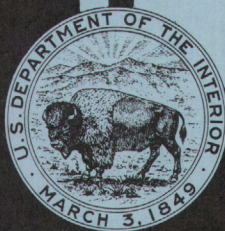
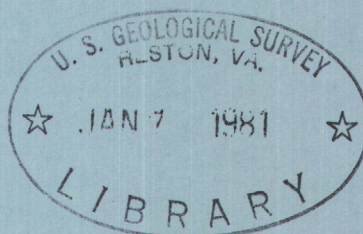


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Water Resources Data for South Dakota

Part 2. Water Quality Records



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

Prepared in cooperation with the State of South Dakota
and with other agencies

CALENDAR FOR WATER YEAR 1974

1973

OCTOBER

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

NOVEMBER

S	M	T	W	T	F	S
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DECEMBER

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1974

JANUARY

S	M	T	W	T	F	S
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27	28	29	30	31		

FEBRUARY

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24	25	26	27	28		

MARCH

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31						

APRIL

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28	29	30				

MAY

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			1	2	3	4
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19	20	21	22	23	24	25
26	27	28	29	30	31	

JUNE

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30						

JULY

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14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30	31			

AUGUST

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

SEPTEMBER

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

1974

Water Resources Data
for
South Dakota

Part 2. Water Quality Records



UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

Prepared in cooperation with the State of South Dakota
and with other agencies

Prepared in cooperation with
East Dakota Conservancy Sub-District
Bureau of Reclamation, U.S. Department of the Interior
Corps of Engineers, U.S. Army
Environmental Protection Agency

Water resources records, 1974, for South Dakota are in the following reports of the U.S. Geological Survey:

1. Water Resources Data for South Dakota
Part 1. Surface Water Records
2. Water Resources Data for South Dakota
Part 2. Water Quality Records

Copies of this report may be obtained from
District Chief, Water Resources Division
U.S. Geological Survey
Room 231, Federal Building
P. O. Box 1412
Huron, South Dakota 57350

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

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

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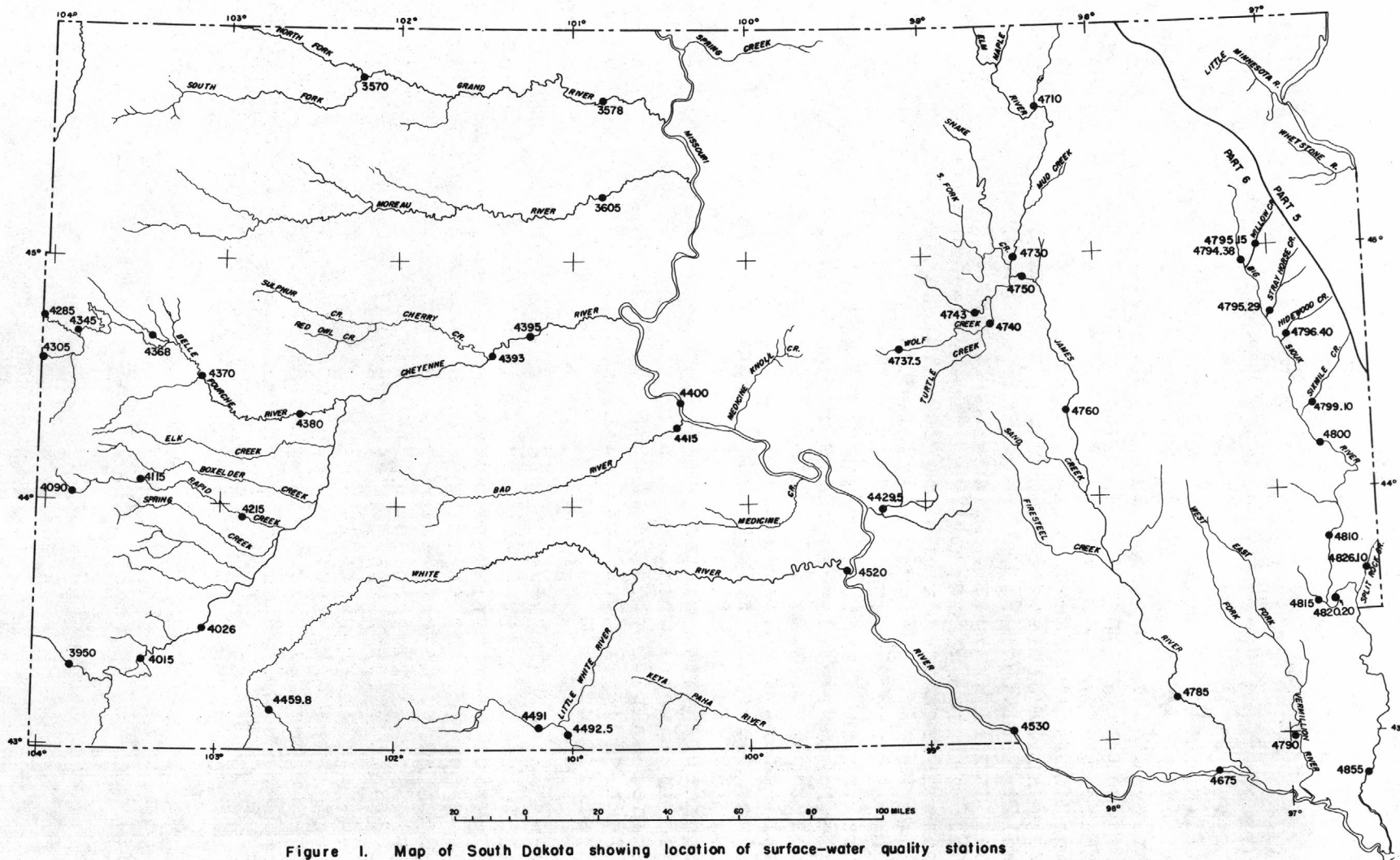


Figure 1. Map of South Dakota showing location of surface-water quality stations

WATER RESOURCES DATA FOR SOUTH DAKOTA, 1974

Part 2. Water Quality Records

by O. J. Larimer and N. F. Leibbrand

INTRODUCTION

Water resources data for the 1974 water year for South Dakota include records of data for the chemical and physical characteristics of surface and ground water. Water-quality data or chemical, physical, and biological characteristics of surface and ground water were collected from designated sampling sites at predetermined intervals such as once daily, weekly, monthly or less frequently. Records are given for 39 sampling stations of which 29 are continuous record stations and 10 are partial-record stations. Records of chemical analyses also are given for 160 ground-water sites. Locations of surface water-quality stations are shown in figure 1. A few pertinent stations (not included above) in bordering States are also included. The records were collected by the Water Resources Division of the U.S. Geological Survey under the direction of John E. Powell, district chief. These data represent that portion of the National Water Data System collected by the U.S. Geological Survey and cooperating State and Federal agencies in South Dakota. South Dakota district personnel who contributed significantly to the collection and preparation of data included in this report were: L. B. Yarger, J. Kume, J. H. Eade, H. L. Dixon, D. W. Heyd, E. B. Hoffman, T. K. Lockner, W. L. Bradford, L. G. Huber, R. C. Ugland, R. C. Beard, and E. M. Decker.

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

COOPERATION

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

East Dakota Conservancy Sub-District, J. L. Siegel,
manager-engineer.

Agencies furnishing assistance were:

Bureau of Reclamation, U.S. Department of the Interior.
Corps of Engineers, U.S. Army.
Environmental Protection Agency.

Funds for many stations were provided under the Missouri River Basin Development Program for collection of data to meet the needs of several agencies of the Department of the Interior.

DEFINITION OF TERMS

Terms related to water-quality and hydrologic data, as used in this report are defined below. See also table for converting English units to International System of units (SI) on page 21.

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

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

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.

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

Total coliform bacteria are a particular group of bacteria that are used as indicators of possible sewage pollution. They are characterized as aerobic or facultative anaerobic, gram-negative, nonspore-forming,

rod-shaped bacteria which ferment lactose with gas formation within 48 hours at 35°C. In the laboratory these bacteria are defined as all the organisms which produce colonies with a golden-green metallic sheen within 24 hours when incubated at 35°C + 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 intestine or feces of warmblooded 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 the intestine of warmblooded 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 shifting portion of fragmented alluvial material of which the streambed is composed.

Biochemical oxygen demand (BOD) is a measure of the quantity of dissolved oxygen, in milligrams per litre, used 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 weight per unit area or volume of habitat.

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

Cfs-day is the volume of water represented by a flow of 1 cubic foot per second for 24 hours. It is equivalent to 86,400 cubic feet, approximately 1.9835 acre-feet, or about 646,000 gallons or 2,445 cubic metres. It represents a runoff of approximately 0.0372 inches from 1 square mile or 0.3468 millimetre from 1 square kilometre.

Chemical oxygen demand (COD) indicates the quantity of oxidizable compounds in water and varies with water composition(s), temperature, period of contact, and other factors.

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

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

Cubic foot per second (CFS, cfs) is the rate of discharge representing a volume of 1 cubic foot passing a given point during 1 second and is equivalent to 7.48 gallons per second, 448.8 gallons per minute or 0.02832 cubic metres per second.

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

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

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

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

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

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

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

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

Micrograms per litre (UG/L, ug/l) is a unit expressing the concentration of chemical constituents in solution weight (micrograms) of solute per unit volume (litre) of water. One thousand micrograms per litre is equivalent to one milligram per litre.

Milligrams per litre (MG/L, mg/l) is a unit for expressing the concentration of chemical constituents in solution. Milligrams per litre represents the weight of solute per unit volume of water. Milligrams or micrograms per litre may be converted to milliequivalents (one thousandth of a gram-equivalent weight of a constituent) per litre by multiplying by the factors in table 1, page 6.

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

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 multi-celled and are counted according to the number of contained cells per sample volume, usually millilitres (ml) or litres (l).

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

Particle size is the diameter, in millimetres (mm), of suspended sediment or bed material determined either by 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) (Guy, 1969).

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

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

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

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

Range of concentration in 1000 mg/l	Di- vide by	Range of concentration in 1000 mg/l	Di- vide by	Range of concentration in 1000 mg/l	Di- vide by	Range of concentration in 100 mg/l	Di- vide by
0 - 8	1.00	201-217	1.13	411-424	1.26	619-634	1.39
8.05- 24	1.01	218-232	1.14	427-440	1.27	636-650	1.40
24.2 - 40	1.02	234-248	1.15	443-457	1.28	652-666	1.41
40.5 - 56	1.03	250-264	1.16	460-473	1.29	668-682	1.42
56.5 - 72	1.04	266-280	1.17	476-489	1.30	684-698	1.43
72.5 - 88	1.05	282-297	1.18	492-506	1.31	700-715	1.44
88.5 -104	1.06	299-313	1.19	508-522	1.32	717-730	1.45
105 -120	1.07	315-329	1.20	524-538	1.33	732-747	1.46
121 -136	1.08	331-345	1.21	540-554	1.34	749-762	1.47
137 -152	1.09	347-361	1.22	556-570	1.35	765-780	1.48
153 -169	1.10	363-378	1.23	572-585	1.36	782-796	1.49
170 -185	1.11	380-393	1.24	587-602	1.37	798-810	1.50
186 -200	1.12	395-409	1.25	604-617	1.38		

*Based on water density of 1.000 g/ml and a specific gravity of sediment of 2.65.

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 (Guy, 1969).

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, weight, or volume.

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

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

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

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

Diatoms are the unicellular or colonial algae having a siliceous shell. Their concentrations are expressed as number of cells per millilitre (cells/ml).

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 per millilitre (cells/ml).

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

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

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

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

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

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

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

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

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

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

Substrate is the physical surface upon which an organism lives.

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

Artificial substrate is a device which is purposely placed in a stream or lake for colonization of organisms. The use of artificial substrates 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 plexi-glass strips for periphyton collection.

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

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

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

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

Weighted average is used in this report to indicate discharge-weighted average. It is computed by multiplying the discharge for a sampling period by the concentrations of individual constituents for the corresponding period and dividing the sum of the products by the sum of the discharges. A discharge-weighted average approximates the composition of water that would be found in a reservoir containing all the water passing a given location during the water year after thorough mixing in the reservoir. See also table for converting English Units to International Units (SI) on page 21.

SPECIAL NETWORKS AND PROGRAMS

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

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

National stream-quality accounting network is an accounting 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 in the network design. Areal configuration of the network is based on river-basin accounting units 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 water-quality conditions nationwide on a year-to-year basis and (2) to detect and assess long-term changes in stream quality.

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

Pesticides are chemical compounds used to control the growth of undesirable plants and animals. Major categories of pesticides includes insecticides, miticides, fungicides, herbicides, and rodenticides. Since the first application of DDT as an insecticide in the early 1930's, there have been almost 60,000 pesticide formulations registered, each containing at least one of the approximately 800 different basic pesticide compounds (Goerlitz and Brown, 1972, p. 24). The United States annually produces about 1 billion pounds of these compounds. Although efforts are being made to substitute many of the chlorinated hydrocarbon pesticides with more specific, fast-acting, and easily degradable compounds, chlorinated hydrocarbon pesticides are still commonly used in many areas of the country.

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

Radioisotopes are isotope forms of an element that exhibit radioactivity. Isotopes are varieties of a chemical element that differ in atomic weight, but are very nearly alike in chemical properties. The difference arises because the atoms of the isotopic forms of an element differ in the number of neutrons in the nucleus. For example: Ordinary chlorine is a mixture of isotopes having atomic weights 35 and 37, with the natural mixture having atomic weight about 35.453. Many of the elements similarly exist as mixtures of isotopes, and a great many new isotopes have been produced in the operation of nuclear devices such as the cyclotron (Rose, 1966). There are 275 isotopes of the 81 stable elements in addition to over 800 radioactive isotopes.

Radioisotopes that are determined in this program are those of uranium in micrograms per liter, radium as radium-226 in picocuries per litre, gross beta radiation as strontium/yttrium-90 in picocuries per litre, and gross alpha radiation as micrograms of uranium equivalent per litre.

A picocurie (PC/L, pCi/l) is one millionth of the amount of radioactivity represented by a microcurie, which is the quantity of radiation represented by one millionth of a gram of radium-226. A picocurie of radium results in 2.22 disintegration per minute.

DOWNSTREAM ORDER AND STATION NUMBER

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

As an added means of identification, each water-quality station, gaging station, and partial-record station has been assigned a station number. These are in the same downstream order used in this report. In assigning station numbers, no distinction is made between partial-record and continuous-record stations; therefore, the station number for a partial-record station indicates downstream order position in a list made up of both types of stations. Water-quality stations located at or near gaging stations or partial-record stations have the same number as the gaging or partial-record station. Gaps are left in the numbers to allow for new stations that may be established; hence the numbers are not consecutive. The complete 8-digit number for each station, such as 06476000 which appears just to left of the station name includes the 2-digit part number "06" plus the 6-digit downstream order number "476000." In this report, the records are listed in downstream order by parts. The part number refers to an area whose boundaries coincide with certain natural drainage lines. Records in this report are in Part 6 (Missouri River basin). All records for a drainage basin encompassing more than one State could be arranged in downstream order by assembling pages from the various State reports by station number to include all records in the basin.

Downstream order station numbers are not assigned to sites where only random water-quality samples are taken. These sites are classified as water-quality miscellaneous sites and as a means of location and identification a 15-digit number consisting of the latitude and longitude coordinates to the

nearest second for each site plus a 2-digit sequential number are assigned. For example, the station number for a water-quality miscellaneous site with lat $42^{\circ}28'47''$, long $071^{\circ}41'04''$ would be 422847071410401.

WELL NUMBER

The well numbering system of the U.S. Geological Survey is based on the grid system of latitude and longitude. 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 is a sequential number for wells within a 1-second grid. The system provides the geographic location of the well and a unique number for each well. In the event that the latitude-longitude coordinates for a surface-water miscellaneous sampling site and a well site are the same, assign sequential numbers "01," "02," etc. within the same sequence. See figure 2, below.

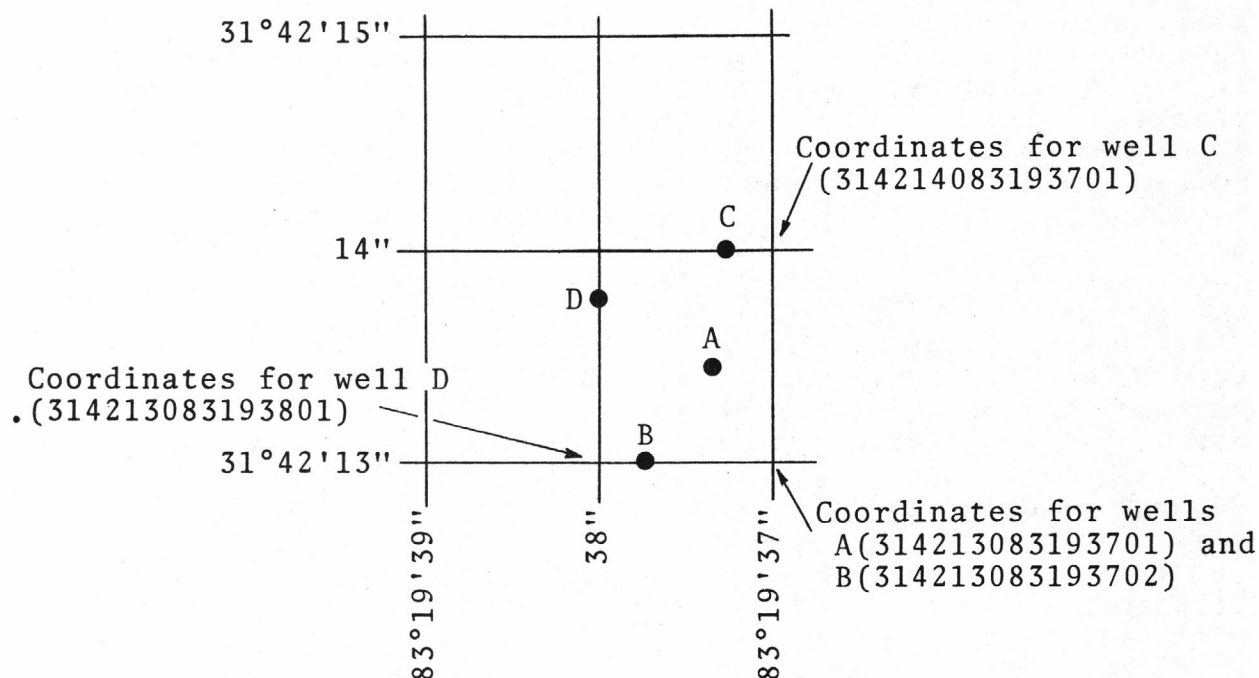


Figure 2.--System for numbering wells
(latitude and longitude)

COLLECTION AND EXAMINATION OF DATA

Water samples for analyses usually are collected at or near gaging stations. The discharge records at these stations are used in conjunction with the computations of the chemical constituents and sediment loads. Discharge records for streams in South Dakota have been released in the report, "Water Resources Data for South Dakota, 1974, Part 1. Surface Water Records."

