	1160	5100	5110	920	280
5	156	301	320	335	345	330	1200	1280	5550	4420	833	266
6	162	308	320	340	345	335	1150	1340	5890	3900	761	252
7	192	315	325	345	345	340	1080	1280	5920	3540	698	231
8	217	308	325	350	340	340	1040	1160	6190	3280	662	217
9	192	290	330	355	340	340	1150	1060	6390	3060	653	217
10	217	275	330	355	335	340	1300	960	6850	2940	626	198
11	210	245	330	360	330	335	1240	993	7690	2810	599	186
12	245	210	330	365	330	330	1040	1080	8390	2760	566	192
13	245	224	335	370	325	330	971	1170	8310	2900	534	186
14	245	273	335	370	320	325	1000	1170	8450	2940	558	204
15	252	252	340	370	315	320	1040	1370	8900	2860	617	224
16	252	259	340	370	310	325	1080	2090	8980	2700	671	217
17	252	273	340	370	310	330	1140	3050	9300	2460	671	217
18	245	308	335	365	310	335	1100	3910	8800	2380	608	217
19	238	200	335	365	310	360	1040	4200	8050	2340	534	245
20	231	170	330	360	310	390	910	4420	7670	2330	494	280
21	238	180	330	355	315	460	880	4270	6990	2150	462	336
22	252	190	330	350	320	590	890	4170	6730	2070	454	390
23	280	210	330	340	320	680	880	4470	6670	1880	438	398
24	280	240	330	335	320	653	860	4950	6710	1640	430	422
25	280	270	335	335	325	617	770	5380	6830	1480	414	422
26	266	300	340	330	325	574	752	5370	7150	1300	390	398
27	273	320	340	335	330	566	870	5170	6710	1230	374	366
28	273	330	340	335	330	599	1160	5080	6130	1120	358	336
29	273	330	340	335	---	680	1260	4680	5910	1040	350	315
30	280	325	330	340	---	779	1230	4830	5730	1120	336	301
31	287	---	325	340	---	880	---	5130	---	1120	322	---
TOTAL	7157	8068	10240	10780	9180	13803	33183	88753	206500	85850	18305	8423
MEAN	231	269	330	348	328	445	1106	2863	6883	2769	590	281
MAX	287	330	340	370	345	880	1800	5380	9300	5730	1060	422
MIN	150	170	315	325	310	320	752	960	4790	1040	322	186
AC-FT	14200	16000	20310	21380	18210	27380	65820	176000	409600	170300	36310	16710
CAL YR 1977 TOTAL	176650	MEAN	484	MAX	3060	MIN	110	AC-FT	350400			
WTR YR 1978 TOTAL	500242	MEAN	1371	MAX	9300	MIN	150	AC-FT	992200			

06630000 NORTH PLATTE RIVER ABOVE SEMINOLE RESERVOIR, NEAR SINCLAIR, WY--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1961 to current year.

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

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	TUR- BID- ITY (JTU)	OXYGEN, DIS- SOLVED (MG/L)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	HARD- NESS (MG/L AS CACO3)
OCT 10...	1300	217	--	--	6.0	600	10.0	--	250
NOV 26...	1230	294	--	--	1.0	10	10.7	42	210
DEC 17...	1100	287	--	--	.0	7	10.1	K3	210
JAN 17...	1430	370	--	--	.0	5	10.8	21	190
FEB 14...	1330	315	--	--	.0	3	10.6	K5	190
MAR 13...	1230	315	--	--	.0	20	11.6	K2	200
APR 27...	1130	890	--	--	9.0	25	9.4	21	120
MAY 22...	1230	4000	--	--	12.0	40	8.1	74	95
JUN 15...	1300	8780	200	8.3	15.0	20	7.8	130	63
JUL 31...	1300	1110	330	8.1	21.0	40	7.6	44	110
AUG 29...	1300	350	380	8.4	18.5	2	8.0	K13	150
SEP 26...	1230	398	410	8.3	15.0	8	9.3	K11	160

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

DATE	HARD- NESS, NONCAR- BONATE (MG/L CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	BICAR- BONATE (MG/L AS HCO3)	CAR- BONATE (MG/L AS CO3)	ALKA- LINITY (MG/L AS CACO3)
OCT 10...	130	63	22	57	1.6	4.2	150	0	120
NOV 26...	62	56	16	39	1.2	3.0	180	0	150
DEC 17...	71	62	14	38	1.1	2.9	170	0	140
JAN 17...	59	58	11	29	.9	2.6	160	0	130
FEB 14...	51	50	16	38	1.2	2.6	170	0	140
MAR 13...	77	51	18	37	1.1	2.4	150	0	120
APR 27...	22	30	11	19	.8	1.5	120	0	98
MAY 22...	40	26	7.4	21	.9	3.0	67	0	55
JUN 15...	13	18	4.4	9.5	.5	2.4	61	0	50
JUL 31...	12	29	9.8	21	.9	.3	120	0	98
AUG 29...	35	42	11	21	.7	1.9	140	0	120
SEP 26...	45	44	11	25	.9	2.5	140	0	120

PLATTE RIVER BASIN

06630000 NORTH PLATTE RIVER ABOVE SEMINOLE RESERVOIR, NEAR SINCLAIR, WY--Continued
WATER-QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

		SULFATE DIS- SOLVED (MG/L AS SO4)	CHLOR- IDE, DIS- SOLVED (MG/L AS CL)	FLUOR- IDE, 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, NITRATE DIS- SOLVED (MG/L AS N)	PHOS- PHORUS, TOTAL (MG/L AS P)	
OCT 10...		210	20	.6	13	463	.63	271	.05	.00	
NOV 26...		120	14	.5	19	352	.48	279	.00	.00	
DEC 17...		120	13	.4	20	358	.49	277	.02	.02	
JAN 17...		98	17	.5	17	311	.42	311	.07	.03	
FEB 14...		110	20	.5	17	342	.47	291	.02	.04	
MAR 13...		130	14	.4	20	348	.47	296	.02	.09	
APR 27...		58	5.1	.7	.2	246	.33	591	.00	.00	
MAY 22...		61	17	.4	6.8	180	.24	1940	.27	.03	
JUN 15...		24	5.6	.3	9.6	109	.15	2580	.68	.06	
JUL 31...		42	6.3	.5	7.1	175	.24	524	.27	.10	
AUG 29...		70	9.3	.5	9.4	306	.42	289	.25	.11	
SEP 26...		79	7.4	.4	7.6	247	.34	265	.02	.05	
DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	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)	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 14...	1120	238	--	.0	0	.00	.00	.0	.0	0	.00
JUN 15...	1300	8780	15.0	.0	1	.00	.00	.0	.0	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)	ENDU- SULFAN, TOTAL (UG/L)	ENDRIN, TOTAL (UG/L)	ENDRIN, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)
OCT 14...	.2	.00	.2	.00	.0	.00	.00	.0	.00	.00	.0
JUN 15...	.0	.00	.1	.00	.6	.00	.00	.1	.00	.00	.0
DATE	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)	METHYL PARA- THION, TOTAL (UG/L)	METHYL TRI- THION, TOTAL (UG/L)	MIREX, TOTAL (UG/L)
OCT 14...	.00	.00	.0	.00	.0	.00	.0	.00	.00	.00	--
JUN 15...	.00	.00	.0	.00	.0	.00	.1	.00	.00	.00	.00
DATE	PARA- THION, TOTAL (UG/L)	TOXA- PHENE, TOTAL (UG/L)	TOXA- PHENE, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	TOTAL TRI- THION (UG/L)	2,4-D, TOTAL (UG/L)	2,4-D, TOTAL IN BOT- TOM MA- TERIAL (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 14...	.00	0	0	.00	.00	--	.00	--	.00	--	
JUN 15...	.00	0	0	.00	.75	0	.00	0	.00	.0	
DATE	TOTAL DICAMBA (UG/L)	TOTAL PICLORAM (UG/L)									
JUN 15...	.00	0	.09	0							

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TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH		
1											---	---
2											---	---
3											---	---
4											---	---
5											---	---
6											---	---
7											---	---
8											---	---
9											---	---
10											---	---
11											---	---
12											---	---
13											---	---
14											---	---
15											---	---
16											---	---
17											---	---
18											---	---
19											---	---
20											---	---
21											---	---
22											---	---
23											---	---
24											---	---
25											---	---
26											---	---
27											---	---
28											---	---
29											10.5	6.0
30											10.5	6.0
31											10.5	6.5
MONTH											10.5	6.0
DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER		
1	10.5	7.0	9.0	7.0	11.5	8.5	17.0	14.5	20.5	17.0	18.5	14.0
2	8.0	5.5	9.5	6.5	11.5	9.0	---	---	20.5	16.5	19.5	14.0
3	6.5	4.5	11.0	6.5	12.0	9.5	---	---	19.5	16.5	20.5	15.5
4	6.0	3.5	11.0	7.5	11.5	8.5	---	---	21.0	16.0	21.5	16.0
5	6.5	3.5	7.5	4.5	10.5	8.5	---	---	21.5	17.0	21.5	16.5
6	6.5	4.5	3.5	2.0	11.5	9.0	---	---	21.0	18.5	21.5	17.0
7	8.0	4.5	4.0	2.0	12.5	10.0	---	---	21.5	17.0	22.0	17.0
8	9.5	6.5	4.5	3.5	13.0	10.0	---	---	21.0	18.0	19.5	15.5
9	11.0	7.5	9.0	3.5	13.5	11.0	---	---	21.5	17.0	19.0	15.0
10	9.0	6.0	9.5	6.5	13.5	11.0	18.5	---	21.5	18.5	16.5	14.0
11	7.5	4.5	9.5	6.0	12.5	9.5	18.0	16.0	21.0	17.0	13.5	9.0
12	7.0	3.0	9.5	6.0	12.5	9.5	18.0	15.0	20.0	17.5	11.0	8.5
13	6.5	3.0	12.0	7.0	14.0	10.5	18.5	15.0	18.5	16.5	11.0	8.0
14	6.0	4.0	13.5	9.5	14.5	11.5	19.5	16.0	17.0	13.5	12.5	8.0
15	8.5	4.5	15.5	11.0	14.5	11.5	19.5	17.0	15.5	11.5	14.0	10.5
16	7.0	5.5	15.5	11.5	14.5	11.5	19.0	16.5	15.5	12.5	14.5	10.5
17	8.5	4.0	11.5	5.0	14.0	11.0	19.5	16.5	16.5	13.0	12.0	10.0
18	5.0	1.5	6.0	4.0	13.5	11.0	19.0	17.0	15.0	12.0	10.0	6.5
19	6.0	1.5	8.0	4.0	14.0	11.5	19.0	16.5	16.0	11.5	7.0	4.0
20	8.0	3.5	11.0	6.0	14.5	12.0	20.0	17.5	17.5	13.0	7.0	4.0
21	9.0	5.0	12.5	9.5	15.5	12.0	17.5	16.0	18.5	14.5	9.5	4.0
22	8.5	3.5	13.0	10.5	16.0	13.0	19.0	15.5	17.0	14.5	11.0	6.0
23	6.0	2.0	12.5	9.5	16.5	13.5	20.0	16.5	18.5	14.5	12.5	8.0
24	5.5	2.0	12.0	9.5	16.5	13.0	21.0	16.5	19.0	14.5	14.5	9.5
25	8.5	3.0	11.5	8.0	15.5	13.0	20.5	17.5	19.5	15.5	15.5	11.0
26	11.0	6.5	11.0	8.0	16.0	12.5	21.5	17.0	20.0	15.5	14.5	11.5
27	11.5	8.5	10.5	8.0	16.0	12.5	21.5	18.0	19.0	14.5	15.0	11.0
28	9.5	7.0	10.5	8.0	15.5	13.5	21.0	18.5	19.0	14.5	13.5	10.5
29	7.5	6.5	11.0	8.5	15.5	13.5	20.5	18.5	19.5	14.5	14.0	9.5
30	9.0	6.5	11.0	9.0	16.0	13.5	21.0	17.0	19.5	14.5	13.5	9.5
31	---	---	11.0	8.5	---	---	21.0	18.0	18.0	14.5	---	---
MONTH	11.5	1.5	15.5	2.0	16.5	8.5	21.5	14.5	21.5	11.5	22.0	4.0
YEAR	22.0	1.5										

06630300 BIG DITCH NEAR COYOTE SPRINGS, WY

LOCATION.--Lat 41°56'07", long 106°48'01", in SE&SE&NW¼ 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 current year.

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.

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, 153 ft³/s (4.33 m³/s) Mar. 5, gage height, 5.04 ft (1.536 m), 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 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.00	.00	.21	.49	5.6	1.4	.00	.00	.00
2	.00	.00	.00	.00	.00	.96	.62	2.9	.44	.00	.00	.00
3	.00	.00	.00	.00	.00	5.5	.53	2.7	.60	.00	.00	.00
4	.00	.00	.00	.00	.16	4.7	.49	2.8	.00	.00	.00	.00
5	.00	.00	.00	.00	.09	42	.36	2.8	.52	.00	.00	.00
6	.00	.00	.00	.00	1.1	18	.23	2.9	.00	.00	.00	.00
7	.00	.00	.00	.00	2.6	5.8	.18	2.9	.00	.00	.00	.00
8	.00	.00	.00	.00	.02	1.2	.08	2.7	.00	.00	.00	.00
9	.00	.00	.00	.00	.80	4.0	.00	3.3	.00	.00	.00	.00
10	.00	.00	.00	.00	.63	4.9	.08	3.9	.00	.00	.00	.00
11	.00	.00	.00	.00	.09	.88	.15	4.5	.00	.00	.00	.00
12	.00	.00	.00	.00	.00	1.3	.06	4.0	.00	.00	.00	.00
13	.00	.00	.00	.00	.00	.99	.01	3.5	.00	.00	.00	.00
14	.00	.00	.00	.00	.00	.00	.00	3.0	.00	.00	.00	.00
15	.00	.00	.00	.00	.00	.00	.00	2.6	.00	.00	.00	.00
16	.00	.00	.00	.00	.00	.00	.00	3.0	.00	.00	.00	.00
17	.00	.00	.00	.00	.00	.00	.00	3.8	.00	.00	.00	.09
18	.00	.00	.00	.00	.00	.68	.00	6.2	.00	.00	.00	.00
19	.00	.00	.00	.00	.00	2.2	.00	10	.00	.00	.00	.00
20	.00	.00	.00	.00	.00	1.8	.00	15	.00	.00	.00	.10
21	.00	.00	.00	.00	.00	.73	.00	14	.00	.20	.00	.00
22	.00	.00	.00	.00	.08	.73	.00	7.1	.00	.00	.00	.00
23	.00	.00	.00	.00	.20	.53	.00	4.6	.00	.00	.00	.00
24	.00	.00	.00	.00	.20	.57	.00	3.5	.00	.00	.00	.00
25	.00	.00	.00	.00	.24	.42	.00	6.1	.00	.00	.00	.00
26	.00	.00	.00	.00	12	.29	.00	2.1	.00	.00	.00	.00
27	.00	.00	.00	.00	9.6	.24	.00	2.1	.00	.00	.00	.00
28	.00	.00	.00	.00	4.0	.22	.00	1.6	.00	.00	.00	.00
29	.00	.00	.00	.00	---	.19	.00	1.5	.11	.00	.00	.00
30	.00	.00	.00	.00	---	.22	3.6	1.5	.00	.00	.00	.00
31	.00	---	.00	.00	---	.33	---	1.4	---	.00	.00	---
TOTAL	.00	.00	.00	.00	31.81	99.59	6.88	133.6	3.07	.20	.00	.19
MEAN	.000	.000	.000	.000	1.14	3.21	.23	4.31	.10	.006	.000	.006
MAX	.00	.00	.00	.00	12	42	3.6	15	1.4	.20	.00	.10
MIN	.00	.00	.00	.00	.00	.00	.00	1.4	.00	.00	.00	.00
AC-FT	.00	.00	.00	.00	63	198	14	265	6.1	.4	.00	.4

CAL YR 1977 TOTAL 25.50 MEAN .070 MAX 13 MIN .00 AC-FT 51
WTR YR 1978 TOTAL 275.34 MEAN .75 MAX 42 MIN .00 AC-FT 546

PLATTE RIVER BASIN

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06630300 BIG DITCH NEAR COYOTE SPRINGS, WY--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1976 to current year.

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

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	TUR- BID- ITY (JTU)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN DEMAND, BIO- CHEM- ICAL, 5 DAY (MG/L)	HARD- NESS (MG/L AS CACO3)	HARD- NESS, NONCAR- BONATE (MG/L AS CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)
MAR												
09...	1145	4.9	1200	8.0	3.0	1500	10.4	8.1	490	320	77	72
10...	1545	4.0	2200	8.0	1.0	1400	--	--	600	420	92	91
MAY												
20...	1430	14	2900	7.9	15.5	800	7.4	--	730	480	110	110
23...	1645	4.0	4600	8.6	15.0	150	7.9	--	1100	710	160	160

DATE	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	BICAR- BONATE (MG/L AS HCO3)	CAR- BONATE (MG/L AS CO3)	ALKA- LINITY (MG/L AS CACO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, RESIDUE AT 105 DEG. C, DIS- SOLVED (MG/L)
MAR											
09...	160	3.2	6.5	210	0	170	620	17	.4	4.6	1200
10...	240	4.2	7.6	230	0	190	880	21	.5	4.3	--
MAY											
20...	340	5.5	10	300	0	250	1100	38	.5	3.9	--
23...	500	6.7	12	390	17	350	1700	52	.5	2.3	--

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- PENDED (MG/L)	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)
MAR											
09...	1060	1.44	14.0	5400	2.8	.64	4.3	4.9	7.7	34	2.8
10...	1450	1.97	15.7	--	2.4	.48	3.7	4.2	6.6	29	1.6
MAY											
20...	1860	2.53	70.3	--	--	--	--	--	--	--	--
23...	2800	3.81	30.2	--	.02	.05	2.3	2.3	2.3	10	.19

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)	BORON, DIS- SOLVED (UG/L AS B)	CADMIUM TOTAL RECOV- ERABLE (UG/L AS CD)	CADMIUM DIS- SOLVED (UG/L AS CD)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR)
MAR											
09...	1145	--	60	11	2	0	0	100	1	1	100
10...	1545	--	50	7	2	0	0	130	0	1	60
MAY											
20...	1430	20000	0	6	1	10	5	170	6	3	45
23...	1645	--	--	--	--	--	--	240	--	--	--

DATE	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)	IRON, DIS- SOLVED (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)
MAR											
09...	0	160	4	120000	130	20	1	120	30	2400	50
10...	0	79	9	69000	110	23	0	70	20	1500	40
MAY											
20...	0	180	2	51000	50	93	17	70	30	1300	10
23...	--	--	--	--	40	--	--	--	--	--	--

PLATTE RIVER BASIN

06630300 BIG DITCH NEAR COYOTE SPRINGS, WY--Continued

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

DATE	MERCURY TOTAL RECOV- ERABLE (UG/L AS HG)	MERCURY DIS- SOLVED (UG/L AS HG)	MOLYB- DENUM, TOTAL RECOV- ERABLE (UG/L AS MO)	MOLYB- DENUM, TOTAL DIS- SOLVED (UG/L AS MO)	NICKEL, TOTAL RECOV- ERABLE (UG/L AS NI)	NICKEL, DIS- SOLVED (UG/L AS NI)	SELE- NIUM, TOTAL 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, DIS- SOLVED (UG/L AS ZN)		
MAR 09...	.1	.0	2	2	18	4	8	1	.0	550	10		
MAR 10...	.0	.0	1	2	23	4	5	1	.0	250	10		
MAY 20...	.2	.0	6	1	20	0	2	1	.0	300	10		
MAY 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)	RADIUM 226, DIS- SOLVED (PCI/L AS SR/ YT-90)	URANIUM 226, DIS- SOLVED (PCI/L AS SR/ YT-90)	URANIUM 226, DIS- SOLVED (PCI/L AS SR/ YT-90)	URANIUM 226, DIS- SOLVED (PCI/L AS SR/ YT-90)		
MAR 09...	1145	41	410	33	220	29	190	.26	6.0				
DATE	TIME	TEMPER- ATURE (DEG C)	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SEDI- MENT, SUS- PENDED (MG/L)	SEDI- MENT, DIS- CHARGE, SUS- PENDED (T/DAY)	SED. SUSP. FALL DIAM. % FINER THAN .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		
MAR 10...	1545	1.0	4.0	--	--	46	68	100	--	--	--		
MAY 19...	0815	--	9.4	2620	66	--	--	--	--	--	--		
MAY 20...	1430	15.5	14	3250	123	49	71	85	89	98	100		
MAY 23...	1645	15.0	4.0	874	9.4	--	--	--	--	--	--		
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	BED MAT. FALL DIAM. % FINER THAN 32.0 MM
MAY 23...	1645	15.0	4.0	1	2	8	15						
MAY 23...				40	49	60	75	85	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 current year.

GAGE.--Water-stage recorder. Altitude of gage is 6,380 ft (1,945 m), from topographic map.

REMARKS.--Records poor. Periods of no gage-height record, Feb. 25 to Mar. 10, Mar. 11-16, Mar. 18 to Apr. 8, Apr. 10-13.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 49 ft³/s (1.39 m³/s) about Mar. 5, 1978, gage height, 2.46 ft (0.750 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, 49 ft³/s (1.39 m³/s) about Mar. 5, gage height, 2.46 ft (0.750 m), from rating curve extended as explained above; no flow most of year.

REVISIONS.--Revised figures of discharge for the water years 1976 and 1977, superseding those published in the reports for 1976 and 1977, respectively, are given herein.

EXTREMES FOR PERIOD JULY TO SEPTEMBER 1976.--Maximum discharge, 28 ft³/s (0.79 m³/s) Aug. 1, gage height, 1.98 ft (0.604 m); no flow for many days.

EXTREMES FOR 1977 WATER YEAR.--Maximum discharge, 3.5 ft³/s (0.099 m³/s) May 15, gage height, 1.53 ft (0.466 m); no flow for many days.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1										.00	2.7	.00
2										.00	3.6	.00
3										.00	1.6	.00
4										.00	4.4	.00
5										.00	2.5	.00
6										.00	.19	.00
7										.00	.17	.00
8										.00	.14	.00
9										.00	.12	.00
10										.00	.12	.00
11										.00	.12	.00
12										.00	.14	.00
13										.00	.12	.00
14										.00	.12	.00
15										.00	.14	.00
16										.00	.14	.00
17										.00	.14	.00
18										.00	.12	.00
19										.00	.08	.00
20										.00	.06	.00
21										.00	.05	.00
22										.00	.05	.00
23										.00	.04	.00
24										.00	.04	.00
25										.00	.03	.00
26										.00	.03	.00
27										.00	.02	.00
28										.00	.02	.00
29										.00	.02	.00
30										.00	.01	.00
31										.00	.00	---
TOTAL	---	---	---	---	---	---	---	---	---	.00	17.03	.00
MEAN	---	---	---	---	---	---	---	---	---	.000	.55	.000
MAX	---	---	---	---	---	---	---	---	---	.00	4.4	.00
MIN	---	---	---	---	---	---	---	---	---	.00	.00	.00
AC-FT	---	---	---	---	---	---	---	---	---	.00	34	.00

PLATTE RIVER BASIN

06630330 NORTH DITCH NEAR COYOTE SPRINGS, WY--Continued

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.01	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
2	.01	.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	.01	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
5	.00	.02	.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	.02	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
9	.00	.01	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
10	.00	.02	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
11	.00	.01	.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	.01	.00	.00	.00	.00
15	.00	.00	.00	.00	.00	.00	.00	.45	.00	.00	.00	.00
16	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
17	.00	.01	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
18	.00	.02	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
19	.00	.01	.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	.08	.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	.00	.00	.00	.00	.00
28	.01	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
29	.01	.00	.00	.00	---	.00	.00	.00	.00	.00	.00	.00
30	.00	.00	.00	.00	---	.00	.00	.00	.00	.00	.00	.00
31	.01	---	.00	.00	---	.00	---	.00	---	.00	.00	---
TOTAL	.04	.14	.00	.00	.00	.08	.00	.46	.00	.00	.00	.00
MEAN	.001	.005	.000	.000	.000	.003	.000	.015	.000	.000	.000	.000
MAX	.01	.02	.00	.00	.00	.08	.00	.45	.00	.00	.00	.00
MIN	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
AC-FT	.08	.3	.00	.00	.00	.2	.00	.9	.00	.00	.00	.00

WTR YR 1977 TOTAL 0.72 MEAN .002 MAX .45 MIN .00 AC-FT 1.4

PLATTE RIVER BASIN

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06630330 NORTH DITCH NEAR COYOTE SPRINGS, WY--Continued

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.00	.00	.30	.40	.00	.00	.00	.00	.00
2	.00	.00	.00	.00	.00	.90	.50	.00	.00	.00	.00	.00
3	.00	.00	.00	.00	.00	3.0	.44	.00	.96	.00	.00	.00
4	.00	.00	.00	.00	.00	2.8	.40	.00	.08	.00	.00	.00
5	.00	.00	.00	.00	.00	10	.20	.00	.00	.00	.00	.00
6	.00	.00	.00	.00	.00	4.0	.17	.00	.00	.00	.00	.00
7	.00	.00	.00	.00	.00	2.0	.12	.00	.00	.00	.00	.00
8	.00	.00	.00	.00	.00	1.0	.03	.00	.00	.00	.00	.00
9	.00	.00	.00	.00	.00	2.0	.00	.00	.00	.00	.00	.00
10	.00	.00	.00	.00	.00	2.4	.05	.00	.00	.00	.00	.00
11	.00	.00	.00	.00	.00	.80	.10	.00	.00	.00	.00	.00
12	.00	.00	.00	.00	.00	1.0	.03	.00	.00	.00	.00	.00
13	.00	.00	.00	.00	.00	.90	.01	.00	.00	.00	.00	.00
14	.00	.00	.00	.00	.00	.02	.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	.20	.00	.00	.00	.00	.00	.00
17	.00	.00	.00	.00	1.2	.54	.00	.00	.00	.00	.00	.00
18	.00	.00	.00	.00	1.3	5.0	.00	1.4	.00	.00	.00	.00
19	.00	.00	.00	.00	.97	2.0	.00	.48	.00	.00	.00	.00
20	.00	.00	.00	.00	2.8	1.0	.00	.97	.00	.00	.00	.00
21	.00	.00	.00	.00	1.8	.60	.00	.08	.00	.00	.00	.00
22	.00	.00	.00	.00	.30	.50	.00	.00	.00	.00	.00	.00
23	.00	.00	.00	.00	.16	.40	.00	.00	.00	.00	.00	.00
24	.00	.00	.00	.00	.23	.42	.00	.00	.00	.00	.00	.00
25	.00	.00	.00	.00	.30	.33	.00	.00	.00	.00	.00	.00
26	.00	.00	.00	.00	5.0	.25	.00	.00	.00	.00	.00	.00
27	.00	.00	.00	.00	4.0	.20	.00	.00	.00	.00	.00	.00
28	.00	.00	.00	.00	1.2	.18	.00	.00	.00	.00	.00	.00
29	.00	.00	.00	.00	---	.16	.00	.00	.00	.00	.00	.00
30	.00	.00	.00	.00	---	.18	.03	.00	.00	.00	.00	.00
31	.00	---	.00	.00	---	.25	---	.00	---	.00	.00	---
TOTAL	.00	.00	.00	.00	19.26	43.33	2.48	2.93	1.04	.00	.00	.00
MEAN	.000	.000	.000	.000	.69	1.40	.083	.095	.035	.000	.000	.000
MAX	.00	.00	.00	.00	5.0	10	.50	1.4	.96	.00	.00	.00
MIN	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
AC-FT	.00	.00	.00	.00	38	86	4.9	5.8	2.1	.00	.00	.00

CAL YR 1977 TOTAL 0.54 MEAN .001 MAX .45 MIN .00 AC-FT 1.1
WTR YR 1978 TOTAL 69.04 MEAN .19 MAX 10 MIN .00 AC-FT 137

PLATTE RIVER BASIN

06630330 NORTH DITCH NEAR COYOTE SPRINGS, WY--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1976 to current year.

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

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	TUR- BID- ITY (JTU)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN DEMAND, BIO- CHEM- ICAL, 5 DAY (MG/L)	HARD- NESS (MG/L AS CaCO3)	HARD- NESS, NONCAR- BONATE (MG/L AS CaCO3)	CALCIUM DIS- SOLVED (MG/L AS Ca)	MAGNE- SIUM, DIS- SOLVED (MG/L AS Mg)
MAR 10...	1100	2.4	425	8.1	1.0	1000	11.7	6.2	78	13	17	8.7
MAY 20...	0845	1.2	900	7.8	7.0	350	9.1	7.4	130	53	25	16

DATE	SODIUM, DIS- SOLVED (MG/L AS Na)	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	BICAR- BONATE (MG/L AS HCO3)	CAR- BONATE (MG/L AS CO3)	ALKA- LINITY (MG/L AS CaCO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, RESIDUE AT 105 DEG. C, DIS- SOLVED (MG/L)
MAR 10...	62	3.1	3.1	80	0	66	150	5.6	.2	3.0	330
MAY 20...	110	4.2	3.4	92	0	75	270	7.0	.3	3.3	--

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, PENDED (MG/L)	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)
MAR 10...	290	.39	1.88	2300	.33	.23	3.2	3.4	3.7	17	1.5
MAY 20...	481	.65	1.56	--	1.1	.01	1.6	1.6	2.7	12	1.6

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)	BORON, DIS- SOLVED (UG/L AS B)	CADMIUM TOTAL RECOV- ERABLE (UG/L AS CD)	CADMIUM DIS- SOLVED (UG/L AS CD)	CHROMIUM, TOTAL RECOV- ERABLE (UG/L AS CR)
MAR 10...	1100	--	250	9	3	0	0	70	0	4	60
MAY 20...	0845	100000	30	3	2	0	10	60	3	3	20

DATE	CHROMIUM, DIS- SOLVED (UG/L AS CR)	CUPPER, TOTAL 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, 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)
MAR 10...	0	73	8	60000	380	38	0	50	10	840	30
MAY 20...	0	33	5	13000	80	49	17	20	7	310	10

DATE	MERCURY TOTAL RECOV- ERABLE (UG/L AS HG)	MERCURY DIS- SOLVED (UG/L AS HG)	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 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, DIS- SOLVED (UG/L AS ZN)
MAR 10...	.1	.0	6	1	24	4	5	1	3.0	250	10
MAY 20...	.3	.2	5	0	21	1	2	1	.0	100	10

PLATTE RIVER BASIN

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06630330 NORTH DITCH NEAR COYOTE SPRINGS, WY--Continued

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

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)
MAR 10...	1100	8.7	230	14	110	12	94	.12	3.3

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
MAR 10...	1215	--	2.4	67	76	100
MAY 20...	0845	7.0	1.2	75	89	100

PLATTE RIVER BASIN

06632400 ROCK CREEK ABOVE KING CANYON CANAL, NEAR ARLINGTON, WY

LOCATION.--Lat 41°35'07", long 106°13'20", in SE4SW4 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 good 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.--24 years (water years 1955-78), 81.8 ft³/s (2.317 m³/s), 59,260 acre-ft/yr (73.1 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.--Maximum discharge, 1,550 ft³/s (43.9 m³/s), June 10, time, 2030 hours, gage height, 4.66 ft (1.420 m), no other peak above base of 700 ft³/s (19.8 m³/s); minimum daily discharge, 6.2 ft³/s (0.18 m³/s) Nov. 9.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	10	7.0	9.6	9.2	13	12	21	32	424	530	74	19
2	10	9.5	10	9.8	13	12	19	29	470	451	68	18
3	10	12	11	10	13	12	17	32	530	415	63	18
4	10	11	11	11	14	12	16	30	555	375	57	17
5	10	12	10	11	14	12	15	24	555	326	52	17
6	11	12	10	11	14	11	14	22	628	286	48	16
7	16	10	9.7	11	14	10	15	23	760	276	56	16
8	14	8.1	10	11	14	10	18	25	772	279	50	14
9	12	6.2	10	11	14	10	19	28	874	264	59	14
10	13	7.4	11	11	14	10	17	32	1100	249	55	14
11	9.0	9.8	11	11	12	10	17	39	1180	264	55	17
12	13	10	11	11	11	10	16	39	958	267	56	17
13	14	9.6	11	11	11	10	16	40	1040	212	63	15
14	13	9.0	11	12	11	9.9	16	61	1120	182	63	14
15	12	8.7	9.9	12	12	9.8	17	94	1130	165	59	14
16	12	8.6	9.7	12	12	10	17	135	1150	147	51	13
17	12	8.7	9.6	11	11	10	16	165	1040	154	48	13
18	12	8.7	9.6	11	11	11	16	139	1010	139	51	17
19	11	8.6	9.5	9.8	12	11	17	129	902	125	56	17
20	11	8.2	9.1	11	12	11	17	133	804	139	48	18
21	12	8.6	9.0	11	13	12	17	154	832	116	50	17
22	13	9.9	9.3	11	12	12	17	194	867	112	54	19
23	12	9.6	9.6	12	12	11	18	289	909	94	51	21
24	12	9.9	9.8	12	13	10	16	375	902	84	47	18
25	12	9.9	9.9	12	13	12	18	403	1000	74	44	16
26	12	10	9.9	12	13	11	24	399	778	70	42	14
27	11	10	9.9	12	12	11	31	411	676	67	32	14
28	11	9.9	9.8	13	12	12	31	375	610	61	29	14
29	11	10	9.6	13	---	13	31	428	545	164	26	13
30	12	9.6	8.8	13	---	14	31	510	580	125	24	13
31	8.7	---	9.1	13	---	17	---	442	---	88	21	---
TOTAL	361.7	282.5	308.4	351.8	352	348.7	570	5231	24701	6300	1552	477
MEAN	11.7	9.42	9.95	11.3	12.6	11.2	19.0	169	823	203	50.1	15.9
MAX	16	12	11	13	14	17	31	510	1180	530	74	21
MIN	8.7	6.2	8.8	9.2	11	9.8	14	22	424	61	21	13
AC-FT	717	560	612	698	698	692	1130	10380	48990	12500	3080	946
CAL YR 1977	TOTAL	19044.4	MEAN	52.2	MAX	585	MIN	6.2	AC-FT	37770		
WTR YR 1978	TOTAL	40836.1	MEAN	112	MAX	1180	MIN	6.2	AC-FT	81000		

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 period and periods of no gage-height record, Dec. 15 to Mar. 28, May 21, May 24 to June 21, which are poor. Diversions for irrigation of about 5,200 acres (21.0 km²) above station.

AVERAGE DISCHARGE.--5 years, 64.4 ft³/s (1.824 m³/s) 46,660 acre-ft/yr (57.5 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.

Peak discharges for the water years 1974-77 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)
Mar. 14, 1974	2330	430 12.2	4.75 1.448	May 11, 1976	0630	501 14.2	5.10 1.555
Mar. 19, 1974	0400	459 13.0	4.84 1.475	May 16, 1976	0730	424 12.0	4.83 1.472
Apr. 27, 1974	2230	*968 27.4	6.00 1.829	May 24, 1976	2230	430 12.2	4.82 1.469
May 3, 1974	0230	514 14.6	4.93 1.503	Aug. 1, 1976	1230	*2,720 77.0	8.63 2.630
Apr. 7, 1975	1200	974 27.6	6.09 1.856	May 3, 1977	0630	*668 18.9	5.44 1.658
Apr. 17, 1975	0930	*3,060 86.7	9.05 2.758	May 17, 1977	1730	415 11.8	4.71 1.436
Apr. 23, 1975	1400	797 22.6	5.76 1.756	July 24, 1977	1730	528 15.0	5.05 1.539
May 20, 1975	0400	552 15.6	5.20 1.585				

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)
Apr. 1	1400	683 19.3	5.48 1.670	May 17	1530	*9,500 269	14.10 4.298

a-About.

Minimum daily discharge, 0.70 ft³/s (0.020 m³/s) Nov. 21.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.7	4.0	2.5	1.5	5.2	10	506	323	147	42	8.0	6.5
2	2.9	3.7	2.6	1.6	5.4	9.9	498	309	137	26	9.0	6.0
3	2.9	4.1	2.8	1.8	5.8	9.8	465	280	126	21	7.5	6.0
4	3.0	4.4	3.0	1.9	6.6	10	376	283	118	17	8.0	6.0
5	3.0	4.2	3.4	2.0	7.2	11	283	296	114	15	8.0	6.0
6	3.7	3.6	3.8	2.1	7.4	12	252	283	113	17	8.0	6.0
7	5.3	2.8	4.1	2.2	7.4	13	224	243	113	20	8.5	5.5
8	5.5	2.1	4.6	2.3	7.2	14	212	236	114	16	8.5	4.7
9	5.5	1.4	5.0	2.4	7.1	14	221	238	114	14	22	5.0
10	6.7	.78	5.4	2.5	7.0	15	219	288	114	32	56	4.7
11	6.2	.76	5.9	2.6	6.8	15	168	421	115	22	26	5.0
12	6.0	.78	6.3	2.6	6.6	15	149	459	116	16	17	4.7
13	6.2	.82	6.6	2.6	6.3	15	155	409	118	15	15	5.5
14	5.8	.86	6.8	2.6	6.0	15	149	418	106	12	44	6.0
15	5.8	.92	6.7	2.6	5.6	15	138	403	91	11	43	6.5
16	5.8	.94	6.2	2.5	5.1	18	155	424	80	10	22	6.5
17	5.5	.94	5.7	2.5	4.6	20	172	4790	69	9.5	15	6.5
18	5.5	.92	5.1	2.4	4.9	26	170	2180	60	9.0	13	9.0
19	5.3	.86	4.3	2.4	5.5	33	140	1440	52	10	11	10
20	5.3	.78	3.7	2.3	6.0	38	140	1310	49	10	10	10
21	11	.70	3.4	2.3	6.3	42	130	1000	45	40	11	10
22	18	1.0	3.4	2.2	6.6	44	126	858	41	31	10	9.5
23	12	1.3	3.5	2.2	6.9	45	123	748	36	30	8.5	10
24	10	1.5	3.6	1.8	7.2	47	115	620	32	30	8.5	10
25	9.3	1.7	3.7	2.2	7.7	50	105	460	28	25	8.0	11
26	8.4	1.9	3.7	2.5	8.3	57	100	350	24	21	7.5	11
27	7.6	2.1	3.6	2.9	8.9	70	112	290	23	16	6.5	10
28	6.7	2.3	3.2	3.4	9.4	90	149	230	22	14	6.5	9.5
29	6.7	2.4	2.2	3.9	---	132	221	200	22	15	6.5	9.0
30	6.7	2.5	1.3	4.3	---	138	278	180	39	11	7.0	9.0
31	6.2	---	1.7	4.7	---	208	---	160	---	9.0	6.5	---
TOTAL	201.2	57.06	127.8	77.8	185.0	1251.7	6251	20129	2378	586.5	446.0	225.1
MEAN	6.49	1.90	4.12	2.51	6.61	40.4	208	649	79.3	18.9	14.4	7.50
MAX	18	4.4	6.8	4.7	9.4	208	506	4790	147	42	56	11
MIN	2.7	.70	1.3	1.5	4.6	9.8	100	160	22	9.0	6.5	4.7
AC-FT	399	113	253	154	367	2480	12400	39930	4720	1160	885	446

CAL YR 1977 TOTAL 14964.11 MEAN 41.0 MAX 555 MIN .00 AC-FT 29680
WTR YR 1978 TOTAL 31916.16 MEAN 87.4 MAX 4790 MIN .70 AC-FT 63310

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 1977 TO SEPTEMBER 1978

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	TEMPER- ATURE (DEG C)	HARD- NESS (MG/L AS CAC03)	HARD- NESS, NONCAR- BONATE (MG/L 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)	BICAR- BONATE (MG/L AS HCO3)	CAR- BONATE (MG/L AS CO3)
OCT 25...	1010	9.3	3.5	290	130	79	22	66	1.7	3.9	190	0
NOV 14...	0930	.86	.0	350	180	96	26	83	1.9	4.1	210	0
DEC 12...	0930	6.3	.0	440	220	120	37	100	2.0	5.3	250	9
JAN 16...	1500	2.5	.0	390	200	110	28	93	2.0	3.8	230	0
FEB 17...	1200	4.6	.0	370	170	99	30	100	2.3	4.1	240	0
MAR 16...	1030	18	.0	300	140	81	23	82	2.1	3.5	200	0
29...	1515	103	--	200	100	52	18	52	1.6	4.7	120	0
APR 17...	1415	179	4.0	120	22	34	9.6	39	1.5	2.5	120	0
MAY 18...	1630	1590	5.0	120	54	38	7.6	22	.9	4.4	80	0
22...	1400	863	9.5	160	90	46	13	33	1.1	3.0	85	0
JUN 14...	1330	106	20.5	270	160	82	23	43	1.1	3.2	130	0
JUL 17...	1500	9.0	25.5	390	230	110	25	84	1.9	6.2	180	5
AUG 14...	1115	13	16.0	290	130	88	17	71	1.8	5.1	190	3
SEP 25...	0915	11	7.0	300	140	84	21	81	2.0	4.4	190	0

DATE	ALKA- LINITY (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)	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, RESIDUE AT 105 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)	SOLIDS, RESIDUE AT 105 DEG. C, SUS- PENDED (MG/L)	NITRO- GEN, NITRATE DIS- SOLVED (MG/L AS N)	PHOS- PHORUS, TOTAL (MG/L AS P)
OCT 25...	160	240	34	.5	15	--	551	.75	13.8	--	.02	.01
NOV 14...	170	320	12	.5	14	740	660	.90	1.5	40	.09	.00
DEC 12...	220	390	15	.6	20	--	824	1.12	14.0	--	.27	.01
JAN 16...	190	370	15	.6	17	820	750	1.02	5.0	<1	.07	.01
FEB 17...	200	370	13	.5	17	--	752	1.02	9.3	--	.02	.01
MAR 16...	160	280	11	.4	13	--	593	.81	28.8	--	.00	.06
29...	98	220	3.6	.3	9.8	--	220	.30	61.2	--	.11	.09
APR 17...	98	100	1.1	.2	8.4	260	254	.35	123	570	.00	.55
MAY 18...	66	100	4.1	.3	2.5	--	262	.36	1120	--	.79	.07
22...	70	150	3.4	.3	11	--	346	.47	806	--	.29	.32
JUN 14...	110	200	48	.4	21	--	500	.68	143	--	2.9	.15
JUL 17...	160	380	12	.6	14	811	731	.99	17.8	13	.02	.03
AUG 14...	160	280	7.8	.5	12	--	579	.79	20.3	--	.00	.05
SEP 25...	160	300	11	.5	10	--	610	.83	18.1	--	.05	.03

PLATTE RIVER BASIN

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06634600 LITTLE MEDICINE BOW RIVER NEAR MEDICINE BOW, WY--Continued

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

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)
NOV 14...	0930	420	400	20	2	0	2	0	0	0	3	2
APR 17...	1415	700	--	0	4	0	4	0	0	0	2	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, 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)
NOV 14...	1	4	0	4	3	1	2	1100	50	19	10	9
APR 17...	2	10	10	0	19	17	2	11000	70	16	13	3

DATE	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- ERABLE (UG/L AS MO)
NOV 14...	40	10	30	60	20	40	.0	.0	.2	5	1
APR 17...	20	10	10	230	220	10	.0	.0	.4	6	3

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 RECOV- ERABLE (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)
NOV 14...	4	5	4	1	2	1	1	.0	20	0	20
APR 17...	3	19	13	6	0	0	0	2.0	60	50	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 (AS SR/ YT-90)	GROSS BETA, SUSP. TOTAL (AS SR/ YT-90)	RADIUM 226, DIS- SOLVED (PCI/L METHOD AS U)	URANIUM NATURAL DIS- SOLVED (UG/L AS U)
NOV 14...	0930	160	4.0	33	16	30	15	.27	100
JAN 16...	1500	270	<.4	36	7.0	31	7.5	.35	120
APR 17...	1415	34	78	11	40	9.7	38	.27	25
JUL 17...	1500	190	1.2	29	8.1	27	8.3	.61	108

PLATTE RIVER BASIN

06634600 LITTLE MEDICINE BOW RIVER NEAR MEDICINE BOW, WY--Continued

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

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	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
OCT												
25...	1010	3.5	9.3	91	2.3	96	--	--	--	--	--	--
NOV												
14...	0930	.0	.86	53	.12	82	--	--	--	--	--	--
DEC												
12...	0930	.0	6.3	52	.88	--	--	--	--	--	--	--
JAN												
16...	1500	.0	2.5	22	.15	--	--	--	--	--	--	--
FEB												
17...	1200	.0	4.6	3	.04	--	--	--	--	--	--	--
MAR												
16...	1030	.0	18	41	2.0	86	--	--	--	--	--	--
29...	1515	--	103	887	247	92	--	--	--	--	--	--
APR												
17...	1415	4.0	179	661	319	88	--	--	--	--	--	--
MAY												
18...	1630	5.0	1590	5360	23000	--	39	58	85	96	98	100
22...	1400	9.5	863	235	548	83	--	--	--	--	--	--
JUN												
14...	1330	20.5	106	86	25	91	--	--	--	--	--	--
JUL												
17...	1500	25.5	9.0	86	2.1	--	--	--	--	--	--	--
AUG												
14...	1115	16.0	13	66	2.3	--	--	--	--	--	--	--
SEP												
25...	0915	7.0	11	71	2.1	--	--	--	--	--	--	--

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
MAY							
22...	1400	9.5	863	--	--	1	2
JUN							
14...	1330	20.5	106	2	5	15	30

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						
22...	51	79	94	99	100	--
JUN						
14...	40	54	72	86	96	100

PLATTE RIVER BASIN

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06634990 HANNA DRAW NEAR HANNA, WY

LOCATION.--Lat 42°00'22", long 106°30'30", in SE4SW4NE4 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 current year.

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

REMARKS.--Records poor.

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, 209 ft³/s (5.92 m³/s) June 3, gage height, 3.37 ft (1.027 m); no flow most of year.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.00	.00	1.4	1.9	1.3	.40	.00	.00	.00
2	.00	.00	.00	.00	.00	4.0	1.4	.55	.32	.00	.00	.00
3	.00	.00	.00	.00	.00	.66	1.1	.36	15	.00	.00	.00
4	.00	.00	.00	.00	.00	.16	.55	.50	2.2	.00	.00	.00
5	.00	.00	.00	.00	.00	23	.60	.55	.55	.00	.00	.00
6	.00	.00	.00	.00	.00	14	.45	.66	.16	.00	.00	.00
7	.00	.00	.00	.00	.00	5.0	.45	.60	.22	.00	.00	.00
8	.00	.00	.00	.00	.00	6.4	.60	1.0	.10	.00	.00	.00
9	.00	.00	.00	.00	.00	12	.50	1.2	.09	.00	.00	.00
10	.00	.00	.00	.00	.00	4.0	.36	1.7	.08	.00	.00	.00
11	.00	.00	.00	.00	.00	1.5	.25	1.2	.04	.00	.00	.00
12	.00	.00	.00	.00	.00	2.0	.12	.66	.04	.00	.00	.00
13	.00	.00	.00	.00	.00	.93	.16	.40	.03	.00	.00	.00
14	.00	.00	.00	.00	.00	.75	.36	.25	.02	.00	.01	.00
15	.00	.00	.00	.00	.00	.01	.40	.16	.02	.00	.00	.00
16	.00	.00	.00	.00	.00	.00	.36	5.4	.01	.00	.00	.00
17	.00	.00	.00	.00	.00	2.2	.22	4.4	.00	.00	.00	.00
18	.00	.00	.00	.00	.00	5.7	.10	11	.00	.00	.00	.00
19	.00	.00	.00	.00	.00	5.2	.09	12	.00	.00	.00	.00
20	.00	.00	.00	.00	.00	3.4	.10	4.6	.01	.00	.00	.00
21	.00	.00	.00	.00	.00	2.9	.12	3.2	.01	.00	.00	.00
22	.00	.00	.00	.00	.00	2.3	.09	1.7	.01	.00	.00	.00
23	.00	.00	.00	.00	.00	2.2	.10	.85	.00	.00	.00	.00
24	.00	.00	.00	.00	.00	1.2	.10	.66	.00	.00	.00	.00
25	.00	.00	.00	.00	.00	.72	.10	.50	.00	.00	.00	.00
26	.00	.00	.00	.00	.00	.66	.10	.40	.00	.00	.00	.00
27	.00	.00	.00	.00	1.2	.78	.10	.40	.00	.00	.00	.00
28	.00	.00	.00	.00	2.3	1.1	.36	.45	.00	.00	.00	.00
29	.00	.00	.00	.00	---	1.1	.85	.45	.00	.00	.00	.00
30	.00	.00	.00	.00	---	1.2	.45	1.5	.00	.00	.00	.00
31	.00	---	.00	.00	---	1.7	---	.66	---	.00	.00	---
TOTAL	.00	.00	.00	.00	3.50	108.17	12.44	59.26	19.31	.00	.01	.00
MEAN	.000	.000	.000	.000	.13	3.49	.41	1.91	.64	.000	.000	.000
MAX	.00	.00	.00	.00	2.3	23	1.9	12	15	.00	.01	.00
MIN	.00	.00	.00	.00	.00	.00	.09	.16	.00	.00	.00	.00
AC-FT	.00	.00	.00	.00	6.9	215	25	118	38	.00	.02	.00

CAL YR 1977 TOTAL 38.45 MEAN .11 MAX 15 MIN .00 AC-FT 76
WTR YR 1978 TOTAL 202.69 MEAN .56 MAX 23 MIN .00 AC-FT 402

PLATTE RIVER BASIN

06634990 HANNA DRAW NEAR HANNA, WY--Continued

WATER-QUALITY RECORDS

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

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

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	TUR- BID- ITY (JTU)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN DEMAND, BIO- CHEM- ICAL, 5 DAY (MG/L)	HARD- NESS (MG/L AS CACO3)	HARD- NESS, NONCAR- BONATE (MG/L AS CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)
MAR												
09...	1830	31	--	--	--	1500	--	6.4	--	--	--	--
10...	1500	2.8	835	7.7	2.0	220	10.9	4.8	380	260	77	46
20...	0945	1.0	1220	7.3	2.5	420	10.6	2.7	580	430	120	69
APR												
18...	0910	.12	3100	8.0	1.0	2	11.5	.7	1500	1100	290	190
MAY												
19...	1100	4.1	1520	8.0	9.0	500	8.9	--	660	490	130	81
23...	1215	.82	2475	8.4	12.0	15	7.9	--	1000	670	280	77
JUN												
20...	1100	.03	3800	8.0	21.0	5	7.3	--	1100	770	240	130

DATE	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	BICAR- BONATE (MG/L AS HCO3)	CAR- BONATE (MG/L AS CO3)	ALKA- LINITY (MG/L AS CACO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, RESIDUE AT 105 DEG. C, DIS- SOLVED (MG/L)
MAR											
09...	--	--	--	--	--	--	--	--	--	--	--
10...	45	1.0	6.0	150	0	120	350	4.6	.3	4.1	660
20...	67	1.2	5.5	190	0	160	520	6.1	.3	5.3	--
APR											
18...	220	2.5	8.8	480	0	390	1400	27	.4	6.4	--
MAY											
19...	84	1.4	6.1	210	0	170	610	7.9	.2	14	--
23...	230	3.1	9.0	420	0	340	1100	13	.4	6.6	--
JUN											
20...	230	3.0	12	450	0	370	1200	25	.5	6.2	--

DATE	SOLIDS, SUM OF CONSTITU- ENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)	SOLIDS, DIS- SOLVED (TONS PER DAY)	SOLIDS, RESIDUE AT 105 DEG. C, SUS- PENDED (MG/L)	NITRO- GEN, 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)
MAR											
09...	--	--	--	--	--	--	--	--	--	--	--
10...	607	.83	4.59	370	.24	.10	1.0	1.1	1.3	5.9	.30
20...	887	1.21	2.42	--	.34	.16	1.2	1.4	1.7	7.7	.35
APR											
18...	2380	3.24	.77	--	.14	.10	.51	.61	.75	3.3	.02
MAY											
19...	1040	1.41	11.5	--	.87	.01	2.3	2.3	3.2	14	.53
23...	1920	2.61	4.25	--	.14	.03	.82	.85	.99	4.4	.02
JUN											
20...	2070	2.82	.17	--	.01	.00	3.7	3.7	3.7	16	.01

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)	BORON, DIS- SOLVED (UG/L AS B)	CADMIUM TOTAL RECOV- ERABLE (UG/L AS CD)	CADMIUM DIS- SOLVED (UG/L AS CD)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR)
MAR											
10...	1500	--	--	3	--	0	--	70	0	--	10
20...	0945	--	40	--	1	--	10	70	--	3	--
APR											
18...	0910	110	10	2	3	0	0	100	3	2	10
MAY											
19...	1100	--	--	--	--	--	--	80	--	--	--
23...	1215	--	--	--	--	--	--	120	--	--	--
JUN											
20...	1100	--	--	--	--	--	--	150	--	--	--

PLATTE RIVER BASIN

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06634990 HANNA DRAW NEAR HANNA, WY--Continued

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

DATE	CHROMIUM, 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)	IRON, DIS- SOLVED (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)
MAR											
10...	--	15	--	14000	80	14	--	20	--	320	--
20...	0	--	3	--	30	--	18	--	20	--	80
APR											
18...	0	3	1	400	20	18	10	40	40	390	390
MAY											
19...	--	--	--	--	40	--	--	--	--	--	--
23...	--	--	--	--	50	--	--	--	--	--	--
JUN											
20...	--	--	--	--	140	--	--	--	--	--	--

DATE	MERCURY TOTAL RECOV- ERABLE (UG/L AS HG)	MERCURY DIS- SOLVED (UG/L AS HG)	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 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, DIS- SOLVED (UG/L AS ZN)
MAR											
10...	.0	--	3	--	10	--	1	--	--	50	--
20...	--	.0	--	2	--	0	--	1	.0	--	10
APR											
18...	.0	.1	3	1	7	4	0	0	.0	20	10
MAY											
19...	--	--	--	--	--	--	--	--	--	--	--
23...	--	--	--	--	--	--	--	--	--	--	--
JUN											
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 (PCI/L METHOD PCI/L)	URANIUM NATURAL DIS- SOLVED (UG/L AS U)
MAR									
10...	1500	12	27	12	21	10	21	.12	6.4

DATE	TIME	TEMPER- ATURE (DEG C)	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SEDI- MENT, SUS- PENDED (MG/L)	SEDI- MENT DIS- CHARGE, SUS- PENDED (T/DAY)	SED. SUSP. FALL DIAM. % FINER THAN .004 MM	SED. SUSP. FALL DIAM. % FINER THAN .016 MM	SED. SUSP. FALL DIAM. % FINER THAN .062 MM
MAR								
10...	1500	2.0	2.8	736	5.6	82	96	100
28...	0945	--	1.1	530	1.6	--	--	--
APR								
18...	0910	1.0	.12	157	.05	--	--	--
MAY								
19...	1100	9.0	4.1	1310	15	--	--	--
23...	1215	12.0	.82	106	.23	--	--	--
JUN								
20...	1100	21.0	.03	180	.01	--	--	--

DATE	TIME	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
MAR										
26...	0935	.55	8	20	67	91	96	98	99	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.--Nine discharge measurements furnished by Bureau of Reclamation.

AVERAGE DISCHARGE.--39 years, 178ft³/s (5.041 m³/s), 129,000 acre-ft/yr (159 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, 5,220 ft³/s (148 m³/s) May 18, gage height, 6.25 ft (1.905 m); minimum daily, 8.8 ft³/s (0.25 m³/s) Oct. 1, 2.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	8.8	23	28	30	33	33	418	394	910	709	94	26
2	8.8	25	28	30	33	33	646	400	800	660	122	25
3	11	28	28	30	33	33	639	394	835	632	97	24
4	12	30	28	30	33	34	583	352	793	541	82	23
5	12	27	29	31	33	35	466	370	814	460	80	19
6	14	26	29	31	33	36	382	394	856	394	78	18
7	18	27	30	31	33	39	358	376	849	352	75	19
8	19	26	30	32	33	43	318	329	856	307	72	18
9	19	23	30	32	33	50	302	340	886	285	62	18
10	25	25	31	32	33	59	329	346	870	270	152	17
11	19	26	31	32	32	69	324	442	870	250	115	14
12	19	27	31	32	32	76	270	730	958	230	85	15
13	20	27	31	33	31	82	245	716	1050	230	85	15
14	19	28	32	33	31	90	245	618	1130	260	88	15
15	19	28	32	33	30	95	240	534	1080	230	91	15
16	19	28	32	33	30	105	230	541	1120	194	100	15
17	19	27	31	33	30	115	240	1170	1130	178	82	15
18	19	27	31	33	30	130	255	4110	1130	162	72	17
19	19	26	31	33	31	150	250	2320	1130	146	65	20
20	19	26	30	33	31	180	212	2010	1010	143	58	26
21	22	26	30	33	32	215	208	1790	966	136	50	33
22	24	27	30	33	32	302	199	1450	918	154	47	33
23	28	27	30	32	33	296	199	1240	849	150	43	43
24	30	28	31	32	33	240	190	1080	814	140	40	50
25	27	28	31	32	33	260	178	1040	814	122	38	50
26	25	28	31	32	33	226	166	1030	856	112	34	49
27	24	28	31	33	33	222	166	990	918	97	31	47
28	24	28	31	33	33	270	212	902	918	80	28	49
29	24	28	31	33	---	296	250	902	821	80	28	40
30	25	28	30	33	---	324	334	835	779	75	30	34
31	22	---	30	33	---	340	---	821	---	68	27	---
TOTAL	613.6	806	939	996	900	4478	9054	28966	27730	7847	2151	802
MEAN	19.8	26.9	30.3	32.1	32.1	144	302	934	924	253	69.4	26.7
MAX	30	30	32	33	33	340	646	4110	1130	709	152	50
MIN	8.8	23	28	30	30	33	166	329	779	68	27	14
AC-FT	1220	1600	1860	1980	1790	8880	17960	57450	55000	15560	4270	1590
CAL YR 1977 TOTAL	36452.6			99.9		730		72300				
WTR YR 1978 TOTAL	85282.6			234		4110		169200				

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 1977 TO SEPTEMBER 1978

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	TEMPER- ATURE (DEG C)	HARD- NESS (MG/L AS CACO3)	HARD- NESS, NONCAR- BONATE (MG/L CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	BICAR- BONATE (MG/L AS HCO3)	CAR- BONATE (MG/L AS CO3)
OCT												
25...	1500	26	9.5	450	320	130	31	80	1.6	4.0	160	0
NOV												
14...	1315	28	1.2	600	470	140	61	150	2.7	3.9	160	0
DEC												
12...	1300	31	.0	710	520	150	83	150	2.4	3.9	230	0
JAN												
17...	1130	33	.0	550	370	130	57	120	2.2	3.1	220	0
FEB												
14...	1230	31	.0	470	310	120	42	49	1.0	1.5	200	0
MAR												
16...	1445	104	.0	450	300	100	48	90	1.9	2.7	180	0
29...	1150	291	8.0	390	270	91	40	130	2.9	4.0	150	0
APR												
18...	1230	279	3.5	280	190	73	25	56	1.4	2.6	100	6
MAY												
19...	1400	2220	7.0	170	88	55	13	33	1.0	2.9	100	0
23...	0945	1400	8.0	200	100	51	18	45	1.4	2.7	120	0
JUN												
20...	1345	994	16.5	170	72	43	16	32	1.1	.2	120	0
JUL												
18...	0915	163	18.0	360	170	86	35	75	1.7	2.7	190	18
AUG												
15...	0930	80	9.0	340	180	94	26	100	2.4	4.4	190	0
SEP												
25...	1310	53	14.0	610	460	150	59	170	3.0	4.2	180	0

DATE	ALKAL- INITY (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 105 DEG. C, DIS- SOLVED (MG/L)	SOLIDS, SUM OF CONSTITU- ENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)	SOLIDS, DIS- SOLVED (TONS PER DAY)	SOLIDS, RESIDUE AT 105 DEG. C, SUS- PENDED (MG/L)	NITRO- GEN, NITRATE DIS- SOLVED (MG/L AS N)	PHOS- PHORUS, TOTAL (MG/L AS P)
OCT												
25...	130	440	44	.6	7.1	--	818	1.11	57.4	--	.00	.01
NOV												
14...	130	720	55	.6	4.9	1400	1220	1.66	92.2	32	.05	.00
DEC												
12...	190	750	42	.6	8.8	--	1330	1.81	111	--	6.1	.00
JAN												
17...	180	550	41	.6	6.9	1100	1020	1.39	90.9	8	.79	.05
FEB												
14...	160	330	35	.4	7.9	--	680	.92	56.9	--	.16	.01
MAR												
16...	150	470	27	.5	11	--	841	1.14	236	--	.66	.05
29...	120	520	16	.7	3.8	--	882	1.20	693	--	1.2	.18
APR												
18...	92	280	6.7	.4	5.5	530	505	.69	380	520	.14	.03
MAY												
19...	82	160	6.8	.3	2.8	--	377	.51	2260	--	.70	.05
23...	98	200	4.7	.2	9.3	--	573	.78	2170	--	.32	.25
JUN												
20...	100	130	3.6	.3	8.4	--	293	.40	786	--	.00	.03
JUL												
18...	190	270	18	.6	4.3	800	619	.84	272	56	.00	.03
AUG												
15...	160	350	20	.6	1.6	--	690	.94	149	--	.18	.24
SEP												
25...	150	760	56	.6	.5	--	1290	1.75	185	--	1.9	.08

PLATTE RIVER BASIN

06635000 MEDICINE BOW RIVER ABOVE SEMINOLE RESERVOIR, NEAR HANNA, WY--Continued

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

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)
NOV 14...	1315	630	610	20	1	0	1	0	0	0	1	1
APR 18...	1230	500	--	0	4	0	4	0	0	0	1	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, 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)
NOV 14...	0	0	0	4	2	0	2	870	30	6	3	3
APR 18...	1	0	0	0	15	13	2	9100	80	13	11	2

DATE	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)
NOV 14...	70	0	70	60	30	30	.0	.0	.0	8	3
APR 18...	40	0	40	220	220	0	.0	.0	.1	5	2

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 RECOV- ERABLE (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)
NOV 14...	5	4	2	2	9	6	3	.0	20	10	10
APR 18...	3	17	11	6	1	1	0	1.0	50	40	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)	GROSS BETA, SUSP. TOTAL (PCI/L AS SR/ YT-90)	RADIUM 226, DIS- SOLVED, RADON METHOD (PCI/L)	URANIUM NATURAL DIS- SOLVED (UG/L AS U)
NOV 14...	1315	76	2.7	17	5.5	15	5.3	.25	33	
JAN 17...	1130	52	.8	11	3.1	8.9	3.2	.39	19	
APR 18...	1230	24	57	6.5	28	5.8	27	.20	23	
JUL 18...	0915	15	3.9	7.3	3.4	6.7	3.3	.18	15	

06635000 MEDICINE BOW RIVER ABOVE SEMINOLE RESERVOIR, NEAR HANNA, WY--Continued

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

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	SED. SUSP. FALL DIAM. % FINER THAN .004 MM
OCT							
25...	1500	9.5	26	148	10	94	--
NOV							
14...	1500	1.0	28	90	6.8	82	--
DEC							
12...	1300	.0	31	83	6.9	87	--
JAN							
17...	1130	.0	33	58	5.2	69	--
FEB							
14...	1230	.0	31	54	4.5	90	--
MAR							
16...	1445	.0	104	156	44	82	--
29...	1150	8.0	291	1440	1130	98	--
APR							
18...	1230	3.5	279	529	398	94	--
MAY							
19...	1400	7.0	2220	3770	22600	--	44
23...	0945	8.0	1400	1670	6310	--	46
JUN							
20...	1345	16.5	994	548	1470	67	--
JUL							
18...	0915	18.0	163	74	33	--	--
AUG							
15...	0930	9.0	80	550	119	--	--
SEP							
25...	1315	14.0	53	124	18	--	--

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 1.00 MM
OCT						
25...	--	--	--	--	--	--
NOV						
14...	--	--	--	--	--	--
DEC						
12...	--	--	--	--	--	--
JAN						
17...	--	--	--	--	--	--
FEB						
14...	--	--	--	--	--	--
MAR						
16...	--	--	--	--	--	--
29...	--	--	--	--	--	--
APR						
18...	--	--	--	--	--	--
MAY						
19...	64	82	86	89	98	100
23...	66	89	95	98	100	--
JUN						
20...	--	--	--	--	--	--
JUL						
18...	--	--	--	--	--	--
AUG						
15...	--	--	--	--	--	--
SEP						
25...	--	--	--	--	--	--

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
JUL							
18...	0915	18.0	163	1	1	4	19
DATE	TIME	TEMPER- ATURE (DEG C)	STREAM- FLOW, INSTAN- TANEOUS (CFS)	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
JUL							
18...	31	34	38	42	50	84	100

PLATTE RIVER BASIN

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.

RESERVOIR-CONTENTS RECORD

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 National Geodetic Vertical Datum of 1929 (levels by Bureau of Reclamation). Prior to Apr. 20, 1930, 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, 877,000 acre-ft (1,080 hm³) July 24-27, elevation, 6,349.68 ft (1,935.382 m); minimum daily, 244,000 acre-ft (301 hm³) Apr. 26, elevation, 6,295.44 ft (1,918.850 m).

Capacity table (elevation, in feet,
and contents, in acre-feet)

6,322	480,000	6,340	716,000
6,325	514,000	6,345	796,000
6,330	575,000	6,350	883,000
6,335	642,000		

CONTENTS, IN ACRE-FEET, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
INSTANTANEOUS OBSERVATIONS AT 2400

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	602000	543000	494000	423000	368000	302000	250000	248000	446000	795000	874000	831000
2	600000	542000	492000	420000	366000	300000	251000	250000	455000	804000	872000	829000
3	598000	539000	491000	417000	365000	297000	253000	250000	463000	815000	872000	827000
4	596000	537000	489000	415000	363000	295000	254000	252000	472000	821000	872000	825000
5	594000	535000	486000	413000	362000	292000	255000	253000	481000	828000	871000	823000
6	593000	533000	484000	411000	361000	290000	254000	256000	491000	833000	870000	821000
7	591000	530000	482000	409000	359000	288000	255000	258000	501000	838000	869000	820000
8	590000	529000	480000	407000	358000	285000	255000	260000	512000	842000	867000	818000
9	588000	527000	478000	405000	355000	283000	255000	261000	522000	845000	867000	815000
10	586000	524000	477000	403000	352000	281000	256000	263000	533000	848000	866000	813000
11	585000	523000	475000	402000	349000	279000	256000	264000	546000	850000	865000	811000
12	583000	522000	473000	399000	348000	276000	255000	266000	561000	852000	863000	808000
13	582000	520000	472000	398000	345000	274000	255000	268000	579000	856000	862000	805000
14	580000	519000	470000	396000	342000	272000	254000	271000	590000	859000	861000	802000
15	579000	517000	469000	394000	339000	270000	254000	273000	605000	863000	860000	800000
16	577000	515000	467000	393000	337000	267000	253000	276000	620000	865000	858000	798000
17	575000	513000	464000	391000	334000	265000	253000	283000	637000	867000	857000	797000
18	572000	511000	461000	390000	332000	263000	252000	292000	652000	868000	855000	795000
19	570000	509000	459000	388000	329000	262000	252000	309000	665000	871000	854000	792000
20	567000	507000	456000	386000	326000	261000	252000	321000	679000	871000	852000	790000
21	566000	505000	453000	385000	323000	260000	250000	332000	691000	874000	851000	788000
22	564000	504000	450000	383000	321000	259000	249000	342000	702000	876000	849000	786000
23	562000	503000	448000	382000	318000	259000	248000	353000	712000	876000	847000	784000
24	559000	502000	445000	381000	315000	258000	247000	353000	722000	877000	845000	782000
25	557000	500000	442000	378000	313000	257000	246000	376000	734000	877000	844000	780000
26	556000	499000	439000	377000	310000	255000	244000	387000	746000	877000	842000	778000
27	553000	498000	436000	375000	308000	254000	246000	398000	756000	877000	840000	777000
28	552000	498000	433000	374000	305000	253000	246000	408000	768000	876000	839000	776000
29	550000	497000	431000	372000	---	252000	246000	418000	777000	875000	837000	777000
30	547000	496000	428000	370000	---	251000	246000	428000	736000	875000	835000	776000
31	545000	---	425000	369000	---	250000	---	437000	---	874000	833000	---
MAX	602000	543000	494000	423000	368000	302000	256000	437000	777000	877000	874000	831000
MIN	545000	496000	425000	369000	305000	250000	244000	248000	446000	795000	833000	776000
(†)	6,327.60	6,323.45	6,316.91	6,311.07	6,303.60	6,296.24	6,295.76	6,318.08	6,344.40	6,349.52	6,347.21	6,343.82
(‡)	-59,000	-49,000	-71,000	-56,000	-64,000	-55,000	-4,000	+191,000	+299,000	+138,000	-41,000	-57,000

CAL YR 1977 MAX 673000 MIN 425000 †-163,000

WTR YR 1978 MAX 877000 MIN 244000 †+172,000

(†) Elevation, in feet, at end of month.

(‡) Change in contents, in acre-feet, at end of month.

PLATTE RIVER BASIN

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06635500 SEMINOE RESERVOIR NEAR LEO, WY--Continued

WATER-QUALITY RECORDS

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

REMARKS.--Reservoir sampled at one site prior to July 1973 and at all sites thereafter. Samples are collected at the surface, the thermocline or midpoint if a well defined thermocline is not present, and at the bottom. Dissolved oxygen and temperature are measured at additional depths. Reservoir storage represents total contents at 2400 hours.

SAMPLE SITE 1.--Lat 42°08'38", long 106°52'57", in NE¼NE¼NE¼ sec.16 T.25 N., R.84 W., 1.6 mi (2.6 km) upstream from dam.

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

DATE	TIME	SAMP- LING DEPTH (FT)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	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 13...	1550	--	--	--	--	--	--	--	--	--
AUG 10...	1320	.0	--	--	--	110	30	9.3	17	.7
10...	1325	30	--	--	--	110	30	9.4	18	.7
10...	1330	152	--	--	--	130	33	11	21	.8
25...	1045	--	285	8.6	18.0	120	32	9.6	15	.6
25...	1050	20	280	8.3	16.5	120	31	9.7	19	.8

DATE	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LINITY SOLVED (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 SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)	NITRO- GEN, NITRATE TOTAL (MG/L AS N)	NITRO- GEN, NITRITE TOTAL (MG/L AS N)
OCT 13...	--	--	--	--	--	--	331	.45	--	--
AUG 10...	2.0	75	64	3.8	.2	11	--	--	.01	.00
10...	2.3	75	66	3.9	.2	11	--	--	.02	.00
10...	2.6	80	78	4.7	.3	11	--	--	.19	.00
25...	2.3	75	69	4.1	.2	11	--	--	.01	.00
25...	2.4	77	69	4.1	.2	11	--	--	.04	.00

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 SOLVED (MG/L AS N)	NITRO- GEN, AMMONIA SOLVED (MG/L AS NH4)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N)	NITRO- GEN, ORGANIC SOLVED (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC DIS- SOLVED (MG/L AS N)	NITRO- GEN, TOTAL (MG/L AS N)
OCT 13...	.12	.10	.01	.04	.05	.25	--	.26	--	.38
AUG 10...	.01	.02	.00	.02	.03	.47	.44	.47	.46	.48
10...	.02	.27	.07	.02	.03	.28	.36	.35	.38	.37
10...	.19	.21	.02	.00	.00	.38	.36	.40	.36	.59
25...	.01	.05	.04	.04	.05	.38	.41	.42	.45	.43
25...	.04	.06	.02	.04	.05	.33	1.8	.35	1.8	.39

DATE	NITRO- GEN, TOTAL (MG/L AS NO3)	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHORUS, DIS- SOLVED (MG/L AS P)	PHOS- PHORUS, ORTHOPHOS- PHATE, TOTAL (MG/L AS P)	PHOS- PHORUS, ORTHOPHOS- PHATE, DIS- SOLVED (MG/L AS P)	PHOS- PHATE, ORTHOPHOS- PHATE, DIS- SOLVED (MG/L AS PO4)	IRON, DIS- SOLVED (UG/L AS FE)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	PHYTO- PLANK- TON, TOTAL (CELLS PER ML)
OCT 13...	1.7	.02	.02	--	--	--	--	--	23
AUG 10...	2.1	.10	.10	.11	.09	.28	20	2	21000
10...	1.6	.02	.11	.01	.11	.34	30	<1	15000
10...	2.6	.10	.10	.13	.09	.28	30	3	3100
25...	1.9	.03	.02	.01	.00	.00	30	0	27000
25...	1.7	.03	.02	.00	.00	.00	30	10	28000

PLATTE RIVER BASIN

06635500 SEMINOE RESERVOIR NEAR LEO, WY--Continued

SAMPLE SITE 1.--Continued

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

DATE	RESER- VOIR STORAGE (AC-FT)	SECCHI DISC (FEET)	DEPTH (FT)	TEMP (°C)	DIS- SOLVED OXYGEN (MG/L)	PH (UNITS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)
OCT., 1977							
13...	582,000	3.8	SURFACE	10.0	8.0	8.2	415
			20	10.0	7.8	8.3	415
			40	10.0	7.8	8.3	415
			60	10.0	7.7	8.3	415
			80	10.0	7.7	8.4	415
			100	10.0	7.5	8.3	415
			120	10.0	7.8	8.2	415
			140	10.0	7.7	8.2	415
AUG., 1978							
10...	866,000	7.2	SURFACE	20.0	8.2	8.4	290
			10	18.5	7.5	--	285
			20	18.0	7.0	--	285
			30	17.5	6.7	8.4	285
			50	17.0	5.7	--	290
			70	14.5	5.2	--	295
			90	15.0	5.0	--	300
			110	14.0	4.6	--	300
			135	12.5	4.0	--	290
			153	12.5	3.6	8.3	290
AUG.							
25...	844,000	7.9	SURFACE	18.0	8.1	8.6	285
			10	17.0	7.9	--	280
			20	16.5	6.9	8.3	280
			30	16.5	6.6	--	275
			40	16.5	6.5	--	275
			50	16.5	6.4	--	275
			70	16.0	6.0	--	275
			90	15.5	5.0	--	290
			110	14.5	4.1	--	285
			130	13.5	3.3	--	275
			140	13.5	3.1	--	280
			160	12.5	2.1	--	285
SEP.							
15...	800,000	3.7	SURFACE	15.5	6.0	--	270
			10	15.0	5.9	--	270
			20	15.0	5.7	--	265
			30	15.0	5.8	--	270
			40	15.0	5.7	--	270
			50	15.0	5.7	--	265
			70	15.0	5.9	--	265
			90	15.0	5.8	--	265
			110	15.0	5.6	--	265
			130	15.0	5.1	--	265
			145	15.0	4.2	--	270

06635500 SEMINOE RESERVOIR NEAR LEO, WY--Continued

SAMPLE SITE 1.--Continued

QUALITATIVE AND ASSOCIATED QUANTITATIVE ANALYSES OF BIOLOGICAL DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

PHYTOPLANKTON ANALYSES

DATE TIME	OCT 13,77 1550	AUG 10,78 1320	AUG 10,78 1325	AUG 10,78 1330	AUG 25,78 1045	AUG 25,78 1050		
TOTAL CELLS/ML	23	21000	15000	3100	27000	28000		
DIVERSITY: DIVISION	0.9	0.2	0.0	0.1	0.0	0.0		
..CLASS	0.9	0.2	0.0	0.1	0.0	0.0		
...ORDER	0.9	0.4	0.0	0.1	0.0	0.0		
...FAMILY	0.9	0.4	0.0	0.1	0.0	0.0		
....GENUS	0.9	0.6	0.0	0.1	0.0	0.0		
ORGANISM	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT
CHLOROPHYTA (GREEN ALGAE)								
..CHLOROPHYCEAE								
...CHLOROCOCCALES								
...CHARACIACEAE								
...SCHROEDERIA	--	-	--	-	--	-	--	-
...OOCYSTACEAE								
...ANKISTRODESMUS	--	-	*	0	--	-	--	-
...VOLVOCALES								
...CHLAMYDOMONADACEAE								
...CHLAMYDOMONAS	--	-	--	-	*	0	--	-
CHRYSDOPHYTA								
..BACILLARIOPHYCEAE								
...CENTRALES								
...COSCINODISCAEAE								
...STEPHANODISCUS	8#	33	--	-	--	-	--	-
..PENNALES								
...ACHNANTHACEAE								
...ACHNANTHES	*	0	--	-	--	-	--	-
...FRAGILARIACEAE								
...SYNEURA	*	0	--	-	--	-	--	-
...GOMPHONEMATAEAE								
...GOMPHONEMA	*	0	--	-	--	-	--	-
...NAVICULACEAE								
...NAVICULA	*	0	--	-	--	-	--	-
...NITZSCHIAEAE								
...NITZSCHIA	*	0	--	-	--	-	--	-
..CHRYSDOPHYCEAE					23	1	--	-
...CHRYSDOMONADALES								
...OCHROMONADACEAE								
...OCHROMONAS	--	-	790	4	--	-	--	-
CRYPTOPHYTA (CRYPTOMONADS)								
..CRYPTOPHYCEAE								
...CRYPTOMONIDALES								
...CRYPTOCHRYSIDACEAE								
...CHROOMONAS	15#	67	--	-	*	0	--	-
CYANOPHYTA (BLUE-GREEN ALGAE)								
..CYANOPHYCEAE								
...CHROCCOCCALES								
...CHROCCOCCAEAE								
...ANACYSTIS	--	-	440	2	--	-	--	-
...HORMOGONALES								
...NOSTOCACEAE								
...ANABAENA	--	-	690	3	--	-	--	-
...APHANIZOMENON	--	-	19000#	91	15000#	100	3100#	99
							27000#	100
								28000#

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

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

PLATTE RIVER BASIN

06635500 SEMINOLE RESERVOIR NEAR LEO, WY--Continued

SAMPLE SITE 2.--Lat 42°00'34", long 106°50'23", in NE&SW&NNW sec.35, T.24 N., R.84 W., about 13 mi (21 km) upstream from dam in the North Platte River arm of reservoir.