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

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

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

a density greater than 1.000 g/ml, values in parts per million should be multiplied by the density to convert to milligrams per litre. Temperature reported in degrees Celsius may be converted to degrees Fahrenheit by using the table on page 15.

In October 1968, the Geological Survey began reporting many of the chemical constituents as well as the minor elements in micrograms per litre instead of milligrams per litre. (See "Definition of Terms," p. 5 and table for converting English units to SI units, p. 21.)

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

°C	°F	°C	°F	°C	°F	°C	°F	°C	°F
0.0	32	10.0	50	20.0	68	30.0	86	40.0	104
.5	33	10.5	51	20.5	69	30.5	87	40.5	105
1.0	34	11.0	52	21.0	70	31.0	88	41.0	106
1.5	35	11.5	53	21.5	71	31.5	89	41.5	107
2.0	36	12.0	54	22.0	72	32.0	90	42.0	108
2.5	36	12.5	54	22.5	72	32.5	90	42.5	108
3.0	37	13.0	55	23.0	73	33.0	91	43.0	109
3.5	38	13.5	56	23.5	74	33.5	92	43.5	110
4.0	39	14.0	57	24.0	75	34.0	93	44.0	111
4.5	40	14.5	58	24.5	76	34.5	94	44.5	112
5.0	41	15.0	59	25.0	77	35.0	95	45.0	113
5.5	42	15.5	60	25.5	78	35.5	96	45.5	114
6.0	43	16.0	61	26.0	79	36.0	97	46.0	115
6.5	44	16.5	62	26.5	80	36.5	98	46.5	116
7.0	45	17.0	63	27.0	81	37.0	99	47.0	117
7.5	45	17.5	63	27.5	81	37.5	99	47.5	117
8.0	46	18.0	64	28.0	82	38.0	100	48.0	118
8.5	47	18.5	65	28.5	83	38.5	101	48.5	119
9.0	48	19.0	66	29.0	84	39.0	102	49.0	120
9.5	49	19.5	67	29.5	85	39.5	103	49.5	121

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

Solutes

The methods of collecting and analyzing water samples for determining the kinds and concentrations of solutes are described by Brown, Skougstad, and Fishman (1970). One sample can define adequately the water quality at a given time if the mixture of solutes throughout the stream cross section is homogeneous. However, the concentration of solutes

at different locations in the cross section may vary widely with different rates of water discharge depending on the source of material and the turbulence and the mixing of the stream. Some must be sampled at several verticals across the channel to determine accurately the solute load.

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

Temperature

Water temperatures are measured at most of the water-quality stations. In addition, water temperatures are taken at time of discharge measurements for surface-water stations. For daily stations, the water temperatures are taken at about the same time each day when sample is collected. Large streams have a daily range of several degrees and may follow closely the changes in air temperature. Some streams may be affected by waste-heat discharges.

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

Sediment

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

During periods of rapidly changing flow or rapidly changing concentration, samples may have been collected more frequently (twice daily or, in some instances, hourly). The published sediment discharges for days of rapidly changing flow or concentration were computed by the sub-divided 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 sub-divided day method. For periods when no samples were collected, daily loads of suspended sediment were estimated on the basis of water discharge, sediment concentrations observed immediately before and after the periods, and suspended-sediment loads for other periods of similar discharge.

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

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

WATER-SUPPLY PAPERS

The annual series of water-supply papers that give information on quality of surface waters in South Dakota are shown in the following table.

Table 4.--Water-Supply paper numbers and parts,
water years 1947-74

<u>Year</u>	<u>Parts</u> <u>5-6</u>	<u>Year</u>	<u>Parts</u> <u>5-6</u>
1947	1102	1968	B2094
1948	1132		C2095
1949	1162	1969	AB2144
1950	1187		AC2145
1951	1198	1970	AB2154
1952	1251		AC2155
1953	1291	1971	AB2164
1954	1351		AC2165
1955	1401	1972	D
1956	1451	1973	D
1957	1521	1974	D
1958	1572		
1959	1643		
1960	1743		
1961	1883		
1962	1943		
1963	1949		
1964	1956		
1965	1963		
1966	1993		
1967	2013		

A In press.

B Part 5.

C Part 6.

D Not assigned.

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Table 5.--Factors for converting English units to International System (SI) units

The following factors may be used to convert the English units published herein to the International System of Units (SI). Subsequent reports will contain both the English and SI unit equivalents in the station manuscript descriptions until such time that all data will be published in SI units.

Multiply English units	By	To obtain SI units
Length		
feet (ft)	.3048	metres (m)
miles (mi)	1.609	kilometres (km)
Area		
acres	4047	square metres (m ²)
	.4047	*hectares (ha)
	.4047	square hectometre (hm ²)
	.004047	square kilometres (km ²)
square miles (mi ²)	2.590	square kilometres (km ²)
Volume		
cubic feet (ft ³)	28.32	cubic decimetres (dm ³)
	.02832	cubic metres (m ³)
cfs-day (ft ³ /s-day)	2447	cubic metres (m ³)
	.002447	cubic hectometres (hm ³)
acre-feet (acre-ft)	1233	cubic metres (m ³)
	.001233	cubic hectometres (hm ³)
	.000001233	cubic kilometres (km ³)
Flow		
cubic feet per second (ft ³ /s)	28.32	litres per second (l/s)
	28.32	cubic decimetres per second (dm ³ /s)
	.02832	cubic metres per second (m ³ /s)

*The unit hectare is approved for use with the International System (SI) for a limited time. See NBS Special Bulletin 330, p. 15, 1972 edition.

GRAND RIVER BASIN

06357800 GRAND RIVER AT LITTLE EAGLE, S. DAK.

LOCATION.--Lat 45°39'28", long 100°49'04", in NE¼NE¼ sec.32, T.20 N., R.37 E., Corson County, at gaging station, on left bank at downstream side of bridge on State Highway 63, 1.3 mi (2.1 km) southwest of Little Eagle and 4.7 mi (7.6 km) downstream from Little Oak Creek.

DRAINAGE AREA.--5,370 mi² (13,910 km²), approximately.

PERIOD OF RECORD.--Chemical analyses: June 1972.

Sediment records: October 1971 to September 1974.

EXTREMES.--1973-74:

Sediment concentrations: Maximum daily, 12,300 mg/l Aug. 14; minimum daily, 168 mg/l Mar. 5.

SUSPENDED-SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1973 TO SEPTEMBER 1974

DAY	OCTOBER			NOVEMBER			DECEMBER		
	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
1	101	1750	477	112	1500	454	100	570	154
2	82	1560	345	114	1250	385	95	800	205
3	77	1120	233	114	1050	323	90	1130	275
4	73	1100	217	121	800	261	85	1100	252
5	71	1050	201	68	500	92	80	1070	231
6	68	1050	193	65	350	61	80	900	194
7	70	1000	189	80	311	67	85	730	168
8	70	950	180	80	450	97	90	560	136
9	79	1050	224	70	673	127	85	400	92
10	110	3300	980	130	600	211	85	223	51
11	212	2600	1490	147	491	195	85	230	53
12	452	5400	6590	147	900	357	80	235	51
13	796	9500	20400	179	1220	590	70	230	43
14	862	10300	24000	194	1000	524	60	225	36
15	529	7200	10300	154	780	324	55	220	33
16	278	4900	3680	144	900	350	60	215	35
17	168	3800	1720	140	1060	401	60	210	34
18	121	3300	1080	130	900	316	65	205	36
19	95	3200	821	110	780	232	65	225	39
20	77	3100	644	60	608	98	65	243	43
21	68	2100	386	50	800	108	70	250	47
22	62	1040	174	65	1200	211	75	245	50
23	58	850	133	85	1400	321	75	250	51
24	53	680	97	90	1630	396	70	250	47
25	51	450	62	90	1700	413	70	260	49
26	49	300	40	95	1800	462	70	260	49
27	55	300	45	100	1610	435	70	250	47
28	105	1250	354	110	1130	336	65	250	44
29	116	2950	924	110	774	230	65	245	43
30	116	2700	846	100	670	181	55	240	36
31	114	1900	585	--	--	--	50	240	32
TOTAL	5238	--	77610	3254	--	8558	2275	--	2656

PARTICLE-SIZE DISTRIBUTION OF SURFACE BED MATERIAL, WATER YEAR OCTOBER 1973 TO SEPTEMBER 1974

DATE	TIME	TEMPERATURE (DEG C) (00010)	NUMBER OF SAMPLING POINTS (00063)	INSTANTANEOUS DISCHARGE (CFS) (00061)	BED MAT. FALL DIAM. % FINER THAN .062 MM (80158)	BED MAT. FALL DIAM. % FINER THAN .125 MM (80159)	BED MAT. FALL DIAM. % FINER THAN .250 MM (80160)
OCT.							
02...	1600	16.5	1	82	--	0	77
24...	1300	11.0	1	52	0	3	84
NOV.							
19...	1550	.0	1	112	0	5	39
APR.							
09...	1015	6.5	2	104	0	2	52
MAY							
08...	1320	13.0	2	113	0	3	61
JUNE							
04...	0940	23.0	2	137	0	2	58
AUG.							
06...	1000	22.0	1	29	0	5	66
SEP.							
04...	1050	17.0	1	32	3	7	30

GRAND RIVER BASIN

23

06357800 GRAND RIVER AT LITTLE EAGLE, S. DAK.--Continued

EXTREMES.--1973-74:--Continued

Sediment discharge: Maximum daily, 57,100 tons Apr. 20; minimum daily, 3.3 tons Sept. 28.

Period of record:

Sediment concentrations: Maximum daily, 19,000 mg/l May 2, 1972; minimum daily, 85 mg/l Feb. 17-20, 22, 1973.

Sediment discharge: Maximum daily, 259,000 tons Mar. 12, 1972; minimum daily, 9.2 tons Oct. 17, 1972.

REMARKS.--Sediment discharge record fair. Flow affected by ice Nov. 8-10, Nov. 17 to Mar. 15. Sediment-discharge records prior to Oct. 1, 1971, on file in the District office, Corps of Engineers, Omaha, Nebr. Miscellaneous samples for chemical data published for water years 1956, 1969.

SUSPENDED-SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1973 TO SEPTEMBER 1974

DAY	JANUARY			FEBRUARY			MARCH		
	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
1	55	240	36	70	251	47	150	330	134
2	65	245	43	70	230	43	160	398	172
3	70	245	46	75	214	43	170	300	138
4	70	245	46	75	210	43	180	223	108
5	65	240	42	75	210	43	185	168	84
6	60	235	38	75	200	41	180	349	170
7	55	230	34	80	193	42	160	260	112
8	55	230	34	80	210	45	190	179	92
9	55	245	36	85	229	53	220	210	125
10	50	257	35	85	240	55	250	247	167
11	50	240	32	90	250	61	270	400	292
12	60	225	36	90	264	64	300	508	411
13	80	210	45	85	280	64	300	680	551
14	150	240	97	90	304	74	290	2260	1770
15	250	274	185	95	300	77	280	2070	1560
16	350	260	246	100	295	80	274	1200	888
17	340	249	229	100	295	80	267	960	692
18	300	240	194	100	260	70	246	850	565
19	400	300	324	95	240	62	260	700	491
20	450	580	705	95	200	51	289	587	458
21	400	440	475	90	186	45	250	550	371
22	350	580	548	90	230	56	188	519	263
23	300	480	389	85	270	62	150	450	182
24	300	400	324	85	285	65	114	380	117
25	310	386	323	90	301	73	150	350	142
26	320	300	259	100	250	68	216	328	191
27	320	250	216	120	209	68	250	450	304
28	300	212	172	140	270	102	274	585	433
29	250	220	149	--	--	--	290	570	446
30	150	225	91	--	--	--	278	562	422
31	100	240	65	--	--	--	250	600	405
TOTAL	6130	--	5494	2510	--	1677	7031	--	12256

PARTICLE-SIZE DISTRIBUTION OF SURFACE BED MATERIAL, WATER YEAR OCTOBER 1973 TO SEPTEMBER 1974

DATE	BED MAT. FALL DIAM. % FINER THAN .500 MM (80161)	BED MAT. FALL DIAM. % FINER THAN 1.00 MM (80162)	BED MAT. SIEVE DIAM. % FINER THAN 2.00 MM (80169)	BED MAT. SIEVE DIAM. % FINER THAN 4.00 MM (80170)	BED MAT. SIEVE DIAM. % FINER THAN 8.00 MM (80171)	BED MAT. SIEVE DIAM. % FINER THAN 16.0 MM (80172)
OCT.						
02...	100	--	--	--	--	--
24...	100	--	--	--	--	--
NOV.						
19...	84	92	98	99	100	--
APR.						
09...	85	96	99	100	--	--
MAY						
08...	95	97	97	98	100	--
JUNE						
04...	83	85	87	91	96	100
AUG.						
06...	0	100	--	--	--	--
SEP.						
04...	64	71	76	80	84	100

GRAND RIVER BASIN

06357800 GRAND RIVER AT LITTLE EAGLE, S. DAK.--Continued

SUSPENDED-SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1973 TO SEPTEMBER 1974

DAY	APRIL			MAY			JUNE		
	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
1	200	650	351	224	604	365	186	256	129
2	179	702	339	194	797	417	233	750	472
3	160	720	311	179	770	372	210	2830	1600
4	150	740	300	156	740	312	135	2150	784
5	160	760	328	146	707	279	115	2900	900
6	173	773	361	135	352	128	117	2300	727
7	150	600	243	122	351	116	164	2250	996
8	103	443	123	113	263	80	254	3000	2060
9	107	435	126	109	244	72	194	3750	1960
10	107	427	123	109	278	82	146	2800	1100
11	194	5100	2670	122	251	83	128	3200	1110
12	600	5600	9070	128	257	89	118	2450	781
13	710	4600	8820	135	300	109	115	1700	528
14	580	4000	6260	118	333	106	111	1300	390
15	480	3600	4670	113	400	122	105	793	225
16	390	3200	3370	107	522	151	95	680	174
17	274	2800	2070	101	356	97	93	577	145
18	229	2500	1550	101	381	104	85	504	116
19	188	2200	1120	105	284	81	78	439	92
20	2860	7400	57100	185	540	270	76	595	122
21	4620	2900	36200	299	1100	888	78	540	114
22	1900	1960	10100	233	800	503	74	459	92
23	1020	1950	5370	202	670	365	76	392	80
24	561	1910	2890	174	530	249	73	506	100
25	399	2440	2630	159	404	173	67	439	79
26	318	1220	1050	149	391	157	64	575	99
27	299	1100	888	140	360	136	61	634	104
28	357	1300	1250	133	330	119	57	471	72
29	360	1000	972	130	300	105	55	497	74
30	282	696	530	142	271	104	55	503	75
31	--	--	--	149	222	89	--	--	--
TOTAL	18110	--	161185	4612	--	6323	3418	--	15300

TEMPERATURE (°C) OF WATER, WATER YEAR OCTOBER 1973 TO SEPTEMBER 1974

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	0.0	---	---	---	---	---	22.0	29.0	25.0	19.0
2	16.5	---	---	---	---	2.0	1.0	---	23.0	28.0	---	---
3	14.5	---	0.0	---	---	---	---	---	26.0	22.0	---	19.0
4	---	---	---	---	---	2.0	---	---	23.0	38.0	17.0	17.0
5	---	---	0.0	---	0.0	0.0	---	---	19.0	34.0	---	23.0
6	---	---	---	0.0	---	1.0	0.0	---	21.0	28.0	22.0	24.0
7	17.5	---	---	---	0.0	---	---	---	24.0	28.0	---	---
8	---	---	---	0.0	---	---	---	13.0	21.0	34.0	19.0	17.0
9	11.0	---	---	---	0.0	---	6.5	---	17.0	29.0	---	---
10	8.0	---	0.0	0.0	---	0.0	0.0	---	20.0	31.0	16.0	18.0
11	---	---	---	---	---	---	0.0	---	21.0	---	---	---
12	5.0	---	0.0	---	0.0	1.0	---	---	26.0	---	25.0	8.0
13	5.5	---	---	0.0	---	---	0.0	---	26.0	---	---	---
14	---	---	---	---	0.0	1.0	---	11.0	24.0	29.0	27.0	---
15	10.5	---	---	0.0	---	---	---	8.0	24.0	---	---	---
16	---	---	---	---	---	0.0	---	17.0	---	30.0	25.0	---
17	---	---	---	0.0	0.0	---	---	16.0	17.0	---	---	12.0
18	13.5	---	0.0	---	---	0.0	---	13.0	26.0	39.0	32.0	---
19	---	0.0	---	0.0	---	---	---	14.0	30.0	---	---	16.0
20	11.0	0.0	0.0	---	---	0.0	---	20.0	35.0	---	19.0	---
21	---	---	---	---	0.0	---	---	23.0	21.0	---	---	4.0
22	---	0.0	---	---	---	0.0	---	21.0	26.0	---	16.0	---
23	---	---	---	---	0.0	---	---	28.0	25.0	28.0	---	19.0
24	11.0	0.0	---	---	---	0.0	---	---	38.0	---	20.0	---
25	---	---	---	---	0.0	---	---	20.0	29.0	26.0	---	18.0
26	---	---	---	---	---	0.0	---	21.0	26.0	---	20.0	---
27	---	0.0	---	---	0.0	---	---	28.0	27.0	---	---	---
28	---	0.0	---	---	---	0.0	---	---	32.0	22.0	---	---
29	---	0.0	---	---	---	---	---	---	25.0	---	---	---
30	---	---	---	---	---	0.0	---	17.0	28.0	21.0	20.0	---
31	---	---	---	---	---	---	---	15.0	---	---	---	---
MONTH	---	---	---	---	---	---	---	---	A 25.0	---	---	---

A Based on 29 days of data.