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

DATE	TIME	SAMP- LING DEPTH (FT)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	HARD- NESS (MG/L AS CACU3)	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 14...	1015	--	--	--	--	--	--	--	--	--
AUG 10...	1110	.0	--	--	--	100	28	8.1	13	.6
10...	1115	30	--	--	--	100	28	7.7	13	.6
10...	1120	64	--	--	--	99	27	7.7	13	.6
25...	1300	--	250	8.5	17.5	110	30	8.1	18	.8

DATE	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LINITY (MG/L AS CACU3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLOR- IDE, DIS- SOLVED (MG/L AS CL)	FLUOR- IDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)	NITRO- GEN, NITRATE TOTAL (MG/L AS N)	NITRO- GEN, NITRITE TOTAL (MG/L AS N)
OCT 14...	--	--	--	--	--	--	333	.45	--	--
AUG 10...	3.2	87	34	3.4	.3	11	--	--	.01	.00
10...	3.7	84	40	2.7	.3	11	--	--	.01	.01
10...	1.7	79	41	3.1	.3	11	--	--	.08	.01
25...	1.5	84	50	5.8	.3	11	--	--	4.0	.00

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 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,AM- MONIA + ORGANIC DIS- SOLVED (MG/L AS N)	NITRO- GEN, TOTAL (MG/L AS N)
OCT 14...	.05	.07	.02	.03	.04	.48	--	.50	--	.55
AUG 10...	.01	.02	.02	.02	.03	.79	.43	.81	.45	.82
10...	.02	.03	.00	.02	.03	.42	.33	.42	.35	.44
10...	.09	.11	.00	.02	.03	.48	.43	.48	.45	.57
25...	4.0	.06	.08	.05	.06	.60	.37	.68	.42	4.7

DATE	NITRO- GEN, TOTAL (MG/L AS NO3)	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHORUS, DIS- SOLVED (MG/L AS P)	PHOS- PHORUS, ORTHU, TOTAL (MG/L AS P)	PHOS- PHORUS, ORTHU, DIS- SOLVED (MG/L AS P)	PHOS- PHATE, ORTHU, DIS- SOLVED (MG/L AS PO4)	IRON, DIS- SOLVED (UG/L AS FE)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	PHYTO- PLANK- TON, TOTAL (CELLS PER ML)
OCT 14...	2.4	.04	.07	--	--	--	--	--	5800
AUG 10...	3.6	.08	.07	.08	.07	.21	30	4	49000
10...	1.9	.01	.07	.01	.07	.21	40	3	270
10...	2.5	.10	.09	.12	.10	.31	30	20	4600
25...	21	.06	.02	.01	.01	.03	40	20	85000

06635500 SEMINOLE RESERVOIR NEAR LEO, WY--Continued

SAMPLE SITE 2.--Continued

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

DATE	RESER- VOIR STORAGE (AC-FT)	SECCHI DISC (FEET)	DEPTH (FT)	TEMP (°C)	DIS- SOLVED OXYGEN (MG/L)	PH (UNITS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)
OCT., 1977							
14...	580,000	2.2	SURFACE	10.0	8.1	8.4	400
			10	9.5	8.0	8.4	400
			20	9.5	8.1	8.3	400
			30	9.5	8.1	8.3	400
			40	9.5	8.0	8.3	400
			45	9.5	7.8	8.2	400
AUG., 1978							
10...	866,000	7.8	SURFACE	19.0	7.3	9.1	235
			10	18.0	6.9	--	230
			20	18.0	6.7	--	230
			30	17.5	6.3	9.1	230
			40	17.0	5.4	--	240
			50	16.5	5.1	--	235
			60	16.0	4.3	--	230
			65	15.5	3.9	8.7	230
AUG.							
25...	844,000	3.2	SURFACE	17.5	9.0	8.5	250
			10	16.0	7.6	--	240
			20	15.5	6.9	--	240
			30	15.5	6.7	--	245
			40	15.0	6.6	--	250
			50	15.0	6.4	--	250
			60	15.0	6.0	--	250
			65	15.0	5.3	--	250

QUALITATIVE AND ASSOCIATED QUANTITATIVE ANALYSES OF BIOLOGICAL DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
PHYTOPLANKTON ANALYSES

DATE TIME	OCT 14,77 1015	AUG 10,78 1110	AUG 10,78 1115	AUG 10,78 1120	AUG 25,78 1300					
TOTAL CELLS/ML	5800	49000	270	4600	85000					
DIVERSITY: DIVISION	0.3	0.1	0.3	0.1	0.1					
..CLASS	0.3	0.1	0.3	0.1	0.1					
..ORDER	0.3	0.1	0.3	0.1	0.1					
...FAMILY	0.3	0.1	0.3	0.1	0.1					
....GENUS	0.3	0.1	0.3	0.1	0.1					
ORGANISM	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT
CHLOROPHYTA (GREEN ALGAE)										
..CHLOROPHYCEAE										
...CHLOROCOCCALES										
....CHARACIACEAE										
....SCHROEDERIA	--	-	250	1	15	6	34	1	*	0
CHRYSTOPHYTA										
..BACILLARIOPHYCEAE										
..CENTRALES										
...COSCINODISCAEAE										
....CYCLOTELLA	*	0	*	0	--	-	--	-	--	-
....MELOSIRA	--	-	--	-	250#	94	--	-	--	-
..PENNALES										
...CYMBELLACEAE										
...EPITHEMIA	*	0	--	-	--	-	--	-	--	-
..CHRYSTOPHYCEAE										
..CHRYSONOMADALES										
...OCHROMONADACEAE										
....OCHROMONAS	--	-	250	1	--	-	--	-	580	1
CRYPTOPHYTA (CRYPTOMONADS)										
..CRYPTOPHYCEAE										
..CRYPTOMONIDALES										
...CRYPTOMONODACEAE										
....CRYPTOMONAS	210	4	--	-	--	-	--	-	*	0
CYANOPHYTA (BLUE-GREEN ALGAE)										
..CYANOPHYCEAE										
..CHRUCCOCCALES										
...CHROCCOCCAEAE										
....ANACYSTIS	--	-	*	0	--	-	--	-	--	-
..HORMOGONALES										
...NOSTOCACEAE										
....APHANIZOMENON	5600#	96	48000#	98	--	-	4500#	99	84000#	99

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

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

PLATTE RIVER BASIN

06635500 SEMINOLE RESERVOIR NEAR LEO, WY--Continued

SAMPLE SITE 3.--Lat 42°02'38", long 106°49'27", in SE&SW&SW& sec.13, T.24 N., R.83 W., about 10 mi (16 km) upstream from dam in the Medicine Bow River arm of reservoir.

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

DATE	TIME	SAMP- LING DEPTH (FT)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	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)
OCT 14...	0930	--	--	--	--	--	--	--	--	--	--
APR 19...	1300	--	--	--	--	--	--	--	--	--	--
19...	1305	--	--	--	--	--	--	--	--	--	--
19...	1310	--	--	--	--	--	--	--	--	--	--
AUG 10...	1015	.0	--	--	--	110	29	8.9	16	.7	3.8
10...	1020	30	--	--	--	110	29	9.2	16	.7	2.2
10...	1025	68	--	--	--	110	30	9.4	17	.7	2.1
25...	1225	--	310	8.7	18.5	130	34	11	16	.6	1.8

DATE	BICAR- BONATE (MG/L AS HCO3)	ALKA- LINITY (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)	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)	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)
OCT 14...	--	--	--	--	--	--	337	.46	--	--	.07
APR 19...	170	140	--	--	--	--	--	--	--	--	--
19...	--	--	--	--	--	--	--	--	--	--	--
19...	--	--	--	--	--	--	--	--	--	--	--
AUG 10...	--	78	55	3.2	.2	11	--	--	.01	.00	.01
10...	--	78	60	3.2	.3	10	--	--	.01	.01	.02
10...	--	77	61	3.3	.3	11	--	--	.09	.00	.09
25...	--	85	75	4.3	.3	11	--	--	.01	.00	.01

DATE	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	NITRO- GEN, NO2+NO3 TOT. IN BOT MAT (MG/KG 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, ORGANIC DIS- SOLVED (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC DIS- SOLVED (MG/L AS N)	NITRO- GEN,NH4 + ORG. TUT IN BOT MAT (MG/KG AS N)	NITRO- GEN, TOTAL (MG/L AS N)
OCT 14...	.05	--	.01	.02	.03	.36	--	.37	--	--	.44
APR 19...	--	.0	--	--	--	--	--	--	--	480	--
19...	--	41	--	--	--	--	--	--	--	780	--
19...	--	21	--	--	--	--	--	--	--	650	--
AUG 10...	.25	--	.02	.02	.03	.52	.52	.54	.54	--	.55
10...	.29	--	.02	.01	.01	1.6	1.6	1.6	1.6	--	1.6
10...	.06	--	.00	.01	.01	.42	.43	.42	.44	--	.51
25...	.04	--	.06	.04	.05	.42	.46	.48	.50	--	.49

DATE	NITRO- GEN, TOTAL (MG/L AS NO3)	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHORUS, DIS- SOLVED (MG/L AS P)	PHOS- PHORUS, ORTHO. TOTAL (MG/L AS P)	PHOS- PHORUS, ORTHO. DIS- SOLVED (MG/L AS P)	PHOS- PHATE, ORTHO, DIS- SOLVED (MG/L AS PO4)	PHOS- PHORUS, TOTAL IN BOT. MAT. (MG/KG AS P)	IRON, DIS- SOLVED (UG/L AS FE)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	PHYTO- PLANK- TON, TOTAL (CELLS PER ML)
OCT 14...	1.9	.04	.00	--	--	--	--	--	--	5900
APR 19...	--	--	--	--	--	--	230	--	--	--
19...	--	--	--	--	--	--	470	--	--	--
19...	--	--	--	--	--	--	450	--	--	--
AUG 10...	2.4	.01	.23	.01	.25	.77	--	30	1	63000
10...	7.2	.01	.32	.01	.30	.92	--	20	1	12000
10...	2.3	.03	.16	.02	.13	.40	--	40	5	2800
25...	2.2	.04	.02	.01	.00	.00	--	100	10	71000

PLATTE RIVER BASIN

465

06635500 SEMINOE RESERVOIR NEAR LEO, WY--Continued

SAMPLE SITE 3.--Continued

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

DATE	RESER- VOIR STORAGE (AC-FT)	SECCHI DISC (FEET)	DEPTH (FT)	TEMP (°C)	DIS- SOLVED OXYGEN (MG/L)	PH (UNITS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)
OCT., 1977							
14...	580,000	2.2	SURFACE	10.0	8.2	8.5	410
			10	10.0	8.1	8.5	410
			20	10.0	8.1	8.4	410
			30	10.0	8.3	8.4	410
			40	9.5	8.2	8.4	410
			50	9.5	8.3	8.5	410
			60	9.5	8.2	8.5	410
AUG., 1978							
10...	866,000	6.2	SURFACE	18.0	7.4	8.6	270
			10	18.0	7.1	--	270
			20	17.5	6.9	--	272
			30	17.5	6.4	8.6	280
			40	17.0	6.2	--	280
			50	16.0	5.1	--	270
			60	16.0	4.9	--	265
			68	16.0	4.8	8.6	270
AUG.							
25...	844,000	4.2	SURFACE	18.5	8.6	8.7	310
			10	16.0	7.8	--	280
			20	16.0	7.6	--	280
			30	16.0	7.5	--	280
			40	16.0	7.3	--	280
			50	16.0	6.7	--	290
			60	15.5	6.1	--	310
			75	15.5	5.0	--	280
			77	15.0	4.7	--	275

PLATTE RIVER BASIN

06635500 SEMINOE RESERVOIR NEAR LEO, WY--Continued

SAMPLE SITE 3.--Continued

QUALITATIVE AND ASSOCIATED QUANTITATIVE ANALYSES OF BIOLOGICAL DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

PHYTOPLANKTON ANALYSES

DATE TIME	OCT 14,77 0930	AUG 10,78 1015	AUG 10,78 1020	AUG 10,78 1025	AUG 25,78 1225					
TOTAL CELLS/ML	5900	63000	12000	2800	71000					
DIVERSITY: DIVISION	0.4	0.0	0.0	0.2	0.1					
..CLASS	0.4	0.0	0.0	0.2	0.1					
..ORDER	0.4	0.0	0.0	0.2	0.1					
...FAMILY	0.5	0.0	0.0	0.2	0.1					
....GENUS	0.5	0.2	0.0	0.2	0.1					
ORGANISM	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT
CHLOROPHYTA (GREEN ALGAE)										
..CHLOROPHYCEAE										
...CHLOROCOCCALES										
....CHARACIACEAE										
...SCHROEDERIA	64	1	--	-	* 0		23	1	*	0
...ODCYSTACEAE										
....ANKISTRODESMUS	58	1	*	0	--	-	--	-	--	-
CHRYSTOPHYTA										
..BACILLARIOPHYCEAE										
..CENTRALES										
...COSCINODISCACEAE										
....CYCLOTELLA	--	-	--	-	* 0		--	-	--	-
....STEPHANODISCUS	*	0	--	-	--	-	--	-	--	-
..PENNALES										
...NAVICULACEAE										
....NAVICULA	41	1	--	-	--	-	--	-	--	-
...NITZSCHACEAE										
....NITZSCHIA	*	0	--	-	--	-	--	-	--	-
...SURIPELLACEAE										
....SURIPELLA	--	-	--	-	--	-	--	-	*	0
..CHRYSTOPHYCEAE										
...CHRYSONOMADALES										
...OCHROMONADACEAE										
....OCHROMONAS	--	-	--	-	--	-	--	-	390	1
CRYPTOPHYTA (CRYPTOMONADS)										
..CRYPTOPHYCEAE										
...CRYPTOMONIDALES										
...CRYPTOCHRYSIDACEAE										
...CHROOMONAS	99	2	--	-	--	-	--	-	--	-
...CRYPTOMONODACEAE										
....CRYPTOMONAS	--	-	--	-	--	-	23	1	--	-
CYANOPHYTA (BLUE-GREEN ALGAE)										
..CYANOPHYCEAE										
...HORMOGONALES										
...NOSTOCACEAE										
....ANABAENA	--	-	1400	2	--	-	--	-	--	-
....APHANIZOMENON	5600#	94	62000#	98	12000#	100	2800#	98	70000#	99
EUGLENOPHYTA (EUGLENOIDS)										
..EUGLENOPHYCEAE										
...EUGLENALES										
...EUGLENACEAE										
....TRACHELOMONAS	35	1	--	-	--	-	23	1	--	-

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

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

PLATTE RIVER BASIN

467

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 Bureau of Reclamation.

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

DATE	TIME	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	TUR- BID- ITY (JTU)	OXYGEN, DIS- SOLVED (MG/L)
OCT						
06...	0930	490	8.0	12.0	6	9.5
NOV						
16...	1030	490	8.0	6.0	2	8.2
DEC						
15...	1030	500	8.2	3.0	2	11.2
JAN						
07...	1030	520	8.1	1.5	1	10.6
FEB						
08...	0945	570	8.0	2.0	2	10.8
MAR						
09...	1030	600	8.0	2.0	1	11.0
APR						
05...	1015	600	--	3.0	2	10.8
MAY						
17...	1145	660	8.1	5.5	3	11.2
JUN						
14...	1100	600	8.2	12.0	6	8.4
JUL						
26...	1045	420	7.8	15.0	10	7.0
AUG						
23...	0910	350	7.5	15.0	15	6.2
SEP						
20...	1120	300	7.6	15.5	20	5.8

PLATTE RIVER BASIN

06637550 SWEETWATER RIVER NEAR SOUTH PASS CITY, WY

LOCATION.--Lat 44°22'30", long 108°52'56", in NW¼NW¼ sec.28, T.28 N., R.101 W., Fremont County, Hydrologic Unit 10180006, 100 ft (30 m) downstream from small tributary, 0.8 mi (1.3 km) downstream from Fog Gulch, 1.2 mi (1.9 km) downstream from State Highway 28, and 7.6 mi (12.2 km) southwest of South Pass City.

DRAINAGE AREA.--177 mi² (458 km²).

PERIOD OF RECORD.--Water years 1975 to September 1978 (discontinued).

REMARKS.--Peak-flow information also collected at this site.

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

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	TUR- BID- ITY (JTU)	HARD- NESS (MG/L AS CAC03)	HARD- NESS, NONCAR- BONATE (MG/L CAC03)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)
OCT 06...	1245	35	75	--	8.5	1	29	0	8.3	2.0	3.4
MAY 22...	1045	480	100	--	6.0	15	37	4	11	2.2	3.5
JUN 06...	1130	562	60	--	7.0	7	--	--	--	--	--
30...	1140	185	38	--	10.5	1	18	2	5.4	1.0	1.8
AUG 04...	1110	71	65	7.9	14.0	1	21	0	6.2	1.3	2.9
31...	1230	62	61	8.0	16.5	--	25	0	7.4	1.5	2.7

DATE	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	BICAR- BONATE (MG/L AS HC03)	CAR- BONATE (MG/L AS CO3)	ALKA- LINITY (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)	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L)
OCT 06...	.3	1.2	37	0	30	3.6	.9	.1	10	48
MAY 22...	.3	1.7	40	0	33	6.9	1.4	.1	14	61
JUN 06...	--	--	--	--	--	--	--	--	--	--
30...	.2	.9	17	1	16	6.2	.6	.0	7.5	33
AUG 04...	.3	1.1	31	0	25	2.5	.6	.1	10	40
31...	.2	1.3	32	0	26	4.9	.8	.1	11	46

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, DIS- SOLVED (MG/L AS P)	PHOS- PHORUS, ORTHO, DIS- SOLVED (MG/L AS P)	PHOS- PHATE, ORTHO, DIS- SOLVED (MG/L AS PO4)	BORON, DIS- SOLVED (UG/L AS B)	IRON, DIS- SOLVED (UG/L AS FE)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)
OCT 06...	.07	4.54	--	.01	.02	--	--	8	200	4
MAY 22...	.08	79.1	.02	.04	.01	.01	.03	50	180	10
JUN 06...	--	--	--	--	--	--	--	--	--	--
30...	.04	16.5	.03	.02	.01	--	--	10	120	10
AUG 04...	.05	7.67	.01	.01	.00	.00	.00	50	170	20
31...	.06	7.70	.05	.02	.00	--	--	2	90	0

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 06...	1245	8.5	35	2	.19
MAY 22...	1045	6.0	480	40	52
JUN 06...	1130	7.0	562	46	70
30...	1140	10.5	185	22	11
AUG 04...	1110	14.0	71	4	.77
31...	1230	16.5	62	2	.33

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 those for winter periods, which are poor. No diversions above station.

AVERAGE DISCHARGE.--16 years, 8.56 ft³/s (0.242 m³/s), 6,200 acre-ft/yr (7.64 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 discharges 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 24	1830	77	2.18	6.47	1.972
June 9	1800	*96	2.72	6.62	2.018

Minimum daily discharge, 0.80 ft³/s (0.023 m³/s) Feb. 14.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.4	1.4	1.3	1.2	1.2	1.1	10	5.9	52	16	3.7	1.8
2	1.6	1.4	1.3	1.2	1.2	1.1	6.0	6.8	50	15	3.6	1.8
3	1.4	1.4	1.3	1.2	1.2	1.1	2.9	7.9	49	14	3.8	1.8
4	1.4	1.5	1.3	1.3	1.1	1.1	2.6	7.6	47	12	3.7	1.7
5	1.4	1.5	1.3	1.3	1.1	1.1	2.5	4.3	51	12	3.3	1.7
6	1.7	1.4	1.3	1.3	1.1	1.1	2.9	9.9	59	14	3.6	1.6
7	2.1	1.4	1.3	1.3	1.1	1.1	3.1	32	67	12	3.4	2.0
8	1.6	1.3	1.3	1.3	1.1	1.1	3.4	22	74	10	3.0	2.2
9	1.6	1.2	1.2	1.3	1.1	1.2	3.6	13	78	9.3	3.1	1.7
10	1.6	1.3	1.2	1.3	1.1	1.2	3.7	9.1	78	8.8	2.9	1.6
11	1.8	1.4	1.2	1.3	1.0	1.2	3.7	11	68	8.1	2.6	1.7
12	1.9	1.4	1.2	1.3	.95	1.2	3.7	11	65	7.3	2.5	1.8
13	1.8	1.3	1.1	1.3	.85	1.2	3.7	15	70	6.8	2.6	1.9
14	1.7	1.3	1.1	1.3	.80	1.1	3.5	21	74	6.6	3.8	1.8
15	1.6	1.3	1.1	1.3	.85	1.1	3.6	34	72	6.3	3.8	1.7
16	1.5	1.3	1.1	1.3	.95	1.1	3.5	48	64	6.1	2.9	1.7
17	1.5	1.3	1.1	1.3	1.0	1.1	3.8	46	54	6.3	2.7	2.1
18	1.5	1.2	1.1	1.3	1.0	1.1	4.0	38	50	6.1	2.8	3.1
19	1.4	1.2	1.0	1.3	1.0	1.2	3.9	36	46	5.8	2.7	2.4
20	1.5	1.2	1.0	1.3	1.0	1.2	3.6	39	41	5.5	2.4	2.3
21	1.8	1.3	1.0	1.3	1.0	1.2	3.2	45	39	7.8	2.2	2.6
22	2.1	1.3	1.0	1.3	1.1	1.3	3.2	56	36	6.9	2.2	3.4
23	2.1	1.3	1.0	1.3	1.1	1.2	3.3	64	33	5.5	2.1	4.3
24	1.9	1.3	1.0	1.3	1.1	1.2	3.9	68	30	4.8	2.1	3.9
25	2.0	1.3	1.1	1.3	1.1	1.1	4.8	66	27	4.3	2.0	3.1
26	1.9	1.3	1.1	1.3	1.1	1.2	5.9	62	24	4.2	2.0	2.7
27	1.8	1.3	1.1	1.3	1.1	1.2	6.0	61	22	4.0	2.0	2.4
28	1.7	1.3	1.1	1.2	1.1	1.3	5.1	64	21	4.1	2.0	2.2
29	1.7	1.3	1.2	1.2	---	1.5	5.1	66	19	4.3	2.0	2.1
30	1.6	1.3	1.2	1.2	---	3.2	5.4	62	18	4.1	2.0	2.0
31	1.4	---	1.2	1.2	---	6.4	---	54	---	3.7	1.8	---
TOTAL	52.0	39.7	35.8	39.6	29.40	43.5	123.6	1085.5	1478	241.7	85.3	67.1
MEAN	1.68	1.32	1.15	1.28	1.05	1.40	4.12	35.0	49.3	7.80	2.75	2.24
MAX	2.1	1.5	1.3	1.3	1.2	6.4	10	68	78	16	3.8	4.3
MIN	1.4	1.2	1.0	1.2	.80	1.1	2.5	4.3	18	3.7	1.8	1.6
AC-FT	103	79	71	79	58	86	245	2150	2930	479	169	133

CAL YR 1977 TOTAL 953.49 MEAN 2.61 MAX 21 MIN .68 AC-FT 1890
WTR YR 1978 TOTAL 3321.20 MEAN 9.10 MAX 78 MIN .80 AC-FT 6590

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, 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.--5 years, 130 ft³/s (3.682 m³/s), 94,180 acre-ft/yr (116 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,950 ft³/s (83.5 m³/s) Apr. 27, 1974, gage height, 9.78 ft (2.981 m), from floodmark; minimum daily, 5.6 ft³/s (0.16 m³/s) Jan. 9, 1977.

Peak discharges for the water years 1974-77 above base of 900 ft³/s (25.5 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. 19, 1974	0900	1,100 31.2	6.34 1.932	May 21, 1975	0530	*980 27.8	5.95 1.814
Apr. 27, 1974	unknown	*2,950 83.5	9.78 2.981	June 10, 1975	1100	942 26.7	5.80 1.768
May 4, 1974	0130	1,180 33.4	6.56 1.999	June 21, 1975	0500	900 25.5	5.63 1.716
May 10, 1974	0800	1,060 30.0	6.19 1.887				
May 31, 1974	1130	965 27.3	5.86 1.786	May 24, 1976	1500	*922 26.1	5.80 1.768
				Apr. 9, 1977	0600	*1,090 30.9	6.31 1.923

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 900 ft³/s (25.5 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 19	1300	918 26.0	5.67 1.728	June 12	1400	*950 26.9	5.85 1.781

Minimum daily discharge, 7.6 ft³/s (0.22 m³/s) Jan. 2.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	17	11	17	8.2	12	18	107	280	608	341	59	16
2	17	11	17	7.6	13	18	122	264	544	317	58	15
3	16	11	17	7.8	14	17	131	292	512	282	58	15
4	15	12	16	8.0	15	17	113	310	538	259	54	15
5	15	12	15	8.2	16	18	124	298	554	243	51	15
6	16	11	14	8.4	16	19	113	267	566	225	50	15
7	17	11	14	8.6	16	18	145	212	596	225	51	17
8	17	11	14	8.8	16	19	145	194	640	223	44	20
9	19	10	13	9.2	16	18	150	246	710	217	42	20
10	20	10	13	9.2	16	17	136	376	768	207	38	20
11	21	11	13	9.2	16	18	158	504	830	189	36	19
12	22	13	13	9.0	15	20	152	508	902	181	34	20
13	21	14	12	9.2	14	21	160	444	792	178	34	21
14	19	14	12	9.4	14	21	136	466	692	171	38	21
15	18	13	12	9.4	14	20	141	524	720	155	42	22
16	19	13	12	9.4	14	19	136	614	798	148	44	22
17	18	13	12	9.4	14	19	131	722	800	143	43	22
18	19	12	11	9.4	14	19	107	842	782	136	40	32
19	18	12	11	9.4	15	20	129	878	672	131	40	44
20	18	12	20	9.4	16	24	122	852	584	129	36	50
21	19	12	20	9.2	17	35	124	678	552	127	33	46
22	19	13	20	9.2	18	47	124	628	506	129	30	42
23	22	15	20	9.2	19	50	120	646	506	122	29	40
24	23	18	20	9.0	19	52	113	682	498	109	25	36
25	24	20	20	9.4	19	50	120	700	496	96	25	39
26	24	20	9.6	9.8	18	48	136	682	490	79	21	36
27	23	19	9.6	11	17	45	171	642	450	73	21	34
28	21	19	9.6	11	17	44	207	612	379	71	21	31
29	19	19	9.4	11	---	51	202	600	367	66	19	29
30	15	18	9.2	11	---	71	228	628	360	66	18	31
31	12	---	9.2	12	---	96	---	658	---	64	17	---
TOTAL	583	410	434.6	289.0	440	969	4203	16249	18212	5102	1151	805
MEAN	18.8	13.7	14.0	9.32	15.7	31.3	140	524	607	165	37.1	26.8
MAX	24	20	20	12	19	96	228	878	902	341	59	50
MIN	12	10	9.2	7.6	12	17	107	194	360	64	17	15
AC-FT	1160	813	862	573	873	1920	8340	32230	36120	10120	2280	1600
CAL YR 1977	TOTAL	15646.7	MEAN	42.9	MAX	852	MIN	5.6	AC-FT	31040		
WTR YR 1978	TOTAL	48847.6	MEAN	134	MAX	902	MIN	7.6	AC-FT	96890		

06638300 WEST FORK CROOKS CREEK NEAR JEFFREY CITY, WY

LOCATION.--Lat 42°20'56", long 107°51'45", in SE¼SW¼ sec.31, T.28 N., R.92 W., Fremont County, Hydrologic Unit 10180006, at culvert on dirt road and 10.1 mi (16.3 km) south of Jeffrey City.

DRAINAGE AREA.--11.6 mi² (30.0 km²).

PERIOD OF RECORD.--Water year 1976 to September 1978 (discontinued).

REMARKS.--Peak-flow information also collected at this site.

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

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	TEMPER- ATURE (DEG C)	TUR- BID- ITY (JTU)	SEDI- MENT, SUS- PENDE (MG/L)	SEDI- MENT DIS- CHARGE, SUS- PENDE (T/DAY)
OCT 03...	1315	1.3	335	11.5	1	5	.02
MAR 31...	1350	2.2	480	10.0	--	6	.04
MAY 30...	1305	2.6	360	11.0	--	6	.04
JUN 27...	1115	1.0	320	12.5	--	6	.02
AUG 03...	1020	3.5	--	17.0	1	6	.06
29...	1045	.85	350	16.0	--	4	.01

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 30...	1305	11.0	2.6	2	4	11	34
AUG 29...	1045	16.0	.85	--	0	4	18

DATE	1.00 MM	2.00 MM	4.00 MM	8.00 MM	16.0 MM	32.0 MM	64.0 MM
MAY 30...	52	68	79	84	93	100	--
AUG 29...	33	42	53	62	72	95	100

PLATTE RIVER BASIN

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 good. 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. Nine discharge measurements were made by the 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, 770 ft³/s (21.8 m³/s) May 20, gage height, 5.51 ft (1.679 m); minimum daily during period of operation, 9.3 ft³/s (0.26 m³/s) Sept. 12, 15.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1						---	100	104	565	342	97	27
2						---	100	115	565	326	91	13
3						---	109	126	568	309	89	13
4						---	120	143	540	291	88	13
5						---	128	162	505	276	86	13
6						---	137	182	489	252	80	12
7						---	135	206	500	244	79	11
8						---	137	224	505	222	75	11
9						---	139	246	508	202	71	11
10						---	147	238	521	198	70	11
11						---	152	212	538	190	64	10
12						---	158	210	571	186	57	9.3
13						---	156	252	596	176	52	10
14						---	160	309	617	162	53	10
15						---	162	315	663	156	55	9.3
16						---	162	298	684	149	53	10
17						---	152	354	602	145	50	10
18						---	149	516	576	122	50	11
19						---	143	672	596	106	50	12
20						---	143	746	628	100	53	12
21						---	131	761	628	107	53	11
22						---	111	742	582	109	48	11
23						97	97	727	500	111	47	11
24						102	93	654	448	113	45	16
25						104	93	596	414	111	41	21
26						97	88	591	407	104	41	22
27						91	82	596	400	102	40	22
28						91	82	614	409	91	40	22
29						93	91	599	409	89	39	21
30						97	91	588	376	89	38	22
31						102	---	579	---	88	35	---
TOTAL						---	3748	12677	15910	5268	1830	417.6
MEAN						---	125	409	530	170	59.0	13.9
MAX						---	162	761	684	342	97	27
MIN						---	82	104	376	88	35	9.3
AC-FT						---	7430	25140	31560	10450	3630	828

06639000 SWEETWATER RIVER NEAR ALCOVA, WY--Continued

WATER-QUALITY RECORDS

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

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

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	TUR- BID- ITY (JTU)	OXYGEN, DIS- SOLVED (MG/L)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	HARD- NESS (MG/L AS CACO3)	HARD- NESS, NONCAR- BONATE (MG/L AS CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)
OCT 06...	1130	--	--	--	7.0	1	9.5	29	180	8	52
NOV 16...	1240	--	--	--	3.0	2	8.8	K6	150	2	44
DEC 15...	1200	--	--	--	.5	3	11.0	21	160	12	45
JAN 07...	1215	--	--	--	.0	1	9.8	K12	180	8	54
FEB 08...	1215	--	--	--	.0	1	10.2	K9	170	14	51
MAR 09...	1230	--	--	--	1.0	10	10.8	66	140	1	42
APR 05...	1150	124	--	--	9.0	25	9.4	K100	140	1	42
MAY 17...	1400	349	--	--	9.0	35	9.5	K310	88	0	27
JUN 14...	1240	614	240	8.2	18.0	15	8.1	130	75	0	23
JUL 26...	1220	104	330	8.2	21.0	5	8.2	K18	94	0	29
AUG 23...	1100	47	440	8.1	16.5	3	8.7	25	140	1	42
SEP 20...	1310	11	490	8.2	10.5	2	9.0	K8	160	0	49

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- SURP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	BICAR- BONATE (MG/L AS HCO3)	CAR- BONATE (MG/L AS CO3)	ALKA- LINITY (MG/L AS CACO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLU- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SiO2)
OCT 06...	13	63	2.0	7.7	210	0	170	99	30	.4	29
NOV 16...	9.7	48	1.7	5.8	180	0	150	70	24	.4	30
DEC 15...	11	39	1.4	5.3	180	0	150	65	19	.2	31
JAN 07...	11	51	1.7	6.4	210	0	170	81	24	.4	37
FEB 08...	11	38	1.3	4.3	190	0	160	69	25	1.5	34
MAR 09...	8.4	37	1.4	5.2	170	0	140	61	8.6	.4	28
APR 05...	7.3	37	1.4	5.3	170	0	140	60	12	.5	13
MAY 17...	5.1	24	1.1	3.9	110	0	90	28	19	.4	9.5
JUN 14...	4.3	13	.7	3.8	100	0	82	11	4.1	.3	15
JUL 26...	5.4	27	1.2	4.7	150	0	120	40	13	.4	7.4
AUG 23...	7.8	33	1.2	5.9	170	0	140	45	13	.4	15
SEP 20...	9.9	52	1.8	6.1	200	0	160	89	24	.5	25

PLATTE RIVER BASIN

06639000 SWEETWATER RIVER NEAR ALCOVA, WY--Continued

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

DATE	SOLIDS, RESIDUE AT 105 DEG. C, DIS- SOLVED (MG/L)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)	SOLIDS, DIS- SOLVED (TONS PER DAY)	SOLIDS, RESIDUE AT 105 DEG. C, SUS- PENDE (MG/L)	NITRO- GEN, NITRATE 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)
OCT 06...	390	399	.54	--	<1	.07	.00	3.5	--	10	--
NOV 16...	--	322	.44	--	--	.00	.00	--	--	14	--
DEC 15...	--	302	.41	--	--	.09	.00	--	--	20	--
JAN 07...	370	369	.50	--	1	.14	.01	2.3	.6	10	--
FEB 08...	--	330	.45	--	--	.09	.02	--	--	17	--
MAR 09...	--	275	.37	--	--	.00	.38	--	--	91	--
APR 05...	--	261	.36	87.4	--	.05	.10	5.6	1.7	105	35
MAY 17...	177	170	.23	160	57	.27	.03	--	--	242	228
JUN 14...	--	129	.18	214	--	.54	.08	--	--	52	86
JUL 26...	193	205	.28	57.6	8	.90	.01	4.3	.4	24	6.7
AUG 23...	--	252	.34	32.0	--	1.0	.03	--	--	11	1.4
SEP 20...	--	355	.48	10.5	--	.23	.13	--	--	6	.18

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 06...	1130	70	50	20	6	2	4	0	0	0	<10	<7
JAN 07...	1215	100	90	10	4	0	4	0	0	0	3	0
APR 05...	1150	710	710	0	5	1	4	0	0	0	2	0
JUL 26...	1220	220	220	0	5	1	4	0	0	0	5	1

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 06...	3	20	10	10	<10	<8	2	150	--	70	<100	<87
JAN 07...	4	0	0	0	4	3	1	170	--	20	16	0
APR 05...	2	0	0	0	2	1	1	1300	--	670	8	4
JUL 26...	4	0	0	10	20	8	12	340	300	40	24	3

PLATTE RIVER BASIN

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06639000 SWEETWATER RIVER NEAR ALCOVA, WY--Continued

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

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 MU)
OCT 06...	13	30	0	30	60	30	30	.0	.0	.0	10	7
JAN 07...	16	30	0	30	50	30	20	.0	.0	.0	2	0
APR 05...	4	20	0	20	110	100	10	.0	.0	.0	4	3
JUL 26...	21	5	0	20	30	20	10	.0	.0	.0	--	--

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 RECOV- ERABLE (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 06...	3	<50	<47	3	0	0	0	.7	20	10	10
JAN 07...	2	5	5	0	1	0	1	--	20	10	10
APR 05...	1	2	2	0	0	0	0	--	10	0	10
JUL 26...	2	14	12	2	0	0	0	--	60	30	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)	RADIUM 226, DIS- SOLVED (PCI/L AS METHOD)	URANIUM NATURAL DIS- SOLVED (UG/L AS U)
OCT 06...	1130	35	<.4	15	2.9	12	2.7	.13	23
JAN 07...	1215	38	<.4	13	1.3	11	1.4	.07	20
MAY 17...	1400	5.3	5.6	6.8	6.3	6.0	6.3	.12	5.2
JUL 26...	1220	16	<.4	7.1	1.0	6.6	1.1	.59	9.6

PLATTE RIVER BASIN

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 Alcovia.

DRAINAGE AREA.--10,711 mi² (27,741 km²), of which 700 mi² (1,813 km²) is probably noncontributing.

RESERVOIR-CONTENTS RECORD

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 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, 647,000 acre-ft (798 hm³) June 29, elevation, 5,830.58 ft (1,777.16 m); minimum daily contents, 250,000 acre-ft (308 hm³) Oct. 1, elevation, 5,793.80 ft (1,765.950 m).

Capacity table (elevation in feet,
and contents, in acre-feet)

5,793	244,000	5,810	387,000	5,830	638,000
5,795	259,000	5,815	439,000	5,835	720,000
5,800	297,000	5,820	498,000	5,838	773,000
5,805	340,000	5,825	564,000		

CONTENTS, IN ACRE-FEET, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
INSTANTANEOUS OBSERVATIONS AT 2400

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	250000	291000	311000	364000	384000	431000	496000	530000	580000	646000	603000	512000
2	251000	291000	312000	367000	385000	432000	497000	530000	583000	644000	601000	510000
3	252000	293000	314000	370000	386000	434000	498000	531000	587000	643000	600000	508000
4	253000	294000	315000	373000	386000	435000	500000	532000	590000	642000	598000	506000
5	254000	294000	316000	374000	388000	437000	500000	532000	593000	640000	596000	504000
6	256000	295000	317000	375000	388000	439000	502000	533000	597000	640000	595000	502000
7	257000	296000	318000	375000	389000	441000	503000	534000	600000	638000	594000	500000
8	258000	297000	319000	375000	390000	493000	504000	535000	603000	637000	592000	498000
9	259000	298000	320000	375000	393000	446000	505000	536000	605000	636000	590000	496000
10	260000	301000	320000	375000	394000	448000	506000	536000	608000	635000	588000	494000
11	261000	301000	321000	375000	395000	450000	507000	536000	611000	634000	586000	493000
12	262000	302000	322000	375000	397000	452000	508000	538000	615000	632000	584000	490000
13	263000	302000	324000	375000	399000	454000	509000	539000	618000	631000	582000	490000
14	264000	304000	324000	375000	401000	456000	510000	540000	622000	630000	580000	489000
15	265000	305000	325000	376000	403000	457000	511000	541000	624000	628000	578000	489000
16	267000	306000	326000	376000	405000	459000	513000	543000	628000	626000	574000	486000
17	269000	307000	328000	376000	406000	461000	513000	548000	630000	625000	569000	485000
18	271000	308000	329000	376000	408000	464000	515000	551000	631000	623000	563000	484000
19	273000	308000	331000	377000	410000	465000	516000	553000	633000	621000	559000	483000
20	275000	309000	333000	377000	412000	467000	516000	556000	635000	619000	554000	482000
21	277000	308000	334000	377000	414000	470000	518000	559000	637000	619000	549000	482000
22	279000	309000	336000	377000	416000	473000	520000	562000	638000	617000	544000	481000
23	281000	310000	339000	377000	418000	476000	521000	564000	639000	616000	539000	480000
24	283000	311000	342000	378000	420000	477000	522000	566000	640000	615000	534000	479000
25	286000	311000	346000	379000	422000	479000	523000	567000	643000	614000	530000	478000
26	286000	311000	348000	379000	424000	482000	526000	569000	644000	612000	527000	478000
27	287000	311000	351000	380000	427000	486000	526000	571000	645000	611000	523000	476000
28	288000	310000	353000	380000	429000	486000	527000	573000	646000	609000	520000	474000
29	289000	310000	356000	381000	---	489000	528000	574000	647000	607000	518000	475000
30	289000	310000	359000	382000	---	491000	530000	576000	646000	606000	516000	473000
31	290000	---	361000	382000	---	494000	---	577000	---	605000	514000	---
MAX	290000	311000	361000	382000	429000	494000	530000	577000	647000	646000	603000	512000
MIN	250000	291000	311000	364000	384000	431000	496000	530000	580000	605000	514000	473000
(†)	5,799.12	5,801.60	5,807.34	5,809.56	5,814.02	5,819.60	5,822.44	5,825.92	5,830.54	5,827.80	5,821.22	5,817.92
(‡)	+41,000	+20,000	+51,000	+21,000	+47,000	+65,000	+36,000	+47,000	+69,000	-41,000	-91,000	-41,000

CAL YR 1977 MAX 765000 MIN 249000 †-351,000

WTR YR 1978 MAX 647000 MIN 250000 †+224,000

(†) Elevation, in feet, at end of month.

(‡) Change in contents, in acre-feet, at end of month.

06640500 PATHFINDER RESERVOIR NEAR ALCOVA, WY--Continued

WATER-QUALITY RECORDS

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

REMARKS.--Reservoir sampled at one site prior to July 1973 and at all sites thereafter. Samples are collected at the surface, the thermocline or midpoint if a well defined thermocline is not present, and at the bottom. Dissolved oxygen and temperature are measured at additional depths. Reservoir storage represents total storage at 2400 hours.

SAMPLE SITE 1.--Lat 42°28'05", long 106°51'16", in NE¼NE¼SE¼ sec.23, T.29 N., R.84 W., about 200 ft (61 m) upstream from dam.

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

DATE	TIME	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)	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)
OCT 13...	0930	338	.46	.07	.09	.07	.07	.09

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, DIS- SOLVED (MG/L AS P)	PHYTO- PLANK- TON, TOTAL (CELLS PER ML)
OCT 13...	.88	.95	1.0	4.5	.05	.03	9300

DATE	RESER- VOIR STORAGE (AC-FT)	SECCHI DISC (FEET)	DEPTH (FT)	TEMP (°C)	DIS- SOLVED OXYGEN (MG/L)	PH (UNITS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)
OCT., 1977							
13...	263,000	2.3	SURFACE	10.0	7.3	8.7	405
			10	10.0	7.3	8.7	405
			20	10.0	7.4	8.6	405
			30	10.0	7.2	8.5	405
			40	10.0	7.3	8.4	405
			60	10.0	7.2	8.6	405
			80	10.0	7.7	8.6	405
			100	10.0	7.3	8.4	405

PLATTE RIVER BASIN

06640500 PATHFINDER RESERVOIR NEAR ALCOVA, WY--Continued

SAMPLE SITE 1--Continued

QUALITATIVE AND ASSOCIATED QUANTITATIVE ANALYSES OF BIOLOGICAL DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

PHYTOPLANKTON ANALYSES

DATE	OCT 13, 77
TIME	0930
TOTAL CELLS/ML	9300
DIVERSITY: DIVISION	0.3
..CLASS	0.3
..ORDER	0.3
...FAMILY	0.4
...GENUS	0.4

ORGANISM	CELLS /ML	PER- CENT
CHLOROPHYTA (GREEN ALGAE)		
..CHLOROPHYCEAE		
...CHLOROCOCCALES		
....CHARACIACEAE		
....SCHROEDERIA	83	1
....UOCYSTACEAE		
....ANKISTRODESMUS	*	0
CHRYSOPHYTA		
..BACILLARIOPHYCEAE		
..CENTRALES		
...COSCINODISCACEAE		
....CYCLOTELLA	*	0
....STEPHANODISCUS	110	1
..PENNALES		
...FRAGILARIACEAE		
....SYNEDRA	*	0
...NAVICULACEAE		
....NAVICULA	*	0
...NITZSCHIA		
....NITZSCHIA	*	0
CRYPTOPHYTA (CRYPTOMONADS)		
..CRYPTOPHYCEAE		
...CRYPTOMONIDALES		
...CRYPTOCHRYSIDACEAE		
....CHROOMONAS	48	1
CYANOPHYTA (BLUE-GREEN ALGAE)		
..CYANOPHYCEAE		
...HORMOGONALES		
...NOSTOCACEAE		
....APHANIZOMENON	8900#	96
EUGLENOPHYTA (EUGLENOIDS)		
..EUGLENOPHYCEAE		
...EUGLENALES		
...EUGLENACEAE		
....TRACHELOMONAS	48	1

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

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

PLATTE RIVER BASIN

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06640500 PATHFINDER RESERVOIR NEAR ALCOVA, WY--Continued

SAMPLE SITE 2.--Lat 42°20'58", long 106°54'38", in NW¼SW¼SE¼ sec.32, T.28 N., R.84 W., about 9 mi (14 km) upstream from dam in the North Platte River arm of reservoir.

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

DATE	TIME	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)	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)
OCT 13...	1045	248	.34	.05	.08	.10	.10	.13

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, DIS- SOLVED (MG/L AS P)	PHYTO- PLANK- TON, TOTAL (CELLS PER ML)
OCT 13...	.30	.40	.45	2.0	.06	.03	2000000

DATE	RESER- VOIR STORAGE (AC-FT)	SECCHI DISC (FEET)	DEPTH (FT)	TEMP (°C)	DIS- SOLVED OXYGEN (MG/L)	PH (UNITS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)
OCT., 1977							
13...	263,000	1.3	SURFACE	8.5	8.2	8.5	395
			10	8.5	8.3	8.4	395
			20	8.5	8.1	8.4	395
			30	8.5	8.2	8.4	395
			38	8.5	8.0	8.3	395

PLATTE RIVER BASIN

06640500 PATHFINDER RESERVOIR NEAR ALCOVA, WY--Continued

SAMPLE SITE 2--Continued

QUALITATIVE AND ASSOCIATED QUANTITATIVE ANALYSES OF BIOLOGICAL DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

PHYTOPLANKTON ANALYSES

DATE	OCT 13,77
TIME	1045
TOTAL CELLS/ML	2000000
DIVERSITY: DIVISION	0.1
..CLASS	0.1
...ORDER	0.1
....FAMILY	0.1
.....GENUS	0.1
ORGANISM	CELLS PER- /ML CENT
CHLOROPHYTA (GREEN ALGAE)	
..CHLOROPHYCEAE	
...CHLOROCOCCALES	
....OOCYSTACEAE	
.....ANKISTRODESMUS	* 0
CHRYSOPHYTA	
..BACILLARIOPHYCEAE	
...CENTRALES	
....COSCINODISCEACEAE	
.....CYCLOTELLA	21000 1
....MELOSIRA	* 0
....STEPHANODISCUS	* 0
...PENNALES	
...ACHNANTHACEAE	
....ACHNANTHES	* 0
....COCCONEIS	* 0
....RHOICOSPHEA	* 0
...CYMBELLACEAE	
....AMPHORA	* 0
...DIATOMACEAE	
....DIATOMA	* 0
...FRAGILARIACEAE	
....ASTERIONELLA	* 0
....FRAGILARIA	* 0
....SYNEDRA	* 0
...GOMPHONEMACEAE	
....GOMPHONEMA	* 0
...NAVICULACEAE	
....NAVICULA	* 0
...NITZSCHACEAE	
....NITZSCHIA	* 0
CYANOPHYTA (BLUE-GREEN ALGAE)	
..CYANOPHYCEAE	
...HORMOGONALES	
...NOSTOCACEAE	
....APHANIZOMENON	2000000# 99

NOTE: # - DOMINANT ORGANISM; EQUAL TO OR GREATER THAN 15%
 * - OBSERVED ORGANISM, MAY NOT HAVE BEEN COUNTED; LESS THAN 1/2%

PLATTE RIVER BASIN

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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 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, 181,000 acre-ft (223 hm³) May 4, 5, July 11, 13-21, Aug. 17-21, 27-30, elevation, 5,498.80 ft (1,676.034 m); minimum daily, 141,000 acre-ft (174 hm³) Jan. 5, elevation, 5,481.26 ft (1,670.688 m).

Capacity table (elevation, in feet,
and contents, in acre-feet)

5,487	154,000	5,495	172,000
5,490	160,000	5,500	184,000

CONTENTS, IN ACRE-FEET, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
INSTANTANEOUS OBSERVATIONS AT 2400

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	178000	156000	155000	145000	157000	155000	157000	179000	179000	179000	177000	180000
2	177000	156000	155000	144000	157000	155000	157000	180000	179000	179000	178000	180000
3	176000	156000	154000	143000	156000	155000	159000	180000	179000	178000	178000	179000
4	175000	156000	155000	142000	156000	155000	160000	181000	179000	179000	178000	179000
5	173000	157000	155000	141000	155000	155000	161000	181000	179000	179000	178000	179000
6	173000	157000	155000	142000	155000	155000	162000	179000	179000	179000	178000	179000
7	172000	157000	155000	143000	155000	155000	163000	179000	179000	180000	178000	179000
8	171000	157000	156000	144000	155000	155000	164000	178000	179000	180000	179000	179000
9	170000	157000	156000	145000	155000	155000	165000	178000	179000	180000	179000	179000
10	169000	157000	156000	146000	155000	155000	166000	178000	180000	180000	179000	179000
11	168000	157000	155000	147000	155000	155000	166000	179000	180000	181000	179000	179000
12	167000	156000	156000	149000	156000	155000	168000	179000	180000	180000	179000	178000
13	166000	156000	155000	150000	156000	155000	169000	179000	180000	181000	179000	178000
14	165000	155000	155000	150000	156000	155000	170000	179000	180000	181000	179000	178000
15	164000	154000	155000	151000	155000	156000	171000	179000	180000	181000	179000	178000
16	163000	154000	155000	152000	155000	156000	172000	178000	179000	181000	180000	179000
17	162000	154000	155000	152000	155000	155000	173000	179000	179000	181000	181000	180000
18	161000	154000	155000	153000	156000	155000	174000	179000	179000	181000	181000	179000
19	160000	155000	155000	154000	156000	155000	175000	179000	179000	181000	181000	179000
20	159000	155000	155000	154000	156000	156000	176000	179000	179000	181000	181000	179000
21	158000	156000	155000	155000	155000	155000	177000	179000	180000	181000	181000	178000
22	158000	156000	155000	156000	155000	156000	177000	179000	180000	180000	180000	179000
23	157000	155000	154000	157000	156000	156000	178000	179000	180000	180000	180000	179000
24	156000	154000	152000	157000	155000	156000	179000	179000	180000	179000	180000	179000
25	155000	154000	151000	157000	155000	156000	179000	179000	180000	179000	180000	179000
26	154000	154000	150000	157000	155000	155000	179000	179000	180000	179000	180000	179000
27	154000	154000	149000	158000	155000	156000	179000	179000	180000	179000	181000	179000
28	154000	155000	148000	158000	155000	156000	179000	179000	179000	178000	181000	179000
29	154000	155000	148000	157000	---	156000	179000	179000	179000	178000	181000	178000
30	155000	155000	147000	157000	---	156000	179000	179000	179000	178000	181000	178000
31	155000	---	146000	158000	---	156000	---	179000	---	178000	180000	---
MAX	178000	157000	156000	158000	157000	156000	179000	181000	180000	181000	181000	180000
MIN	154000	154000	146000	141000	155000	155000	157000	178000	179000	178000	177000	178000
(†)	5,487.54	5,487.64	5,483.43	5,488.73	5,487.41	5,488.17	5,497.91	5,497.85	5,497.95	5,497.26	5,498.32	5,497.60
(‡)	-24,000	0	-9,000	+12,000	-3,000	+1,000	+23,000	0	0	-1,000	+2,000	-2,000

CAL YR 1977 MAX 181000 MIN 146000 †-10,000

WTP YR 1978 MAX 181000 MIN 141000 †-1,000

(†) Elevation, in feet, at end of month.

(‡) Change in contents, in acre-feet, at end of month.

PLATTE RIVER BASIN

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.--Ten 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, 3,620 ft³/s (103 m³/s) Aug. 22, gage height, 4.54 ft (1.384 m); minimum daily, 390 ft³/s (11.0 m³/s) May 18, 26.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1150	456	834	832	804	817	583	1010	401	1800	1750	1960
2	1150	722	828	831	803	824	580	1010	400	1810	1760	1950
3	1130	796	827	820	796	816	580	1010	396	1730	1740	1980
4	1090	791	831	834	798	768	584	1010	404	1670	1760	1970
5	1000	790	810	830	797	625	584	1010	396	1670	1750	1940
6	653	807	618	812	801	743	582	1020	395	1700	1760	1950
7	807	801	566	809	802	825	584	1010	401	1680	1760	1940
8	916	824	809	806	800	827	583	1020	400	1680	1770	1930
9	923	805	801	804	802	822	584	771	392	1670	1770	1930
10	929	806	791	801	802	825	599	519	397	1670	1730	1910
11	939	802	816	797	800	826	607	516	404	1660	1750	1940
12	931	803	805	806	806	828	608	420	401	1670	1700	1940
13	948	804	803	813	801	830	610	417	395	1670	1710	1600
14	952	816	807	807	804	815	605	418	398	1700	1710	1410
15	954	819	802	807	810	798	605	420	401	1750	1700	1420
16	953	815	800	808	807	801	608	412	719	1770	2300	1410
17	967	808	798	804	805	605	611	395	991	1790	3570	1420
18	964	817	790	800	809	601	604	390	983	1870	3580	1410
19	980	804	803	796	806	599	617	398	986	1880	3580	1420
20	981	815	813	806	810	604	634	396	988	1960	3530	1420
21	988	809	822	794	803	605	640	395	988	1960	3560	1420
22	993	815	822	801	799	595	627	391	981	2070	3610	1400
23	989	838	814	809	809	582	610	395	985	2060	3600	1410
24	711	825	819	807	810	586	585	394	992	2050	3530	1410
25	580	818	821	802	815	587	761	398	992	2050	2940	1420
26	777	817	810	803	813	585	1020	390	1170	2050	2540	1420
27	901	824	810	805	818	583	1010	394	1390	1960	2500	1430
28	889	827	815	803	816	585	1030	392	1380	1950	2490	1430
29	903	822	812	801	---	588	1000	391	1520	1970	2240	1420
30	912	822	820	798	---	583	1000	392	1800	1920	1990	1420
31	593	---	829	805	---	586	---	395	---	1750	1980	---
TOTAL	28553	23918	24746	25051	22546	21664	20235	17899	22846	56590	73660	49030
MEAN	921	797	798	808	805	699	675	577	762	1825	2376	1634
MAX	1150	838	834	834	818	830	1030	1020	1800	2070	3610	1980
MIN	580	456	566	794	796	582	580	390	392	1660	1700	1400
AC-FT	56630	47440	49080	49690	44720	42970	40140	35500	45320	112200	146100	97250
CAL YR 1977	TOTAL	451021	MEAN	1236	MAX	3680	MIN	447	AC-FT	894600		
WTR YR 1978	TOTAL	386738	MEAN	1060	MAX	3610	MIN	390	AC-FT	767100		

06642000 NORTH PLATTE RIVER AT ALCOVA, WY--Continued

WATER-QUALITY RECORDS

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

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

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	TUR- BID- ITY (JTU)	OXYGEN, DIS- SOLVED (MG/L)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	HARD- NESS (MG/L AS CAC03)
OCT									
06...	0800	641	--	--	11.0	15	9.2	K8	200
NOV									
16...	0845	815	--	--	6.0	4	10.0	K7	200
DEC									
15...	0845	815	--	--	4.0	8	11.4	K1	210
JAN									
07...	0900	815	--	--	1.5	2	11.8	K2	210
FEB									
08...	0800	792	--	--	2.0	3	11.8	<1	220
MAR									
09...	0900	815	--	--	2.5	6	12.2	K1	230
APR									
05...	0840	588	--	--	6.0	3	13.0	<1	240
MAY									
17...	0910	396	--	--	7.0	30	11.2	37	220
JUN									
14...	0900	402	630	8.7	12.0	4	11.0	K13	210
JUL									
26...	0830	2070	610	8.1	14.0	7	9.2	K4	190
AUG									
23...	0730	3620	600	8.1	15.0	6	8.4	K3	200
SEP									
20...	0950	1410	550	8.4	15.0	10	9.0	K1	210

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

DATE	HARD- NESS, NONCAR- BONATE (MG/L 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)	BICAR- BONATE (MG/L AS HCO3)	CAR- BONATE (MG/L AS CO3)	ALKA- LINITY (MG/L AS CAC03)
OCT									
06...	69	51	17	44	1.4	3.4	160	0	130
NOV									
16...	69	51	18	40	1.2	3.3	160	0	130
DEC									
15...	79	60	15	42	1.3	3.5	160	0	130
JAN									
07...	71	57	17	44	1.3	3.3	170	0	140
FEB									
08...	81	59	19	33	1.0	2.4	170	0	140
MAR									
09...	92	59	19	43	1.2	3.5	160	4	140
APR									
05...	100	66	19	41	1.1	3.3	170	0	140
MAY									
17...	89	58	18	53	1.6	3.5	160	0	130
JUN									
14...	72	58	17	42	1.2	3.6	150	9	140
JUL									
26...	59	51	17	45	1.4	3.3	160	0	130
AUG									
23...	69	52	17	46	1.4	3.4	160	0	130
SEP									
20...	79	55	17	45	1.4	3.8	160	0	130

PLATTE RIVER BASIN

06642000 NORTH PLATTE RIVER AT ALCOVA, WY--Continued

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

DATE	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLOR- IDE, DIS- SOLVED (MG/L AS CL)	FLUOR- IDE, 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, NITRATE DIS- SOLVED (MG/L AS N)	PHOS- PHORUS, TOTAL (MG/L AS P)
OCT									
06...	130	13	.4	11	354	.48	613	.14	.00
NOV									
16...	130	11	.5	11	350	.48	770	.20	.00
DEC									
15...	140	12	.3	14	370	.50	814	.23	.03
JAN									
07...	140	13	.5	11	369	.50	812	.14	.01
FEB									
08...	120	17	.6	10	340	.46	727	.14	.03
MAR									
09...	150	33	.5	12	398	.54	876	.18	.29
APR									
05...	160	12	.5	7.5	388	.53	616	.16	.06
MAY									
17...	180	12	.6	6.4	410	.56	438	.25	.03
JUN									
14...	140	11	.5	9.1	372	.51	404	.11	.01
JUL									
26...	150	10	.5	5.2	363	.49	2030	.18	.04
AUG									
23...	140	11	.5	8.5	357	.49	3490	.20	.04
SEP									
20...	160	13	.3	9.1	384	.52	1460	.50	.05

06643000 BATES CREEK NEAR ALCOVA, WY

LOCATION.--Lat 42°40'34", long 106°36'09", in SE4SE4 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 1977 TO SEPTEMBER 1978

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	TUR- BID- ITY (JTU)	OXYGEN, DIS- SOLVED (MG/L)
OCT							
06...	0700	4.5	1500	8.0	6.5	20	10.0
NOV							
16...	0800	3.2	1450	8.0	2.0	6	11.2
DEC							
15...	0745	8.0	1280	8.1	3.0	8	11.7
JAN							
07...	0815	12	1230	8.0	.0	1	10.6
FEB							
08...	0730	4.5	1180	8.0	1.5	4	12.4
MAR							
09...	0800	E15	1000	8.0	.5	900	12.4
APR							
05...	0800	8.0	770	7.9	6.0	55	11.2
MAY							
17...	0830	E250	970	7.7	7.0	5000	10.1
JUN							
14...	0800	44	1300	8.4	13.0	15	10.2
JUL							
26...	0730	6.1	1500	8.0	15.0	90	8.6
AUG							
23...	0700	5.0	1600	7.8	12.0	10	9.1
SEP							
20...	0920	8.6	1500	8.0	6.0	10	10.2

E-Estimate.

06643510 NORTH PLATTE RIVER ABOVE POISON SPIDER CREEK, NEAR GOOSE EGG, WY

LOCATION.--Lat 42°46'18", long 106°31'48", in NW¼SW¼NE¼ sec.3, T.32 N., R.81 W., Natrona County, Hydrologic Unit 10180007, at bridge on county road, 0.3 mi (0.5 km) upstream from Poison Spider Creek, and 2.4 mi (3.9 km) west of Goose Egg.

PERIOD OF RECORD.--November 1977 to September 1978.

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

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	TUR- BID- ITY (JTU)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN DEMAND, CHEM- ICAL (HIGH LEVEL) (MG/L)	COLI- FORM, TOTAL, IMMED. (COLS. PER 100 ML)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	HARD- NESS (MG/L AS CACO3)	HARD- NESS, NONCAR- BONATE (MG/L AS CACO3)
NOV												
09...	1150	875	580	8.7	3.0	10	11.2	18	120	13	--	--
29...	1130	903	590	8.9	2.5	8	10.9	38	43	2	--	--
DEC												
06...	1245	854	650	8.9	1.0	5	11.6	39	7	<1	240	89
20...	1100	919	520	8.9	.0	5	10.8	24	26	1	--	--
JAN												
04...	1130	850	640	8.7	.0	7	11.0	29	32	5	--	--
17...	1205	850	600	8.4	.0	5	11.2	25	37	<1	--	--
31...	1110	850	625	7.9	.0	6	11.4	2	32	<1	--	--
FEB												
14...	1100	825	625	8.5	.0	4	11.8	25	23	2	--	--
MAR												
01...	1100	840	575	8.9	7.0	20	12.4	0	70	19	--	--
14...	1050	890	605	8.9	3.5	10	9.6	21	44	14	260	110
27...	1055	770	650	8.9	10.0	15	12.4	18	43	17	--	--
APR												
11...	1050	700	625	9.1	9.0	8	8.2	12	34	9	--	--
27...	1045	1050	600	8.8	10.5	30	9.2	23	44	58	--	--
MAY												
09...	1120	1400	740	8.5	8.0	900	9.8	80	K390	K430	--	--
24...	1120	800	600	8.5	15.0	160	7.6	46	K110	K120	--	--
JUN												
06...	1040	440	725	8.7	15.0	140	8.2	31	K240	K130	--	--
22...	1100	1030	650	8.9	16.0	45	7.7	17	53	52	250	110
JUL												
06...	1100	1820	580	8.7	14.0	35	9.1	28	--	--	--	--
20...	1010	1810	550	8.5	14.0	35	5.5	22	43	23	--	--
AUG												
02...	0950	2250	600	8.8	15.5	30	7.6	450	100	18	--	--
15...	1300	1880	540	7.7	16.0	20	10.0	19	12	7	--	--
29...	1000	2950	600	8.5	16.5	20	7.6	22	38	11	--	--
SEP												
14...	1040	1450	640	8.5	15.0	10	9.4	14	8	7	220	92

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)	BICAR- BONATE (MG/L AS HCO3)	CAR- BONATE (MG/L AS CO3)	ALKA- LINITY (MG/L AS CACO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)
NOV												
09...	--	--	--	--	--	--	--	--	--	--	--	390
29...	--	--	--	--	--	--	--	--	--	--	--	430
DEC												
06...	62	20	41	1.2	3.8	170	5	150	160	13	9.6	397
20...	--	--	--	--	--	--	--	--	--	--	--	397
JAN												
04...	--	--	--	--	--	--	--	--	--	--	--	402
17...	--	--	--	--	--	--	--	--	--	--	--	398
31...	--	--	--	--	--	--	--	--	--	--	--	80
FEB												
14...	--	--	--	--	--	--	--	--	--	--	--	414
MAR												
01...	--	--	--	--	--	--	--	--	--	--	--	508
14...	66	22	47	1.3	3.8	170	6	150	160	12	9.8	396
27...	--	--	--	--	--	--	--	--	--	--	--	430
APR												
11...	--	--	--	--	--	--	--	--	--	--	--	406
27...	--	--	--	--	--	--	--	--	--	--	--	376
MAY												
09...	--	--	--	--	--	--	--	--	--	--	--	482
24...	--	--	--	--	--	--	--	--	--	--	--	402
JUN												
06...	--	--	--	--	--	--	--	--	--	--	--	483
22...	66	20	42	1.2	3.4	170	0	140	160	15	7.8	401
JUL												
06...	--	--	--	--	--	--	--	--	--	--	--	380
20...	--	--	--	--	--	--	--	--	--	--	--	374
AUG												
02...	--	--	--	--	--	--	--	--	--	--	--	386
15...	--	--	--	--	--	--	--	--	--	--	--	387
29...	--	--	--	--	--	--	--	--	--	--	--	388
SEP												
14...	59	18	37	1.1	3.5	150	4	130	160	12	10	402

06643510 NORTH PLATTE RIVER ABOVE POISON SPIDER CREEK, NEAR GOOSE EGG, WY--Continued

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

DATE	SOLIDS, SUM OF CONSTITUENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)	SOLIDS, DIS- SOLVED (TONS PER DAY)	SOLIDS, SUSP. TOTAL, RESIDUE AT 110 DEG. C (MG/L)	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)	CARBON, ORGANIC TOTAL (MG/L AS C)
NOV												
09...	--	.53	921	16	.17	.00	.36	.36	.53	2.3	.02	4.1
29...	--	.58	1050	5	.12	.06	.25	.31	.43	1.9	.01	4.3
DEC												
06...	398	.54	918	11	.15	.00	.25	.25	.40	1.8	.00	4.3
20...	--	.54	985	11	.18	.00	.38	.38	.56	2.5	.00	5.4
JAN												
04...	--	.55	923	29	.27	.01	.31	.32	.59	2.6	.03	--
17...	--	.54	913	21	.18	.04	.38	.42	.60	2.7	.04	4.4
31...	--	.11	184	23	.22	.02	.34	.36	.58	2.6	.04	6.9
FEB												
14...	--	.56	922	23	.23	.02	.23	.25	.48	2.1	.04	5.8
MAR												
01...	--	.69	1150	60	.44	.17	.44	.61	1.1	4.6	.11	12
14...	410	.56	985	45	.17	.01	.29	.30	.47	2.1	.08	--
27...	--	.58	894	51	.13	.03	.32	.35	.48	2.1	.05	5.5
APR												
11...	--	.55	767	22	.06	.01	.66	.67	.73	3.2	.03	7.2
27...	--	.51	1070	59	.07	.05	.50	.55	.62	2.7	.08	7.2
MAY												
09...	--	.66	1820	1600	.25	.03	2.3	2.3	2.6	11	.93	15
24...	--	.55	868	330	.20	.16	.66	.82	1.0	4.5	.18	8.5
JUN												
06...	--	.66	574	304	.33	.19	.66	.85	1.2	5.2	.22	8.0
22...	398	.54	1110	150	.09	.01	.34	.35	.44	1.9	.09	5.1
JUL												
06...	--	.52	1870	116	.08	.03	.45	.48	.56	2.5	.14	5.9
20...	--	.51	1830	120	.03	.00	.62	.62	.65	2.9	.09	5.8
AUG												
02...	--	.53	2350	78	.15	.00	1.2	1.2	1.4	6.0	.08	4.9
15...	--	.53	1960	27	.20	.00	.61	.61	.81	3.6	.01	5.6
29...	--	.53	3090	56	.17	.01	.39	.40	.57	2.5	.07	5.4
SEP												
14...	377	.51	1480	24	.14	.01	.52	.53	.67	3.0	.03	--

PLATTE RIVER BASIN

487

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 Bureau of Reclamation.

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

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	TUR- BID- ITY (JTU)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN DEMAND, CHEM- ICAL (HIGH LEVEL) (MG/L)	COLI- FORM, TOTAL, IMMED. (COLS. PER 100 ML)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)
OCT											
05...	1255	1060	625	8.6	11.0	15	9.1	20	--	15	414
18...	1020	866	625	8.7	10.0	10	8.1	21	64	12	414
NOV											
29...	1345	903	625	8.9	2.0	8	11.0	--	--	--	--
DEC											
20...	1445	919	625	9.0	.0	6	12.2	--	--	--	--
JAN											
31...	1430	850	660	8.4	.0	6	9.6	--	--	--	--
FEB											
14...	1420	825	650	8.8	.0	3	11.1	--	--	--	--
MAR											
14...	1450	890	675	8.9	5.0	15	9.7	--	--	--	--
MAY											
10...	1040	1660	800	8.7	10.5	250	9.2	--	--	--	--
25...	1555	700	800	8.6	17.0	120	8.2	--	--	--	--
JUN											
06...	1430	440	875	8.6	19.0	180	8.2	--	--	--	--
13...	1105	440	800	8.9	18.0	25	9.4	--	--	--	--
22...	1500	1030	675	8.9	20.0	45	8.6	--	--	--	--
28...	1210	1420	625	8.8	17.0	100	7.5	--	--	--	--
JUL											
06...	1515	1820	650	8.9	16.0	40	8.3	--	--	--	--
13...	1340	1720	625	8.9	18.0	35	8.3	--	--	--	--
20...	1400	1810	650	8.1	17.0	25	7.7	--	--	--	--
25...	1325	2390	650	8.9	18.0	45	7.5	--	--	--	--
AUG											
02...	1440	2250	650	8.9	15.0	30	7.8	--	--	--	--
08...	1105	1930	650	8.7	18.5	20	7.9	--	--	--	--
16...	1050	1860	675	8.5	16.0	15	8.3	--	--	--	--
23...	1530	4070	650	8.5	19.0	25	7.3	--	--	--	--
29...	1405	2950	625	8.7	18.0	15	7.2	--	--	--	--
SEP											
05...	1125	2000	580	8.9	19.0	10	8.0	--	--	--	--
14...	1420	1450	690	9.0	16.5	8	9.0	--	--	--	--
19...	1020	1520	650	8.9	10.5	20	8.3	--	--	--	--

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

[illegible]

PLATTE RIVER BASIN

489

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 1977 TO SEPTEMBER 1978

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	TUR- BID- ITY (JTU)	OXYGEN, DIS- SOLVED (MG/L)
OCT							
18...	1445	8.0	7000	8.7	15.0	1	12.4
NOV							
29...	1410	14	>8000	8.5	1.5	10	10.8
DEC							
20...	1425	8.5	6500	8.5	.0	9	10.4
JAN							
31...	1410	10	6500	7.8	.0	8	8.7
FEB							
14...	1400	9.1	8000	8.2	.0	3	8.2
MAR							
14...	1430	18	6000	8.4	7.0	10	7.7
MAY							
10...	1005	E70	>8000	8.5	11.0	40	9.0
25...	1420	E117	2200	8.4	19.5	75	7.2
31...	1150	E67	4000	8.6	13.5	45	8.3
JUN							
06...	1405	46	6000	8.6	23.5	20	6.7
13...	1030	24	6000	8.5	19.0	15	7.7
22...	1440	20	6000	8.7	27.0	8	6.8
28...	1145	19	6000	8.6	24.0	6	8.2
JUL							
06...	1500	13	5500	8.9	25.0	4	9.2
20...	1340	11	5000	8.7	27.0	2	11.0
25...	1320	27	5500	8.7	27.0	20	7.5
AUG							
02...	1420	15	4500	8.7	16.0	55	8.6
08...	1020	12	4500	8.7	20.0	15	9.1
16...	1020	14	4250	8.4	15.0	15	9.2
23...	1500	11	4500	7.5	25.0	4	9.4
29...	1345	13	5750	8.8	23.0	10	10.8
SEP							
05...	1105	7.4	5000	8.7	20.0	5	10.2
14...	1410	9.5	5500	8.7	20.0	10	9.4
19...	1000	20	4500	8.6	6.5	20	9.9

E-Estimate.