GRAND RIVER BASIN

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06357800 GRAND RIVER AT LITTLE EAGLE, S. DAK.--Continued

TEMPERATURE (°C) OF WATER, WATER YEAR OCTOBER 1973 TO SEPTEMBER 1974

DAY	JULY			AUGUST			SEPTEMBER		
	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
1	54	567	83	29	353	28	36	511	50
2	52	536	75	35	330	31	35	460	43
3	57	504	78	35	300	28	33	410	37
4	57	510	78	35	266	25	30	361	29
5	54	559	82	32	300	26	30	342	28
6	64	668	115	29	324	25	29	407	32
7	61	532	88	28	300	23	28	430	33
8	49	523	69	29	279	22	26	453	32
9	44	307	36	32	350	30	28	420	32
10	41	433	48	35	403	38	26	378	27
11	38	420	43	47	440	56	23	385	24
12	33	400	36	63	550	94	20	390	21
13	32	385	33	144	9900	3850	18	360	17
14	30	376	30	126	12300	4180	16	330	14
15	29	410	32	87	8900	2090	15	300	12
16	26	447	31	71	6300	1210	14	280	11
17	26	430	30	59	3700	589	11	251	7.5
18	28	410	31	57	2000	308	10	275	7.4
19	30	390	32	54	1750	255	9.2	282	7.0
20	29	370	29	49	1770	234	9.2	300	7.5
21	29	350	27	42	1100	125	9.2	316	7.8
22	33	330	29	42	531	60	8.4	300	6.8
23	36	316	31	39	540	57	7.6	287	5.9
24	36	270	26	44	545	65	7.6	310	6.4
25	33	224	20	42	500	57	6.8	343	6.3
26	29	275	22	41	472	52	6.0	320	5.2
27	28	350	26	46	480	60	5.2	300	4.2
28	28	394	30	50	490	66	4.4	280	3.3
29	29	390	31	46	500	62	6.0	260	4.2
30	28	382	29	38	517	53	14	240	9.1
31	26	370	26	36	515	50	--	--	--
TOTAL	1169	--	1376	1542	--	13849	521.6	--	530.6

TOTAL DISCHARGE FOR YEAR (FT³/S-DAYS)

55810.6

TOTAL SUSPENDED-SEDIMENT DISCHARGE FOR YEAR (TONS)

306814.6

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

DATE	TYPE	TIME	INSTAN- TANEOUS DIS- CHARGE (CFS) 00061	TEMPER- ATURE (DEG C) 00010	SUS- PENDE SEDIM- ENT (MG/L) 80154	SUS- PENDE SEDIM- ENT DIS- CHARGE (T/DAY) 80155	SUS. SED. FALL DIAM. % FINER THAN .002 MM 70337	SUS. SED. FALL DIAM. % FINER THAN .004 MM 70338	SUS. SED. FALL DIAM. % FINER THAN .016 MM 70340
OCT. 02...	2	1600	82	16.5	1530	339	90	96	100

MOREAU RIVER BASIN

06360500 MOREAU RIVER NEAR WHITEHORSE, S. DAK.

LOCATION.--Lat 45°15'21", long 100°50'33", in SW¼SE¼ sec.17, T.15 N., R.27 E., Dewey County, at gaging station, on left bank 30 ft (9 m) downstream from bridge, 2.4 mi (3.9 km) southeast of Whitehorse, 8.8 mi (14.2 km) downstream from Little Moreau River, and 16.3 mi (26.2 km) southeast of town of Timber Lake.

DRAINAGE AREA.--4,880 mi² (12,640 km²), approximately.

PERIOD OF RECORD.--Chemical analyses: June 1972.

Sediment records: October 1971 to September 1974.

EXTREMES.--1973-74:

Sediment concentrations: Maximum daily, 7,500 mg/l May 20; minimum daily, no flow for many days.

Sediment discharge: Maximum daily, 8,890 tons Apr. 22; minimum daily, 0 tons for many days.

SUSPENDED-SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1973 TO SEPTEMBER 1974

DAY	OCTOBER			NOVEMBER			DECEMBER		
	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
1	24	118	7.6	15	550	22	17	240	11
2	19	116	6.0	15	500	20	17	230	11
3	15	185	7.5	15	400	16	18	220	11
4	14	230	8.7	17	350	16	18	200	9.7
5	13	210	7.4	17	345	16	17	190	8.7
6	10	180	4.9	14	340	13	15	175	7.1
7	9.0	165	4.0	12	335	11	13	160	5.6
8	6.8	235	4.3	18	330	16	14	150	5.7
9	7.2	200	3.9	15	325	13	12	140	4.5
10	7.7	175	3.6	14	320	12	10	130	3.5
11	11	250	7.4	14	315	12	8.0	125	2.7
12	52	700	98	12	310	10	7.0	120	2.3
13	155	1800	753	11	305	9.1	6.0	115	1.9
14	272	5800	4260	11	300	8.9	4.5	115	1.4
15	254	6100	4180	14	295	11	3.5	110	1.0
16	182	4100	2010	15	290	12	4.0	110	1.2
17	116	3500	1100	14	285	11	4.0	105	1.1
18	100	4800	1300	14	280	11	4.5	100	1.2
19	83	6700	1500	14	275	10	5.0	95	1.3
20	70	5700	1080	13	274	9.6	5.0	100	1.4
21	49	4000	529	13	270	9.5	5.5	105	1.6
22	41	2900	321	13	270	9.5	5.5	115	1.7
23	36	2500	243	13	270	9.5	6.0	100	1.6
24	29	2400	188	14	265	10	6.0	90	1.5
25	26	2000	140	14	265	10	6.5	80	1.4
26	22	1700	101	15	260	11	6.5	85	1.5
27	21	1400	79	16	260	11	6.5	90	1.6
28	21	1000	57	16	255	11	6.0	115	1.9
29	18	800	39	16	250	11	5.0	105	1.4
30	16	650	28	17	245	11	4.0	110	1.2
31	15	600	24	--	--	--	3.0	100	.81
TOTAL	1714.7	--	18095.3	431	--	363.1	263.0	--	109.51

PARTICLE-SIZE DISTRIBUTION OF SURFACE BED MATERIAL, WATER YEAR OCTOBER 1973 TO SEPTEMBER 1974

DATE	BED MAT. FALL DIAM. % FINER THAN .500 MM (80161)	BED MAT. FALL DIAM. % FINER THAN 1.00 MM (80162)	BED MAT. SIEVE DIAM. % FINER THAN 2.00 MM (80169)	BED MAT. SIEVE DIAM. % FINER THAN 4.00 MM (80170)	BED MAT. SIEVE DIAM. % FINER THAN 8.00 MM (80171)	BED MAT. SIEVE DIAM. % FINER THAN 16.0 MM (80172)
OCT.						
02...	98	99	100	--	--	--
24...	86	90	97	100	--	--
APR.						
09...	86	90	94	98	100	--
MAY						
08...	20	21	27	38	56	100

MOREAU RIVER BASIN

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06360500 MOREAU RIVER NEAR WHITEHORSE, S. DAK.--Continued

EXTREMES.--Continued

Period of record:

Sediment concentrations: Maximum daily, 20,000 mg/l May 1, 1972; minimum daily, no flow on several days each year.

Sediment discharge: Maximum daily, 239,000 tons Mar. 15, 1972; minimum daily, 0 tons on several days each year.

REMARKS.--Records poor. Flow affected by ice Nov. 15 to Mar. 24; no flow Jan. 5 to Feb. 8, July 18 to Aug. 12, Aug. 27 to Sept. 30. Sediment-discharge records prior to Oct. 1, 1971, on file in the District office, Corps of Engineers, Omaha, Nebr. Miscellaneous samples for chemical data published for water year 1969.

SUSPENDED-SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1973 TO SEPTEMBER 1974

DAY	JANUARY			FEBRUARY			MARCH		
	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
1	2.5	90	.61	0	0	0	30	95	7.7
2	2.0	80	.43	0	0	0	40	100	11
3	1.0	85	.23	0	0	0	100	1500	405
4	.50	90	.12	0	0	0	105	1300	369
5	0	0	0	0	0	0	80	1120	242
6	0	0	0	0	0	0	50	1000	135
7	0	0	0	0	0	0	50	900	122
8	0	0	0	0	0	0	45	1100	134
9	0	0	0	.50	100	.14	35	1000	95
10	0	0	0	2.0	105	.57	50	800	108
11	0	0	0	5.0	95	1.3	70	700	132
12	0	0	0	5.0	90	1.2	80	600	130
13	0	0	0	4.0	85	.92	80	500	108
14	0	0	0	4.0	100	1.1	80	450	97
15	0	0	0	6.0	90	1.5	65	400	70
16	0	0	0	8.0	110	2.4	55	375	56
17	0	0	0	10	105	2.8	55	350	52
18	0	0	0	11	85	2.5	50	325	44
19	0	0	0	10	90	2.4	45	300	36
20	0	0	0	10	95	2.6	40	275	30
21	0	0	0	9.0	115	2.8	35	280	26
22	0	0	0	9.0	120	2.9	35	270	26
23	0	0	0	8.0	105	2.3	40	800	86
24	0	0	0	8.0	100	2.2	50	700	95
25	0	0	0	10	95	2.6	62	650	109
26	0	0	0	15	80	3.2	56	600	91
27	0	0	0	20	85	4.6	51	550	76
28	0	0	0	25	90	6.1	48	500	65
29	0	0	0	--	--	--	97	2000	524
30	0	0	0	--	--	--	112	4000	1210
31	0	0	0	--	--	--	61	2500	412
TOTAL	6.00	--	1.39	179.50	--	46.13	1852	--	5103.7

PARTICLE-SIZE DISTRIBUTION OF SURFACE BED MATERIAL, WATER YEAR OCTOBER 1973 TO SEPTEMBER 1974

DATE	TIME	TEMPERATURE (DEG C) (00010)	NUMBER OF SAMPLING POINTS (00063)	INSTANTANEOUS DISCHARGE (CFS) (00061)	BED MAT. FALL DIAM. % FINER THAN .062 MM (80158)	BED MAT. FALL DIAM. % FINER THAN .125 MM (80159)	BED MAT. FALL DIAM. % FINER THAN .250 MM (80160)
OCT.							
02...	1020	15.0	1	19	28	44	90
24...	0845	11.5	1	32	0	3	54
APR.							
09...	1220	13.0	1	25	5	10	70
MAY							
08...	1745	13.0	1	18	5	8	17

06360500 MOREAU RIVER NEAR WHITEHORSE, S. DAK.--Continued

SUSPENDED-SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1973 TO SEPTEMBER 1974

DAY	APRIL			MAY			JUNE		
	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
1	51	2000	275	46	580	72	19	800	41
2	46	1500	186	40	520	56	18	893	43
3	45	1000	122	39	450	47	17	600	28
4	39	800	84	37	400	40	24	426	28
5	38	600	62	33	350	31	48	1800	233
6	30	500	41	26	300	21	46	1500	186
7	28	400	30	21	250	14	38	1300	133
8	27	300	22	18	221	11	36	1000	97
9	26	205	14	18	220	11	42	1400	159
10	22	190	11	18	215	10	45	1090	132
11	21	180	10	20	220	12	39	816	86
12	26	170	12	18	210	10	41	1180	131
13	27	180	13	18	200	9.7	35	610	58
14	28	190	14	18	200	9.7	29	595	47
15	27	180	13	19	190	9.7	25	719	49
16	96	1000	259	18	180	8.7	22	868	52
17	80	600	130	16	170	7.3	25	443	30
18	62	400	67	15	160	6.5	30	1150	93
19	54	300	44	19	200	10	29	653	51
20	136	2800	1030	47	7500	952	23	1260	78
21	464	6300	7890	31	4500	377	29	936	73
22	451	7300	8890	21	1500	85	31	591	49
23	252	4750	3230	25	800	54	15	600	24
24	169	3900	1780	32	1200	104	16	576	25
25	113	3200	976	17	597	27	11	650	19
26	84	2700	612	15	425	17	4.2	723	8.2
27	103	2650	737	12	400	13	2.0	619	3.3
28	123	3650	1210	11	380	11	1.3	600	2.1
29	76	3850	790	15	350	14	.60	550	.89
30	55	1050	156	20	500	27	.30	500	.41
31	--	--	--	20	404	22	--	--	--
TOTAL	2799	--	28710	723	--	2099.6	741.40	--	1959.90

TEMPERATURE (°C) OF WATER, WATER YEAR OCTOBER 1973 TO SEPTEMBER 1974

[illegible]

06360500 MOREAU RIVER NEAR WHITEHORSE, S. DAK.--Continued

SUSPENDED-SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1973 TO SEPTEMBER 1974

DAY	JULY			AUGUST			SEPTEMBER		
	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
1	.20	400	.22	0	0	0			0
2	.10	400	.11	0	0	0			0
3	3.0	600	4.9	0	0	0			0
4	100	5600	1510	0	0	0			0
5	90	4700	1140	0	0	0			0
6	70	3000	567	0	0	0			0
7	50	1200	162	0	0	0			0
8	35	1200	113	0	0	0			0
9	25	610	41	0	0	0			0
10	20	700	38	0	0	0			0
11	15	761	31	0	0	0			0
12	11	648	19	0	0	0			0
13	7.2	500	9.7	111	4220	1260			0
14	3.9	350	3.7	136	6400	2350			0
15	1.8	250	1.2	70	5000	945			0
16	.60	200	.32	44	3600	428			0
17	.02	150	.01	29	2600	204			0
18	0	0	0	21	2600	147			0
19	0	0	0	24	5000	324			0
20	0	0	0	14	4300	163			0
21	0	0	0	11	3900	116			0
22	0	0	0	10	2500	68			0
23	0	0	0	3.5	1600	15			0
24	0	0	0	.71	1100	2.1			0
25	0	0	0	.24	700	.45			0
26	0	0	0	.05	300	.04			0
27	0	0	0	0	0	0			0
28	0	0	0	0	0	0			0
29	0	0	0	0	0	0			0
30	0	0	0	0	0	0			0
31	0	0	0	0	0	0			--
TOTAL	432.82	--	3641.16	474.50	--	6022.59	0	--	0

TOTAL DISCHARGE FOR YEAR (FT³/S-DAYS)

9616.92

TOTAL SUSPENDED-SEDIMENT DISCHARGE FOR YEAR (TONS)

66152.38

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

DATE	TYPE	TIME	INSTAN- TANEOUS DIS- CHARGE (CFS)	TEMPER- ATURE (DEG C)	SUS- PENDED SEDIM- ENT (MG/L)	SUS- PENDED SEDIM- ENT DIS- CHARGE (T/DAY)	SUS. SED. FALL DIAM. % FINER THAN .002 MM	SUS. SED. FALL DIAM. % FINER THAN .004 MM	SUS. SED. FALL DIAM. % FINER THAN .016 MM	SUS. SED. FALL DIAM. % FINER THAN .062 MM
			00061	00010	80154	80155	70337	70338	70340	70342
OCT.										
19...	2	0830	87	8.0	7150	1680	87	91	95	100
24...	2	0845	32	11.5	2570	222	94	96	96	100

CHEYENNE RIVER BASIN

06395000 CHEYENNE RIVER AT EDMONT, S. DAK.

LOCATION.--Lat 43°18'20", long 103°49'14", in SW¼SE¼SE¼ sec.36, T.8 S., R.2 E., Fall River County, at gaging station, 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).

CHEMICAL ANALYSES, OCTOBER 1973 TO JUNE 1974

DATE	TIME	INSTAN- TANEOUS DIS- CHARGE (CFS) (00061)	DIS- SOLVED SILICA (SI02) (MG/L) (00955)	DIS- SOLVED CAL- CIUM (CA) (MG/L) (00915)	DIS- SOLVED MAG- NE- SIUM (MG) (MG/L) (00925)	DIS- SOLVED SODIUM (NA) (MG/L) (00930)	DIS- SOLVED PO- TAS- SIUM (K) (MG/L) (00935)	BICAR- BONATE (HCO3) (MG/L) (00440)
OCT. 29...	1100	77	6.5	140	47	200	7.6	162
NOV. 28...	1335	19	8.9	400	120	440	9.0	272
DEC. 11...	1115	14	8.3	450	140	490	8.3	294
JAN. 16...	1045	2.4	--	--	--	--	--	303
28...	1315	32	10	170	50	200	9.3	210
FEB. 25...	1115	54	8.6	140	43	200	8.2	162
MAR. 25...	1335	58	8.3	310	110	440	9.8	272
APR. 23...	1150	413	12	200	81	460	1.2	286
MAY 22...	1030	9.3	9.1	290	120	620	13	271
JUNE 19...	--	.46	11	430	180	890	20	303

DATE	DIS- SOLVED SULFATE (SO4) (MG/L) (00945)	DIS- SOLVED CHLO- RIDE (CL) (MG/L) (00940)	DIS- SOLVED FLUO- RIDE (F) (MG/L) (00950)	DIS- SOLVED NITRITE PLUS NITRATE (N) (MG/L) (00631)	DIS- SOLVED ORTHO. PHOS- PHORUS (P) (MG/L) (00671)	TOTAL PHOS- PHORUS (P) (MG/L) (00665)	DIS- SOLVED BORON (B) (UG/L) (01020)	DIS- SOLVED SOLIDS (RESI- DUE AT 180 C) (MG/L) (70300)	DIS- SOLVED SOLIDS (SUM OF CONSTI- TUENTS) (MG/L) (70301)
OCT. 29...	670	120	.6	.10	.03	.05	--	1370	1270
NOV. 28...	1700	360	.2	.06	.04	.06	--	3290	3170
DEC. 11...	1800	450	.4	.04	.01	.05	--	3880	3490
JAN. 16...	--	--	--	--	--	.02	--	--	--
28...	710	98	.4	.33	.05	.12	--	1460	1350
FEB. 25...	620	130	.5	.08	.04	.13	--	1300	1230
MAR. 25...	1400	330	.6	.17	.03	.17	--	2930	2740
APR. 23...	1300	170	.6	.01	.03	.08	--	2430	2370
MAY 22...	1900	270	.6	.01	.02	.02	--	3560	3360
JUNE 19...	2600	510	.6	.00	.03	.03	--	5110	4790

NOTE.--Carbonate (CO₃) analysis for all samples, 0.0 mg/l.

06395000 CHEYENNE RIVER AT EDMONT, S. DAK.--Continued

PERIOD OF RECORD.--Chemical analyses: July 1969 to June 1974 (discontinued).

REMARKS.--Miscellaneous samples for chemical data published for water year 1970.

CHEMICAL ANALYSES, OCTOBER 1973 TO JUNE 1974

DATE	DIS- SOLVED SOLIDS (TONS PER AC-FT) (70303)	DIS- SOLVED SOLIDS (TONS PER DAY) (70302)	HARD- NESS (CA,MG) (MG/L) (00900)	NON- CAR- BONATE HARD- NESS (MG/L) (00902)	SODIUM AD- SORP- TION RATIO (00931)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS) (00095)	PH (UNITS) (00400)	TEMPER- ATURE (DEG C) (00010)
OCT. 29...	1.86	285	540	410	3.7	2250	8.0	7.5
NOV. 28...	4.47	169	1500	1300	5.0	5500	7.9	.5
DEC. 11...	5.28	147	1700	1500	5.2	5700	7.8	.0
JAN. 16...	--	--	--	--	--	5800	7.2	.0
28...	1.99	126	630	460	3.5	2150	8.0	.0
FEB. 25...	1.77	190	530	390	3.8	1800	8.0	2.0
MAR. 25...	3.98	459	1200	1000	5.5	4100	8.0	7.5
APR. 23...	3.30	2710	830	600	6.9	3500	7.9	14.5
MAY 22...	4.84	89.4	1200	1000	7.7	5000	8.3	13.5
JUNE 19...	6.95	6.35	1800	1600	9.1	6060	7.9	28.0

FIELD DETERMINATIONS

DATE	TIME	INSTAN- TANEOUS DIS- CHARGE (CFS) (00061)	TEMPER- ATURE (DEG C) (00010)	DIS- SOLVED OXYGEN (MG/L) (00300)	BIO- CHEM- ICAL OXYGEN DEMAND (MG/L) (00310)	IMME- DIATE COLI- FORM (COL. PER 100 ML) (31501)	FECAL COLI- FORM (COL. PER 100 ML) (31616)
OCT. 16...	1310	26	14.0	9.8	--	--	--
29...	1100	77	7.5	10.3	2.0	1900	1800
NOV. 12...	1115	58	3.5	12.5	--	--	--
28...	1335	19	.5	12.0	1.0	<2	<0
DEC. 11...	1115	14	.0	12.6	1.0	<5	<2
27...	1345	11	.0	11.6	--	--	--
JAN. 16...	1045	2.4	.0	13.1	1.5	5000	50
28...	1315	32	.0	11.9	1.0	100	<0
FEB. 25...	1115	54	2.0	12.5	1.0	50	<1
MAR. 13...	1245	75	5.0	9.4	--	--	--
25...	1335	58	7.5	10.6	2.5	--	--
APR. 10...	0930	22	9.0	10.3	--	--	--
23...	1150	413	14.5	9.4	3.0	550	20
MAY 06...	1315	19	24.5	11.0	--	--	--
22...	1030	9.3	13.5	9.1	2.0	10	50
JUNE 19...	1145	.46	28.0	8.1	2.5	--	--

CHEYENNE RIVER BASIN

06395000 CHEYENNE RIVER AT EDMONT, S. DAK.--Continued

CHEMICAL ANALYSES, OCTOBER 1973 TO JUNE 1974

DATE	TIME	TUR- BID- ITY (JTU) (00070)	SUS- PENED SOLIDS (MG/L) (70299)	CHEM- ICAL OXYGEN DEMAND (HIGH LEVEL) (MG/L) (00340)	DIS- SOLVED NITRATE (N) (MG/L) (00618)	DIS- SOLVED NITRITE (N) (MG/L) (00613)	TOTAL NITRITE PLUS NITRATE (N) (MG/L) (00630)
OCT.							
29...	1100	--	--	--	.10	.00	.64
NOV.							
28...	1335	--	--	--	.04	.02	.08
DEC.							
11...	1115	--	--	--	.03	.01	.06
JAN.							
16...	1045	--	--	--	--	--	.18
28...	1315	--	--	--	.32	.01	.29
FEB.							
25...	1115	--	--	--	.08	.00	.13
MAR.							
25...	1335	--	--	--	.17	.00	.16
APR.							
23...	1150	--	--	--	.01	.00	.02
MAY							
22...	1030	--	--	--	.00	.01	.02
JUNE							
19...	--	--	--	--	.00	.01	.03

CHEYENNE RIVER BASIN

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06395000 CHEYENNE RIVER AT EDMONT, S. DAK.--Continued

CHEMICAL ANALYSES, OCTOBER 1973 TO JUNE 1974

DATE	AMMONIA NITRO- GEN (N) (MG/L) (00610)	ORGANIC NITRO- GEN (N) (MG/L) (00605)	TOTAL KJEL- DAHL NITRO- GEN (N) (MG/L) (00625)	TOTAL NITRO- GEN (N) (MG/L) (00600)	DIS- SOL- VED- PHOS- PHORUS (P) (MG/L) (00666)	TOTAL PHOS- PHORUS (P) (MG/L) (00665)	TOTAL ORGANIC CARBON (C) (MG/L) (00680)
OCT. 29...	.08	2.4	2.5	3.1	--	.05	--
NOV. 28...	.05	.32	.37	.45	--	.06	--
DEC. 11...	.05	.30	.35	.41	--	.05	--
JAN. 16...	--	--	.67	.85	--	.02	--
28...	.09	.80	.89	1.2	--	.12	--
FEB. 25...	.22	.58	.80	.93	--	.13	--
MAR. 25...	.13	.60	.73	.89	--	.17	--
APR. 23...	.07	.43	.50	.52	--	.08	--
MAY 22...	.01	.58	.59	.61	--	.02	--
JUNE 19...	.10	.52	.62	.65	--	.03	--

CHEYENNE RIVER BASIN

06401500 CHEYENNE RIVER BELOW ANGOSTURA DAM, S. DAK.

LOCATION.--Lat 43°20'42", long 103°26'12", in NE¼NW¼ sec.20, T.8 S., R.6 E., Fall River County, at gaging station, on right bank 800 ft (244 m) downstream from Angostura Dam, 4.8 mi (7.7 km) upstream from Fall River, and 6.5 mi (10.5 km) southeast of Hot Springs.

DRAINAGE AREA.--9,100 mi² (23,600 km²), approximately.

PERIOD OF RECORD.--Chemical analyses: September 1968 (miscellaneous station), October 1968 to September 1973 (daily), October 1973 to September 1974 (monthly).

Water temperatures: October 1968 to September 1974.

Sediment records: Water years 1958, 1960-63 (partial-record station).

EXTREMES.--1973-74:

Specific conductance: Maximum daily, 2,180 micromhos May 24; minimum, 1,850 micromhos Oct. 20, 29.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1973 TO SEPTEMBER 1974

DATE	TIME	INSTANTANEOUS DIS- CHARGE (CFS) (00061)	DIS- SOLVED SILICA (SI02) (MG/L) (00955)	DIS- SOLVED CAL- CIUM (CA) (MG/L) (00915)	DIS- SOLVED MAG- NE- SIUM (MG) (MG/L) (00925)	DIS- SOLVED SODIUM (NA) (MG/L) (00930)	DIS- SOLVED PO- TAS- SIUM (K) (MG/L) (00935)	BICAR- BONATE (HCO3) (MG/L) (00440)	DIS- SOLVED SULFATE (SO4) (MG/L) (00945)	DIS- SOLVED CHLO- RIDE (CL) (MG/L) (00940)	DIS- SOLVED FLUO- RIDE (F) (MG/L) (00950)	DIS- SOLVED NITRITE PLUS NITRATE (N) (MG/L) (00631)
OCT.												
02...	1100	1.6	7.7	200	70	160	10	163	830	96	.3	.06
24...	1015	1.9	6.9	200	66	160	9.7	172	780	87	.7	.11
NOV.												
20...	1315	1.8	7.2	210	67	160	9.8	172	860	96	.4	.16
JAN.												
15...	1530	1.9	8.6	220	68	160	9.5	165	860	94	.7	.26
MAR.												
11...	1515	2.0	7.0	210	60	170	9.8	156	850	95	1.1	.11
APR.												
09...	1420	2.5	7.0	210	62	170	8.7	163	880	86	.7	.09
MAY												
06...	1545	2.2	8.4	210	65	160	9.6	163	810	91	.7	.09
JUNE												
13...	0915	1.6	6.5	210	68	170	9.3	172	840	92	.5	.06
JULY												
09...	1540	1.5	7.1	200	70	170	9.4	154	830	95	.6	.04
31...	0900	1.6	6.7	210	71	170	5.7	172	870	97	.6	.03
AUG.												
29...	1000	1.6	10	190	70	170	15	184	820	110	.6	.11
SEP.												
24...	1430	1.4	7.1	180	55	140	8.8	165	840	99	.6	.05

NOTE.--Carbonate (CO₃) analysis for all samples, 0.0 mg/l.

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C) , WATER YEAR OCTOBER 1973 TO SEPTEMBER 1974

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1980	2000	2000	2000	2090	1980	2100	2080	2100	2000	2050	2000
2	1960	1990	2000	2000	2060	1980	2100	2100	2100	2000	2050	2050
3	1950	1990	2000	2000	2070	1950	2090	2100	1980	2020	2050	2000
4	1950	1980	2000	2100	2050	1930	2080	2100	2100	2020	2080	2000
5	1950	1980	2050	2080	2050	1930	2080	2080	2060	2020	2080	2050
6	1960	1980	2050	1950	2060	1930	2090	2090	2000	2020	2000	2030
7	1960	1990	2050	1980	2070	1930	2100	2100	1950	2020	2050	2030
8	1960	1990	2040	2000	2070	1930	2100	2100	1900	2000	2080	1950
9	1950	1980	2030	2080	2050	1930	2060	2100	2000	2020	2050	1980
10	1940	1990	2030	2000	2060	1930	2040	2080	1950	2020	1980	2030
11	1970	1990	2020	2000	2070	1970	2020	2090	1980	2020	2000	2000
12	1970	1980	2010	2000	2060	2000	2010	2090	2000	2020	2050	2030
13	1930	1980	2000	2030	2060	2020	2000	2100	2000	2020	2080	2050
14	1910	1990	2000	2030	2070	2040	1980	2120	2000	2050	2080	1950
15	1920	1980	1990	2000	2070	2040	1980	2120	2030	2020	2000	2030
16	1920	1980	1980	2030	2040	2060	1980	2140	2000	2020	2000	2050
17	1900	1990	1980	2000	2040	2050	2000	2150	2000	2050	2000	2100
18	1890	2000	1980	2000	2050	2050	1990	2140	2000	2050	2050	2050
19	1880	2000	1980	2000	2060	2060	2000	2120	2000	2050	2050	2000
20	1850	2020	1960	2000	1980	2060	1960	2150	2000	2050	2050	2000
21	1940	2020	1990	2080	1960	2080	1980	2160	2000	2000	2080	2030
22	1930	2010	2000	2080	1980	2090	2000	2160	2000	2050	2100	2050
23	1930	2010	1980	2080	1980	2100	2010	2160	2000	2050	2080	2050
24	1930	2010	1980	2080	1990	2100	2030	2180	2000	2050	2100	2050
25	1930	1990	1980	2100	1980	2100	2050	2160	2000	2050	2050	2050
26	1920	1980	1980	2080	1980	2100	2070	2140	2000	2050	2050	2030
27	1950	1990	1940	2080	1960	2080	2080	2120	2020	2090	2080	2050
28	1900	1990	1980	2080	1980	2080	2080	2000	2000	2080	2080	2050
29	1850	1990	1990	2100	---	2090	2060	2120	2000	2020	2100	2050
30	1930	1980	1990	2080	---	2100	---	2120	2100	2020	2050	2000
31	1930	---	1980	2050	---	---	---	---	---	2050	2050	---
MONTH	1930	1990	2000	2040	2030	2020	2040	2120	2010	2030	2050	2030

06401500 CHEYENNE RIVER BELOW ANGOSTURA DAM, S. DAK.--Continued

EXTREMES.--Continued

Period of record:

Dissolved solids (1968-69, 1971-73): Maximum, 1,770 mg/l Mar. 1 to Apr. 30, 1969; minimum, 1,450 mg/l

Feb. 1-29, 1972.

Hardness (1968-69, 1971-73): Maximum, 900 mg/l Jan. 1-31, 1972; minimum, 750 mg/l Feb. 1-29, 1972.

Specific conductance (1968-70, 1971-74): Maximum daily, 2,400 micromhos Jan. 1, 1972; minimum daily, 1,750 micromhos Mar. 4, June 21-25, 1972.

Water temperatures (1968-70, 1971-73): Maximum, 30.0°C on several days during June to July 1970, July 8, Aug. 21, 1973; minimum, freezing point on several days in 1968, 1971-73.

REMARKS.--Maximum observed during water year: Dissolved solids, 1,520 micromhos July 31; hardness, 690 mg/l Jan. 15; water temperatures, 31.0°C July 9. Minimum observed during water year: Dissolved solids, 1,400 micromhos, Oct. 24; hardness, 770 mg/l Oct. 24, Mar. 11; water temperatures, 0.0°C on several days.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1973 TO SEPTEMBER 1973

DATE	DIS- SOL- VED- PHOS- PHORUS (P) (MG/L) (00666)	TOTAL PHOS- PHORUS (P) (MG/L) (00665)	DIS- SOLVED BORON (B) (UG/L) (01020)	DIS- SOLVED (SUM OF CONSTI- TUENTS) (MG/L) (70301)	DIS- SOLVED SOLIDS (TONS PER AC-FT) (70303)	DIS- SOLVED SOLIDS (TONS PER DAY) (70302)	HARD- NESS (CA+MG) (MG/L) (00900)	NON- CAR- BONATE HARD- NESS (MG/L) (00902)	SODIUM AD- SORP- TION RATIO (00931)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS) (00095)	PH (UNITS) (00400)	TEMPER- ATURE (DEG C) (00010)
OCT.												
02...	.03	.04	180	1460	1.99	6.31	790	650	2.5	2000	8.0	16.0
24...	.06	.06	160	1400	1.90	7.18	770	630	2.5	1930	7.9	7.5
NOV.												
20...	.00	.00	120	1500	2.04	7.29	800	660	2.5	1990	8.2	5.0
JAN.												
15...	.02	.07	140	1500	2.04	7.70	830	690	2.4	1920	8.0	4.0
MAR.												
11...	.02	.02	160	1480	2.01	7.99	770	640	2.7	1990	8.2	4.5
APR.												
09...	.01	.02	150	1510	2.05	10.2	780	650	2.7	1970	8.1	11.0
MAY												
06...	.03	.04	160	1440	1.96	8.55	790	660	2.5	1970	8.1	20.5
JUNE												
13...	.01	.01	160	1480	2.01	6.39	800	660	2.6	2050	8.1	16.0
JULY												
09...	.00	.00	160	1460	1.99	5.91	790	660	2.6	2060	8.3	31.0
31...	.02	.02	170	1520	2.07	6.57	820	680	2.6	2070	8.0	21.5
AUG.												
29...	.00	.01	160	1480	2.01	6.39	760	610	2.7	2090	8.1	17.5
SEP.												
24...	.01	.02	210	1410	1.92	5.33	680	540	2.3	2100	8.1	20.0