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 1977 TO SEPTEMBER 1978

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	TUR- BID- ITY (JTU)	OXYGEN, DIS- SOLVED (MG/L)
OCT							
18...	1350	866	660	8.8	12.0	10	9.1
NOV							
29...	1500	903	560	9.0	2.5	9	10.7
DEC							
20...	1330	919	700	8.7	.0	7	11.6
JAN							
31...	1320	850	700	8.3	.0	2	10.1
FEB							
14...	1300	825	730	8.8	.0	3	11.6
MAR							
14...	1315	890	890	8.8	3.5	20	9.2
MAY							
10...	0940	1660	1000	8.3	9.0	300	9.1
25...	1305	700	1000	8.4	16.0	65	7.8
31...	1100	600	1030	8.6	12.0	75	8.2
JUN							
06...	1310	440	1300	8.6	17.5	200	7.6
13...	0940	440	1200	7.9	16.0	30	7.6
22...	1340	1030	750	8.7	19.0	50	8.0
28...	1030	1420	675	8.6	16.0	120	7.7
JUL							
06...	1355	1820	700	8.9	16.0	45	7.9
13...	1305	1720	650	8.9	17.5	35	7.3
20...	1230	1810	675	8.6	17.0	30	7.7
25...	1030	2390	700	8.7	17.0	50	7.8
AUG							
02...	1300	2250	660	8.8	16.0	45	7.2
08...	1000	1930	675	8.6	17.0	20	7.7
16...	0840	1860	675	8.3	15.0	15	8.1
23...	1400	4070	700	8.5	18.5	20	7.0
29...	1250	2950	650	8.6	18.0	20	8.0
SEP							
05...	1010	2000	650	8.7	18.5	10	8.7
14...	1320	1450	725	8.1	15.5	9	8.6
19...	0910	1520	700	8.9	9.0	20	8.3

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					
31...	1350	6.5	811	21	46
DEC					
22...	1345	.0	840	26	59
MAR					
01...	1430	3.0	840	86	195
27...	1400	11.0	770	50	104
JUN					
15...	0900	16.0	420	90	102
JUL					
25...	1000	17.0	2390	700	4520
AUG					
23...	1300	18.5	4070	272	2990
SEP					
19...	1330	10.5	1520	92	378

PLATTE RIVER BASIN

491

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 Bureau of Reclamation.

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

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	TUR- BID- ITY (JTU)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN DEMAND, CHEM- ICAL (LOW LEVEL) (MG/L)	OXYGEN DEMAND, CHEM- ICAL (HIGH LEVEL) (MG/L)	COLI- FORM, TOTAL, IMMED. PER 100 ML
OCT										
05...	1010	1070	680	8.8	11.0	15	8.2	--	22	--
18...	0830	866	650	8.6	10.0	15	7.8	--	21	--
NOV										
09...	0850	875	675	8.5	1.0	10	11.4	--	19	4000
29...	0930	903	560	8.7	2.0	8	10.0	--	46	3700
DEC										
06...	1000	854	750	8.6	.0	9	11.2	--	51	3300
20...	0830	919	750	8.6	.5	7	9.3	--	27	2900
JAN										
04...	0905	850	750	8.7	.0	8	10.8	--	32	6000
17...	0915	850	710	8.4	.0	4	9.0	--	28	1700
31...	0900	850	730	8.1	.0	3	8.9	--	17	1200
FEB										
14...	0900	825	700	8.9	.0	3	11.4	--	24	13000
MAR										
01...	0845	840	725	8.7	1.0	4	11.6	--	5	19000
14...	0830	890	790	8.6	3.5	20	9.1	--	10	9700
27...	0830	770	875	8.9	9.0	25	10.6	--	17	4600
APR										
11...	0820	700	750	8.9	7.0	9	9.7	16	11	7200
27...	0820	1050	650	8.6	11.5	65	8.5	--	34	1700
MAY										
09...	0835	1400	1040	8.5	8.0	270	9.4	--	51	940
24...	0845	800	750	8.5	14.5	190	6.8	--	96	1200
JUN										
06...	0845	440	1600	8.5	15.5	460	7.2	--	51	1700
22...	0815	1030	760	8.6	18.0	70	7.5	--	18	1300
JUL										
06...	0830	1820	660	8.6	14.5	45	8.0	--	45	--
20...	0810	1810	625	8.4	17.0	45	7.3	--	26	3100
AUG										
02...	0805	2250	650	8.6	16.5	35	--	--	49	1100
15...	0900	1880	700	8.1	13.5	40	8.9	--	18	710
29...	0815	2950	650	8.4	17.0	20	7.4	--	19	390
SEP										
14...	0825	1450	660	8.6	14.0	8	8.2	--	31	240

PLATTE RIVER BASIN

06645000 NORTH PLATTE RIVER BELOW CASPER, WY--Continued
 WATER-QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	COLI-FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	HARD- NESS (MG/L AS CACO3)	HARD- NESS, NONCAR- BONATE (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)	BICAR- BONATE (MG/L AS HCO3)	CAR- BONATE (MG/L AS CO3)
OCT										
05...	77	240	94	62	22	56	1.6	4.0	160	9
18...	--	--	--	--	--	--	--	--	--	--
NOV										
09...	700	240	100	62	22	58	1.6	3.8	140	13
29...	370	--	--	--	--	--	--	--	--	--
DEC										
06...	470	280	120	67	28	64	1.7	3.7	160	15
20...	510	--	--	--	--	--	--	--	--	--
JAN										
04...	2000	280	120	73	23	63	1.6	3.8	180	6
17...	510	--	--	--	--	--	--	--	--	--
31...	460	--	--	--	--	--	--	--	--	--
FEB										
14...	3800	280	120	68	28	65	1.7	3.7	200	0
MAR										
01...	8100	--	--	--	--	--	--	--	--	--
14...	3600	270	110	66	26	80	2.1	3.2	190	0
27...	2100	--	--	--	--	--	--	--	--	--
APR										
11...	2200	--	--	--	--	--	--	--	--	--
27...	340	240	92	56	25	56	1.6	3.2	180	0
MAY										
09...	430	--	--	--	--	--	--	--	--	--
24...	170	270	180	69	24	110	2.9	4.6	110	0
JUN										
06...	970	--	--	--	--	--	--	--	--	--
22...	320	250	100	61	24	72	2.0	3.1	180	0
JUL										
06...	--	--	--	--	--	--	--	--	--	--
20...	320	220	81	57	19	49	1.4	5.6	170	0
AUG										
02...	170	--	--	--	--	--	--	--	--	--
15...	140	230	91	56	22	53	1.5	3.7	170	0
29...	67	--	--	--	--	--	--	--	--	--
SEP										
14...	56	240	110	64	20	55	1.5	3.5	160	0

DATE	ALKA- LINITY (MG/L AS CACO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SiO2)	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)	SOLIDS, SUSP. TOTAL, RESIDUE AT 110 DEG. C (MG/L)
OCT										
05...	150	180	16	.4	8.8	447	447	.61	1290	32
18...	--	--	--	--	--	459	--	.62	1070	22
NOV										
09...	140	200	17	.5	9.0	456	458	.62	1080	23
29...	--	--	--	--	--	551	--	.75	1340	14
DEC										
06...	160	220	17	.5	9.8	506	520	.71	1200	13
20...	--	--	--	--	--	513	--	.70	1270	14
JAN										
04...	160	220	23	.5	12	502	515	.70	1180	51
17...	--	--	--	--	--	484	--	.66	1110	14
31...	--	--	--	--	--	458	--	.62	1050	18
FEB										
14...	160	220	16	.6	13	495	512	.70	1140	26
MAR										
01...	--	--	--	--	--	401	--	.55	909	18
14...	160	260	16	.5	13	558	566	.77	1360	50
27...	--	--	--	--	--	602	--	.82	1250	54
APR										
11...	--	--	--	--	--	528	--	.72	998	27
27...	140	190	10	.2	.4	435	430	.58	1220	117
MAY										
09...	--	--	--	--	--	827	--	1.12	3130	510
24...	90	340	50	.6	6.1	651	670	.91	1450	468
JUN										
06...	--	--	--	--	--	889	--	1.21	1060	11900
22...	150	220	15	.6	13	523	490	.67	1360	172
JUL										
06...	--	--	--	--	--	440	--	.60	2160	150
20...	140	190	9.3	.6	3.6	421	420	.57	2050	190
AUG										
02...	--	--	--	--	--	435	--	.59	2640	89
15...	140	190	8.9	.5	7.1	446	427	.58	2170	32
29...	--	--	--	--	--	422	--	.57	3360	66
SEP										
14...	140	200	15	.4	8.5	449	446	.61	1750	29

PLATTE RIVER BASIN

493

06645000 NORTH PLATTE RIVER BELOW CASPER, WY--Continued

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

DATE	NITRO- GEN, NITRATE DIS- SOLVED (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)	CARBON, ORGANIC TOTAL (MG/L AS C)
OCT									
05...	1.6	.29	.00	.41	.41	.70	3.1	.12	5.0
18...	--	.26	.05	.35	.40	.66	2.9	.07	5.3
NOV									
09...	.00	.34	.01	.73	.74	1.1	4.8	.06	4.2
29...	--	.62	.08	.37	.45	1.1	4.7	.04	5.3
DEC									
06...	.47	.45	.03	.39	.42	.87	3.9	.00	5.0
20...	--	.18	.00	.49	.49	.67	3.0	.04	4.7
JAN									
04...	1.7	.48	.20	.40	.60	1.1	4.8	.15	--
17...	--	.44	.16	.50	.66	1.1	4.9	.09	4.6
31...	--	.35	.10	.22	.32	.67	3.0	.07	5.8
FEB									
14...	.47	.52	.14	.25	.39	.91	4.0	.10	5.3
MAR									
01...	--	.12	.02	.41	.43	.55	2.4	.01	--
14...	1.8	.65	.08	.38	.46	1.1	4.9	.14	6.3
27...	--	.66	.14	.42	.56	1.2	5.4	.10	6.5
APR									
11...	--	.34	.12	.47	.59	.93	4.1	.10	6.5
27...	.07	.24	.12	.79	.91	1.2	5.1	.20	11
MAY									
09...	--	2.4	.11	1.8	1.9	4.3	19	.37	15
24...	2.0	.63	.26	1.0	1.3	1.9	8.5	.27	9.9
JUN									
06...	--	1.3	.01	1.6	1.6	2.9	13	.63	15
22...	.36	.37	.05	1.3	1.3	1.7	7.4	.16	5.7
JUL									
06...	--	.25	.04	.41	.45	.70	3.1	.13	7.2
20...	.16	.02	.00	.66	.66	.68	3.0	.13	6.7
AUG									
02...	--	.31	.00	.53	.53	.84	3.7	.14	6.2
15...	.43	.29	.02	.57	.59	.88	3.9	.06	5.5
29...	--	--	--	--	--	--	--	.07	6.3
SEP									
14...	.20	.25	.05	.54	.59	.84	3.7	.05	5.9

PLATTE RIVER BASIN

06645150 SMITH CREEK ABOVE OTTER CREEK, NEAR CASPER, WY

LOCATION.--Lat 42°39'00", long 106°10'44", in SW¼SE¼SW¼ sec.15, T.31 N., R.78 W., Natrona County, Hydrologic Unit 10180007, on right bank 1.2 mi (1.9 km) upstream from Otter Creek and 16 mi (26 km) southeast of Casper.

DRAINAGE AREA.--9.91 mi² (25.7 km²).

PERIOD OF RECORD.--October 1974 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 6,550 ft (1,996 m), from topographic map. Prior to Oct. 1, 1976, at site 200 ft (61 m) downstream at datum 7.22 ft (2.201 m) lower.

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

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 41 ft³/s (1.16 m³/s) May 20, 1978, gage height, 1.98 ft (0.604 m); maximum gage height, 4.03 ft (1.228 m) May 7, 1975 (backwater from snow), site and datum then in use; minimum daily discharge, 0.35 ft³/s (0.010 m³/s) Mar. 3, 1977.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 41 ft³/s (1.16 m³/s) May 20, gage height, 1.98 ft (0.604 m); minimum daily, 1.4 ft³/s (0.040 m³/s) Feb. 2, 20.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.7	1.8	1.7	1.5	1.6	1.5	2.1	11	7.0	3.3	2.6	2.1
2	1.7	1.8	1.8	1.5	1.4	1.5	2.0	8.6	6.8	3.2	2.5	2.0
3	1.8	1.8	1.9	1.6	1.7	1.5	1.8	8.4	8.2	3.0	2.5	2.0
4	1.8	1.8	1.8	1.7	1.7	1.7	1.6	8.2	8.4	3.0	2.5	2.0
5	1.8	1.8	1.7	1.7	1.7	1.8	1.6	7.6	7.0	3.0	2.4	2.0
6	1.8	1.8	1.6	1.7	1.7	1.8	1.6	6.5	6.5	3.2	2.4	1.9
7	1.8	1.8	1.8	1.5	1.6	1.7	1.6	6.7	6.3	3.4	2.4	2.0
8	1.8	1.8	1.8	1.5	1.6	1.8	1.7	6.3	6.0	3.2	2.3	2.0
9	1.8	1.7	1.8	1.5	1.6	1.8	1.8	7.0	5.8	3.2	2.3	2.0
10	1.8	2.0	1.8	1.6	1.7	1.8	1.8	15	5.3	3.3	2.2	2.0
11	1.8	1.8	1.8	1.6	1.5	1.8	1.8	16	5.1	3.0	2.2	2.1
12	1.8	1.9	1.8	1.5	1.5	1.8	1.8	14	5.0	3.0	2.2	2.1
13	1.8	1.8	1.8	1.5	1.5	1.8	1.7	12	5.0	2.8	2.2	2.2
14	1.8	1.8	1.9	1.5	1.6	1.8	1.8	10	4.5	2.7	2.4	2.1
15	1.8	1.9	1.9	1.6	1.5	1.8	1.8	9.0	4.2	2.7	2.7	2.1
16	1.8	1.8	1.7	1.6	1.6	2.1	1.8	9.0	4.2	2.7	2.3	2.1
17	1.8	1.7	1.8	1.6	1.5	2.0	1.8	16	4.4	2.7	2.3	2.1
18	1.8	1.7	1.8	1.5	1.5	2.2	1.8	13	4.2	2.6	2.9	2.2
19	1.8	1.6	1.8	1.5	1.5	1.9	1.8	14	4.1	2.6	2.5	2.2
20	1.8	1.5	1.7	1.5	1.4	1.8	1.7	22	4.1	2.6	2.3	2.1
21	1.9	1.6	1.8	1.5	1.8	1.9	1.7	19	4.2	3.7	2.3	2.1
22	1.8	1.8	1.8	1.6	1.8	1.7	1.8	14	3.9	2.9	2.4	2.0
23	1.8	1.9	1.8	1.5	1.7	1.6	1.8	12	3.8	2.6	2.3	1.9
24	1.8	1.8	1.7	1.5	1.7	1.7	1.8	11	3.7	2.5	2.2	1.9
25	1.8	1.8	1.6	1.6	1.6	1.7	1.8	9.7	3.7	2.5	2.2	1.8
26	1.8	2.0	1.6	1.7	1.6	1.7	1.7	8.8	3.5	2.5	2.2	1.8
27	1.8	1.8	1.6	1.6	1.6	1.8	1.8	9.8	3.5	2.5	2.2	1.8
28	1.8	1.8	1.6	1.6	1.5	1.8	6.4	9.9	3.4	2.4	2.2	1.8
29	1.8	1.7	1.6	1.6	---	1.8	10	8.0	3.9	2.5	2.2	1.8
30	1.8	1.8	1.7	1.5	---	1.9	13	9.7	3.5	2.5	2.2	1.8
31	1.8	---	1.6	1.6	---	1.9	---	7.6	---	2.5	2.2	---
TOTAL	55.7	53.6	54.1	48.5	44.7	55.4	77.2	339.8	149.2	88.3	72.7	60.0
MEAN	1.80	1.79	1.75	1.56	1.60	1.79	2.57	11.0	4.97	2.85	2.35	2.00
MAX	1.9	2.0	1.9	1.7	1.8	2.2	13	22	8.4	3.7	2.9	2.2
MIN	1.7	1.5	1.6	1.5	1.4	1.5	1.6	6.3	3.4	2.4	2.2	1.8
AC-FT	110	106	107	96	89	110	153	674	296	175	144	119
CAL YR 1977	TOTAL	1052.18	MEAN 2.88	MAX 20	MIN .35	AC-FT 2090						
WTR YR 1978	TOTAL	1099.20	MEAN 3.01	MAX 22	MIN 1.4	AC-FT 2180						

06645160 SMITH CREEK AT OTTER CREEK, NEAR CASPER, WY

LOCATION.--Lat 42°39'24", long 106°09'40", in NE¼NW¼SW¼ sec.14, T.31 N., R.78 W., Natrona County, Hydrologic Unit 10180007, on right bank 0.2 mi (0.3 km) upstream from Otter Creek and 16 mi (26 km) southeast of Casper.

DRAINAGE AREA.--10.9 mi² (28.2 km²).

PERIOD OF RECORD.--October 1974 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 6,360 ft (1,939 m), from topographic map. Prior to Mar. 31, 1976, at site 80 ft (24 m) downstream at same datum.

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

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 41 ft³/s (1.16 m³/s) May 20, 1978, gage height, 3.24 ft (0.988 m); minimum daily, 0.45 ft³/s (0.013 m³/s) Mar. 3, 1977.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 41 ft³/s (1.16 m³/s) May 20, gage height, 3.24 ft (0.988 m); minimum daily, 0.84 ft³/s (0.024 m³/s) Feb. 2, 20.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.4	1.1	1.2	1.1	.99	1.1	1.4	11	7.4	2.9	2.2	1.3
2	1.4	1.2	1.3	1.1	.84	1.0	1.4	8.8	7.2	2.8	2.2	1.2
3	1.4	1.2	1.4	1.2	1.0	.99	1.3	8.9	7.5	2.9	2.2	1.2
4	1.3	1.1	1.5	1.2	1.0	1.0	1.1	8.7	8.1	2.8	2.0	1.2
5	1.3	1.1	1.3	1.2	1.0	1.1	1.2	7.8	6.7	2.8	1.9	1.2
6	1.3	1.1	1.2	1.2	1.0	1.2	1.2	7.0	6.1	3.0	1.9	1.1
7	1.5	1.1	1.3	1.2	1.1	1.0	1.2	7.2	5.7	3.1	1.9	1.1
8	1.4	.99	1.2	1.1	1.2	1.0	1.2	6.9	5.5	2.9	1.8	1.2
9	1.3	1.1	1.1	1.1	1.1	1.1	1.3	8.0	5.2	2.8	1.8	1.3
10	1.5	1.4	1.2	1.1	1.2	.99	1.3	14	4.9	2.9	1.7	1.3
11	1.5	1.3	1.3	1.1	1.1	1.0	1.3	16	4.7	2.8	1.7	1.4
12	1.5	1.3	1.4	1.0	1.1	.99	1.3	14	4.5	2.8	1.6	1.4
13	1.3	1.2	1.4	1.1	1.0	.92	1.2	11	4.3	2.6	1.7	1.4
14	1.3	1.2	1.5	1.1	1.0	.92	1.2	10	4.0	2.4	1.9	1.3
15	1.3	1.2	1.6	1.1	1.1	.99	1.3	8.6	3.9	2.4	2.4	1.3
16	1.2	1.3	1.4	1.0	1.1	1.0	1.3	8.6	3.8	2.4	1.8	1.3
17	1.3	1.2	1.4	1.1	1.0	.99	1.2	14	3.9	2.3	1.8	1.4
18	1.2	1.2	1.4	1.1	1.0	1.2	1.2	12	3.8	2.3	2.6	1.4
19	1.2	1.1	1.4	1.0	1.0	1.2	1.3	13	3.7	2.3	2.1	1.4
20	1.2	.97	1.3	1.0	.84	1.2	1.3	20	3.6	2.3	1.9	1.4
21	1.3	1.1	1.3	1.0	1.2	1.3	1.3	17	3.5	4.2	1.8	1.4
22	1.2	1.1	1.3	.99	1.2	1.2	1.3	13	3.3	3.0	1.8	1.3
23	1.1	1.3	1.3	1.0	1.1	1.2	1.3	12	3.2	2.6	1.5	1.3
24	1.1	1.4	1.3	.97	1.1	1.2	1.3	11	3.1	2.5	1.5	1.2
25	1.1	1.4	1.2	1.0	1.1	1.2	1.3	9.9	3.4	2.3	1.5	1.2
26	1.1	1.7	1.2	1.1	1.1	1.2	1.2	9.0	3.2	2.3	1.5	1.2
27	1.1	1.6	1.2	1.0	1.1	1.2	1.4	9.3	3.1	2.1	1.5	1.2
28	1.0	1.4	1.2	.94	.97	1.2	5.7	10	3.1	2.1	1.5	1.2
29	.99	1.4	1.2	.97	---	1.2	9.5	8.3	3.5	2.1	1.5	1.2
30	1.0	1.3	1.2	.97	---	1.3	12	9.6	3.0	2.1	1.4	1.2
31	1.1	---	1.1	.99	---	1.3	---	7.9	---	2.1	1.4	---
TOTAL	38.89	37.06	40.3	33.03	29.54	34.39	61.5	332.5	136.9	80.9	56.0	38.2
MEAN	1.25	1.24	1.30	1.07	1.06	1.11	2.05	10.7	4.56	2.61	1.81	1.27
MAX	1.5	1.7	1.6	1.2	1.2	1.3	12	20	8.1	4.2	2.6	1.4
MIN	.99	.97	1.1	.94	.84	.92	1.1	6.9	3.0	2.1	1.4	1.1
AC-FT	77	74	80	66	59	68	122	660	272	160	111	76

CAL YR 1977 TOTAL 850.64 MEAN 2.33 MAX 18 MIN .45 AC-FT 1690
WTR YR 1978 TOTAL 919.21 MEAN 2.52 MAX 20 MIN .84 AC-FT 1820

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 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 to Millar ditch 0.3 mi (0.5 km) upstream and bypasses station.

AVERAGE DISCHARGE.--17 years, 76.5 ft³/s (2.166 m³/s), 55,420 acre-ft/yr (68.3 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.

EXTREMES FOR CURRENT YEAR.--Peak discharges 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 12	0100	740 21.0	5.70 1.737
May 17	0730	*6,090 172	8.87 2.704

No flow Oct. 1, 2.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	17	19	18	23	28	85	163	171	4.5	.15	1.8
2	.00	18	19	19	28	25	121	110	147	2.3	.21	2.3
3	.96	19	22	22	30	24	118	104	134	.32	.63	2.8
4	3.3	19	22	27	28	25	91	152	152	.11	1.1	3.9
5	3.1	19	21	29	23	27	91	194	144	.11	.63	5.9
6	3.6	19	20	31	23	30	85	226	120	.15	.32	6.2
7	4.4	19	23	29	24	31	100	210	86	.32	.32	5.6
8	5.4	22	21	27	22	33	114	182	70	.45	.21	5.2
9	4.4	20	17	26	18	35	135	202	40	.45	.11	4.7
10	6.1	20	20	25	20	35	100	316	31	.63	.32	4.3
11	7.4	20	25	26	18	34	76	564	30	.86	.45	3.9
12	7.4	20	29	27	18	32	110	560	26	.63	.21	3.7
13	7.8	20	27	26	17	31	97	440	21	.86	.21	3.2
14	9.9	20	25	26	19	29	88	406	17	.86	.63	2.9
15	10	19	23	26	20	28	114	370	12	.45	1.1	2.7
16	10	19	23	25	21	29	124	323	11	.86	.86	2.4
17	14	18	22	25	22	30	118	2720	12	.86	.45	2.4
18	14	19	23	25	22	32	91	1700	10	.86	.80	2.3
19	15	19	19	24	23	31	76	1130	10	1.1	1.0	2.4
20	14	16	17	24	24	29	68	876	10	3.3	1.8	2.6
21	16	17	24	25	26	32	52	684	8.4	3.9	2.3	2.9
22	16	22	23	27	28	37	49	550	5.9	3.9	3.0	3.2
23	15	23	20	26	30	37	47	483	5.9	3.3	3.3	3.3
24	15	19	20	25	29	32	45	427	6.7	3.3	2.8	3.5
25	16	19	19	25	25	33	40	372	7.5	1.1	2.8	3.7
26	16	22	18	26	25	32	28	333	5.9	.63	3.3	3.8
27	16	23	17	26	26	32	28	302	6.7	.63	3.9	3.6
28	16	19	18	26	26	35	47	280	6.7	.45	3.9	3.5
29	18	23	19	26	---	42	151	240	8.4	.63	3.3	3.2
30	18	20	20	26	---	54	195	237	5.9	.15	2.3	3.1
31	17	---	19	23	---	65	---	204	---	.11	1.8	---
TOTAL	319.76	589	654	788	658	1029	2684	15060	1322.0	38.08	44.21	105.0
MEAN	10.3	19.6	21.1	25.4	23.5	33.2	89.5	486	44.1	1.23	1.43	3.50
MAX	18	23	29	31	30	65	195	2720	171	4.5	3.9	6.2
MIN	.00	16	17	18	17	24	28	104	5.9	.11	.11	1.8
AC-FT	634	1170	1300	1560	1310	2040	5320	29870	2620	76	88	208
CAL YR 1977	TOTAL	17727.13	MEAN 48.6	MAX 799	MIN .00	AC-FT 35160						
WTR YR 1978	TOTAL	23291.05	MEAN 63.8	MAX 2720	MIN .00	AC-FT 46200						

PLATTE RIVER BASIN

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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 1977 TO SEPTEMBER 1978

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	TEMPER- ATURE (DEG C)	HARD- NESS (MG/L AS CACO3)	HARD- NESS, NONCAR- BONATE (MG/L CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	BICAR- BONATE (MG/L AS HCO3)
OCT 04...	1700	3.8	13.5	480	160	95	59	84	1.7	2.9	390
NOV 23...	1410	24	2.0	450	210	100	59	51	1.0	2.2	290
DEC 08...	1400	26	1.0	430	180	90	49	53	1.1	2.0	300
JAN 26...	1315	A26	.5	450	210	95	52	44	.9	1.7	290
FEB 28...	1400	A26	.5	410	190	89	45	43	.9	3.1	270
MAR 24...	1415	30	8.0	320	130	69	36	31	.8	1.5	220
APR 07...	1500	110	10.5	140	50	30	15	13	.5	.9	110
MAY 12...	0945	560	6.5	140	92	17	6.7	6.8	.4	1.2	59
JUN 12...	1655	26	--	430	210	95	47	58	1.2	2.9	270
JUL 26...	1230	.86	23.0	470	210	110	51	83	1.6	.3	320
AUG 23...	1130	3.9	13.5	490	210	110	55	80	1.6	2.5	340
SEP 05...	1230	4.5	23.0	510	220	110	56	71	1.4	2.7	350

A-Daily mean discharge.

DATE	CAR- BONATE (MG/L AS CO3)	ALKA- LINITY (MG/L AS CACO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, SUM OF CONSTITU- ENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)	SOLIDS, DIS- SOLVED (TONS PER DAY)	NITRO- GEN, NITRATE DIS- SOLVED (MG/L AS N)	PHOS- PHORUS, TOTAL (MG/L AS P)
OCT 04...	0	320	330	9.3	.5	15	786	1.07	8.0	.00	.00
NOV 23...	0	240	350	6.9	.5	14	728	.99	47.2	.05	.00
DEC 08...	0	250	270	7.8	.4	13	629	.86	44.2	.00	.00
JAN 26...	0	240	270	6.8	.5	23	638	.87	44.8	.16	.01
FEB 28...	0	220	260	7.9	.0	13	601	.82	42.2	.25	.04
MAR 24...	6	190	190	3.9	.4	15	466	.63	37.7	.07	.07
APR 07...	0	90	60	1.7	--	--	--	.32	70.7	1.1	.01
MAY 12...	0	48	34	.0	.2	8.6	135	.18	204	.23	.05
JUN 12...	0	220	300	36	.6	11	690	.94	48.4	.00	.00
JUL 26...	0	260	380	15	.7	13	813	1.11	1.8	.05	.02
AUG 23...	0	280	370	9.6	.7	12	810	1.10	8.5	.00	.02
SEP 05...	0	290	330	35	.7	13	970	1.32	11.8	.32	.02

PLATTE RIVER BASIN

06646610 NORTH PLATTE RIVER BELOW DEER CREEK, NEAR GLENROCK, WY

LOCATION.--Lat 42°52'20", long 105°50'42", in NE¼NW¼SW¼ sec.34, T.34 N., R.75 W., Converse County, Hydrologic Unit 10180007, 1.2 mi (1.9 km) downstream from Deer Creek and 1.4 mi (2.3 km) northeast of Glenrock.

PERIOD OF RECORD.--Water years 1969 to current year.

PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: January 1969 to current year.

INSTRUMENTATION.--Temperature recorder.

REMARKS.--Records furnished by Wyoming Game and Fish Commission and Pacific Power and Light Company.

EXTREMES FOR PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: Maximum, 27.0°C July 4, 1970, June 16, 1978; minimum, 0.0°C on many days during winter period most years.

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURES: Maximum, 27.0°C June 16; minimum recorded, 0.0°C on many days.

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

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

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

[illegible]

PLATTE RIVER BASIN

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 1978.

GAGE.--Water-stage recorder. Altitude of gage is 5,000 ft (1,524 m), from topographic map.

REMARKS.--Records poor.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 460 ft³/s (13.0 m³/s) May 18, gage height, 3.87 ft (1.180 m), from rating curve extended above 13 ft³/s (0.37 m³/s) on basis of slope-area measurement of peak flow and step-backwater method; no flow for many days.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.00	.00	.00	.01	.03	.03	.00	.00	.00
2	.00	.00	.00	.00	.00	.00	.01	.02	.00	.00	.00	.00
3	.00	.00	.00	.00	.00	.00	.00	.03	.01	.00	.00	.00
4	.00	.00	.00	.00	.00	.00	.00	.07	.04	.00	.00	.00
5	.00	.00	.00	.00	.00	.00	.00	.04	.00	.00	.00	.00
6	.00	.00	.00	.00	.00	.00	.00	.15	.01	.00	.00	.00
7	.00	.00	.00	.00	.00	.20	.02	.24	.01	.02	.00	.00
8	.00	.00	.00	.00	.00	1.0	.03	.21	.00	.00	.00	.00
9	.00	.00	.00	.00	.00	6.2	.02	.15	.00	.02	.00	.00
10	.00	.00	.00	.00	.00	1.9	.01	5.0	.00	.00	.00	.00
11	.00	.00	.00	.00	.00	.09	.01	.11	.00	.00	.00	.00
12	.00	.00	.00	.00	.00	.07	.01	.07	.00	.00	.00	.00
13	.00	.00	.00	.00	.00	.04	.00	.05	.00	.00	.00	.00
14	.00	.00	.00	.00	.00	.02	.00	.07	.00	.00	.10	.00
15	.00	.00	.00	.00	.00	.03	.01	.07	.00	.00	.00	.00
16	.00	.00	.00	.00	.00	.03	.01	.10	.00	.00	.00	.00
17	.00	.00	.00	.00	.00	.02	.01	19	.01	.00	.00	.00
18	.00	.00	.00	.00	.00	.02	.01	278	.00	.00	.07	.00
19	.00	.00	.00	.00	.30	.02	.01	34	.00	.00	.00	.00
20	.00	.00	.00	.00	1.0	.01	.01	1.4	.00	26	.00	.00
21	.00	.00	.00	.00	.60	.01	.01	1.1	.00	123	.00	.00
22	.00	.00	.00	.00	.47	.01	.02	1.1	.00	32	.00	.00
23	.00	.00	.00	.00	.03	.02	.01	.72	.00	2.8	.00	.00
24	.00	.00	.00	.00	.00	.02	.00	.44	.00	.52	.00	.00
25	.00	.00	.00	.00	.00	.01	.00	.24	.00	.00	.00	.00
26	.00	.00	.00	.00	.00	.01	.00	.21	.00	.00	.00	.00
27	.00	.00	.00	.00	.00	.01	.02	.21	.00	.00	.00	.00
28	.00	.00	.00	.00	.00	.01	.02	.11	.00	.00	.00	.00
29	.00	.00	.00	.00	---	.01	.02	.09	.00	.00	.00	.00
30	.00	.00	.00	.00	---	.01	.03	.09	.00	.00	.00	.00
31	.00	---	.00	.00	---	.01	---	.05	---	.00	.00	---
TOTAL	.00	.00	.00	.00	2.40	9.78	.31	343.17	.11	184.36	.17	.00
MEAN	.000	.000	.000	.000	.086	.32	.010	11.1	.004	5.95	.005	.000
MAX	.00	.00	.00	.00	1.0	6.2	.03	278	.04	123	.10	.00
MIN	.00	.00	.00	.00	.00	.00	.00	.02	.00	.00	.00	.00
AC-FT	.00	.00	.00	.00	4.8	19	.6	681	.2	366	.3	.00

WTR YR 1978 TOTAL 540.30 MEAN 1.48 MAX 278 MIN .00 AC-FT 1070

06646780 SAND CREEK NEAR GLENROCK, WY--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--October 1977 to September 1978.

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

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED (MG/L)	COLI- FORM, FECAL, (PER- CENT UM-MF SATUR- ATION)	STREP- TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)	HARD- NESS (MG/L AS CACO3)
MAR 09...	1215	.89	260	7.9	9.0	9.4	98	K100	12000	110
MAY 17...	1445	.58	1220	7.6	9.0	9.3	97	>7100	3400	460

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

DATE	HARD- NESS, NONCAR- BONATE (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)	BICAR- BONATE (MG/L AS HCO3)	CAR- BONATE (MG/L AS CO3)	ALKA- LINITY (MG/L AS CACO3)	SULFATE DIS- SOLVED (MG/L AS SO4)
MAR 09...	36	29	8.1	7.6	.3	5.2	90	0	74	60
MAY 17...	170	100	50	100	2.0	6.0	350	0	290	500

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, RESIDUE AT 180 DEG. C 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, NITRATE TOTAL (MG/L AS N)	NITRO- GEN, NITRITE TOTAL (MG/L AS N)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N)
MAR 09...	3.5	.3	4.8	154	163	.22	.39	.60	.02	.62
MAY 17...	14	.3	5.4	920	948	1.29	1.48	--	--	.08

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, DIS- SOLVED (MG/L AS P)	CARBON, ORGANIC DIS- SOLVED (MG/L AS C)	CARBON, ORGANIC SUS- PENDED TOTAL (MG/L AS C)	PHYTO- PLANK- TON, TOTAL (CELLS PER ML)
MAR 09...	.03	9.1	9.1	9.7	43	1.4	.10	12	2.5	140
MAY 17...	.11	1.4	1.5	1.6	7.0	.47	.01	3.9	3.2	14000

DATE	TIME	ALUM- INUM, DIS- SOLVED (UG/L AS AL)	ARSENIC TOTAL (UG/L AS AS)	ARSENIC DIS- SOLVED (UG/L AS AS)	BARIUM, TOTAL RECOV- ERABLE (UG/L AS BA)	BARIUM, DIS- SOLVED (UG/L AS BA)	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 DIS- SOLVED (UG/L AS CD)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR)
MAR 09...	1215	280	5	1	400	0	10	0	80	2	2	50
MAY 17...	1445	--	--	--	--	--	--	--	80	--	--	--

DATE	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, DIS- SOLVED (UG/L AS CU)	IRON, DIS- SOLVED (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)
MAR 09...	0	28	0	63	6	220	56	15	60	7	650	20
MAY 17...	--	--	--	--	--	10	--	--	--	--	--	--

06646780 SAND CREEK NEAR GLENROCK, WY--Continued

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

DATE	MERCURY TOTAL RECOV- ERABLE (UG/L AS HG)	MERCURY DIS- SOLVED (UG/L AS HG)	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)
MAR 09...	.0	.0	0	0	75	8	2	2	3.0	320	20
MAY 17...	--	--	--	--	--	--	--	--	--	--	--
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 ALPHA, DIS- SOLVED (PCI/L AS U-NAT)	GROSS ALPHA, SUSP. TOTAL (PCI/L AS U-NAT)				
MAR 09...	1215	4.3	410	9.8	190	2.9	280				
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			
MAR 09...	1215	9.0	.89	4680	11	95	97	100			
MAY 17...	1445	9.0	.58	1850	2.9	72	99	100			
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
MAR 09...	1215	9.0	.89	2	3	15	66	86	96	99	100

06646780 SAND CREEK NEAR GLENROCK, WY--Continued

QUALITATIVE AND ASSOCIATED QUANTITATIVE ANALYSES OF BIOLOGICAL DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
PHYTOPLANKTON ANALYSES

DATE	MAR 9,78
TIME	1215
TOTAL CELLS/ML	140
DIVERSITY: DIVISION	0.0
..CLASS	0.0
...ORDER	1.0
...FAMILY	1.0
....GENUS	1.0

ORGANISM	CELLS /ML	PER- CENT
CHLOROPHYTA (GREEN ALGAE)		
..CHLOROPHYCEAE		
...CHLOROCOCCALES		
...ODCYSTACEAE		
....ANKISTRODESMUS	72#	50
...VOLVOCALES		
...CHLAMYDOMONADACEAE		
....CHLAMYDOMONAS	72#	50

NOTE: # - DOMINANT ORGANISM; EQUAL TO OR GREATER THAN 15%
* - OBSERVED ORGANISM, MAY NOT HAVE BEEN COUNTED; LESS THAN 1/2%

PLATTE RIVER BASIN

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 fair. 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, 6,380 ft³/s (181 m³/s) May 19, gage height, 4.78 ft (1.457 m); minimum daily, 370 ft³/s (10.5 m³/s) Dec. 9.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1330	847	892	733	873	994	760	1510	882	1760	2050	2060
2	1200	647	882	597	825	952	797	1410	825	1780	2020	2030
3	1210	655	882	527	863	769	806	1410	778	1790	1820	2030
4	1190	882	882	542	882	655	815	1570	844	1740	1790	2030
5	1170	882	882	724	922	1080	806	1770	1070	1660	1780	2050
6	1160	892	834	882	952	1210	797	1790	797	1670	1770	2020
7	955	902	872	892	994	1260	787	1750	724	1760	1760	2020
8	848	912	498	853	973	1320	797	1660	680	1710	1750	2000
9	991	902	370	769	963	1270	797	1720	647	1730	1740	2000
10	998	902	376	742	994	1260	815	1800	614	1730	1710	1970
11	993	902	742	769	994	1190	797	1890	605	1700	1720	1950
12	994	902	902	769	844	1020	787	1990	597	1690	1720	1960
13	991	902	932	815	689	994	787	1890	589	1680	1720	1980
14	990	902	1270	863	715	983	797	1770	563	1680	1740	1780
15	994	902	983	873	760	963	815	1460	533	1700	1730	1480
16	996	912	863	853	815	942	834	1340	537	1740	1710	1470
17	992	912	815	724	825	932	844	1640	573	1780	2080	1480
18	1000	902	834	751	815	873	844	4510	1020	1770	3350	1480
19	996	942	844	806	787	806	825	5970	1060	1850	3470	1470
20	989	605	806	769	815	806	815	4620	1050	1920	3490	1480
21	1000	395	742	797	873	806	815	3600	1060	2270	3440	1480
22	1020	733	698	806	942	806	825	3050	1030	2370	3470	1480
23	1000	963	715	806	1020	806	834	1870	1020	2250	3550	1470
24	1000	1000	778	825	1040	806	815	1560	1030	2140	3560	1470
25	945	1020	622	797	1020	806	815	1320	1040	2120	3530	1480
26	712	1240	614	787	952	815	787	1190	1030	2120	3030	1480
27	705	983	630	815	994	797	994	1060	1090	2090	2610	1500
28	906	932	605	873	994	778	1120	1100	1360	2110	2570	1510
29	912	902	638	863	---	769	1360	1050	1420	2080	2560	1540
30	901	892	797	863	---	760	1460	983	1480	2010	2380	1520
31	902	---	873	882	---	751	---	952	---	1990	2090	---
TOTAL	30990	26266	24073	24367	25135	28979	25947	61205	26548	58390	73710	51670
MEAN	1000	876	777	786	898	935	865	1974	885	1884	2378	1722
MAX	1330	1240	1270	892	1040	1320	1460	5970	1480	2370	3560	2060
MIN	705	395	370	527	689	655	760	952	533	1660	1710	1470
AC-FT	61470	52100	47750	48330	49860	57480	51470	121400	52660	115800	146200	102500
CAL YR 1977	TOTAL	496825	MEAN	1361	MAX	3720	MIN	370	AC-FT	985500		
WTR YR 1978	TOTAL	457280	MEAN	1253	MAX	5970	MIN	370	AC-FT	907000		

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 1977 TO SEPTEMBER 1978

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	TEMPER- ATURE (DEG C)	HARD- NESS (MG/L AS CAC03)	HARD- NESS, NONCAR- BONATE (MG/L 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)	BICAR- BONATE (MG/L AS HCO3)
OCT 04...	1130	1190	15.0	290	140	67	29	60	1.5	3.9	180
NOV 23...	1300	942	4.5	260	110	50	33	61	1.6	3.9	180
DEC 08...	1320	465	4.0	330	180	80	26	70	1.7	3.7	170
JAN 26...	1130	797	6.0	270	120	73	22	59	1.6	3.6	180
FEB 28...	1415	978	10.0	290	140	76	24	66	1.7	3.7	180
MAR 31...	1315	750	--	310	150	73	31	75	1.9	3.9	180
MAY 02...	1515	1450	--	450	320	59	19	59	1.7	3.2	160
12...	1230	1990	13.0	260	140	65	23	90	2.4	3.5	150
JUN 12...	1330	594	--	340	170	92	32	140	3.2	4.6	210
JUL 26...	1400	2180	26.5	240	92	63	21	57	1.6	.3	180
AUG 21...	1550	3460	22.5	230	91	66	17	46	1.3	3.0	170
SEP 07...	0900	2030	21.0	240	100	64	20	48	1.3	3.4	170

DATE	CAR- BONATE (MG/L AS CO3)	ALKA- LINITY (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)	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, NITRATE DIS- SOLVED (MG/L AS N)	PHOS- PHORUS, TOTAL (MG/L AS P)
OCT 04...	0	150	230	16	.5	8.5	501	.68	1610	.00	.00
NOV 23...	0	150	220	17	.8	9.6	484	.66	1230	.47	.04
DEC 08...	7	150	230	22	.6	9.4	541	.74	679	.52	.03
JAN 26...	3	150	220	16	.7	17	503	.68	1080	.50	.08
FEB 28...	0	150	250	20	.5	10	538	.73	1420	.56	.50
MAR 31...	6	160	290	20	.5	9.8	600	.82	1220	.32	.23
MAY 02...	0	130	210	5.3	.5	11	450	.61	1760	.99	.10
12...	0	120	330	5.3	.5	8.6	603	.82	3240	.79	.08
JUN 12...	0	170	450	23	.7	8.3	963	1.31	1540	.61	.00
JUL 26...	0	150	200	13	.5	7.9	451	.61	2650	.32	.31
AUG 21...	0	140	160	12	.5	8.7	400	.54	3740	.34	.29
SEP 07...	0	140	180	16	.6	8.1	504	.69	2760	.41	.13

PLATTE RIVER BASIN

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 except those below 20 ft³/s (0.6 m³/s), which area poor. Diversions above station for irrigation of about 60 acres (24 hm²), of which about 40 acres (16 hm²) are below station.

AVERAGE DISCHARGE.--18 years, 39.1 ft³/s (1.107 m³/s), 28,330 acre-ft/yr (34.9 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 10	1800	376 10.6	3.84 1.170
May 17	0330	*2,230 63.2	6.61 2.015

Minimum daily discharge, 0.13 ft³/s (0.004 m³/s) Sept. 10-12.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.61	1.1	2.5	1.7	1.8	2.3	61	148	150	12	2.8	.49
2	.65	1.1	2.5	1.8	1.9	2.1	65	142	130	9.8	3.0	.40
3	.80	1.2	2.6	1.9	2.0	2.0	56	152	131	8.1	3.4	.37
4	.80	1.3	2.6	2.0	2.1	2.2	49	150	111	6.8	3.2	.31
5	.93	1.4	2.3	2.1	2.0	2.4	51	142	100	6.1	2.6	.27
6	1.1	1.4	2.2	2.1	2.1	2.5	50	131	88	6.5	2.2	.23
7	1.3	1.6	2.3	1.9	2.1	2.7	55	128	85	9.5	2.8	.21
8	1.6	1.6	2.1	1.7	2.1	2.8	65	120	79	7.3	2.2	.18
9	1.9	1.6	1.9	1.6	2.1	2.9	70	131	72	8.5	2.9	.16
10	1.9	1.6	2.0	1.6	2.1	2.8	61	232	66	19	6.1	.13
11	1.9	1.8	2.2	1.7	2.0	2.8	61	294	61	9.2	3.0	.13
12	1.6	1.9	2.3	1.8	1.9	2.6	62	315	56	7.0	2.2	.13
13	1.5	1.8	2.2	1.8	1.8	2.5	55	279	50	5.4	2.0	.14
14	1.4	1.9	2.6	1.8	1.8	2.5	55	306	44	4.6	2.5	.18
15	1.1	1.7	3.0	1.8	1.9	2.4	63	354	40	4.0	4.6	.15
16	.99	1.9	2.8	1.6	1.9	2.5	64	444	37	3.5	4.6	.14
17	.99	1.6	2.4	1.7	1.9	2.8	67	1470	35	3.5	2.8	.14
18	.93	1.8	2.1	1.7	1.9	3.7	60	931	31	3.2	3.0	.21
19	.86	1.6	2.0	1.6	2.0	4.8	56	645	27	2.9	3.4	.23
20	.86	1.6	1.9	1.6	2.1	6.1	56	532	26	2.9	2.9	.29
21	1.1	1.5	2.0	1.7	2.1	6.8	56	468	23	10	2.2	.37
22	1.6	1.6	2.1	1.8	2.1	7.5	55	428	20	14	1.6	.46
23	1.8	2.3	2.3	1.9	2.2	6.5	50	416	18	7.0	1.3	.37
24	1.6	2.6	2.1	1.8	2.2	6.5	46	400	17	5.0	.93	.43
25	1.3	2.6	2.0	1.7	2.1	7.5	50	357	15	4.0	.75	.40
26	1.2	3.2	2.0	1.8	2.2	8.1	62	306	14	3.4	.65	.37
27	1.2	3.0	1.8	1.8	2.2	11	82	270	13	2.8	.57	.37
28	1.1	2.5	1.9	1.8	2.1	13	114	240	12	2.3	.57	.31
29	1.1	2.2	2.0	1.9	---	17	134	208	12	2.1	.57	.34
30	1.1	2.3	2.1	1.9	---	23	145	200	15	2.2	.61	.37
31	1.1	---	1.9	1.8	---	37	---	172	---	2.2	.61	---
TOTAL	37.92	55.3	68.7	55.4	56.7	201.3	1976	10511	1578	194.8	72.56	8.28
MEAN	1.22	1.84	2.22	1.79	2.03	6.49	65.9	339	52.6	6.28	2.34	.28
MAX	1.9	3.2	3.0	2.1	2.2	37	145	1470	150	19	6.1	.49
MIN	.61	1.1	1.8	1.6	1.8	2.0	46	120	12	2.1	.57	.13
AC-FT	75	110	136	110	112	399	3920	20850	3130	386	144	16
CAL YR 1977 TOTAL	10652.12			MEAN 29.2	MAX 506	MIN .55	AC-FT 21130					
WTR YR 1978 TOTAL	14815.96			MEAN 40.6	MAX 1470	MIN .13	AC-FT 29390					

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LOCATION.--Lat 42°45'04", long 105°44'25", in SE4SW4SE4 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.

PERIOD OF RECORD.--October 1974 to current year.

REMARKS:--Records good except those for October to February, which are poor. No diversion above station.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 83 ft³/s (2.35 m³/s) May 11, 1978, gage height, 2.04 ft (0.622 m); minimum daily, 0.38 ft³/s (0.011 m³/s) Nov. 27, 1976.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 83 ft³/s (2.35 m³/s) May 11, gage height, 2.04 ft (0.622 m); minimum daily, 0.39 ft³/s (0.001 m³/s) Feb. 14.

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.66	.57	.48	.45	.47	.54	1.9	2.5	2.8	1.2	.94	.65
2	.59	.61	.56	.48	.52	.49	1.8	2.1	2.7	1.2	.87	.64
3	.59	.59	.61	.51	.53	.46	1.7	2.4	2.7	1.1	.85	.64
4	.66	.59	.58	.54	.47	.48	1.5	3.4	2.6	1.0	.82	.64
5	.59	.59	.54	.54	.47	.53	1.5	3.6	2.5	1.0	.78	.63
6	.66	.57	.49	.56	.47	.53	1.4	2.8	2.3	1.1	.77	.63
7	.59	.53	.54	.50	.47	.63	1.6	3.2	2.3	1.0	.75	.63
8	.59	.52	.50	.45	.47	.72	1.8	3.6	2.2	.99	.75	.63
9	.59	.48	.44	.44	.44	.84	1.4	6.5	2.1	2.7	.74	.63
10	.66	.50	.49	.40	.45	.85	1.3	16	2.0	1.1	.75	.63
11	.59	.53	.66	.43	.41	.74	1.4	34	1.9	1.0	.72	.66
12	.55	.53	.77	.47	.42	.76	1.4	22	1.9	1.0	.70	.68
13	.59	.52	.74	.49	.41	.74	1.3	18	1.8	.98	.72	.70
14	.59	.53	.77	.48	.39	.73	1.3	15	1.8	.94	.83	.70
15	.60	.54	.76	.46	.42	.68	1.8	10	1.7	.93	.77	.71
16	.66	.53	.69	.43	.42	.70	1.6	8.2	1.7	.92	.72	.70
17	.68	.53	.64	.46	.42	.72	1.4	26	1.6	.90	.74	.66
18	.68	.50	.62	.47	.44	1.0	1.3	34	1.5	.92	.86	.68
19	.72	.48	.59	.46	.45	1.3	1.2	17	1.5	.92	.76	.69
20	.72	.40	.56	.47	.47	1.5	1.2	11	1.5	.94	.74	.66
21	.82	.47	.58	.49	.49	1.5	1.2	9.2	1.4	1.4	.71	.66
22	.66	.48	.59	.53	.52	1.1	1.7	7.8	1.4	.96	.72	.65
23	.61	.50	.56	.53	.57	1.2	1.4	6.4	1.4	.91	.70	.62
24	.53	.47	.53	.52	.56	1.2	1.3	5.6	1.4	.86	.69	.62
25	.54	.48	.51	.50	.52	1.2	1.4	4.9	1.3	.84	.70	.62
26	.58	.58	.54	.50	.54	1.2	1.8	4.3	1.3	.84	.68	.60
27	.55	.54	.52	.53	.53	1.2	3.2	4.0	1.3	.83	.69	.60
28	.57	.53	.52	.52	.52	1.3	4.8	3.6	1.3	.83	.70	.60
29	.59	.52	.55	.53	---	1.5	5.9	3.4	1.3	.84	.69	.60
30	.54	.50	.55	.53	---	2.2	2.8	3.3	1.3	.80	.69	.60
31	.58	---	.50	.52	---	2.3	---	3.0	---	.84	.66	---
TOTAL	19.18	15.71	17.98	15.19	13.26	30.84	55.3	296.8	54.5	31.79	23.21	19.36
MEAN	.62	.52	.58	.49	.47	.99	1.84	9.57	1.82	1.03	.75	.65
MAX	.82	.61	.77	.56	.57	2.3	5.9	34	2.8	2.7	.94	.71
MIN	.53	.40	.44	.40	.39	.46	1.2	2.1	1.3	.80	.66	.60
AC-FT	38	31	36	30	26	61	110	589	108	63	46	38
CAL YR 1977	TOTAL	357.90	MEAN	.98	MAX	6.7	MIN	.40	AC-FT	710		
WTR YR 1978	TOTAL	593.12	MEAN	1.62	MAX	34	MIN	.39	AC-FT	1180		

PLATTE RIVER BASIN

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 fair. One small detention reservoir above station.

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, 41 ft³/s (1.16 m³/s) May 18, gage height, 2.07 ft (0.631 m); no flow for many days.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.00	.00	.00	.00	.00	.93	.00	.00	.00
2	.00	.00	.00	.00	.00	.00	.00	.00	.81	.00	.00	.00
3	.00	.00	.00	.00	.00	.00	.00	.00	.70	.00	.00	.00
4	.00	.00	.00	.00	.00	.00	.00	.00	.65	.00	.00	.00
5	.00	.00	.00	.00	.00	.00	.00	.00	.40	.00	.00	.00
6	.00	.00	.00	.00	.00	.00	.00	.04	.23	.00	.00	.00
7	.00	.00	.00	.00	.00	.00	.00	.18	.15	.00	.00	.00
8	.00	.00	.00	.00	.00	.00	.00	.39	.06	.00	.00	.00
9	.00	.00	.00	.00	.00	.00	.00	.65	.00	.09	.00	.00
10	.00	.00	.00	.00	.00	.00	.00	2.3	.00	.00	.00	.00
11	.00	.00	.00	.00	.00	.00	.00	9.0	.00	.00	.00	.00
12	.00	.00	.00	.00	.00	.00	.00	17	.00	.00	.00	.00
13	.00	.00	.00	.00	.00	.00	.00	12	.00	.00	.00	.00
14	.00	.00	.00	.00	.00	.00	.00	11	.00	.00	.00	.00
15	.00	.00	.00	.00	.00	.00	.00	8.3	.00	.00	.00	.00
16	.00	.00	.00	.00	.00	.00	.00	7.7	.00	.00	.00	.00
17	.00	.00	.00	.00	.00	.00	.00	12	.00	.00	.00	.00
18	.00	.00	.00	.00	.00	.00	.00	30	.00	.00	.00	.00
19	.00	.00	.00	.00	.00	.00	.00	14	.00	.00	.00	.00
20	.00	.00	.00	.00	.00	.00	.00	9.1	.00	.00	.00	.00
21	.00	.00	.00	.00	.00	.00	.00	8.3	.00	.00	.00	.00
22	.00	.00	.00	.00	.00	.00	.00	8.0	.00	.00	.00	.00
23	.00	.00	.00	.00	.00	.00	.00	7.4	.00	.00	.00	.00
24	.00	.00	.00	.00	.00	.00	.00	6.7	.00	.00	.00	.00
25	.00	.00	.00	.00	.00	.00	.00	5.6	.00	.00	.00	.00
26	.00	.00	.00	.00	.00	.00	.00	4.5	.00	.00	.00	.00
27	.00	.00	.00	.00	.00	.00	.00	3.1	.00	.00	.00	.00
28	.00	.00	.00	.00	.00	.00	.00	1.9	.00	.00	.00	.00
29	.00	.00	.00	.00	---	.00	.00	1.5	.00	.00	.00	.00
30	.00	.00	.00	.00	---	.00	.00	1.4	.00	.00	.00	.00
31	.00	---	.00	.00	---	.00	---	1.1	---	.00	.00	---
TOTAL	.00	.00	.00	.00	.00	.00	.00	183.16	3.93	.09	.00	.00
MEAN	.000	.000	.000	.000	.000	.000	.000	5.91	.13	.003	.000	.000
MAX	.00	.00	.00	.00	.00	.00	.00	30	.93	.09	.00	.00
MIN	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
AC-FT	.00	.00	.00	.00	.00	.00	.00	363	7.8	.2	.00	.00

CAL YR 1977 TOTAL 14.11 MEAN .039 MAX 1.4 MIN .00 AC-FT 28
WTR YR 1978 TOTAL 187.18 MEAN .51 MAX 30 MIN .00 AC-FT 371

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.--No records for 1978 water year. 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.

LOCATION.--Lat 42°51'08", long 105°29'27", in NE¼NW¼ sec.10, T.33 N., R.72 W., Converse County, Hydrologic Unit 10180008, Fort Fetterman Reservation, at bridge on Ross Road, 0.2 mi (0.3 km) downstream from Fetterman Creek, 0.4 mi (0.6 km) downstream from La Prele Creek, and 0.7 mi (1.1 km) east of Orpha.

PERIOD OF DAILY RECORD. --

INSTRUMENTATION.--Temperature recorder.

REMARKS.--Records furnished by Wyoming Game and Fish Commission and Pacific Power and Light Company.

EXTREMES FOR PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: Maximum, 29.5°C July 4, 1970; minimum, -1.0°C Jan. 25, 26, 1976.

EXTREMES FOR PERIOD OCTOBER TO NOVEMBER.--

WATER TEMPERATURES: Maximum, 15.5°C Oct. 26; minimum, 0.0°C Nov. 19.

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY	MARCH
1	13.5	11.5	8.0	5.5						
2	13.5	11.0	9.0	5.5						
3	13.0	9.5	10.0	6.5						
4	13.5	11.5	10.0	7.0						
5	11.5	10.5	10.5	9.0						
6	11.5	9.5	10.5	9.0						
7	12.0	10.5	10.5	8.0						
8	13.0	9.0	8.5	5.0						
9	13.0	10.5	5.0	3.5						
10	11.0	9.0	5.0	3.5						
11	11.0	8.0	6.5	4.0						
12	10.5	7.0	8.0	5.5						
13	11.5	8.5	8.0	6.0						
14	13.5	10.5	7.0	6.0						
15	14.5	11.0	6.5	5.0						
16	14.5	11.5	6.5	5.5						
17	14.5	11.5	6.5	5.0						
18	14.5	12.0	6.0	4.0						
19	14.0	11.5	4.0	.0						
20	12.0	10.0	---	---						
21	11.5	10.5	---	---						
22	14.0	10.5	---	---						
23	14.0	11.0	---	---						
24	13.5	12.0	---	---						
25	14.0	11.0	---	---						
26	15.5	12.0	---	---						
27	14.0	11.5	---	---						
28	12.0	10.0	---	---						
29	12.0	11.0	---	---						
30	11.5	8.5	---	---						
31	8.5	6.0	---	---						
MONTH	15.5	6.0	10.5	.0						
YEAR	15.5	.0								

PLATTE RIVER BASIN

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06652000 NORTH PLATTE RIVER AT ORIN, WY

LOCATION.--Lat 42°39'02", long 105°09'46", in SE&SW&SW&SW 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.--Thirty-four 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, 12,200 ft³/s (346 m³/s) May 17, gage height, 7.76 ft (2.365 m); maximum gage height, 7.90 ft (2.408 m) Dec. 28 (backwater from ice); minimum daily discharge, 418 ft³/s (11.8 m³/s) Nov. 22.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1290	958	1050	705	1020	1170	859	1870	1410	1450	1980	2020
2	1280	906	1050	625	980	1080	1010	1850	1300	1660	1990	1960
3	1160	650	1040	650	1030	965	1110	1710	1180	1680	1940	1960
4	1180	625	1040	760	1140	860	1100	1830	1170	1720	1720	1980
5	1150	837	1040	915	1220	875	1030	2160	1340	1670	1680	1980
6	1120	863	985	1020	1250	1500	985	2390	1400	1570	1650	1980
7	1150	877	1010	885	1240	1610	932	2430	1100	1590	1640	1950
8	897	893	1090	780	1240	1710	931	2440	1000	1560	1600	1920
9	785	895	680	720	1200	1690	964	2180	931	1580	1580	1920
10	944	928	505	660	1180	1610	992	2510	863	1560	1590	1960
11	990	932	635	740	1050	1460	975	3230	789	1540	1560	1930
12	989	939	920	855	1080	1370	948	3800	745	1520	1540	1890
13	994	944	1140	920	970	1190	949	3370	720	1500	1580	1960
14	980	940	1400	965	810	1110	912	3080	696	1490	1620	1990
15	967	941	1650	1000	845	1090	935	2750	640	1470	1730	1680
16	987	926	1260	950	900	1040	938	3180	580	1510	1640	1450
17	1000	945	1090	940	940	1010	960	5620	563	1580	1570	1420
18	1010	947	970	895	975	1010	958	9140	560	1590	2520	1460
19	1010	1030	980	835	1020	923	929	8640	916	1600	3400	1480
20	1040	1100	995	865	1060	809	873	7720	979	2000	3480	1480
21	1050	670	976	915	1110	809	835	5500	978	3710	3440	1460
22	1100	418	961	980	1160	808	878	5000	959	2650	3390	1460
23	1110	645	998	1000	1270	808	898	3840	926	2390	3400	1460
24	1090	910	895	995	1330	850	853	2960	902	2300	3440	1420
25	1080	1070	835	1000	1300	837	770	2420	916	2150	3460	1410
26	997	1250	725	995	1300	840	748	2160	914	2110	3400	1420
27	738	1480	560	1010	1250	812	726	1980	904	2040	2690	1400
28	714	1190	620	1040	1240	788	1180	1830	966	2000	2520	1410
29	917	1110	715	1070	---	792	1470	1770	1240	2020	2490	1410
30	954	1070	760	1080	---	791	1770	1640	1340	2050	2510	1410
31	949	---	800	1070	---	803	---	1540	---	1940	2210	---
TOTAL	31622	27889	29375	27840	31110	33020	29418	102540	28927	57200	70960	50630
MEAN	1020	930	948	898	1111	1065	981	3308	964	1845	2289	1688
MAX	1290	1480	1650	1080	1330	1710	1770	9140	1410	3710	3480	2020
MIN	714	418	505	625	810	788	726	1540	560	1450	1540	1400
AC-FT	62720	55320	58270	55220	61710	65500	58350	203400	57380	113500	140700	100400
CAL YR 1977 TOTAL	519191			1422	4130	418	AC-FT	1030000				
WTR YR 1978 TOTAL	520531			1426	9140	418	AC-FT	1032000				

WATER-QUALITY RECORDS

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

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

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	TUR- BID- ITY (JTU)	OXYGEN, DIS- SOLVED (MG/L)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	HARD- NESS (MG/L AS CACO3)	HARD- NESS, NONCAR- BONATE (MG/L CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)
NOV											
08...	1430	900	--	--	4.5	2	10.4	K6	270	110	64
DEC											
07...	1445	1160	--	--	1.0	9	10.3	K6	310	140	66
30...	1015	760	--	--	.0	8	10.8	51	300	130	78
JAN											
31...	1245	1070	--	--	.0	15	9.0	72	280	120	72
MAR											
01...	1400	1210	--	--	.5	7	11.2	K2	290	130	75
28...	1130	788	--	--	14.0	50	9.2	K12	340	180	79
MAY											
09...	1500	2190	--	--	9.5	100	10.3	K280	440	320	56
JUN											
06...	1300	1350	950	8.2	18.0	140	8.8	290	290	130	71
JUL											
18...	1400	1620	700	8.2	23.0	45	7.5	88	230	91	59
AUG											
15...	1415	1690	670	8.3	18.0	80	8.3	K490	230	82	63
SEP											
12...	1540	1900	630	8.5	19.5	20	8.8	K20	250	110	64

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)	BICAR- BONATE (MG/L AS HCO3)	CAR- BONATE (MG/L AS CO3)	ALKA- LINITY (MG/L AS CACO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)
NOV										
08...	26	74	2.0	5.9	190	0	160	230	17	.5
DEC										
07...	25	67	1.8	4.0	180	12	170	210	11	.5
30...	26	71	1.8	4.4	210	0	170	240	20	.6
JAN										
31...	24	59	1.5	3.4	190	0	160	210	17	.4
MAR										
01...	24	65	1.7	3.6	190	0	160	220	22	.6
28...	34	82	1.9	4.0	200	0	160	320	18	.6
MAY										
09...	19	76	2.2	3.3	150	0	130	240	8.5	.5
JUN										
06...	27	110	2.8	3.4	190	0	160	320	20	.4
JUL										
18...	20	55	1.6	3.9	170	--	140	200	12	.6
AUG										
15...	18	54	1.5	3.9	180	0	150	180	10	.6
SEP										
12...	21	50	1.4	2.1	170	0	140	200	13	.5

DATE	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, RESIDUE AT 105 DEG. C, DIS- SOLVED (MG/L)	SOLIDS, SUM OF CONSTITU- ENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)	SOLIDS, DIS- SOLVED (TONS PER DAY)	SOLIDS, RESIDUE AT 105 DEG. C, SUS- PENDED (MG/L)	NITRO- GEN, NITRATE DIS- SOLVED (MG/L AS N)	PHOS- PHORUS, DIS- SOLVED TOTAL (MG/L AS P)	CARBON, ORGANIC DIS- SOLVED (MG/L AS C)	CARBON, ORGANIC SUS- PENDED TOTAL (MG/L AS C)
NOV										
08...	4.4	--	514	.70	1250	--	.00	.00	--	--
DEC										
07...	8.1	--	590	.80	1850	--	.54	.01	--	--
30...	10	580	557	.76	1140	55	.68	.03	5.6	.8
JAN										
31...	8.3	--	489	.67	1410	--	.59	.13	--	--
MAR										
01...	7.2	--	518	.70	1690	--	.59	.57	--	--
28...	12	710	653	.89	1390	81	.88	.32	6.3	2.2
MAY										
09...	11	--	493	.67	2920	--	.99	.08	--	--
JUN										
06...	2.6	--	750	1.02	2730	--	1.1	.25	--	--
JUL										
18...	5.0	451	444	.60	1940	13	1.2	.04	5.5	1.8
AUG										
15...	6.5	--	428	.58	1950	--	.45	.22	--	--
SEP										
12...	5.8	--	441	.60	2260	--	.27	.03	--	--

PLATTE RIVER BASIN

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06652000 NORTH PLATTE RIVER AT ORIN, WY--Continued

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

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)
DEC 30...	1015	520	520	0	3	1	2	0	0	0	3	1
MAR 28...	1130	1500	1500	0	3	1	2	10	10	0	3	1
JUL 18...	1400	0	0	10	3	1	2	10	10	0	4	1

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)
DEC 30...	2	0	0	0	8	6	2	700	--	0	5	1
MAR 28...	2	10	10	0	34	31	3	1900	--	50	15	7
JUL 18...	3	10	0	10	11	6	5	3200	3200	10	14	1

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- 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)
DEC 30...	4	40	0	40	40	20	20	.0	.0	.0	1
MAR 28...	8	50	0	50	80	80	0	.0	.0	.0	8
JUL 18...	13	40	0	40	100	90	10	.0	.0	.0	6

DATE	MOLYB- DENUM, SUS- PENDE RECOV. (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 TOTAL (UG/L AS SE)	SELE- NIUM, DIS- SOLVED (UG/L AS SE)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN)	ZINC, SUS- PENDE RECOV- ERABLE (UG/L AS ZN)	ZINC, DIS- SOLVED (UG/L AS ZN)
DEC 30...	0	2	7	7	0	7	0	8	10	10	0
MAR 28...	4	4	14	12	2	12	1	11	40	30	10
JUL 18...	2	4	11	6	5	3	0	4	40	40	0

PLATTE RIVER BASIN

06652000 NORTH PLATTE RIVER AT ORIN, WY--Continued

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

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 (PCI/L AS METHOD PCIT/L)	URANIUM NATURAL DIS- SOLVED (UG/L AS U)
DEC 30...	1015	32	3.2	9.1	3.7	8.2	3.4	.17	12
MAR 28...	1130	33	5.0	11	7.0	9.6	6.3	.20	18
JUL 18...	1400	18	10	5.9	6.9	5.5	6.5	.14	13

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	TEMPER- ATURE (DEG C)	PCB, TOTAL (UG/L)	PCB, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	NAPH- THA- LFNES, POLY- CHLOR. TOTAL (UG/L)	ALDRIN, TOTAL (UG/L)	ALDRIN, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	CHLOR- DANE, TOTAL (UG/L)	CHLOR- DANE, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	DDD, TOTAL (UG/L)
OCT 20...	1630	1040	13.0	.0	0	.00	.00	.0	.0	0	.00
MAY 12...	1100	3770	12.0	.0	2	.00	.00	.0	.0	1	.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)	ENDRI- N, TOTAL (UG/L)	ENDRI- N, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)
OCT 20...	.0	.00	.0	.00	.0	.00	.00	.0	.00	.00	.0
MAY 12...	.4	.00	.2	.00	.2	.00	.00	.1	.00	.00	.0

DATE	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)	METHYL PARA- THION, TOTAL (UG/L)	METHYL TRI- THION, TOTAL (UG/L)
OCT 20...	.00	.00	.0	.00	.0	.00	.0	.00	.00	.00
MAY 12...	.00	.00	.0	.00	.0	.00	.0	.00	.00	.00

DATE	PARA- THION, TOTAL (UG/L)	TOX- APHENE, TOTAL (UG/L)	TOXA- PHENE, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	TOTAL TRI- THION (UG/L)	2,4-D, TOTAL (UG/L)	2,4-D, TOTAL IN BOT- TOM MA- TERIAL (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...	.00	0	0	.00	.00	--	.00	--	.00	--
MAY 12...	.00	0	0	.00	.00	0	.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)
MAY 12...	.00	0	.01	0

PLATTE RIVER BASIN

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06652000 NORTH PLATTE RIVER AT ORIN, WY--Continued

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

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					
17...	1200	11.5	1010	43	117
NOV					
10...	1345	4.0	942	20	51
DEC					
06...	1140	.0	A 985	39	104
JAN					
12...	1120	.0	A 855	603	1390
FEB					
06...	1125	.0	A 1250	344	1160
MAR					
15...	1510	6.0	1100	121	359
APR					
09...	1250	10.5	986	83	221
MAY					
04...	1105	4.5	1760	384	1830
JUN					
09...	1325	20.5	932	523	1320
JUL					
06...	1110	19.5	1540	324	1350
AUG					
18...	1230	17.0	2790	526	3960
SEP					
12...	1430	15.5	1900	87	446

A-Daily mean discharge.

DATE	TIME	TEMPER- ATURE (DEG C)	STREAM- FLOW, INSTAN- TANEOUS (CFS)	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
NOV								
10...	1345	4.0	942	4	0	0	1	12
MAR								
15...	1510	6.0	1100	--	0	1	2	4

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
NOV							
10...	49	72	91	99	100	--	--
MAR							
15...	43	58	73	83	89	96	100

PLATTE RIVER BASIN

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 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, 571,000 acre-ft (704 hm³) May 22, 23, elevation, 4,639.12 ft (1,414.004 m); minimum daily, 51,100 acre-ft (63.0 hm³) Sept. 27, elevation, 4,565.92 ft (1,391.692 m).

Capacity table (elevation in feet,
and contents, in acre-feet)

4,570	63,100	4,610	274,000
4,580	98,800	4,620	358,000
4,590	144,000	4,630	459,000
4,600	202,000	4,634	505,000

CONTENTS, IN ACRE-FEET, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
INSTANTANEOUS OBSERVATIONS AT 2400

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	112000	177000	233000	286000	341000	399000	463000	453000	535000	454000	291000	125000
2	115000	179000	235000	287000	343000	401000	465000	454000	537000	448000	285000	121000
3	117000	181000	237000	289000	345000	403000	466000	455000	530000	441000	279000	117000
4	120000	182000	240000	290000	347000	404000	467000	456000	529000	435000	272000	113000
5	122000	184000	241000	291000	350000	406000	466000	459000	527000	428000	262000	109000
6	125000	186000	243000	293000	352000	409000	465000	462000	525000	420000	252000	106000
7	127000	188000	245000	295000	354000	412000	464000	466000	522000	412000	241000	102000
8	129000	189000	247000	297000	356000	415000	463000	469000	520000	405000	233000	98000
9	131000	191000	247000	299000	359000	419000	462000	473000	520000	398000	228000	94500
10	133000	193000	248000	300000	361000	422000	460000	476000	520000	391000	222000	91400
11	135000	195000	249000	301000	363000	425000	459000	480000	520000	384000	215000	88400
12	137000	196000	250000	303000	365000	427000	458000	485000	520000	376000	209000	85400
13	139000	198000	253000	305000	367000	430000	457000	491000	520000	369000	202000	82800
14	142000	200000	255000	307000	368000	432000	456000	496000	520000	362000	195000	80400
15	144000	202000	259000	310000	370000	434000	455000	500000	519000	355000	188000	77800
16	146000	204000	261000	311000	371000	436000	454000	507000	518000	348000	182000	74900
17	148000	206000	264000	313000	373000	438000	453000	522000	516000	340000	176000	71900
18	150000	208000	265000	314000	374000	440000	452000	538000	515000	337000	171000	69300
19	152000	211000	267000	316000	376000	442000	452000	552000	513000	337000	167000	67300
20	153000	211000	269000	317000	378000	443000	451000	561000	510000	340000	164000	64700
21	155000	212000	270000	319000	380000	445000	451000	567000	506000	346000	161000	62700
22	157000	213000	272000	321000	382000	447000	450000	571000	502000	344000	158000	60100
23	159000	214000	273000	323000	385000	448000	450000	571000	497000	341000	154000	57100
24	161000	217000	275000	325000	387000	450000	450000	569000	492000	337000	152000	53900
25	161000	219000	276000	327000	390000	452000	449000	565000	487000	332000	149000	52000
26	167000	222000	277000	329000	392000	453000	449000	560000	482000	326000	147000	51500
27	168000	225000	279000	331000	395000	455000	448000	557000	477000	319000	144000	51100
28	170000	227000	280000	333000	397000	457000	449000	552000	472000	314000	141000	52600
29	172000	230000	281000	335000	---	458000	449000	548000	467000	307000	137000	55300
30	174000	231000	283000	337000	---	460000	451000	544000	460000	302000	133000	58200
31	176000	---	285000	338000	---	461000	---	539000	---	296000	129000	---
MAX	176000	231000	285000	338000	397000	461000	467000	571000	535000	454000	291000	125000
MIN	112000	177000	233000	286000	341000	399000	463000	453000	535000	454000	291000	125000
(†)	4,595.72	4,604.30	4,611.37	4,617.75	4,624.02	4,630.20	4,629.25	4,636.72	4,630.12	4,612.75	4,586.85	4,568.37
(‡)	+66,000	+55,000	+54,000	+53,000	+59,000	+64,000	-10,000	+88,000	-79,000	-164,000	-167,000	-70,800

CAL YR 1977 MAX 499000 MIN 92000 †+16,000

WTR YR 1978 MAX 571000 MIN 51100 †-51,800

(†) Elevation, in feet, at end of month.

(‡) Change in contents, in acre-feet, at end of month.

PLATTE RIVER BASIN

517

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 for October to March, which are fair. 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-nine 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, 1978.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 7,090 ft³/s (201 m³/s) Aug. 7, gage height, 9.71 ft (2.960 m); minimum daily, 0.41 ft³/s (0.012 m³/s) Oct. 17.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.1	1.6	1.4	1.4	1.6	1.5	9.3	1020	3460	4730	4960	4040
2	1.8	1.2	1.6	1.7	1.6	1.1	9.3	951	2680	4900	4920	3860
3	6.8	1.1	1.6	1.8	2.0	1.2	327	1310	2090	5060	4680	3890
4	7.6	1.2	1.6	2.0	2.4	1.8	825	1170	1920	5140	5350	3890
5	7.2	1.2	1.3	1.7	2.0	2.4	1360	816	2350	5230	6990	3860
6	8.4	1.3	1.3	2.2	2.0	2.2	1530	532	2550	5470	7050	3870
7	8.8	1.3	1.7	2.2	1.7	2.5	1530	532	2520	5450	7050	3860
8	8.4	1.7	2.2	1.8	1.8	3.0	1540	532	1910	5420	5860	3760
9	7.2	1.3	1.2	1.4	1.8	5.2	1530	619	1330	5440	4490	3620
10	4.8	1.3	1.3	1.2	1.8	6.1	1530	846	667	5420	4770	3510
11	4.8	1.3	1.7	1.3	1.8	6.4	1550	1090	637	5420	5070	3430
12	7.6	1.3	2.2	1.6	1.8	6.4	1560	771	619	5400	5230	3360
13	8.0	1.3	1.8	2.0	2.0	6.4	1540	506	631	5190	5240	3180
14	6.4	1.3	2.0	1.8	1.8	6.1	1540	511	791	5040	5230	3090
15	.94	1.4	1.8	1.6	2.0	6.4	1550	316	910	5230	5120	3070
16	.46	1.6	1.6	1.4	2.2	6.1	1550	63	1050	5380	5000	2970
17	.41	1.6	1.6	1.0	2.0	6.8	1400	21	1310	5440	4860	2920
18	4.2	1.7	1.4	1.2	2.2	6.8	1160	413	1310	3260	4940	2760
19	7.2	1.8	1.4	1.0	2.0	6.8	1190	1270	1510	1160	5020	2490
20	1.2	1.8	1.6	.82	2.4	6.8	1160	2260	2540	1010	5090	2560
21	1.2	1.6	1.3	1.1	2.2	6.4	1050	2700	2920	1000	5120	2590
22	1.1	1.8	1.6	1.3	2.0	6.8	994	2910	3270	3380	5110	2780
23	1.1	2.2	1.6	1.4	2.2	6.8	1060	3860	3380	4120	5090	2970
24	1.1	1.8	1.7	1.3	2.2	7.5	1060	4220	3500	4380	4760	2920
25	1.6	1.7	1.6	1.6	2.2	7.7	1060	4360	3620	4630	4520	2400
26	1.4	2.0	1.2	1.8	2.0	7.2	958	4260	3550	5110	4500	1720
27	1.2	1.8	1.3	2.0	2.0	8.0	1070	4090	3500	5190	4490	1640
28	1.2	1.6	1.2	2.0	1.7	8.8	937	4020	3810	5060	4460	727
29	1.2	1.6	1.2	2.0	---	9.3	979	3930	4390	5070	4470	169
30	1.2	1.6	1.3	2.0	---	8.8	811	3910	4660	5060	4460	116
31	4.1	---	1.7	1.7	---	9.3	---	3910	---	4920	4260	---
TOTAL	119.71	46.0	48.0	49.32	55.4	178.6	34369.6	57719	69385	142710	158160	86022
MEAN	3.86	1.53	1.55	1.59	1.98	5.76	1146	1862	2313	4604	5102	2867
MAX	8.8	2.2	2.2	2.2	2.4	9.3	1560	4360	4660	5470	7050	4040
MIN	.41	1.1	1.2	.82	1.6	1.1	9.3	21	619	1000	4260	116
AC-FT	237	91	95	98	110	354	68170	114500	137600	283100	313700	170600
CAL YR 1977 TOTAL	503575.41			MEAN 1380	MAX 6450	MIN .41	AC-FT 998800					
WTR YR 1978 TOTAL	548862.63			MEAN 1504	MAX 7050	MIN .41	AC-FT 1089000					

PLATTE RIVER BASIN

06652800 NORTH PLATTE RIVER BELOW GLENDON RESERVOIR, WY--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1967 to current year.

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

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	TUR- BID- ITY (JTU)	OXYGEN, DIS- SOLVED (MG/L)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	HARD- NESS (MG/L AS CACO3)
NOV 08...	1230	1.8	--	--	8.0	2	8.8	K12	250
DEC 07...	1245	1.7	--	--	3.0	4	10.4	K2	210
30...	0915	1.2	--	--	.0	2	9.1	<1	260
JAN 31...	1130	1.7	--	--	2.5	1	9.5	<1	290
MAR 01...	1200	A1.5	--	--	4.0	2	12.4	<1	290
28...	1015	8.4	--	--	5.0	1	6.5	<1	300
MAY 09...	1330	697	--	--	7.0	3	11.8	<1	530
JUN 06...	1145	2580	720	8.2	11.0	3	7.8	K2	250
JUL 18...	1220	2800	780	8.2	18.0	5	5.6	<1	240
AUG 15...	1230	5120	750	8.3	20.0	4	6.7	<1	230
SEP 12...	1430	3380	700	8.3	19.0	8	6.3	--	240

A-Daily mean discharge.

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

DATE	HARD- NESS, NONCAR- BONATE (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)	BICAR- BONATE (MG/L AS HCO3)	CAR- BONATE (MG/L AS CO3)	ALKA- LINITY (MG/L AS CACO3)
NOV 08...	86	60	25	66	1.8	5.5	200	0	160
DEC 07...	46	61	15	62	1.8	1.7	200	0	160
30...	88	65	24	71	1.9	4.8	210	0	170
JAN 31...	120	70	27	71	1.8	4.5	210	0	170
MAR 01...	120	72	26	73	1.9	4.7	210	0	170
28...	130	72	29	69	1.7	4.0	210	0	170
MAY 09...	370	71	21	68	1.8	3.7	190	0	160
JUN 06...	110	64	21	63	1.7	4.4	170	0	140
JUL 18...	130	62	20	67	1.9	4.6	130	0	110
AUG 15...	91	59	19	64	1.9	4.7	170	0	140
SEP 12...	100	64	21	54	1.5	2.9	170	0	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 CONSTI- TUENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)	SOLIDS, DIS- SOLVED (TONS PER DAY)	NITRO- GEN, DIS- SOLVED (MG/L AS N)	PHOS- PHORUS, TOTAL (MG/L AS P)
NOV 08...	190	16	.5	8.1	470	.64	2.2	.27	.00
DEC 07...	180	16	.5	8.5	438	.60	2.0	.43	.03
30...	210	23	.6	9.2	509	.69	1.6	.27	.01
JAN 31...	220	19	.5	9.2	523	.71	2.4	.38	.01
MAR 01...	240	20	.6	8.4	550	.75	2.2	.36	.32
28...	250	18	.6	12	497	.68	11.3	.47	.22
MAY 09...	240	9.6	.5	3.4	512	.70	964	.18	.02
JUN 06...	220	8.6	.4	.0	550	.75	3830	.52	.12
JUL 18...	250	14	.6	3.2	492	.67	3720	1.1	.04
AUG 15...	210	10	.5	5.1	460	.63	6360	.56	.04
SEP 12...	210	15	.5	9.9	458	.62	4180	.14	.03

PLATTE RIVER BASIN

519

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, 37,100 acre-ft (45.7 hm³) May 16, elevation, 4,416.43 ft (1,346.128 m); minimum daily, 2,180 acre-ft (2.69 hm³) July 25, elevation, 4,385.66 ft (1,336.749 m).

Capacity table (elevation, in feet,
and contents, in acre-feet)

4,378	807	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	4,417	38,400
4,390	3,530				

CONTENTS, IN ACRE-FEET, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
INSTANTANEOUS OBSERVATIONS AT 2400

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	11400	12700	13300	14000	14500	15100	16000	31200	36400	34800	3450	30700
2	11500	12700	13400	14000	14500	15100	16100	31200	36100	34800	3420	30600
3	11700	12700	13400	14000	14500	15100	16100	31300	35400	34700	3550	30500
4	11700	12700	13400	14000	14500	15100	17100	32000	34600	34600	3820	30700
5	11700	12800	13500	14000	14600	15100	19400	32100	33900	34200	9290	30800
6	11800	12800	13500	14000	14600	15200	21600	31700	34100	34400	14600	30900
7	11900	12900	13500	14100	14600	15200	22900	31100	35100	34300	19900	31100
8	12000	12900	13500	14100	14600	15200	23800	30300	35900	34300	23800	31200
9	12100	12900	13500	14100	14700	15200	24300	29700	36200	34500	23400	31000
10	12100	12900	13500	14100	14700	15300	25000	29400	36300	34600	23300	30800
11	12100	12900	13600	14100	14700	15300	25600	30100	35800	34700	23700	30400
12	12200	12900	13600	14200	14700	15400	26500	31700	35300	34700	24400	30100
13	12200	12900	13600	14200	14700	15400	27400	32200	34900	34500	25100	29800
14	12300	12900	13700	14200	14700	15500	28300	33900	34700	33700	25700	29100
15	12300	12900	13700	14200	14700	15500	29200	36300	34800	33100	26100	28500
16	12400	12900	13700	14200	14800	15600	30100	37100	34700	33300	26400	27800
17	12400	12900	13700	14300	14800	15600	30900	37000	34800	32600	26600	27200
18	12400	13000	13800	14300	14800	15600	31200	35400	34700	30000	26700	26600
19	12500	13100	13800	14300	14800	15700	31200	34400	34100	22100	27200	25300
20	12500	13100	13800	14300	14800	15700	31300	33400	34100	14300	27800	24200
21	12500	13100	13800	14300	14800	15700	31300	33800	34000	7980	28500	23200
22	12500	13100	13800	14300	14800	15700	31200	33300	34200	4070	29300	22500
23	12600	13100	13900	14300	14900	15800	31200	34400	34300	3070	30100	22300
24	12600	13100	13900	14400	14900	15900	31200	35600	34400	2450	30600	22300
25	12600	13100	13900	14400	14900	15800	31300	36500	34500	2180	30500	22600
26	12600	13300	13900	14400	15000	15900	31200	36900	34500	2590	30300	21800
27	12600	13200	13900	14400	15000	15900	31500	36800	34000	3200	30000	22200
28	12700	13200	13900	14400	15100	15900	31600	36600	33200	3380	29800	22100
29	12700	13300	13900	14400	---	16000	31500	36400	33800	3490	29800	20500
30	12700	13300	13900	14400	---	16000	31100	36100	34800	3600	29900	19000
31	12700	---	14000	14500	---	16000	---	36400	---	3530	30400	---
MAX	12700	13300	14000	14500	15100	16000	31600	37100	36400	34800	30600	31200
MIN	11400	12700	13300	14000	14500	15100	16000	29400	33200	2180	3420	19000

(†) 4,402.55 4,403.05 4,403.54 4,403.94 4,404.36 4,405.04 4,413.60 4,416.08 4,415.35 4,389.71 4,413.25 4,407.00
(‡) +1,300 +600 +700 +500 +600 +900 +15,100 +5,300 -1,600 -31,270 +26,870 -11,400

CAL YR 1977 MAX 36500 MIN 1770 †+9,090

WTR YR 1978 MAX 37100 MIN 2180 †+7,600

(†) Elevation, in feet, at end of month.

(‡) Change in contents, in acre-feet, at end of month.

PLATTE RIVER BASIN

06656000 NORTH PLATTE RIVER BELOW GUERNSEY RESERVOIR, WY

LOCATION.--Lat 42°16'50", long 104°45'15", in SE4SE4 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 500 ft³/s (14.2 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.--Forty 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, 5,630 ft³/s (159 m³/s) July 16, 17, 18, gage height, 6.34 ft (1.932 m); minimum daily, 5.7 ft³/s (0.161 m³/s) Oct. 17.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	12	18	9.8	8.5	9.2	12	10	949	3710	4510	5000	4090
2	11	18	9.8	8.5	9.3	11	10	945	3120	4700	4960	3980
3	9.2	18	9.8	9.2	10	11	9.6	942	2680	4930	4790	3970
4	7.3	18	9.5	9.2	11	11	11	944	2510	5070	4530	3910
5	7.8	18	8.9	9.2	9.3	11	16	928	2710	5150	4460	3870
6	8.5	16	9.6	9.2	9.8	11	390	880	2610	5290	4370	3860
7	9.2	16	9.5	8.5	9.8	11	711	840	2180	5330	4380	3850
8	10	13	9.2	8.5	9.8	11	1000	844	1780	5320	4440	3850
9	10	16	8.4	8.5	9.8	11	1220	852	1400	5330	4620	3850
10	10	16	8.5	7.8	14	12	1120	848	917	5300	4750	3770
11	10	17	9.0	8.5	13	12	1120	800	947	5330	4750	3720
12	10	17	9.1	8.5	12	11	1080	464	936	5280	4840	3610
13	9.0	16	9.2	8.5	12	11	1040	20	910	5360	4910	3530
14	9.0	18	9.8	8.5	11	11	1020	14	903	5420	4910	3520
15	9.0	16	10	8.5	12	11	1020	14	901	5450	4880	3500
16	7.5	16	9.8	8.2	12	11	1030	14	1010	5560	4840	3410
17	5.7	16	9.2	8.2	12	11	1030	687	1280	5580	4770	3400
18	6.2	16	9.2	8.5	12	11	1020	1980	1380	5550	4700	3300
19	14	13	9.2	8.5	12	11	1050	2420	1650	5410	4700	3280
20	16	20	9.2	8.5	12	11	1050	3040	2380	5330	4730	3220
21	16	10	9.2	9.2	12	11	1040	3030	2750	4540	4720	3100
22	16	10	9.8	9.2	12	10	1010	3240	3060	4380	4700	3140
23	16	9.8	9.2	9.2	12	10	944	3510	3220	4560	4640	3160
24	16	9.8	9.2	9.2	12	9.5	944	3860	3330	4570	4630	3030
25	16	9.8	9.2	9.2	12	8.3	941	4090	3400	4660	4630	2740
26	16	9.8	9.2	9.2	12	8.5	936	4250	3460	4830	4630	2210
27	16	9.8	9.2	8.5	12	8.9	937	4300	3630	5020	4640	1630
28	16	9.8	8.5	9.0	12	9.4	938	4280	3840	5030	4590	1290
29	16	9.8	8.5	9.2	---	9.8	938	4210	3940	5050	4530	1050
30	18	9.8	8.5	9.2	---	9.8	943	4150	4190	5050	4420	1020
31	18	---	8.5	9.1	---	9.8	---	3960	---	5010	4210	---
TOTAL	371.4	430.4	285.7	271.7	318.0	328.0	24528.6	61305	70734	157900	144670	95860
MEAN	12.0	14.3	9.22	8.76	11.4	10.6	818	1978	2358	5094	4667	3195
MAX	18	20	10	9.2	14	12	1220	4300	4190	5580	5000	4090
MIN	5.7	9.8	8.4	7.8	9.2	8.3	9.6	14	901	4380	4210	1020
AC-FT	737	854	567	539	631	651	48650	121600	140300	313200	287000	190100
CAL YR 1977	TOTAL	512170.95	MEAN	1403	MAX	5350	MIN	.61	AC-FT	1016000		
WTR YR 1978	TOTAL	557002.80	MEAN	1526	MAX	5580	MIN	5.7	AC-FT	1105000		

06656000 NORTH PLATTE RIVER BELOW GUERNSEY RESERVOIR, WY--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1947-58, 1966 to current year.

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

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	TEMPER- ATURE (DEG C)	HARD- NESS (MG/L AS CACO3)	HARD- NESS, NONCAR- BONATE (MG/L CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	BICAR- BONATE (MG/L AS HCO3)
OCT 17...	1640	A5.7	13.0	260	96	61	25	52	1.4	4.3	200
NOV 10...	1500	16	--	240	92	57	23	57	1.6	5.3	180
DEC 13...	1125	8.5	--	260	80	66	23	55	1.5	5.0	220
JAN 27...	1400	8.5	.5	280	98	69	26	55	1.4	4.3	210
FEB 14...	1520	12	1.0	280	88	74	23	60	1.6	4.5	210
MAR 09...	1420	11	7.0	260	88	68	22	55	1.5	4.7	210
APR 12...	1300	1060	--	290	130	79	23	60	1.5	4.7	200
MAY 30...	1420	4210	13.0	260	130	66	22	65	1.8	3.9	160
JUN 25...	1435	3410	19.0	260	110	70	21	61	1.6	3.9	180
JUL 16...	1555	5550	20.0	240	100	61	20	71	2.0	3.8	170
AUG 29...	1450	4520	19.5	240	92	65	20	58	1.6	4.4	180
SEP 25...	1515	2690	--	240	130	63	19	54	1.5	3.7	130

A-Daily mean discharge.

DATE	CAR- BONATE (MG/L AS CO3)	ALKA- LINITY (MG/L AS CACO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, SUM OF CONSTITUENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)	SOLIDS, DIS- SOLVED (TONS PER DAY)	NITRO- GEN, NITRATE DIS- SOLVED (MG/L AS N)	PHOS- PHORUS, TOTAL (MG/L AS P)
OCT 17...	0	160	170	15	.5	8.9	436	.59	6.7	.02	.01
NOV 10...	0	150	180	16	.5	1.0	425	.58	18.4	.00	.00
DEC 13...	0	180	180	13	.4	15	462	.63	10.6	.16	.01
JAN 27...	6	180	180	14	.6	22	480	.65	11.0	.18	.00
FEB 14...	12	190	190	16	.5	14	495	.67	16.0	.14	.21
MAR 09...	0	170	200	4.7	.5	11	463	.63	13.8	.00	.09
APR 12...	0	160	230	12	.5	6.0	510	.69	1460	.07	.11
MAY 30...	0	130	230	20	.5	6.7	500	.68	5680	.18	.00
JUN 25...	0	150	200	14	.3	6.6	465	.63	4280	.00	.02
JUL 16...	0	140	230	14	.6	3.3	490	.67	7340	.11	.02
AUG 29...	0	150	200	14	.5	7.7	459	.62	5600	.25	.03
SEP 25...	0	110	230	13	.5	7.0	455	.62	3300	.25	.01

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.

WATER-DISCHARGE RECORDS

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-76-1: 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 below 300 ft³/s (8.5 m³/s), 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-three 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.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 2,220 ft³/s (62.9 m³/s) July 21, gage height, 4.22 ft (1.286 m); minimum daily, 4.3 ft³/s (0.122 m³/s) Dec. 9.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	120	16	7.6	6.0	8.2	11	6.0	85	1370	1560	1400	710
2	74	16	7.9	5.4	7.9	6.8	6.8	83	800	1610	1370	645
3	58	15	7.6	6.2	8.6	9.3	6.8	81	326	1640	1300	636
4	49	15	6.5	7.6	11	10	6.2	81	180	1720	1170	584
5	44	15	6.8	9.0	12	12	6.2	76	226	1770	1120	528
6	42	15	6.2	9.3	12	12	7.9	87	280	1850	989	520
7	40	15	6.8	9.6	11	12	242	94	198	1880	967	506
8	36	15	6.8	6.8	9.6	12	250	87	139	1880	934	499
9	35	16	4.3	6.5	10	12	266	92	142	1840	1120	506
10	33	17	5.9	7.2	11	13	201	89	114	1810	1230	485
11	31	15	11	8.2	12	12	159	85	124	1770	1250	464
12	29	15	9.0	9.0	11	11	142	120	114	1710	1300	422
13	28	16	9.0	9.6	10	10	117	136	81	1770	1380	380
14	27	17	7.9	9.3	8.9	10	96	63	64	1820	1410	456
15	26	16	7.2	9.3	8.5	10	94	49	58	1820	1370	422
16	24	18	6.5	6.0	9.0	10	94	40	64	1860	1360	408
17	23	19	6.2	7.2	8.3	9.3	98	203	204	1910	1300	429
18	23	19	5.7	9.0	8.6	9.0	100	1220	380	1920	1160	422
19	22	13	5.4	8.2	9.0	7.2	89	1140	535	1880	1240	380
20	21	8.9	5.0	7.2	10	6.8	89	1560	790	1840	1270	394
21	20	12	4.6	7.2	14	6.8	66	1330	663	1540	1270	368
22	20	15	7.9	7.6	14	6.0	79	1670	730	1370	1200	356
23	19	12	7.6	7.9	15	6.0	69	1880	770	1320	1130	368
24	19	10	6.0	8.2	15	7.6	74	1950	820	1270	1100	368
25	18	9.3	5.4	7.2	13	8.6	78	1980	912	1290	1080	394
26	18	9.0	6.2	5.4	12	7.6	72	2000	934	1360	1070	364
27	17	9.6	6.2	7.9	12	6.0	74	2020	989	1460	1060	260
28	17	8.2	6.2	7.9	12	6.0	78	1960	1070	1440	1010	198
29	17	7.9	7.9	7.9	---	5.7	76	1890	1220	1440	956	190
30	16	7.6	7.6	8.6	---	5.4	79	1860	1360	1450	989	150
31	16	---	6.8	8.6	---	5.7	---	1680	---	1420	820	---
TOTAL	982	412.5	211.7	241.0	303.6	276.8	2821.9	25691	15657	51190	36325	12792
MEAN	31.7	13.8	6.83	7.77	10.8	8.93	94.1	829	522	1651	1172	426
MAX	120	19	11	9.6	15	13	266	2020	1370	1920	1410	710
MIN	16	7.6	4.3	5.4	7.9	5.4	6.0	40	58	1270	820	150
AC-FT	1950	818	420	478	602	549	5600	50960	31060	101500	72050	25370
CAL YR 1977	TOTAL	128852.59	MEAN	353	MAX	1890	MIN	.00	AC-FT	255600		
WTR YR 1978	TOTAL	146904.50	MEAN	402	MAX	2020	MIN	4.3	AC-FT	291400		

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.--69 years, 73.1 ft³/s (2.070 m³/s), 52,960 acre-ft/yr (65.3 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, 845 ft³/s (23.9 m³/s) June 11, gage height, 3.39 ft (1.033 m); minimum daily, 12 ft³/s (0.34 m³/s) Mar. 14.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	22	21	18	15	15	13	37	25	257	292	35	47
2	22	24	19	15	15	14	33	23	260	232	27	44
3	22	24	19	16	15	15	31	26	268	203	22	44
4	22	24	20	16	15	14	29	26	271	176	21	43
5	22	24	18	16	15	14	30	37	274	154	19	42
6	26	24	19	16	15	13	28	34	292	137	19	42
7	40	23	20	16	15	13	34	34	499	123	19	42
8	32	20	19	15	15	14	35	34	549	117	18	40
9	27	25	18	15	15	14	34	37	595	115	19	39
10	26	25	18	15	15	13	30	44	714	95	17	39
11	25	25	18	16	15	14	30	48	786	89	17	39
12	26	20	18	16	15	14	32	48	662	148	17	39
13	28	21	18	16	15	13	32	44	684	128	17	37
14	27	20	18	16	15	12	33	60	759	91	20	35
15	26	18	18	16	15	13	33	108	746	68	22	33
16	25	17	17	16	15	14	33	176	736	58	61	31
17	24	17	17	16	15	13	34	211	649	65	56	30
18	23	18	17	16	14	14	31	193	553	66	40	33
19	22	17	16	16	14	14	33	195	528	50	40	34
20	22	17	15	16	14	14	30	191	532	45	35	37
21	25	17	16	16	14	15	31	208	511	34	32	34
22	26	18	16	15	14	16	29	235	540	34	35	37
23	25	18	16	15	14	15	27	291	553	30	35	35
24	24	18	16	15	13	15	27	348	455	28	39	32
25	23	18	17	15	13	15	30	410	432	25	37	30
26	23	19	18	15	13	15	34	395	380	24	48	29
27	22	19	17	15	13	17	30	376	305	23	51	27
28	21	19	17	15	13	19	28	338	296	22	49	26
29	21	18	16	15	---	21	25	356	280	22	48	25
30	22	18	16	15	---	24	26	455	338	23	47	24
31	21	---	16	15	---	30	---	402	---	22	46	---
TOTAL	762	606	541	481	404	474	929	5408	14704	2739	1008	1069
MEAN	24.6	20.2	17.5	15.5	14.4	15.3	31.0	174	490	88.4	32.5	35.6
MAX	40	25	20	16	15	30	37	455	786	292	61	47
MIN	21	17	15	15	13	12	25	23	257	22	17	24
AC-FT	1510	1200	1070	954	801	940	1840	10730	29170	5430	2000	2120
CAL YR 1977	TOTAL	10223.5	MEAN 28.0	MAX 182	MIN 7.5	AC-FT 20280						
WTR YR 1978	TOTAL	29125.0	MEAN 79.8	MAX 786	MIN 12	AC-FT 57770						

PLATTE RIVER BASIN

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 (see page).

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, 1,970 ft³/s (55.8 m³/s) June 12; minimum daily during period of operation, 44 ft³/s (1.25 m³/s) Sept. 17, 30.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1							141	151	978	711	61	63
2							137	134	905	581	83	64
3							125	142	903	497	77	58
4							112	154	990	423	71	57
5							108	146	1070	368	63	57
6							97	150	1010	317	60	55
7							100	140	1070	286	59	54
8							116	137	1240	250	59	53
9							123	134	1260	222	60	56
10							106	155	1400	210	64	53
11							99	183	1700	192	59	54
12							108	192	1710	219	55	55
13							105	184	1540	239	60	56
14							109	223	1570	198	68	51
15							114	334	1580	164	77	51
16							111	505	1580	148	69	47
17							113	680	1560	148	86	44
18							99	643	1360	136	80	46
19							94	681	1210	115	71	55
20							98	692	1140	100	70	68
21							96	770	1080	90	63	67
22							97	809	1040	84	62	62
23							88	999	1070	80	66	62
24							82	1080	1050	76	63	62
25							88	1180	966	71	63	54
26							114	1070	902	59	62	49
27							149	1070	769	56	66	48
28							152	1000	726	54	68	46
29							138	961	686	53	67	45
30							152	1110	790	61	66	44
31							---	1180	---	62	65	---
TOTAL	---	---	---	---	---	---	3371	16989	34855	6270	2063	1636
MEAN	---	---	---	---	---	---	112	548	1162	202	66.5	54.5
MAX	---	---	---	---	---	---	152	1180	1710	711	86	68
MIN	---	---	---	---	---	---	82	134	686	53	55	44
AC-FT	---	---	---	---	---	---	6690	33700	69130	12440	4090	3250

PLATTE RIVER BASIN

525

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 except for period of no gage-height record, July 19 to Sept. 20, which are poor. Natural flow affected by diversion above station to Cache la Poudre River basin through Wilson Supply ditch (see page). 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, 178 ft³/s (5.04 m³/s) June 11, gage height, 1.86 ft (0.567 m); minimum daily during period of operation, 0.14 ft³/s (0.004 m³/s) Sept. 8-15.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1							8.4	6.7	39	13	1.4	.29
2							7.5	5.8	37	13	1.3	.29
3							6.2	6.2	34	6.0	1.1	.26
4							4.9	8.4	37	5.3	1.3	.23
5							4.9	8.1	46	5.1	1.0	.20
6							4.7	8.1	40	4.5	.91	.18
7							4.5	6.2	43	3.4	.80	.16
8							4.7	6.2	43	2.1	.70	.14
9							5.3	6.2	43	1.8	.76	.14
10							5.1	10	56	1.5	.62	.14
11							4.2	13	109	1.4	.55	.14
12							5.6	11	74	1.1	.55	.14
13							4.7	9.8	67	.91	.49	.14
14							4.5	9.8	82	1.3	.42	.14
15							4.9	11	78	2.5	.37	.14
16							4.9	13	73	2.9	.37	.16
17							4.7	34	57	3.6	.37	.16
18							4.0	38	49	3.4	.42	.16
19							3.8	45	39	3.0	.42	.18
20							3.8	47	33	3.2	.37	.20
21							3.8	47	26	3.8	.29	.23
22							3.8	37	22	3.2	.29	.55
23							3.6	32	22	2.9	.29	.80
24							3.2	29	17	2.7	.29	.70
25							3.4	34	14	2.0	.29	.70
26							3.8	64	12	1.5	.26	.62
27							4.5	51	9.8	1.4	.29	.62
28							5.1	45	8.1	1.3	.26	.62
29							6.0	39	7.8	1.1	.26	.55
30							6.7	43	9.8	1.0	.29	.55
31							---	46	---	1.3	.29	---
TOTAL	---	---	---	---	---	---	145.2	770.5	1227.5	101.21	17.32	9.53
MEAN	---	---	---	---	---	---	4.84	24.9	40.9	3.26	.56	.32
MAX	---	---	---	---	---	---	8.4	64	109	13	1.4	.80
MIN	---	---	---	---	---	---	3.2	5.8	7.8	.91	.26	.14
AC-FT	---	---	---	---	---	---	288	1530	2430	201	34	19

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 current year.

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

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	TUR- BID- ITY (JTU)	OXYGEN, DIS- SOLVED (MG/L)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	HARD- NESS (MG/L AS CACO3)
OCT									
17...	1330	31	--	--	9.0	9	9.7	210	260
NOV									
26...	0945	E40	--	--	.5	4	11.2	K1300	240
DEC									
28...	1515	21	--	--	.0	4	11.6	160	220
JAN									
25...	1640	E35	--	--	.0	4	--	300	220
FEB									
21...	1450	44	--	--	.0	1	9.2	230	210
MAR									
20...	1430	63	--	--	8.0	5	9.6	88	260
MAY									
03...	1500	E1.0	--	--	9.0	15	14.2	K16	680
28...	1630	E400	320	7.6	10.0	15	8.3	200	120
JUL									
07...	1445	148	640	7.8	20.0	25	8.8	K24	250
AUG									
08...	1430	20	1150	8.1	21.0	4	12.2	--	480
28...	1430	8.7	1250	8.0	17.5	3	9.1	K32	570
SEP									
25...	1500	7.5	1650	8.6	17.0	10	15.6	K28	730

E-Estimate.

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

DATE	HARD- NESS, NONCAR- BONATE (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)	BICAR- BONATE (MG/L AS HCO3)	CAR- BONATE (MG/L AS CO3)	ALKA- LINITY (MG/L AS CACO3)
OCT									
17...	140	61	25	31	.8	3.2	140	--	110
NOV									
26...	110	61	22	27	.8	2.8	160	--	130
DEC									
28...	100	55	21	22	.6	2.5	150	--	120
JAN									
25...	99	56	20	23	.7	2.4	150	--	120
FEB									
21...	89	52	20	24	.7	2.5	150	--	120
MAR									
20...	140	61	26	35	.9	2.5	140	--	110
MAY									
03...	470	140	79	110	1.8	5.8	250	--	210
28...	58	33	9.9	15	.6	2.9	79	0	65
JUL									
07...	130	59	24	33	.9	3.6	140	0	110
AUG									
08...	320	100	57	74	1.5	5.4	200	0	160
28...	400	120	66	80	1.5	5.9	210	0	170
SEP									
25...	530	150	86	120	1.9	8.6	240	0	200

PLATTE RIVER BASIN

527

06660100 LARAMIE RIVER AT HOWELL, WY--Continued

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

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)
OCT 17...	180	16	.5	11	397	.54	33.2	.15	.48
NOV 26...	130	16	.4	13	352	.48	38.0	.24	.53
DEC 28...	120	18	.4	13	327	.44	18.5	.30	.57
JAN 25...	140	12	.4	1.3	330	.45	31.2	.19	.71
FEB 21...	120	16	.4	12	321	.44	38.1	.12	.67
MAR 20...	180	14	.4	10	399	.54	67.9	.24	.58
MAY 03...	580	61	.9	8.3	1110	1.51	3.00	.60	1.8
28...	77	5.1	.2	13	196	.27	212	.18	.11
JUL 07...	170	17	.4	13	390	.53	156	.13	.17
AUG 08...	420	32	.7	8.7	798	1.09	43.1	.25	.74
28...	480	42	.6	9.1	909	1.24	21.4	.41	.69
SEP 25...	670	63	.7	9.9	1230	1.67	24.9	.80	2.1

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 1977 TO SEPTEMBER 1978

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	HARD- NESS (MG/L AS CACO3)	HARD- NESS, NONCAR- BONATE (MG/L CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)
OCT 17...	1210	31	--	--	7.0	280	150	66	29	38	1.0	3.0
NOV 26...	0745	E40	--	--	.0	230	99	40	32	34	1.0	2.6
DEC 28...	1400	21	--	--	.0	240	110	60	21	29	.8	2.6
JAN 25...	1515	E35	--	--	.0	210	95	56	17	27	.8	2.5
FEB 21...	1350	44	--	--	.0	240	120	58	23	48	1.3	6.3
MAR 20...	1250	63	--	--	1.0	240	130	56	25	35	1.0	2.1
MAY 03...	1445	E1.0	--	--	9.0	820	660	100	38	88	1.9	2.6
28...	1545	E400	370	7.7	12.0	120	54	36	9.4	16	.6	2.8
JUL 07...	1345	148	640	7.8	19.0	260	130	66	23	40	1.1	.2
AUG 08...	1245	20	1150	8.5	21.0	490	360	110	51	81	1.6	4.2
28...	1315	8.7	1100	8.6	18.0	410	230	87	47	64	1.4	4.5
SEP 25...	1400	7.5	1600	9.2	18.0	630	430	140	70	130	2.2	6.7

E-Estimate.

DATE	BICAR- BONATE (MG/L AS HCO3)	CAR- BONATE (MG/L AS CO3)	ALKA- LINITY (MG/L AS CACO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)	SOLIDS, DIS- SOLVED (TONS PER DAY)	NITRO- GEN, NITRATE DIS- SOLVED (MG/L AS N)	PHOS- PHORUS, TOTAL (MG/L AS P)
OCT 17...	160	0	130	180	28	.6	9.3	431	.59	36.1	.20	.28
NOV 26...	160	0	130	150	18	.5	12	364	.50	--	.38	.39
DEC 28...	160	0	130	130	18	.5	13	356	.48	20.2	.47	.37
JAN 25...	140	0	120	120	20	.5	13	330	.45	--	.27	.64
FEB 21...	150	0	120	180	30	.4	10	432	.59	51.3	.95	.55
MAR 20...	130	0	110	190	14	.4	11	392	.53	66.7	.23	.82
MAY 03...	200	0	160	420	16	.6	.0	766	1.04	2.07	.45	.11
28...	80	0	66	78	6.4	.4	11	242	.33	--	.38	.24
JUL 07...	160	0	140	180	7.1	.6	15	412	.56	165	.20	.10
AUG 08...	160	0	130	470	33	.8	2.5	833	1.13	45.0	.00	.26
28...	220	0	180	310	35	.8	3.0	662	.90	15.6	.02	.46
SEP 25...	240	0	200	560	62	.9	.0	1090	1.48	22.1	.00	.40

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, 1,340 ft³/s (37.9 m³/s) June 16, 25, gage height, 3.78 ft (1.152 m); minimum daily during period of operation, 27 ft³/s (0.76 m³/s) Sept. 16, 17.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1							64	58	368	778	137	40
2							57	52	372	655	133	36
3							48	48	414	633	126	36
4							42	50	520	560	118	36
5							42	49	505	505	108	36
6							39	47	490	454	100	34
7							43	61	560	432	102	31
8							46	73	628	414	97	30
9							47	81	650	404	97	29
10							40	76	820	396	89	30
11							39	60	1120	396	82	32
12							42	67	980	468	79	34
13							40	58	958	404	93	33
14							43	60	1080	360	95	32
15							46	78	1080	345	93	30
16							43	114	1170	308	78	27
17							42	163	1140	326	65	27
18							38	189	950	312	64	31
19							39	178	887	281	65	39
20							37	133	820	284	58	49
21							38	146	808	261	55	52
22							34	156	887	233	54	52
23							33	203	972	189	52	47
24							32	249	1050	168	49	44
25							34	294	1170	158	50	39
26							39	308	1080	168	50	36
27							46	341	808	158	48	34
28							48	315	790	149	44	33
29							50	318	683	166	44	30
30							57	372	748	184	44	29
31							---	380	---	149	41	---
TOTAL	---	---	---	---	---	---	1288	4777	24508	10698	2410	1068
MEAN	---	---	---	---	---	---	42.9	154	817	345	77.7	35.6
MAX	---	---	---	---	---	---	64	380	1170	778	137	52
MIN	---	---	---	---	---	---	32	47	368	149	41	27
AC-FT	---	---	---	---	---	---	2550	9480	48610	21220	4780	2120

06661500 LITTLE LARAMIE RIVER AT TWO RIVERS, WY

LOCATION.--Lat 41°28'07", long 105°43'56", in SE4SE4SE4 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.

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

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	HARD- NESS (MG/L AS CACO3)	HARD- NESS, NONCAR- BONATE (MG/L CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)
OCT												
17...	1030	E.80	--	--	6.0	190	51	45	18	21	.7	2.3
NOV												
26...	0700	E1.2	--	--	.0	240	76	59	23	31	.9	2.3
DEC												
28...	1215	E.30	--	--	.0	300	87	75	28	47	1.2	2.6
JAN												
25...	1430	E1.0	--	--	.0	250	70	71	16	51	1.4	2.8
FEB												
21...	1115	2.3	--	--	.0	450	290	65	21	45	1.2	2.5
MAR												
20...	1100	E8.0	--	--	.0	220	97	47	24	47	1.4	3.2
MAY												
03...	1410	E3.8	--	--	9.0	520	340	68	22	50	1.3	2.0
28...	1500	29	630	8.2	13.0	230	82	63	22	45	1.2	2.3
JUL												
07...	1205	207	340	8.0	16.0	150	11	38	13	18	.6	.2
AUG												
08...	1140	60	260	8.1	19.0	110	12	29	9.6	12	.5	1.1
28...	1150	11	300	7.9	15.0	120	5	31	9.6	14	.6	2.1
SEP												
25...	1340	14	360	8.3	14.5	140	17	36	11	17	.6	1.6

E-Estimate.

DATE	BICAR- BONATE (MG/L AS HCO3)	CAR- BONATE (MG/L AS CO3)	ALKA- LINITY (MG/L AS CACO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, SUM OF CONSTITU- ENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)	SOLIDS, DIS- SOLVED (TONS PER DAY)	NITRO- GEN, NITRATE DIS- SOLVED (MG/L AS N)	PHOS- PHORUS, TOTAL (MG/L AS P)
OCT												
17...	170	0	140	73	7.4	.4	7.9	259	.35	.56	.00	.01
NOV												
26...	200	0	160	120	7.5	.4	9.1	350	.48	1.13	.00	.00
DEC												
28...	260	0	210	160	16	.5	12	469	.64	.38	.05	.00
JAN												
25...	220	0	180	140	23	.5	20	436	.59	--	.02	.00
FEB												
21...	190	0	160	150	24	.4	8.6	410	.56	2.55	.11	.01
MAR												
20...	150	0	120	160	18	.4	12	366	.50	--	.00	.09
MAY												
03...	220	0	180	180	5.3	.6	3.8	440	.60	4.51	.02	.01
28...	180	0	140	150	24	.6	11	407	.55	31.9	.02	.02
JUL												
07...	170	0	140	37	1.8	.3	7.6	200	.27	112	.07	.02
AUG												
08...	120	0	98	30	3.7	.2	.4	143	.19	23.2	.00	.06
28...	140	0	120	30	3.3	.3	.0	158	.21	4.69	.05	.09
SEP												
25...	150	0	120	49	4.4	.3	.0	191	.26	7.22	.00	.01

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 trans-basin 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.--6 years, 150 ft³/s (4.248 m³/s), 108,700 acre-ft/yr (134 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,630 ft³/s (46.2 m³/s) June 19, 1973, gage height, 6.72 ft (2.048 m); maximum gage height, 8.40 ft (2.560 m) Apr. 22, 1973 (backwater from ice jam); minimum daily discharge, 0.86 ft³/s (0.024 m³/s) Sept. 25, 1977.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,590 ft³/s (45.0 m³/s) June 19, gage height, 6.57 ft (2.003 m); minimum daily, 2.2 ft³/s (0.062 m³/s) May 15, 1978.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.5	38	40	32	34	54	95	3.2	421	1030	154	20
2	2.6	39	41	30	34	54	98	3.0	466	997	141	18
3	3.0	41	42	27	34	52	103	3.2	542	985	129	17
4	3.0	43	42	27	34	53	105	3.5	626	913	127	15
5	3.5	37	38	30	35	53	83	3.2	591	785	115	14
6	3.7	37	39	30	39	54	62	3.2	647	681	105	13
7	3.9	38	40	28	42	53	54	3.2	737	612	96	12
8	3.7	31	37	30	42	52	44	3.0	817	535	95	11
9	4.1	34	39	30	44	55	31	3.0	853	454	91	11
10	4.8	32	40	29	46	57	27	2.8	869	391	83	10
11	11	24	40	29	44	56	24	2.8	913	354	79	10
12	20	26	41	29	43	56	19	2.6	977	338	68	9.6
13	40	43	40	28	38	53	16	2.5	1110	338	58	9.9
14	39	52	41	28	37	50	16	2.5	1260	367	56	10
15	39	58	39	27	35	47	17	2.2	1380	370	62	11
16	40	41	39	26	35	49	16	2.2	1450	391	61	10
17	42	34	36	26	35	51	13	2.4	1480	394	55	11
18	44	35	38	25	36	54	11	2.6	1500	370	46	12
19	44	40	35	25	36	55	12	5.6	1560	351	44	11
20	46	38	35	24	37	54	10	49	1530	338	40	12
21	47	44	33	24	37	57	9.2	78	1480	325	40	14
22	50	44	34	23	39	57	6.8	69	1360	325	38	18
23	48	38	34	24	42	55	6.8	58	1230	308	35	21
24	47	36	33	24	45	65	6.8	71	1160	277	33	23
25	50	32	32	25	50	70	4.6	110	1140	233	29	21
26	52	34	32	25	56	120	3.9	179	1130	192	27	20
27	52	38	33	28	56	110	3.9	259	1150	167	26	18
28	51	36	33	27	55	108	3.7	329	1210	145	24	16
29	43	42	34	29	---	98	3.5	362	1200	138	21	15
30	39	41	35	30	---	93	3.3	412	1090	158	23	14
31	37	---	34	33	---	91	---	424	---	159	21	---
TOTAL	915.8	1146	1149	852	1140	1986	908.5	2456.7	31879	13421	2022	427.5
MEAN	29.5	38.2	37.1	27.5	40.7	64.1	30.3	79.2	1063	433	65.2	14.3
MAX	52	58	42	33	56	120	105	424	1560	1030	154	23
MIN	2.5	24	32	23	34	47	3.3	2.2	421	138	21	9.6
AC-FT	1820	2270	2280	1690	2260	3940	1800	4870	63230	26620	4010	848
CAL YR 1977 TOTAL	14596.41			40.0		302			28950			
WTR YR 1978 TOTAL	58303.50			160		1560		2.2	115600			

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, 1,570 ft³/s (44.5 m³/s) June 20, gage height, 4.76 ft (1.451 m); minimum daily during period of operation, 5.0 ft³/s (0.14 m³/s) Sept. 16.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1							99	11	446	1020	164	28
2							95	12	458	940	164	21
3							93	12	512	890	157	19
4							95	12	589	845	150	17
5							91	15	648	751	143	17
6							82	22	620	656	136	16
7							70	17	679	584	134	14
8							63	12	738	512	130	14
9							53	12	775	446	147	13
10							40	17	795	392	122	11
11							31	21	820	361	107	10
12							31	19	870	361	101	6.6
13							31	18	945	361	95	7.3
14							28	14	1060	372	89	6.6
15							25	14	1200	403	87	5.5
16							26	16	1310	414	87	5.0
17							22	22	1390	426	86	7.3
18							17	45	1440	422	80	16
19							24	61	1490	400	75	11
20							22	71	1540	392	63	12
21							19	119	1540	382	58	9.5
22							15	124	1460	372	53	10
23							15	117	1330	347	50	13
24							15	111	1190	312	48	19
25							15	124	1120	270	45	21
26							12	154	1100	225	45	20
27							12	222	1100	189	43	19
28							14	312	1130	183	38	17
29							15	358	1190	159	37	15
30							13	389	1150	157	34	11
31							---	430	---	159	30	---
TOTAL	---	---	---	---	---	---	1183	2903	30635	13703	2798	411.8
MEAN	---	---	---	---	---	---	39.4	93.6	1021	442	90.3	13.7
MAX	---	---	---	---	---	---	99	430	1540	1020	164	28
MIN	---	---	---	---	---	---	12	11	446	157	30	5.0
AC-FT	---	---	---	---	---	---	2350	5760	60760	27180	5550	817

06662000 LARAMIE RIVER NEAR LOOKOUT, WY--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1976 to current year.

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

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	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)	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 17...	0915	37	3.5	.0	0	.00	.00	.0	.0	0	.00
MAY 24...	1230	111	16.0	.0	0	.00	.00	.0	.0	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- FLORIN, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	ENDU- SULFAN, TOTAL (UG/L)	ENDRIN, TOTAL (UG/L)	ENDRIN, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)
OCT 17...	.0	.00	.0	.00	.0	.00	.00	.0	.00	.00	.0
MAY 24...	.0	.00	.0	.00	.0	.00	.00	.0	.00	.00	.0

DATE	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)	METHYL PARA- THION, TOTAL (UG/L)	METHYL TRI- THION, TOTAL (UG/L)
OCT 17...	.00	.00	.0	.00	.0	.00	.0	.00	.00	.00
MAY 24...	.00	.00	.0	.00	.0	.00	.0	.00	.00	.00

DATE	PARA- THION, TOTAL (UG/L)	TOX- APHENE, TOTAL (UG/L)	TOXA- PHENE, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	TOTAL TRI- THION (UG/L)	2,4-D, TOTAL (UG/L)	2,4-D, TOTAL IN BOT- TOM MA- TERIAL (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 17...	.00	0	0	.00	.01	--	.00	--	.00	--
MAY 24...	.00	0	0	.00	.08	0	.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)
MAY 24...	.00	0	.00	0

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 fair. 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, 100 ft³/s (2.83 m³/s) July 20, gage height, 2.81 ft (0.856 m), from rating curve extended above 60 ft³/s (1.70 m³/s) on basis of slope-conveyance study; minimum daily during period of operation, 1.9 ft³/s (0.054 m³/s) Sept. 11.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1							6.6	8.0	34	5.8	5.1	3.3
2							10	7.6	34	5.3	18	2.9
3							10	7.8	30	5.1	11	2.7
4							7.6	8.5	32	4.9	8.5	2.6
5							7.3	9.0	28	4.7	7.3	2.6
6							7.6	12	27	6.8	6.4	2.4
7							8.0	12	25	8.0	6.2	2.4
8							8.3	15	25	8.0	5.8	2.2
9							9.4	20	23	8.0	6.0	2.0
10							8.8	33	20	8.3	5.6	2.0
11							7.3	55	18	8.0	5.8	1.9
12							7.1	59	17	7.8	5.8	2.3
13							7.1	52	16	7.3	5.6	2.4
14							5.1	48	15	7.1	5.6	2.6
15							5.1	45	13	6.8	5.6	2.9
16							4.9	42	9.4	6.4	5.1	2.9
17							5.3	39	10	6.0	4.9	2.7
18							5.8	58	10	6.2	4.9	3.3
19							5.3	78	9.0	5.8	4.3	3.3
20							5.3	82	8.0	13	4.0	3.4
21							6.2	76	7.6	43	4.0	3.3
22							6.6	66	7.3	11	4.0	3.1
23							6.2	56	6.8	8.8	3.8	2.9
24							5.8	52	7.1	7.8	4.0	2.7
25							4.2	47	6.8	6.6	3.8	2.6
26							4.0	42	6.6	5.6	3.6	2.6
27							4.3	39	7.3	5.3	3.3	2.6
28							4.0	42	6.6	5.1	3.3	2.6
29							4.7	38	6.0	5.1	3.4	2.6
30							6.4	36	5.8	5.1	3.6	2.4
31							---	35	---	5.1	3.4	---
TOTAL	---	---	---	---	---	---	194.3	1219.9	471.3	247.8	171.7	80.2
MEAN	---	---	---	---	---	---	6.48	39.4	15.7	7.99	5.54	2.67
MAX	---	---	---	---	---	---	10	82	34	43	18	3.4
MIN	---	---	---	---	---	---	4.0	7.6	5.8	4.7	3.3	1.9
AC-FT	---	---	---	---	---	---	385	2420	935	492	341	159

PLATTE RIVER BASIN

535

06664900 BLUEGRASS CREEK NEAR WHEATLAND, WY

LOCATION.--Lat 41°52'14", long 105°12'51", in NE¼NE¼NE¼ sec.22, T.22 N., R.70 W., Platte County, Hydrologic Unit 10180011, on right bank 150 ft (46 m) upstream from State Highway 34, 0.2 mi (0.3 km) upstream from Sybille Creek, and 18.2 mi (29.3 km) southwest of Wheatland.

DRAINAGE AREA.--139 mi² (360 km²).

PERIOD OF RECORD.--August 1958 to September 1963, October 1968 to current year (no winter records since 1972).

GAGE.--Water-stage recorder. Altitude of gage is 5,250 ft (1,600 m), from topographic map.

REMARKS.--Records fair. Most of flow during irrigation season is water released from Wheatland Reservoir No 2, capacity, 98,930 acre-ft (122 hm³), and Wheatland Reservoir No. 3, capacity, 90,870 acre-ft (112 hm³), on the Laramie River and diverted through a tunnel 15 mi (24 km) upstream. Diversions for irrigation of about 210 acres (85 km²) 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, 2,590 ft³/s (73.3 m³/s) May 9, 1973, gage height, 5.92 ft (1.804 m), from rating curve extended above 700 ft³/s (19.8 m³/s); minimum daily, 0.35 ft³/s (0.010 m³/s) Jan. 8, 1970.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of June 8, 1968, reached a discharge of about 3,400 ft³/s (96.3 m³/s), from comparison of flow at stations on Sybille Creek above and below Bluegrass Creek.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 795 ft³/s (22.5 m³/s) July 21, gage height, 3.92 ft (1.195 m); minimum daily during period of operation, 8.1 ft³/s (0.23 m³/s) Apr. 27.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1							59	22	157	302	448	400
2							55	22	166	306	476	396
3							36	18	172	310	456	396
4							30	18	187	313	460	400
5							24	19	190	306	436	400
6							24	24	181	340	420	400
7							22	24	169	416	420	395
8							22	29	172	432	412	394
9							24	27	160	420	369	392
10							24	38	157	416	356	389
11							22	94	157	420	352	387
12							22	73	160	420	352	381
13							21	43	166	460	356	358
14							22	35	163	476	356	353
15							24	31	193	468	356	325
16							24	29	184	468	356	300
17							22	32	187	468	356	287
18							18	71	187	472	356	280
19							18	102	193	472	360	253
20							18	59	199	472	360	226
21							19	48	196	490	356	181
22							18	52	199	436	352	175
23							16	43	217	396	356	169
24							14	35	223	404	348	152
25							16	30	238	416	382	143
26							11	29	275	416	404	141
27							8.1	24	299	416	400	141
28							13	24	299	432	400	118
29							18	24	299	444	400	44
30							18	24	296	440	400	26
31							---	131	---	440	400	---
TOTAL							682.1	1274	6041	12887	12011	8402
MEAN							22.7	41.1	201	416	387	280
MAX							59	131	299	490	476	400
MIN							8.1	18	157	302	348	26
AC-FT							1350	2530	11980	25560	23820	16670

LOCATION.--Lat 42°07'12", long 104°56'09", in SWxSWxSE¹ sec.19, T.25 N., R.67 W., Platte County, Hydrologic Unit 10180011, on right bank 75 ft (23 m) downstream from bridge on U.S. Highway 87, 0.8 mi (1.3 km) upstream from North Laramie River, 1.1 mi (1.8 km) southwest of Uva, and 4.6 mi (7.4 km) north of Wheatland.

PERIOD OF RECORD.--October 1973 to current year.

REMARKS.--Records poor. Natural flow of stream affected by transbasin diversions, storage reservoirs, ground-water withdrawals, diversions for irrigation of about 157,000 acres (635 km²) above station, and return flow from irrigated areas.

EXTREMES FOR PERIOD OR RECORD.--Maximum discharge, 1,250 ft³/s (35.4 m³/s) Aug. 1, 1976, gage height, 7.42 ft (2.262 m); minimum daily, 1.3 ft³/s (0.037 m³/s) Aug. 3, 1977.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 243 ft³/s (6.88 m³/s) May 12, gage height, 3.90 ft (1.189 m); minimum daily, 2.2 ft³/s (0.062 m³/s) June 26.

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5.5	13	23	22	23	33	28	17	51	7.2	43	6.9
2	12	13	25	23	25	30	35	35	48	8.0	52	6.6
3	14	13	28	25	28	28	35	28	46	8.6	77	6.3
4	16	14	27	29	32	30	35	28	67	8.0	62	5.2
5	15	13	25	32	33	33	30	26	81	6.9	51	4.7
6	15	14	24	32	32	35	30	40	85	7.4	43	4.5
7	15	15	26	30	31	36	28	58	70	7.7	41	5.0
8	16	15	23	27	29	39	24	52	77	7.7	34	6.6
9	17	14	20	26	29	41	28	48	64	7.7	31	6.3
10	16	15	23	26	30	40	31	60	55	8.6	28	5.5
11	17	15	28	26	30	37	32	153	43	11	27	5.0
12	17	15	27	26	27	35	30	214	35	11	24	5.0
13	18	15	26	24	25	35	30	154	28	7.4	22	4.5
14	18	16	26	23	24	34	28	123	21	5.7	19	5.0
15	17	16	24	23	25	34	28	105	17	6.0	16	5.2
16	14	17	24	22	27	35	29	85	12	6.9	14	5.7
17	13	18	22	22	27	34	29	85	7.2	8.0	13	6.6
18	15	18	24	23	28	33	28	192	7.2	7.7	14	11
19	15	18	22	22	29	31	27	183	8.3	8.3	18	11
20	16	15	22	23	31	31	20	160	6.6	8.9	16	14
21	15	13	22	23	34	31	19	137	5.5	16	15	12
22	14	16	24	25	36	30	19	124	6.0	38	15	13
23	13	20	27	25	36	31	20	99	5.5	34	15	14
24	13	22	26	24	38	34	20	84	3.3	17	14	14
25	13	23	23	24	35	32	20	72	2.5	11	8.0	16
26	12	24	24	24	34	31	16	62	2.2	8.9	7.7	15
27	8.0	24	24	23	34	30	14	54	3.1	7.2	7.7	15
28	8.3	23	24	22	34	30	13	59	4.5	6.3	8.0	14
29	8.6	24	24	25	---	30	12	57	4.3	7.2	8.0	13
30	11	24	24	24	---	29	13	51	5.7	9.6	8.6	14
31	12	---	24	23	---	26	---	55	---	13	7.2	---
TOTAL	429.4	515	755	768	846	1018	751	2700	871.9	326.9	759.2	270.6
MEAN	13.9	17.2	24.4	24.8	30.2	32.8	25.0	87.1	29.1	10.5	24.5	9.02
MAX	18	24	28	32	38	41	35	214	85	38	77	16
MIN	5.5	13	20	22	23	26	12	17	2.2	5.7	7.2	4.5
AC-FT	852	1020	1500	1520	1680	2020	1490	5360	1730	648	1510	537
CAL YR 1977	TOTAL	7144.9	MEAN 19.6	MAX 93	MIN 1.3	AC-FT 14170						
WTR YR 1978	TOTAL	10011.0	MEAN 27.4	MAX 214	MIN 2.2	AC-FT 19860						

LOCATION.--Lat 42°12'02", long 104°32'16", in NE₄SE₄NE₄ 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.

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."

REVISÉD 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 fair except those for October to March, which are 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.--22 years (water years 1957-78), 136 ft³/s (3.852 m³/s), 98,530 acre-ft/yr (121 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, 903 ft³/s (25.6 m³/s), May 20, gage height, 5.49 ft (1.673 m); minimum daily, 15 ft³/s (0.42 m³/s) Sept. 19-22:

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

DAY	UCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	19	34	71	64	66	82	87	74	232	74	36	26
2	19	37	79	66	69	70	87	77	277	70	57	26
3	19	39	84	72	76	63	105	102	323	68	97	26
4	19	41	83	76	86	72	128	110	302	61	105	23
5	17	43	78	80	84	82	122	113	265	55	102	20
6	17	45	74	83	82	99	113	125	258	48	89	20
7	16	47	79	80	81	115	105	146	228	47	79	20
8	16	47	72	75	79	122	97	156	203	43	72	19
9	19	47	63	70	78	128	94	162	182	43	68	19
10	19	47	72	68	78	113	92	183	172	43	63	19
11	20	48	82	71	78	108	94	281	170	43	59	17
12	21	48	81	77	75	102	97	424	165	41	55	19
13	22	48	79	77	69	94	92	628	165	39	48	20
14	23	51	77	74	64	94	92	601	158	39	43	20
15	24	50	77	71	63	94	92	538	149	36	41	20
16	24	54	74	68	66	92	89	485	149	34	39	19
17	23	57	68	68	65	94	92	440	143	30	34	17
18	27	57	70	70	68	94	94	500	140	29	29	17
19	29	57	68	68	71	94	92	828	140	29	29	15
20	30	52	62	70	73	92	89	861	140	30	29	15
21	27	47	58	72	76	92	87	804	143	70	29	15
22	27	54	61	73	79	92	84	705	149	50	32	15
23	29	65	72	72	87	92	82	546	137	45	32	16
24	30	70	68	70	92	94	82	399	131	55	30	17
25	30	71	64	69	88	100	79	360	122	52	30	21
26	30	73	64	68	88	100	79	355	112	47	30	23
27	30	76	64	65	91	94	79	341	102	41	30	23
28	30	73	66	64	88	94	74	310	97	36	30	23
29	30	74	66	66	---	92	72	310	89	34	30	23
30	32	74	69	65	---	89	74	265	84	34	29	23
31	34	---	68	64	---	87	---	243	---	32	29	---
TOTAL	752	1626	2213	2196	2160	2930	2745	11472	5127	1398	1505	596
MEAN	24.3	54.2	71.4	70.8	77.1	94.5	91.5	370	171	45.1	48.5	19.9
MAX	34	76	84	83	92	128	128	861	323	74	105	26
MIN	16	34	58	64	63	63	72	74	84	29	29	15
AC-FT	1490	3230	4390	4360	4280	5810	5440	22750	10170	2770	2990	1180
CAL YR 1977	TOTAL	23177	MEAN	63.5	MAX	438	MIN	16	AC-FT	45970		
WTR YR 1978	TOTAL	34720	MEAN	95.1	MAX	861	MIN	15	AC-FT	68870		

PLATTE RIVER BASIN

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 1977 TO SEPTEMBER 1978

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	TUR- BID- ITY (JTU)	OXYGEN, DIS- SOLVED (MG/L)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	HARD- NESS (MG/L AS CAC03)
NOV									
08...	1030	46	760	--	4.0	8	10.8	K34	330
DEC									
07...	1030	A79	760	--	.0	7	11.5	K16	330
30...	0730	A69	850	--	.0	4	11.8	22	360
JAN									
31...	0930	A64	840	--	.0	3	10.5	K4	370
MAR									
01...	1015	89	810	--	.0	3	12.2	K8	330
28...	0830	94	750	--	9.0	8	10.2	29	320
MAY									
09...	1115	183	780	--	10.0	20	11.4	65	550
JUN									
06...	1000	258	480	8.0	14.0	40	8.8	K350	180
JUL									
18...	1010	29	850	8.0	18.0	3	9.3	130	300
AUG									
15...	1030	41	790	8.0	15.0	7	7.5	K24	280
SEP									
12...	1230	19	780	8.2	15.0	2	10.3	--	300

A-Daily mean discharge.

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

DATE	HARD- NESS, NONCAR- BONATE (MG/L 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)	BICAR- BONATE (MG/L AS HCO3)	CAR- BONATE (MG/L AS CO3)	ALKA- LINITY (MG/L AS CAC03)
NOV									
08...	100	90	26	63	1.5	5.6	280	0	230
DEC									
07...	67	92	27	61	1.4	1.3	320	0	260
30...	97	100	27	71	1.6	5.8	320	0	260
JAN									
31...	110	96	31	63	1.4	5.1	320	0	260
MAR									
01...	100	91	26	61	1.5	5.3	280	0	230
28...	99	81	28	54	1.3	4.7	270	0	220
MAY									
09...	340	73	23	59	1.5	5.4	260	0	220
JUN									
06...	32	50	14	29	.9	3.6	180	0	150
JUL									
18...	87	86	20	61	1.5	5.4	260	0	210
AUG									
15...	50	83	19	56	1.4	5.5	280	0	230
SEP									
12...	79	87	21	61	1.5	5.8	270	0	220

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, NITRATE DIS- SOLVED (MG/L AS N)	PHOS- PHORUS, TOTAL (MG/L AS P)
NOV									
08...	190	21	.6	32	573	.78	71.2	.70	.00
DEC									
07...	170	22	.6	32	561	.76	120	.95	.00
30...	200	28	.7	35	625	.85	116	1.4	.00
JAN									
31...	190	23	.7	35	609	.83	105	1.5	.01
MAR									
01...	190	23	.6	27	568	.77	137	.79	.22
28...	190	20	.6	8.9	518	.70	131	.45	.09
MAY									
09...	180	9.6	.6	18	499	.68	247	.59	.02
JUN									
06...	75	6.4	.3	15	380	.52	265	.43	.23
JUL									
18...	200	17	.6	13	537	.73	42.0	.90	.06
AUG									
15...	170	13	.6	23	511	.70	56.6	.23	.04
SEP									
12...	190	18	.5	24	541	.74	27.8	.25	.02

PLATTE RIVER BASIN

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06670500 LARAMIE RIVER NEAR FORT LARAMIE, WY--Continued

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

DATE	TIME	PCB, TOTAL (UG/L)	PCB, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	NAPH- THA- LENES, POLY- CHLOR. TOTAL (UG/L)	ALDRIN, TOTAL (UG/L)	ALDRIN, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	CHLOR- DANE, TOTAL (UG/L)	CHLOR- DANE, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	DDD, TOTAL (UG/L)	DDD, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	DDE, TOTAL (UG/L)
MAY 09...	1115	.0	0	.00	.00	.0	.0	0	.00	.1	.00
SEP 12...	1230	.0	0	.00	.00	.0	.0	0	.00	.1	.00

DATE	DDE, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	DDT, TOTAL (UG/L)	DDT, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	DI- AZINON, TOTAL (UG/L)	DI- ELDRIN TOTAL (UG/L)	DI- ELDRIN, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	ENDO- SULFAN, TOTAL (UG/L)	ENDRIN, TOTAL (UG/L)	ENDRIN, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	ETHION, TOTAL (UG/L)
MAY 09...	.1	.00	.0	.00	.00	.1	.00	.00	.0	.00
SEP 12...	.0	.00	.0	.00	.00	.0	--	.00	.0	.00

DATE	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)	METHYL PARA- THION, TOTAL (UG/L)	METHYL TRI- THION, TOTAL (UG/L)	MIREX, TOTAL (UG/L)
MAY 09...	.00	.0	.00	.0	.00	.0	.04	.00	.00	--
SEP 12...	.00	.0	.00	.0	.00	.0	.00	.00	.00	.00

DATE	PARA- THION, TOTAL (UG/L)	TOX- APHENE, TOTAL (UG/L)	TOXA- PHENE, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	TOTAL TRI- THION (UG/L)	2,4-D, TOTAL (UG/L)	2,4-D, TOTAL IN BOT- TOM MA- TERIAL (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)
MAY 09...	.00	0	0	.00	.07	0	.00	0	.00	.0
SEP 12...	.00	0	0	.00	.00	0	.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)
MAY 9...	.00	0	.00	0
SEP 12...	.00	0	.00	0

PLATTE RIVER BASIN

06670500 LARAMIE RIVER NEAR FORT LARAMIE, WY--Continued

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

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					
21...	1355	13.0	27	47	3.4
NOV					
08...	1500	5.5	46	45	5.6
DEC					
13...	1355	1.0	77	103	21
JAN					
20...	1605	.0	7.0	55	1.0
FEB					
06...	1315	1.0	86	14	3.3
MAR					
09...	1330	4.5	119	41	13
APR					
12...	1000	--	100	80	22
MAY					
11...	1550	13.0	262	278	197
JUN					
27...	1405	20.0	70	27	5.1
JUL					
29...	1455	19.0	34	59	5.4
AUG					
27...	1455	20.5	31	34	2.8
SEP					
21...	1200	14.5	24	41	2.7

DATE	TIME	TEMPER- ATURE (DEG C)	STREAM- FLOW, INSTAN- TANEOUS (CFS)	NUMBER OF SAM- PLING POINTS	BED MAT. FALL DIAM. % FINER THAN .125 MM	BED MAT. FALL DIAM. % FINER THAN .250 MM	BED MAT. FALL DIAM. % FINER THAN .500 MM
OCT							
21...	1355	13.0	27	4	0	1	10

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
OCT							
21...	22	30	40	51	64	84	100

06671000 RAWHIDE CREEK NEAR LINGLE, WY

LOCATION.--Lat 42°07'32", long 104°19'36", in SE&NE& 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, 254 ft³/s (7.19 m³/s) July 21, gage height, 5.78 ft (1.762 m); minimum daily during period of operation, 0.70 ft³/s (0.020 m³/s) Apr. 7.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1							16	21	20	7.5	45	22
2							16	21	14	7.8	56	19
3							15	22	9.3	11	58	19
4							12	23	7.5	14	49	19
5							4.1	24	6.8	15	43	22
6							.90	25	5.5	12	39	24
7							.70	27	4.7	27	38	22
8							3.8	28	4.4	21	33	21
9							6.1	28	4.4	8.6	36	22
10							5.8	28	4.4	7.5	37	25
11							5.8	28	4.7	6.8	31	28
12							5.5	28	5.0	5.5	13	27
13							5.5	28	5.2	2.6	17	27
14							3.1	30	5.0	2.2	27	24
15							3.3	32	3.8	2.2	20	23
16							7.8	33	2.8	2.2	15	23
17							9.3	37	3.1	1.7	14	26
18							13	42	7.1	5.0	16	31
19							12	44	11	9.3	18	33
20							12	39	13	28	17	33
21							14	36	13	183	17	30
22							18	35	13	75	17	32
23							19	34	9.3	61	17	29
24							22	30	7.1	43	15	26
25							17	30	7.1	33	12	24
26							19	26	7.8	21	12	25
27							19	23	8.9	13	13	24
28							19	22	8.2	13	15	21
29							19	23	6.4	19	18	30
30							19	24	6.8	25	19	27
31							---	24	---	25	19	---
TOTAL							342.70	895	229.3	707.9	796	758
MEAN							11.4	28.9	7.64	22.8	25.7	25.3
MAX							22	44	20	183	58	33
MIN							.70	21	2.8	1.7	12	19
AC-FT							680	1780	455	1400	1580	1500

LOCATION.--Lat 42°03'13", long 104°12'29", in SE4SE4NE4 sec.17, T.24 N., R.61 W., Goshen County, Hydrologic Unit 101800009, 1.5 mi (2.4 km) upstream from former discharge station, 1.5 mi (2.4 km) upstream from bridge on U.S. Highway 85, and 1.5 mi (2.4 km) southwest of Torrington.

PERIOD OF DAILY RECORD. --

INSTRUMENTATION.--Temperature recorder.

EXTREMES FOR PERIOD OF DAILY RECORD.--

EXTREMES FOR PERIOD OF OPERATION. --

WATER TEMPERATURES: Maximum, 24.5°C June 14; minimum, 5.5°C Apr. 18.

[illegible]

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, except those for August and September, which are fair. 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, 283 ft³/s (8.01 m³/s) June 23, gage height, 3.64 ft (1.109 m); minimum daily during period of operation, 5.0 ft³/s (0.14 m³/s) Apr. 8, 9, 11-16, Apr. 18 to May 3.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1							7.4	5.0	32	64	56	90
2							7.4	5.0	30	56	66	87
3							6.9	5.0	24	56	75	90
4							6.4	7.9	35	52	81	93
5							6.0	7.4	32	50	74	97
6							6.0	8.4	27	49	67	92
7							5.5	13	27	47	67	99
8							5.0	10	27	45	65	74
9							5.0	8.4	29	43	66	69
10							5.5	7.4	30	40	61	65
11							5.0	7.4	34	39	59	67
12							5.0	6.9	34	37	52	66
13							5.0	6.9	33	34	55	65
14							5.0	7.4	30	35	61	66
15							5.0	8.4	28	35	67	69
16							5.0	9.3	26	36	61	74
17							5.5	9.8	26	39	64	74
18							5.0	12	28	46	64	73
19							5.0	11	29	54	70	68
20							5.0	24	26	53	69	66
21							5.0	13	24	53	66	65
22							5.0	8.4	26	56	60	60
23							5.0	7.9	69	54	66	66
24							5.0	11	57	56	65	68
25							5.0	34	57	50	65	67
26							5.0	16	48	51	67	60
27							5.0	18	42	49	72	47
28							5.0	24	41	48	79	40
29							5.0	24	68	50	76	37
30							5.0	24	92	51	82	36
31							---	31	---	51	90	---
TOTAL	---	---	---	---	---	---	161.6	391.9	1111	1479	2088	2090
MEAN	---	---	---	---	---	---	5.39	12.6	37.0	47.7	67.4	69.7
MAX	---	---	---	---	---	---	7.4	34	92	64	90	99
MIN	---	---	---	---	---	---	5.0	5.0	24	34	52	36
AC-FT	---	---	---	---	---	---	321	777	2200	2930	4140	4150

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, 233 ft³/s (6.60 m³/s) June 17, gage height, 2.82 ft (0.860 m); minimum daily during period of operation, 5.2 ft³/s (0.15 m³/s) May 24.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1							7.0	10	25	43	68	74
2							7.0	10	23	44	83	73
3							6.7	10	27	44	94	72
4							6.4	12	40	44	85	70
5							6.1	11	41	37	86	76
6							5.8	14	44	52	91	74
7							5.8	16	64	54	92	74
8							5.8	9.6	69	48	80	69
9							6.1	7.7	68	44	73	71
10							6.1	6.7	58	48	65	76
11							6.1	6.7	40	52	63	89
12							5.5	6.4	37	48	58	86
13							5.5	6.4	40	43	53	77
14							5.8	6.4	37	44	61	79
15							6.1	6.1	32	37	55	75
16							6.1	6.1	40	39	50	69
17							7.7	6.4	71	40	44	78
18							7.7	9.2	41	36	60	75
19							7.4	7.0	40	41	61	68
20							7.7	6.4	37	65	61	74
21							8.5	6.4	37	73	63	68
22							9.2	6.4	33	86	61	60
23							9.2	5.8	65	78	58	61
24							10	5.2	41	73	54	64
25							9.2	9.2	52	75	54	59
26							9.2	16	48	68	54	50
27							9.6	31	48	60	57	36
28							10	37	45	59	61	20
29							9.6	40	51	64	63	15
30							9.6	32	50	59	70	12
31							---	25	---	61	73	---
TOTAL	---	---	---	---	---	---	222.5	388.1	1344	1659	2051	1944
MEAN	---	---	---	---	---	---	7.42	12.5	44.8	53.5	66.2	64.8
MAX	---	---	---	---	---	---	10	40	71	86	94	89
MIN	---	---	---	---	---	---	5.5	5.2	23	36	44	12
AC-FT	---	---	---	---	---	---	441	770	2670	3290	4070	3860

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.

WATER-DISCHARGE RECORDS

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

GAGE.--Water-stage recorder. Altitude of gage is 4,020 ft (1,225 m), from topographic map. Prior to Nov. 6, 1929, nonrecording gage and Nov. 6, 1929, to Feb. 22, 1972, water-stage recorder at sites 0.5 mi (0.8 km) upstream at different datums.

REMARKS.--Records fair except those for January and February, which are poor. 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, 2,260 ft³/s (64.0 m³/s) May 28; maximum gage height, 3.96 ft (1.207 m) May 27, 28; minimum daily discharge, 195 ft³/s (5.52 m³/s) Jan. 31.

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

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	396	284	280	237	202	222	218	238	1810	1050	1240	971
2	401	291	280	227	210	210	218	248	1540	1190	1260	923
3	365	295	284	238	231	198	222	252	1150	1260	1280	854
4	392	295	280	248	235	205	222	266	884	1290	1270	817
5	406	295	280	252	238	218	231	273	698	1290	1200	817
6	392	291	270	255	238	222	228	299	659	1310	1130	774
7	392	288	270	255	230	231	222	331	679	1390	1050	760
8	376	291	257	241	225	252	245	335	634	1400	971	732
9	365	284	247	232	220	284	299	327	574	1340	931	725
10	356	284	255	223	235	307	331	331	534	1330	971	698
11	348	288	263	220	238	276	339	339	491	1330	1010	705
12	348	284	276	230	238	266	315	352	449	1300	1010	705
13	344	276	291	238	225	262	311	444	420	1220	1060	666
14	339	276	295	245	215	258	307	574	387	1240	1160	647
15	327	276	295	230	210	252	299	580	348	1260	1180	666
16	319	284	295	215	215	241	295	528	319	1270	1120	628
17	315	280	288	210	210	238	299	496	335	1330	1060	616
18	311	284	284	220	210	245	295	501	327	1330	1020	647
19	307	288	284	210	213	245	291	1000	415	1480	1010	640
20	307	264	270	220	217	241	291	1320	454	1520	1000	647
21	303	256	258	225	228	238	288	1690	604	1640	1000	634
22	295	276	273	235	238	238	280	1640	562	1590	1040	604
23	291	284	273	241	248	241	262	1840	643	1340	1040	598
24	288	291	269	241	255	241	258	1990	672	1240	979	586
25	284	288	262	235	248	241	252	2050	698	1180	947	592
26	280	291	252	227	238	238	248	2100	712	1150	947	610
27	276	295	245	218	241	235	252	2150	698	1160	963	562
28	276	288	242	213	235	231	252	2170	753	1150	988	501
29	273	284	255	220	---	238	252	2060	946	1180	979	475
30	273	280	258	210	---	225	222	2120	996	1200	988	444
31	280	---	255	195	---	218	---	2110	---	1230	1060	---
TOTAL	10225	8531	8386	7106	6386	7047	8044	30954	20291	40190	32864	20244
MEAN	330	284	271	229	208	240	268	999	676	1296	1060	675
MAX	406	295	295	255	255	307	339	2170	1810	1640	1280	971
MIN	273	256	242	195	202	198	218	238	319	1050	931	444
AC-FT	20280	16920	16630	14040	12670	14770	15960	61400	40250	79720	65190	40150
CAL YR 1977	TOTAL	176538	MEAN	484	MAX	1620	MIN	177	AC-FT	550200		
WIR YR 1978	TOTAL	200668	MEAN	550	MAX	2170	MIN	195	AC-FT	398000		

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 1977 TO SEPTEMBER 1978

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHUS)	PH (UNITS)	TEMPER- ATURE (DEG C)	TUR- BID- ITY (JTU)	OXYGEN, DIS- SOLVED (MG/L)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	HARD- NESS (MG/L AS CACO3)
NOV									
08...	0830	299	840	--	3.5	2	11.0	K20	280
DEC									
07...	0830	280	850	--	.0	3	12.6	32	320
29...	1530	262	890	--	4.0	2	11.2	K12	300
JAN									
31...	0800	180	910	--	.0	1	12.3	K4	310
MAR									
01...	0845	212	740	--	.0	4	10.3	K9	285
27...	1700	235	900	--	15.0	10	10.3	--	280
MAY									
09...	0810	319	900	--	6.0	15	10.4	K300	520
JUN									
06...	0815	616	750	8.0	13.0	10	8.5	K370	250
JUL									
18...	0810	1370	840	8.3	17.5	20	8.0	K300	230
AUG									
15...	0820	1200	800	8.3	15.0	20	8.4	170	250
SEP									
12...	0840	685	800	8.3	11.5	20	8.6	--	270

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

DATE	HARD- NESS, NUNCAR- BONATE (MG/L CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	BICAR- BONATE (MG/L AS HCO3)	CAR- BONATE (MG/L AS CO3)	ALKA- LINITY (MG/L AS CACO3)
NOV									
08...	42	78	21	100	2.6	7.6	290	0	240
DEC									
07...	66	81	21	83	2.1	8.1	310	0	250
29...	47	85	21	110	2.8	7.0	290	9	250
JAN									
31...	56	66	35	95	2.4	7.4	310	0	250
MAR									
01...	39	91	14	120	3.1	7.5	300	0	250
27...	26	76	21	110	2.9	8.1	310	0	250
MAY									
09...	290	73	19	97	2.6	6.1	280	0	230
JUN									
06...	53	69	19	66	1.8	5.2	240	0	200
JUL									
18...	77	60	20	72	2.1	5.4	180	3	150
AUG									
15...	78	69	18	70	1.9	5.8	210	0	170
SEP									
12...	73	74	20	74	2.0	4.7	240	0	190

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, NITRATE DIS- SOLVED (MG/L AS N)	PHOS- PHORUS, TOTAL (MG/L AS P)
NOV									
08...	230	21	.5	25	606	.82	489	2.3	.00
DEC									
07...	180	22	.6	29	588	.80	445	2.0	.00
29...	220	24	.6	28	660	.90	467	2.5	.01
JAN									
31...	210	23	.4	30	631	.86	307	2.5	.00
MAR									
01...	230	27	.5	25	671	.91	384	1.8	.31
27...	230	20	.5	27	650	.88	412	1.5	.15
MAY									
09...	220	11	.6	20	593	.81	511	1.8	.04
JUN									
06...	150	21	.4	1.2	580	.79	965	1.0	.08
JUL									
18...	230	13	.6	5.4	501	.68	1850	.56	.05
AUG									
15...	220	13	.6	9.9	510	.69	1650	.72	.10
SEP									
12...	200	18	.6	14	529	.72	978	1.2	.05

PLATTE RIVER BASIN

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06674500 NORTH PLATTE RIVER AT WYOMING-NEBRASKA STATE LINE--Continued

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

DATE	TIME	TEMPER- ATURE (DEG C)	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SED1- MENT, SUS- PENDE (MG/L)	SEDI- MENT DIS- CHARGE, SUS- PENDE (T/DAY)
OCT					
21...	1550	13.0	303	34	28
NOV					
08...	1645	5.0	292	45	35
DEC					
14...	0850	5.0	297	31	25
JAN					
21...	0935	.0	224	75	45
FEB					
06...	1515	3.0	235	20	13
MAR					
09...	1600	11.0	272	110	81
APR					
11...	1755	--	339	122	112
17...	1030	8.0	280	58	44
MAY					
11...	1300	14.0	392	78	83
JUN					
27...	1745	22.5	207	183	102
JUL					
29...	1620	21.5	1190	294	945
AUG					
27...	1650	15.5	953	127	327
SEP					
29...	1530	15.5	467	95	120

DATE	TIME	TEMPER- ATURE (DEG C)	STREAM- FLOW, INSTAN- TANEOUS (CFS)	NUMBER OF SAM- PLING POINTS	BED MAT. FALL DIAM. % FINER THAN .125 MM	BED MAT. FALL DIAM. % FINER THAN .250 MM	BED MAT. FALL DIAM. % FINER THAN .500 MM
OCT							
21...	1550	13.0	303	4	0	1	19
APR							
17...	1030	8.0	280	30	0	8	31

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
OCT							
21...	42	60	81	93	96	97	100
APR							
17...	66	82	93	100	--	--	--

PLATTE RIVER BASIN

06675850 HORSE CREEK NEAR JOHNSON RANCH, NEAR LA GRANGE, WY

LOCATION.--Lat 41°34'33", long 104°08'44", in SE¼NW¼NW¼ sec.36, T.19 N., R.61 W., Goshen County, Hydrologic Unit 10180012, on right bank 0.8 mi (1.3 km) downstream from culvert on farm road at Johnson ranch, 4.0 mi (6.4 km) southeast of La Grange, and 10.8 mi (17.4 km) north of Albin.