TEMPERATURE (°C) OF WATER, WATER YEAR OCTOBER 1973 TO SEPTEMBER 1974

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	20.0	15.0	7.0	2.0	1.0	---	---	---	25.0	22.0	25.0	20.0
2	19.0	13.0	8.0	1.0	1.0	---	---	---	25.0	22.0	25.0	22.0
3	18.0	16.0	8.0	0.0	2.0	---	---	---	25.0	22.0	25.0	24.0
4	16.0	15.0	6.0	1.0	1.0	---	---	---	25.0	22.0	25.0	25.0
5	17.0	---	10.0	0.0	3.0	---	---	---	25.0	22.0	25.0	25.0
6	14.0	---	---	0.0	2.0	---	---	---	25.0	22.0	25.0	25.0
7	18.0	---	---	0.0	3.0	---	---	---	25.0	22.0	25.0	25.0
8	12.0	---	---	1.0	3.0	---	---	---	25.0	22.0	25.0	26.0
9	14.0	---	---	1.0	2.0	---	---	---	25.0	22.0	25.0	26.0
10	13.0	---	---	0.0	3.0	---	---	---	25.0	22.0	18.0	25.0
11	16.0	---	---	0.0	3.0	---	---	---	25.0	24.0	23.0	25.0
12	14.0	---	---	1.0	3.0	---	---	---	24.5	25.0	25.0	25.0
13	12.0	---	---	1.0	2.0	---	---	---	20.0	25.0	25.0	25.0
14	13.0	---	---	0.0	3.0	---	---	---	20.0	25.0	25.0	24.0
15	14.0	---	---	1.0	3.0	---	---	---	22.0	25.0	25.0	24.0
16	13.0	---	---	0.0	3.0	---	---	---	22.0	25.0	25.0	24.0
17	11.0	---	8.0	1.0	2.0	---	---	---	20.0	25.0	25.0	24.0
18	13.0	---	7.0	2.0	3.0	---	---	---	20.0	25.0	25.0	24.0
19	11.0	9.0	6.0	2.0	3.0	---	---	---	20.0	25.0	25.0	24.0
20	12.0	9.0	8.0	1.0	3.0	---	---	---	20.0	25.0	25.0	24.0
21	11.0	10.0	6.0	1.0	3.0	---	---	---	20.0	25.0	25.0	21.0
22	11.0	7.0	4.0	2.0	2.0	---	---	---	20.0	25.0	25.0	21.0
23	13.0	10.0	6.0	2.0	3.0	---	---	---	22.0	25.0	25.0	22.0
24	12.0	10.0	6.0	3.0	2.0	---	---	---	20.0	25.0	25.0	23.0
25	11.0	9.0	4.0	3.0	3.0	---	---	---	22.0	25.0	25.0	23.0
26	12.0	7.0	5.0	2.0	3.0	---	---	---	22.0	25.0	25.0	23.0
27	11.0	10.0	3.0	3.0	2.0	---	---	---	22.0	25.0	25.0	24.0
28	14.0	10.0	2.0	3.0	3.0	---	---	---	22.0	19.0	25.0	24.0
29	17.0	9.0	2.0	2.0	---	---	---	---	22.0	25.0	25.0	25.0
30	11.0	7.0	1.0	3.0	---	---	---	---	22.0	25.0	25.0	23.0
31	13.0	---	0.0	3.0	---	---	---	---	---	25.0	21.0	---
MONTH	13.5	---	---	1.5	2.5	---	---	---	22.5	24.0	24.5	24.0

06402600 CHEYENNE RIVER NEAR BUFFALO GAP, S. DAK.

LOCATION.--Lat 43°30'05", long 103°04'23", in SW¼NE¼ sec.29, T.6 S., R.9 E., Custer County, 6.0 mi (9.6 km) downstream from gaging station, 5.8 mi (9.3 km) upstream from Cottonwood Creek and 12 mi (19 km) east of Buffalo Gap.

DRAINAGE AREA.--9,810 mi² (25,410 km²), approximately.

PERIOD OF RECORD.--Chemical analyses: October 1968 to September 1973 (daily), October 1973 to September 1974 (monthly).

Water temperatures: October 1968 to September 1974.

EXTREMES.--1973-74:

Specific conductance: Maximum daily, 2,500 micromhos June 26; minimum daily, 2,050 micromhos Mar. 1-4, 6-7.

Water temperatures: Maximum, 22.0°C on many days May to August; minimum, freezing point on many days during December to January.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1973 TO SEPTEMBER 1974

DATE	TIME	INSTAN- TANEOUS DIS- CHARGE (CFS) (00061)	DIS- SOLVED SILICA (SI02) (MG/L) (00955)	DIS- SOLVED CAL- CIUM (CA) (MG/L) (00915)	DIS- SOLVED MAG- NE- SIUM (MG) (MG/L) (00925)	DIS- SOLVED SODIUM (NA) (MG/L) (00930)	DIS- SOLVED PO- TAS- SIUM (K) (MG/L) (00935)	BICAR- BONATE (HCO3) (MG/L) (00440)	DIS- SOLVED SULFATE (SO4) (MG/L) (00945)	DIS- SOLVED CHLO- RIDE (CL) (MG/L) (00940)	DIS- SOLVED FLUO- RIDE (F) (MG/L) (00950)	DIS- SOLVED NITRITE PLUS NITRATE (N) (MG/L) (00631)
OCT. 24...	1400	91	12	260	75	180	17	212	940	110	.5	1.1
NOV. 26...	1315	78	12	260	79	190	16	244	990	110	.5	1.7
JAN. 15...	1100	81	15	240	71	160	15	244	880	100	.7	1.9
APR. 09...	0930	55	8.0	250	74	190	14	214	960	100	.7	.60
MAY 06...	1200	66	7.5	250	75	190	13	198	970	100	.7	.28
JUNE 13...	1400	46	6.3	220	71	200	12	184	950	110	.5	.19
JULY 09...	1110	30	7.0	220	71	210	14	174	920	120	.6	.10
31...	1400	47	8.0	210	73	210	18	168	950	120	.5	.27
AUG. 26...	1000	62	7.1	210	76	220	17	136	950	130	.6	.38
26...	1300	62	9.1	210	79	210	17	169	960	120	.7	.48
SEP. 23...	1015	65	11	220	89	220	19	217	960	130	.5	.84
23...	1430	65	12	220	92	220	17	213	980	130	.6	.87

NOTE.--Carbonate (CO₃) analysis for all samples, 0.0 mg/l.

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25°C), WATER YEAR OCTOBER 1973 TO SEPTEMBER 1974

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2330	2230	2280	2180	2200	2050	2250	2250	2280	2430	2350	2450
2	2330	2230	2260	2170	2200	2050	2150	2250	2230	2450	2350	2400
3	2330	2250	2260	2180	2250	2050	2200	2300	2280	2430	2350	2400
4	2300	2180	2250	2150	2100	2050	2250	2230	2280	2450	2350	2380
5	2330	2180	2220	2180	2150	2080	2200	2230	2250	2430	2350	2430
6	2310	2250	2210	2150	2150	2050	2200	2200	2280	2450	2350	2400
7	2320	2250	2210	2150	2150	2050	2200	2300	2280	2450	2330	2400
8	2340	2210	2200	2150	2180	2200	2200	2230	2280	2350	2330	2380
9	2340	2200	2290	2150	2150	2200	2300	2300	2250	2430	2350	2400
10	2350	2210	2240	2150	2150	2200	2300	2300	2280	2430	2350	2400
11	2340	2230	2270	2150	2130	2180	2250	2230	2380	2330	2350	2350
12	2330	2240	2250	2180	2150	2200	2300	2250	2400	2330	2430	2400
13	2330	2240	2240	2180	2150	2180	2300	2250	2400	2330	2380	2380
14	2330	2250	2240	2150	2150	2200	2250	2230	2400	2330	2400	2450
15	2330	2240	2240	2150	2180	2200	2250	2230	2400	2330	2400	2400
16	2300	2210	2230	2150	2150	2200	2300	2230	2380	2330	2400	2400
17	2320	2210	2230	2180	2180	2200	2300	2200	2400	2350	2400	2400
18	2320	2230	2210	2180	2150	2200	2230	2250	2380	2300	2400	2400
19	2320	2220	2210	2180	2130	2230	2250	2230	2380	2300	2400	2400
20	2330	2250	2280	2180	2130	2200	2350	2250	2380	2300	2400	2400
21	2350	2230	2280	2180	2180	2180	2230	2250	2450	2300	2400	2400
22	2380	2230	2280	2150	2150	2180	2280	2230	2400	2330	2400	2400
23	2350	2230	2280	2180	2150	2200	2300	2250	2400	2330	2400	2350
24	2360	2280	2280	2150	2180	2180	2350	2230	2400	2300	2380	2430
25	2330	2230	2250	2150	2150	2200	2250	2250	2400	2300	2400	2380
26	2330	2280	2250	2180	2100	2200	2300	2250	2500	2300	2400	2400
27	2330	2260	2240	2150	2130	2250	2300	2230	2400	2330	2400	2400
28	2330	2240	2220	2180	2150	2200	2350	2230	2400	2330	2400	2400
29	2340	2230	2210	2180	---	2150	2250	2230	2400	2330	2400	2400
30	2370	2240	2220	2150	---	2180	2250	2250	2400	2330	2400	2400
31	2310	---	2330	2180	---	2200	---	2230	---	2300	2400	---
MONTH	2330	2230	2250	2170	2150	2160	2260	2240	2360	2350	2380	2400

06402600 CHEYENNE RIVER NEAR BUFFALO GAP, S. DAK.--Continued

EXTREMES.--Continued

Period of record:

Dissolved solids (1968-69, 1970-73): Maximum, 1,930 mg/l May 1-23, Dec. 1-31, 1971; minimum, 1,120 mg/l June 1-8, 1971.

Hardness (1968-69, 1970-73): Maximum, 1,000 mg/l Dec. 1-31, 1970; minimum, 550 mg/l June 1-8, 1971.

Specific conductance: Maximum daily, 3,140 micromhos Jan. 13, 1971; minimum daily, 1,530 micromhos June 1, 4, 6, 7, 1971.

Water temperatures: Maximum, 32.0°C on several days during July to August 1969; minimum, freezing point on many days during winter period.

REMARKS.--Maximum observed during water year: Dissolved solids, 1,790 mg/l Nov. 26; hardness, 970 mg/l Nov. 26; water temperatures, 26.0°C June 13. Minimum observed during water year: Dissolved solids, 1,610 mg/l Jan. 15; hardness, 830 mg/l July 31.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1973 TO SEPTEMBER 1974

DATE	DIS- SOLVED- PHOS- PHORUS (P) (MG/L) (00666)	TOTAL PHOS- PHORUS (P) (MG/L) (00665)	DIS- SOLVED BORON (B) (UG/L) (01020)	DIS- SOLVED SOLIDS (SUM OF CONSTI- TUENTS) (MG/L) (70301)	DIS- SOLVED SOLIDS (TONS PER AC-FT) (MG/L) (70303)	DIS- SOLVED SOLIDS (TONS PER DAY) (MG/L) (70302)	HARD- NESS (CA, MG) (MG/L) (00900)	NON- CAR- BONATE HARD- NESS (MG/L) (00902)	SODIUM AD- SORP- TION RATIO (00931)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS) (00095)	PH (UNITS) (00400)	TEMPER- ATURE (DEG C) (00010)
OCT. 24...	.11	.12	340	1700	2.31	418	960	780	2.5	2220	7.9	9.0
NOV. 26...	.02	.02	290	1790	2.43	377	970	770	2.6	2310	8.0	1.0
JAN. 15...	.05	.08	250	1610	2.19	352	890	690	2.3	2140	7.9	.0
APR. 09...	.02	.03	300	1710	2.33	254	930	750	2.7	2260	8.0	7.5
MAY 06...	.03	.05	300	1710	2.33	305	930	770	2.7	2270	7.9	16.0
JUNE 13...	.01	.02	310	1660	2.26	206	840	690	3.0	2210	7.9	26.0
JULY 09...	.00	.04	330	1650	2.24	134	840	700	3.2	2320	8.2	25.5
31...	.02	.04	360	1670	2.27	212	830	690	3.2	2310	7.9	25.5
AUG. 26...	.01	.02	330	1680	2.28	281	840	730	3.3	2310	8.1	24.0
26...	.01	.02	330	1690	2.30	283	850	710	3.1	2300	8.0	24.5
SEP. 23...	.02	.00	350	1760	2.39	309	920	740	3.2	2460	8.0	13.5
23...	.02	.04	350	1780	2.42	312	930	750	3.1	2420	8.0	15.0

TEMPERATURE (°C) OF WATER, WATER YEAR OCTOBER 1973 TO SEPTEMBER 1974

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	18.0	10.0	2.0	0.0	2.0	4.0	4.0	14.0	22.0	22.0	22.0	20.0
2	18.0	10.0	2.0	0.0	2.0	4.0	4.0	14.0	22.0	22.0	22.0	20.0
3	18.0	4.0	2.0	0.0	2.0	2.0	4.0	14.0	22.0	22.0	22.0	20.0
4	18.0	2.0	2.0	0.0	2.0	2.0	4.0	14.0	22.0	22.0	22.0	20.0
5	16.0	2.0	2.0	0.0	2.0	2.0	6.0	14.0	22.0	22.0	22.0	20.0
6	16.0	2.0	2.0	0.0	2.0	2.0	6.0	14.0	22.0	22.0	22.0	20.0
7	16.0	2.0	2.0	0.0	2.0	2.0	6.0	14.0	22.0	22.0	22.0	16.0
8	16.0	2.0	2.0	0.0	2.0	2.0	6.0	14.0	22.0	22.0	22.0	16.0
9	16.0	2.0	2.0	0.0	2.0	2.0	6.0	14.0	22.0	22.0	22.0	16.0
10	12.0	2.0	2.0	0.0	2.0	2.0	6.0	14.0	22.0	22.0	22.0	16.0
11	12.0	2.0	2.0	0.0	2.0	4.0	6.0	14.0	22.0	22.0	22.0	16.0
12	12.0	2.0	2.0	0.0	2.0	4.0	6.0	14.0	22.0	22.0	22.0	16.0
13	12.0	2.0	2.0	0.0	2.0	4.0	8.0	14.0	22.0	22.0	22.0	16.0
14	12.0	2.0	2.0	2.0	2.0	4.0	8.0	16.0	22.0	22.0	22.0	16.0
15	12.0	2.0	2.0	2.0	4.0	4.0	8.0	16.0	22.0	22.0	22.0	16.0
16	12.0	2.0	2.0	2.0	4.0	4.0	8.0	16.0	22.0	22.0	22.0	18.0
17	12.0	2.0	2.0	2.0	4.0	4.0	8.0	18.0	22.0	22.0	22.0	18.0
18	12.0	2.0	2.0	2.0	4.0	4.0	8.0	18.0	22.0	22.0	22.0	16.0
19	12.0	2.0	2.0	2.0	4.0	4.0	10.0	18.0	22.0	22.0	22.0	16.0
20	12.0	2.0	2.0	2.0	4.0	4.0	10.0	18.0	22.0	22.0	22.0	16.0
21	10.0	2.0	2.0	2.0	4.0	4.0	10.0	20.0	22.0	22.0	22.0	16.0
22	10.0	2.0	2.0	2.0	4.0	4.0	10.0	20.0	22.0	22.0	22.0	16.0
23	10.0	2.0	2.0	0.0	4.0	4.0	10.0	20.0	22.0	22.0	22.0	16.0
24	10.0	2.0	2.0	0.0	4.0	2.0	10.0	20.0	22.0	22.0	22.0	16.0
25	10.0	2.0	2.0	0.0	4.0	2.0	10.0	20.0	22.0	22.0	22.0	16.0
26	10.0	2.0	2.0	0.0	4.0	2.0	10.0	20.0	22.0	22.0	22.0	16.0
27	10.0	2.0	2.0	0.0	4.0	2.0	10.0	22.0	22.0	22.0	22.0	16.0
28	10.0	2.0	0.0	0.0	4.0	2.0	10.0	22.0	22.0	22.0	20.0	16.0
29	10.0	2.0	0.0	0.0	---	2.0	10.0	22.0	22.0	22.0	20.0	16.0
30	10.0	2.0	0.0	0.0	---	4.0	10.0	22.0	22.0	22.0	20.0	16.0
31	10.0	---	0.0	0.0	---	4.0	---	22.0	---	22.0	20.0	---
MONTH	12.5	2.5	1.5	0.5	3.0	3.0	7.5	17.0	22.0	22.0	21.5	17.0

CHEYENNE RIVER BASIN

06409000 CASTLE CREEK ABOVE DEERFIELD RESERVOIR, NEAR HILL CITY, S. DAK.
(Hydrologic benchmark and radiochemical station)

LOCATION.--Lat 44°00'49", long 103°49'48", in SW¼ sec.25, T.1 N., R.2 E., Pennington County, at gaging station, on right bank 50 ft (15 m) downstream from highway bridge, 250 ft (76 m) downstream from South Fork Castle Creek, 600 ft (183 m) upstream from high-water line of Deerfield Reservoir, 2.5 mi (4.0 km) southwest of Deerfield Dam, and 14 mi (23 km) northwest of Hill City.

DRAINAGE AREA.--83 mi² (215 km²), approximately.

PERIOD OF RECORD.--Chemical analyses: October 1967 to September 1974 (monthly).
Water temperatures: May 1964 to September 1974.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1973 TO SEPTEMBER 1974

DATE	TIME	INSTAN- TANEOUS DIS- CHARGE (CFS) (00061)	DIS- SOLVED SILICA (SiO ₂) (MG/L) (00955)	DIS- SOLVED CAL- CIUM (CA) (MG/L) (00915)	DIS- SOLVED MAG- NE- SIUM (MG) (MG/L) (00925)	DIS- SOLVED SODIUM (NA) (MG/L) (00930)	DIS- SOLVED PO- TAS- SIUM (K) (MG/L) (00935)	BICAR- BONATE (HCO ₃) (MG/L) (00440)	DIS- SOLVED SULFATE (SO ₄) (MG/L) (00945)
OCT. 30...	1030	13	9.0	56	29	1.3	1.2	314	9.7
NOV. 26...	1215	7.5	9.6	62	30	2.0	1.6	333	7.6
DEC. 12...	1240	10	9.8	58	29	1.3	1.1	313	7.4
JAN. 15...	1150	10	9.1	58	29	1.5	1.3	307	5.6
FEB. 25...	1100	8.0	9.4	57	30	1.9	1.2	320	6.2
MAR. 25...	1015	12	9.1	58	28	2.1	1.5	314	5.6
APR. 15...	1330	13	8.2	57	28	2.1	1.2	308	7.4
MAY 22...	1130	10	7.8	57	30	1.9	1.1	292	8.3
JUNE 18...	1300	9.6	5.9	47	29	2.3	1.2	257	6.2
JULY 16...	1340	8.7	8.5	54	30	2.1	1.4	293	7.4
AUG. 20...	1200	9.0	8.4	52	30	2.2	1.0	286	6.0
SEP. 23...	1315	8.2	10	54	32	3.0	3.5	327	8.1

DATE	DIS- SOLVED CHLO- RIDE (CL) (MG/L) (00940)	DIS- SOLVED FLUO- RIDE (F) (MG/L) (00950)	TOTAL NITRITE PLUS NITRATE (N) (MG/L) (00630)	DIS- SOLVED NITRITE PLUS NITRATE (N) (MG/L) (00631)	DIS- SOL- VED- PHOS- PHORUS (P) (MG/L) (00666)	TOTAL PHOS- PHORUS (P) (MG/L) (00665)	DIS- SOLVED BORON (B) (UG/L) (01020)	DIS- SOLVED SOLIDS (RESI- DUE AT 180 C) (MG/L) (70300)	DIS- SOLVED SOLIDS (SUM OF CONSTI- TUENTS) (MG/L) (70301)
OCT. 30...	2.5	.3	--	.17	.02	.03	9	--	265
NOV. 26...	1.4	.1	.21	--	--	.05	--	199	278
DEC. 12...	2.6	.1	.28	--	--	.02	--	242	264
JAN. 15...	1.1	.2	.23	--	--	.05	--	236	257
FEB. 25...	.8	.2	.29	--	--	.04	--	271	264
MAR. 25...	2.4	.1	.22	--	--	.04	--	263	262
APR. 15...	1.5	.1	.16	--	--	.05	--	247	257
MAY 22...	1.1	.1	.07	--	--	.04	--	212	251
JUNE 18...	1.3	.5	.12	--	--	.02	--	210	220
JULY 16...	1.1	.1	.05	--	--	.02	--	216	249
AUG. 20...	1.5	.1	.03	--	--	.01	--	214	242
SEP. 23...	2.8	.2	.13	--	--	.08	--	261	275

06409000 CASTLE CREEK ABOVE DEERFIELD RESERVOIR, NEAR HILL CITY, S. DAK.--Continued

EXTREMES.--1973-74:

Water temperatures: Maximum, 21.0°C June 19, 24, 27, 28, July 1; minimum, freezing point on many days during November to March.

Period of record:

Water temperatures: Maximum, 22.0°C July 17, 1969, June 25, 1971; minimum, freezing point on many days during winter period.

REMARKS.--Periodic samples obtained for analysis of suspended-sediment concentration most years.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1973 TO SEPTEMBER 1974

DATE	DIS- SOLVED SOLIDS (TONS PER AC-FT) (70303)	DIS- SOLVED SOLIDS (TONS PER DAY) (70302)	HARD- NESS (CA,MG) (MG/L) (00900)	NON- CAR- BONATE HARD- NESS (MG/L) (00902)	SODIUM AD- SORP- TION RATIO (00931)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS) (00095)	PH (UNITS) (00400)	TEMPER- ATURE (DEG C) (00010)
OCT.								
30...	.36	9.30	260	2	.0	466	8.3	2.0
NOV.								
26...	.27	4.03	280	5	.1	492	8.3	.0
DEC.								
12...	.33	6.53	260	8	.0	467	8.3	.0
JAN.								
15...	.32	6.37	260	12	.0	473	8.2	.0
FEB.								
25...	.37	5.85	270	3	.1	479	8.2	.0
MAR.								
25...	.36	8.52	260	3	.1	468	8.1	.0
APR.								
15...	.34	8.67	260	5	.1	458	8.3	4.5
MAY								
22...	.29	5.72	270	26	.1	442	8.0	7.0
JUNE								
18...	.29	5.44	240	26	.1	387	7.3	16.5
JULY								
16...	.29	5.07	260	18	.1	434	8.3	18.5
AUG.								
20...	.29	5.20	250	19	.1	433	8.4	13.5
SEP.								
23...	.36	5.78	270	0	.1	482	7.8	6.5

NOTE.--Carbonate (CO₃) analysis for all samples, 0.0 mg/l.

FIELD DETERMINATIONS

DATE	TIME	INSTAN- TANEOUS DIS- CHARGE (CFS) (00061)	TEMPER- ATURE (DEG C) (00010)	DIS- SOLVED OXYGEN (MG/L) (00300)	BIO- CHEM- ICAL OXYGEN DEMAND (MG/L) (00310)	IMME- DIATE COLI- FORM (COL. PER 100 ML) (31501)	FECAL COLI- FORM (COL. PER 100 ML) (31616)	STREP- TOCOCCI (COL- ONIES PER 100 ML) (31679)
OCT.								
30...	1030	13	2.0	11.4	--	60	10	--
NOV.								
26...	1240	7.5	.0	11.7	--	40	4	10
DEC.								
12...	1240	10	.0	12.5	--	60	10	10
JAN.								
15...	1150	10	.0	--	--	50	10	30
FEB.								
25...	1100	8.0	.0	11.5	--	100	20	--
MAR.								
25...	1015	12	.0	10.7	--	10	<0	6
APR.								
15...	1330	13	4.5	10.1	--	15	10	3
MAY								
22...	1130	10	7.0	10.6	--	10	20	20
JUNE								
18...	1300	9.6	16.5	8.8	--	20	30	90
JULY								
16...	1340	8.7	18.5	8.8	--	190	130	100
AUG.								
20...	1200	9.0	13.5	8.8	--	20	30	120
SEP.								
23...	1315	8.2	6.5	--	--	100	60	30

CHEYENNE RIVER BASIN

06409000 CASTLE CREEK ABOVE DEERFIELD RESERVOIR, NEAR HILL CITY, S. DAK.--Continued

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1973 TO SEPTEMBER 1974

TRACE METALS

DATE	TIME	INSTANTANEOUS DIS- CHARGE (CFS) (00061)	TEMPER- ATURE (DEG C) (00010)	CYANIDE (CN) (MG/L) (00720)	TOTAL ARSENIC (AS) (UG/L) (01002)	TOTAL BARIUM (BA) (UG/L) (01007)	TOTAL CAD- MIUM (CD) (UG/L) (01027)	TOTAL CHRO- MIUM (CR) (UG/L) (01034)
NOV. 26...	1215	7.5	.0	.00	4	0	<10	0
JUNE 18...	1300	9.6	16.5	.01	1	0	<10	0

RADIOCHEMICAL ANALYSES

DATE	TIME	INSTANTANEOUS DIS- CHARGE (CFS) (00061)	TEMPER- ATURE (DEG C) (00010)	DIS- SOLVED GROSS ALPHA AS U-NAT. (UG/L) (80030)	SUS- PENDED GROSS ALPHA AS U-NAT. (UG/L) (80040)	DIS- SOLVED GROSS BETA AS SR90 /Y90 (PC/L) (80050)	SUS- PENDED GROSS BETA AS SR90 /Y90 (PC/L) (80060)
NOV. 26...	1240	7.5	.0	<3.1	<.4	1.3	<.4

PESTICIDES

DATE	TIME	INSTANTANEOUS DIS- CHARGE (CFS) (00061)	TEMPER- ATURE (DEG C) (00010)	ALDRIN IN FILT. FRAC. (UG/L) (39330)	ALDRIN IN SUSP. FRAC. (UG/L) (39332)	ALDRIN IN BOTTOM DE- POSITS (UG/KG) (39333)	DDD (UG/L) (39360)	DDD IN FILT. FRAC. (UG/L) (39361)	DDD IN SUSP. FRAC. (UG/L) (39362)	DDD IN BOTTOM DE- POSITS (UG/KG) (39363)	DDE (UG/L) (39365)
NOV. 26...	1240	7.5	.0	.00	--	.0	.00	--	--	.0	.00

DATE	ENDRIN IN FILT. FRAC. (UG/L) (39391)	ENDRIN IN SUSP. FRAC. (UG/L) (39392)	ENDRIN IN BOTTOM DE- POSITS (UG/KG) (39393)	HEPTA- CHLOR IN FILT. FRAC. (UG/L) (39410)	HEPTA- CHLOR IN SUSP. FRAC. (UG/L) (39411)	HEPTA- CHLOR IN BOTTOM DE- POSITS (UG/KG) (39412)	HEPTA- CHLOR IN EPOXIDE FRAC. (UG/L) (39420)	HEPTA- CHLOR IN EPOXIDE FRAC. (UG/L) (39421)	HEPTA- CHLOR IN EPOXIDE FRAC. (UG/L) (39422)	HEPTA- CHLOR IN EPOXIDE FRAC. (UG/L) (39423)
NOV. 26...	--	--	.0	.00	--	.0	.00	--	--	.0

DATE	DI- AZINON (UG/L) (39570)	DI- AZINON IN FILT. FRAC. (UG/L) (39572)	DI- AZINON IN SUSP. FRAC. (UG/L) (39573)	MALA- THION IN FILT. FRAC. (UG/L) (39530)	MALA- THION IN SUSP. FRAC. (UG/L) (39532)	METHYL PARA- THION IN FILT. FRAC. (UG/L) (39600)	METHYL PARA- THION IN SUSP. FRAC. (UG/L) (39602)	METHYL PARA- THION IN SUSP. FRAC. (UG/L) (39603)	PARA- THION IN FILT. FRAC. (UG/L) (39540)	PARA- THION IN FILT. FRAC. (UG/L) (39542)
NOV. 26...	.00	--	--	.00	--	.00	--	--	.00	--

CHEYENNE RIVER BASIN

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06409000 CASTLE CREEK ABOVE DEERFIELD RESERVOIR, NEAR HILL CITY, S. DAK.--Continued

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1973 TO SEPTEMBER 1974

TRACE METALS

DATE	TOTAL COPPER (CU) (UG/L) (01042)	TOTAL IRON (FE) (UG/L) (01045)	TOTAL LEAD (PB) (UG/L) (01051)	TOTAL MAN- GANESE (MN) (UG/L) (01055)	TOTAL SILVER (AG) (UG/L) (01077)	TOTAL ZINC (ZN) (UG/L) (01092)	TOTAL SELE- NIUM (SE) (UG/L) (01147)	TOTAL MERCURY (HG) (UG/L) (71900)
NOV. 26...	10	110	<100	20	<10	30	1	.3
JUNE 18...	<10	350	<100	10	<10	10	0	.0

RADIOCHEMICAL ANALYSES

DATE	DIS- SOLVED GROSS BETA AS CS-137 (PC/L) (03515)	SUS- PENDED GROSS BETA AS CS-137 (PC/L) (03516)	DIS- SOLVED RA-226 (RADON METHOD) (PC/L) (09511)	DIS- SOLVED NATURAL URANIUM (U) (UG/L) (22703)	TOTAL FILT- RABLE RESIDUE (MG/L) (00515)	TOTAL NON- FILT- RABLE RESIDUE (MG/L) (00530)
NOV. 26...	1.6	<.4	.14	.9	290	3

PESTICIDES

DATE	DDE IN FILT. FRAC. (UG/L) (39366)	DDE IN SUSP. FRAC. (UG/L) (39367)	DDE IN BOTTOM DE- POSITS (UG/KG) (39368)	DDT (UG/L) (39370)	DDT IN FILT. FRAC. (UG/L) (39371)	DDT IN SUSP. FRAC. (UG/L) (39372)	DDT IN BOTTOM DE- POSITS (UG/KG) (39373)	DI- ELDRIN IN FILT. FRAC. (UG/L) (39380)	DI- ELDRIN IN SUSP. FRAC. (UG/L) (39381)	DI- ELDRIN IN BOTTOM DE- POSITS (UG/L) (39382)	DI- ELDRIN IN BOTTOM DE- POSITS (UG/KG) (39383)	ENDRIN (UG/L) (39390)
NOV. 26...	--	--	.0	.00	--	--	.0	.00	--	--	.0	.00

DATE	LINDANE (UG/L) (39340)	LINDANE IN FILT. FRAC. (UG/L) (39341)	LINDANE IN SUSP. FRAC. (UG/L) (39342)	LINDANE IN BOTTOM DE- POSITS (UG/KG) (39343)	CHLOR- DANE (UG/L) (39350)	CHLOR- DANE IN FILT. FRAC. (UG/L) (39352)	CHLOR- DANE IN SUSP. FRAC. (UG/L) (39353)	CHLOR- DANE IN BOTTOM DE- POSITS (UG/KG) (39351)	PCB (UG/L) (39516)	PCB IN FILT. FRAC. (UG/L) (39517)	PCB IN SUSP. FRAC. (UG/L) (39518)	PCB IN BOTTOM DE- POSITS (UG/KG) (39519)
NOV. 26...	.00	--	--	.0	.0	--	--	0	.0	--	--	0

DATE	PARA- THION IN SUSP. FRAC. (UG/L) (39543)	2,4-D (UG/L) (39730)	2,4-D IN FILT. FRAC. (UG/L) (39732)	2,4-D IN SUSP. FRAC. (UG/L) (39733)	SILVEX (UG/L) (39760)	SILVEX IN FILT. FRAC. (UG/L) (39762)	SILVEX IN SUSP. FRAC. (UG/L) (39763)	2,4,5-T (UG/L) (39740)	2,4,5-T IN FILT. FRAC. (UG/L) (39742)	2,4,5-T IN SUSP. FRAC. (UG/L) (39743)	TOTAL ORGANIC CARBON (C) (MG/L) (00680)
NOV. 26...	--	.00	--	--	.00	--	--	.00	--	--	2.5

CHEYENNE RIVER BASIN

06409000 CASTLE CREEK ABOVE DEERFIELD RESERVOIR, NEAR HILL CITY, S. DAK.--Continued

TEMPERATURE (°C) OF WATER, WATER YEAR OCTOBER 1973 TO SEPTEMBER 1974
(RECORDER WITH TEMPERATURE ATTACHMENT, CONTINUOUS ETHYL ALCOHOL-ACTUATED THERMOGRAPH)

	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	9.0	5.0	1.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2	9.0	5.5	1.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3	8.5	5.5	0.5	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4	6.0	2.0	0.5	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5	7.0	2.0	0.5	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
6	8.0	4.5	0.5	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
7	7.0	4.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
8	6.0	4.5	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
9	5.0	4.5	1.0	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
10	4.5	4.0	1.5	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
11	4.0	1.5	2.0	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
12	4.5	1.0	3.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
13	6.0	3.0	3.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
14	7.0	4.0	3.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
15	5.5	4.0	1.0	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
16	8.0	4.5	0.5	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
17	6.5	4.5	1.0	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
18	6.5	4.5	0.5	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
19	6.5	4.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
20	6.5	4.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
21	7.0	4.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
22	6.0	4.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
23	5.5	4.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
24	5.5	4.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
25	4.5	3.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
26	4.5	2.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
27	3.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.5	0.0
28	4.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.5	0.5
29	4.5	2.0	0.0	0.0	0.0	0.0	0.0	0.0	---	---	4.0	0.5
30	3.5	1.0	0.0	0.0	0.0	0.0	0.0	0.0	---	---	4.5	0.0
31	2.0	1.0	---	---	0.0	0.0	0.0	0.0	---	---	4.5	1.5
MONTH	9.0	1.0	3.0	0.6	0.0	0.0	0.0	0.0	0.0	0.0	4.5	0.0

SUSPENDED-SEDIMENT DISCHARGE MEASUREMENTS, WATER YEAR OCTOBER 1973 TO SEPTEMBER 1974

DATE	TIME	TEMPER- ATURE (DEG C) (00010)	INSTAN- TANEOUS DIS- CHARGE (CFS) (00061)	SUS- PEN- DED SEDIM- ENT DIS- CHARGE (MG/L) (80154)	SUS- PEN- DED SEDIM- ENT DIS- CHARGE (T/DAY) (80155)
OCT.					
30...	1030	2.0	13	55	1.9
NOV.					
26...	1240	.0	7.5	74	1.5
DEC.					
12...	1240	.0	10	37	1.0
JAN.					
15...	1150	.0	10	80	2.2
FEB.					
25...	1100	.0	8.0	65	1.4
MAR.					
25...	1015	.0	12	43	1.4
APR.					
15...	1330	4.5	13	90	3.2
MAY					
22...	1130	7.0	10	60	1.6
JUNE					
18...	1300	16.5	9.6	37	.96
JULY					
16...	1340	18.5	8.7	45	1.1
AUG.					
20...	1200	13.5	9.0	35	.85
SEP.					
23...	1315	6.5	8.2	40	.89

CHEYENNE RIVER BASIN

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06409000 CASTLE CREEK ABOVE DEERFIELD RESERVOIR, NEAR HILL CITY, S. DAK.--Continued

TEMPERATURE (°C) OF WATER, WATER YEAR OCTOBER 1973 TO SEPTEMBER 1974
(RECORDER WITH TEMPERATURE ATTACHMENT, CONTINUOUS ETHYL ALCOHOL-ACTUATED THERMOGRAPH)