DRAINAGE AREA.--595 mi² (1,540 km²).

PERIOD OF RECORD.--March to September 1978.

GAGE.--Water-stage recorder. Altitude of gage is 4,650 ft (1,417 m), from topographic map.

REMARKS.--Records good except those for July to September, which are poor.

EXTREMES FOR CURRENT YEAR.--Maximum discharge during period of operation, 148 ft³/s (4.19 m³/s) July 31, gage height, 2.72 ft (0.829 m), from rating curve extended above 50 ft³/s (1.42 m³/s); minimum daily during period of operation, 8.7 ft³/s (0.25 m³/s) June 17-19.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1						---	30	19	13	11	17	11
2						---	29	19	13	12	15	10
3						---	31	21	13	10	14	10
4						---	31	22	17	10	13	10
5						---	30	20	23	10	12	10
6						---						
7						---	29	20	18	10	12	10
8						---	28	20	16	11	12	9.6
9						---	29	20	14	11	13	9.6
10						---	30	20	13	10	13	10
11						---	29	20	12	10	12	10
12						---	26	20	12	10	12	10
13						---	24	20	11	10	12	10
14						49	22	19	11	11	12	10
15						46	21	19	11	12	12	10
16						45	21	17	10	12	13	11
17						44	21	16	10	12	12	11
18						45	20	19	8.7	12	12	11
19						48	20	21	8.7	12	12	11
20						46	20	21	8.7	12	12	12
21						44	24	18	9.2	13	12	11
22						41	22	16	12	13	12	11
23						37	22	14	13	14	11	11
24						35	22	12	14	14	11	11
25						35	23	12	14	14	11	11
26						35	23	12	13	13	10	11
27						32	20	12	13	14	10	11
28						31	18	12	14	14	11	11
29						31	19	13	13	14	10	10
30						30	18	13	11	15	10	11
31						30	19	13	10	38	12	11
TOTAL	---	---	---	---	---	---	721	533	379.3	454	373	316.2
MEAN	---	---	---	---	---	---	24.0	17.2	12.6	14.6	12.0	10.5
MAX	---	---	---	---	---	---	31	22	23	70	17	12
MIN	---	---	---	---	---	---	18	12	8.7	10	10	9.6
AC-FT	---	---	---	---	---	---	1430	1060	752	901	740	627

06676550 HORSE CREEK AT WYCROSS 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, on right bank 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 (REVISED).--651 mi² (1,760 km²).

PERIOD OF RECORD.--October 1965 to December 1973, March to September 1978.

GAGE.--Water-stage recorder. Altitude of gage is 4,490 ft (1,369 m), from topographic map.

REMARKS.--Records good except those for period of backwater from beaver dam, Aug. 13 to Sept. 30, which are poor. Diversions above station for irrigation of about 9,000 acres (36.4 km²). Except for extreme high flow, WyCross ditch diverts all water from Bear Creek to Horse Creek 1.4 mi (2.3 km) upstream.

AVERAGE DISCHARGE.--8 years (water years 1966-73), 26.5 ft³/s (0.750 m³/s), 19,200 acre-ft/yr (23.7 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 480 ft³/s (13.6 m³/s) June 11, 1967, gage height, 6.27 ft (1.911 m); minimum daily, 0.14 ft³/s (0.004 m³/s) Aug. 29, Sept. 7, 8, 1969.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 82 ft³/s (2.32 m³/s) July 6, gage height, 3.78 ft (1.152 m); minimum daily, 0.45 ft³/s (0.013 m³/s) Sept. 8, 9, 20.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1						---	7.7	7.4	4.5	1.7	11	3.8
2						---	7.5	8.0	4.6	2.0	8.9	3.2
3						---	8.0	8.0	4.9	1.5	7.4	1.7
4						---	7.7	8.0	5.0	1.5	15	.67
5						---	7.7	8.2	7.7	1.6	9.6	.67
6						---	7.2	8.8	7.0	26	8.9	.67
7						---	7.0	10	6.2	8.9	7.2	.56
8						---	8.0	8.4	5.6	3.5	5.4	.45
9						---	7.4	6.7	5.2	2.7	3.9	.45
10						---	8.0	6.0	4.8	2.7	3.6	.56
11						---	8.0	5.4	4.5	2.6	3.9	.78
12						---	8.0	5.2	4.9	2.8	3.5	1.1
13						60	8.0	4.9	4.5	3.9	3.6	1.2
14						48	8.0	4.6	4.2	3.0	3.8	1.6
15						42	8.9	4.6	3.0	2.3	3.6	1.4
16						41	9.8	4.5	2.6	1.6	3.6	1.1
17						45	9.1	5.4	2.8	1.6	3.1	1.4
18						34	8.7	7.2	2.6	1.7	3.5	1.5
19						30	8.0	6.0	2.3	3.1	3.6	.56
20						25	7.8	6.4	2.3	11	3.8	.45
21						20	6.9	4.3	2.7	10	3.8	.56
22						19	7.5	4.3	2.8	6.2	3.8	.67
23						18	7.7	3.1	2.7	5.6	3.6	.89
24						17	7.5	3.0	2.6	4.2	3.8	1.1
25						17	7.4	3.0	2.6	2.6	3.8	1.4
26						17	6.9	3.0	2.7	2.1	3.8	1.2
27						16	6.4	3.5	2.8	2.7	3.8	.89
28						16	6.0	4.3	2.6	1.8	3.5	.78
29						11	5.8	4.2	2.2	2.0	3.9	.67
30						7.5	6.2	3.9	1.2	5.8	4.6	2.5
31						7.7	---	4.1	---	16	3.8	---
TOTAL						---	228.8	174.4	114.1	144.7	159.1	34.48
MEAN						---	7.63	5.63	3.80	4.67	5.13	1.15
MAX						---	9.8	10	7.7	26	15	3.8
MIN						---	5.8	3.0	1.2	1.5	3.1	.45
AC-FT						---	454	346	226	287	316	68

PLATTE RIVER BASIN

06676900 BEAR CREEK NEAR LA GRANGE, WY

LOCATION.--Lat 41°38'22", long 104°14'28", in SW¼NE¼SW¼ sec.6, T.19 N., R.61 W., Goshen County, Hydrologic Unit 10180012, on right bank 300 ft (91 m) upstream from bridge on State Highway 85, 4.5 mi (7.2 km) west of La Grange, 7.5 mi (12.1 km) upstream from mouth, and 10.0 mi (16.1 km) southeast of Hawk Springs.

DRAINAGE AREA.--516 mi² (1,340 km²), of which 72.4 mi² (187 km²) is probably noncontributing.

PERIOD OF RECORD.--March to September 1978.

GAGE.--Water-stage recorder. Altitude of gage is 4,600 ft (1,402 m), from topographic map.

REMARKS.--Records good except those for June and July, which are poor.

EXTREMES FOR CURRENT YEAR.--Maximum discharge during period of operation, 134 ft³/s (3.79 m³/s) July 6, gage height, 4.31 ft (1.314 m), from floodmarks; minimum daily during period of operation, 6.0 ft³/s (0.17 m³/s) June 18, 19.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1						---	13	11	7.5	7.5	20	9.6
2						---	12	11	8.1	8.0	11	8.8
3						---	13	10	9.0	9.0	10	8.5
4						---	13	10	12	8.8	15	8.2
5						---	12	10	16	20	12	7.6
6						---	12	13	14	41	11	7.3
7						---	9.9	12	13	11	11	7.0
8						---	9.0	8.2	12	9.7	11	6.9
9						---	10	7.5	12	9.1	10	6.9
10						---	12	10	11	9.7	11	7.0
11						---	12	12	11	9.3	11	7.3
12						---	11	11	10	9.0	9.7	7.4
13						---	36	11	10	9.3	10	7.4
14						---	33	11	10	9.5	10	7.7
15						---	32	14	9.3	8.5	11	7.8
16						---	32	13	8.5	8.5	9.7	7.7
17						---	30	11	13	7.0	8.7	7.6
18						---	30	11	12	6.0	8.4	7.9
19						---	23	10	13	6.0	8.6	8.0
20						---	16	10	11	6.2	8.4	8.6
21						---	11	10	9.7	6.5	9.0	8.7
22						---	11	9.6	10	8.0	10	8.8
23						---	10	9.5	10	9.0	12	8.6
24						---	13	9.1	10	9.0	12	8.4
25						---	14	9.1	9.3	8.5	12	8.3
26						---	11	9.3	9.9	9.8	12	8.4
27						---	19	8.7	9.1	9.5	12	8.5
28						---	18	8.7	9.0	9.0	11	8.6
29						---	17	8.8	8.4	8.0	10	8.5
30						---	16	8.9	8.7	7.0	17	8.8
31						---	14	---	8.5	---	30	---
TOTAL	---	---	---	---	---	---	321.6	316.1	282.1	347.4	341.5	240.8
MEAN	---	---	---	---	---	---	10.7	10.2	9.40	11.2	11.0	8.03
MAX	---	---	---	---	---	---	14	13	16	41	20	9.6
MIN	---	---	---	---	---	---	8.7	7.5	6.0	7.5	8.4	6.9
AC-FT	---	---	---	---	---	---	638	627	560	689	677	478

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, near right bank of main channel on downstream side of pier of bridge on State Highway 29, 0.5 mi (0.8 km) south of Mitchell.

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.

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, 2,070 ft³/s (58.6 m³/s) May 28, gage height, 5.03 ft (1.533 m); minimum daily, 208 ft³/s (5.89 m³/s) May 4, 5.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	807	604	545	488	430	442	430	359	1690	374	363	430
2	833	600	550	480	422	434	434	227	1520	363	418	414
3	771	604	545	480	434	414	430	211	1310	378	514	402
4	745	604	536	492	438	410	422	208	1110	374	572	414
5	776	609	536	501	438	418	426	208	897	378	519	398
6	750	618	514	505	442	426	426	217	671	513	492	363
7	760	614	514	505	434	430	426	230	628	475	459	355
8	766	623	514	501	430	475	422	230	623	471	418	359
9	755	609	514	488	434	536	463	233	642	446	351	363
10	750	618	514	484	438	661	501	269	647	438	336	362
11	730	618	523	480	442	637	523	262	595	450	329	410
12	720	618	527	497	438	623	510	262	558	406	318	442
13	720	614	532	497	430	590	510	262	519	336	300	430
14	705	618	536	497	418	563	510	370	492	293	346	454
15	695	609	554	497	418	541	501	446	438	283	402	446
16	693	614	545	475	414	527	488	430	382	283	340	454
17	686	614	527	459	414	519	480	394	394	286	305	467
18	681	604	523	471	410	519	480	402	370	300	315	475
19	681	595	519	459	414	510	471	572	367	454	322	459
20	671	568	492	459	418	501	471	844	363	572	322	446
21	656	563	480	454	418	484	467	1230	363	975	322	467
22	647	572	492	459	430	480	467	1430	333	1090	311	480
23	642	568	492	463	454	475	450	1640	390	776	315	488
24	637	577	492	463	497	471	446	1900	514	642	304	480
25	633	572	497	454	484	480	442	1970	480	563	297	554
26	623	577	488	438	463	471	434	1920	430	467	315	590
27	618	577	488	450	467	467	434	1940	394	406	311	715
28	618	563	484	446	454	459	438	2030	418	382	318	865
29	614	554	492	446	---	450	438	1990	410	378	402	980
30	614	554	497	446	---	442	434	1950	398	374	410	1000
31	609	---	497	438	---	434	---	1970	---	370	418	---
TOTAL	21606	17852	15959	14672	12223	15289	13774	26606	18346	14296	11464	14982
MEAN	697	595	515	473	437	493	459	858	612	461	370	499
MAX	833	623	554	505	497	661	523	2030	1690	1090	572	1000
MIN	609	554	480	438	410	410	422	208	333	283	297	355
AC-FT	42860	35410	31650	29100	24240	30330	27320	52770	36390	28360	22740	29720
CAL YR 1977	TOTAL	170311	MEAN	467	MAX	1580	MIN	201	AC-FT	337800		
WTR YR 1978	TOTAL	197069	MEAN	540	MAX	2030	MIN	208	AC-FT	390900		

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 1977 TO SEPTEMBER 1978

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	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)	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)
MAY 09...	0915	230	--	.0	0	.00	.00	.0	.0	0	.00
SEP 12...	1030	447	13.0	.0	0	.00	.00	.1	.0	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)	ENDRI- N, TOTAL (UG/L)	ENDRI- N, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)
MAY 09...	.1	.00	.3	.00	.0	.00	.00	.0	.00	.00	.0
SEP 12...	.0	.00	7.2	.00	.0	.00	.00	1.2	--	.00	.2

DATE	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)	METHYL PARA- THION, TOTAL (UG/L)	METHYL TRI- THION, TOTAL (UG/L)	MIREX, TOTAL (UG/L)
MAY 09...	.00	.00	.0	.00	.0	.00	.0	.00	.00	.00	--
SEP 12...	.00	.00	.0	.00	.0	.00	.0	.00	.00	.00	.00

DATE	PARA- THION, TOTAL (UG/L)	TOX- APHENE, TOTAL (UG/L)	TOXA- PHENE, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	TOTAL TRI- THION (UG/L)	2,4-D, TOTAL (UG/L)	2,4-D, TOTAL IN BOT- TOM MA- TERIAL (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)
MAY 09...	.00	0	0	.00	.00	0	.00	0	.00	.0
SEP 12...	.00	0	7	.00	.00	0	.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)
MAY 09...	.00	0	.02	0
SEP 12...	.00	0	.00	0

TRANSBASIN DIVERSIONS FROM NORTH PLATTE RIVER BASIN TO
CACHE LA POUDE RIVER BASIN IN COLORADO

The following seven diversions, which are equipped with water-stage recorders, divert water from tributaries of the North Platte River to the Cache la Poudre River or its tributaries. Records furnished by Colorado Division of Water Resources.

06745500 Cameron Pass ditch diverts water from tributaries of Michigan River in sec.10, T.6 N., R.76 W., to Joe Wright Creek (tributary to Cache la Poudre River) in sec.2, T.6 N., R.76 W.

06746000 Michigan ditch diverts water from Michigan River, headgate in sec.12, T.6 N., R.76 W., and many small tributaries and Agnes Creek (tributary to Michigan River), headgate in sec.15, T.6 N., R.76 W., to Joe Wright Creek (tributary to Cache la Poudre River) in sec.2, T.6 N., R.76 W.

06746500 Skyline ditch diverts water from West Branch Laramie River (tributary to Laramie River), headgate in sec.14, T.8 N., R.76 W., to Chambers Lake (tributary to Cache la Poudre River) in sec.31, T.8 N., R.75 W.

06747000 Laramie-Poudre tunnel diverts water from Laramie River in sec.7, T.8 N., R.75 W., and Rawah Creek (tributary to Laramie River) in sec.14, T.9 N., R.76 W., to Cache la Poudre River in sec.9, T.8 N., R.75 W.

06747200 Bob Creek ditch diverts water from Nunn Creek (tributary to Laramie River) in sec.9, T.9 N., R.75 W., to Roaring Creek (tributary to Cache la Poudre River) in sec.11, T.9 N., R.75 W.

06750000 Columbine ditch diverts water from Nunn Creek (tributary to Laramie River) in sec.3, T.9 N., R.75 W., to North Fork Cache la Poudre River (tributary to Cache la Poudre River) in sec.25, T.10 N., R.75 W.

06750500 Wilson supply ditch diverts water from Sand Creek in sec.22, T.11 N., R.75 W., and at times includes water diverted from tributaries of Deadman Creek in sec.9, T.10 N., R.75 W. Diversion is from the Laramie River basin to Sheep Creek (tributary to North Fork Cache la Poudre River) in sec.23, T.11 N., R.75 W., in the Cache la Poudre River basin. Records represent total flow diverted from the Laramie River basin by Wilson supply ditch.

REVISED RECORDS.--WSP 1310: 1945, 1947.

DIVERSIONS, IN ACRE-FEET, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

Month	06745500 Cameron Pass ditch	06746000 Michigan ditch	06746500 Skyline ditch	06747000 Laramie- Poudre tunnel	06747200 Bob Creek ditch	06750000 Columbine ditch	06750500 Wilson supply ditch
October.....	0	0	0	0	0	0	0
November.....	0	0	0	0	0	0	0
December.....	0	0	0	0	0	0	0
January.....	0	0	0	0	0	0	0
February.....	0	0	0	0	0	0	0
March.....	0	0	0	0	0	0	0
April.....	0	0	0	180	0	0	0
May.....	0	0	0	289	0	0	534
June.....	68	70	0	3,790	0	0	1,200
July.....	133	191	0	11,920	0	0	109
August.....	0	0	0	2,880	0	0	0
September.....	0	0	0	0	0	0	0
Water year 1978....	201	261	0	19,060	0	0	1,840

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	Drainage area (sq mi)	Period of Record	Annual maximum		
					Date	Gage height (feet)	Discharge (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	1961-78	10- 6-77	14.94	50
06223800	Wind River tributary No. 2 near Crowheart, WY	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	1961-78	1978		(a)
06226200	Little Dry Creek near Crowheart, WY	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	1961-78	5-18-78	1.82	21
06226300	Dry Creek near Crowheart, WY	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, 1961-78	5-18-78	5.77	127
06229700	Norkok Meadows Creek near Fort Washakie, WY	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	1965-78	7-12-78	5.69	7
06229800	Sand Draw near Fort Washakie, WY	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	1961-78	1978		(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, 1970-78	6-10-78	6.61	470
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	1965-78	8-15-78	.62	4
06234800	Bobcat Draw near Sand Draw, WY	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.	b2.89	1969, 1971-78	5-17-78	4.94	21
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, 1961-78	5- 1-78	2.55	38

See footnotes at end of table, p.

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							
06274250	Elk Creek near Basin, WY	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	1959-78	5-19-78	9.30	2,450
06277700	Twentyfour Mile Creek near Emblem, WY	Lat 44°27'32", long 108°36'30", in SE¼SW¼ 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	1960-78	5-18-78	11.84	40
06277750	Dry Creek tributary near Emblem, WY	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, 1970-78	4-28-78	4.02	42
06279020	Red Gulch near Shell, WY	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, 1970-78	5-17-78	6.33	360
06299900	Slater Creek near Monarch, WY	Lat 44°54'32", long 107°02'49", in SE¼SW¼ 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	1967-78	5-18-78	59.97	1,100
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	1961-78	5-18-78	8.75	1,800
06312795	Sanchez Creek above reservoir, near Arminto, WY	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	1970-78	5- -78 5-16-78	c16.16 14.89	22
06313020	Bobcat Creek near Edgerton, WY	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	1965-78	5-18-78	1.88	64
06313050	East Teapot Creek near Edgerton, WY	Lat 43°10'50", long 106°12'40", in SE¼NE¼ sec.16, T.37 N., R.78 W., Natrona County, on right bank about 2 miles southwest of light duty road and 16.2 miles southeast of Edgerton.	5.44	1965-78	5-18-78	2.18	250
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	1961-78	7- 7-78	8.29	580
06313630	Van Houten Draw near Buffalo, WY	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	1971-78	8-15-77 7- 7-78	d7.01 10.50	e69 678

See footnotes at end of table, p.

DISCHARGE AT PARTIAL-RECORD STATIONS AND MISCELLANEOUS SITES

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							
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.	0.69	1965-78	5-18-78	2.03	46
06255300	Poison Creek tributary near Shoshoni, WY	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	1959-78	1978		(a)
06256600	Red Creek near Arminto, WY	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	1963-78	9-18-78	7.17	110
06256700	South Bridger Creek near Lysite, WY	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	1960-78	3- -78 5-18-78	c5.84 5.48	13
06257300	Shotgun Creek tributary near Pavillion, WY	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	1961-78	1978		(a)
06265200	Sand Draw near Thermopolis, WY	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	1960-78	5-18-78	4.49	(†)
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	1961-78	5-19-78	6.11	114
06266460	Murphy Draw near Grass Creek, WY	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	1965-78	5-18-78	2.59	26
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	1964-78	5-18-78	5.29	332
*06268500	Fifteenmile Creek near Worland, WY	Lat 44°01'14", long 108°00'42", in NW¼NW¼NE¼ sec.27, T.47 N., R.93 W., Washakie County, on left bank 300 ft upstream from Bighorn Canal spillway, 2.0 miles upstream from mouth, and 2.8 miles west of Worland.	518	1951-72 [†] 1973-78	5-18-78	10.58	4,270
06269750	Nowood River tributary near Ten Sleep, WY	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	1960-78	3-10-78	4.63	<10
06274190	Nowood River tributary No. 2 near Basin, WY	Lat 44°16'42", long 107°54'33", in SE¼NE¼ 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	1965-78	4-28-78	1.02	17

See footnotes at end of table, p.

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							
06316700	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	1965-78	7- 7-78	3.01	193
06317050	Rucker Draw near Spotted Horse, WY	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	1961-78	5-18-78	8.89	87
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	1969-78	5-18-78	6.01	535
06324800	Little Powder River tributary near Gillette, WY	Lat 44°26'50", long 105°27'40", in NE¼ sec.36, T.42 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	1960-78	5-18-78	7.97	33
06324900	Cedar Draw near Gillette, WY	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	1959-78	5-18-78	6.87	230
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	1971-78	3-18-78	6.22	63
Cheyenne River basin							
06379600	Box Creek near Bill, WY	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, 1961-78	5-17-78	8.15	2,570
06382200	Pritchard Draw near Lance Creek, WY	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.	5.1	1964-78	5-18-78	4.78	360
06385400	Cottonwood Creek at Hat Creek, WY	Lat 42°56'15", long 104°21'55", in NE¼ sec.12, T.34 N., R.63 W., Niobrara County, at culvert on county road and 0.1 mile east of Hat Creek.	14.5	1972-78	3- 9-78	5.28	23
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.	47.8	1959-78	5-18-78	15.57	2,480
06388800	Blacktail Creek tributary near Newcastle, WY	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	1960-78	7-21-78	4.86	h.6
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.	.2	1970-78	5-14-70 7-25-71 4-18-72 7-21-73 4-20-74 4- 7-75 2- 9-76 8- 9-77 5-18-78	15.2 16.22 16.13 16.79 15.96 15.64 16.16 15.77 16.27	e.5 e52 e42 e155 e26 e9 e45 e14 58

See footnotes at end of table, p.

Annual maximum discharge at crest-stage partial-record stations--Continued

Station No.	Station Name	Location	Drain- age area (sq mi)	Period of Record	Annual maximum		
					Date	Gage height (feet)	Dis- charge (cfs)
Cheyenne River basin--Continued							
06427700	Inyan Kara Creek near Upton, WY	Lat 44°13'45", long 104°26'45", in S½ 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	1959-78	6-30-78	6.67	107
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	1962-78	5-18-78	1.96	(†)
06429300	Ogden Creek near Sundance, WY	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 up- stream 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	1962-78	5-18-78	1.72	49
Platte River basin							
06629150	Coal Bank Draw tributary near Walcott, WY	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	1962-78	3-23-78	6.05	40
06629200	Coal Bank Draw tributary No. 2 near Walcott, WY	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	1962-78	8-14-78	6.00	25
06629800	Coal Creek near Rawlins, WY	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	1959-78	3-22-78	16.55	48
06630200	Big Ditch tribu- tary near Hanna, WY	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	1959-78	3-23-78	15.20	h19
06631150	Third Sand Creek near Medicine Bow, WY	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 south- west of Medicine Bow.	10.8	1965-78	10-21-77	2.10	77
06634200	Sheep Creek near Marshall, WY	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	1961-78	5-17-78	8.10	1,400
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	1961-78	5-17-78	9.76	1,700
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	1965-78	6- 3-78	1.81	72

See footnotes at end of table, p.

Annual maximum discharge at crest-stage partial-record stations--Continued

Station No.	Station Name	Location	Drain- age area (sq mi)	Period of Record	Annual maximum		
					Date	Gage height (feet)	Dis- charge (cfs)
Platte River basin--Continued							
j06637550	Sweetwater River near South Pass City, WY	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; 1974-78	6-10-78	6.88	908
j06638300	West Fork Crooks Creek near Jeffrey City, WY	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	1961-78	7-21-78	4.20	29
06638350	Coal Creek near Muddy Gap, WY	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 down- stream at different datum.	6.08	1961-78	5-18-78	15.13	56
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	1960-78	5-17-78	12.24	131
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	1961-78	5-17-78	7.60	565
06642760	Stinking Creek near Alcova, WY	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	1961-78	5-17-78	7.12	1,750
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	1960-78	5-17-78	6.70	69
06644840	McKenzie Draw tributary near Casper, WY	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	1965-78	3- -78 5-18-78	c2.25 1.45	11
06646700	East Fork Dry Creek tributary near Glenrock, WY	Lat 42°47'37", long 105°49'40", in SW¼SW¼ sec.26, T.33 N., R.75 W., Converse County, at culvert on Box- elder Road and 4.9 miles southeast of Glenrock.	2.60	1961-78	8-14-78	6.94	55
06648780	Sage Creek tribu- tary near Orpha, WY	Lat 43°00'35", long 105°40'00", in NE¼NW¼ sec.18, T.35 N., R.73 W., Con- verse County, on right bank 600 ft upstream from culvert on Ross Road and about 14 miles northwest of Orpha.	1.38	1965-78	5-17-78	.40	10
06649900	North Platte River tributary near Douglas, WY	Lat 42°41'22", long 105°23'30", in SW¼NE¼ sec.5, T.31 N., R.71 W., Con- verse County, at culvert on Esterbrook Road and 4.2 miles south of Douglas.	8.53	1961-78	7-20-78	8.40	705
06651800	Sand Creek near Orin, WY	Lat 42°40'09", long 105°12'44", in NE¼SE¼ sec.11, T.31 N., R.70 W., Con- verse County, at bridge on old U.S. Highway 87 and 1.6 miles northwest of Orin.	27.8	1955, 1961-78	5-16-78	10.2	5,460
06652400	Watson Draw near Lost Springs, WY	Lat 42°45'20", long 104°57'30", in SW¼SE¼ sec.12, T.32 N., R.68 W., Con- verse 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	1960-78	5-16-78	8.81	581

See footnotes at end of table, p.

DISCHARGE AT PARTIAL-RECORD STATIONS AND MISCELLANEOUS SITES

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							
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	1962-78	5-17-78	5.37	98
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.	11.3	1965-78	7- 9-78	.80	57
06670100	Laramie River tributary near Guernsey, WY	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	1971-78	8- 1-78	4.24	16
06670985	Dry Rawhide Creek near Lingle, WY	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	1969-78	7-18-78	6.87	103
06675300	Horse Creek tributary near Little Bear, WY	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	1961-78	3- 9-78	4.78	8
06761900	Lodgepole Creek tributary near Pine Bluffs, WY	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	1960-78	8- 8-78	7.76	52
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	1960-78	7-30-78	7.10	201

† Operated as a continuous-record gaging station.

‡ Discharge not determined.

* Converted to continuous-record station June 1978.

a No evidence of flow.

b Of which 0.50 mi² is probably noncontributing.

c Backwater from ice and snow.

d Revised.

e Not previously published.

f Approximately.

g Of which 2.5 mi² is probably noncontributing.

h Estimated.

i About 0.4 ft backwater from fence.

j Water quality data is published elsewhere in this report.

Discharge measurements made at miscellaneous sites during water year 1978

Stream	Tributary to	Location	Drainage area (sq mi)	Measured previously (water years)	Measurements	
					Date	Dis-charge (cfs)
Yellowstone River basin						
Little Wind River at Fort Washakie	Wind River	Lat 43°00'37", long 108°52'52", in NE¼NW¼NE¼ sec.4, T.1 S., R.1 W., Fremont County, Wind River Indian Reservation, at bridge on U.S. Highway 287, 150 ft (45.7 m) downstream from confluence of North Fork Little Wind River and South Fork Little Wind River, and 0.5 mi (0.8 km) north of Fort Washakie post office.			10-20-77	44.3
					10-31-77	25.7
					11-30-77	72.7
					1- 5-78	59.6
					2- 6-78	52.7
					3- 8-78	47.6
					4- 3-78	39.2
					4-28-78	27.3
					5-15-78	265
					6- 6-78	464
					6-20-78	1180
					7- 7-78	665
					7-25-78	351
8-14-78	111					
8-30-78	79.6					
9-20-78	74.9					
South Tributary to Five Springs Creek near forest boundary	Bighorn River	Lat 44°47'46", long 107°57'48", in SE¼SE¼SE¼ 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		7-28-77	.69
					9-13-77	.30
					5-24-78	5.20
					6-26-78	3.54
					7-27-78	1.60
					8-23-78	1.22
South Tributary to Five Springs Creek near mouth	Bighorn River	Lat 44°47'42", long 107°58'09", in NW¼NW¼NE¼ 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		7-28-77	.74
					9-13-77	.31
					5-24-78	5.25
					6-26-78	2.90
					7-27-78	1.53
					8-23-78	.75
Jackson Creek	Little Goose Creek	Lat 44°40'38", long 107°00'45", in SE¼SE¼SE¼ sec.6, T.54 N., R.84 W., Sheridan County, 1.0 mi (1.6 km) west of Big Horn and 1.5 mi (2.4 km) upstream from mouth.	7.44		5-18-78	+810
Platte River Basin						
Hog Park Creek 06623820	Encampment River	Lat 41°02'01", long 106°51'33", in SW¼SE¼ sec.5, T.14 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.		1967-77	11- 1-77	1.62
					6- 6-78	230
					7-21-78	34.6
					8-23-78	10.0
					9-29-78	3.21
Shawnee Creek	North Platte River	Lat 42°41'33", long 105°06'38", in NE¼NE¼ sec.3, T.31 N., R.69 W., Converse County, 2.5 mi (4.0 km) upstream from U.S. Highway 20 bridge and 4.5 mi (7.2 km) northeast of Orin.	a90	1955	5-16-78	+9210
Horse Creek	North Platte River	Lat 41°36'27", long 104°09'12", in NW¼NE¼NE¼ sec.23, T.19 N., R.61 W., Goshen County, above Brown-LaGrange diversion ditch and 2.0 mi (3.2 km) south of LaGrange.			9-21-78	9.84
Brown-LaGrange Diversion Ditch	Horse Creek	Lat 41°37'20", long 104°09'10", in NW¼NE¼NE¼ sec.14, T.19 N., R.61 W., Goshen County, 65 ft (20 m) above flume and 1.2 mi (1.9 km) south of LaGrange.			9-21-78	9.85
Bear Creek	Horse Creek	Lat 41°38'15", long 104°12'56", in SW¼SW¼SE¼ sec.5, T.19 N., R.61 W., Goshen County, 25 ft (7.6 m) upstream from State Highway 151 bridge, and 2.7 mi (4.3 km) west of LaGrange.			9-21-78	8.88

See footnotes at end of table, p.

DISCHARGE AT PARTIAL-RECORD STATIONS AND MISCELLANEOUS SITES

Discharge measurements made at miscellaneous sites during water year 1978

Stream	Tributary to	Location	Drainage area (sq mi)	Measured pre- viously (water years)	Measurements	
					Date	Dis- charge (cfs)
Platte River basin--Continued						
Bear Creek	Horse Creek	Lat 41°39'42", long 104°12'47", in SE¼SW¼NE¼ sec.32, T.20 N., R.61 W., Goshen County, 500 ft (150 m) above Wycross ditch and 2.9 mi (4.7 km) northwest of LaGrange.			9-21-78	9.12
Horse Creek	North Platte River	Lat 41°42'37", long 104°13'14", in SW¼SE¼SW¼ sec.8, T.20 N., R.61 W., Goshen County, 300 ft (91 m) down- stream from county bridge and 7.0 mi (11.3 km) northwest of LaGrange.			9-21-78	4.91

† Peak flow.

‡ Operated as a continuous-record gaging station.

a Approximately.

ANALYSES OF SAMPLES COLLECTED AT MISCELLANEOUS SITES IN WYOMING

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

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 (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	HARD- NESS (MG/L AS CACO3)	HARD- NESS, NONCAR- BONATE (MG/L CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)
AUG 20...	1245	115	7.2	19.0	17	0	5.3	.9

DATE	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	BICAR- BONATE (MG/L AS HCO3)	CAR- BONATE (MG/L AS CO3)	ALKA- LINITY (MG/L AS CACO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)
AUG 20...	22	2.3	3.8	43	0	35	4.0	9.2	4.6

DATE	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, SUM OF CONSTITUENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N)	PHOS- PHORUS, TOTAL (MG/L AS P)	IRON, DIS- SOLVED (UG/L AS FE)	CARBON, ORGANIC DIS- SOLVED (MG/L AS C)
AUG 20...	74	145	.20	.01	.21	.00	20	1.9

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 (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	HARD- NESS (MG/L AS CACO3)	HARD- NESS, NONCAR- BONATE (MG/L CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)
AUG 20...	1400	140	7.2	22.0	17	0	5.5	.8

DATE	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	BICAR- BONATE (MG/L AS HCO3)	CAR- BONATE (MG/L AS CO3)	ALKA- LINITY (MG/L AS CACO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)
AUG 20...	35	3.7	4.8	54	0	44	5.2	20	5.0

DATE	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, SUM OF CONSTITUENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N)	PHOS- PHORUS, TOTAL (MG/L AS P)	IRON, DIS- SOLVED (UG/L AS FE)	CARBON, ORGANIC DIS- SOLVED (MG/L AS C)
AUG 20...	82	185	.25	.01	.79	.06	50	1.2

ANALYSES OF SAMPLES COLLECTED AT MISCELLANEOUS SITES IN WYOMING

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

YELLOWSTONE RIVER BASIN

443835110515001 MADISON RIVER NEAR MADISON JUNCTION, YNP (LAT 44 38 35 LONG 110 51 50)

DATE	TIME	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	HARD- NESS (MG/L AS CACO3)	HARD- NESS, NONCAR- BONATE (MG/L CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)
AUG 24...	1410	430	7.0	20.0	20	0	6.8	.8

DATE	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	BICAR- BONATE (MG/L AS HCO3)	CAR- BONATE (MG/L AS CO3)	ALKA- LINITY (MG/L AS CACO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)
AUG 24...	83	8.0	8.9	120	0	98	16	59	7.2

DATE	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, SUM OF CONSTITUENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N)	PHOS- PHORUS, TOTAL (MG/L AS P)	IRON, DIS- SOLVED (UG/L AS FE)	CARBON, ORGANIC DIS- SOLVED (MG/L AS C)
AUG 24...	97	338	.46	.02	.13	.03	50	2.1

443832110522801 MADISON RIVER BELOW MADISON JUNCTION, YNP (LAT 44 38 32 LONG 110 52 28)

DATE	TIME	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	HARD- NESS (MG/L AS CACO3)	HARD- NESS, NONCAR- BONATE (MG/L CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)		
AUG 24...	1425	420	6.9	20.0	22	0	7.3	.9		
DATE	TIME	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	BICAR- BONATE (MG/L AS HCO3)	CAR- BONATE (MG/L AS CO3)	ALKA- LINITY (MG/L AS CACO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)
AUG 24...	82		7.6	8.8	130	0	110	15	59	7.3
DATE	TIME	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, SUM OF CONSTITUENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N)	PHOS- PHORUS, TOTAL (MG/L AS P)	IRON, DIS- SOLVED (UG/L AS FE)	CARBON, ORGANIC DIS- SOLVED (MG/L AS C)	
AUG 24...	98		343	.47	.07	.12	.03	50	1.5	

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

YELLOWSTONE RIVER BASIN

443403110224801 YELLOWSTONE RIVER AT FISHING BRIDGE, YNP (LAT 44 34 03 LONG 110 22 48)

DATE	TIME	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	HARD- NESS (MG/L AS CACO3)	HARD- NESS, NONCAR- BONATE (MG/L CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)		
AUG 17...	1000	85	6.9	13.5	24	0	5.4	2.6		
DATE	TIME	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	BICAR- BONATE (MG/L AS HCO3)	CAR- BONATE (MG/L AS CO3)	ALKA- LINITY (MG/L AS CACO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)
AUG 17...	11		1.0	1.8	33	0	27	9.5	4.8	.6
DATE	TIME	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)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N)	PHOS- PHORUS, TOTAL (MG/L AS P)	IRON, DIS- SOLVED (UG/L AS FE)	CARBON, ORGANIC DIS- SOLVED (MG/L AS C)	
AUG 17...	12		64	.09	.01	.97	.02	30	2.4	

443446110223001 YELLOWSTONE RIVER BELOW FISHING BRIDGE, YNP (LAT 44 34 46 LONG 110 22 30)

DATE	TIME	SPE- CIFIC CON- DUCT- ANCE (MICRU- MHUS)	PH (UNITS)	TEMPER- ATURE (DEG C)	HARD- NESS (MG/L AS CACO3)	HARD- NESS, NONCAR- BONATE (MG/L AS CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)		
AUG 17...	1345	87	6.9	14.0	23	0	5.2	2.5		
DATE	TIME	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	BICAR- BONATE (MG/L AS HCO3)	CAR- BONATE (MG/L AS CO3)	ALKA- LINITY (MG/L AS CACO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)
AUG 17...	11		1.0	1.7	33	0	27	8.3	4.9	.6
DATE	TIME	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)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N)	PHOS- PHORUS, TOTAL (MG/L AS P)	IRON, DIS- SOLVED (UG/L AS FE)	CARBON, ORGANIC DIS- SOLVED (MG/L AS C)	
AUG 17...	12		63	.09	.01	.40	.02	40	3.0	

ANALYSES OF SAMPLES COLLECTED AT MISCELLANEOUS SITES IN WYOMING

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

YELLOWSTONE RIVER BASIN

445258106591301 GOOSE CREEK NEAR MOUTH, NEAR KLEENBURN, WY (LAT 44 52 58 LONG 106 59 13)

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	TEMPER- ATURE (DEG C)
AUG S29...	1105	96	750	17.0

S-Seepage run data (see Explanation of Water-Quality Records).

445700106563101 ASH CREEK AT MOUTH, NEAR ACME, WY (LAT 44 57 00 LONG 106 56 31)

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	TEMPER- ATURE (DEG C)
AUG S29...	1200	.42	1600	14.0

S-Seepage run data (see Explanation of Water-Quality Records).

445832106551401 YOUNGS CREEK NEAR MOUTH, NEAR DECKER, MT (LAT 44 58 32 LONG 106 55 14)

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	TEMPER- ATURE (DEG C)
AUG S29...	1600	8.0	810	17.0

S-Seepage run data (see Explanation of Water-Quality Records).

444732106452801 DUTCH CREEK ABOVE DOW PRONG, NEAR WYARNO, WY (LAT 44 47 32 LONG 106 45 28)

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	HARD- NESS (MG/L CACO3)	HARD- NESS, NONCAR- BONATE (MG/L CACU3)	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)
AUG S29...	0945	1.5	2600	8.2	14.5	1400	1000	230	210	200	2.3	15

S-Seepage run data (see Explanation of Water-Quality Records).

DATE	TIME	BICAR- BONATE (MG/L AS HCO3)	CAR- BONATE (MG/L AS CO3)	ALKA- LINITY (MG/L AS CACO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS AC-FT)	SOLIDS, DIS- SOLVED (TONS PER DAY)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N)
AUG 29...	520	1	430	1400	7.7	.5	8.3	2430	2330	3.17	9.44	.31	

DATE	TIME	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, DIS- SOLVED (MG/L AS P)	BORON, DIS- SOLVED (UG/L AS B)	IRON, DIS- SOLVED (UG/L AS FE)	CARBON, ORGANIC DIS- SOLVED (MG/L AS C)	CARBON, ORGANIC SUS- PENDED TOTAL (MG/L AS C)
AUG 29...		.05	.75	.80	1.1	4.9	.03	.02	370	30	14	.4

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

YELLOWSTONE RIVER BASIN

444708106452201 DOW PRONG CREEK AT MOUTH, NEAR WYARNO, WY (LAT 44 47 08 LONG 106 45 22)

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	TEMPER- ATURE (DEG C)
AUG S29...	0920	2.4	1650	14.5

S-Seepage run data (see Explanation of Water-Quality Records).

445126106520801 PRAIRIE DOG DITCH NO 13 ABOVE BATES DRAW, NEAR WAKELEY, WY (LAT 44 51 26 LONG 106 52 08)

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	TEMPER- ATURE (DEG C)
AUG S29...	1115	1.4	540	17.0

S-Seepage run data (see Explanation of Water-Quality Records).

445130106511601 PRAIRIE DOG CREEK ABOVE BATES DRAW, NEAR WAKELEY, WY (LAT 44 51 30 LONG 106 51 16)

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	HARD- NESS (MG/L AS CACO3)	HARD- NESS, NONCAR- BONATE (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)
AUG S29...	0930	52	660	7.8	14.0	330	160	74	36	18	.4	3.5

S-Seepage run data (see Explanation of Water-Quality Records).

DATE	BICAR- BONATE (MG/L AS HCO3)	CAR- BONATE (MG/L AS CO3)	ALKA- LINITY (MG/L AS CACO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, RESIDUE AT 180 DEG. C 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 TOTAL (MG/L AS N)
AUG 29...	210	0	170	180	1.6	.2	10	446	427	.58	60.4	.24

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, DIS- SOLVED (MG/L AS P)	BORON, DIS- SOLVED (UG/L AS B)	IRON, DIS- SOLVED (UG/L AS FE)	CARBON, ORGANIC DIS- SOLVED (MG/L AS C)	CARBON, ORGANIC SUS- PENDED TOTAL (MG/L AS C)
AUG 29...	.02	.52	.54	.78	3.5	.10	.03	60	30	8.2	1.6

ANALYSES OF SAMPLES COLLECTED AT MISCELLANEOUS SITES IN WYOMING

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

YELLOWSTONE RIVER BASIN

06306250 PRAIRIE DOG CREEK NEAR ACME, WY (LAT 44 59 02 LONG 106 50 21)

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	HARD- NESS (MG/L AS CACO3)	HARD- NESS, NONCAR- BONATE (MG/L CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)
AUG S29...	1200	53	1100	8.1	16.0	510	280	100	63	55	1.1	6.0

S-Seepage run data (see Explanation of Water-Quality Records).

DATE	BICAR- BONATE (MG/L AS HCO3)	CAR- BONATE (MG/L AS CO3)	ALKA- LINITY (MG/L AS CACO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, RESIDUE AT 180 DEG. C 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 TOTAL (MG/L AS N)
AUG 29...	280	0	230	370	2.8	.2	11	803	746	1.01	84.6	.30

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, DIS- SOLVED (MG/L AS P)	BORON, DIS- SOLVED (UG/L AS B)	IRON, DIS- SOLVED (UG/L AS FE)	CARBON, ORGANIC DIS- SOLVED (MG/L AS C)	CARBON, ORGANIC SUS- PENDED TOTAL (MG/L AS C)
AUG 29...	.03	.60	.63	.93	4.1	.11	.03	110	60	4.7	1.4

434145106315401 NEWLAND DITCH BELOW SEVENTYSIX DRAW, NEAR KAYCEE, WY (LAT 43 41 45 LONG 106 31 54)

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	TEMPER- ATURE (DEG C)
AUG S30...	1800	1.3	1040	21.5

S-Seepage run data (see Explanation of Water-Quality Records).

434134106315401 SUSSEX IRRIGATION CANAL AT DIVERSION, NEAR KAYCEE, WY (LAT 43 41 34 LONG 106 31 54)

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	TEMPER- ATURE (DEG C)
AUG S30...	1810	57	1040	21.5

S-Seepage run data (see Explanation of Water-Quality Records).

432912106171001 SALT CREEK BELOW SHERWOOD CREEK, NEAR MIDWEST, WY (LAT 43 29 12 LONG 106 17 10)

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	TEMPER- ATURE (DEG C)
AUG S30...	1825	33	6700	26.0

S-Seepage run data (see Explanation of Water-Quality Records).

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

YELLOWSTONE RIVER BASIN

434000106211601 SALT CREEK NEAR MOUTH, NEAR SUSSEX, WY (LAT 43 40 00 LONG 106 21 16)

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	HARD- NESS (MG/L AS CACO3)	HARD- NESS, NONCAR- BONATE (MG/L CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM AD- SORP- TION RATIO
AUG 31...	1030	30	6600	8.5	16.0	310	0	55	41	1500	37
S-Seepage run data (see Explanation of Water-Quality Records).											

DATE	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	BICAR- BONATE (MG/L AS HCO3)	CAR- BONATE (MG/L AS CO3)	ALKA- LINITY (MG/L AS CACO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SiO2)	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)
AUG 31...	22	700	12	620	930	1500	2.2	22	4270	4430	6.02

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)	NITRO- GEN, TOTAL (MG/L AS N)	NITRO- GEN, TOTAL (MG/L AS NO3)	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHORUS, DIS- SOLVED (MG/L AS P)	BORON, DIS- SOLVED (UG/L AS B)	IRON, DIS- SOLVED (UG/L AS FE)
AUG 31...	359	.25	.02	.80	.82	1.1	4.7	.19	.01	2100	20

435005106131701 POWDER RIVER ABOVE LITTLE WILLOW CREEK, NEAR SUSSEX, WY (LAT 43 50 05 LONG 106 13 17)

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	HARD- NESS (MG/L AS CACO3)	HARD- NESS, NONCAR- BONATE (MG/L CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM AD- SORP- TION RATIO
AUG 31...	1600	79	3660	8.2	20.0	560	240	120	62	580	11
S-Seepage run data (see Explanation of Water-Quality Records).											

DATE	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	BICAR- BONATE (MG/L AS HCO3)	CAR- BONATE (MG/L AS CO3)	ALKA- LINITY (MG/L AS CACO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SiO2)	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)
AUG 31...	10	390	0	320	840	540	1.0	12	2420	2360	3.21

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)	NITRO- GEN, TOTAL (MG/L AS N)	NITRO- GEN, TOTAL (MG/L AS NO3)	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHORUS, DIS- SOLVED (MG/L AS P)	BORON, DIS- SOLVED (UG/L AS B)	IRON, DIS- SOLVED (UG/L AS FE)
AUG 31...	503	.03	.02	1.3	1.3	1.3	5.9	.18	.02	830	20

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

YELLOWSTONE RIVER BASIN

441252106090801 POWDER RIVER ABOVE DEAD HORSE CREEK, NEAR BUFFALO, WY (LAT 44 12 52 LONG 106 09 08)

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	HARD- NESS (MG/L AS CAC03)	HARD- NESS, NONCAR- BONATE (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
AUG 31...	1900	90	3500	8.2	17.5	410	160	110	34	530	11

S-Seepage run data (see Explanation of Water-Quality Records).

DATE	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	BICAR- BONATE (MG/L AS HCO3)	CAR- BONATE (MG/L AS CO3)	ALKA- LINITY (MG/L AS CAC03)	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)
AUG 31...	10	310	0	260	780	460	.9	11	2350	2090	2.84

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)	NITRO- GEN, TOTAL (MG/L AS N)	NITRO- GEN, TOTAL (MG/L AS NO3)	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHORUS, DIS- SOLVED (MG/L AS P)	BORON, DIS- SOLVED (UG/L AS B)	IRON, DIS- SOLVED (UG/L AS FE)
AUG 31...	508	.05	.01	.88	.89	.94	4.2	.29	.01	730	30

442829106081601 POWDER RIVER ABOVE CRAZY WOMAN CREEK, NEAR ARVADA, WY (LAT 44 28 29 LONG 106 08 16)

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	HARD- NESS (MG/L AS CAC03)	HARD- NESS, NONCAR- BONATE (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
AUG 31...	1645	75	3480	8.1	18.0	620	370	130	71	560	9.8

S-Seepage run data (see Explanation of Water-Quality Records).

DATE	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	BICAR- BONATE (MG/L AS HCO3)	CAR- BONATE (MG/L AS CO3)	ALKA- LINITY (MG/L AS CAC03)	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)
AUG 31...	9.8	310	0	250	950	470	.8	10	2820	2360	3.21

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)	NITRO- GEN, TOTAL (MG/L AS N)	NITRO- GEN, TOTAL (MG/L AS NO3)	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHORUS, DIS- SOLVED (MG/L AS P)	BORON, DIS- SOLVED (UG/L AS B)	IRON, DIS- SOLVED (UG/L AS FE)
AUG 31...	478	.01	.01	1.2	1.2	1.2	5.4	.28	.01	700	40

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

YELLOWSTONE RIVER BASIN

441148106460601 NORTH FORK CRAZY WOMAN CREEK BELOW LITTLE NORTH FORK CRAZY WOMAN CREEK, NEAR BUFFALO, WY
(LAT 44 11 48 LONG 106 46 06)

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	TEMPER- ATURE (DEG C)
AUG S29...	1110	E6.1	240	14.0

E-Estimate.

S-Seepage run data (see Explanation of
Water-Quality Records).

441023106414801 NORTH FORK CRAZY WOMAN CREEK BELOW KELLEY CREEK, NEAR BUFFALO, WY (LAT 44 10 23 LONG 106 41 48)

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	TEMPER- ATURE (DEG C)
AUG S29...	1435	6.7	965	18.0

S-Seepage run data (see Explanation of
Water-Quality Records).

440756106423401 MUDDY CREEK NEAR MOUTH, NEAR BUFFALO, WY (LAT 44 07 56 LONG 106 42 34)

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	TEMPER- ATURE (DEG C)
AUG S29...	1630	2.2	2080	18.0

S-Seepage run data (see Explanation of
Water-Quality Records).

440740106423801 BILLY CREEK AT MOUTH, NEAR BUFFALO, WY (LAT 44 07 40 LONG 106 42 38)

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	TEMPER- ATURE (DEG C)
AUG S29...	1120	.61	790	18.0

S-Seepage run data (see Explanation of
Water-Quality Records).

440507106424201 POISON CREEK NEAR OMALLEY DRAW, NEAR BUFFALO, WY (LAT 44 05 07 LONG 106 42 42)

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	TEMPER- ATURE (DEG C)
AUG S29...	1235	.25	4250	21.5

S-Seepage run data (see Explanation of
Water-Quality Records).

ANALYSES OF SAMPLES COLLECTED AT MISCELLANEOUS SITES IN WYOMING

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

YELLOWSTONE RIVER BASIN

440508106401701 NORTH FORK CRAZY WOMAN CREEK BELOW POISON CREEK, NEAR BUFFALO, WY (LAT 44 05 08 LONG 106 40 17)

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	TEMPER- ATURE (DEG C)
AUG				
S29...	1400	9.3	1620	19.5

S-Seepage run data (see Explanation of Water-Quality Records).

440306106413901 MIDDLE FORK CRAZY WOMAN CREEK BELOW SEVENTYSIX CREEK, NEAR MAYOWORTH, WY
(LAT 44 03 06 LONG 106 41 39)

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	TEMPER- ATURE (DEG C)
AUG				
S29...	1435	16	535	19.0

S-Seepage run data (see Explanation of Water-Quality Records).

440428106375701 NORTH FORK CRAZY WOMAN CREEK BELOW MIDDLE FORK CRAZY WOMAN CREEK, NEAR MAYOWORTH, WY
(LAT 44 04 28 LONG 106 37 57)

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	TEMPER- ATURE (DEG C)
AUG				
S29...	1515	25	1100	20.5

S-Seepage run data (see Explanation of Water-Quality Records).

440321106380201 SOUTH FORK CRAZY WOMAN CREEK NEAR MOUTH, NEAR MAYOWORTH, WY (LAT 44 03 21 LONG 106 38 02)

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	TEMPER- ATURE (DEG C)
AUG				
S29...	1530	.02	2860	25.0

S-Seepage run data (see Explanation of Water-Quality Records).

440516106315701 CRAZY WOMAN CREEK BELOW TRABING DRAW, NEAR BUFFALO, WY (LAT 44 05 16 LONG 106 31 57)

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	TEMPER- ATURE (DEG C)
AUG				
S29...	1425	11	1800	21.0

S-Seepage run data (see Explanation of Water-Quality Records).

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

YELLOWSTONE RIVER BASIN

441500106254601 CRAZY WOMAN CREEK BELOW TIMBER DRAW, NEAR BUFFALO, WY (LAT 44 15 00 LONG 106 25 46)

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	TEMPER- ATURE (DEG C)
AUG				
S29...	1720	12	1920	21.0

S-Seepage run data (see Explanation of Water-Quality Records).

442348106221001 CRAZY WOMAN CREEK ABOVE DRY CREEK, NEAR BUFFALO, WY (LAT 44 23 48 LONG 106 22 10)

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	TEMPER- ATURE (DEG C)
AUG				
S29...	1410	12	2190	21.0

S-Seepage run data (see Explanation of Water-Quality Records).

445249106034201 POWDER RIVER ABOVE CLEAR CREEK, NEAR ARVADA, WY (LAT 44 52 49 LONG 106 03 42)

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH	TEMPER- ATURE (DEG C)	BICAR- BONATE (MG/L AS HCO3)	CAR- BONATE (MG/L AS CO3)	ALKA- LINITY (MG/L AS CACO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SiO2)
AUG												
S31...	1445	100	3160	8.1	23.0	300	0	240	1000	380	.7	8.7

S-Seepage run data (see Explanation of Water-Quality Records).

DATE	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS 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, 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, DIS- SOLVED (MG/L AS P)	BORON, DIS- SOLVED (UG/L AS B)
AUG												
S31...	2400	3.26	648	.01	.01	1.2	1.2	1.2	5.4	.31	.01	540

ANALYSES OF SAMPLES COLLECTED AT MISCELLANEOUS SITES IN WYOMING

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

YELLOWSTONE RIVER BASIN

442106106421800 CLEAR CREEK NO 1 NEAR BUFFALO, WY (LAT 44 21 06 LONG 106 42 18)

DATE	TIME	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	TEMPERATURE (DEG C)	OXYGEN, DIS-SOLVED (MG/L)	HARDNESS (MG/L AS CAC03)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNESIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	SODIUM ADSORPTION RATIO
SEP 26...	1100	200	7.1	11.0	9.4	51	15	3.4	5.8	.4

DATE	POTASSIUM, DIS-SOLVED (MG/L AS K)	ALKALINITY (MG/L AS CAC03)	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)	NITROGEN, NITRATE (MG/L AS N)	NITROGEN, NITRITE TOTAL (MG/L AS N)	NITROGEN, NO2+NO3 TOTAL (MG/L AS N)
SEP 26...	.8	44	15	4.3	.1	10	.01	.00	.01

DATE	NITROGEN, NO2+NO3 DIS-SOLVED (MG/L AS N)	NITROGEN, AMMONIA TOTAL (MG/L AS N)	NITROGEN, AMMONIA DIS-SOLVED (MG/L AS N)	NITROGEN, AMMONIA DIS-SOLVED (MG/L AS NH4)	NITROGEN, ORGANIC TOTAL (MG/L AS N)	NITROGEN, ORGANIC DIS-SOLVED (MG/L AS N)	NITROGEN, AMMONIA + ORGANIC TOTAL (MG/L AS N)	NITROGEN, AMMONIA + ORGANIC DIS-SOLVED (MG/L AS N)	NITROGEN, TOTAL (MG/L AS N)
SEP 26...	.01	.00	.01	.01	.28	.38	.28	.39	.29

DATE	NITROGEN, TOTAL (MG/L AS NO3)	PHOSPHORUS, TOTAL (MG/L AS P)	PHOSPHORUS, DIS-SOLVED (MG/L AS P)	PHOSPHORUS, ORTHO, TOTAL (MG/L AS P)	PHOSPHORUS, ORTHO, DIS-SOLVED (MG/L AS P)	PHOSPHATE, ORTHO, DIS-SOLVED (MG/L AS PO4)	BORON, DIS-SOLVED (UG/L AS B)	IRON, DIS-SOLVED (UG/L AS FE)	ALGAL GROWTH POTENTIAL, BOTTLE TEST (MG/L)
SEP 26...	1.3	.02	.01	.00	.01	.03	30	30	.2

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

YELLOWSTONE RIVER BASIN

06318500 CLEAR CREEK NEAR BUFFALO, WY (LAT 44 19 58 LONG 106 46 36)

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	TEMPER- ATURE (DEG C)	TUR- BID- ITY (JTU)	OXYGEN, DIS- SOLVED (MG/L)	HARD- NESS (MG/L AS CACO3)	HARD- NESS, NONCAR- BONATE (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)
FEB 28...	1330	13	100	.0	0	10.3	32	0	8.8	2.4	2.6

DATE	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	BICAR- BONATE (MG/L AS HCO3)	CAR- BONATE (MG/L AS CO3)	ALKA- LINITY (MG/L AS CACO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)
FEB 28...	.2	.7	39	0	32	4.4	.5	.1	14	54	.07

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 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, AM- MONIA + ORGANIC DIS. (MG/L AS N)	NITRO- GEN, TOTAL (MG/L AS N)
FEB 28...	1.90	.21	.21	.00	.00	.00	.04	.01	.04	.25

DATE	NITRO- GEN, TOTAL (MG/L AS NO3)	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHATE, TOTAL (MG/L AS PO4)	PHOS- PHORUS, DIS- SOLVED (MG/L AS P)	PHOS- PHORUS, ORTHU. TOTAL (MG/L AS P)	PHOS- PHORUS, ORTHU. DIS- SOLVED (MG/L AS P)	PHOS- PHATE, DIS- SOLVED (MG/L AS PO4)	BORON, DIS- SOLVED (UG/L AS B)	IRON, DIS- SOLVED (UG/L AS FE)	ALGAL GROWTH POTEN- TIAL, BOTTLE TEST (MG/L)
FEB 28...	1.1	.01	.03	.01	.04	.01	.03	10	40	5.5

DATE	TIME	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
MAY 19...	1340	414	78	87	45

ANALYSES OF SAMPLES COLLECTED AT MISCELLANEOUS SITES IN WYOMING

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

YELLOWSTONE RIVER BASIN

442104106410100 CLEAR CREEK NO 2 NEAR BUFFALO, WY (LAT 44 21 04 LONG 106 41 01)

DATE	TIME	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	TEMPERATURE (DEG C)	OXYGEN, DIS-SOLVED (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
SEP 26...	1200	180	7.6	11.0	10.2	50	14	3.7	6.9	.4

DATE	POTASSIUM, DIS-SOLVED (MG/L AS K)	ALKALINITY (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)	NITROGEN, NITRATE TOTAL (MG/L AS N)	NITROGEN, NITRITE TOTAL (MG/L AS N)	NITROGEN, NO2+NO3 TOTAL (MG/L AS N)
SEP 26...	.9	43	18	4.0	.1	9.7	.00	.00	.00

DATE	NITROGEN, NO2+NO3 DIS-SOLVED (MG/L AS N)	NITROGEN, AMMONIA TOTAL (MG/L AS N)	NITROGEN, AMMONIA DIS-SOLVED (MG/L AS N)	NITROGEN, AMMONIA DIS-SOLVED (MG/L AS NH4)	NITROGEN, ORGANIC TOTAL (MG/L AS N)	NITROGEN, ORGANIC DIS-SOLVED (MG/L AS N)	NITROGEN, AMMONIA + ORGANIC TOTAL (MG/L AS N)	NITROGEN, AMMONIA + ORGANIC DIS-SOLVED (MG/L AS N)	NITROGEN, TOTAL (MG/L AS N)
SEP 26...	.01	.00	.00	.00	.11	.13	.11	.13	.11

DATE	NITROGEN, TOTAL (MG/L AS NO3)	PHOSPHORUS, TOTAL (MG/L AS P)	PHOSPHORUS, DIS-SOLVED (MG/L AS P)	PHOSPHORUS, ORTHO. TOTAL (MG/L AS P)	PHOSPHORUS, ORTHO. DIS-SOLVED (MG/L AS P)	PHOSPHATE, ORTHO. DIS-SOLVED (MG/L AS PO4)	BORON, DIS-SOLVED (UG/L AS B)	IRON, DIS-SOLVED (UG/L AS FE)	ALGAL GROWTH POTENTIAL, BOTTLE TEST (MG/L)
SEP 26...	.49	.02	.01	.00	.01	.03	30	30	.4

ANALYSES OF SAMPLES COLLECTED AT MISCELLANEOUS SITES IN WYOMING

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

YELLOWSTONE RIVER BASIN

442105106405700 CLEAR CREEK NO 3 NEAR BUFFALO, WY (LAT 44 21 05 LONG 106 40 57)

DATE	TIME	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	TEMPERATURE (DEG C)	OXYGEN, DIS-SOLVED (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
SEP 26...	1245	250	7.8	11.5	10.1	97	26	7.8	12	.5
DATE		POTASSIUM, DIS-SOLVED (MG/L AS K)	ALKALINITY (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)	NITROGEN, NITRATE TOTAL (MG/L AS N)	NITROGEN, NITRITE TOTAL (MG/L AS N)	NITROGEN, NO2+NO3 TOTAL (MG/L AS N)
SEP 26...		1.0	55	63	1.4	.1	9.7	.01	.00	.01
DATE		NITROGEN, NO2+NO3 DIS-SOLVED (MG/L AS N)	NITROGEN, AMMONIA TOTAL (MG/L AS N)	NITROGEN, AMMONIA DIS-SOLVED (MG/L AS N)	NITROGEN, AMMONIA DIS-SOLVED (MG/L AS NH4)	NITROGEN, ORGANIC TOTAL (MG/L AS N)	NITROGEN, ORGANIC DIS-SOLVED (MG/L AS N)	NITROGEN, AMMONIA + ORGANIC TOTAL (MG/L AS N)	NITROGEN, AMMONIA + ORGANIC DIS-SOLVED (MG/L AS N)	NITROGEN, TOTAL (MG/L AS N)
SEP 26...		.01	.00	.01	.01	.24	.31	.24	.32	.25
DATE		NITROGEN, TOTAL (MG/L AS NO3)	PHOSPHORUS, TOTAL (MG/L AS P)	PHOSPHORUS, DIS-SOLVED (MG/L AS P)	PHOSPHORUS, ORTHO. TOTAL (MG/L AS P)	PHOSPHORUS, ORTHO. DIS-SOLVED (MG/L AS P)	PHOSPHATE, ORTHO. DIS-SOLVED (MG/L AS PO4)	BORON, DIS-SOLVED (UG/L AS B)	IRON, DIS-SOLVED (UG/L AS FE)	ALGAL GROWTH POTENTIAL, BOTTLE TEST (MG/L)
SEP 26...		1.1	.02	.02	.01	.02	.06	40	30	.4

ANALYSES OF SAMPLES COLLECTED AT MISCELLANEOUS SITES IN WYOMING

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

YELLOWSTONE RIVER BASIN

442108106404500 CLEAR CREEK NO 4 NEAR BUFFALO, WY (LAT 44 21 08 LONG 106 40 45)

DATE	TIME	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	TEMPERATURE (DEG C)	OXYGEN, DIS-SOLVED (MG/L)	HARDNESS (MG/L AS CaCO3)	HARDNESS, NONCARBONATE (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)
SEP 26...	1315	400	7.9	12.0	10.8	140	63	39	11	16

DATE	SODIUM ADSORPTION RATIO	POTASSIUM, DIS-SOLVED (MG/L AS K)	ALKALINITY (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)	NITROGEN, NITRATE (MG/L AS N)	NITROGEN, NITRITE (MG/L AS N)	NITROGEN, NO2+NO3 TOTAL (MG/L AS N)
SEP 26...	.6	13	80	83	14	.1	9.8	.01	.00	.01

DATE	NITROGEN, NO2+NO3 DIS-SOLVED (MG/L AS N)	NITROGEN, AMMONIA TOTAL (MG/L AS N)	NITROGEN, AMMONIA DIS-SOLVED (MG/L AS N)	NITROGEN, AMMONIA DIS-SOLVED (MG/L AS NH4)	NITROGEN, ORGANIC TOTAL (MG/L AS N)	NITROGEN, ORGANIC DIS-SOLVED (MG/L AS N)	NITROGEN, AMMONIA + ORGANIC TOTAL (MG/L AS N)	NITROGEN, AMMONIA + ORGANIC DIS-SOLVED (MG/L AS N)	NITROGEN, TOTAL (MG/L AS N)
SEP 26...	.01	.00	.01	.01	.37	.20	.37	.21	.38

DATE	NITROGEN, TOTAL (MG/L AS NO3)	PHOSPHORUS, TOTAL (MG/L AS P)	PHOSPHORUS, DIS-SOLVED (MG/L AS P)	PHOSPHORUS, ORTHO. TOTAL (MG/L AS P)	PHOSPHORUS, ORTHO. DIS-SOLVED (MG/L AS P)	PHOSPHATE, ORTHO. DIS-SOLVED (MG/L AS PO4)	BORON, DIS-SOLVED (UG/L AS B)	IRON, DIS-SOLVED (UG/L AS FE)	ALGAL GROWTH POTENTIAL, BOTTLE TEST (MG/L)
SEP 26...	1.7	.02	.35	.00	.38	1.2	70	20	.4

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

YELLOWSTONE RIVER BASIN

442102106404000 CLEAR CREEK NO 5 NEAR BUFFALO, WY (LAT 44 21 02 LONG 106 40 40)

DATE	TIME	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	TEMPERATURE (DEG C)	OXYGEN, DIS-SOLVED (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 AD-SURPTION RATIO
SEP 26...	1340	1275	7.9	15.0	9.9	440	110	39	94	2.0

DATE	POTASSIUM, DIS-SOLVED (MG/L AS K)	ALKALINITY (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)	NITROGEN, NITRATE (MG/L AS N)	NITROGEN, NITRITE (MG/L AS N)	NITROGEN, NO2+NO3 TOTAL (MG/L AS N)
SEP 26...	4.9	200	440	17	.2	16	.12	.17	.29

DATE	NITROGEN, NO2+NO3 DIS-SOLVED (MG/L AS N)	NITROGEN, AMMONIA TOTAL (MG/L AS N)	NITROGEN, AMMONIA DIS-SOLVED (MG/L AS N)	NITROGEN, AMMONIA DIS-SOLVED (MG/L AS NH4)	NITROGEN, ORGANIC TOTAL (MG/L AS N)	NITROGEN, ORGANIC DIS-SOLVED (MG/L AS N)	NITROGEN, AMMONIA + ORGANIC TOTAL (MG/L AS N)	NITROGEN, AMMONIA + ORGANIC DIS-SOLVED (MG/L AS N)	NITROGEN, TOTAL (MG/L AS N)
SEP 26...	.31	.93	.88	1.1	4.0	1.3	4.9	2.2	5.2

DATE	NITROGEN, TOTAL (MG/L AS NO3)	PHOSPHORUS, TOTAL (MG/L AS P)	PHOSPHORUS, DIS-SOLVED (MG/L AS P)	PHOSPHORUS, ORTHO. TOTAL (MG/L AS P)	PHOSPHORUS, ORTHO. DIS-SOLVED (MG/L AS P)	PHOSPHATE, ORTHO. DIS-SOLVED (MG/L AS PO4)	BORON, DIS-SOLVED (UG/L AS B)	IRON, DIS-SOLVED (UG/L AS FE)	ALGAL GROWTH POTENTIAL, BOTTLE TEST (MG/L)
SEP 26...	23	2.6	.94	1.1	.95	2.9	270	40	39

ANALYSES OF SAMPLES COLLECTED AT MISCELLANEOUS SITES IN WYOMING

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

YELLOWSTONE RIVER BASIN

442101106403300 CLEAR CREEK NO 6 NEAR BUFFALO, WY (LAT 44 21 01 LONG 106 40 33)

DATE	TIME	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	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
SEP 26...	1430	525	8.0	14.0	9.0	180	48	14	28	.9

DATE	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LINEITY (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)	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)
SEP 26...	1.9	87	140	3.8	.1	11	.01	.04	.05

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, ORGANIC DIS- SOLVED (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC DIS- SOLVED (MG/L AS N)	NITRO- GEN, TOTAL (MG/L AS N)
SEP 26...	.06	.13	.13	.17	.63	.50	.76	.63	.81

DATE	NITRO- GEN, TOTAL (MG/L AS NO3)	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHORUS, DIS- SOLVED (MG/L AS P)	PHOS- PHORUS, ORTHOPHOS- PHATE, DIS- SOLVED (MG/L AS P)	PHOS- PHORUS, ORTHOPHOS- PHATE, DIS- SOLVED (MG/L AS P)	PHOS- PHATE, ORTHOPHOS- PHATE, DIS- SOLVED (MG/L AS PO4)	BORON, DIS- SOLVED (UG/L AS B)	IRON, DIS- SOLVED (UG/L AS FE)	ALGAL GROWTH POTEN- TIAL, BOTTLE TEST (MG/L)
SEP 26...	3.6	.37	.17	.25	.18	.55	70	30	7.0

ANALYSES OF SAMPLES COLLECTED AT MISCELLANEOUS SITES IN WYOMING

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

YELLOWSTONE RIVER BASIN

442117106400300 CLEAR CREEK NO 8 NEAR BUFFALO, WY (LAT 44 21 17 LONG 106 40 03)

DATE	TIME	SPECIFIC CONDUCTANCE (MICRO-MHOS)	PH (UNITS)	TEMPERATURE (DEG C)	OXYGEN, DIS-SOLVED (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
SEP 26...	1530	500	8.0	14.5	11.7	190	47	18	24	.8

DATE	POTASSIUM, DIS-SOLVED (MG/L AS K)	ALKALINITY (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)	NITROGEN, NITRATE TOTAL (MG/L AS N)	NITROGEN, NITRITE TOTAL (MG/L AS N)	NITROGEN, NO2+NO3 TOTAL (MG/L AS N)
SEP 26...	1.7	93	130	6.9	.1	9.9	.01	.01	.02

DATE	NITROGEN, NO2+NO3 DIS-SOLVED (MG/L AS N)	NITROGEN, AMMONIA TOTAL (MG/L AS N)	NITROGEN, AMMONIA DIS-SOLVED (MG/L AS N)	NITROGEN, AMMONIA DIS-SOLVED (MG/L AS NH4)	NITROGEN, ORGANIC TOTAL (MG/L AS N)	NITROGEN, ORGANIC DIS-SOLVED (MG/L AS N)	NITROGEN, AMMONIA + ORGANIC TOTAL (MG/L AS N)	NITROGEN, AMMONIA + ORGANIC DIS-SOLVED (MG/L AS N)	NITROGEN, TOTAL (MG/L AS N)
SEP 26...	.02	.01	.02	.03	.66	.37	.67	.39	.69

DATE	NITROGEN, TOTAL (MG/L AS NO3)	PHOSPHORUS, TOTAL (MG/L AS P)	PHOSPHORUS, DIS-SOLVED (MG/L AS P)	PHOSPHORUS, ORTHO, TOTAL (MG/L AS P)	PHOSPHORUS, ORTHO, DIS-SOLVED (MG/L AS P)	PHOSPHATE, ORTHO, DIS-SOLVED (MG/L AS PO4)	BORON, DIS-SOLVED (UG/L AS B)	IRON, DIS-SOLVED (UG/L AS FE)	ALGAL GROWTH POTENTIAL, BOTTLE TEST (MG/L)
SEP 26...	3.1	.10	.06	.07	.07	.21	70	20	2.5

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

YELLOWSTONE RIVER BASIN

06319200 CLEAR CREEK ABOVE ROCK CREEK, NEAR BUFFALO, WY (LAT 44 21 39 LONG 106 39 36)

DATE	TIME	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	TUR- BID- ITY (JTU)	OXYGEN, DIS- SOLVED (MG/L)	HARD- NESS (MG/L AS CACO3)	HARD- NESS, NONCAR- BONATE (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)
FEB 27...	1600	700	7.9	.0	1	10.4	300	150	70	30	38
SEP 27...	0900	480	7.5	8.5	--	9.9	210	--	50	20	27

DATE	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	BICAR- BONATE (MG/L AS HCO3)	CAR- BONATE (MG/L AS CO3)	ALKA- LINITY (MG/L AS CACO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)
FEB 27...	1.0	2.3	180	0	150	210	4.0	.1	13	459	.62
SEP 27...	.8	2.9	--	--	100	150	8.7	.1	9.5	--	--

DATE	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 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, ORGANIC DIS- SOLVED (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC DIS. (MG/L AS N)
FEB 27...	--	--	.26	.24	.70	.58	.75	.00	.09	.66	.67
SEP 27...	.01	.01	.02	.02	.00	.02	.03	.35	.95	.35	.97

DATE	NITRO- GEN, TOTAL (MG/L AS N)	NITRO- GEN, TOTAL (MG/L AS NO3)	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHATE, TOTAL (MG/L AS PO4)	PHOS- PHORUS, DIS- SOLVED (MG/L AS P)	PHOS- PHORUS, ORTHU. TOTAL (MG/L AS P)	PHOS- PHORUS, ORTHU. DIS- SOLVED (MG/L AS P)	PHOS- PHATE, ORTHU. DIS- SOLVED (MG/L AS PO4)	BORON, DIS- SOLVED (UG/L AS B)	IRON, DIS- SOLVED (UG/L AS FE)	ALGAL GROWTH PUTEN- TIAL, BOTTLE TEST (MG/L)
FEB 27...	.92	4.1	.26	.80	.24	.25	.24	.74	60	40	34
SEP 27...	.37	1.6	.08	--	.16	.06	.16	.49	60	20	2.2

442314106420201 ROCK CREEK NEAR MOUTH, NEAR BUFFALO, WY (LAT 44 23 14 LONG 106 42 02)

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	TEMPER- ATURE (DEG C)
AUG S29...	0850	41	695	14.5
S-Seepage run data (see Explanation of Water-Quality Records).				