DAY	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	4.5	0.5	11.5	5.0	14.5	7.0	21.0	13.5	14.5	12.0	9.5	7.0
2	3.5	1.5	10.5	5.0	16.0	8.5	16.5	13.0	14.0	11.5	9.5	6.5
3	4.0	1.5	9.0	2.0	16.0	9.0	13.5	11.0	14.5	9.5	10.5	6.5
4	2.0	0.5	9.5	3.5	16.0	9.5	18.5	9.5	13.5	10.0	11.5	8.0
5	4.0	0.5	11.5	4.0	14.5	11.0	19.5	11.0	14.5	10.0	13.0	10.0
6	5.0	0.5	11.5	5.5	13.0	8.0	19.5	12.0	15.0	10.0	13.0	10.0
7	4.0	3.0	11.5	6.5	11.0	6.5	17.0	12.0	15.5	12.0	13.0	10.0
8	6.0	0.5	11.5	6.0	10.0	9.0	18.0	11.5	16.0	12.0	13.0	10.0
9	6.0	1.0	13.5	6.0	11.0	9.0	19.5	12.0	15.0	11.5	14.0	10.5
10	5.5	4.0	11.5	6.0	11.0	6.5	18.5	13.0	12.0	11.0	14.5	11.0
11	4.0	1.0	8.5	3.5	15.5	7.0	20.0	13.0	13.5	9.5	13.0	9.5
12	2.0	1.0	9.0	3.0	16.5	9.0	19.5	11.5	14.5	10.5	9.5	8.0
13	4.0	1.0	10.5	6.5	19.0	10.0	18.0	14.0	15.5	11.0	9.5	6.5
14	4.5	1.0	9.5	3.5	16.0	11.5	19.0	13.0	16.5	13.0	10.0	6.0
15	6.0	1.0	9.5	5.5	18.5	10.0	19.5	14.0	16.0	11.5	10.5	8.0
16	8.0	1.5	9.5	6.0	19.0	11.0	19.5	15.0	15.5	11.0	11.0	9.0
17	6.5	2.0	9.5	5.5	20.5	13.0	18.0	15.0	16.5	11.5	12.0	8.5
18	10.0	2.0	15.5	5.5	20.0	13.0	16.0	14.0	16.5	11.0	12.0	9.5
19	10.0	5.5	14.0	11.5	21.0	13.5	19.0	13.0	15.5	13.0	12.0	10.0
20	9.0	5.0	14.0	11.5	20.0	13.5	19.0	14.0	16.5	12.0	10.0	9.0
21	6.5	4.5	11.0	6.5	18.0	12.0	18.0	14.5	15.0	11.0	9.0	6.5
22	9.0	1.5	10.0	5.5	15.5	12.0	17.0	13.0	14.5	10.0	9.5	6.5
23	9.5	2.0	12.0	5.0	16.5	10.5	19.0	13.5	16.0	11.0	9.5	6.5
24	12.0	5.5	13.0	5.5	21.0	12.0	17.0	14.0	15.5	11.0	8.5	5.5
25	11.0	6.0	11.0	8.5	19.0	13.0	17.0	11.5	16.5	12.0	9.5	6.0
26	10.5	6.0	13.5	6.0	20.5	13.0	18.0	11.5	16.0	11.5	9.5	6.0
27	10.0	6.0	16.0	9.0	21.0	13.5	18.5	13.0	14.0	11.0	9.5	7.0
28	9.5	4.0	14.0	10.0	21.0	12.0	17.0	14.0	12.0	11.0	6.5	5.0
29	9.0	5.0	13.0	9.5	20.0	12.0	14.5	11.0	13.0	11.5	7.0	5.0
30	10.0	4.0	11.0	8.5	20.0	12.0	14.0	11.0	11.5	10.5	7.0	5.0
31	---	---	13.5	6.0	---	---	15.0	11.5	10.5	9.5	---	---
MONTH	12.0	0.5	16.0	2.0	21.0	6.5	21.0	9.5	16.5	9.5	14.5	5.0

CHEYENNE RIVER BASIN

06411500 RAPID CREEK BELOW PACTOLA DAM, S. DAK.

LOCATION.--Lat 44°04'36", long 103°28'54", in SW¼NE¼ sec.2, T.1 N., R.5 E., Pennington County, at gaging station, on right bank 2,000 ft (610 m) downstream from Pactola Dam, 3.9 mi (6.3 km) upstream from Deer Creek, and 13 mi (21 km) west of Rapid City.

DRAINAGE AREA.--320 mi² (829 km²), approximately.

PERIOD OF RECORD.--Chemical analyses: October 1968 to September 1973 (daily), October 1973 to October 1974 (monthly).

Water temperatures: October 1968 to September 1974.

EXTREMES.--1973-74:

Specific conductance: Maximum daily, 400 micromhos Jan. 16, minimum daily, 330 micromhos Dec. 1.

Water temperatures: Maximum, 9.5°C Aug. 27, Sept. 23, 25; minimum, 2.0°C Dec. 27-31, Jan. 2-3, 31.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1973 TO SEPTEMBER 1974

DATE	TIME	INSTANTANEOUS DIS- CHARGE (CFS) (00061)	DIS- SOLVED SILICA (SI02) (MG/L) (00955)	DIS- SOLVED CAL- CIUM (CA) (MG/L) (00915)	DIS- SOLVED MAG- NE- SIUM (MG) (MG/L) (00925)	DIS- SOLVED SODIUM (NA) (MG/L) (00930)	DIS- SOLVED PO- TAS- SIUM (K) (MG/L) (00935)	BICAR- BONATE (HCO3) (MG/L) (00440)	DIS- SOLVED SULFATE (SO4) (MG/L) (00945)	DIS- SOLVED CHLO- RIDE (CL) (MG/L) (00940)	DIS- SOLVED FLUO- RIDE (F) (MG/L) (00950)	DIS- SOLVED NITRITE PLUS NITRATE (N) (MG/L) (00631)
OCT. 24...	1455	20	11	38	19	3.5	2.5	175	42	2.1	.3	.11
NOV. 19...	1130	19	9.0	38	20	4.6	2.6	175	41	1.3	.1	.02
JAN. 16...	1140	15	9.7	41	20	3.5	2.7	186	43	1.6	.2	.06
MAR. 20...	1315	15	9.6	43	22	3.9	2.5	190	48	.6	.4	.08
APR. 18...	1230	15	9.2	41	20	4.0	2.7	180	41	1.5	.4	.07
MAY 14...	1200	63	8.7	40	20	4.5	2.7	179	38	.9	.3	.01
JUNE 20...	1330	38	8.8	40	20	5.1	2.7	180	42	1.5	.2	.00
JULY 17...	1540	108	8.8	45	20	4.5	2.7	180	45	1.6	.2	.02
AUG. 12...	1430	72	9.2	40	19	3.2	2.5	183	44	1.5	.2	.04
SEP. 13...	1200	31	9.3	42	20	3.8	2.5	184	43	1.5	.2	.04

NOTE.--Carbonate (CO₃) analysis for all samples, 0.0 mg/l.

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25°C), WATER YEAR OCTOBER 1973 TO SEPTEMBER 1974

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	350	345	330	340	375	385	350	360	350	375	360	360
2	350	345	360	345	365	375	350	340	350	370	355	370
3	350	345	345	365	360	370	340	345	350	365	360	360
4	350	345	340	370	360	365	340	340	350	370	360	360
5	350	345	340	375	360	375	345	340	350	370	360	350
6	350	345	340	370	360	360	345	340	350	375	360	360
7	350	345	345	370	360	365	350	335	350	365	355	360
8	350	345	340	370	355	365	345	335	350	380	355	360
9	350	345	340	375	360	370	345	335	350	380	355	360
10	350	345	340	375	360	370	345	330	350	370	360	350
11	350	345	350	380	360	370	345	330	350	370	360	350
12	350	345	345	380	360	370	340	330	350	370	355	350
13	350	345	350	385	360	365	340	340	350	370	360	360
14	350	345	350	380	360	370	340	340	350	370	360	360
15	350	345	340	385	355	370	340	340	350	370	360	360
16	350	345	340	395	360	370	340	340	350	370	360	360
17	350	345	340	385	360	370	340	340	350	370	360	360
18	350	345	340	380	360	370	340	340	350	380	360	360
19	350	345	340	380	360	355	340	330	350	370	360	360
20	350	350	340	385	360	365	340	340	350	370	360	360
21	350	350	340	385	360	370	335	340	350	370	360	360
22	350	350	340	390	360	375	340	340	350	375	360	360
23	350	350	340	390	365	360	340	340	350	375	360	360
24	350	350	340	380	360	360	340	340	350	370	360	360
25	350	350	340	380	365	360	340	340	350	370	360	360
26	350	350	340	385	360	360	335	340	350	380	360	360
27	350	350	340	385	365	370	340	340	350	380	360	360
28	350	350	340	390	360	365	340	340	350	385	360	360
29	350	350	340	400	---	355	340	340	350	375	360	360
30	350	350	340	390	---	355	340	340	350	380	360	360
31	350	---	340	390	---	355	---	340	---	375	355	---
MONTH	350	347	342	379	361	366	342	339	350	373	359	359

06411500 RAPID CREEK BELOW PACTOLA DAM, S. DAK.--Continued

EXTREMES.--Continued

Period of record:

Dissolved solids (1968-69, 1970-73): Maximum, 260 mg/l July 1 to Sept. 30, 1969; minimum, 200 mg/l

Nov. 1-30, 1971, Nov. 1-30, 1973.

Hardness (1968-69, 1970-73): Maximum, 206 mg/l Jan. 1 to Mar. 31, 1969; minimum, 170 mg/l June 1-30,

Aug. 1 to Sept. 30, Dec. 1-31, 1971, May 1-31, 1972, Nov. 1-30, May 1 to Sept. 30, 1973.

Specific conductance: Maximum daily, 435 micromhos Feb. 8, 17, 22, 1971; minimum daily, 238 micromhos Mar. 28-30, 1971.

Water temperatures (1968-72, 1974): Maximum, 9.5°C Aug. 27, Sept. 23, 25, 1974; minimum, freezing point on several days during December 1968.

REMARKS.--Maximum observed during water year: Dissolved solids, 217 mg/l July 17; hardness, 200 mg/l Mar. 20; water temperatures, 10.0°C May 14. Minimum observed during water year: Dissolved solids, 203 mg/l Nov. 19, May 14; hardness, 170 mg/l Oct. 24.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1973 TO SEPTEMBER 1974

DATE	DIS- SOL- VED- PHOS- PHORUS (P) (MG/L) (00666)	TOTAL PHOS- PHORUS (P) (MG/L) (00665)	DIS- SOLVED BORON (B) (UG/L) (01020)	DIS- SOLVED SOLIDS (SUM OF CONSTITUENTS) (MG/L) (70301)	DIS- SOLVED SOLIDS (TONS PER AC-FT) (70303)	DIS- SOLVED SOLIDS (TONS PER DAY) (70302)	HARD- NESS (CA/MG) (MG/L) (00900)	NON- CAR- BONATE HARD- NESS (MG/L) (00902)	SODIUM AD- SORP- TION RATIO (00931)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS) (00095)	PH (UNITS) (00400)	TEMPER- ATURE (DEG C) (00010)
OCT. 24...	.05	.05	30	205	.28	11.1	170	30	.1	346	8.2	8.0
NOV. 19...	.01	.00	20	203	.28	10.4	180	34	.2	350	8.4	6.0
JAN. 16...	.04	.08	10	214	.29	8.67	180	32	.1	370	8.2	2.0
MAR. 20...	.02	.04	10	224	.30	9.07	200	42	.1	377	8.1	4.5
APR. 18...	.01	.03	20	209	.28	8.46	180	37	.1	354	8.3	8.0
MAY 14...	.00	.01	10	203	.28	34.5	180	35	.1	352	8.2	10.0
JUNE 20...	.01	.02	20	209	.28	21.4	180	35	.2	356	8.2	9.5
JULY 17...	2.0	.00	20	217	.30	63.3	190	47	.1	362	8.1	7.5
AUG. 12...	.03	.03	20	210	.29	40.8	180	28	.1	353	8.0	8.5
SEP. 13...	.03	.01	30	213	.29	17.8	190	36	.1	361	8.0	8.0

TEMPERATURE (°C) OF WATER, WATER YEAR OCTOBER 1973 TO SEPTEMBER 1974

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	7.5	6.5	5.5	---	3.5	6.0	6.0	8.0	6.0	6.0	7.0	6.5
2	7.0	7.0	5.0	2.0	---	5.0	5.5	5.0	6.5	6.0	7.5	6.5
3	7.0	6.5	4.0	2.0	3.5	4.0	5.5	6.0	7.0	6.5	7.5	7.0
4	7.0	6.5	4.5	2.5	3.0	4.5	5.5	6.0	6.5	6.0	7.5	7.0
5	9.0	6.5	4.0	6.0	2.0	4.0	6.0	6.5	6.0	6.5	8.0	7.0
6	8.5	6.5	4.5	4.0	3.0	3.0	5.5	6.0	6.0	6.0	8.0	7.5
7	---	6.5	4.0	5.0	2.5	5.0	5.0	5.0	6.0	6.0	7.5	8.0
8	8.0	6.5	4.0	4.0	2.5	5.0	6.0	5.5	6.0	6.0	7.5	8.5
9	7.5	6.0	4.0	6.5	3.0	5.5	7.0	6.0	6.0	6.5	7.0	9.0
10	7.5	6.0	4.0	5.0	3.0	5.0	6.0	5.0	6.0	7.0	7.0	9.0
11	---	6.0	4.0	6.0	3.0	4.0	5.5	5.0	7.0	7.0	7.5	7.5
12	8.0	6.5	4.5	6.5	3.5	4.5	5.0	5.0	7.0	7.0	8.5	7.0
13	8.5	6.5	3.0	3.0	4.0	6.5	5.5	5.0	7.5	7.0	8.0	8.0
14	---	7.0	3.5	3.0	4.5	5.5	5.0	5.0	6.5	7.0	7.5	8.0
15	7.0	7.0	3.0	3.0	4.0	4.0	7.5	5.5	7.0	7.0	8.5	8.5
16	---	7.0	3.0	3.5	4.5	4.5	8.5	5.0	8.0	7.0	8.5	9.0
17	8.0	7.0	3.0	3.0	4.5	6.0	6.5	5.0	8.0	7.0	8.5	8.5
18	---	7.0	3.0	2.5	4.5	5.5	7.5	6.0	7.0	7.0	8.0	8.5
19	7.5	6.0	3.0	3.5	4.5	3.5	8.0	5.5	8.0	8.0	8.0	7.5
20	8.0	5.0	3.0	3.0	3.5	4.5	8.0	6.0	6.0	7.0	8.5	8.0
21	9.0	5.0	3.0	3.0	3.5	4.5	8.0	5.0	6.5	7.5	8.0	8.0
22	8.0	5.0	3.0	2.5	4.5	4.5	9.0	6.5	7.0	8.0	8.0	9.0
23	8.0	5.0	3.0	3.0	2.5	4.0	7.0	6.0	7.0	8.0	7.5	9.5
24	7.0	5.0	3.0	3.0	4.0	4.5	8.5	5.5	7.0	7.5	---	9.0
25	7.5	5.0	3.0	3.0	4.5	5.0	8.0	---	7.5	8.0	7.5	9.5
26	7.0	4.5	3.0	3.0	3.5	5.5	7.5	---	6.5	7.0	8.5	8.5
27	7.5	4.0	2.0	3.0	4.5	6.0	7.0	---	6.0	---	9.5	8.0
28	---	5.5	2.0	3.0	5.0	6.5	6.5	---	6.5	7.0	9.0	8.0
29	7.5	5.0	2.0	3.5	---	6.0	6.5	5.0	6.5	8.0	8.5	8.5
30	7.0	5.0	2.0	3.0	---	6.5	---	5.5	6.0	7.0	8.5	9.0
31	7.0	---	2.0	2.0	---	6.0	---	6.0	---	7.5	6.5	---
MONTH	A 7.5	6.0	3.5	B 3.5	C 3.5	5.0	D 6.5	C 5.5	6.5	B 7.0	B 8.0	8.0

A Based on 25 days of data.

B Based on 30 days of data.

C Based on 27 days of data.

D Based on 29 days of data.

CHEYENNE RIVER BASIN

06421500 RAPID CREEK NEAR FARMINGDALE, S. DAK.

LOCATION.--Lat 43°56'31", long 102°51'12", in SW¼SW¼SW¼ sec.19, T.1 S., R.11 E., Pennington County, at gaging station, on right bank at downstream side of bridge, 2.0 mi (3.2 km) southeast of Farmingdale and 4.8 mi (7.7 km) downstream from Antelope Creek.

DRAINAGE AREA.--602 mi² (1,559 km²).

PERIOD OF RECORD.--Chemical analyses: February to September 1953, October 1955 to September 1958, October 1968 to September 1973 (daily), October 1973 to September 1974 (monthly).

Water temperatures: October 1955 to September 1958, October 1968 to September 1974.