06320000 ROCK CREEK NEAR BUFFALO, WY (LAT 42 27 22 LONG 106 52 42)

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	TEMPER- ATURE (DEG C)
AUG S29...	0930	52	800	12.0
S-Seepage run data (see Explanation of Water-Quality Records).				

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

YELLOWSTONE RIVER BASIN

06320170 ROCK CREEK AT MOUTH, NEAR BUFFALO, WY (LAT 44 21 49 LONG 106 40 04)

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	TUR- BID- ITY (JTU)	OXYGEN, DIS- SOLVED (MG/L)	HARD- NESS (MG/L AS CACO3)	HARD- NESS, NONCAR- BONATE (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)
FEB 27...	1500	--	1300	7.5	.0	2	10.5	650	400	150	68	65
SEP 27...	0800	E48	1100	7.6	10.0	--	8.5	550	--	130	54	62

E-Estimate.

DATE	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	BICAR- BONATE (MG/L AS HCO3)	CAR- BONATE (MG/L AS CO3)	ALKA- LINITY (MG/L AS CACO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)
FEB 27...	1.1	3.2	310	0	250	490	4.6	.2	14	950	1.29
SEP 27...	1.2	3.0	--	--	220	420	8.9	.2	9.3	--	--

DATE	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 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, ORGANIC DIS- SOLVED (MG/L AS N)	NITRO- GEN, AM- MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO- GEN, AM- MONIA + ORGANIC DIS- SOLVED (MG/L AS N)
FEB 27...	--	--	.33	.32	.05	.05	.06	.13	.04	.18	.09
SEP 27...	.00	.00	.00	.01	.00	.01	.01	.97	.30	.97	.31

DATE	NITRO- GEN, TOTAL (MG/L AS N)	NITRO- GEN, TOTAL (MG/L AS NO3)	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHATE, TOTAL (MG/L AS PO4)	PHOS- PHURUS, DIS- SOLVED (MG/L AS P)	PHOS- PHURUS, TOTAL (MG/L AS P)	PHOS- PHURUS, ORTHOD. TOTAL (MG/L AS P)	PHOS- PHATE, ORTHOD. DIS- SOLVED (MG/L AS PO4)	BORON, DIS- SOLVED (UG/L AS B)	IRON, DIS- SOLVED (UG/L AS FE)	ALGAL GROWTH POTEN- TIAL, BOTTLE TEST (MG/L)
FEB 27...	.51	2.3	.01	.03	.01	.03	.02	.06	110	20	.2
SEP 27...	.97	4.3	.03	--	.02	.00	.02	.06	130	20	<.2

442338106371300 CLEAR CREEK NO 12 NEAR BUFFALO, WY (LAT 44 23 38 LONG 106 37 13)

DATE	TIME	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	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	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LINITY (MG/L AS CACO3)
SEP 27...	0945	760	7.5	10.0	8.8	340	84	32	38	.9	2.5	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)	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 DIS- SOLVED (MG/L AS N)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS NH4)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N)
SEP 27...	260	7.9	.2	8.8	.01	.00	.01	.00	.00	.01	.01	.31

DATE	NITRO- GEN, ORGANIC DIS- SOLVED (MG/L AS N)	NITRO- GEN, AM- MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO- GEN, AM- MONIA + ORGANIC DIS- SOLVED (MG/L AS N)	NITRO- GEN, TOTAL (MG/L AS N)	NITRO- GEN, TOTAL (MG/L AS NO3)	PHOS- PHORUS, DIS- SOLVED (MG/L AS P)	PHOS- PHORUS, ORTHOD. TOTAL (MG/L AS P)	PHOS- PHORUS, ORTHOD. SOLVED (MG/L AS P)	PHOS- PHATE, ORTHOD. DIS- SOLVED (MG/L AS PO4)	BORON, DIS- SOLVED (UG/L AS B)	IRON, DIS- SOLVED (UG/L AS FE)	
SEP 27...	.30	.31	.31	.32	1.4	.06	.04	.04	.04	.12	100	20

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

YELLOWSTONE RIVER BASIN

442416106365600 HALEY RESERVOIR NEAR BUFFALO, WY (LAT 44 24 16 LONG 106 36 56)

DATE	TIME	SAMP- LING DEPTH (FT)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	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)
AUG										
31...	1030	36	969	9.0	18.5	3.8	360	81	39	45
31...	1035	.0	992	9.2	19.0	7.3	360	79	40	44

DATE	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LINEITY (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)	SILICA, DIS- SOLVED (MG/L AS SiO2)	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)
AUG										
31...	1.0	3.7	150	300	3.6	.2	7.5	.00	.00	.00
31...	1.0	3.8	130	310	3.6	.2	7.2	.01	.00	.01

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, ORGANIC DIS- SOLVED (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC DIS- SOLVED (MG/L AS N)	NITRO- GEN, TOTAL (MG/L AS N)
AUG									
31...	.01	.01	.01	.01	.37	.41	.38	.42	.38
31...	.01	.01	.01	.01	.43	.40	.44	.41	.45

DATE	NITRO- GEN, TOTAL (MG/L AS NO3)	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHORUS, DIS- SOLVED (MG/L AS P)	PHOS- PHORUS, ORTHOPHOS- PHATE, DIS- SOLVED (MG/L AS P)	PHOS- PHORUS, ORTHOPHOS- PHATE, DIS- SOLVED (MG/L AS P04)	BORON, DIS- SOLVED (UG/L AS B)	IRON, DIS- SOLVED (UG/L AS FE)	ALGAL GROWTH POTEN- TIAL, BOTTLE TEST (MG/L)
AUG								
31...	1.7	.02	.02	.00	.01	.03	110	40
31...	2.0	.02	.02	.00	.01	.03	100	320

ANALYSES OF SAMPLES COLLECTED AT MISCELLANEOUS SITES IN WYOMING

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

YELLOWSTONE RIVER BASIN

442407106363000 CLEAR CREEK NO 13 NEAR BUFFALO, WY (LAT 44 24 07 LONG 106 36 30)

DATE	TIME	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	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- SURP- TIUN RATIO
SEP 27...	1000	800	7.6	11.0	9.6	340	83	33	38	.9

DATE	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LINITY (MG/L AS CACO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SiO2)	NITRO- GEN, NITRATE (MG/L AS N)	NITRO- GEN, NITRITE (MG/L AS N)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N)
SEP 27...	2.5	140	270	9.2	.2	8.9	.00	.00	.00

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 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,AM- MONIA + ORGANIC DIS- SOLVED (MG/L AS N)	NITRO- GEN, TOTAL (MG/L AS N)
SEP 27...	.00	.00	.01	.01	.46	.31	.46	.32	.46

DATE	NITRO- GEN, TOTAL (MG/L AS NO3)	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHORUS, DIS- SOLVED (MG/L AS P)	PHOS- PHORUS, ORTHO. TOTAL (MG/L AS P)	PHOS- PHORUS, ORTHO, DIS- SOLVED (MG/L AS P)	PHOS- PHATE, ORTHO, DIS- SOLVED (MG/L AS PO4)	BORON, DIS- SOLVED (UG/L AS B)	IRON, DIS- SOLVED (UG/L AS FE)	ALGAL GROWTH POTEN- TIAL, BOTTLE TEST (MG/L)
SEP 27...	2.0	.07	.19	.02	.01	.03	100	30	1.3

ANALYSES OF SAMPLES COLLECTED AT MISCELLANEOUS SITES IN WYOMING

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

YELLOWSTONE RIVER BASIN

442652106344101 CLEAR CREEK ABOVE WAEGLE DRAW, NEAR BUFFALO, WY (LAT 44 26 52 LONG 106 34 41)

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	TEMPER- ATURE (DEG C)
AUG 29...	0945	52	980	17.5

S-Seepage run data (see Explanation of
Water-Quality Records).

06323090 SHELL CREEK ABOVE LAKE DE SMET, NEAR BUFFALO, WY (LAT 44 30 10 LONG 106 47 10)

DATE	TIME	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	TUR- BID- ITY (JTU)	OXYGEN, DIS- SOLVED (MG/L)	HARD- NESS (MG/L AS CACO3)	HARD- NESS, NONCAR- BONATE (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)
FEB 28...	1200	1300	8.4	.0	2	10.2	610	240	130	69	75

DATE	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	BICAR- BONATE (MG/L AS HCO3)	CAR- BONATE (MG/L AS CO3)	ALKA- LITY (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)
FEB 28...	1.3	4.1	450	0	370	390	5.3	.2	15	912	1.24

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 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,AM- MONIA + ORGANIC DIS- SOLVED (MG/L AS N)	NITRO- GEN, TOTAL (MG/L AS N)
FEB 28...	.33	.31	.06	.06	.08	.44	.43	.50	.49	.83

DATE	NITRO- GEN, TOTAL (MG/L AS NO3)	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHATE, TOTAL (MG/L AS PO4)	PHOS- PHORUS, DIS- SOLVED (MG/L AS P)	PHOS- PHORUS, ORTHO, TOTAL (MG/L AS P)	PHOS- PHORUS, ORTHO, DIS- SOLVED (MG/L AS P)	PHOS- PHATE, ORTHO, DIS- SOLVED (MG/L AS PO4)	BORON, DIS- SOLVED (UG/L AS B)	IRON, DIS- SOLVED (UG/L AS FE)	ALGAL GROWTH POTEN- TIAL, BOTTLE TEST (MG/L)
FEB 28...	3.7	.05	.15	.05	.07	.05	.15	100	20	2.2

ANALYSES OF SAMPLES COLLECTED AT MISCELLANEOUS SITES IN WYOMING

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

YELLOWSTONE RIVER BASIN

06323102 LAKE DE SMET SITE 2 NEAR BUFFALO, WY (LAT 44 28 17 LONG 106 44 47)

DATE	TIME	SAMP- LING DEPTH (FT)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	TUR- BID- ITY (JTU)	OXYGEN, DIS- SOLVED (MG/L)	HARD- NESS (MG/L AS CACO3)	HARD- NESS, NONCAR- BONATE (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)
MAR												
01...	1200	.0	678	6.1	.0	0	9.0	250	120	55	27	35
01...	1210	55	812	5.6	3.0	1	6.2	320	160	68	36	50
AUG												
30...	1000	60	699	7.8	17.5	--	2.8	260	--	58	27	38
30...	1005	--	717	8.4	18.5	--	4.6	260	--	59	27	38

DATE	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	BICAR- BONATE (MG/L AS HCO3)	CAR- BONATE (MG/L AS CO3)	ALKA- LITY (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)
MAR											
01...	1.0	4.7	160	0	130	170	2.7	.2	5.9	380	.52
01...	1.2	6.4	190	0	160	230	3.5	.2	3.9	492	.67
AUG											
30...	1.0	5.8	--	--	140	200	2.9	.2	4.1	--	--
30...	1.0	5.5	--	--	140	190	2.8	.2	2.6	--	--

DATE	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 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, ORGANIC DIS- SOLVED (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC DIS. (MG/L AS N)
MAR											
01...	--	--	.06	.08	.07	.07	.09	.25	.28	.32	.35
01...	--	--	.05	.07	.21	.20	.26	.33	.34	.54	.54
AUG											
30...	.02	.01	.03	.04	.07	.08	.10	.68	.46	.75	.54
30...	.01	.00	.01	.01	.03	.01	.01	.41	.34	.44	.35

DATE	NITRO- GEN, TOTAL (MG/L AS N)	NITRO- GEN, TOTAL (MG/L AS NO3)	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHATE, TOTAL (MG/L AS PO4)	PHOS- PHORUS, DIS- SOLVED (MG/L AS P)	PHOS- PHORUS, ORTHU. TOTAL (MG/L AS P)	PHOS- PHORUS, ORTHU. DIS- SOLVED (MG/L AS P)	PHOS- PHATE, ORTHU. DIS- SOLVED (MG/L AS PO4)	BORON, DIS- SOLVED (UG/L AS B)	IRON, DIS- SOLVED (UG/L AS FE)	ALGAL GROWTH POTEN- TIAL, BUTTL TEST (MG/L)
MAR											
01...	.38	1.7	.02	.06	.02	.00	.01	.03	50	20	2.9
01...	.59	2.6	.04	.12	.04	.01	.02	.06	70	20	12
AUG											
30...	.78	3.5	.06	--	.06	.05	.06	.18	60	410	.6
30...	.45	2.0	.03	--	.02	.01	.02	.06	60	430	.2

ANALYSES OF SAMPLES COLLECTED AT MISCELLANEOUS SITES IN WYOMING

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

YELLOWSTONE RIVER BASIN

06323114 PINEY CREEK BELOW LAKE DE SMET OUTLET, NO 5, NEAR BUFFALO, WY (LAT 44 31 16 LONG 106 45 10)

DATE	TIME	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	TUR- BID- ITY (JTU)	OXYGEN, DIS- SOLVED (MG/L)	HARD- NESS (MG/L AS CACO3)	HARD- NESS, NONCAR- BONATE (MG/L CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)
FEB 28...	1100	320	8.6	.0	1	10.8	150	23	37	13	7.3

DATE	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	BICAR- BONATE (MG/L AS HCO3)	CAR- BONATE (MG/L AS CO3)	ALKA- LINITY (MG/L AS CACO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)
FEB 28...	.3	1.4	150	0	120	36	.9	.1	12	182	.25

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 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, AM- MONIA + ORGANIC DIS- SOLVED (MG/L AS N)	NITRO- GEN, TOTAL (MG/L AS N)
FEB 28...	.16	.13	.01	.00	.00	.14	.13	.15	.31

DATE	NITRO- GEN, TOTAL (MG/L AS NO3)	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHATE, TOTAL (MG/L AS PO4)	PHOS- PHORUS, DIS- SOLVED (MG/L AS P)	PHOS- PHORUS, ORTHOPHOS- PHATE, DIS- SOLVED (MG/L AS P)	PHOS- PHATE, ORTHOPHOS- PHATE, DIS- SOLVED (MG/L AS PO4)	BORON, DIS- SOLVED (UG/L AS B)	IRON, DIS- SOLVED (UG/L AS FE)	ALGAL GROWTH POTEN- TIAL, BOTTLE TEST (MG/L)
FEB 28...	1.4	.02	.06	.01	.01	.02	.06	30	30

444258106165601 CLEAR CREEK BELOW BIG CORRAL DRAW, AT LEITER, WY (LAT 44 42 58 LONG 106 16 56)

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	TEMPER- ATURE (DEG C)
AUG 29...	1300	112	1400	19.5

S-Seepage run data (see Explanation of Water-Quality Records).

444821106155001 BUFFALO CREEK BELOW GARDNER GULCH, NEAR LEITER, WY (LAT 44 48 21 LONG 106 15 50)

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	TEMPER- ATURE (DEG C)
AUG 29...	1400	E.002	20.5

E-Estimate.
S-Seepage run data (see Explanation of Water-Quality Records).

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

YELLOWSTONE RIVER BASIN

445150106043301 KENDRICK DITCH BELOW DIVERSION, NEAR ARVADA, WY (LAT 44 51 50 LONG 106 04 33)

DATE TIME STREAM- FLOW, INSTANTANEOUS (CFS) SPECIFIC CONDUCTANCE (MICROMHOS) TEMPERATURE (DEG C)

AUG
S29... 1715 4.1 1000 19.5

S-Seepage run data (see Explanation of Water-Quality Records).

06324830 RAWHIDE CREEK AT U.S. HIGHWAY 14-16, NEAR GILLETTE, WY (LAT 44 25 30 LONG 105 33 50)

DATE	TIME	STREAM- FLOW, INSTANTANEOUS (CFS)	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	TEMPERATURE (DEG C)	TURBIDITY (JTU)	OXYGEN, DIS-SOLVED (MG/L)	HARDNESS (MG/L AS CaCO3)	HARDNESS, NONCARBONATE (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)	
MAY 16...	0800	E3.5	5000	7.4	14.0	2	4.8	2100	1700	260	360	440	
E-Estimate.													
DATE	TIME	SODIUM AD-SORPTION RATIO	POTASSIUM DIS-SOLVED (MG/L AS K)	BICARBONATE (MG/L AS HCO3)	CARBONATE (MG/L AS CO3)	ALKALINITY (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)	NITROGEN, NO2+NO3 TOTAL (MG/L AS N)
MAY 16...	4.1	20	520	0	430	2500	9.8	.4	3.5	3850	5.24	.00	
DATE	TIME	NITROGEN, NO2+NO3 DIS-SOLVED (MG/L AS N)	NITROGEN, AMMONIA DIS-SOLVED (MG/L AS N)	NITROGEN, AMMONIA DIS-SOLVED (MG/L AS N)	NITROGEN, AMMONIA DIS-SOLVED (MG/L AS NH4)	NITROGEN, ORGANIC DIS-SOLVED (MG/L AS N)	NITROGEN, ORGANIC DIS-SOLVED (MG/L AS N)	NITROGEN, AMMONIA + ORGANIC DIS-SOLVED (MG/L AS N)	NITROGEN, AMMONIA + ORGANIC DIS-SOLVED (MG/L AS N)	NITROGEN, TOTAL DIS-SOLVED (MG/L AS N)	NITROGEN, TOTAL DIS-SOLVED (MG/L AS NO3)	PHOSPHORUS, TOTAL (MG/L AS P)	
MAY 16...	.01	.01	.01	.01	.94	.65	.95	.66	.95	4.2	.06		
DATE	TIME	PHOSPHATE, TOTAL (MG/L AS PO4)	PHOSPHORUS, DIS-SOLVED (MG/L AS P)	PHOSPHORUS, ORTHO. DIS-SOLVED (MG/L AS P)	PHOSPHORUS, ORTHO. DIS-SOLVED (MG/L AS P)	PHOSPHATE, ORTHO. DIS-SOLVED (MG/L AS PO4)	BORON, DIS-SOLVED (UG/L AS B)	IRON, DIS-SOLVED (UG/L AS FE)	ALGAL GROWTH POTENTIAL, BOTTLE TEST (MG/L)	SEDIMENT, DISCHARGE, SUSPENDED (MG/L)	SEDIMENT, DISCHARGE, SUSPENDED (T/DAY)	SEDIMENT, SIEVE DIAM. % FINER THAN .062 MM	
MAY 16...	.18	.04	.02	.00	.00	300	80	.9	89	.84	62		
DATE	TIME	BED MATERIAL, FALL DIAM. % FINER THAN .062 MM	BED MATERIAL, FALL DIAM. % FINER THAN .125 MM	BED MATERIAL, FALL DIAM. % FINER THAN .250 MM	BED MATERIAL, FALL DIAM. % FINER THAN .500 MM	BED MATERIAL, FALL DIAM. % FINER THAN 1.00 MM							
MAY 16...	0800	14.0	E3.5	8	10	13	18	20					
E-Estimate.													
DATE	TIME	BED MATERIAL, SIEVE DIAM. % FINER THAN 2.00 MM	BED MATERIAL, SIEVE DIAM. % FINER THAN 4.00 MM	BED MATERIAL, SIEVE DIAM. % FINER THAN 8.00 MM	BED MATERIAL, SIEVE DIAM. % FINER THAN 16.0 MM	BED MATERIAL, SIEVE DIAM. % FINER THAN 32.0 MM	BED MATERIAL, SIEVE DIAM. % FINER THAN 64.0 MM	BED MATERIAL, SIEVE DIAM. % FINER THAN 128 MM					
MAY 16...	24	30	38	43	55	78	100						

ANALYSES OF SAMPLES COLLECTED AT MISCELLANEOUS SITES IN WYOMING

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

YELLOWSTONE RIVER BASIN

443640105171801 COTTONWOOD CREEK NEAR MOUTH, NEAR WESTON, WY (LAT 44 36 40 LONG 105 17 18)

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	TEMPER- ATURE (DEG C)
AUG S30...	1100	.50	4100	18.5

S-Seepage run data (see Explanation of Water-Quality Records).

444836105215601 LITTLE POWDER RIVER ABOVE ANTELOPE CREEK, NEAR WESTON, WY (LAT 44 48 36 LONG 105 21 56)

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	TEMPER- ATURE (DEG C)
AUG S30...	1220	2.8	3790	20.5

S-Seepage run data (see Explanation of Water-Quality Records).

LITTLE MISSOURI RIVER BASIN

444328105004801 PRAIRIE CREEK BELOW HORSE CREEK, NEAR STRONER, WY (LAT 44 43 28 LONG 105 00 48)

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	HARD- NESS, (MG/L AS CACO3)	HARD- NESS, NONCAR- BONATE (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
AUG S30...	0810	.04	2010	8.6	15.5	160	0	26	24	480	16

S-Seepage run data (see Explanation of Water-Quality Records).

DATE	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	BICAR- BONATE (MG/L AS HCO3)	CAR- BONATE (MG/L AS CO3)	ALKA- LINITY (MG/L AS CACO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SiO2)	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)
AUG 30...	5.6	890	14	750	370	5.2	.6	5.6	1390	1370	1.86

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)	NITRO- GEN, TOTAL (MG/L AS N)	NITRO- GEN, TOTAL (MG/L AS NO3)	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHORUS, DIS- SOLVED (MG/L AS P)	BORON, DIS- SOLVED (UG/L AS B)	IRON, DIS- SOLVED (UG/L AS FE)
AUG 30...	.15	.01	.08	2.0	2.1	2.1	9.3	.26	.09	290	50

ANALYSES OF SAMPLES COLLECTED AT MISCELLANEOUS SITES IN WYOMING

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

CHEYENNE RIVER BASIN

433022104522001 CHEYENNE RIVER BELOW FROG CREEK, NEAR DULL CENTER, WY (LAT 43 30 22 LONG 104 52 20)

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	HARD- NESS (MG/L AS CACO3)	HARD- NESS, NONCAR- BONATE (MG/L CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)
AUG 30...	1500	2.0	2300	8.1	26.0	920	710	230	83	230	3.3	17

S-Seepage run data (see Explanation of Water-Quality Records).

DATE	BICAR- BONATE (MG/L AS HCO3)	CAR- BONATE (MG/L AS CO3)	ALKA- LINITY (MG/L AS CACO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS AC-FT)	SOLIDS, DIS- SOLVED (TONS DAY)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N)
AUG 30...	250	0	210	1100	22	.5	13	1940	1820	2.48	9.83	.01

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, DIS- SOLVED (MG/L AS P)	BORON, DIS- SOLVED (UG/L AS B)	IRON, DIS- SOLVED (UG/L AS FE)	CARBON, ORGANIC DIS- SOLVED (MG/L AS C)	CARBON, ORGANIC SUS- PENDE TOTAL (MG/L AS C)
AUG 30...	.00	.38	.38	.39	1.7	.01	.01	100	20	8.0	1.4

433240104431001 CHEYENNE RIVER ABOVE BLACK THUNDER CREEK, NEAR HAMPSHIRE, WY (LAT 43 32 40 LONG 104 43 10)

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	HARD- NESS (MG/L AS CACO3)	HARD- NESS, NONCAR- BONATE (MG/L CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)
AUG 30...	1300	.82	2500	8.0	26.0	980	800	240	92	250	3.5	17

S-Seepage run data (see Explanation of Water-Quality Records).

DATE	BICAR- BONATE (MG/L AS HCO3)	CAR- BONATE (MG/L AS CO3)	ALKA- LINITY (MG/L AS CACO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS AC-FT)	SOLIDS, DIS- SOLVED (TONS DAY)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N)
AUG 30...	220	0	180	1200	25	.5	13	2140	1950	2.65	4.32	.00

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, DIS- SOLVED (MG/L AS P)	BORON, DIS- SOLVED (UG/L AS B)	IRON, DIS- SOLVED (UG/L AS FE)	CARBON, ORGANIC DIS- SOLVED (MG/L AS C)	CARBON, ORGANIC SUS- PENDE TOTAL (MG/L AS C)
AUG 30...	.00	.43	.43	.43	1.9	.01	.01	110	30	7.9	.3

ANALYSES OF SAMPLES COLLECTED AT MISCELLANEOUS SITES IN WYOMING

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

CHEYENNE RIVER BASIN

432526104293501 CHEYENNE RIVER BELOW SNYDER CREEK, NEAR MORRISEY, WY (LAT 43 25 26 LONG 104 29 35)

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	HARD- NESS (MG/L AS CACO3)	HARD- NESS NONCAR- BONATE (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)
AUG 30...	1200	6.8	2300	8.3	23.0	580	280	140	57	360	6.5	16
S-Seepage run data (see Explanation of Water-Quality Records).												

DATE	BICAR- BONATE (MG/L AS HCO3)	CAR- BONATE (MG/L AS CO3)	ALKA- LINITY (MG/L AS CACO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, RESIDUE AT 180 DEG. C SOLVED (MG/L)	SOLIDS, SUM OF CONSTITU- ENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)	SOLIDS, DIS- SOLVED (TONS PER DAY)	NITRO- GEN, DIS- SOLVED NO2+NO3 TOTAL (MG/L AS N)
AUG 30...	360	6	310	1000	23	.6	12	1850	1790	2.43	32.9	.01

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, DIS- SOLVED (MG/L AS P)	BORON, DIS- SOLVED (UG/L AS B)	IRON, DIS- SOLVED (UG/L AS FE)	CARBON, ORGANIC DIS- SOLVED (MG/L AS C)	CARBON, ORGANIC SUS- PENDED TOTAL (MG/L AS C)
AUG 30...	.01	.42	.43	.44	1.9	.01	.05	100	20	7.6	.3

430435105233700 BOX CREEK BELOW CONFLUENCE, NEAR BILL, WY (LAT 43 04 35 LONG 105 23 37)

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	TUR- BID- ITY (JTU)	OXYGEN, DIS- SOLVED (MG/L)	HARD- NESS (MG/L AS CACO3)	HARD- NESS NONCAR- BONATE (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 15...	1000	E3.0	1190	8.2	14.5	3	7.5	340	54	82	33	140
E-Estimate.												

DATE	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	BICAR- BONATE (MG/L AS HCO3)	CAR- BONATE (MG/L AS CO3)	ALKA- LINITY (MG/L AS CACO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, SUM OF CONSTITU- ENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)	NITRO- GEN, DIS- SOLVED NO2+NO3 TOTAL (MG/L AS N)
MAY 15...	3.3	5.5	350	0	290	340	11	.3	8.3	793	1.08	.00

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 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,AM- MONIA + ORGANIC DIS- SOLVED (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)
MAY 15...	.01	.01	.01	.01	.50	.22	.51	.23	.51	2.3	.05

DATE	PHOS- PHATE, TOTAL (MG/L AS PO4)	PHOS- PHORUS, DIS- SOLVED (MG/L AS P)	PHOS- PHORUS, ORTHOPHOS- PHATE, TOTAL (MG/L AS P)	PHOS- PHORUS, ORTHOPHOS- PHATE, DIS- SOLVED (MG/L AS P)	PHOS- PHATE, ORTHOPHOS- PHATE, DIS- SOLVED (MG/L AS PO4)	BORON, DIS- SOLVED (UG/L AS B)	IRON, DIS- SOLVED (UG/L AS FE)	ALGAL GROWTH POTEN- TIAL- BOTTLE TEST (MG/L)	SEDI- MENT, SUS- PENDED (MG/L)	SEDI- MENT, DIS- CHARGE, SUS- PENDED (T/DAY)	SED. SUSP. SIEVE DIAM. & FINER THAN .062 MM
MAY 15...	.15	.03	.01	.00	.00	80	30	.6	45	.36	85

ANALYSES OF SAMPLES COLLECTED AT MISCELLANEOUS SITES IN WYOMING

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

CHEYENNE RIVER BASIN

431400104372500 LIGHTNING CREEK NEAR COW CREEK, NEAR LANCE CREEK, WY (LAT 43 14 00 LONG 104 37 25)

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	TUR- BID- ITY (JTU)	OXYGEN, DIS- SOLVED (MG/L)	HARD- NESS (MG/L AS CACO3)	HARD- NESS, NONCAR- BONATE (MG/L CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	
JUN 07...	1000	E18	1900	7.8	16.0	30	8.0	680	460	150	74	210	
E-Estimate.													
DATE	TIME	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	BICAR- BONATE (MG/L AS HCO3)	CAR- BONATE (MG/L AS CO3)	ALKA- LINITY (MG/L AS CACO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)	NITRO- GEN, DIS- SOLVED (MG/L AS N)
JUN 07...	3.5	10	270	0	220	830	14	.5	7.5	1430	1.94	.09	
DATE	TIME	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 N)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS NH4)	NITRO- GEN, ORGANIC DIS- SOLVED (MG/L AS N)	NITRO- GEN, ORGANIC DIS- SOLVED (MG/L AS N)	NITRO- GEN, AM- MONIA + ORGANIC DIS- SOLVED (MG/L AS N)	NITRO- GEN, AM- MONIA + ORGANIC DIS- SOLVED (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)	
JUN 07...	.13	.03	.00	.00	.67	.46	.70	.46	.79	3.5	.01		
DATE	TIME	PHOS- PHATE, TOTAL (MG/L AS PO4)	PHOS- PHORUS, DIS- SOLVED (MG/L AS P)	PHOS- PHORUS, ORTHODI- SOLVED (MG/L AS P)	PHOS- PHORUS, ORTHODI- SOLVED (MG/L AS P)	PHOS- PHATE, ORTHODI- SOLVED (MG/L AS PO4)	BORON, DIS- SOLVED (UG/L AS B)	IRON, DIS- SOLVED (UG/L AS FE)	ALGAL GROWTH POTEN- TIAL, BOTTLE TEST (MG/L)	SEDI- MENT, SUS- PENDE (MG/L)	SEDI- MENT CHARGE, PENDE (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM	
JUN 07...	.03	.00	.01	.01	.03	80	20	.8	147	7.1	94		
DATE	TIME	BED MAT. FALL DIAM. % FINER THAN (MM)	BED MAT. FALL DIAM. % FINER THAN (MM)	BED MAT. FALL DIAM. % FINER THAN (MM)	BED MAT. FALL DIAM. % FINER THAN (MM)	BED MAT. FALL DIAM. % FINER THAN (MM)	BED MAT. FALL DIAM. % FINER THAN (MM)	BED MAT. FALL DIAM. % FINER THAN (MM)	BED MAT. FALL DIAM. % FINER THAN (MM)	BED MAT. FALL DIAM. % FINER THAN (MM)	BED MAT. FALL DIAM. % FINER THAN (MM)	BED MAT. FALL DIAM. % FINER THAN (MM)	
JUN 07...	1000	16.0	E18	0	1	2	3	6	10	19	46	100	
E-Estimate.													

431512104232001 LANCE CREEK BELOW CRAZY WOMAN CREEK, AT BRIGHT, WY (LAT 43 15 12 LONG 104 23 20)

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	HARD- NESS (MG/L AS CACO3)	HARD- NESS, NONCAR- BONATE (MG/L CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	
AUG S30...	1645	12	2800	8.3	26.0	750	510	190	66	400	6.4	19	
S-Seepage run data (see Explanation of Water-Quality Records).													
DATE	TIME	BICAR- BONATE (MG/L AS HCO3)	CAR- BONATE (MG/L AS CO3)	ALKA- LINITY (MG/L CACU3)	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 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, DIS- SOLVED (MG/L AS N)
AUG 30...	280	1	230	1200	65	.7	15	2250	2100	2.86	68.0	.02	
DATE	TIME	NITRO- GEN, AMMONIA TOTAL (MG/L AS N)	NITRO- GEN, AMMONIA 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, DIS- SOLVED (MG/L AS P)	BORON, DIS- SOLVED (UG/L AS B)	IRON, DIS- SOLVED (UG/L AS FE)	CARBON, ORGANIC DIS- SOLVED (MG/L AS C)	CARBON, ORGANIC SUS- PENDE TOTAL (MG/L AS C)	
AUG 30...	.03	.97	1.0	1.0	4.5	.02	.00	230	20	6.9	.6		

ANALYSES OF SAMPLES COLLECTED AT MISCELLANEOUS SITES IN WYOMING

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

CHEYENNE RIVER BASIN

432542104114601 CHEYENNE RIVER ABOVE WILD CAT CREEK, AT RIVERVIEW, WY (LAT 43 25 42 LONG 104 11 46)

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	HARD- NESS (MG/L AS CACO3)	HARD- NESS, NONCAR- BONATE (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)
AUG 30...	1345	30	2600	8.4	26.0	670	400	160	65	430	7.2	16

S-Seepage run data (see Explanation of Water-Quality Records).

DATE	BICAR- BONATE (MG/L AS HCO3)	CAR- BONATE (MG/L AS CO3)	ALKA- LINIT (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)
AUG 30...	320	0	260	1200	77	.6	13	2160	2120	2.88	172	.02

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 NH3)	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHORUS, DIS- SOLVED (MG/L AS P)	BORON, DIS- SOLVED (UG/L AS B)	IRON, DIS- SOLVED (UG/L AS FE)	CARBON, ORGANIC DIS- SOLVED (MG/L AS C)	CARBON, ORGANIC SUS- PENDE TOTAL (MG/L AS C)
AUG 30...	.02	.61	.63	.65	2.9	.02	.01	170	40	6.8	.4

440734105072201 BELLE FOURCHE RIVER ABOVE FOUR HORSE CREEK, NEAR PINEY, WY (LAT 44 07 34 LONG 105 07 22)

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	TEMPER- ATURE (DEG C)
SEP 26...	1115	3.4	2900	13.5

S-Seepage run data (see Explanation of Water-Quality Records).

441126105034701 BELLE FOURCHE RIVER BELOW RAVEN CREEK, NEAR MOORCROFT, WY (LAT 44 11 26 LONG 105 03 47)

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	TEMPER- ATURE (DEG C)
SEP 26...	1145	4.3	3050	14.0

S-Seepage run data (see Explanation of Water-Quality Records).

441630104583601 BELLE FOURCHE RIVER ABOVE DONKEY CREEK, NEAR MOORCROFT, WY (LAT 44 16 30 LONG 104 58 36)

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	TEMPER- ATURE (DEG C)
SEP 26...	0930	6.3	3030	12.0

S-Seepage run data (see Explanation of Water-Quality Records).

ANALYSES OF SAMPLES COLLECTED AT MISCELLANEOUS SITES IN WYOMING

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

CHEYENNE RIVER BASIN

441650105233000 DONKEY CREEK 0.5 MILE BELOW LEE DRAW, ABOVE WYODAK MINE, WY (LAT 44 16 50 LONG 105 23 30)

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	TUR- BID- ITY (JTU)	DOXYGEN, DIS- SOLVED (MG/L)	HARD- NESS (MG/L AS CAC03)	HARD- NESS, NONCAR- BONATE (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)
MAY 16...	1500	E9.0	2800	8.0	19.0	4	13.8	1200	1000	200	180	200
E-Estimate.												

DATE	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	BICAR- BONATE (MG/L AS HC03)	CAR- BONATE (MG/L AS CO3)	ALKA- LINITY (MG/L AS CAC03)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLU- 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 TOTAL (MG/L AS N)
MAY 16...	2.5	16	290	0	240	1200	110	.9	3.5	2060	2.80	.01

DATE	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N)	NITRO- GEN, AMMONIA SOLVED (MG/L AS N)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS NH4)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N)	NITRO- GEN, ORGANIC SOLVED (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC DIS- SOLVED (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)
MAY 16...	.73	.03	2.8	3.6	4.2	1.0	4.2	3.8	4.2	19	1.1

DATE	PHOS- PHATE, TOTAL (MG/L AS PO4)	PHOS- PHORUS, SOLVED (MG/L AS P)	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHORUS, ORTHOPHOS- PHATE, SOLVED (MG/L AS P)	PHOS- PHATE, ORTHOPHOS- PHATE, SOLVED (MG/L AS PO4)	BORON, DIS- SOLVED (UG/L AS B)	IRON, DIS- SOLVED (UG/L AS FE)	ALGAL GROWTH POTEN- TIAL, BOTTLE TEST (MG/L)	SEDI- MENT, SUS- PENDED (MG/L)	SEDI- MENT, DIS- CHARGE, SUS- PENDED (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
MAY 16...	3.4	.82	.81	.80	2.5	280	40	112	249	6.0	90

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 16...	1500	19.0	E9.0	7	17	41	58
E-Estimate.							

DATE	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 16...	62	66	76	94	99	100

ANALYSES OF SAMPLES COLLECTED AT MISCELLANEOUS SITES IN WYOMING

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

CHEYENNE RIVER BASIN

441650105203000 DONKEY CREEK BELOW WYODAK MINE, NEAR GILLETTE, WY (LAT 44 16 50 LONG 105 20 30)

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	TUR- BID- ITY (JTU)	OXYGEN, DIS- SOLVED (MG/L)	HARD- NESS (MG/L AS CAC03)	HARD- NESS, NONCAR- BONATE (MG/L CAC03)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)
MAY 16...	1700	E12	2700	7.6	20.0	7	9.6	1200	1000	200	180	170

E-Estimate.

DATE	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	BICAR- BONATE (MG/L AS HCO3)	CAR- BONATE (MG/L AS CO3)	ALKA- LINITY (MG/L AS CAC03)	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 TOTAL (MG/L AS N)
MAY 16...	2.1	16	270	0	220	1200	64	.8	3.2	1970	2.68	.67

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, ORGANIC DIS- SOLVED (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC DIS- SOLVED (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)
MAY 16...	.87	2.7	.40	.52	.00	.80	1.5	1.2	2.2	9.6	.94

DATE	PHOS- PHATE, TOTAL (MG/L AS PO4)	PHOS- PHORUS, DIS- SOLVED (MG/L AS P)	PHOS- PHORUS, ORTHOPHOS- PHATE (MG/L AS P)	PHOS- PHORUS, ORTHOPHOS- PHATE (MG/L AS P)	PHOS- PHATE, ORTHOPHOS- PHATE (MG/L AS PO4)	BORON, DIS- SOLVED (UG/L AS B)	IRON, DIS- SOLVED (UG/L AS FE)	ALGAL GROWTH POTEN- TIAL, BOTTLE TEST (MG/L)	SEDI- MENT, SUS- PENDED (MG/L)	SEDI- MENT DIS- CHARGE, SUS- PENDED (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
MAY 16...	2.9	.74	.71	.59	1.8	270	30	54	69	2.2	92

DATE	TIME	TEMPER- ATURE (DEG C)	STREAM- FLOW, INSTAN- TANEOUS (CFS)	BED MAT. FALL DIAM. % FINER THAN .125 MM	BED MAT. FALL DIAM. % FINER THAN .250 MM	BED MAT. FALL DIAM. % FINER THAN .500 MM	BED MAT. FALL DIAM. % FINER THAN 1.00 MM
MAY 16...	1700	20.0	E12	0	1	1	1

E-Estimate.

DATE	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 16...	2	4	13	35	70	100

441645104592001 DONKEY CREEK NEAR MOUTH, NEAR MOORCROFT, WY (LAT 44 16 45 LONG 104 59 20)

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	TEMPER- ATURE (DEG C)
SEP S26...	0835	.20	3890	13.0

S-Seepage run data (see Explanation of Water-Quality Records).

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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)	2,4,5-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)
NOV 07...	1245	65	6.5	.08	0	.01	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)
NOV 07...	.00	0	.11	0

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)	2,4,5-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)
NOV 07...	1045	160	6.0	.18	0	.02	0	.00	.0

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	TUR- BID- ITY (JTU)	OXYGEN, DIS- SOLVED (MG/L)	HARD- NESS (MG/L AS CACO3)	HARD- NESS, NONCAR- BONATE (MG/L CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)
MAY 15...	1400	E7.0	700	8.5	22.0	6	10.0	300	190	79	26	29
E-Estimate.												

DATE	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	BICAR- BONATE (MG/L AS HCO3)	CAR- BONATE (MG/L AS CO3)	ALKA- LINITY (MG/L AS CA CO3)	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 TOTAL (MG/L AS N)
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MAY												
15...	.7	8.9	140	2	120	230	3.8	.4	15	463	.63	.00

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, ORGANIC DIS- SOLVED (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC DIS. (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)
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MAY											
15...	.04	.01	.01	.01	.22	.16	.23	.17	.23	1.0	.04

DATE	PHOS-PHATE, TOTAL (MG/L AS P04)	PHOS-PHURUS, DIS-SOLVED (MG/L AS P)	PHOS-PHURUS, ORTHO, DIS-SOLVED (MG/L AS P)	PHOS-PHURUS, ORTHO, DIS-SOLVED (MG/L AS P)	PHOS-PHATE, ORTHO, DIS-SOLVED (MG/L AS P04)	BORON, DIS-SOLVED (UG/L AS B)	IRON, DIS-SOLVED (UG/L AS FE)	ALGAL GROWTH POTENTIAL, BOTTLE TEST (MG/L)	SEDIMENT DISCHARGE, SUSPENDED (MG/L)	SEDIMENT DISCHARGE, SUSPENDED (T/DAY)	SEDIMENT DISCHARGE, SUSPENDED THAN .062 MM
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MAY												
15...	.12	.02	.01	.00	.00	70	10	.6	62	1.2	82	

DATE	TIME	TEMPER- ATURE (DEG C)	STREAM- FLOW, INSTAN- TANEOUS (CFS)	BED	BED	BED	BED	BED	BED	BED	BED
				MAT. FALL DIAM.	MAT. FALL DIAM.	MAT. FALL DIAM.	MAT. FALL DIAM.	MAT. FALL DIAM.	MAT. FALL DIAM.	MAT. FALL DIAM.	MAT. FALL DIAM.
				% FINER THAN	% FINER THAN	% FINER THAN	% FINER THAN	% FINER THAN	% FINER THAN	% FINER THAN	% FINER THAN
				.062 MM	.125 MM	.250 MM	.500 MM	1.00 MM	2.00 MM	4.00 MM	8.00 MM

MAY	15...	1400	22.0	E7.0	11	18	39	61	83	95	100	100
E-Estimate.												

GROUND-WATER LEVELS

ALBANY COUNTY

410847105585201. Local number, 14N 077W 25dcd01.

LOCATION.--Lat 41°08'47", long 105°58'52", in SE¼SW¼SE¼ sec.25, T.14 N., R.77 W., Hydrologic Unit 10180010.

Owner: Wm. D. Embree.

AQUIFER.--Gravel of terrace deposits.

WELL CHARACTERISTICS.--Drilled stock water-table well, diameter 8 in (20 cm), depth 75 ft (22.9 m), cased.

DATUM.--Altitude of land-surface datum is about 7,424 ft (2,263 m). Measuring point: Top of casing 0.90 ft (0.27 m) above land-surface datum.

PERIOD OF RECORD.--July 1948 to September 1953, April 1959 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 24.92 ft (7.60 m) below land-surface datum, Sept. 21, 1951; lowest, 35.78 ft (10.91 m) below land-surface datum, June 3, 1968.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

No measurement in 1978.

413816105325601. Local number, 19N 073W 02cdd01.

LOCATION.--Lat 41°38'16", long 105°32'56", in SE¼SE¼SW¼ sec.2, T.19 N., R.73 W., Hydrologic Unit 10180010.

Owner: Gil Smith.

AQUIFER.--Forelle Limestone.

WELL CHARACTERISTICS.--Drilled unused artesian well, diameter unknown, depth 100 ft (30.4 m), cased.

DATUM.--Altitude of land-surface datum is about 7,300 ft (2,225 m). Measuring point: Bolt hole in pump base, 0.50 ft (0.15 m) above land-surface datum.

PERIOD OF RECORD.--October 1965 to October 1968, March 1970 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 58.26 ft (17.76 m) below land-surface datum, June 19, 1974; lowest, 71.83 ft (21.89 m) below land-surface datum, May 8, 1968.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	WATER LEVEL
JAN 16	68.30

CAMPBELL COUNTY

444611105295001. Local number, 44N 072W 22cc01.

LOCATION.--Lat 44°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 1977 TO SEPTEMBER 1978

DATE	WATER LEVEL
NOV 7	46.50
MAR 28	46.76

CARBON COUNTY

414104106442801. Local number, 20N 083W 28bab01.

LOCATION.--Lat 41°41'04", long 106°44'28", 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 1977 TO SEPTEMBER 1978

DATE	WATER LEVEL
FEB 16	16.42
APR 19	16.47

GROUND-WATER LEVELS

599

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 1977 TO SEPTEMBER 1978

DATE	WATER LEVEL
NOV 14	30.21
FEB 22	31.15

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 1977 TO SEPTEMBER 1978

DATE	WATER LEVEL
NOV 8	13.06
MAR 10	13.44

443459104425601. Local number, 53N 065W 18bbd02.

LOCATION.--Lat 44°34'59", 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: 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 1977 TO SEPTEMBER 1978

DATE	WATER LEVEL
NOV 8	7.40
MAR 10	8.56

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.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 146.06 ft (44.52 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 1977 TO SEPTEMBER 1978

DATE	WATER LEVEL
NOV 28	150.82
FEB 15	149.47

GROUND-WATER LEVELS

FREMONT COUNTY--Continued

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 1977 TO SEPTEMBER 1978

DATE	WATER LEVEL
NOV 28	10.89
FEB 15	10.02

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 1943 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. 1961.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	WATER LEVEL	DATE	WATER LEVEL
MAR 9	13.45	JUL 14	18.46
APR 13	16.34	AUG 16	18.59
JUN 14	17.02		

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.

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, Sept. 1961.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	WATER LEVEL
MAR 9	10.40
APR 14	9.84
JUN 13	9.24

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, 16.43 ft (5.01 m) below land-surface datum, Aug. 10, 1970.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	WATER LEVEL
OCT 6	8.72
MAR 8	8.86
MAY 31	6.81

GROUND-WATER LEVELS

601

GOSHEN COUNTY--Continued

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.

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

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 1977 TO SEPTEMBER 1978

DATE	WATER LEVEL
OCT 6	20.13
MAR 8	24.60
MAY 31	21.78

420426104100601. Local number, 24N 061W 11bbb01.

LOCATION.--Lat 42°04'26", 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, 81.86 ft (24.95 m) below land-surface datum, Aug. 30, 1962.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	WATER LEVEL
OCT 6	77.39
MAR 8	76.86
MAY 31	78.96

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.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 37.48 ft (11.42 m) below land-surface datum, Oct. 16, 1951; lowest, 64.65 ft (19.71 m) below land-surface datum, July 19, 1943.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	WATER LEVEL
OCT 6	49.74
MAR 8	51.24
MAY 31	53.08

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.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 9.15 ft (2.79 m) below land-surface datum, Sept. 9, 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 1977 TO SEPTEMBER 1978

DATE	WATER LEVEL
OCT 6	10.58
MAR 8	12.33
MAY 31	11.91

GROUND-WATER LEVELS

GOSHEN COUNTY--Continued

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 1977 TO SEPTEMBER 1978

DATE	WATER LEVEL
OCT 6	21.79
MAR 8	26.03
MAY 31	26.31

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, Sept. 26, 1952; lowest, 24.85 ft (7.57 m) below land-surface datum, Oct. 8, 1962.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	WATER LEVEL
OCT 6	20.63
MAR 8	22.19
MAY 31	21.58

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.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 10.78 ft (3.29 m) below land-surface datum, June 25, 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 1977 TO SEPTEMBER 1978

DATE	WATER LEVEL
OCT 6	15.51
MAR 8	13.76
MAY 31	14.25

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 Spikner.

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, 28.51 ft (8.69 m) below land-surface datum, Oct. 1, 1969.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	WATER LEVEL
OCT 6	21.85
MAR 8	25.35
MAY 31	23.73

GROUND-WATER LEVELS

603

GOSHEN COUNTY--Continued

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 1977 TO SEPTEMBER 1978

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 4	17.11	JAN 4	17.03	JUL 5	16.47
NOV 4	17.23	FEB 6	17.05	AUG 4	16.15
DEC 5	17.10	MAR 6	17.02	SEP 5	16.85

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 1977 TO SEPTEMBER 1978

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 4	18.02	JAN 4	18.00	JUL 5	17.92
NOV 4	18.03	FEB 6	17.99	AUG 4	17.24
DEC 5	17.97	MAR 6	18.02	SEP 5	18.29

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: Niels Nielson.

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, May 28, 1974.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	WATER LEVEL
JAN 30	35.27

LARAMIE COUNTY

410322104071701. Local number, 13N 060W 31aaa01.

LOCATION.--Lat 41°03'22", long 104°07'17", in NE¼NE¼NE¼ sec.31, T.13 N., R.60 W., Hydrologic Unit 101290015.

Owner: W. T. Young, Jr.

AQUIFER.--Siltstone of Brule Formation.

WELL CHARACTERISTICS.--Drilled irrigation water-table well, diameter 20 in (51 cm), depth 100 ft (30.5 m), galvanized iron casing.

DATUM.--Altitude of land-surface datum is 5,184.8 ft (1,580.3 m). Measuring point: Top of casing, 1.00 ft (0.30 m) above land-surface datum.

PERIOD OF RECORD.--November 1940 to October 1969, September 1970 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 35.10 ft (10.70 m) below land-surface datum, Mar. 28, 1974; lowest, 44.10 ft (13.44 m) below land-surface datum, Sept. 13, 1978.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 11	41.71	JAN 17	38.47	APR 12	37.64	JUL 12	40.64
NOV 14	39.77	FEB 15	38.29	MAY 15	37.35	AUG 15	43.77
DEC 14	39.17	MAR 15	37.90	JUN 14	37.17	SEP 13	44.10

GROUND-WATER LEVELS

LARAMIE COUNTY--Continued

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 1977 TO SEPTEMBER 1978

DATE	WATER LEVEL
MAR 20	157.95

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 1977 TO SEPTEMBER 1978

Highest water level for the day, from recorder graph

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	40.79	42.05	39.65	38.20	37.59	37.12	36.29	36.65	36.11	53.10	53.61	43.25
10	40.80	41.70	39.28	38.05	37.49	37.05	36.25	36.43	36.18	43.55	45.07	41.35
15	40.78	40.98	39.00	37.89	37.42	37.04	36.20	36.31	50.16	45.55	44.12	41.24
20	41.91	40.54	38.86	37.97	37.38	36.93	36.19	36.31	37.82	46.53	42.79	40.74
25	42.63	40.09	38.60	37.83	37.28	36.51	36.21	36.20	52.08	51.46	45.54	40.42
EOM	42.33	39.78	38.41	37.69	37.21	36.38	37.17	36.15	45.59	45.04	42.27	40.14

WTR YEAR 1978 MAX 36.09 JUN 9 MIN 56.32 JUL 28

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 1977 TO SEPTEMBER 1978

Highest water level for the day, from recorder graph

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	34.03	36.94	33.98	30.73	29.94	29.60	28.19	29.04	29.49	41.68	48.07	43.75
10	34.12	37.36	35.24	30.22	29.82	29.61	28.85	28.39	30.17	41.70	45.31	44.48
15	33.52	33.44	33.58	30.31	29.80	29.54	29.03	29.03	33.08	37.76	41.64	36.55
20	34.95	33.44	33.16	30.39	29.84	29.02	28.82	28.73	34.87	48.14	44.40	37.25
25	34.15	34.87	31.44	30.17	29.70	28.52	29.04	29.55	36.42	48.09	46.79	39.24
EOM	36.62	34.16	31.04	30.04	29.64	28.77	29.35	29.07	41.68	48.07	48.25	40.61

WTR YEAR 1978 MAX 28.05 APR 4 MIN 49.18 AUG 31

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, 56.76 ft (17.30 m) below land-surface datum, Mar. 14, 1978.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	WATER LEVEL
MAR 14	56.76

LARAMIE COUNTY--Continued

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.

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 1977 TO SEPTEMBER 1978

DATE	WATER LEVEL
MAR 20	176.66

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.

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.

REVISIONS.--Revised figures of water level, in feet below land-surface datum, for the water year 1977, superseding those published in WDR WY-77-1 are given below.

DATE	WATER LEVEL
MAR 16	72.75

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	WATER LEVEL
MAR 30	73.31

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.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 73.62 ft (22.44 m) below land-surface datum, Dec. 21, 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 1977 TO SEPTEMBER 1978

DATE	WATER LEVEL
NOV 10	80.85
FEB 15	78.28

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, 35.34 ft (10.77 m) below land-surface datum, Mar. 21, 1974; 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 1977 TO SEPTEMBER 1978

DATE	WATER LEVEL
MAR 17	35.81

GROUND-WATER LEVELS

NIOBRARA COUNTY--Continued

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 to current year.

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.

REVISIONS.--Revised figures of water level, in feet below land-surface datum, for the water year 1977, superseding those published in WDR WY-77-1 are given below.

DATE	WATER LEVEL
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MAR 21 41.27

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	WATER LEVEL
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MAR 17 40.84

PLATTE COUNTY

415730104585601. Local number, 23N 068W 15ddd01.

LOCATION.--Lat 41°57'30", 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, 71.12 ft (21.68 m) below land-surface datum, June 21, 1965.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 12	67.16	JUL 12	70.78
FEB 8	68.57		

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 1977 TO SEPTEMBER 1978

DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 12	17.36	JUL 16	17.03
FEB 8	16.38		

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, 58.10 ft (17.71 m) below land-surface datum, Jan. 11, 1978; 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 1977 TO SEPTEMBER 1978

DATE	WATER LEVEL
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JAN 11 58.10

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

STATION NUMBER	LOCAL IDENT- IFIER	GEOL- OGIC UNIT	SITE	DATE OF SAMPLE	TIME	SAMP- LING DEPTH (FT)	FLOW RATE (GPM)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)
CAMPBELL COUNTY									
434131105225502	43N 071W 21ADB02	124WSTC	GW	78-06-22	1115	--	--	1550	8.2
434131105225503	43N 071W 21ADB03	124WSTC	GW	78-06-22	1310	--	--	1700	8.8
434956105275802	43N 072W 36BCC02	125FRUN	GW	78-06-21	1615	--	--	2300	7.9
445427105245201	45N 071W 05BAD01	125FRUN	GW	77-10-21	1100	400	--	1300	7.3
434956105275801	45N 072W 36BCC01	124WSTC	GW	78-06-21	1435	--	--	4150	7.7
440346105334901	47N 072W 07CCA01	124WSTC	GW	78-01-05	1000	--	--	2300	6.5
440346105334902	47N 072W 07CCA02	124WSTC	GW	78-06-14	1515	--	--	1830	7.4
		124WSTC	GW	77-11-15	--	--	--	--	--
		124WSTC	GW	78-01-05	1110	--	--	1530	7.2
440346105334905	47N 072W 07CCA05	124WSTC	GW	78-06-14	1440	--	--	1390	7.5
		124WSTC	GW	78-01-05	1035	--	--	1650	7.0
		124WSTC	GW	78-06-14	1400	--	--	1640	7.5
440346105334911	47N 072W 07CCA11	124WSTC	GW	78-01-05	1125	--	--	1760	7.2
440346105334914	47N 072W 07CCA14	124WSTC	GW	78-01-05	1330	--	--	1550	7.3
		124WSTC	GW	78-06-14	1115	--	--	1760	7.4
440346105334915	47N 072W 07CCA15	124WSTC	GW	77-11-15	--	--	--	--	--
		124WSTC	GW	78-01-05	1310	--	--	1700	7.2
		124WSTC	GW	78-06-14	0930	--	--	1860	7.3
440346105334916	47N 072W 07CCA16	124WSTC	GW	78-01-05	1200	--	--	1880	7.0
		124WSTC	GW	78-06-14	1015	--	--	1830	7.3
440346105334921	47N 072W 07CCA21	124WSTC	GW	78-01-05	1350	--	--	1700	7.3
		124WSTC	GW	78-06-14	1200	--	--	1800	7.5
		124WSTC	GW	77-10-04	1200	--	--	2220	6.8
440346105334924	47N 072W 07CCA24	124WSTC	GW	78-02-14	1600	--	--	2200	8.4
		124WSTC	GW	78-04-11	0830	--	--	1650	8.7
440346105334925	47N 072W 07CCA25	125FRUN	GW	78-06-13	1610	--	--	1360	8.9
		125FRUN	GW	78-09-21	0900	--	--	970	9.2
		124WSTC	GW	77-10-05	1200	--	--	1420	8.3
440346105334926	47N 072W 07CCA26	124WSTC	GW	78-01-17	1400	--	--	2380	8.0
		124WSTC	GW	78-02-14	1650	--	--	2050	8.4
440346105334927	47N 072W 07CCA27	124WSTC	GW	78-04-10	1625	--	--	1700	8.6
		125FRUN	GW	78-06-13	1540	--	--	1500	8.7
		125FRUN	GW	78-09-21	1110	--	--	1550	9.2
440346105334928	47N 072W 07CCA28	124WSTC	GW	78-01-05	1130	--	--	2250	7.1
		124WSTC	GW	78-02-14	1515	--	--	1800	8.2
		124WSTC	GW	78-04-10	1545	--	--	1700	8.6
440346105334929	47N 072W 07CCA29	124WSTC	GW	78-06-13	1440	--	--	1790	8.7
		124WSTC	GW	78-09-21	1200	--	--	1480	9.2
440346105334930	47N 072W 07CCA30	124WSTC	GW	78-01-04	1600	--	--	2100	7.0
		124WSTC	GW	78-04-11	1000	--	--	1550	8.3
		--	GW	78-09-21	1400	--	--	1700	--
440346105334931	47N 072W 07CCA31	124WSTC	GW	78-01-04	1515	--	--	2500	7.0
		124WSTC	GW	78-02-14	1430	--	--	2400	7.3
		124WSTC	GW	78-04-10	1500	--	--	1950	7.4
440346105334932	47N 072W 07CCA32	--	GW	78-06-13	1345	--	--	1710	8.0
		--	GW	78-09-21	1445	--	--	--	--
		124WSTC	GW	78-01-04	1430	--	--	2500	7.0
440346105334933	47N 072W 07CCA33	124WSTC	GW	78-02-14	1350	--	--	2600	7.2
		124WSTC	GW	78-04-10	1410	--	--	1950	7.2
		124WSTC	GW	78-06-13	1140	--	--	1500	7.3
440346105334934	47N 072W 07CCA34	124WSTC	GW	78-09-21	1530	--	--	1400	7.9
		124WSTC	GW	77-11-15	1330	--	--	3200	6.5
		124WSTC	GW	78-01-04	1130	--	--	2500	6.9
440346105334935	47N 072W 07CCA35	124WSTC	GW	78-02-14	1140	--	--	2500	7.0
		124WSTC	GW	78-04-10	1150	--	--	1950	7.1
		--	GW	78-06-13	1040	--	--	1470	7.3
440346105334936	47N 072W 07CCA36	--	GW	78-09-21	1615	--	--	1400	7.8
		124WSTC	GW	78-01-05	1630	--	--	2550	6.7
440346105334937	47N 072W 07CCA37	124WSTC	GW	78-02-14	1100	--	--	2350	7.0
		124WSTC	GW	78-04-10	1110	--	--	2050	7.1
		124WSTC	GW	78-06-13	1715	--	--	1950	7.3
440346105334938	47N 072W 07CCA38	124WSTC	GW	78-09-21	1700	--	--	1550	--
		124WSTC	GW	77-10-04	1000	--	--	1150	8.3
		124WSTC	GW	77-11-15	1430	--	--	1700	6.3
440346105334939	47N 072W 07CCA39	124WSTC	GW	78-01-04	1050	--	--	1700	7.0
		124WSTC	GW	78-02-14	1000	--	--	1850	7.2
		124WSTC	GW	78-04-10	1040	--	--	1700	7.2
440346105334940	47N 072W 07CCA40	124WSTC	GW	78-06-13	1750	--	--	1910	7.3
		124WSTC	GW	78-09-22	0940	--	--	1650	7.5

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

STATION NUMBER	LOCAL IDENTIFIER	GEOLOGIC UNIT	SITE	DATE OF SAMPLE	TIME	SAMPLING DEPTH (FT)	FLOW RATE (GPM)	SPECIFIC CONDUCTANCE (MICRO-MHOS)	PH (UNITS)
CAMPBELL COUNTY--Continued									
440346105334933	47N 072W 07CCA33	124WSTC	GW	77-10-05	0800	--	--	1440	8.5
		124WSTC	GW	78-01-17	1520	--	--	--	8.1
		124WSTC	GW	78-02-15	1000	--	--	1900	9.1
		125FRUN	GW	78-04-11	1140	--	--	1470	9.1
440346105334934	47N 072W 07CCA34	124WSTC	GW	78-02-14	1130	--	--	2400	9.3
440346105334935	47N 072W 07CCA35	124WSTC	GW	78-01-06	1400	--	--	3500	7.0
440346105334936	47N 072W 07CCA36	124WSTC	GW	78-01-17	1600	--	--	--	7.7
		124WSTC	GW	78-02-14	1720	--	--	2000	8.3
		124WSTC	GW	78-04-10	1650	--	--	1800	8.6
		124WSTC	GW	78-06-13	1640	--	--	1800	8.5
		124WSTC	GW	78-09-22	1045	--	--	1450	--
440358105310701	47N 072W 09BB 01	124WSTC	GW	78-01-06	1300	--	--	1150	7.4
440317105335501	47N 072W 18BB01	124WSTC	GW	78-01-06	1100	--	--	2450	7.0
441816105243101	50N 071W 218BB01	125FRUN	GW	77-10-19	1500	240	--	5500	6.9
441749105221901	50N 071W 27AAC01	111ALVM	GW	77-10-20	1330	18	--	6000	7.2
441716105224901	50N 071W 27BAD01	111ALVM	GW	77-10-20	1215	19	--	4200	7.0
441628105240801	50N 071W 33BAC01	125FRUN	GW	77-10-20	1000	174	--	4900	7.0
441628105240802	50N 071W 33BAC02	125FRUN	GW	77-10-20	0900	--	--	3500	6.9
441628105240803	50N 071W 33BAC03	111ALVM	GW	77-10-20	1045	26	--	5400	7.1
444328105362701	55N 073W 26 01	125FRUN	GW	77-10-19	0930	465	--	1850	7.4
444626105263002	56N 071W 30DBB01	111ALVM	GW	77-10-19	1130	30	--	2750	7.0
444743105301201	56N 072W 32AC 01	125FRUN	GW	77-10-18	1130	465	--	2300	7.5
444740105314701	56N 072W 33BC001	125FRUN	GW	77-10-18	1330	402	--	2000	7.8
444929105381001	56N 073W 21AB 01	125FRUN	GW	77-10-17	1400	405	--	1550	7.9
444842105352201	56N 073W 25BBA01	125FRUN	GW	77-10-18	1430	422	--	3100	7.6
444758105353301	56N 073W 25CC 01	125FRUN	GW	77-10-17	0900	422	--	2050	7.2
444758105353303	56N 073W 25CC 03	125FRUN	GW	77-10-12	1230	175	--	1900	7.8
444756105372901	56N 073W 27DDC01	125FRUN	GW	77-10-17	1100	396	--	1950	7.5
CARBON COUNTY									
414928106215601	21N 080W 02AAD01	124HANN	GW	77-10-08	1515	185	2.7	1380	7.9
414828106205601	21N 080W 12ACA01	124HANN	GW	77-10-07	1345	310	3.8	2260	7.3
414657106213601	21N 080W 24BBA01	124HANN	GW	77-10-06	1500	200	--	970	7.3
414643106384701	21N 082W 21BDA01	121NRPK	GW	78-06-12	1515	--	--	1050	7.8
414709106450701	21N 083W 16DDA01	211MVRD	GW	78-06-13	0900	--	--	700	6.7
415401106223601	22N 080W 02CDC01	125FRRS	GW	78-06-22	1230	120	--	430	7.6
414932106232201	22N 080W 34DCD01	124HANN	GW	77-10-05	1330	310	3.1	1300	7.3
415209106340301	22N 081W 19BAA01	124HANN	GW	78-06-16	0900	--	--	4500	7.2
414938106312201	22N 081W 33DDC01	124HANN	GW	77-11-13	1130	120	--	850	7.2
		124HANN	GW	77-11-13	1200	120	--	850	7.2
415750106225001	23N 080W 14CBA01	211MDCB	GW	77-11-13	0925	110	--	560	7.1
415700106244401	23N 080W 21BDD01	124HANN	GW	77-11-12	1515	185	--	1310	7.2
415542106271501	23N 080W 31BAB01	124HANN	GW	77-11-12	1200	208	--	1730	6.5
415514106280901	23N 081W 36ABB01	124HANN	GW	77-11-12	0915	253	--	1300	7.8
415530106461601	23N 083W 32AAD01	125FRRS	GW	77-11-07	1235	140	6.5	8000	7.4
415530106463301	23N 083W 32ABD01	125FRRS	GW	77-11-07	1330	--	--	7500	6.9
415506106464201	23N 083W 32OBC01	125FRRS	GW	77-11-10	1515	300	--	2500	8.4
420214106263301	24N 080W 19ADD01	221SNDC	GW	78-06-15	1300	--	--	890	8.4
		221SNDC	GW	78-06-15	1400	--	--	470	8.0
420203106421901	24N 083W 24CAA01	124HANN	GW	77-10-04	1300	274	8.6	2840	8.4
420048106480901	24N 083W 31BAB01	125FRRS	GW	77-11-08	1315	114	1200	5500	6.9
420023106481001	24N 083W 31CAB01	125FRRS	GW	77-11-09	1450	317	--	7800	7.8
420027106484301	24N 084W 36ADC01	125FRRS	GW	77-11-09	1100	300	--	3700	7.2
CONVERSE COUNTY									
431140104580001	36N 067W 13AAA01	125FRUN	GW	77-10-06	1300	180	--	5550	8.0
431150104581001	37N 068W 12CB 01	125FRUN	GW	77-10-06	1200	200	--	6000	7.8
431110105442201	37N 074W 14AB 01	124WSTC	GW	77-10-07	1100	140	--	4200	7.8
431840105435201	39N 074W 34BDD01	124WSTC	GW	77-10-11	1000	184	--	480	8.2
CROOK COUNTY									
442930104063401	52N 062W 18C 01	337PHSP	GW	78-07-22	1000	--	--	760	7.3

QUALITY OF GROUND WATER

609

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

STATION NUMBER	LOCAL IDENT- I- FIER	GEO- LOGIC UNIT	SITE	DATE OF SAMPLE	TIME	SAMP- LING DEPTH (FT)	FLOW RATE (GPM)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)
GOSHEN COUNTY									
414705104104601	21N 061W 15CDD01	211LNCE	GW	78-03-29	1450	60	--	1850	7.9
414456104123801	21N 061W 32ADC01	211LNCE	GW	78-03-29	1520	160	--	1760	8.0
415402104202001	22N 062W 05CDC01	211LNCE	GW	78-03-29	1310	60	--	772	7.0
415353104181601	22N 062W 10B8C01	123WRVR	GW	78-03-29	1330	--	--	1020	8.5
415821104122401	23N 061W 1688B01	123WRVR	GW	78-03-29	1705	100	--	1310	8.2
415548104160001	23N 062W 26DDD01	123WRVR	GW	78-03-29	1620	165	--	1540	8.4
415921104274001	23N 063W 06DDD01	123WRVR	GW	78-03-29	1225	100	--	625	8.5
420116104160001	24N 062W 26DA001	123WRVR	GW	78-03-29	1145	120	--	1480	7.5
PARK COUNTY									
443432110214001	WELL FB 1 YNP	111LCTN	GW	78-06-21	1030	48	--	75	--
		111LCTN	GW	78-08-15	1300	48	--	60	6.6
443437110214601	WELL FB 2 YNP	111LCTN	GW	77-10-19	1300	51	--	85	7.0
		111LCTN	GW	78-06-21	1120	51	--	75	--
		111LCTN	GW	78-08-15	1600	51	--	70	6.5
443440110215201	WELL FB 3 YNP	111LCTN	GW	77-10-19	1320	51	--	535	6.9
		111LCTN	GW	78-06-21	1100	51	--	390	--
		111LCTN	GW	78-08-16	1330	51	--	320	6.4
443443110215001	WELL FB 4 YNP	111LCTN	GW	78-06-21	1315	49	--	250	--
		111LCTN	GW	78-08-16	1415	49	--	290	6.8
443448110213101	WELL FB 7 YNP	111LCTN	GW	78-06-21	1230	47	--	77	--
		111LCTN	GW	78-08-18	1305	47	--	100	--
443441110213801	WELL FB 8 YNP	111LCTN	GW	78-08-18	1505	48	--	100	--
443431110215001	WELL FB 9 YNP	111LCTN	GW	78-06-21	1000	51	--	180	--
		111LCTN	GW	78-08-18	1245	51	--	190	--
443452110220401	WELL FB10 YNP	111LCTN	GW	78-06-21	1430	40	--	90	--
		111LCTN	GW	78-08-18	1415	40	--	62	--
443436110214301	WELL FB11 YNP	111LCTN	GW	78-06-21	1340	49	--	85	--
		111LCTN	GW	78-08-18	1040	49	--	130	--
443435110214401	WELL FB12 YNP	111LCTN	GW	78-06-21	1400	49	--	130	--
		111LCTN	GW	78-08-15	1430	49	--	170	6.5
443435110220401	WELL FB13 YNP	111LCTN	GW	78-06-21	0930	6.0	--	105	--
443435110220401	WELL FB13 YNP	111LCTN	GW	78-08-16	1100	6.0	--	70	6.5

QUALITY OF GROUND WATER

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

STATION NUMBER	LOCAL IDENTIFIER	GEOLOGIC UNIT	SITE	DATE OF SAMPLE	TIME	SAMPLING DEPTH (FT)	FLOW RATE (GPM)	SPECIFIC CONDUCTANCE (MICRO-MHOS)	PH (UNITS)
TETON COUNTY									
442324110315701	WELL GV 1 YNP	111LCTN	GW	78-06-26	1020	16	--	150	--
		111LCTN	GW	78-08-20	1345	16	--	160	--
442323110321101	WELL GV 2 YNP	111LCTN	GW	78-06-26	1015	50	--	220	--
		111LCTN	GW	78-08-20	1325	50	--	140	--
442322110321002	WELL GV 3AYNP	111LCTN	GW	78-06-26	1010	38	--	65	--
		111LCTN	GW	78-08-18	1400	38	--	240	6.1
442321110321901	WELL GV 4 YNP	111LCTN	GW	78-06-26	1000	58	--	430	--
		111LCTN	GW	78-08-18	1230	58	--	260	6.4
442319110320401	WELL GV 5 YNP	111LCTN	GW	78-06-26	1145	54	--	140	--
		111LCTN	GW	78-08-20	1245	54	--	110	--
442320110320801	WELL GV 6 YNP	111LCTN	GW	78-06-26	1025	43	--	60	--
		111LCTN	GW	78-08-18	1545	43	--	75	6.9
442317110321601	WELL GV 7 YNP	111LCTN	GW	78-06-26	1100	105	--	130	--
		111LCTN	GW	78-08-19	1400	105	--	360	6.5
442315110321201	WELL GV 8 YNP	111LCTN	GW	78-06-26	1110	97	--	110	--
		111LCTN	GW	78-08-19	1530	97	--	75	6.7
442316110320901	WELL GV 9 YNP	111LCTN	GW	78-06-26	1120	57	--	170	--
		111LCTN	GW	78-08-19	1700	57	--	55	6.4
442318110320301	WELL GV10 YNP	111LCTN	GW	78-06-26	1130	53	--	120	--
		111LCTN	GW	78-08-20	1210	53	--	130	--
442318110320302	WELL GV10AYNP	--	GW	78-06-26	1135	--	--	130	--
		111LCTN	GW	78-08-20	1135	20	--	90	--
443844110522501	WELL MJ 1 YNP	111ALVM	GW	78-06-24	1400	35	--	230	--
		111ALVM	GW	78-08-23	1100	35	--	185	6.0
443844110521901	WELL MJ 3 YNP	111ALVM	GW	77-10-09	1300	60	--	215	6.8
		111ALVM	GW	77-11-09	1300	60	--	220	7.0
		111ALVM	GW	78-06-24	1405	60	--	390	--
		111ALVM	GW	78-08-23	1300	60	--	390	5.8
443842110522201	WELL MJ 5 YNP	111ALVM	GW	77-11-09	1300	40	--	205	6.9
		111ALVM	GW	78-06-24	1410	40	--	240	--
		111ALVM	GW	78-08-24	1130	40	--	165	6.0
443842110522101	WELL MJ 6 YNP	111ALVM	GW	78-06-24	1415	35	--	230	--
		111ALVM	GW	78-08-24	1000	35	--	200	--
443843110522001	WELL MJ 7 YNP	111ALVM	GW	77-10-09	1300	50	--	255	7.0
		111ALVM	GW	78-06-24	1420	50	--	170	--
		111ALVM	GW	78-08-23	1420	50	--	230	6.2
442717110504601	WELL OF 1 YNP	112GLCL	GW	78-06-27	1150	29	--	140	--
		112GLCL	GW	78-08-22	1530	29	--	110	--
442720110504101	WELL OF 2 YNP	112GLCL	GW	78-06-27	1045	48	--	170	--
		112GLCL	GW	78-08-21	1300	48	--	440	6.2
442722110504401	WELL OF 3 YNP	112GLCL	GW	77-10-09	1100	65	--	460	7.0
		112GLCL	GW	78-06-27	1100	65	--	350	--
		112GLCL	GW	78-08-21	1350	65	--	360	5.9
442723110504601	WELL OF 4 YNP	112GLCL	GW	77-10-09	1100	49	--	385	7.0
		112GLCL	GW	78-06-27	1115	49	--	280	--
		112GLCL	GW	78-08-21	1545	49	--	370	6.1
442724110504801	WELL OF 5 YNP	112GLCL	GW	78-06-27	1305	49	--	200	--
		112GLCL	GW	78-08-22	1100	49	--	280	5.6
442726110505001	WELL OF 6 YNP	112GLCL	GW	78-06-27	1140	36	--	270	--
		112GLCL	GW	78-08-22	1330	36	--	255	--
442723110505203	WELL OF 7BYNP	112GLCL	GW	78-08-22	1345	30	--	250	--

QUALITY OF GROUND WATER

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

STATION NUMBER	DATE OF SAMPLE	TEMPERATURE (DEG C)	TURBIDITY (JTU)	HARDNESS (MG/L AS CaCO3)	HARDNESS, NONCARBONATE (MG/L AS CaCO3)	CALCIUM 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)	BICARBONATE (MG/L AS HCO3)
CAMPBELL COUNTY--Continued											
434131105225502	78-06-22	11.5	--	330	140	96	23	310	7.4	8.0	240
434131105225503	78-06-22	12.5	--	390	220	110	29	350	7.7	11	160
434956105275802	78-06-21	11.5	--	1500	1300	310	180	180	2.0	9.5	320
445427105245201	77-10-21	10.0	29000	120	0	30	12	240	9.4	10	790
434956105275801	78-06-21	10.0	--	2200	1800	460	250	300	2.8	12	410
440346105334901	78-01-05	10.0	--	480	0	140	31	380	7.6	9.1	1260
	78-06-14	12.5	--	300	0	100	12	360	9.1	7.9	1280
440346105334902	77-11-15	--	--	--	--	--	--	--	--	--	--
	78-01-05	12.0	--	210	0	60	15	300	9.0	6.5	640
	78-06-14	12.0	--	170	0	48	12	290	9.7	5.5	780
440346105334905	78-01-05	13.0	--	260	0	73	19	310	8.4	8.5	650
	78-06-14	14.5	--	250	0	70	17	310	8.6	8.6	730
440346105334911	78-01-05	14.5	--	490	0	120	46	240	4.7	18	650
440346105334914	78-01-05	16.0	--	390	0	97	36	230	5.1	22	830
	78-06-14	15.0	--	460	0	120	39	250	5.1	21	740
440346105334915	77-11-15	--	--	--	--	--	--	--	--	--	--
	78-01-05	15.0	--	490	0	130	39	240	4.7	19	870
	78-06-14	14.5	--	520	0	140	41	260	5.0	18	780
440346105334916	78-01-05	14.5	--	590	0	150	53	240	4.3	19	760
	78-06-14	14.5	--	530	0	140	44	240	4.5	16	750
440346105334921	78-01-05	15.0	--	550	0	140	49	220	4.1	21	910
440346105334923	78-06-14	15.0	--	570	0	140	54	220	4.0	19	770
440346105334924	77-10-04	10.5	--	760	520	200	63	190	3.0	6.7	290
	78-02-14	62.0	--	380	300	140	8.0	240	5.3	100	62
	78-04-11	56.0	--	280	180	100	7.6	210	5.5	88	74
	78-06-13	50.5	--	110	0	40	3.2	180	7.4	64	110
	78-09-21	44.0	--	42	0	14	1.8	140	9.4	43	21
440346105334925	77-10-05	10.0	--	130	0	31	13	280	11	5.1	270
	78-01-17	47.0	--	330	0	89	25	280	6.8	110	440
	78-02-14	42.0	--	240	72	65	20	270	7.5	85	210
	78-04-10	37.5	--	210	59	58	15	260	7.9	87	180
	78-06-13	36.5	--	150	0	40	12	250	8.9	78	180
	78-09-21	33.5	--	94	0	23	8.9	220	9.9	64	160
440346105334926	78-01-05	54.5	--	200	0	57	14	330	10	51	600
	78-02-14	40.0	--	260	55	68	22	270	7.3	85	250
	78-04-10	37.5	--	230	130	67	16	250	7.1	79	130
	78-06-13	34.0	--	140	0	36	11	240	9.0	76	190
	78-09-21	31.5	--	140	0	36	12	220	8.1	60	180
440346105334927	78-01-04	17.0	--	340	0	98	24	380	8.9	7.9	1120
	78-04-11	30.0	--	120	0	25	14	330	13	110	630
	78-09-21	28.5	--	260	0	82	13	270	7.3	45	370
440346105334928	78-01-04	15.0	--	560	0	160	40	460	8.4	9.3	1710
	78-02-14	23.5	--	510	64	150	34	430	8.3	21	550
	78-04-10	27.5	--	280	0	84	18	320	8.3	32	440
	78-06-13	32.0	--	120	0	31	11	290	11	33	590
	78-09-21	--	--	130	0	38	8.8	240	9.1	46	400
440346105334929	78-01-04	11.0	--	640	0	180	45	490	8.5	9.8	1930
	78-02-14	13.0	--	590	0	170	41	470	8.4	12	1020
	78-04-10	16.0	--	380	0	110	25	380	8.5	14	730
	78-06-13	18.5	--	240	0	69	17	330	9.2	16	660
	78-09-21	21.5	--	190	0	55	12	270	8.6	19	700
440346105334930	77-11-15	11.0	--	650	0	180	49	560	9.6	9.4	1810
	78-01-04	12.0	--	580	0	160	43	500	9.1	9.3	1890
	78-02-14	11.0	--	510	0	140	39	480	9.2	9.7	1310
	78-04-10	11.5	--	380	0	110	26	400	8.9	12	840
	78-06-13	13.0	--	270	0	74	20	350	9.3	12	770
	78-09-21	8.0	--	170	0	50	12	270	8.9	12	650
440346105334931	78-01-05	11.5	--	530	0	150	37	460	8.7	8.9	1800
	78-02-14	11.0	--	470	0	130	35	470	9.4	8.7	970
	78-04-10	11.5	--	420	0	120	28	430	9.2	9.3	1120
	78-06-13	11.5	--	300	0	84	21	390	9.9	7.5	1030
	78-09-21	11.5	--	220	0	63	15	320	9.4	6.4	860
440346105334932	77-10-04	12.0	--	83	0	22	6.7	230	11	3.9	410
	77-11-15	14.0	--	390	0	100	35	360	7.9	6.4	1360
	78-01-04	13.0	--	340	0	96	25	370	8.7	8.0	1360
	78-02-14	10.5	--	300	0	81	23	370	9.3	7.1	1330
	78-04-10	11.5	--	300	0	86	20	390	9.8	7.8	1400
	78-06-13	11.5	--	310	0	88	21	380	9.5	7.2	1320
	78-09-22	11.5	--	270	0	75	19	360	9.6	6.4	1230

QUALITY OF GROUND WATER

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

STATION NUMBER	DATE OF SAMPLE	TEMPERATURE (DEG C)	TURBIDITY (JTU)	HARDNESS (MG/L AS CaCO ₃)	HARDNESS, NONCARBONATE (MG/L AS CaCO ₃)	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)	BICARBONATE (MG/L AS HCO ₃)
CAMPBELL COUNTY--Continued											
440346105334933	77-10-05	10.0	--	160	0	46	11	300	10	5.4	350
	78-01-17	89.0	--	560	320	210	8.5	260	4.8	150	290
	78-02-15	69.0	--	350	0	140	1.2	190	4.4	89	13
	78-04-11	63.5	--	200	0	78	1.9	160	4.9	73	0
440346105334934	78-02-14	84.0	--	480	130	170	14	180	3.6	98	180
440346105334935	78-01-06	9.0	--	1500	1400	330	170	100	1.1	10	170
440346105334936	78-01-17	55.0	--	460	290	140	26	280	5.7	100	200
	78-02-14	44.0	--	310	150	93	20	260	6.4	87	170
	78-04-10	38.0	--	250	86	75	15	250	6.9	85	150
	78-06-13	41.5	--	210	41	62	13	240	7.2	79	180
	78-09-22	37.0	--	150	0	41	11	220	7.9	64	160
440358105310701	78-01-06	11.0	--	990	650	230	100	180	2.5	9.6	170
440317105335501	78-01-06	9.0	--	650	380	180	49	340	5.8	8.0	330
441816105243101	77-10-19	14.0	42000	1500	880	340	160	470	5.3	50	760
441749105221901	77-10-20	11.5	230	2400	1700	450	310	660	5.9	30	880
441716105224901	77-10-20	10.5	8800	1600	1000	260	240	520	5.6	18	760
441628105240801	77-10-20	11.5	8000	1300	130	250	160	660	8.0	25	1410
441628105240802	77-10-20	8.5	600	1600	1100	340	190	190	2.0	23	590
441628105240803	77-10-20	9.5	440	2600	2000	450	370	430	3.6	23	780
444328105362701	77-10-19	14.0	480	260	0	49	34	360	9.7	12	1290
444626105263002	77-10-19	10.0	2600	1200	890	280	120	160	2.0	27	370
444743105301201	77-10-18	13.0	600	380	0	61	55	420	9.4	12	1220
444740105314701	77-10-18	13.0	2200	290	0	42	46	390	9.9	13	1090
444929105381001	77-10-17	15.0	4800	80	0	17	9.0	320	16	7.6	960
444842105352201	77-10-18	15.0	290	520	48	73	83	480	9.1	15	580
444758105353301	77-10-17	10.5	650	200	0	37	27	450	14	8.2	1410
444758105353303	77-10-12	11.0	8200	170	0	32	22	390	13	8.3	1160
444756105372901	77-10-17	13.0	3400	170	0	31	23	440	15	9.6	1340
CARBON COUNTY--Continued											
414928106215601	77-10-08	9.5	--	620	420	180	41	93	1.6	5.8	240
414828106205601	77-10-07	9.0	--	840	580	190	88	240	3.6	4.9	310
414657106213601	77-10-06	11.0	--	450	98	93	53	62	1.3	2.9	430
414643106384701	78-06-12	8.0	1	280	110	64	29	130	3.4	3.3	210
414709106450701	78-06-13	12.0	45	440	170	110	41	13	.3	6.2	330
415401106223601	78-06-22	9.0	0	370	120	100	28	87	2.0	1.5	300
414932106232201	77-10-05	10.0	--	460	160	110	44	120	2.4	5.5	360
415209106340301	78-06-16	11.5	45	1400	630	210	210	690	8.1	12	920
414938106312201	77-11-13	7.0	--	450	130	100	49	21	.4	1.8	390
	77-11-13	7.0	--	460	140	100	50	21	.4	1.9	390
415750106225001	77-11-13	8.0	--	230	6	45	28	33	1.0	3.6	270
415700106244401	77-11-12	9.0	--	710	260	150	81	41	.7	12	550
415542106271501	77-11-12	8.5	--	1000	860	230	110	14	.2	9.5	210
415514106280901	77-11-12	8.0	--	660	570	180	52	60	1.0	3.6	120
415530106461601	77-11-07	9.5	--	3600	3200	450	600	800	5.8	9.6	530
415530106463301	77-11-07	12.0	--	3500	3000	540	520	660	4.9	16	580
415506106464201	77-11-10	9.5	--	29	0	5.1	4.0	570	46	2.6	700
420214106263301	78-06-15	--	0	210	12	41	27	130	3.9	2.5	240
	78-06-15	14.0	35	180	0	40	20	170	5.5	2.3	260
420203106421901	77-10-04	9.0	--	130	0	32	13	620	23	3.5	330
420048106480901	77-11-08	8.0	--	4100	3300	440	740	50	.3	110	1040
420023106481001	77-11-09	10.0	--	5200	4500	490	960	130	.8	51	850
420027106484301	77-11-09	9.5	--	1800	920	230	290	260	2.7	30	1030
CONVERSE COUNTY--Continued											
431140104580001	77-10-06	13.0	4	130	0	31	13	70	2.7	7.6	260
431150104581001	77-10-06	12.0	5	130	0	31	12	69	2.7	7.6	250
431110105442201	77-10-07	10.5	6	170	0	48	11	20	.7	6.2	210
431840105435201	77-10-11	10.5	10	210	66	33	30	23	.7	6.4	170
CROOK COUNTY--Continued											
442930104063401	78-07-22	12.0	--	420	200	120	30	2.6	.1	1.4	270

QUALITY OF GROUND WATER

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

STATION NUMBER	DATE OF SAMPLE	TEMPERATURE (DEG C)	TURBIDITY (JTU)	HARDNESS (MG/L AS CaCO3)	HARDNESS, NONCARBONATE (MG/L 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)	BICARBONATE (MG/L AS HCO3)
GOSHEN COUNTY--Continued											
414705104104601	78-03-29	13.0	--	--	--	--	--	--	--	--	--
414456104123801	78-03-29	14.0	--	--	--	--	--	--	--	--	--
415402104202001	78-03-29	12.0	--	--	--	--	--	--	--	--	--
415353104181601	78-03-29	14.0	--	--	--	--	--	--	--	--	--
415821104122401	78-03-29	9.5	--	--	--	--	--	--	--	--	--
415548104160001	78-03-29	13.0	--	--	--	--	--	--	--	--	--
415921104274001	78-03-29	14.0	--	--	--	--	--	--	--	--	--
420116104160001	78-03-29	12.0	--	--	--	--	--	--	--	--	--
PARK COUNTY--Continued											
443432110214001	78-06-21	17.0	--	--	--	--	--	--	--	--	--
	78-08-15	7.0	--	23	0	5.8	2.1	2.5	.2	2.2	31
443437110214601	77-10-19	4.0	--	--	--	--	--	--	--	--	--
	78-06-21	20.0	--	--	--	--	--	--	--	--	--
	78-08-15	5.0	--	28	0	5.6	3.4	3.2	.3	2.6	43
443440110215201	77-10-19	10.0	--	--	--	--	--	--	--	--	--
	78-06-21	16.0	--	--	--	--	--	--	--	--	--
	78-08-16	9.0	--	120	9	28	13	16	.6	7.4	140
443443110215001	78-06-21	15.0	--	--	--	--	--	--	--	--	--
	78-08-16	6.0	--	120	51	30	12	10	.4	6.3	90
443448110213101	78-06-21	20.0	--	--	--	--	--	--	--	--	--
	78-08-18	7.0	--	--	--	--	--	--	--	--	--
443441110213801	78-08-18	7.0	--	--	--	--	--	--	--	--	--
443431110215001	78-06-21	18.0	--	--	--	--	--	--	--	--	--
	78-08-18	6.0	--	--	--	--	--	--	--	--	--
443452110220401	78-06-21	16.0	--	--	--	--	--	--	--	--	--
	78-08-18	7.0	--	--	--	--	--	--	--	--	--
443436110214301	78-06-21	16.0	--	--	--	--	--	--	--	--	--
	78-08-18	6.0	--	--	--	--	--	--	--	--	--
443435110214401	78-06-21	--	--	--	--	--	--	--	--	--	--
	78-08-15	6.5	--	72	11	16	7.8	5.1	.3	4.0	75
443435110220401	78-06-21	15.0	--	--	--	--	--	--	--	--	--
443435110220401	78-08-16	8.0	--	30	0	7.0	3.0	3.4	.3	2.8	46

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

STATION	NUMBER	DATE OF SAMPLE	TEMPER- ATURE (DEG C)	TUR- BID- ITY (JTU)	HARD- NESS (MG/L AS CACO3)	HARD- NESS, NONCAR- BONATE (MG/L CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	BICAR- BONATE (MG/L AS HCO3)
TETON COUNTY--Continued												
442324110315701		78-06-26	7.0	--	--	--	--	--	--	--	--	--
		78-08-20	9.0	--	--	--	--	--	--	--	--	--
442323110321101		78-06-26	10.0	--	--	--	--	--	--	--	--	--
		78-08-20	9.0	--	--	--	--	--	--	--	--	--
442322110321002		78-06-26	9.0	--	--	--	--	--	--	--	--	--
		78-08-18	6.0	--	64	16	19	4.0	8.6	.5	4.5	59
442321110321901		78-06-26	11.0	--	--	--	--	--	--	--	--	--
		78-08-18	6.5	--	90	15	23	7.8	8.0	.4	6.3	91
442319110320401		78-06-26	10.0	--	--	--	--	--	--	--	--	--
		78-08-20	7.0	--	--	--	--	--	--	--	--	--
442320110320801		78-06-26	10.0	--	--	--	--	--	--	--	--	--
		78-08-18	4.0	--	32	0	7.5	3.1	2.5	.2	2.3	45
442317110321601		78-06-26	12.0	--	--	--	--	--	--	--	--	--
		78-08-19	7.0	--	150	72	38	13	7.8	.3	8.0	93
442315110321201		78-06-26	12.0	--	--	--	--	--	--	--	--	--
		78-08-19	5.5	--	42	0	10	4.2	4.0	.3	3.2	57
442316110320901		78-06-26	10.0	--	--	--	--	--	--	--	--	--
		78-08-19	5.0	--	18	0	4.7	1.5	2.4	.2	2.4	29
442318110320301		78-06-26	10.0	--	--	--	--	--	--	--	--	--
		78-08-20	8.0	--	--	--	--	--	--	--	--	--
442318110320302		78-06-26	10.0	--	--	--	--	--	--	--	--	--
		78-08-20	9.0	--	--	--	--	--	--	--	--	--
443844110522501		78-06-24	15.0	--	--	--	--	--	--	--	--	--
		78-08-23	13.0	--	15	0	4.7	.7	35	4.0	5.9	94
443844110521901		77-10-09	12.0	--	--	--	--	--	--	--	--	--
		77-11-09	10.0	--	--	--	--	--	--	--	--	--
		78-06-24	15.0	--	--	--	--	--	--	--	--	--
443842110522201		78-08-23	12.0	--	87	15	27	4.7	36	1.7	10	88
		77-11-09	12.0	--	--	--	--	--	--	--	--	--
		78-06-24	15.0	--	--	--	--	--	--	--	--	--
443842110522101		78-08-24	12.5	--	24	0	7.0	1.5	35	3.1	6.0	120
		78-06-24	19.0	--	--	--	--	--	--	--	--	--
		78-08-24	16.0	--	--	--	--	--	--	--	--	--
443843110522001		77-10-09	11.0	--	--	--	--	--	--	--	--	--
		78-06-24	15.0	--	--	--	--	--	--	--	--	--
		78-08-23	11.0	--	37	0	11	2.2	31	2.2	6.6	67
442717110504601		78-06-27	18.0	--	--	--	--	--	--	--	--	--
		78-08-22	15.5	--	--	--	--	--	--	--	--	--
442720110504101		78-06-27	13.0	--	--	--	--	--	--	--	--	--
		78-08-21	21.0	--	7	0	2.7	.1	89	14	7.2	140
442722110504401		77-10-09	16.0	--	--	--	--	--	--	--	--	--
		78-06-27	15.0	--	--	--	--	--	--	--	--	--
		78-08-21	19.5	--	11	0	3.9	.4	71	9.2	8.1	85
442723110504601		77-10-09	16.0	--	--	--	--	--	--	--	--	--
		78-06-27	14.0	--	--	--	--	--	--	--	--	--
		78-08-21	17.5	--	13	0	3.9	.8	61	7.4	12	72
442724110504801		78-06-27	15.0	--	--	--	--	--	--	--	--	--
		78-08-22	13.5	--	10	0	3.5	.4	45	6.1	8.3	40
442726110505001		78-06-27	23.0	--	--	--	--	--	--	--	--	--
		78-08-22	20.0	--	--	--	--	--	--	--	--	--
442723110505203		78-08-22	10.5	--	--	--	--	--	--	--	--	--

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

STATION NUMBER	DATE OF SAMPLE	CAR-BONATE (MG/L AS CO ₃)	HY-DROXIDE ION (MG/L AS OH)	ALKA-LINITY (MG/L AS CaCO ₃)	SULFIDE TOTAL (MG/L AS S)	SULFIDE DIS-SOLVED (MG/L AS S)	SULFATE DIS-SOLVED (MG/L AS SO ₄)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	BRUMIDE DIS-SOLVED (MG/L AS BR)	IODIDE, DIS-SOLVED (MG/L AS I)
CAMPBELL COUNTY--Continued											
434131105225502	78-06-22	0	--	200	--	--	750	8.6	.1	--	--
434131105225503	78-06-22	23	--	170	--	--	940	7.9	.3	--	--
434956105275802	78-06-21	0	--	260	--	--	1600	4.2	.3	--	--
445427105245201	77-10-21	0	--	650	--	--	62	41	1.1	--	--
434956105275801	78-06-21	0	--	340	--	--	2500	16	.3	--	--
440346105334901	78-01-05	0	--	1030	--	1.0	220	7.8	--	.1	--
	78-06-14	0	--	1050	.2	--	60	14	.1	.1	--
440346105334902	77-11-15	--	--	--	--	--	--	--	--	--	--
	78-01-05	0	--	530	--	1.1	320	8.4	--	.3	--
	78-06-14	0	--	640	.9	--	170	17	.3	.6	--
440346105334905	78-01-05	0	--	530	--	.3	380	9.3	--	.2	--
	78-06-14	0	--	600	.2	--	320	17	.3	.4	--
440346105334911	78-01-05	0	--	530	--	3.4	410	7.2	--	.2	--
440346105334914	78-01-05	0	--	680	--	13	250	9.0	--	.2	--
	78-06-14	0	--	610	8.0	--	430	9.5	.8	.3	--
440346105334915	77-11-15	--	--	--	--	--	--	--	--	--	--
	78-01-05	0	--	710	--	6.2	300	7.2	--	.1	--
	78-06-14	0	--	640	2.3	--	420	9.5	.9	.2	--
440346105334916	78-01-05	0	--	620	--	3.2	520	8.2	--	.1	--
	78-06-14	0	--	620	5.6	--	450	9.2	.8	.5	--
440346105334921	78-01-05	0	--	750	--	.6	270	8.3	--	.1	--
440346105334923	78-06-14	0	--	630	1.0	--	450	9.8	1.2	.1	--
440346105334924	77-10-04	0	--	240	--	.6	860	6.7	--	.1	--
	78-02-14	17	--	79	--	--	950	20	--	.8	--
	78-04-11	23	--	99	7.5	--	760	35	8.1	.6	--
	78-06-13	43	--	160	7.1	--	450	32	9.8	.4	--
440346105334925	78-09-21	86	--	160	7.9	--	260	34	--	--	--
	77-10-05	14	--	240	--	.6	520	6.6	--	.1	--
	78-01-17	0	--	360	--	26	920	20	--	1.0	--
	78-02-14	0	--	170	--	--	760	38	--	.5	--
	78-04-10	0	--	150	4.8	--	750	18	6.5	.6	--
	78-06-13	26	--	190	28	--	680	11	6.3	.8	--
	78-09-21	48	--	210	8.3	--	480	60	--	--	--
440346105334926	78-01-05	0	--	490	--	32	590	17	--	.1	--
	78-02-14	0	--	210	--	--	770	25	--	.6	--
	78-04-10	0	--	110	14	--	790	16	5.8	.3	--
	78-06-13	30	--	210	23	--	620	.6	5.6	.8	--
	78-09-21	51	--	230	31	--	580	23	--	--	--
440346105334927	78-01-04	0	--	920	--	2.2	65	7.5	--	.1	--
	78-04-11	0	--	520	11	--	380	18	1.8	.4	--
	78-09-21	0	--	300	27	--	600	18	--	--	--
440346105334928	78-01-04	0	--	1400	--	4.5	140	7.3	--	.1	--
	78-02-14	0	--	450	--	--	950	13	--	.9	--
	78-04-10	0	--	360	5.5	--	640	15	1.8	.3	--
	78-06-13	0	--	480	6.0	--	330	10	2.1	.3	--
	78-09-21	18	--	360	2.7	--	340	4.8	--	--	--
440346105334929	78-01-04	0	--	1580	--	3.0	66	7.2	--	.1	--
	78-02-14	0	--	840	--	--	750	12	--	.4	--
	78-04-10	0	--	600	9.0	--	560	13	.7	.3	--
	78-06-13	0	--	540	5.9	--	400	10	1.1	.5	--
	78-09-21	0	--	570	2.9	--	240	18	--	--	--
440346105334930	77-11-15	0	--	1480	--	1.9	120	7.0	--	.1	--
	78-01-04	0	--	1550	--	1.3	41	5.3	--	.1	--
	78-02-14	0	--	1070	--	--	460	7.9	--	.3	--
	78-04-10	0	--	690	1.7	--	510	13	.2	.3	--
	78-06-13	0	--	630	2.1	--	350	11	.6	.5	--
	78-09-21	0	--	530	1.5	--	210	14	--	--	--
440346105334931	78-01-05	0	--	1480	--	.5	25	6.7	--	.1	--
	78-02-14	0	--	800	--	--	430	8.4	--	.4	--
	78-04-10	0	--	920	.6	--	420	11	.1	.2	--
	78-06-13	0	--	840	.8	--	280	8.0	.2	.2	--
	78-09-21	0	--	700	.3	--	180	23	--	--	--
440346105334932	77-10-04	0	--	340	--	.8	270	6.9	--	.1	--
	77-11-15	0	--	1120	--	3.8	22	7.3	--	.1	--
	78-01-04	0	--	1120	--	.6	51	5.7	--	.1	--
	78-02-14	0	--	1090	--	--	26	7.2	--	.2	--
	78-04-10	0	--	1150	.6	--	75	7.2	.2	.1	--
	78-06-13	0	--	1080	.8	--	58	7.6	.2	.1	--
	78-09-22	0	--	1010	.1	--	45	8.8	--	--	--

QUALITY OF GROUND WATER

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

STATION NUMBER	DATE OF SAMPLE	CAR-BONATE (MG/L AS CU3)	HY-DROXIDE ION (MG/L AS OH)	ALKA-LINITY (MG/L AS CACO3)	SULFIDE TOTAL (MG/L AS S)	SULFIDE DIS-SOLVED (MG/L AS S)	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)
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CAMPBELL COUNTY--Continued

440346105334933	77-10-05	19	--	320	--	.3	470	6.7	--	.1	--
	78-01-17	0	--	240	--	94	990	54	--	3.5	--
	78-02-15	210	--	360	--	--	760	54	--	1.1	--
	78-04-11	130	8	240	38	--	490	48	13	1.0	--
440346105334934	78-02-14	120	--	350	--	--	980	50	--	1.1	--
440346105334935	78-01-06	0	--	140	--	.5	1600	3.3	--	.0	--
440346105334936	78-01-17	0	--	160	--	33	950	48	--	1.0	--
	78-02-14	15	--	160	--	--	830	26	--	.9	--
	78-04-10	24	--	160	42	--	760	16	7.6	.5	--
	78-06-13	13	--	170	6.0	--	630	55	7.1	.4	--
	78-09-22	31	--	180	40	--	600	23	--	--	--
440358105310701	78-01-06	0	--	140	--	.6	1200	4.9	--	.0	--
440317105335501	78-01-06	0	--	270	--	.5	1100	7.7	--	.1	--
441816105243101	77-10-19	0	--	620	--	--	1900	15	--	.6	--
441749105221901	77-10-20	0	--	720	--	--	2700	260	--	.8	--
441716105224901	77-10-20	0	--	620	--	--	1800	220	.8	--	--
441628105240801	77-10-20	0	--	1160	--	--	1400	35	.9	--	--
441628105240802	77-10-20	0	--	480	--	--	1400	140	.6	--	--
441628105240803	77-10-20	0	--	640	--	--	2400	290	.8	--	--
444328105362701	77-10-19	0	--	1060	--	--	8.3	6.3	.7	--	--
444626105263002	77-10-19	0	--	300	--	--	1300	7.9	.6	--	--
444743105301201	77-10-18	0	--	1000	--	--	220	26	.7	--	--
444740105314701	77-10-18	0	--	890	--	--	200	10	.7	--	--
444929105381001	77-10-17	0	--	790	--	--	23	6.6	.5	--	--
444842105352201	77-10-18	0	--	480	--	--	990	6.4	.2	--	--
444758105353301	77-10-17	0	--	1160	--	--	48	5.0	1.0	--	--
444758105353303	77-10-12	0	--	950	--	--	87	6.6	.9	--	--
444756105372901	77-10-17	0	--	1100	--	--	6.9	7.0	.6	--	--

CARBON COUNTY--Continued

414928106215601	77-10-08	0	--	200	--	--	550	10	.2	--	--
414828106205601	77-10-07	0	--	250	--	--	1000	28	.7	--	--
414657106213601	77-10-06	0	--	350	--	--	220	9.1	.4	--	--
414643106384701	78-06-12	0	--	170	--	--	350	7.9	.5	--	--
414709106450701	78-06-13	0	--	270	--	--	180	4.2	.5	--	--
415401106223601	78-06-22	0	--	250	--	--	220	29	.3	--	--
414932106232201	77-10-05	0	--	300	--	--	420	11	.4	--	--
415209106340301	78-06-16	0	--	750	--	--	1900	52	.5	--	--
414938106312201	77-11-13	0	--	320	--	--	170	4.9	.2	--	--
	77-11-13	0	--	320	--	--	160	4.6	.2	--	--
415750106225001	77-11-13	0	--	220	--	--	69	4.4	.5	--	--
415700106244401	77-11-12	0	--	450	--	--	350	3.1	.4	--	--
415542106271501	77-11-12	0	--	170	--	--	820	4.1	.0	--	--
415514106280901	77-11-12	0	--	98	--	--	650	18	.2	--	--
415530106461601	77-11-07	0	--	430	--	--	4600	43	.1	--	--
415530106463301	77-11-07	0	--	480	--	--	4200	51	.0	--	--
415506106464201	77-11-10	13	--	600	--	--	600	24	1.9	--	--
420214106263301	78-06-15	3	--	200	--	--	260	6.9	.5	--	--
	78-06-15	0	--	210	--	--	300	7.4	.5	--	--
420203106421901	77-10-04	3	--	280	--	--	1100	8.0	.3	--	--
420048106480901	77-11-08	0	--	850	--	--	3200	5.3	.2	--	--
420023106481001	77-11-09	0	--	700	--	--	4800	7.9	.7	--	--
420027106484301	77-11-09	0	--	840	--	--	1500	13	.7	--	--

CONVERSE COUNTY--Continued

431140104580001	77-10-06	0	--	210	--	.1	75	3.8	.7	--	--
431150104581001	77-10-06	0	--	210	--	.1	72	3.7	.7	--	--
431110105442201	77-10-07	0	--	170	--	.2	41	2.9	.4	--	--
431840105435201	77-10-11	0	--	140	--	--	100	12	.5	--	--

CROOK COUNTY--Continued

442930104063401	78-07-22	0	--	220	.0	--	200	1.4	.3	.1	.00
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WATER-QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

STATION	NUMBER	DATE OF SAMPLE	CAR- BONATE (MG/L AS CO ₃)	HY- DROXIDE ION (MG/L AS OH)	ALKA- LINITY (MG/L AS CACO ₃)	SULFIDE TOTAL (MG/L AS S)	SULFIDE DIS- SOLVED (MG/L AS S)	SULFATE DIS- SOLVED (MG/L AS SO ₄)	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)
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GOSHEN COUNTY--Continued

414705104104601	78-03-29	--	--	--	--	--	--	--	--	--	--	--
414456104123801	78-03-29	--	--	--	--	--	--	--	--	--	--	--
415402104202001	78-03-29	--	--	--	--	--	--	--	--	--	--	--
415353104181601	78-03-29	--	--	--	--	--	--	--	--	--	--	--
415821104122401	78-03-29	--	--	--	--	--	--	--	--	--	--	--
415548104160001	78-03-29	--	--	--	--	--	--	--	--	--	--	--
415921104274001	78-03-29	--	--	--	--	--	--	--	--	--	--	--
420116104160001	78-03-29	--	--	--	--	--	--	--	--	--	--	--

PARK COUNTY--Continued

443432110214001	78-06-21	--	--	--	--	--	8.2	2.8	--	--	--	--
	78-08-15	0	--	25	--	--	7.0	1.1	.1	--	--	--
443437110214601	77-10-19	--	--	--	--	--	5.1	1.6	--	--	--	--
	78-06-21	--	--	--	--	--	4.7	2.1	--	--	--	--
	78-08-15	0	--	35	--	--	4.1	.8	.1	--	--	--
443440110215201	77-10-19	--	--	--	--	--	19	18	--	--	--	--
	78-06-21	--	--	--	--	--	13	9.4	--	--	--	--
	78-08-16	0	--	110	--	--	17	23	.1	--	--	--
443443110215001	78-06-21	--	--	--	--	--	11	16	--	--	--	--
	78-08-16	0	--	74	--	--	14	17	.0	--	--	--
443448110213101	78-06-21	--	--	--	--	--	7.7	2.2	--	--	--	--
	78-08-18	--	--	--	--	--	7.3	2.1	--	--	--	--
443441110213801	78-08-18	--	--	--	--	--	6.5	1.8	--	--	--	--
443431110215001	78-06-21	--	--	--	--	--	11	6.7	--	--	--	--
	78-08-18	--	--	--	--	--	9.2	6.7	--	--	--	--
443452110220401	78-06-21	--	--	--	--	--	4.7	7.8	--	--	--	--
	78-08-18	--	--	--	--	--	3.5	7.9	--	--	--	--
443436110214301	78-06-21	--	--	--	--	--	4.8	2.7	--	--	--	--
	78-08-18	--	--	--	--	--	7.6	4.6	--	--	--	--
443435110214401	78-06-21	--	--	--	--	--	12	16	--	--	--	--
	78-08-15	0	--	62	--	--	8.0	7.1	.1	--	--	--
443435110220401	78-06-21	--	--	--	--	--	19	3.4	--	--	--	--
443435110220401	78-08-16	0	--	38	--	--	4.6	.9	.1	--	--	--

QUALITY OF GROUND WATER

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

STATION NUMBER	DATE OF SAMPLE	CAR-BONATE (MG/L AS CO3)	HY-DROXIDE ION (MG/L AS OH)	ALKA-LINITY (MG/L AS CaCO3)	SULFIDE TOTAL (MG/L AS S)	SULFIDE DIS-SOLVED (MG/L AS S)	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)
TETON COUNTY--Continued											
442324110315701	78-06-26	--	--	--	--	--	8.7	2.4	--	--	--
	78-08-20	--	--	--	--	--	8.6	1.9	--	--	--
442323110321101	78-06-26	--	--	--	--	--	11	19	--	--	--
	78-08-20	--	--	--	--	--	8.5	15	--	--	--
442322110321002	78-06-26	--	--	--	--	--	3.1	1.4	--	--	--
	78-08-18	0	--	48	--	--	7.0	15	.0	--	--
442321110321901	78-06-26	--	--	--	--	--	15	30	--	--	--
	78-08-18	0	--	75	--	--	10	15	.1	--	--
442319110320401	78-06-26	--	--	--	--	--	12	1.7	--	--	--
	78-08-20	--	--	--	--	--	5.3	2.0	--	--	--
442320110320801	78-06-26	--	--	--	--	--	3.1	1.5	--	--	--
	78-08-18	0	--	37	--	--	2.9	1.0	.1	--	--
442317110321601	78-06-26	--	--	--	--	--	9.4	9.4	--	--	--
	78-08-19	0	--	76	--	--	12	17	.1	--	--
442315110321201	78-06-26	--	--	--	--	--	5.5	1.1	--	--	--
	78-08-19	0	--	47	--	--	5.4	.9	.1	--	--
442316110320901	78-06-26	--	--	--	--	--	6.3	6.0	--	--	--
	78-08-19	0	--	24	--	--	3.4	2.1	.1	--	--
442318110320301	78-06-26	--	--	--	--	--	7.9	1.5	--	--	--
	78-08-20	--	--	--	--	--	4.4	2.7	--	--	--
442318110320302	78-06-26	--	--	--	--	--	3.4	2.2	--	--	--
	78-08-20	--	--	--	--	--	8.1	5.9	--	--	--
443844110522501	78-06-24	--	--	--	--	--	5.0	3.3	--	--	--
	78-08-23	0	--	77	--	--	3.4	2.3	8.4	--	--
443844110521901	77-10-09	--	--	--	--	--	7.4	19	--	--	--
	77-11-09	--	--	--	--	--	6.3	17	--	--	--
	78-06-24	--	--	--	--	--	7.7	39	--	--	--
	78-08-23	0	--	72	--	--	6.5	37	3.6	--	--
443842110522201	77-11-09	--	--	--	--	--	4.1	2.3	--	--	--
	78-06-24	--	--	--	--	--	5.3	3.5	--	--	--
	78-08-24	0	--	98	--	--	4.2	2.3	8.2	--	--
443842110522101	78-06-24	--	--	--	--	--	3.5	4.1	--	--	--
	78-08-24	--	--	--	--	--	3.4	2.8	--	--	--
443843110522001	77-10-09	--	--	--	--	--	7.3	20	--	--	--
	78-06-24	--	--	--	--	--	4.3	3.9	--	--	--
	78-08-23	0	--	55	--	--	7.7	11	6.6	--	--
442717110504601	78-06-27	--	--	--	--	--	3.8	3.8	--	--	--
	78-08-22	--	--	--	--	--	4.4	3.4	--	--	--
442720110504101	78-06-27	--	--	--	--	--	18	8.6	--	--	--
	78-08-21	0	--	110	--	--	7.5	45	4.2	--	--
442722110504401	77-10-09	--	--	--	--	--	26	46	--	--	--
	78-06-27	--	--	--	--	--	18	38	--	--	--
	78-08-21	0	--	70	--	--	8.2	42	5.2	--	--
442723110504601	77-10-09	--	--	--	--	--	13	47	--	--	--
	78-06-27	--	--	--	--	--	9.3	35	--	--	--
	78-08-21	0	--	59	--	--	10	48	5.0	--	--
442724110504801	78-06-27	--	--	--	--	--	6.1	29	--	--	--
	78-08-22	0	--	33	--	--	13	39	3.4	--	--
442726110505001	78-06-27	--	--	--	--	--	8.2	21	--	--	--
	78-08-22	--	--	--	--	--	8.9	29	--	--	--
442723110505203	78-08-22	--	--	--	--	--	12	25	--	--	--

SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, RESIDUE AT 105 DEG. C, DIS- SOLVED (MG/L)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)	SOLIDS, RESIDUE AT 105 DEG. C, SUS- PENDED (MG/L)	SOLIDS, SUSP. TOTAL, RESIDUE AT 110 DEG. C (MG/L)	NITRO- GEN, NITRATE TOTAL (MG/L AS N)	NITRO- GEN, NITRATE DIS- SOLVED (MG/L AS N)	NITRO- GEN, NITRATE TOTAL (MG/L AS N)
---	--	---	---	---	---	---	--	---	--

434131105225502	78-06-22	9.6	--	--	1320	1.80	--	--	--	--
434131105225503	78-06-22	7.6	--	--	1560	2.12	--	--	--	--
434956105275802	78-06-21	6.5	--	--	2570	3.50	--	--	--	--
445427105245201	77-10-21	5.4	--	--	792	1.08	--	--	--	--
434956105275801	78-06-21	11	--	--	3760	5.11	--	--	--	--
440346105334901	78-01-05	--	1400	--	--	1.90	--	--	--	.00
	78-06-14	9.5	1040	--	1200	1.63	--	--	--	--
	77-11-15	--	--	--	--	--	--	--	--	--
	78-01-05	--	1010	--	--	1.37	--	--	--	.00
440346105334902	78-06-14	10	831	--	941	1.28	--	--	--	.09
	78-01-05	--	1150	--	--	1.56	--	--	--	.00
	78-06-14	17	1040	--	1120	1.52	--	--	--	.01
	78-01-05	--	1250	--	--	1.70	--	--	--	.00
440346105334911	78-01-05	--	1050	--	--	1.43	--	--	--	.00
	78-06-14	24	1190	--	1270	1.73	--	--	--	.00
	77-11-15	--	--	--	--	--	--	--	--	--
	78-01-05	--	1180	--	--	1.60	--	--	--	.00
440346105334915	78-06-14	24	1220	--	1300	1.77	--	--	--	.10
	78-01-05	--	1360	--	--	1.85	--	--	--	.01
	78-06-14	23	1180	--	1300	1.77	--	--	--	.21
	78-01-05	--	1190	--	--	1.62	--	--	--	.00
440346105334921	78-06-14	27	1180	--	1310	1.78	--	--	--	.03
	77-10-04	--	1620	--	--	2.20	--	--	--	.04
	78-02-14	--	1570	--	--	2.14	--	--	--	.82
	78-04-11	24	1250	--	1320	1.80	--	--	--	.02
440346105334923	78-06-13	23	806	--	940	1.28	--	--	--	.02
	78-09-21	--	--	--	--	--	--	--	--	--
	77-10-05	--	1000	--	--	1.36	--	--	--	.00
	78-01-17	--	1510	--	--	2.05	--	--	--	.01
440346105334925	78-02-14	--	1390	--	--	1.89	--	--	--	.14
	78-04-10	21	1220	--	1350	1.84	--	--	--	.01
	78-06-13	22	1100	--	1250	1.70	--	--	--	.02
	78-09-21	--	--	--	--	--	--	--	--	--
440346105334926	78-01-05	--	1320	--	--	1.80	--	--	--	.01
	78-02-14	--	1280	--	--	1.74	--	--	--	.23
	78-04-10	24	1220	--	1350	1.84	--	--	--	.00
	78-06-13	16	1030	--	1160	1.58	--	--	--	.03
440346105334927	78-09-21	--	--	--	--	--	--	--	--	--
	78-01-04	--	1080	--	--	1.47	--	--	--	.01
	78-04-11	16	1080	--	1220	1.66	--	--	--	.06
	78-09-21	--	--	--	--	--	--	--	--	--
440346105334928	78-01-04	--	1670	--	--	2.27	--	--	--	.04
	78-02-14	--	1850	--	--	2.52	--	--	--	.70
	78-04-10	19	1290	--	1360	1.85	--	--	--	.03
	78-06-13	13	965	--	1020	1.39	--	--	--	.00
440346105334929	78-09-21	--	--	--	--	--	--	--	--	--
	78-01-04	--	1810	--	--	2.46	--	--	--	.00

QUALITY OF GROUND WATER

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

STATION NUMBER	DATE OF SAMPLE	SILICA, DIS-SOLVED (MG/L AS SiO2)	SOLIDS, RESIDUE AT 180 DEG. C (MG/L)	SOLIDS, RESIDUE AT 105 DEG. C, DIS-SOLVED (MG/L)	SOLIDS, SUM OF CONSTITUENTS, DIS-SOLVED (MG/L)	SOLIDS, RESIDUE AT 105 DEG. C, SUS-PENDED (MG/L)	SOLIDS, SUSP. TOTAL, RESIDUE AT 110 DEG. C (MG/L)	NITRO-GEN, NITRATE DIS-SOLVED (MG/L AS N)	NITRO-GEN, NITRATE DIS-SOLVED (MG/L AS N)	NITRO-GEN, NITRITE TOTAL (MG/L AS N)
CAMPBELL COUNTY--Continued										
440346105334933	77-10-05	--	985	--	--	1.34	--	--	.02	--
	78-01-17	--	1900	--	--	2.58	--	--	.01	--
	78-02-15	--	1300	--	--	1.77	--	--	1.2	--
	78-04-11	25	891	--	1120	1.52	--	--	.27	--
440346105334934	78-02-14	--	1480	--	--	2.01	--	--	.95	--
440346105334935	78-01-06	--	2440	--	--	3.32	--	--	.00	--
440346105334936	78-01-17	--	1650	--	--	2.24	--	--	.02	--
	78-02-14	--	1440	--	--	1.96	--	--	.27	--
	78-04-10	34	1290	--	1380	1.88	--	--	.00	--
	78-06-13	33	1180	--	1260	1.71	--	--	.02	--
	78-09-22	--	--	--	--	--	--	--	--	--
440358105310701	78-01-06	--	1950	--	--	2.65	--	--	.00	--
440317105335501	78-01-06	--	1870	--	--	2.54	--	--	.00	--
441816105243101	77-10-19	9.0	--	--	3320	4.52	--	--	--	--
441749105221901	77-10-20	13	--	--	4880	6.64	--	--	--	--
441716105224901	77-10-20	14	--	--	3450	4.69	--	--	--	--
441628105240801	77-10-20	8.8	--	--	3240	4.41	--	--	--	--
441628105240802	77-10-20	13	--	--	2590	3.52	--	--	--	--
441628105240803	77-10-20	17	--	--	4370	5.94	--	--	--	--
444328105362701	77-10-19	8.7	--	--	1120	1.52	--	--	--	--
444626105263002	77-10-19	30	--	--	2110	2.87	--	--	--	--
444743105301201	77-10-18	6.3	--	--	1400	1.90	--	--	--	--
444740105314701	77-10-18	8.0	--	--	1250	1.70	--	--	--	--
444929105381001	77-10-17	4.6	--	--	862	1.17	--	--	--	--
444842105352201	77-10-18	1.7	--	--	1940	2.64	--	--	--	--
444758105353301	77-10-17	8.0	--	--	1280	1.74	--	--	--	--
444758105353303	77-10-12	7.8	--	--	1130	1.54	--	--	--	--
444756105372901	77-10-17	7.9	--	--	1190	1.62	--	--	--	--

CARBON COUNTY--Continued

414928106215601	77-10-08	13	1090	--	1010	1.37	--	.00	--	.00
414828106205601	77-10-07	19	1870	1900	1720	2.34	530	.00	--	.01
414657106213601	77-10-06	11	645	--	664	.90	--	.32	--	.03
414643106384701	78-06-12	21	--	--	710	.97	--	--	--	--
414709106450701	78-06-13	13	--	567	535	.73	10	--	--	--
415401106223601	78-06-22	.0	--	--	614	--	--	--	--	--
414932106232201	77-10-05	14	921	--	904	1.23	--	.01	--	.00
415209106340301	78-06-16	12	--	--	3540	4.81	--	--	--	--
414938106312201	77-11-13	18	569	610	558	.76	1	.00	--	.01
	77-11-13	18	568	580	549	.75	1	.01	--	.00
415750106225001	77-11-13	8.8	308	--	328	.45	--	.01	--	.00
415700106244401	77-11-12	9.5	959	--	919	1.25	--	.00	--	.01
415542106271501	77-11-12	20	1380	--	1330	1.81	--	.00	--	.01
415514106280901	77-11-12	12	1090	--	1040	1.41	--	.02	--	.01
415530106461601	77-11-07	12	7690	--	6780	9.22	--	1.8	--	.01
415530106463301	77-11-07	10	7110	7000	6280	8.54	200	12	--	.40
415506106464201	77-11-10	7.1	1570	1600	1570	2.14	94	.01	--	.02
420214106263301	78-06-15	10	--	--	600	.82	--	--	--	--
	78-06-15	11	--	--	680	.92	--	--	--	--
420203106421901	77-10-04	4.2	1980	2000	1950	2.65	19	.01	--	.00
420048106480901	77-11-08	31	5730	--	5090	6.92	--	40	--	.05
420023106481001	77-11-09	13	7740	--	6870	9.34	--	.00	--	.01
420027106484301	77-11-09	7.5	2970	2800	2840	3.86	1400	5.3	--	.01

CONVERSE COUNTY--Continued

431140104580001	77-10-06	8.3	--	--	338	.46	11	11	--	--
431150104581001	77-10-06	8.4	--	--	328	.45	--	--	--	--
431110105442201	77-10-07	14	--	--	248	.34	--	--	--	--
431840105435201	77-10-11	1.4	--	--	291	.40	--	--	--	--

CROOK COUNTY--Continued

442930104063401	78-07-22	13	517	560	503	.68	<1	--	--	--
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WATER-QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

STATION	NUMBER	DATE OF SAMPLE	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, RESIDUE AT 105 DEG. C DIS- SOLVED (MG/L)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)	SOLIDS, RESIDUE AT 105 DEG. C, SUS- PENDED (MG/L)	SOLIDS, SUSP. TOTAL, RESIDUE AT 110 DEG. C (MG/L)	NITRO- GEN, NITRATE TOTAL (MG/L AS N)	NITRO- GEN, DIS- SOLVED (MG/L AS N)	NITRO- GEN, NITRITE TOTAL (MG/L AS N)
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GOSHEN COUNTY--Continued

414705104104601	78-03-29	--	--	--	--	--	--	--	--	--	--	--
414456104123801	78-03-29	--	--	--	--	--	--	--	--	--	--	--
415402104202001	78-03-29	--	--	--	--	--	--	--	--	--	--	--
415353104181601	78-03-29	--	--	--	--	--	--	--	--	--	--	--
415821104122401	78-03-29	--	--	--	--	--	--	--	--	--	--	--
415548104160001	78-03-29	--	--	--	--	--	--	--	--	--	--	--
415921104274001	78-03-29	--	--	--	--	--	--	--	--	--	--	--
420116104160001	78-03-29	--	--	--	--	--	--	--	--	--	--	--

PARK COUNTY--Continued

443432110214001	78-06-21	--	--	--	--	--	--	--	--	--	--	--
	78-08-15	33	--	--	71	.10	--	--	--	--	--	--
443437110214601	77-10-19	--	--	--	--	--	--	--	--	--	--	--
	78-06-21	--	--	--	--	--	--	--	--	--	--	--
	78-08-15	47	--	--	90	.12	--	--	--	--	--	--
443440110215201	77-10-19	--	--	--	--	--	--	--	--	--	--	--
	78-06-21	--	--	--	--	--	--	--	--	--	--	--
	78-08-16	45	--	--	229	.31	--	--	--	--	--	--
443443110215001	78-06-21	--	--	--	--	--	--	--	--	--	--	--
	78-08-16	46	--	--	282	.38	--	--	--	--	--	--
443448110213101	78-06-21	--	--	--	--	--	--	--	--	--	--	--
	78-08-18	--	--	--	--	--	--	--	--	--	--	--
443441110213801	78-08-18	--	--	--	--	--	--	--	--	--	--	--
443431110215001	78-06-21	--	--	--	--	--	--	--	--	--	--	--
	78-08-18	--	--	--	--	--	--	--	--	--	--	--
443452110220401	78-06-21	--	--	--	--	--	--	--	--	--	--	--
	78-08-18	--	--	--	--	--	--	--	--	--	--	--
443436110214301	78-06-21	--	--	--	--	--	--	--	--	--	--	--
	78-08-18	--	--	--	--	--	--	--	--	--	--	--
443435110214401	78-06-21	--	--	--	--	--	--	--	--	--	--	--
	78-08-15	43	--	--	141	.19	--	--	--	--	--	--
443435110220401	78-06-21	--	--	--	--	--	--	--	--	--	--	--
443435110220401	78-08-16	40	--	--	85	.12	--	--	--	--	--	--

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

STATION	NUMBER	DATE OF SAMPLE	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS NO2)	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)	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)
CAMPBELL COUNTY--Continued												
434131105225502	78-06-22	--	--	--	.01	--	--	--	--	--	--	--
434131105225503	78-06-22	--	--	--	.02	--	--	--	--	--	--	--
434956105275802	78-06-21	--	--	--	.20	--	--	--	--	--	--	--
445427105245201	77-10-21	--	--	.01	--	1.1	--	--	82	--	--	83
434956105275801	78-06-21	--	--	--	.03	--	--	--	--	--	--	--
440346105334901	78-01-05	.01	.03	--	.01	--	.77	.99	--	--	--	--
	78-06-14	--	--	--	.01	--	--	--	--	--	--	--
440346105334902	77-11-15	--	--	--	--	--	--	--	--	--	--	--
	78-01-05	.01	.03	--	.01	--	.68	.88	--	--	--	--
	78-06-14	.01	.03	--	.10	--	.47	.61	--	--	--	--
440346105334905	78-01-05	.01	.03	--	.01	--	1.6	2.1	--	--	--	--
	78-06-14	.00	.00	--	.01	--	1.7	2.2	--	--	--	--
440346105334911	78-01-05	.01	.03	--	.01	--	.16	.21	--	--	--	--
440346105334914	78-01-05	.05	.16	--	.02	--	8.4	11	--	--	--	--
	78-06-14	.04	.13	--	.04	--	7.7	9.9	--	--	--	--
440346105334915	77-11-15	--	--	--	--	--	--	--	--	--	--	--
	78-01-05	.01	.03	--	.01	--	.89	1.1	--	--	--	--
	78-06-14	.02	.07	--	.12	--	2.2	2.8	--	--	--	--
440346105334916	78-01-05	.00	.00	--	.01	--	5.5	7.1	--	--	--	--
	78-06-14	.02	.07	--	.23	--	2.8	3.6	--	--	--	--
440346105334921	78-01-05	.01	.03	--	.01	--	2.3	3.0	--	--	--	--
440346105334923	78-06-14	.01	.03	--	.04	--	3.0	3.9	--	--	--	--
440346105334924	77-10-04	.00	.00	--	.04	--	.37	.48	--	--	--	--
	78-02-14	.01	.03	--	.83	--	28	36	--	--	--	--
	78-04-11	.01	.03	--	.03	--	22	28	--	6.0	--	--
	78-06-13	.01	.03	--	.03	--	29	37	--	--	--	--
440346105334925	78-09-21	--	--	--	.02	--	2.7	3.5	--	--	--	--
	77-10-05	.01	.03	--	.01	--	.40	.52	--	--	--	--
	78-01-17	.02	.07	--	.03	--	75	97	--	--	--	--
	78-02-14	<.01	<.03	--	.15	--	45	58	--	--	--	--
	78-04-10	.03	.10	--	.04	--	34	44	--	3.0	--	--
	78-06-13	.01	.03	--	.03	--	27	35	--	--	--	--
	78-09-21	--	--	--	.01	--	27	35	--	--	--	--
440346105334926	78-01-05	.01	.03	--	.02	--	47	61	--	--	--	--
	78-02-14	<.01	<.03	--	.24	--	27	35	--	--	--	--
	78-04-10	.04	.13	--	.04	--	29	37	--	.00	--	--
	78-06-13	.01	.03	--	.04	--	24	31	--	--	--	--
	78-09-21	--	--	--	.08	--	23	30	--	--	--	--
440346105334927	78-01-04	.01	.03	--	.02	--	.88	1.1	--	--	--	--
	78-04-11	.04	.13	--	.10	--	6.5	8.4	--	.90	--	--
	78-09-21	--	--	--	.01	--	9.8	13	--	--	--	--
440346105334928	78-01-04	.01	.03	--	.05	--	1.5	1.9	--	--	--	--
	78-02-14	<.01	<.03	--	.71	--	6.0	7.7	--	--	--	--
	78-04-10	.03	.10	--	.06	--	8.8	11	--	1.2	--	--
	78-06-13	.01	.03	--	.00	--	6.1	7.9	--	--	--	--
	78-09-21	--	--	--	.01	--	10	13	--	--	--	--
440346105334929	78-01-04	.01	.03	--	.01	--	1.2	1.5	--	--	--	--
	78-02-14	<.01	<.03	--	.70	--	1.4	1.8	--	--	--	--
	78-04-10	.02	.07	--	.06	--	1.8	2.3	--	1.2	--	--
	78-06-13	.03	.10	--	.06	--	3.0	3.9	--	--	--	--
	78-09-21	--	--	--	.01	--	4.3	5.5	--	--	--	--
440346105334930	77-11-15	.00	.00	--	.00	--	1.8	2.3	--	--	--	--
	78-01-04	.01	.03	--	.01	--	.90	1.2	--	--	--	--
	78-02-14	.02	.07	--	.58	--	.90	1.2	--	--	--	--
	78-04-10	.02	.07	--	.28	--	1.0	1.3	--	.40	--	--
	78-06-13	.00	.00	--	.03	--	1.7	2.2	--	--	--	--
	78-09-21	--	--	--	.01	--	2.4	3.1	--	--	--	--
440346105334931	78-01-05	.01	.03	--	.01	--	.93	1.2	--	--	--	--
	78-02-14	.01	.03	--	.53	--	1.9	2.4	--	--	--	--
	78-04-10	.01	.03	--	.02	--	.63	.81	--	.47	--	--
	78-06-13	.05	.16	--	.15	--	.56	.72	--	--	--	--
	78-09-21	--	--	--	.01	--	.69	.89	--	--	--	--
440346105334932	77-10-04	.00	.00	--	.02	--	.27	.35	--	--	--	--
	77-11-15	.01	.03	--	.20	--	.95	1.2	--	--	--	--
	78-01-04	.01	.03	--	.01	--	.77	.99	--	--	--	--
	78-02-14	.01	.03	--	.74	--	1.0	1.3	--	--	--	--
	78-04-10	.01	.03	--	.05	--	.56	.72	--	.54	--	--
	78-06-13	.01	.03	--	.04	--	.43	.55	--	--	--	--
	78-09-22	--	--	--	.15	--	.77	.99	--	--	--	--

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

STATION	NUMBER	DATE OF SAMPLE	NITRO- GEN, NITRITE	NITRO- GEN, NITRITE	NITRO- GEN, NO2+NO3	NITRO- GEN, NO2+NO3	NITRO- GEN, AMMONIA	NITRO- GEN, AMMONIA	NITRO- GEN, AMMONIA	NITRO- GEN, ORGANIC	NITRO- GEN,AM- MONIA + ORGANIC
			DIS- SOLVED (MG/L AS N)	DIS- SOLVED (MG/L AS NO2)	TOTAL (MG/L AS N)	DIS- SOLVED (MG/L AS N)	TOTAL (MG/L AS N)	DIS- SOLVED (MG/L AS NH4)	TOTAL (MG/L AS N)	DIS- SOLVED (MG/L AS N)	TOTAL (MG/L AS N)
CAMPBELL COUNTY--Continued											
440346105334933	77-10-05		.00	.00	--	.02	--	.40	.52	--	--
	78-01-17		.01	.03	--	.02	--	43	55	--	--
	78-02-15		<.01	<.03	--	1.2	--	140	180	--	--
	78-04-11		.18	.59	--	.45	--	66	85	--	--
440346105334934	78-02-14		<.01	<.03	--	.96	--	150	190	--	--
440346105334935	78-01-06		.02	.07	--	.02	--	.61	.79	--	--
440346105334936	78-01-17		.01	.03	--	.03	--	25	32	--	--
	78-02-14		.03	.10	--	.30	--	25	32	--	--
	78-04-10		.02	.07	--	.01	--	26	33	--	4.0
	78-06-13		.01	.03	--	.03	--	26	33	--	--
	78-09-22		--	--	--	.03	--	22	28	--	--
440358105310701	78-01-06		.01	.03	--	.01	--	.30	.39	--	--
440317105335501	78-01-06		.01	.03	--	.01	--	.67	.86	--	--
441816105243101	77-10-19		--	--	.02	--	4.6	--	--	130	--
441749105221901	77-10-20		--	--	.11	--	1.9	--	--	1.9	--
441716105224901	77-10-20		--	--	.12	--	.09	--	--	13	--
441628105240801	77-10-20		--	--	.01	--	3.2	--	--	43	--
441628105240802	77-10-20		--	--	.02	--	2.1	--	--	3.7	--
441628105240803	77-10-20		--	--	.05	--	.37	--	--	1.5	--
444328105362701	77-10-19		--	--	.02	--	1.9	--	--	.50	--
444626105263002	77-10-19		--	--	.12	--	.10	--	--	1.0	--
444743105301201	77-10-18		--	--	.03	--	2.2	--	--	1.3	--
444740105314701	77-10-18		--	--	.01	--	1.8	--	--	2.8	--
444929105381001	77-10-17		--	--	.01	--	1.4	--	--	.00	--
444842105352201	77-10-18		--	--	.01	--	3.0	--	--	.20	--
444758105353301	77-10-17		--	--	.01	--	1.7	--	--	1.9	--
444758105353303	77-10-12		--	--	.00	--	1.4	--	--	30	--
444756105372901	77-10-17		--	--	.01	--	1.6	--	--	6.0	--
CARBON COUNTY--Continued											
414928106215601	77-10-08		--	--	.00	--	--	--	--	--	--
414828106205601	77-10-07		--	--	.00	--	--	--	--	--	--
414657106213601	77-10-06		--	--	.35	--	--	--	--	--	--
414643106384701	78-06-12		--	--	.00	--	.25	--	--	.05	--
414709106450701	78-06-13		--	--	.00	--	.38	--	--	.09	--
415401106223601	78-06-22		--	--	.49	--	.01	--	--	.11	--
414932106232201	77-10-05		--	--	.01	--	--	--	--	--	--
415209106340301	78-06-16		--	--	.01	--	.92	--	--	.78	--
414938106312201	77-11-13		--	--	.01	--	--	--	--	--	--
	77-11-13		--	--	.01	--	--	--	--	--	--
415750106225001	77-11-13		--	--	.01	--	--	--	--	--	--
415700106244401	77-11-12		--	--	.01	--	--	--	--	--	--
415542106271501	77-11-12		--	--	.01	--	--	--	--	--	--
415514106280901	77-11-12		--	--	.03	--	--	--	--	--	--
415530106461601	77-11-07		--	--	1.8	--	--	--	--	--	--
415530106463301	77-11-07		--	--	12	--	--	--	--	--	--
415506106464201	77-11-10		--	--	.03	--	--	--	--	--	--
420214106263301	78-06-15		--	--	.04	--	.03	--	--	.55	--
	78-06-15		--	--	.04	--	.11	--	--	.22	--
420203106421901	77-10-04		--	--	.01	--	--	--	--	--	--
420048106480901	77-11-08		--	--	40	--	--	--	--	--	--
420023106481001	77-11-09		--	--	.01	--	--	--	--	--	--
420027106484301	77-11-09		--	--	5.3	--	--	--	--	--	--
CONVERSE COUNTY--Continued											
431140104580001	77-10-06		--	--	.96	--	1.0	--	--	.00	--
431150104581001	77-10-06		--	--	1.0	--	1.1	--	--	.00	--
431110105442201	77-10-07		--	--	.05	--	.05	--	--	.08	--
431840105435201	77-10-11		--	--	.00	--	.00	--	--	.73	--
CROOK COUNTY--Continued											
442930104063401	78-07-22		--	--	--	--	--	--	--	--	.30

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

STATION	NUMBER	DATE OF SAMPLE	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS NO2)	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)	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)
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GOSHEN COUNTY--Continued

414705104104601	78-03-29	--	--	--	--	--	--	--	--	--	--	--
414456104123801	78-03-29	--	--	--	--	--	--	--	--	--	--	--
415402104202001	78-03-29	--	--	--	--	--	--	--	--	--	--	--
415353104181601	78-03-29	--	--	--	--	--	--	--	--	--	--	--
415821104122401	78-03-29	--	--	--	--	--	--	--	--	--	--	--
415548104160001	78-03-29	--	--	--	--	--	--	--	--	--	--	--
415921104274001	78-03-29	--	--	--	--	--	--	--	--	--	--	--
420116104160001	78-03-29	--	--	--	--	--	--	--	--	--	--	--

PARK COUNTY--Continued

443432110214001	78-06-21	--	--	--	--	--	--	--	--	--	--	--
	78-08-15	--	--	--	.32	--	--	--	--	--	--	.68
443437110214601	77-10-19	--	--	--	--	--	--	--	--	--	--	--
	78-06-21	--	--	--	--	--	--	--	--	--	--	--
	78-08-15	--	--	--	.47	--	--	--	--	--	--	.82
443440110215201	77-10-19	--	--	--	--	--	--	--	--	--	--	--
	78-06-21	--	--	--	--	--	--	--	--	--	--	--
	78-08-16	--	--	--	2.4	--	--	--	--	--	--	1.1
443443110215001	78-06-21	--	--	--	--	--	--	--	--	--	--	--
	78-08-16	--	--	--	23	--	--	--	--	--	--	1.9
443448110213101	78-06-21	--	--	--	--	--	--	--	--	--	--	--
	78-08-18	--	--	--	--	--	--	--	--	--	--	--
443441110213801	78-08-18	--	--	--	--	--	--	--	--	--	--	--
443431110215001	78-06-21	--	--	--	--	--	--	--	--	--	--	--
	78-08-18	--	--	--	--	--	--	--	--	--	--	--
443452110220401	78-06-21	--	--	--	--	--	--	--	--	--	--	--
	78-08-18	--	--	--	--	--	--	--	--	--	--	--
443436110214301	78-06-21	--	--	--	--	--	--	--	--	--	--	--
	78-08-18	--	--	--	--	--	--	--	--	--	--	--
443435110214401	78-06-21	--	--	--	--	--	--	--	--	--	--	--
	78-08-15	--	--	--	2.9	--	--	--	--	--	--	2.8
443435110220401	78-06-21	--	--	--	--	--	--	--	--	--	--	--
443435110220401	78-08-16	--	--	--	.06	--	--	--	--	--	--	.64

QUALITY OF GROUND WATER

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

STATION	NUMBER	DATE OF SAMPLE	NITRO- GEN, NITRITE DIS- SOLVED	NITRO- GEN, NO2+NO3 TOTAL	NITRO- GEN, NO2+NO3 DIS- SOLVED	NITRO- GEN, AMMONIA TOTAL	NITRO- GEN, AMMONIA DIS- SOLVED	NITRO- GEN, AMMONIA DIS- SOLVED	NITRO- GEN, ORGANIC TOTAL	NITRO- GEN, ORGANIC DIS- SOLVED	NITRO- GEN,AM- MONIA + ORGANIC TOTAL	NITRO- GEN,AM- MONIA + ORGANIC DIS.
			(MG/L AS NO2)	(MG/L AS N)	(MG/L AS N)	(MG/L AS N)	(MG/L AS N)	(MG/L AS NH4)	(MG/L AS N)	(MG/L AS N)	(MG/L AS N)	(MG/L AS N)
TETON COUNTY--Continued												
442324110315701		78-06-26	--	--	--	--	--	--	--	--	--	--
		78-08-20	--	--	--	--	--	--	--	--	--	--
442323110321101		78-06-26	--	--	--	--	--	--	--	--	--	--
		78-08-20	--	--	--	--	--	--	--	--	--	--
442322110321002		78-06-26	--	--	--	--	--	--	--	--	--	--
		78-08-18	--	--	5.9	--	--	--	--	--	1.2	--
442321110321901		78-06-26	--	--	--	--	--	--	--	--	--	--
		78-08-18	--	--	4.7	--	--	--	--	--	1.3	--
442319110320401		78-06-26	--	--	--	--	--	--	--	--	--	--
		78-08-20	--	--	--	--	--	--	--	--	--	--
442320110320801		78-06-26	--	--	--	--	--	--	--	--	--	--
		78-08-18	--	--	.15	--	--	--	--	--	2.1	--
442317110321601		78-06-26	--	--	--	--	--	--	--	--	--	--
		78-08-19	--	--	17	--	--	--	--	--	.98	--
442315110321201		78-06-26	--	--	--	--	--	--	--	--	--	--
		78-08-19	--	--	.32	--	--	--	--	--	1.2	--
442316110320901		78-06-26	--	--	--	--	--	--	--	--	--	--
		78-08-19	--	--	.24	--	--	--	--	--	.95	--
442318110320301		78-06-26	--	--	--	--	--	--	--	--	--	--
		78-08-20	--	--	--	--	--	--	--	--	--	--
442318110320302		78-06-26	--	--	--	--	--	--	--	--	--	--
		78-08-20	--	--	--	--	--	--	--	--	--	--
443844110522501		78-06-24	--	--	--	--	--	--	--	--	--	--
		78-08-23	--	--	.00	--	--	--	--	--	.66	--
443844110521901		77-10-09	--	--	--	--	--	--	--	--	--	--
		77-11-09	--	--	--	--	--	--	--	--	--	--
		78-06-24	--	--	--	--	--	--	--	--	--	--
443842110522201		78-08-23	--	--	12	--	--	--	--	--	2.6	--
		77-11-09	--	--	--	--	--	--	--	--	--	--
		78-06-24	--	--	--	--	--	--	--	--	--	--
443842110522101		78-08-24	--	--	.04	--	--	--	--	--	.42	--
		78-06-24	--	--	--	--	--	--	--	--	--	--
		78-08-24	--	--	--	--	--	--	--	--	--	--
443843110522001		77-10-09	--	--	--	--	--	--	--	--	--	--
		78-06-24	--	--	--	--	--	--	--	--	--	--
		78-08-23	--	--	4.6	--	--	--	--	--	1.0	--
442717110504601		78-06-27	--	--	--	--	--	--	--	--	--	--
		78-08-22	--	--	--	--	--	--	--	--	--	--
442720110504101		78-06-27	--	--	--	--	--	--	--	--	--	--
		78-08-21	--	--	.42	--	--	--	--	--	3.9	--
442722110504401		77-10-09	--	--	--	--	--	--	--	--	--	--
		78-06-27	--	--	--	--	--	--	--	--	--	--
		78-08-21	--	--	4.0	--	--	--	--	--	2.9	--
442723110504601		77-10-09	--	--	--	--	--	--	--	--	--	--
		78-06-27	--	--	--	--	--	--	--	--	--	--
		78-08-21	--	--	.30	--	--	--	--	--	6.3	--
442724110504801		78-06-27	--	--	--	--	--	--	--	--	--	--
		78-08-22	--	--	4.9	--	--	--	--	--	5.8	--
442726110505001		78-06-27	--	--	--	--	--	--	--	--	--	--
		78-08-22	--	--	--	--	--	--	--	--	--	--
442723110505203		78-08-22	--	--	--	--	--	--	--	--	--	--

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

STATION NUMBER	DATE OF SAMPLE	NITRO- GEN, AM- MONIA + ORGANIC DIS. (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, DIS- SOLVED (MG/L AS P)	CARBON, ORGANIC DIS- SOLVED (MG/L AS C)	CYANIDE TOTAL (MG/L AS CN)	PHENOLS (UG/L)
CAMPBELL COUNTY--Continued									
434131105225502	78-06-22	--	--	--	--	--	--	--	--
434131105225503	78-06-22	--	--	--	--	--	--	--	--
434956105275802	78-06-21	--	--	--	--	--	--	--	--
445427105245201	77-10-21	--	83	370	2.0	--	--	--	--
434956105275801	78-06-21	--	--	--	--	--	--	--	--
440346105334901	78-01-05	--	--	--	--	--	9.5	.01	5
	78-06-14	--	--	--	--	--	4.4	.00	0
440346105334902	77-11-15	--	--	--	--	--	9.8	--	--
	78-01-05	--	--	--	--	--	4.3	.01	6
	78-06-14	--	--	--	--	--	2.0	.03	0
440346105334905	78-01-05	--	--	--	--	--	3.0	.01	8
	78-06-14	--	--	--	--	--	1.6	.00	2
440346105334911	78-01-05	--	--	--	--	--	5.5	.02	75
440346105334914	78-01-05	--	--	--	--	--	6.3	.06	980
	78-06-14	--	--	--	--	--	6.4	.05	500
440346105334915	77-11-15	--	--	--	--	--	4.9	--	--
	78-01-05	--	--	--	--	--	6.9	.05	110
	78-06-14	--	--	--	--	--	2.8	.04	95
440346105334916	78-01-05	--	--	--	--	--	6.2	.01	100
	78-06-14	--	--	--	--	--	2.9	.04	55
440346105334921	78-01-05	--	--	--	--	--	2.5	.06	9
440346105334923	78-06-14	--	--	--	--	--	1.2	.05	2
440346105334924	77-10-04	--	--	--	--	--	2.3	.00	1
	78-02-14	--	--	--	--	--	--	.21	8800
	78-04-11	28	--	--	--	--	--	.22	5000
	78-06-13	--	--	--	--	--	8.8	.17	900
	78-09-21	--	--	--	--	--	6.7	.15	620
440346105334925	77-10-05	--	--	--	--	--	3.0	.00	1
	78-01-17	--	--	--	--	--	40	.15	9900
	78-02-14	--	--	--	--	--	--	.11	4600
	78-04-10	37	--	--	--	--	--	.12	2800
	78-06-13	--	--	--	--	--	6.0	.09	720
	78-09-21	--	--	--	--	--	86	.09	580
440346105334926	78-01-05	--	--	--	--	--	107	.14	32000
	78-02-14	--	--	--	--	--	--	.17	8000
	78-04-10	29	--	--	--	--	--	.12	260
	78-06-13	--	--	--	--	--	6.9	.08	350
	78-09-21	--	--	--	--	--	8.3	.03	500
440346105334927	78-01-04	--	--	--	--	--	16	.01	480
	78-04-11	7.4	--	--	--	--	--	.11	2200
	78-09-21	--	--	--	--	--	36	.09	520
440346105334928	78-01-04	--	--	--	--	--	76	.02	1700
	78-02-14	--	--	--	--	--	--	.22	6900
	78-04-10	10	--	--	--	--	--	.16	4900
	78-06-13	--	--	--	--	--	38	.11	1900
	78-09-21	--	--	--	--	--	91	.14	1600
440346105334929	78-01-04	--	--	--	--	--	85	.01	550
	78-02-14	--	--	--	--	--	--	.18	2600
	78-04-10	3.0	--	--	--	--	--	.12	2500
	78-06-13	--	--	--	--	--	27	.12	800
	78-09-21	--	--	--	--	--	20	.14	740
440346105334930	77-11-15	--	--	--	--	--	26	.02	860
	78-01-04	--	--	--	--	--	31	.00	220
	78-02-14	--	--	--	--	--	--	.07	590
	78-04-10	1.4	--	--	--	--	--	.12	1700
	78-06-13	--	--	--	--	--	1.2	.11	140
	78-09-21	--	--	--	--	--	12	.13	260
440346105334931	78-01-05	--	--	--	--	--	26	.00	88
	78-02-14	--	--	--	--	--	--	.03	150
	78-04-10	1.1	--	--	--	--	--	.07	81
	78-06-13	--	--	--	--	--	4.4	.05	31
	78-09-21	--	--	--	--	--	84	.08	35
440346105334932	77-10-04	--	--	--	--	--	3.2	.00	2
	77-11-15	--	--	--	--	--	9.9	.00	45
	78-01-04	--	--	--	--	--	10	.00	17
	78-02-14	--	--	--	--	--	--	.00	32
	78-04-10	1.1	--	--	--	--	--	.00	14
	78-06-13	--	--	--	--	--	4.1	.01	7
	78-09-22	--	--	--	--	--	9.7	.01	9

QUALITY OF GROUND WATER

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

STATION	NUMBER	DATE OF SAMPLE	NITRO- GEN, AM- MONIA + ORGANIC DIS. (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, DIS- SOLVED (MG/L AS P)	CARBON, ORGANIC DIS- SOLVED (MG/L AS C)	CYANIDE TOTAL (MG/L AS CN)	PHENOLS (UG/L)
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CAMPBELL COUNTY--Continued

440346105334933	77-10-05	--	--	--	--	--	--	2.9	.00	2
	78-01-17	--	--	--	--	--	--	128	.19	33000
	78-02-15	--	--	--	--	--	--	--	.16	36000
	78-04-11	43	--	--	--	--	--	--	.19	23000
440346105334934	78-02-14	--	--	--	--	--	--	--	.10	28000
440346105334935	78-01-06	--	--	--	--	--	--	9.4	--	6
440346105334936	78-01-17	--	--	--	--	--	--	27	.09	6800
	78-02-14	--	--	--	--	--	--	--	.11	6000
	78-04-10	30	--	--	--	--	--	--	.14	750
	78-06-13	--	--	--	--	--	--	5.8	.08	360
	78-09-22	--	--	--	--	--	--	25	.03	330
440358105310701	78-01-06	--	--	--	--	--	--	4.9	.00	6
440317105335501	78-01-06	--	--	--	--	--	--	3.1	.00	16
441816105243101	77-10-19	--	130	580	5.3	--	--	--	--	--
441749105221901	77-10-20	--	3.9	17	.13	--	--	--	--	--
441716105224901	77-10-20	--	13	58	3.8	--	--	--	--	--
441628105240801	77-10-20	--	46	200	.49	--	--	--	--	--
441628105240802	77-10-20	--	5.8	26	.28	--	--	--	--	--
441628105240803	77-10-20	--	2.0	8.6	.26	--	--	--	--	--
444328105362701	77-10-19	--	2.4	11	.08	--	--	--	--	--
444626105263002	77-10-19	--	1.2	5.4	2.5	--	--	--	--	--
444743105301201	77-10-18	--	3.5	16	.11	--	--	--	--	--
444740105314701	77-10-18	--	4.6	20	.24	--	--	--	--	--
444929105381001	77-10-17	--	.05	.22	.44	--	--	--	--	--
444842105352201	77-10-18	--	3.2	14	.06	--	--	--	--	--
444758105353301	77-10-17	--	3.6	16	.36	--	--	--	--	--
444758105353303	77-10-12	--	31	140	6.3	--	--	--	--	--
444756105372901	77-10-17	--	7.6	34	.99	--	--	--	--	--

CARBON COUNTY--Continued

414928106215601	77-10-08	--	--	--	8.5	--	--	--	--	--
414828106205601	77-10-07	--	--	--	11	--	--	--	--	--
414657106213601	77-10-06	--	--	--	.04	--	--	--	--	--
414643106384701	78-06-12	--	.30	1.3	.00	--	--	--	--	--
414709106450701	78-06-13	--	.47	2.1	.02	--	--	--	--	--
415401106223601	78-06-22	--	.61	2.7	.01	--	--	--	--	--
414932106232201	77-10-05	--	--	--	.09	--	--	--	--	--
415209106340301	78-06-16	--	1.7	7.6	.00	--	--	--	--	--
414938106312201	77-11-13	--	--	--	.01	--	--	--	--	--
	77-11-13	--	--	--	.02	--	--	--	--	--
415750106225001	77-11-13	--	--	--	.19	--	--	--	--	--
415700106244401	77-11-12	--	--	--	4.8	--	--	--	--	--
415542106271501	77-11-12	--	--	--	.74	--	--	--	--	--
415514106280901	77-11-12	--	--	--	.88	--	--	--	--	--
415530106461601	77-11-07	--	--	--	.09	--	--	--	--	--
415530106463301	77-11-07	--	--	--	.01	--	--	--	--	--
415506106464201	77-11-10	--	--	--	.12	--	--	--	--	--
420214106263301	78-06-15	--	.62	2.7	.00	--	--	--	--	--
	78-06-15	--	.37	1.6	.01	--	--	--	--	--
420203106421901	77-10-04	--	--	--	.01	--	--	--	--	--
420048106480901	77-11-08	--	--	--	.39	--	--	--	--	--
420023106481001	77-11-09	--	--	--	.64	--	--	--	--	--
420027106484301	77-11-09	--	--	--	.34	--	--	--	--	--

CONVERSE COUNTY--Continued

431140104580001	77-10-06	--	1.9	8.5	.01	--	--	--	--	--
431150104581001	77-10-06	--	2.0	8.8	.03	--	--	--	--	--
431110105442201	77-10-07	--	.18	.80	.03	--	--	--	--	--
431840105435201	77-10-11	--	.73	3.2	.05	--	19	--	--	--

CROOK COUNTY--Continued

442930104063401	78-07-22	--	--	--	--	.00	5.1	--	--	--
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QUALITY OF GROUND WATER

629

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

STATION	NUMBER	DATE OF SAMPLE	NITRO- GEN, AM- MONIA + ORGANIC DIS. (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, DIS- SOLVED (MG/L AS P)	CARBON, ORGANIC DIS- SOLVED (MG/L AS C)	CYANIDE TOTAL (MG/L AS CN)	PHENOLS (UG/L)
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GOSHEN COUNTY--Continued

414705104104601	78-03-29	--	--	--	--	--	--	--	--	--
414456104123801	78-03-29	--	--	--	--	--	--	--	--	--
415402104202001	78-03-29	--	--	--	--	--	--	--	--	--
415353104181601	78-03-29	--	--	--	--	--	--	--	--	--
415821104122401	78-03-29	--	--	--	--	--	--	--	--	--
415548104160001	78-03-29	--	--	--	--	--	--	--	--	--
415921104274001	78-03-29	--	--	--	--	--	--	--	--	--
420116104160001	78-03-29	--	--	--	--	--	--	--	--	--

PARK COUNTY--Continued

443432110214001	78-06-21	--	--	--	--	--	--	--	--	--
	78-08-15	--	--	--	.15	--	4.4	--	--	--
443437110214601	77-10-19	--	--	--	--	--	--	--	--	--
	78-06-21	--	--	--	--	--	--	--	--	--
	78-08-15	--	--	--	.27	--	5.8	--	--	--
443440110215201	77-10-19	--	--	--	--	--	--	--	--	--
	78-06-21	--	--	--	--	--	--	--	--	--
	78-08-16	--	--	--	.32	--	6.8	--	--	--
443443110215001	78-06-21	--	--	--	--	--	--	--	--	--
	78-08-16	--	--	--	.23	--	5.0	--	--	--
443448110213101	78-06-21	--	--	--	--	--	--	--	--	--
	78-08-18	--	--	--	--	--	--	--	--	--
443441110213801	78-08-18	--	--	--	--	--	--	--	--	--
443431110215001	78-06-21	--	--	--	--	--	--	--	--	--
	78-08-18	--	--	--	--	--	--	--	--	--
443452110220401	78-06-21	--	--	--	--	--	--	--	--	--
	78-08-18	--	--	--	--	--	--	--	--	--
443436110214301	78-06-21	--	--	--	--	--	--	--	--	--
	78-08-18	--	--	--	--	--	--	--	--	--
443435110214401	78-06-21	--	--	--	--	--	--	--	--	--
	78-08-15	--	--	--	.15	--	3.5	--	--	--
443435110220401	78-06-21	--	--	--	--	--	--	--	--	--
443435110220401	78-08-16	--	--	--	.12	--	3.3	--	--	--

QUALITY OF GROUND WATER

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

STATION	NUMBER	DATE OF SAMPLE	NITRO- GEN, TOTAL (MG/L AS N)	NITRO- GEN, TOTAL (MG/L AS NO3)	PHOS- PHORUS, TOTAL (MG/L AS P)	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)
TETON COUNTY--Continued									
442324110315701		78-06-26	--	--	--	--	--	--	--
		78-08-20	--	--	--	--	--	--	--
442323110321101		78-06-26	--	--	--	--	--	--	--
		78-08-20	--	--	--	--	--	--	--
442322110321002		78-06-26	--	--	--	--	--	--	--
		78-08-18	--	--	.56	--	1.7	--	--
442321110321901		78-06-26	--	--	--	--	--	--	--
		78-08-18	--	--	.33	--	5.8	--	--
442319110320401		78-06-26	--	--	--	--	--	--	--
		78-08-20	--	--	--	--	--	--	--
442320110320801		78-06-26	--	--	--	--	--	--	--
		78-08-18	--	--	.12	--	2.7	--	--
442317110321601		78-06-26	--	--	--	--	--	--	--
		78-08-19	--	--	.09	--	2.0	--	--
442315110321201		78-06-26	--	--	--	--	--	--	--
		78-08-19	--	--	.14	--	3.8	--	--
442316110320901		78-06-26	--	--	--	--	--	--	--
		78-08-19	--	--	.09	--	2.3	--	--
442318110320301		78-06-26	--	--	--	--	--	--	--
		78-08-20	--	--	--	--	--	--	--
442318110320302		78-06-26	--	--	--	--	--	--	--
		78-08-20	--	--	--	--	--	--	--
443844110522501		78-06-24	--	--	--	--	--	--	--
		78-08-23	--	--	.05	--	2.2	--	--
443844110521901		77-10-09	--	--	--	--	--	--	--
		77-11-09	--	--	--	--	--	--	--
		78-06-24	--	--	--	--	--	--	--
		78-08-23	--	--	.08	--	4.1	--	--
443842110522201		77-11-09	--	--	--	--	--	--	--
		78-06-24	--	--	--	--	--	--	--
		78-08-24	--	--	.11	--	3.9	--	--
443842110522101		78-06-24	--	--	--	--	--	--	--
		78-08-24	--	--	--	--	--	--	--
443843110522001		77-10-09	--	--	--	--	--	--	--
		78-06-24	--	--	--	--	--	--	--
		78-08-23	--	--	.37	--	2.5	--	--
442717110504601		78-06-27	--	--	--	--	--	--	--
		78-08-22	--	--	--	--	--	--	--
442720110504101		78-06-27	--	--	--	--	--	--	--
		78-08-21	--	--	17	--	10	--	--
442722110504401		77-10-09	--	--	--	--	--	--	--
		78-06-27	--	--	--	--	--	--	--
		78-08-21	--	--	7.3	--	7.5	--	--
442723110504601		77-10-09	--	--	--	--	--	--	--
		78-06-27	--	--	--	--	--	--	--
		78-08-21	--	--	5.1	--	7.4	--	--
442724110504801		78-06-27	--	--	--	--	--	--	--
		78-08-22	--	--	4.9	--	6.8	--	--
442726110505001		78-06-27	--	--	--	--	--	--	--
		78-08-22	--	--	--	--	--	--	--
442723110505203		78-08-22	--	--	--	--	--	--	--

QUALITY OF GROUND WATER
WATER-QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
TRACE METALS ANALYSES

631

STATION NUMBER	LOCAL IDENTIFIER	GEO-LOGIC UNIT	SITE	DATE OF SAMPLE	TIME	ALUM-INUM, TOTAL, RECOVERABLE (UG/L AS AL)	ALUM-INUM, DIS-SOLVED (UG/L AS AL)	ANTI-MONY, TOTAL (UG/L AS SB)	ANTI-MONY, DIS-SOLVED (UG/L AS SB)
CAMPBELL COUNTY									
434131105225502	43N 071W 21ADB02	124WSTC	GW	78-06-22	1115	--	--	--	--
434131105225503	43N 071W 21ADB03	124WSTC	GW	78-06-22	1310	--	--	--	--
434956105275802	43N 072W 368CC02	125FRUN	GW	78-06-21	1615	--	--	--	--
445427105245201	45N 071W 05BAD01	125FRUN	GW	77-10-21	1100	230000	--	0	--
434956105275801	45N 072W 368CC01	124WSTC	GW	78-06-21	1435	--	--	--	--
440346105334901	47N 072W 07CCA01	124WSTC	GW	78-01-05	1000	--	0	--	--
		124WSTC	GW	78-06-14	1515	--	0	--	--
440346105334902	47N 072W 07CCA02	124WSTC	GW	78-01-05	1110	--	0	--	--
		124WSTC	GW	78-06-14	1440	--	0	--	--
440346105334905	47N 072W 07CCA05	124WSTC	GW	78-01-05	1035	--	10	--	--
		124WSTC	GW	78-06-14	1400	--	10	--	--
440346105334911	47N 072W 07CCA11	124WSTC	GW	78-01-05	1125	--	0	--	--
440346105334914	47N 072W 07CCA14	124WSTC	GW	78-01-05	1330	--	10	--	--
		124WSTC	GW	78-06-14	1115	--	10	--	--
440346105334915	47N 072W 07CCA15	124WSTC	GW	78-01-05	1310	--	10	--	--
		124WSTC	GW	78-06-14	0930	--	20	--	--
440346105334916	47N 072W 07CCA16	124WSTC	GW	78-01-05	1200	--	0	--	--
		124WSTC	GW	78-06-14	1015	--	10	--	--
440346105334921	47N 072W 07CCA21	124WSTC	GW	78-01-05	1350	--	20	--	--
440346105334923	47N 072W 07CCA23	124WSTC	GW	78-06-14	1200	--	20	--	--
440346105334924	47N 072W 07CCA24	124WSTC	GW	77-10-04	1200	--	0	--	--
		124WSTC	GW	78-02-14	1600	--	130	--	--
		124WSTC	GW	78-04-11	0830	--	170	--	--
		125FRUN	GW	78-06-13	1610	--	180	--	--
		125FRUN	GW	78-09-21	0900	--	--	--	--
440346105334925	47N 072W 07CCA25	124WSTC	GW	77-10-05	1200	--	10	--	--
		124WSTC	GW	78-01-17	1400	--	30	--	--
		124WSTC	GW	78-02-14	1650	--	30	--	--
		124WSTC	GW	78-04-10	1625	--	50	--	--
		125FRUN	GW	78-06-13	1540	--	60	--	--
440346105334926	47N 072W 07CCA26	125FRUN	GW	78-09-21	1110	--	--	--	--
		124WSTC	GW	78-01-05	1130	--	30	--	--
		124WSTC	GW	78-02-14	1515	--	30	--	--
440346105334926	47N 072W 07CCA26	124WSTC	GW	78-04-10	1545	--	60	--	--
		124WSTC	GW	78-06-13	1440	--	20	--	--
		124WSTC	GW	78-09-21	1200	--	--	--	--
440346105334927	47N 072W 07CCA27	124WSTC	GW	78-01-04	1600	--	0	--	--
		124WSTC	GW	78-04-11	1000	--	20	--	--
440346105334928	47N 072W 07CCA28	--	GW	78-09-21	1400	--	--	--	--
		124WSTC	GW	78-01-04	1515	--	0	--	--
		124WSTC	GW	78-02-14	1430	--	0	--	--
		124WSTC	GW	78-04-10	1500	--	0	--	--
		--	GW	78-06-13	1345	--	0	--	--
440346105334929	47N 072W 07CCA29	--	GW	78-09-21	1445	--	--	--	--
		124WSTC	GW	78-01-04	1430	--	0	--	--
		124WSTC	GW	78-02-14	1350	--	0	--	--
		124WSTC	GW	78-04-10	1410	--	0	--	--
		124WSTC	GW	78-06-13	1140	--	10	--	--
440346105334930	47N 072W 07CCA30	124WSTC	GW	78-09-21	1530	--	--	--	--
		124WSTC	GW	77-11-15	1330	--	20	--	--
		124WSTC	GW	78-01-04	1130	--	0	--	--
		124WSTC	GW	78-02-14	1140	--	20	--	--
		124WSTC	GW	78-04-10	1150	--	0	--	--
440346105334931	47N 072W 07CCA31	--	GW	78-06-13	1040	--	20	--	--
		--	GW	78-09-21	1615	--	--	--	--
		124WSTC	GW	78-01-05	1630	--	10	--	--
		124WSTC	GW	78-02-14	1100	--	0	--	--
		124WSTC	GW	78-04-10	1110	--	0	--	--
		124WSTC	GW	78-06-13	1715	--	10	--	--
440346105334932	47N 072W 07CCA32	124WSTC	GW	78-09-21	1700	--	--	--	--
		124WSTC	GW	77-10-04	1000	--	0	--	--
		124WSTC	GW	77-11-15	1430	--	0	--	--
		124WSTC	GW	78-01-04	1050	--	0	--	--
440346105334933	47N 072W 07CCA33	124WSTC	GW	78-02-14	1000	--	30	--	--
		124WSTC	GW	78-04-10	1040	--	0	--	--
		124WSTC	GW	78-06-13	1750	--	10	--	--
		124WSTC	GW	78-09-22	0940	--	--	--	--
		124WSTC	GW	77-10-05	0800	--	0	--	--
		124WSTC	GW	78-01-17	1520	--	280	--	--

QUALITY OF GROUND WATER

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

TRACE METALS ANALYSES

STATION NUMBER	LOCAL IDENTIFIER	GEOLOGIC UNIT	SITE	DATE OF SAMPLE	TIME	ALUM-INUM, TOTAL RECOVERABLE (UG/L AS AL)	ALUM-INUM, DIS-SOLVED (UG/L AS AL)	ANTI-MONY, TOTAL (UG/L AS SB)	ANTI-MONY, DIS-SOLVED (UG/L AS SB)
CAMPBELL COUNTY--Continued									
440346105334933	47N 072W 07CCA33	124WSTC	GW	78-02-15	1000	--	250	--	--
		125FRUN	GW	78-04-11	1140	--	110	--	--
440346105334934	47N 072W 07CCA34	124WSTC	GW	78-02-14	1130	--	40	--	--
440346105334935	47N 072W 07CCA35	124WSTC	GW	78-01-06	1400	--	0	--	--
440346105334936	47N 072W 07CCA36	124WSTC	GW	78-01-17	1600	--	60	--	--
		124WSTC	GW	78-02-14	1720	--	30	--	--
		124WSTC	GW	78-04-10	1650	--	50	--	--
		124WSTC	GW	78-06-13	1640	--	60	--	--
		124WSTC	GW	78-09-22	1045	--	--	--	--
440358105310701	47N 072W 09BB 01	124WSTC	GW	78-01-06	1300	--	10	--	--
440317105335501	47N 072W 18BBC01	124WSTC	GW	78-01-06	1100	--	10	--	--
441816105243101	50N 071W 21BBB01	125FRUN	GW	77-10-19	1500	0	20	0	0
441749105221901	50N 071W 27AAC01	111ALVM	GW	77-10-20	1330	6000	10	1	1
441716105224901	50N 071W 27BAD01	111ALVM	GW	77-10-20	1215	210000	10	23	0
441628105240801	50N 071W 33BAC01	125FRUN	GW	77-10-20	1000	6000	10	1	1
441628105240802	50N 071W 33BAC02	125FRUN	GW	77-10-20	0900	7800	10	1	0
441628105240803	50N 071W 33BAC03	111ALVM	GW	77-10-20	1045	7800	10	1	1
444328105362701	55N 073W 26 01	125FRUN	GW	77-10-19	0930	6600	20	0	0
444626105263002	56N 071W 30DBB01	111ALVM	GW	77-10-19	1130	90	30	4	2
444743105301201	56N 072W 32AC 01	125FRUN	GW	77-10-18	1130	3400	20	1	1
444740105314701	56N 072W 33BCD01	125FRUN	GW	77-10-18	1330	25000	10	3	1
444929105381001	56N 073W 21AB 01	125FRUN	GW	77-10-17	1400	47000	20	5	1
444842105352201	56N 073W 25BBA01	125FRUN	GW	77-10-18	1430	3800	10	1	1
444758105353301	56N 073W 25CC 01	125FRUN	GW	77-10-17	0900	12000	60	2	0
444758105353303	56N 073W 25CC 03	125FRUN	GW	77-10-12	1230	140000	140	1	1
444756105372901	56N 073W 27DDC01	125FRUN	GW	77-10-17	1100	49000	20	2	2
CARBON COUNTY									
414828106205601	21N 080W 12ACA01	124HANN	GW	77-10-07	1345	25000	30	--	--
414657106213601	21N 080W 24BBA01	124HANN	GW	77-10-06	1500	1200	20	--	--
414643106384701	21N 082W 21BDA01	121NRPK	GW	78-06-12	1515	4	0	--	--
414709106450701	21N 083W 16DDA01	211MVRD	GW	78-06-13	0900	3	0	--	--
415401106223601	22N 080W 02CDC01	125FRRS	GW	78-06-22	1230	2	0	--	--
414932106232201	22N 080W 34DCD01	124HANN	GW	77-10-05	1330	3600	20	--	--
415209106340301	22N 081W 19BAA01	124HANN	GW	78-06-16	0900	30	0	--	--
414938106312201	22N 081W 33DDC01	124HANN	GW	77-11-13	1130	30	10	--	--
		124HANN	GW	77-11-13	1200	30	20	--	--
415750106225001	23N 080W 14CBA01	211MDCB	GW	77-11-13	0925	6000	20	--	--
415700106244401	23N 080W 21BDD01	124HANN	GW	77-11-12	1515	32000	10	--	--
415542106271501	23N 080W 31BAB01	124HANN	GW	77-11-12	1200	8000	10	--	--
415514106280901	23N 081W 36ABB01	124HANN	GW	77-11-12	0915	18000	10	--	--
415530106461601	23N 083W 32AAD01	125FRRS	GW	77-11-07	1235	600	10	--	--
415530106463301	23N 083W 32ABD01	125FRRS	GW	77-11-07	1330	800	10	--	--
415506106464201	23N 083W 32DBC01	125FRRS	GW	77-11-10	1515	2600	20	--	--
420214106263301	24N 080W 19ADD01	221SNDC	GW	78-06-15	1300	10	10	--	--
		221SNDC	GW	78-06-15	1400	90	20	--	--
420203106421901	24N 083W 24CAA01	124HANN	GW	77-10-04	1300	230	20	--	--
420048106480901	24N 083W 31BAB01	125FRRS	GW	77-11-08	1315	40	10	--	--
420027106484301	24N 084W 36ADC01	125FRRS	GW	77-11-09	1100	21000	10	--	--
CONVERSE COUNTY									
431140104580001	36N 067W 13AAA01	125FRUN	GW	77-10-06	1300	30	10	1	0
431150104581001	37N 068W 12CB 01	125FRUN	GW	77-10-06	1200	20	10	2	0
431110105442201	37N 074W 14AB 01	124WSTC	GW	77-10-07	1100	20	20	0	0
431840105435201	39N 074W 34BDD01	124WSTC	GW	77-10-11	1000	200	20	0	1
CROOK COUNTY									
442930104063401	52N 062W 18C 01	337PHSP	GW	78-07-22	1000	--	20	--	--

QUALITY OF GROUND WATER

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

TRACE METALS ANALYSES

STATION NUMBER	LOCAL IDENT- IFIER	GEO- LOGIC UNIT	SITE	DATE OF SAMPLE	TIME	ALUM- INUM, TOTAL RECOV- ERABLE (UG/L AS AL)	ALUM- INUM, DIS- SOLVED (UG/L AS AL)	ANTI- MONY, TOTAL (UG/L AS SB)	ANTI- MONY, DIS- SOLVED (UG/L AS SB)
PARK COUNTY									
443432110214001	WELL FB 1 YNP	111LCTN	GW	78-08-15	1300	--	--	--	--
443437110214601	WELL FB 2 YNP	111LCTN	GW	77-10-19	1300	--	--	--	--
		111LCTN	GW	78-08-15	1600	--	--	--	--
443440110215201	WELL FB 3 YNP	111LCTN	GW	77-10-19	1320	--	--	--	--
		111LCTN	GW	78-08-16	1330	--	--	--	--
443443110215001	WELL FB 4 YNP	111LCTN	GW	78-08-16	1415	--	--	--	--
443435110214401	WELL FB12 YNP	111LCTN	GW	78-08-15	1430	--	--	--	--
443435110220401	WELL FB13 YNP	111LCTN	GW	78-08-16	1100	--	--	--	--
TETON COUNTY									
435746110413900	T46NR115W08CCA1S	--	SP	77-10-14	1000	--	--	--	--
435737110413700	T46NR115W08CDC1S	--	SP	77-10-14	1130	--	--	--	--
435730110414000	T46NR115W178BA1S	--	SP	77-10-14	1500	--	--	--	--
435729110415000	T46NR115W178BB1S	--	SP	77-10-14	1530	--	--	--	--
442324110315701	WELL GV 1 YNP	111LCTN	GW	78-06-26	1020	--	--	--	--
442322110321002	WELL GV 3AYNP	111LCTN	GW	78-08-18	1400	--	--	--	--
442321110321901	WELL GV 4 YNP	111LCTN	GW	78-08-18	1230	--	--	--	--
442320110320801	WELL GV 6 YNP	111LCTN	GW	78-08-18	1545	--	--	--	--
442317110321601	WELL GV 7 YNP	111LCTN	GW	78-08-19	1400	--	--	--	--
442315110321201	WELL GV 8 YNP	111LCTN	GW	78-08-19	1530	--	--	--	--
442316110320901	WELL GV 9 YNP	111LCTN	GW	78-08-19	1700	--	--	--	--
443844110522501	WELL MJ 1 YNP	111ALVM	GW	78-08-23	1100	--	--	--	--
443844110521901	WELL MJ 3 YNP	111ALVM	GW	77-10-09	1300	--	--	--	--
		111ALVM	GW	77-11-09	1300	--	--	--	--
		111ALVM	GW	78-08-23	1300	--	--	--	--
443842110522201	WELL MJ 5 YNP	111ALVM	GW	78-08-24	1130	--	--	--	--
443843110522001	WELL MJ 7 YNP	111ALVM	GW	77-10-09	1300	--	--	--	--
		111ALVM	GW	78-08-23	1420	--	--	--	--
442720110504101	WELL OF 2 YNP	112GLCL	GW	78-08-21	1300	--	--	--	--
442722110504401	WELL OF 3 YNP	112GLCL	GW	77-10-09	1100	--	--	--	--
		112GLCL	GW	78-08-21	1350	--	--	--	--
442723110504601	WELL OF 4 YNP	112GLCL	GW	77-10-09	1100	--	--	--	--
		112GLCL	GW	78-08-21	1545	--	--	--	--
442724110504801	WELL OF 5 YNP	112GLCL	GW	78-08-22	1100	--	--	--	--

QUALITY OF GROUND WATER
WATER-QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
TRACE METALS ANALYSES

STATION	NUMBER	DATE OF SAMPLE	ARSENIC		ARSENIC		BARIUM,		BERYL-		BERYL-		BORON,		BORON,		CADMIUM		CADMIUM	
			TOTAL	AS	DIS-	AS	TOTAL	AS	DIS-	AS	TOTAL	AS	TOTAL	AS	DIS-	AS	TOTAL	AS	DIS-	AS
			(UG/L)		SOLVED	(UG/L)	RECOV-		SOLVED	ERABLE	RECOV-		RECOV-		ERABLE		RECOV-		ERABLE	
			AS	AS	AS	AS	BA	AS	BA	BE	BE	BE	B	B	B	B	CD	CD	CD	CD
CAMPBELL COUNTY--Continued																				
434131105225502		78-06-22	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
434131105225503		78-06-22	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
434956105275802		78-06-21	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
445427105245201		77-10-21	820	--	--	--	--	--	--	20	--	--	--	--	160	--	30	--	--	--
434956105275801		78-06-21	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
440346105334901		78-01-05	--	--	1	--	0	--	--	--	--	--	--	--	110	--	--	--	2	--
		78-06-14	--	--	0	--	600	--	--	--	--	--	--	--	80	--	--	--	2	--
440346105334902		78-01-05	--	--	1	--	0	--	--	--	--	--	--	--	70	--	--	--	2	--
		78-06-14	--	--	0	--	400	--	--	--	--	--	--	--	50	--	--	--	0	--
440346105334905		78-01-05	--	--	1	--	0	--	--	--	--	--	--	--	100	--	--	--	1	--
		78-06-14	--	--	0	--	300	--	--	--	--	--	--	--	80	--	--	--	0	--
440346105334911		78-01-05	--	--	1	--	100	--	--	--	--	--	--	--	220	--	--	--	1	--
440346105334914		78-01-05	--	--	1	--	400	--	--	--	--	--	--	--	880	--	--	--	2	--
		78-06-14	--	--	0	--	300	--	--	--	--	--	--	--	780	--	--	--	0	--
440346105334915		78-01-05	--	--	1	--	200	--	--	--	--	--	--	--	650	--	--	--	2	--
		78-06-14	--	--	0	--	300	--	--	--	--	--	--	--	580	--	--	--	0	--
440346105334916		78-01-05	--	--	1	--	0	--	--	--	--	--	--	--	260	--	--	--	3	--
		78-06-14	--	--	0	--	200	--	--	--	--	--	--	--	330	--	--	--	0	--
440346105334921		78-01-05	--	--	2	--	100	--	--	--	--	--	--	--	1100	--	--	--	0	--
440346105334923		78-06-14	--	--	0	--	300	--	--	--	--	--	--	--	1100	--	--	--	0	--
440346105334924		77-10-04	--	--	0	--	900	--	--	--	--	--	--	--	50	--	--	--	0	--
		78-02-14	--	--	13	--	100	--	--	--	--	--	--	--	2600	--	--	--	1	--
		78-04-11	14	--	15	100	0	--	--	--	--	--	--	--	2300	1	--	--	1	--
		78-06-13	--	--	12	--	200	--	--	--	--	--	--	--	2500	--	--	--	1	--
		78-09-21	--	--	9	--	0	--	--	--	--	--	--	--	2400	--	--	--	0	--
440346105334925		77-10-05	--	--	0	--	0	--	--	--	--	--	--	--	50	--	--	--	0	--
		78-01-17	--	--	13	--	200	--	--	--	--	--	--	--	2400	--	--	--	0	--
		78-02-14	--	--	5	--	100	--	--	--	--	--	--	--	2200	--	--	--	1	--
		78-04-10	--	--	9	--	0	--	--	--	--	--	--	--	2000	--	--	--	1	--
		78-06-13	--	--	7	--	200	--	--	--	--	--	--	--	1900	--	--	--	0	--
		78-09-21	--	--	--	--	--	--	--	--	--	--	--	--	1900	--	--	--	--	--
440346105334926		78-01-05	--	--	3	--	100	--	--	--	--	--	--	--	2100	--	--	--	0	--
		78-02-14	--	--	9	--	100	--	--	--	--	--	--	--	2300	--	--	--	1	--
440346105334926		78-04-10	6	--	8	100	0	--	--	--	--	--	--	--	2000	1	--	--	1	--
		78-06-13	--	--	5	--	200	--	--	--	--	--	--	--	1900	--	--	--	0	--
		78-09-21	--	--	4	--	0	--	--	--	--	--	--	--	1900	--	--	--	0	--
440346105334927		78-01-04	--	--	2	--	500	--	--	--	--	--	--	--	100	--	--	--	2	--
		78-04-11	--	--	8	--	100	--	--	--	--	--	--	--	1000	--	--	--	1	--
		78-09-21	--	--	--	--	--	--	--	--	--	--	--	--	1300	--	--	--	--	--
440346105334928		78-01-04	--	--	4	--	200	--	--	--	--	--	--	--	110	--	--	--	1	--
		78-02-14	--	--	3	--	200	--	--	--	--	--	--	--	590	--	--	--	1	--
		78-04-10	9	--	10	100	0	--	--	--	--	--	--	--	780	1	--	--	1	--
		78-06-13	--	--	9	--	300	--	--	--	--	--	--	--	780	--	--	--	0	--
		78-09-21	--	--	7	--	300	--	--	--	--	--	--	--	750	--	--	--	0	--
440346105334929		78-01-04	--	--	2	--	200	--	--	--	--	--	--	--	100	--	--	--	0	--
		78-02-14	--	--	1	--	200	--	--	--	--	--	--	--	230	--	--	--	0	--
		78-04-10	--	--	4	--	0	--	--	--	--	--	--	--	290	--	--	--	1	--
		78-06-13	--	--	2	--	200	--	--	--	--	--	--	--	370	--	--	--	0	--
		78-09-21	--	--	--	--	--	--	--	--	--	--	--	--	410	--	--	--	--	--
440346105334930		77-11-15	--	--	1	--	700	--	--	--	--	--	--	--	140	--	--	--	0	--
		78-01-04	--	--	2	--	500	--	--	--	--	--	--	--	130	--	--	--	0	--
		78-02-14	--	--	1	--	200	--	--	--	--	--	--	--	120	--	--	--	1	--
		78-04-10	2	--	3	100	100	--	--	--	--	--	--	--	140	0	--	--	0	--
		78-06-13	--	--	2	--	200	--	--	--	--	--	--	--	190	--	--	--	0	--
		78-09-21	--	--	--	--	--	--	--	--	--	--	--	--	300	--	--	--	--	--
440346105334931		78-01-05	--	--	1	--	700	--	--	--	--	--	--	--	110	--	--	--	3	--
		78-02-14	--	--	1	--	200	--	--	--	--	--	--	--	100	--	--	--	1	--
		78-04-10	--	--	3	--	100	--	--	--	--	--	--	--	80	--	--	--	0	--
		78-06-13	--	--	1	--	200	--	--	--	--	--	--	--	90	--	--	--	0	--
		78-09-21	--	--	1	--	100	--	--	--	--	--	--	--	90	--	--	--	1	--
440346105334932		77-10-04	--	--	0	--	200	--	--	--	--	--	--	--	60	--	--	--	0	--
		77-11-15	--	--	1	--	900	--	--	--	--	--	--	--	110	--	--	--	1	--
		78-01-04	--	--	3	--	700	--	--	--	--	--	--	--	100	--	--	--	1	--
		78-02-14	--	--	1	--	300	--	--	--	--	--	--	--	90	--	--	--	1	--
		78-04-10	2	--	4	800	800	--	--	--	--	--	--	--	70	1	--	--	1	--
		78-06-13	--	--	1	--	800	--	--	--	--	--	--	--	80	--	--	--	0	--
		78-09-22	--	--	--	--	--	--	--	--	--	--	--	--	90	--	--	--	--	--
440346105334933		77-10-05	--	--	0	--	200	--	--	--	--	--	--	--	70	--	--	--	0	--
		78-01-17	--	--	150	--	200	--	--	--	--	--	--	--	320	--	--	--	0	--

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

TRACE METALS ANALYSES

STATION	NUMBER	DATE OF SAMPLE	ARSENIC TOTAL (UG/L AS AS)	ARSENIC DIS- SOLVED (UG/L AS AS)	BARIUM, TOTAL RECOV- ERABLE (UG/L AS BA)	BARIUM, DIS- SOLVED (UG/L AS BA)	BERYL- LIUM, TOTAL RECOV- ERABLE (UG/L AS BE)	BERYL- LIUM, DIS- SOLVED (UG/L AS BE)	BORON, TOTAL RECOV- ERABLE (UG/L AS B)	BORON, DIS- SOLVED (UG/L AS B)	CADMIUM TOTAL RECOV- ERABLE (UG/L AS CD)	CADMIUM DIS- SOLVED (UG/L AS CD)
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CAMPBELL COUNTY--Continued

440346105334933		78-02-15	--	50	--	100	--	--	3200	--	--	1
		78-04-11	16	16	100	100	--	--	3000	63	--	1
440346105334934		78-02-14	--	120	--	200	--	--	2900	--	--	1
440346105334935		78-01-06	--	1	--	0	--	--	90	--	--	1
440346105334936		78-01-17	--	15	--	200	--	--	2800	--	--	0
		78-02-14	--	12	--	100	--	--	2400	--	--	1
		78-04-10	8	9	100	0	--	--	2200	1	--	1
		78-06-13	--	8	--	200	--	--	2200	--	--	0
		78-09-22	--	--	--	--	--	--	2300	--	--	--
440358105310701		78-01-06	--	0	--	0	--	--	60	--	--	2
440317105335501		78-01-06	--	1	--	0	--	--	70	--	--	0
441816105243101		77-10-19	1200	1	--	--	40	10	70	60	0	0
441749105221901		77-10-20	5	1	--	--	0	0	450	10	1	1
441716105224901		77-10-20	310	1	--	--	20	20	480	30	0	0
441628105240801		77-10-20	260	3	--	--	0	20	100	20	0	0
441628105240802		77-10-20	12	1	--	--	0	0	140	10	0	0
441628105240803		77-10-20	4	1	--	--	20	10	290	10	1	1
444328105362701		77-10-19	10	1	--	--	0	20	90	10	1	1
444626105263002		77-10-19	66	1	--	--	0	0	500	10	1	1
444743105301201		77-10-18	2	2	--	--	0	20	80	10	3	3
444740105314701		77-10-18	60	1	--	--	0	0	90	10	2	2
444929105381001		77-10-17	140	1	--	--	0	10	90	10	6	6
444842105352201		77-10-18	5	1	--	--	0	0	100	<10	0	0
444758105353301		77-10-17	45	1	--	--	10	0	90	10	9	9
444758105353303		77-10-12	290	1	--	--	0	20	80	30	17	17
444756105372901		77-10-17	120	2	--	--	10	0	100	10	7	7

CARBON COUNTY--Continued

414828106205601		77-10-07	4	0	--	--	0	0	90	70	<10	0
414657106213601		77-10-06	0	0	--	--	0	0	70	50	<10	1
414643106384701		78-06-12	0	0	--	--	0	0	--	130	14	0
414709106450701		78-06-13	1	0	--	--	0	0	--	70	3	3
415401106223601		78-06-22	1	1	--	--	5	0	--	50	3	1
414932106232201		77-10-05	2	0	--	--	0	10	140	120	<10	1
415209106340301		78-06-16	2	2	--	--	0	5	--	80	3	2
414938106312201		77-11-13	0	0	--	--	0	0	60	40	0	2
		77-11-13	1	1	--	--	0	0	80	40	0	1
415750106225001		77-11-13	4	1	--	--	10	0	150	110	0	0
415700106244401		77-11-12	90	1	--	--	20	0	130	70	1	0
415542106271501		77-11-12	8	1	--	--	10	0	670	650	0	1
415514106280901		77-11-12	14	1	--	--	0	0	90	40	0	0
415530106461601		77-11-07	2	0	--	--	0	0	150	110	10	1
415530106463301		77-11-07	1	1	--	--	0	0	170	140	10	1
415506106464201		77-11-10	4	3	--	--	0	0	160	110	0	0
420214106263301		78-06-15	1	1	--	--	10	0	--	190	1	2
		78-06-15	1	1	--	--	5	0	--	200	6	0
420203106421901		77-10-04	0	0	--	--	0	0	80	70	<10	0
420048106480901		77-11-08	13	10	--	--	0	0	1800	1700	10	1
420027106484301		77-11-09	14	1	--	--	10	0	170	100	1	0

CONVERSE COUNTY--Continued

431140104580001		77-10-06	0	0	--	--	0	10	--	60	<10	0
431150104581001		77-10-06	0	0	--	--	0	0	--	70	<10	1
431110105442201		77-10-07	0	0	--	--	0	0	--	60	<10	0
431840105435201		77-10-11	2	1	--	--	0	20	--	70	10	9

CROOK COUNTY--Continued

442930104063401		78-07-22	--	1	--	50	--	--	--	30	--	<1
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TRACE METALS ANALYSES

STATION	NUMBER	DATE OF SAMPLE	ARSENIC	ARSENIC	BARIUM,	BARIUM,	BERYL-	BERYL-	BORON,	BORON,	CADMIUM	CADMIUM
			TOTAL (UG/L AS AS)	DIS- SOLVED (UG/L AS AS)	TOTAL RECOV- ERABLE (UG/L AS BA)	DIS- SOLVED (UG/L AS BA)	TOTAL RECOV- ERABLE (UG/L AS BE)	TOTAL RECOV- ERABLE (UG/L AS BE)	TOTAL RECOV- ERABLE (UG/L AS B)	TOTAL RECOV- ERABLE (UG/L AS CD)		

PARK COUNTY--Continued

443432110214001	78-08-15	--	--	--	--	--	--	--
443437110214601	77-10-19	--	--	--	--	--	--	--
	78-08-15	--	--	--	--	--	--	--
443440110215201	77-10-19	--	--	--	--	--	--	--
	78-08-16	--	--	--	--	--	--	--
443443110215001	78-08-16	--	--	--	--	--	--	--
443435110214401	78-08-15	--	--	--	--	--	--	--
443435110220401	78-08-16	--	--	--	--	--	--	--

TETON COUNTY--Continued

[illegible]

QUALITY OF GROUND WATER
WATER-QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
TRACE METALS ANALYSES

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STATION	NUMBER	DATE OF SAMPLE	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)	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, DIS- SOLVED (UG/L AS PB)	LITHIUM TOTAL RECOV- ERABLE (UG/L AS LI)
CAMPBELL COUNTY--Continued												
434131105225502		78-06-22	--	--	--	--	--	--	150	--	--	--
434131105225503		78-06-22	--	--	--	--	--	--	40	--	--	--
434956105275802		78-06-21	--	--	--	--	--	--	120000	--	--	--
445427105245201		77-10-21	800	--	94	--	1400000	--	700	1100	--	320
434956105275801		78-06-21	--	--	--	--	--	--	3200	--	--	--
440346105334901		78-01-05	--	--	--	--	5400	--	2600	--	38	--
		78-06-14	--	5	--	--	2400	1000	1400	--	0	--
440346105334902		78-01-05	--	--	--	--	9000	--	3100	--	21	--
		78-06-14	--	0	--	--	2700	--	2100	--	0	--
440346105334905		78-01-05	--	--	--	--	4100	--	3400	--	17	--
		78-06-14	--	0	--	--	2300	--	1000	--	0	--
440346105334911		78-01-05	--	--	--	--	18000	--	1800	--	19	--
440346105334914		78-01-05	--	--	--	--	3000	--	290	--	4	--
		78-06-14	--	10	--	--	1700	--	220	--	0	--
440346105334915		78-01-05	--	--	--	--	5400	--	1200	--	10	--
		78-06-14	--	15	--	--	1300	--	840	--	0	--
440346105334916		78-01-05	--	--	--	--	26000	--	730	--	42	--
		78-06-14	--	5	--	--	2400	--	660	--	0	--
440346105334921		78-01-05	--	--	--	--	11000	--	2500	--	3	--
440346105334923		78-06-14	--	10	--	--	2800	1400	1400	--	0	--
440346105334924		77-10-04	--	--	--	--	4800	--	40	--	16	--
		78-02-14	--	--	--	--	33000	--	500	--	2	--
		78-04-11	0	0	--	--	3200	--	80	50	2	--
		78-06-13	--	0	--	--	3200	3100	110	--	0	--
		78-09-21	--	0	--	--	--	--	130	--	1	--
440346105334925		77-10-05	--	--	--	--	11000	--	30	--	2	--
		78-01-17	--	--	--	--	7300	--	450	--	3	--
		78-02-14	--	--	--	--	33000	--	800	--	1	--
		78-04-10	--	10	--	--	4900	--	360	--	0	--
		78-06-13	--	0	--	--	750	--	280	--	2	--
		78-09-21	--	--	--	--	--	--	50	--	--	--
440346105334926		78-01-05	--	--	--	--	20000	--	460	--	8	--
		78-02-14	--	--	--	--	18000	--	1000	--	2	--
440346105334926		78-04-10	0	0	--	--	2500	--	280	20	1	--
		78-06-13	--	0	--	--	17000	17000	310	--	2	--
		78-09-21	--	0	--	--	--	--	240	--	1	--
440346105334927		78-01-04	--	--	--	--	3600	--	1900	--	22	--
		78-04-11	--	0	--	--	29000	--	330	--	1	--
		78-09-21	--	--	--	--	--	--	360	--	--	--
440346105334928		78-01-04	--	--	--	--	21000	--	8500	--	20	--
		78-02-14	--	--	--	--	9500	--	6400	--	0	--
		78-04-10	10	0	--	--	10000	--	1500	100	0	--
		78-06-13	--	10	--	--	1800	--	960	--	2	--
		78-09-21	--	0	--	--	--	--	500	--	0	--
440346105334929		78-01-04	--	--	--	--	28000	--	13000	--	23	--
		78-02-14	--	--	--	--	17000	--	12000	--	0	--
		78-04-10	--	0	--	--	15000	--	6500	--	2	--
		78-06-13	--	10	--	--	13000	--	2200	--	2	--
		78-09-21	--	--	--	--	--	--	890	--	--	--
440346105334930		77-11-15	--	--	--	--	--	--	27000	--	2	--
		78-01-04	--	--	--	--	21000	--	16000	--	6	--
		78-02-14	--	--	--	--	19000	--	9000	--	0	--
		78-04-10	0	0	--	--	16000	--	12000	22	0	--
		78-06-13	--	0	--	--	12000	--	6000	--	0	--
		78-09-21	--	--	--	--	--	--	1100	--	--	--
440346105334931		78-01-05	--	--	--	--	10000	--	5300	--	50	--
		78-02-14	--	--	--	--	--	--	9000	--	0	--
		78-04-10	--	0	--	--	9400	--	8000	--	0	--
		78-06-13	--	5	--	--	7500	--	4100	--	0	--
		78-09-21	--	10	--	--	--	--	3000	--	2	--
440346105334932		77-10-04	--	--	--	--	4600	--	40	--	50	--
		77-11-15	--	--	--	--	--	--	320	--	22	--
		78-01-04	--	--	--	--	20000	--	2300	--	6	--
		78-02-14	--	--	--	--	19000	--	2800	--	4	--
		78-04-10	0	0	--	--	5900	--	3000	87	4	--
		78-06-13	--	5	--	--	3700	--	1500	--	0	--
		78-09-22	--	--	--	--	--	--	1400	--	--	--
440346105334933		77-10-05	--	--	--	--	5600	--	10	--	8	--
		78-01-17	--	--	--	--	6800	--	50	--	1	--

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

TRACE METALS ANALYSES

STATION NUMBER	DATE OF SAMPLE	CHROMIUM, TOTAL RECOVERABLE (UG/L AS CR)	CHROMIUM, DIS-SOLVED (UG/L AS CR)	COPPER, TOTAL RECOVERABLE (UG/L AS CU)	COPPER, DIS-SOLVED (UG/L AS CU)	IRON, TOTAL RECOVERABLE (UG/L AS FE)	IRON, SUSPENDED RECOVERABLE (UG/L AS FE)	IRON, DIS-SOLVED (UG/L AS FE)	LEAD, TOTAL RECOVERABLE (UG/L AS PB)	LEAD, DIS-SOLVED (UG/L AS PB)	LITHIUM, TOTAL RECOVERABLE (UG/L AS LI)
CAMPBELL COUNTY--Continued											
440346105334933	78-02-15	--	--	--	--	9300	--	500	--	14	--
	78-04-11	10	0	--	--	14000	--	860	77	2	--
440346105334934	78-02-14	--	--	--	--	56000	--	500	--	7	--
440346105334935	78-01-06	--	--	--	--	4200	--	140	--	3	--
440346105334936	78-01-17	--	--	--	--	610	--	60	--	0	--
	78-02-14	--	--	--	--	2400	--	200	--	2	--
	78-04-10	0	0	--	--	4800	--	70	73	0	--
	78-06-13	--	0	--	--	1100	1000	60	--	0	--
	78-09-22	--	--	--	--	--	--	110	--	--	--
440358105310701	78-01-06	--	--	--	--	1400	--	1300	--	10	--
440317105335501	78-01-06	--	--	--	--	5300	--	1200	--	2	--
441816105243101	77-10-19	1000	10	610	0	900000	--	50	1300	5	600
441749105221901	77-10-20	30	10	22	24	28000	--	4300	100	4	140
441716105224901	77-10-20	420	0	680	1	500000	--	60	500	4	440
441628105240801	77-10-20	160	10	34	0	150000	--	50	300	8	170
441628105240802	77-10-20	40	10	6	0	44000	--	860	100	3	130
441628105240803	77-10-20	40	0	60	1	61000	--	1900	100	2	190
444328105362701	77-10-19	20	0	30	0	37000	--	20	100	6	80
444626105263002	77-10-19	620	10	190	0	--	--	120	400	3	230
444743105301201	77-10-18	40	10	90	1	190000	--	320	200	39	60
444740105314701	77-10-18	180	10	350	0	370000	--	50	200	10	80
444929105381001	77-10-17	120	10	420	14	300000	--	210	300	72	100
444842105352201	77-10-18	30	20	40	0	190000	--	60	100	3	110
444758105353301	77-10-17	60	20	80	2	160000	--	170	100	92	70
444758105353303	77-10-12	270	10	460	2	340000	--	110	500	70	230
444756105372901	77-10-17	90	10	230	1	250000	--	60	300	63	140
CARBON COUNTY--Continued											
414828106205601	77-10-07	60	60	30	0	42000	--	120	100	0	50
414657106213601	77-10-06	10	0	<10	0	2700	--	70	<100	4	7
414643106384701	78-06-12	0	10	6	0	260	--	140	13	0	140
414709106450701	78-06-13	0	0	10	2	4700	--	4100	7	3	50
415401106223601	78-06-22	5	0	6	0	200	--	20	20	9	9
414932106232201	77-10-05	20	10	<10	1	9100	--	410	<100	6	30
415209106340301	78-06-16	10	0	5	0	4900	--	3200	19	9	110
414938106312201	77-11-13	8	0	2	1	620	--	620	2	1	10
	77-11-13	12	8	2	0	610	--	600	1	2	10
415750106225001	77-11-13	28	0	19	1	40000	--	2000	14	2	8
415700106244401	77-11-12	76	4	190	6	130000	--	140	78	3	130
415542106271501	77-11-12	24	20	29	3	38000	--	14000	9	1	180
415514106280901	77-11-12	44	8	40	4	44000	--	100	12	2	40
415530106461601	77-11-07	10	0	30	4	19000	--	5300	100	2	70
415530106463301	77-11-07	20	28	20	2	2800	--	60	100	3	100
415506106464201	77-11-10	12	4	12	0	6900	--	40	9	2	40
420214106263301	78-06-15	5	0	4	0	40	--	10	7	3	50
	78-06-15	5	0	6	0	1200	--	30	54	0	50
420203106421901	77-10-04	10	0	<10	0	3900	--	30	<100	4	20
420048106480901	77-11-08	16	20	20	6	160	--	70	100	5	1000
420027106484301	77-11-09	42	4	160	0	320	--	40	110	2	180
CONVERSE COUNTY--Continued											
431140104580001	77-10-06	10	20	<10	0	470	--	460	<100	3	10
431150104581001	77-10-06	10	20	<10	2	510	--	490	<100	9	10
431110105442201	77-10-07	10	20	<10	0	500	--	460	<100	2	10
431840105435201	77-10-11	10	10	20	0	14000	--	250	100	22	30
CROOK COUNTY--Continued											
442930104063401	78-07-22	--	0	--	0	--	--	<10	--	1	--

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

TRACE METALS ANALYSES

STATION	NUMBER	DATE OF SAMPLE	CHROMIUM, TOTAL RECOVERABLE (UG/L AS CR)	CHROMIUM, DIS- SOLVED (UG/L AS CR)	COPPER, TOTAL 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, DIS- SOLVED (UG/L AS PB)	LITHIUM TOTAL RECOVERABLE (UG/L AS LI)
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PARK COUNTY--Continued

443432110214001	78-08-15	--	--	--	--	--	--	--	80	--	--	--
443437110214601	77-10-19	--	--	--	--	--	--	--	40	--	--	--
	78-08-15	--	--	--	--	--	--	--	30	--	--	--
443440110215201	77-10-19	--	--	--	--	--	--	--	40	--	--	--
	78-08-16	--	--	--	--	--	--	--	50	--	--	--
443443110215001	78-08-16	--	--	--	--	--	--	--	50	--	--	--
443435110214401	78-08-15	--	--	--	--	--	--	--	20	--	--	--
443435110220401	78-08-16	--	--	--	--	--	--	--	40	--	--	--

TETON COUNTY--Continued

435746110413900	77-10-14	--	--	--	--	--	--	--	150	--	--	--
435737110413700	77-10-14	--	--	--	--	--	--	--	150	--	--	--
435730110414000	77-10-14	--	--	--	--	--	--	--	190	--	--	--
435729110415000	77-10-14	--	--	--	--	--	--	--	--	--	--	--
442324110315701	78-06-26	--	--	--	--	--	--	--	--	--	--	--
442322110321002	78-08-18	--	--	--	--	--	--	--	30	--	--	--
442321110321901	78-08-18	--	--	--	--	--	--	--	30	--	--	--
442320110320801	78-08-18	--	--	--	--	--	--	--	50	--	--	--
442317110321601	78-08-19	--	--	--	--	--	--	--	20	--	--	--
442315110321201	78-08-19	--	--	--	--	--	--	--	20	--	--	--
442316110320901	78-08-19	--	--	--	--	--	--	--	30	--	--	--
443844110522501	78-08-23	--	--	--	--	--	--	--	50	--	--	--
443844110521901	77-10-09	--	--	--	--	--	--	--	20	--	--	--
	77-11-09	--	--	--	--	--	--	--	60	--	--	--
	78-08-23	--	--	--	--	--	--	--	160	--	--	--
443842110522201	78-08-24	--	--	--	--	--	--	--	170	--	--	--
443843110522001	77-10-09	--	--	--	--	--	--	--	40	--	--	--
	78-08-23	--	--	--	--	--	--	--	50	--	--	--
442720110504101	78-08-21	--	--	--	--	--	--	--	210	--	--	--
442722110504401	77-10-09	--	--	--	--	--	--	--	920	--	--	--
	78-08-21	--	--	--	--	--	--	--	290	--	--	--
442723110504601	77-10-09	--	--	--	--	--	--	--	470	--	--	--
	78-08-21	--	--	--	--	--	--	--	340	--	--	--
442724110504801	78-08-22	--	--	--	--	--	--	--	100	--	--	--

STATION	NUMBER	DATE OF SAMPLE	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)	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)
CAMPBELL COUNTY--Continued												
434131105225502		78-06-22	--	--	150	--	--	--	--	--	--	--
434131105225503		78-06-22	--	--	70	--	--	--	--	--	--	--
434956105275802		78-06-21	--	--	1100	--	--	--	--	--	--	--
445427105245201		77-10-21	--	8600	--	.4	--	7	--	350	--	0
434956105275801		78-06-21	--	--	2000	--	--	--	--	--	--	--
440346105334901		78-01-05	60	--	--	--	--	--	--	--	--	--
		78-06-14	50	--	--	--	.0	--	--	--	--	--
440346105334902		78-01-05	40	--	--	--	--	--	--	--	--	--
		78-06-14	40	--	--	--	.0	--	--	--	--	--
440346105334905		78-01-05	80	--	--	--	--	--	--	--	--	--
		78-06-14	80	--	--	--	.0	--	--	--	--	--
440346105334911		78-01-05	110	--	--	--	--	--	--	--	--	--
440346105334914		78-01-05	130	--	--	--	--	--	--	--	--	--
		78-06-14	130	--	--	--	.0	--	--	--	--	--
440346105334915		78-01-05	120	--	--	--	--	--	--	--	--	--
		78-06-14	120	--	--	--	.0	--	--	--	--	--
440346105334916		78-01-05	110	--	--	--	--	--	--	--	--	--
		78-06-14	110	--	--	--	.0	--	--	--	--	--
440346105334921		78-01-05	130	--	--	--	--	--	--	--	--	--
440346105334923		78-06-14	130	--	--	--	.0	--	--	--	--	--
440346105334924		77-10-04	60	--	--	--	--	--	--	--	--	--
		78-02-14	510	--	--	--	--	--	--	--	--	--
		78-04-11	390	--	--	.0	.0	--	--	--	--	0
		78-06-13	260	--	--	--	.0	--	--	--	--	--
		78-09-21	--	--	--	--	.4	--	--	--	--	--
440346105334925		77-10-05	40	--	--	--	--	--	--	--	--	--
		78-01-17	540	--	--	--	--	--	--	--	--	--
		78-02-14	420	--	--	--	--	--	--	--	--	--
		78-04-10	370	--	--	--	.0	--	--	--	--	--
		78-06-13	320	--	--	--	.0	--	--	--	--	--
		78-09-21	--	--	--	--	--	--	--	--	--	--
440346105334926		78-01-05	370	--	--	--	--	--	--	--	--	--
		78-02-14	450	--	--	--	--	--	--	--	--	--
440346105334926		78-04-10	370	--	--	.0	.0	--	--	--	--	0
		78-06-13	320	--	--	--	.0	--	--	--	--	--
		78-09-21	--	--	--	--	.1	--	--	--	--	--
440346105334927		78-01-04	60	--	--	--	--	--	--	--	--	--
		78-04-11	220	--	--	--	.0	--	--	--	--	--
		78-09-21	--	--	--	--	--	--	--	--	--	--
440346105334928		78-01-04	70	--	--	--	--	--	--	--	--	--
		78-02-14	180	--	--	--	--	--	--	--	--	--
		78-04-10	240	--	--	.0	.0	--	--	--	--	0
		78-06-13	190	--	--	--	.0	--	--	--	--	--
		78-09-21	--	--	--	--	.0	--	--	--	--	--
440346105334929		78-01-04	80	--	--	--	--	--	--	--	--	--
		78-02-14	110	--	--	--	--	--	--	--	--	--
		78-04-10	140	--	--	--	.0	--	--	--	--	--
		78-06-13	120	--	--	--	.0	--	--	--	--	--
		78-09-21	--	--	--	--	--	--	--	--	--	--
440346105334930		77-11-15	80	--	--	--	--	--	--	--	--	--
		78-01-04	70	--	--	--	--	--	--	--	--	--
		78-02-14	80	--	--	--	--	--	--	--	--	--
		78-04-10	110	--	--	.0	.0	--	--	--	--	0
		78-06-13	110	--	--	--	.0	--	--	--	--	--
		78-09-21	--	--	--	--	--	--	--	--	--	--
440346105334931		78-01-05	60	--	--	--	--	--	--	--	--	--
		78-02-14	60	--	--	--	--	--	--	--	--	--
		78-04-10	80	--	--	--	.0	--	--	--	--	--
		78-06-13	60	--	--	--	.0	--	--	--	--	--
		78-09-21	--	--	--	--	.0	--	--	--	--	--
440346105334932		77-10-04	30	--	--	--	--	--	--	--	--	--
		77-11-15	60	--	--	--	--	--	--	--	--	--
		78-01-04	50	--	--	--	--	--	--	--	--	--
		78-02-14	50	--	--	--	--	--	--	--	--	--
		78-04-10	60	--	--	.0	.0	--	--	--	--	0
		78-06-13	50	--	--	--	.0	--	--	--	--	--
		78-09-22	--	--	--	--	--	--	--	--	--	--
440346105334933		77-10-05	40	--	--	--	--	--	--	--	--	--
		78-01-17	900	--	--	--	--	--	--	--	--	--

QUALITY OF GROUND WATER

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

TRACE METALS ANALYSES

STATION	NUMBER	DATE OF SAMPLE	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)	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)
CAMPBELL COUNTY--Continued												
440346105334933		78-02-15	470	--	--	--	--	--	--	--	--	--
		78-04-11	360	--	--	.0	.0	--	--	--	--	5
440346105334934		78-02-14	420	--	--	--	--	--	--	--	--	--
440346105334935		78-01-06	110	--	--	--	--	--	--	--	--	--
440346105334936		78-01-17	540	--	--	--	--	--	--	--	--	--
		78-02-14	420	--	--	--	--	--	--	--	--	--
		78-04-10	380	--	--	.0	.1	--	--	--	--	0
		78-06-13	320	--	--	--	.0	--	--	--	--	--
		78-09-22	--	--	--	--	--	--	--	--	--	--
440358105310701		78-01-06	100	--	--	--	--	--	--	--	--	--
440317105335501		78-01-06	80	--	--	--	--	--	--	--	--	--
441816105243101		77-10-19	250	15000	140	.2	.0	3	1	400	0	1
441749105221901		77-10-20	120	13000	13000	.0	.0	6	1	50	14	2
441716105224901		77-10-20	100	14000	690	.8	.0	18	2	600	3	23
441628105240801		77-10-20	120	570	80	.6	.0	6	1	50	0	0
441628105240802		77-10-20	110	470	240	.0	.0	6	1	50	0	3
441628105240803		77-10-20	170	3300	2000	.0	.0	7	1	50	3	2
444328105362701		77-10-19	70	180	40	.0	.0	7	1	<50	10	0
444626105263002		77-10-19	130	2600	300	.4	.0	35	8	150	2	6
444743105301201		77-10-18	50	740	80	.0	.0	6	2	50	8	0
444740105314701		77-10-18	60	2700	70	2.1	.0	19	5	150	5	2
444929105381001		77-10-17	40	2800	20	.6	.0	11	4	300	5	4
444842105352201		77-10-18	90	940	180	.0	.0	11	3	50	1	0
444758105353301		77-10-17	50	350	50	.0	.0	8	0	50	2	2
444758105353303		77-10-12	40	8200	10	1.0	.0	7	0	150	0	8
444756105372901		77-10-17	50	1300	50	.4	.0	11	1	150	1	5
CARBON COUNTY--Continued												
414828106205601		77-10-07	20	1500	880	.0	.0	7	1	50	3	0
414657106213601		77-10-06	8	150	60	.0	.0	10	2	<50	2	0
414643106384701		78-06-12	140	90	80	.0	.0	42	10	4	2	3
414709106450701		78-06-13	60	610	600	.0	.0	6	0	4	4	0
415401106223601		78-06-22	9	70	60	.0	.0	2	0	0	0	4
414932106232201		77-10-05	30	740	620	.0	.0	11	2	<50	2	0
415209106340301		78-06-16	110	450	430	.2	.0	4	3	5	0	0
414938106312201		77-11-13	10	170	190	.0	.0	2	0	4	1	0
		77-11-13	20	180	190	.0	.0	3	0	4	1	0
415750106225001		77-11-13	20	330	240	.0	.0	0	0	14	1	0
415700106244401		77-11-12	80	2800	80	.4	.0	3	0	50	2	8
415542106271501		77-11-12	180	1800	1300	.0	.0	3	0	21	2	1
415514106280901		77-11-12	20	1600	250	.0	.0	3	0	38	3	1
415530106461601		77-11-07	70	270	230	.0	.0	5	0	100	5	0
415530106463301		77-11-07	100	950	940	.0	.0	9	10	200	51	1
415506106464201		77-11-10	40	80	30	.0	.0	5	2	13	4	0
420214106263301		78-06-15	60	10	10	.0	.0	8	6	3	0	0
		78-06-15	60	30	10	.2	.0	8	6	5	0	0
420203106421901		77-10-04	30	120	80	.0	.0	9	3	<50	0	0
420048106480901		77-11-08	1000	1400	1300	.0	.0	27	24	100	8	27
420027106484301		77-11-09	120	240	50	.2	.0	1	1	79	6	1
CONVERSE COUNTY--Continued												
431140104580001		77-10-06	10	40	40	.0	.0	10	3	<50	2	1
431150104581001		77-10-06	10	40	40	.0	.0	11	4	<50	2	0
431110105442201		77-10-07	10	20	20	.0	.0	10	3	<50	2	0
431840105435201		77-10-11	20	100	30	.0	.0	5	3	<50	0	0
CROOK COUNTY--Continued												
442930104063401		78-07-22	<4	--	<1	--	.0	--	8	--	--	--

STATION	NUMBER	DATE OF SAMPLE	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)	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)
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WATER-QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

TRACE METALS ANALYSES

STATION NUMBER	DATE OF SAMPLE	SELE- NIUM, DIS- SOLVED (UG/L AS SE)	SILVER, TOTAL 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, DIS- SOLVED (UG/L AS ZN)
CAMPBELL COUNTY--Continued								
434131105225502	78-06-22	--	--	--	--	--	--	--
434131105225503	78-06-22	--	--	--	--	--	--	--
434956105275802	78-06-21	--	--	--	--	--	--	--
445427105245201	77-10-21	--	--	--	--	--	5000	--
434956105275801	78-06-21	--	--	--	--	--	--	--
440346105334901	78-01-05	--	--	--	--	--	--	20
	78-06-14	0	--	0	--	--	--	20
440346105334902	78-01-05	--	--	--	--	--	--	20
	78-06-14	0	--	0	--	--	--	20
440346105334905	78-01-05	--	--	--	--	--	--	180
	78-06-14	0	--	0	--	--	--	120
440346105334911	78-01-05	--	--	--	--	--	--	20
440346105334914	78-01-05	--	--	--	--	--	--	10
	78-06-14	0	--	0	--	--	--	20
440346105334915	78-01-05	--	--	--	--	--	--	20
	78-06-14	0	--	0	--	--	--	30
440346105334916	78-01-05	--	--	--	--	--	--	20
	78-06-14	0	--	0	--	--	--	20
440346105334921	78-01-05	--	--	--	--	--	--	20
440346105334923	78-06-14	0	--	0	--	--	--	20
440346105334924	77-10-04	--	--	--	--	--	--	50
	78-02-14	--	--	--	--	--	--	10
	78-04-11	0	0	0	--	--	--	20
	78-06-13	0	--	0	--	--	--	20
	78-09-21	0	--	--	--	--	--	--
440346105334925	77-10-05	--	--	--	--	--	--	0
	78-01-17	--	--	--	--	--	--	30
	78-02-14	--	--	--	--	--	--	20
	78-04-10	0	--	0	--	--	--	20
	78-06-13	0	--	0	--	--	--	30
	78-09-21	--	--	--	--	--	--	--
440346105334926	78-01-05	--	--	--	--	--	--	20
	78-02-14	--	--	--	--	--	--	50
440346105334926	78-04-10	0	0	0	--	--	--	20
	78-06-13	0	--	0	--	--	--	20
	78-09-21	0	--	--	--	--	--	--
440346105334927	78-01-04	--	--	--	--	--	--	20
	78-04-11	0	--	0	--	--	--	20
	78-09-21	--	--	--	--	--	--	--
440346105334928	78-01-04	--	--	--	--	--	--	30
	78-02-14	--	--	--	--	--	--	10
	78-04-10	0	0	0	--	--	--	10
	78-06-13	0	--	0	--	--	--	20
	78-09-21	0	--	--	--	--	--	--
440346105334929	78-01-04	--	--	--	--	--	--	40
	78-02-14	--	--	--	--	--	--	10
	78-04-10	0	--	0	--	--	--	10
	78-06-13	0	--	0	--	--	--	20
	78-09-21	--	--	--	--	--	--	--
440346105334930	77-11-15	--	--	--	--	--	--	40
	78-01-04	--	--	--	--	--	--	30
	78-02-14	--	--	--	--	--	--	10
	78-04-10	0	0	1	--	--	--	10
	78-06-13	0	--	0	--	--	--	20
	78-09-21	--	--	--	--	--	--	--
440346105334931	78-01-05	--	--	--	--	--	--	40
	78-02-14	--	--	--	--	--	--	10
	78-04-10	0	--	0	--	--	--	10
	78-06-13	0	--	0	--	--	--	20
	78-09-21	0	--	--	--	--	--	--
440346105334932	77-10-04	--	--	--	--	--	--	60
	77-11-15	--	--	--	--	--	--	190
	78-01-04	--	--	--	--	--	--	20
	78-02-14	--	--	--	--	--	--	10
	78-04-10	0	0	0	--	--	--	20
	78-06-13	0	--	0	--	--	--	20
	78-09-22	--	--	--	--	--	--	--
440346105334933	77-10-05	--	--	--	--	--	--	10
	78-01-17	--	--	--	--	--	--	10

QUALITY OF GROUND WATER

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

TRACE METALS ANALYSES

STATION NUMBER	DATE OF SAMPLE	SELENIUM, DIS-SOLVED (UG/L AS SE)	SILVER, TOTAL RECOVERABLE (UG/L AS AG)	SILVER, DIS-SOLVED (UG/L AS AG)	STRONTIUM, DIS-SOLVED (UG/L AS SR)	VANADIUM, DIS-SOLVED (UG/L AS V)	ZINC, TOTAL RECOVERABLE (UG/L AS ZN)	ZINC, DIS-SOLVED (UG/L AS ZN)
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CAMPBELL COUNTY--Continued

440346105334933	78-02-15	--	--	--	--	--	--	10
	78-04-11	1	0	0	--	--	--	10
440346105334934	78-02-14	--	--	--	--	--	--	10
440346105334935	78-01-06	--	--	--	--	--	--	90
440346105334936	78-01-17	--	--	--	--	--	--	10
	78-02-14	--	--	--	--	--	--	10
	78-04-10	0	0	0	--	--	--	20
	78-06-13	0	--	0	--	--	--	20
	78-09-22	--	--	--	--	--	--	--
440358105310701	78-01-06	--	--	--	--	--	--	20
440317105335501	78-01-06	--	--	--	--	--	--	20
441816105243101	77-10-19	0	--	--	--	.8	5000	10
441749105221901	77-10-20	0	--	--	--	1.7	70	10
441716105224901	77-10-20	0	--	--	--	2.2	1800	10
441628105240801	77-10-20	0	--	--	--	3.3	--	20
441628105240802	77-10-20	0	--	--	--	.6	110	10
441628105240803	77-10-20	0	--	--	--	2.4	140	10
444328105362701	77-10-19	0	--	--	--	1.3	100	0
444626105263002	77-10-19	0	--	--	--	2.0	430	10
444743105301201	77-10-18	0	--	--	--	.0	140	10
444740105314701	77-10-18	0	--	--	--	.0	400	0
444929105381001	77-10-17	0	--	--	--	1.9	800	0
444842105352201	77-10-18	0	--	--	--	.0	110	10
444758105353301	77-10-17	0	--	--	--	.3	220	10
444758105353303	77-10-12	0	--	--	--	3.1	2100	10
444756105372901	77-10-17	0	--	--	--	.7	1900	10

CARBON COUNTY--Continued

414828106205601	77-10-07	0	--	--	--	.0	90	30
414657106213601	77-10-06	0	--	--	--	.0	30	20
414643106384701	78-06-12	0	--	--	--	.0	10	10
414709106450701	78-06-13	0	--	--	--	.0	10	20
415401106223601	78-06-22	4	--	--	--	.0	20	10
414932106232201	77-10-05	0	--	--	--	.0	100	10
415209106340301	78-06-16	0	--	--	--	.0	30	20
414938106312201	77-11-13	0	--	--	--	.1	10	10
	77-11-13	0	--	--	--	.1	8	4
415750106225001	77-11-13	0	--	--	--	.2	50	6
415700106244401	77-11-12	0	--	--	--	.9	580	10
415542106271501	77-11-12	0	--	--	--	.2	110	20
415514106280901	77-11-12	0	--	--	--	.2	130	6
415530106461601	77-11-07	0	--	--	--	.3	190	30
415530106463301	77-11-07	2	--	--	--	.8	70	50
415506106464201	77-11-10	0	--	--	--	2.1	90	20
420214106263301	78-06-15	1	--	--	--	.0	20	10
	78-06-15	1	--	--	--	.0	20	10
420203106421901	77-10-04	1	--	--	--	.3	40	10
420048106480901	77-11-08	80	--	--	540	340	70	60
420027106484301	77-11-09	0	--	--	--	.6	420	20

CONVERSE COUNTY--Continued

431140104580001	77-10-06	0	--	--	--	.0	0	10
431150104581001	77-10-06	0	--	--	--	.0	0	0
431110105442201	77-10-07	0	--	--	--	.0	10	0
431840105435201	77-10-11	0	--	--	--	.0	30	0

CROOK COUNTY--Continued

442930104063401	78-07-22	1	--	--	1100	.5	--	370
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645

TRACE METALS ANALYSES

STATION	NUMBER	DATE OF SAMPLE	SELE- NIUM, DIS- SOLVED (UG/L AS SE)	SILVER, TOTAL 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, DIS- SOLVED (UG/L AS ZN)
---------	--------	----------------------	---	---	--	--	--	---	--

443432110214001	78-08-15	--	--	--	--	--	--
443437110214601	77-10-19	--	--	--	--	--	--
	78-08-15	--	--	--	--	--	--
443440110215201	77-10-19	--	--	--	--	--	--
	78-08-16	--	--	--	--	--	--
443443110215001	78-08-16	--	--	--	--	--	--
443435110214401	78-08-15	--	--	--	--	--	--
443435110220401	78-08-16	--	--	--	--	--	--

435746110413900	77-10-14	--	--	--	--	--	20
435737110413700	77-10-14	--	--	--	--	--	20
435730110414000	77-10-14	--	--	--	--	--	6
435729110415000	77-10-14	--	--	--	--	--	--
442324110315701	78-06-26	--	--	--	--	--	--
442322110321002	78-08-18	--	--	--	--	--	--
442321110321901	78-08-18	--	--	--	--	--	--
442320110320801	78-08-18	--	--	--	--	--	--
442317110321601	78-08-19	--	--	--	--	--	--
442315110321201	78-08-19	--	--	--	--	--	--
442316110320901	78-08-19	--	--	--	--	--	--
443844110522501	78-08-23	--	--	--	--	--	--
443844110521901	77-10-09	--	--	--	--	--	--
	77-11-09	--	--	--	--	--	--
	78-08-23	--	--	--	--	--	--
443842110522201	78-08-24	--	--	--	--	--	--
443843110522001	77-10-09	--	--	--	--	--	--
	78-08-23	--	--	--	--	--	--
442720110504101	78-08-21	--	--	--	--	--	--
442722110504401	77-10-09	--	--	--	--	--	--
	78-08-21	--	--	--	--	--	--
442723110504601	77-10-09	--	--	--	--	--	--
	78-08-21	--	--	--	--	--	--
442724110504801	78-08-22	--	--	--	--	--	--

QUALITY OF GROUND WATER

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

RADIOCHEMICAL ANALYSES

STATION NUMBER	LOCAL IDENTIFIER	GEO-LOGIC UNIT	SITE	DATE OF SAMPLE	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)
CARBON COUNTY									
414828106205601	21N 080W 12ACA01	124HANN	GW	77-10-07	1345	<19	240	7.4	20
414709106450701	21N 083W 16DDA01	211MVRD	GW	78-06-13	0900	5.3	.4	7.3	<.4
414938106312201	22N 081W 33DDC01	124HANN	GW	77-11-13	1130	<7.1	<.4	<2.1	<.4
		124HANN	GW	77-11-13	1200	<6.9	<.4	3.4	<.4
415530106463301	23N 083W 32ABD01	125FRRS	GW	77-11-07	1330	140	18	<18	10
415506106464201	23N 083W 32DBC01	125FRRS	GW	77-11-10	1515	<17	10	<5.6	5.7
420203106421901	24N 083W 24CAA01	124HANN	GW	77-10-04	1300	44	5.5	<6.3	3.4
420027106484301	24N 084W 36ADC01	125FRRS	GW	77-11-09	1100	65	140	29	70

CROOK COUNTY

442930104063401	52N 062W 18C 01	337PHSP	GW	78-07-22	1000	<8.1	<.4	<3.4	<.4
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GOSHEN COUNTY

414705104104601	21N 061W 15CDD01	211LNCE	GW	78-03-29	1450	--	--	--	--
414456104123801	21N 061W 32ADC01	211LNCE	GW	78-03-29	1520	--	--	--	--
415402104202001	22N 062W 05CDC01	211LNCE	GW	78-03-29	1310	--	--	--	--
415353104181601	22N 062W 10BBC01	123WRVR	GW	78-03-29	1330	--	--	--	--
415821104122401	23N 061W 168BB01	123WRVR	GW	78-03-29	1705	--	--	--	--
415548104160001	23N 062W 26DDD01	123WRVR	GW	78-03-29	1620	--	--	--	--
415921104274001	23N 063W 06DDD01	123WRVR	GW	78-03-29	1225	--	--	--	--
420116104160001	24N 062W 260AD01	123WRVR	GW	78-03-29	1145	--	--	--	--

STATION NUMBER	DATE OF SAMPLE	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, EXTRAC-TION (UG/L)
----------------	----------------	---	--	--	--	--

CARBON COUNTY--Continued

414828106205601	77-10-07	6.4	16	.22	--	.15
414709106450701	78-06-13	6.5	<.4	.55	<.4	--
414938106312201	77-11-13	<1.9	<.4	.33	--	.17
	77-11-13	3.1	<.4	.34	--	.16
415530106463301	77-11-07	<16	9.7	1.5	12	--
415506106464201	77-11-10	<5.1	5.4	.19	1.1	--
420203106421901	77-10-04	<5.1	2.9	.43	14	--
420027106484301	77-11-09	26	65	2.0	1.0	--

CROOK COUNTY--Continued

442930104063401	78-07-22	<3.1	<.4	--	--	.00
-----------------	----------	------	-----	----	----	-----

GOSHEN COUNTY--Continued

414705104104601	78-03-29	--	--	.10	15	--
414456104123801	78-03-29	--	--	.20	140	--
415402104202001	78-03-29	--	--	.28	270	--
415353104181601	78-03-29	--	--	.10	97	--
415821104122401	78-03-29	--	--	.24	120	--
415548104160001	78-03-29	--	--	.14	160	--
415921104274001	78-03-29	--	--	.15	38	--
420116104160001	78-03-29	--	--	.10	200	--

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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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