EXTREMES.--1973-74:

Specific conductance: Maximum daily, 1,580 micromhos May 30; minimum daily, 610 micromhos Aug. 24.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1973 TO SEPTEMBER 1974

DATE	TIME	INSTANTANEOUS DIS-CHARGE (CFS) (00061)	DIS-SOLVED SILICA (SI02) (MG/L) (00955)	DIS-SOLVED CALCIUM (CA) (MG/L) (00915)	DIS-SOLVED MAGNE-SIUM (MG) (MG/L) (00925)	DIS-SOLVED SODIUM (NA) (MG/L) (00930)	DIS-SOLVED POTAS-SIUM (K) (MG/L) (00935)	BICARBONATE (HC03) (MG/L) (00440)	DIS-SOLVED SULFATE (S04) (MG/L) (00945)	DIS-SOLVED CHLORIDE (CL) (MG/L) (00940)	DIS-SOLVED FLUORIDE (F) (MG/L) (00950)	DIS-SOLVED NITRITE PLUS NITRATE (N) (MG/L) (00631)
OCT. 23...	1430	39	1.0	95	40	45	6.1	260	230	39	.5	1.6
NOV. 20...	0930	46	4.5	95	37	34	5.6	246	210	26	.5	1.6
JAN. 16...	1425	180	9.8	95	37	43	7.1	249	240	33	.5	1.3
MAR. 19...	1345	50	1.7	93	39	42	5.3	231	220	31	.6	.85
APR. 16...	1100	42	6.3	110	44	55	6.4	216	310	30	.5	.75
MAY 16...	0945	7.1	8.8	100	43	63	8.6	289	290	28	.6	.95
JUNE 18...	1500	13	7.9	47	29	1.5	.8	232	18	19	.0	.00
JULY 18...	1010	47	8.0	90	44	51	7.0	260	240	36	.6	1.4
AUG. 13...	0910	45	12	89	38	42	7.8	258	230	23	.5	1.3
SEP. 11...	1530	34	6.3	100	44	54	8.6	264	250	41	.6	2.0

NOTE.--Carbonate (CO₃) analysis for all samples, 0.0 mg/l.

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25°C), WATER YEAR OCTOBER 1973 TO SEPTEMBER 1974

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	800	900	825	900	875	840	980	1090	1220	1550	1250	1140
2	770	920	850	1060	870	740	990	1190	1220	1340	1280	990
3	760	950	860	1070	890	830	960	1170	1270	900	1240	1000
4	785	900	850	1100	900	830	940	1170	1210	960	1200	980
5	820	890	865	1140	905	850	990	1200	1260	830	1160	830
6	840	900	1050	1150	875	850	890	1240	1300	950	1180	920
7	900	890	970	1150	865	860	975	1290	1250	910	1130	920
8	960	915	910	1150	900	810	940	1290	1280	950	1140	1050
9	950	975	950	1040	900	770	940	1180	1310	960	1180	1040
10	935	960	1020	970	940	820	940	1120	1340	970	1090	1030
11	970	950	975	990	870	865	890	1240	1220	940	1090	1040
12	1040	900	850	985	850	930	940	1190	1190	890	980	1060
13	940	900	830	995	890	850	920	1140	1160	960	920	1040
14	835	890	870	1010	855	840	910	990	1100	1080	910	990
15	860	925	960	935	860	900	1000	950	1120	1120	880	990
16	940	915	900	890	840	895	990	1050	1150	1170	920	1020
17	910	900	980	875	820	890	1000	1070	1210	1050	960	1020
18	905	890	985	995	830	920	1060	1160	1240	930	1000	1040
19	890	880	890	885	790	910	1020	1250	1270	760	1040	1000
20	905	870	970	840	810	860	960	1270	1310	740	1100	1030
21	910	870	980	840	800	865	1010	1230	1340	840	1120	1060
22	925	910	940	855	860	860	980	1180	1370	880	1150	1110
23	920	900	920	835	875	900	1020	1170	1360	900	640	1070
24	970	890	900	845	875	930	990	1140	1350	930	610	1060
25	915	940	900	865	940	970	990	1130	1400	1030	710	1120
26	980	910	890	875	910	925	1020	1130	1440	1040	780	1120
27	955	935	940	885	840	890	1040	1130	1460	1000	850	1130
28	890	910	950	895	820	890	1060	1110	1490	1040	930	1170
29	980	890	960	910	---	880	1140	1260	1490	1080	930	1250
30	925	900	980	860	---	920	1100	1580	1490	1130	1010	1180
31	875	---	1000	880	---	900	---	1220	---	1150	---	---
MONTH	902	909	926	957	866	871	986	1180	1290	999	1010	1050

06421500 RAPID CREEK NEAR FARMINGDALE, S. DAK.--Continued

EXTREMES.--Continued

Period of record:

Dissolved solids (1955-58, 1968-69, 1970-73): Maximum, 1,220 mg/l Sept. 12, 1969; minimum, 320 mg/l Nov. 5-7, 1956.

Hardness (1955-58, 1968-69, 1970-73): Maximum, 690 mg/l Oct. 1-7, 9-26, 1956; minimum, 250 mg/l May 1-31, 1971.

Specific conductance (1955-58, 1968-70, 1970-74): Maximum daily, 1,650 micromhos Oct. 16, 1956; minimum daily, 422 micromhos Jan. 8, 1958.

Water temperatures (1955-58, 1968-69, 1971-73): Maximum, 34.0°C June 12, 1956; minimum, freezing point on many days during winter period.

REMARKS.--Maximum observed during water year: Dissolved solids, 690 mg/l May 16; hardness, 460 mg/l Apr. 16; water temperatures, 30.0°C July 13. Minimum observed during water year: Dissolved solids, 238 mg/l June 18; hardness, 240 mg/l June 18; water temperatures, 0.0°C on many days during winter period.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1973 TO SEPTEMBER 1974

DATE	DIS- SOL- VED- PHOS- PHORUS (P) (MG/L) (00666)	TOTAL PHOS- PHORUS (P) (MG/L) (00665)	DIS- SOLVED BORON (B) (UG/L) (01020)	DIS- SOLVED SOLIDS (SUM OF CONSTI- TUENTS) (MG/L) (70301)	DIS- SOLVED SOLIDS (TONS PER AC-FT) (70303)	DIS- SOLVED SOLIDS (TONS PER DAY) (70302)	HARD- NESS (CA, MG) (MG/L) (00900)	NON- CAR- BONATE HARD- NESS (MG/L) (00902)	SODIUM AD- SORP- TION RATIO (00931)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS) (00095)	PH (UNITS) (00400)	TEMPER- ATURE (DEG C) (00010)
OCT. 23...	.96	.97	200	595	.81	62.7	400	190	1.0	944	8.3	10.5
NOV. 20...	.90	.94	140	544	.74	67.6	390	190	.8	847	8.2	.0
JAN. 16...	1.3	1.4	140	598	.81	291	390	190	.9	936	7.9	.0
MAR. 19...	1.1	1.2	150	561	.76	75.7	390	190	.9	879	8.6	4.5
APR. 16...	.76	.84	190	684	.93	77.6	460	260	1.1	1010	8.6	7.5
MAY 16...	.35	.53	190	690	.94	13.2	430	190	1.3	1070	7.7	12.0
JUNE 18...	.01	.33	20	238	.32	8.35	240	46	.0	1260	8.2	27.5
JULY 18...	.30	.71	240	612	.83	77.7	410	190	1.1	968	7.9	25.5
AUG. 13...	.32	.60	190	576	.78	70.0	380	170	.9	880	8.0	19.5
SEP. 11...	.62	.71	230	649	.88	59.6	430	210	1.1	1030	8.1	15.5

TEMPERATURE (°C) OF WATER, WATER YEAR OCTOBER 1973 TO SEPTEMBER 1974

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	12.0	2.5	0.0	0.0	0.0	0.0	5.0	13.0	---	27.0	27.0	12.0
2	12.0	1.0	0.0	0.0	0.0	0.0	4.5	14.0	---	22.0	21.0	4.0
3	10.0	0.5	0.0	0.0	---	0.0	2.0	8.0	---	22.0	---	5.5
4	8.0	0.0	0.0	---	---	0.0	0.5	11.5	---	---	---	17.0
5	8.0	0.0	0.0	0.0	0.0	0.0	1.0	---	---	24.5	23.5	19.0
6	13.0	0.0	0.0	---	0.0	2.0	10.0	13.0	---	---	---	19.0
7	---	0.0	0.0	0.0	0.0	0.5	5.5	15.0	---	27.0	27.0	---
8	10.5	0.0	0.0	0.0	0.0	4.5	3.0	13.0	---	29.0	27.0	19.5
9	---	0.0	0.0	0.0	0.0	3.0	5.0	12.5	---	---	20.0	19.5
10	5.0	---	0.0	0.0	0.0	---	8.0	15.5	---	27.0	19.0	16.0
11	4.0	0.0	0.0	0.0	0.0	1.0	2.0	15.0	---	29.0	20.5	15.0
12	3.0	9.0	0.0	0.0	0.0	1.5	5.5	16.0	---	29.5	22.0	12.0
13	---	7.0	0.0	---	0.0	2.0	3.5	12.0	---	30.0	24.5	13.0
14	7.5	5.0	0.0	0.0	0.0	2.0	4.5	8.0	---	29.5	---	11.0
15	9.0	5.0	0.0	0.0	0.0	0.0	4.5	9.0	---	28.0	22.0	12.0
16	9.0	3.5	0.0	0.0	0.0	---	5.0	12.0	---	27.0	24.0	17.0
17	8.5	---	0.0	0.0	0.0	4.0	8.0	---	---	---	---	14.5
18	9.0	---	0.0	0.0	0.0	4.0	9.0	---	---	26.5	---	18.5
19	---	2.0	0.0	0.0	0.0	2.0	11.5	---	29.0	29.0	22.5	15.5
20	10.0	0.0	0.0	0.0	0.0	0.0	13.0	---	28.5	24.0	25.0	14.0
21	11.0	0.0	0.0	0.0	0.0	0.0	12.5	---	---	28.0	21.0	11.5
22	9.5	0.0	---	0.0	0.0	0.0	8.0	---	19.0	26.0	17.0	15.0
23	9.5	---	0.0	0.0	0.0	---	9.0	---	---	---	20.0	14.0
24	10.0	0.0	0.0	0.0	0.0	0.0	12.0	---	23.5	---	24.0	12.5
25	6.5	0.0	0.0	0.0	0.0	0.0	14.5	---	---	26.5	23.0	12.0
26	6.0	0.0	0.0	---	0.0	0.0	16.5	---	28.0	25.0	20.0	12.5
27	3.0	0.0	0.0	---	0.0	3.0	---	---	---	28.0	18.0	13.0
28	5.0	0.0	---	0.0	0.0	4.5	17.0	---	24.0	---	22.0	12.5
29	5.0	0.0	---	0.0	---	6.0	11.0	---	---	24.0	19.0	10.0
30	4.5	0.0	---	0.0	---	7.0	11.0	---	24.0	21.0	17.0	8.5
31	4.0	---	0.0	0.0	---	5.0	---	---	---	---	---	---
MONTH	A 8.0	B 1.5	A 0.0	C 0.0	C 0.0	D 2.0	E 7.5	---	---	---	---	F 13.5

A Based on 27 days of data.

B Based on 25 days of data.

C Based on 26 days of data.

D Based on 28 days of data.

E Based on 30 days of data.

F Based on 29 days of data.

CHEYENNE RIVER BASIN

06434500 INLET CANAL NEAR BELLE FOURCHE, S. DAK.

LOCATION.--Lat 44°42'14", long 103°49'23", in NE¼NW¼ sec.36, T.9 N., R.2 E., Butte County, at gaging station, on right bank 0.5 mi (0.8 km) downstream from Crow Creek, 0.9 mi (1.4 km) downstream from diversion dam on Belle Fourche River, and 2.5 mi (4.0 km) northeast of Belle Fourche.

PERIOD OF RECORD.--Chemical analyses: October 1968 to September 1973 (daily), October 1973 to September 1974 (monthly).

Water temperatures: October 1968 to September 1974.

EXTREMES.--1973-74:

Specific conductance: Maximum daily, 1,880 micromhos July 3; minimum daily, 830 micromhos Mar. 6.

Water temperatures: Maximum, 26.0°C Aug. 1; minimum, freezing point on many days during November to February.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1973 TO SEPTEMBER 1974

DATE	TIME	INSTANTANEOUS DIS-CHARGE (CFS) (00061)	DIS-SOLVED SILICA (SiO ₂) (MG/L) (00955)	DIS-SOLVED CALCIUM (CA) (MG/L) (00915)	DIS-SOLVED MAGNE-SIUM (MG/L) (00925)	DIS-SOLVED SODIUM (NA) (MG/L) (00930)	DIS-SOLVED POTAS-SIUM (K) (MG/L) (00935)	BICAR-BONATE (HCO ₃) (MG/L) (00440)	DIS-SOLVED SULFATE (SO ₄) (MG/L) (00945)	DIS-SOLVED CHLORIDE (CL) (MG/L) (00940)	DIS-SOLVED FLUORIDE (F) (MG/L) (00950)	DIS-SOLVED NITRITE PLUS NITRATE (N) (MG/L) (00631)
OCT. 03...	0930	200	9.9	190	48	20	3.5	228	500	2.9	.3	.17
NOV. 01...	1510	243	9.6	190	50	23	3.5	234	480	4.3	.5	.27
JAN. 08...	1745	180	12	220	51	22	3.3	310	530	5.1	.4	.51
MAR. 06...	0750	774	6.5	96	25	31	4.9	147	290	4.4	.5	.23
JUNE 03...	1330	227	5.9	190	56	50	6.0	216	620	4.4	.6	1.5
JULY 01...	1800	83	7.4	260	79	100	11	199	1000	6.5	.5	.03
AUG. 07...	1400	104	7.1	130	39	81	9.0	203	470	9.4	.4	.08
SEP. 03...	1550	176	9.5	180	48	33	5.0	210	500	5.3	.4	.13

NOTE.--Carbonate (CO₃) analysis for all samples, 0.0 mg/l.

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25°C), WATER YEAR OCTOBER 1973 TO SEPTEMBER 1974

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1190	1190	1220	1310	1160	1300	---	---	1420	1850	1300	1220
2	1190	1200	1260	1300	1190	1130	---	---	1400	1800	1290	1220
3	1200	1200	1210	1290	1230	1230	---	---	1340	1880	1290	1210
4	1200	1200	1270	1340	1230	1290	---	---	1340	1400	1290	1230
5	1190	1110	1260	1340	1190	1380	---	---	1300	1320	1290	1240
6	1200	1090	1280	1340	1190	830	---	---	1250	1250	1290	1200
7	1200	1160	1270	1350	1140	860	---	---	1320	1250	1300	1260
8	1190	1200	1260	1330	1120	850	---	---	1360	1200	1290	1240
9	1190	1190	1240	1300	1180	970	---	---	1340	1210	1290	1230
10	1210	1100	1180	1260	1190	970	---	---	1320	1180	1200	1200
11	1220	1180	1190	1210	1210	1090	---	---	1350	1230	1200	1220
12	1190	1250	1290	1330	1260	1140	1200	---	1300	1230	1280	1200
13	1190	1210	1290	1360	1250	1170	---	---	1310	1230	1240	1200
14	1200	1210	1280	1280	1200	1170	---	---	1280	1240	1240	1210
15	1200	1220	1300	1090	1190	1150	---	---	1320	1220	1240	1200
16	1200	1210	1300	1080	1210	1230	---	---	1310	1220	1220	1220
17	1190	1220	1310	1090	1230	1150	---	---	1300	1220	1260	1220
18	1220	1200	1300	1120	1190	1260	---	---	1340	1240	1270	1230
19	1220	1180	1220	1140	1180	---	---	---	1370	1240	1300	1230
20	1210	1190	1280	1150	1230	---	---	---	1400	1220	1310	1220
21	1200	1160	1280	1100	1060	---	---	---	1420	1160	1340	1220
22	1190	1170	1230	1090	1210	---	---	---	1380	1140	1290	1220
23	1190	1160	1240	1090	1070	---	---	1280	1410	1060	1200	1230
24	---	1150	1270	1090	1230	---	---	1360	1300	1060	1320	1220
25	---	1210	1210	1100	1240	---	---	1300	1390	1150	1320	1300
26	1190	1210	1270	1090	1100	---	---	1280	1460	1200	1340	1310
27	1190	1170	1220	1100	1070	---	---	1290	1500	1240	1300	1280
28	1280	1230	1120	1110	1100	---	---	1300	1500	1240	1300	1300
29	1250	1240	1280	1160	---	---	---	1330	1560	1250	1310	1280
30	1220	1240	1280	1280	---	---	---	1340	1800	1250	1320	1310
31	1170	---	1340	1170	---	---	---	1440	---	1260	1320	---
MONTH	1200	1190	1260	1210	1180	---	---	---	1380	1280	1280	1240

06434500 INLET CANAL NEAR BELLE FOURCHE, S. DAK.--Continued

EXTREMES.--Continued

Period of record:

Dissolved solids (1968-69, 1970-73): Maximum, 1,180 mg/l Feb. 1-29, 1972; minimum, 536 mg/l Feb. 1-28, 1971.

Hardness (1968-69, 1971-73): Maximum, 900 mg/l Feb. 1-29, 1972; minimum, 360 mg/l Feb. 1-28, 1971, Mar. 1-9, 21-23, June 7-30, 1972.

Specific conductance: Maximum daily, 3,100 micromhos Feb. 13, 1969; minimum daily, 335 micromhos Feb. 12, 1971.

Water temperatures: Maximum, 29.0°C July 1, 1971; minimum, freezing point on many days during winter period

REMARKS.--Maximum observed during water year: Dissolved solids, 1,560 mg/l July 1; hardness, 970 mg/l July 1; specific conductance, 1,970 micromhos July 1; water temperatures, 28°C July 1. Minimum observed during water year: Dissolved solids, 532 mg/l Mar. 6; hardness, 340 mg/l Mar. 6; specific conductance, 800 micromhos Mar. 6; no flow Oct. 23, 24, Mar. 19 to Apr. 13, Apr. 15 to May 21.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1973 TO SEPTEMBER 1974

DATE	DIS- SOL- VED- PHOS- PHORUS (P) (MG/L) (00666)	TOTAL PHOS- PHORUS (P) (MG/L) (00665)	DIS- SOLVED BORON (B) (UG/L) (01020)	DIS- SOLVED SOLIDS (SUM OF CONSTI- TUENTS) (MG/L) (70301)	DIS- SOLVED SOLIDS (TONS PER AC-FT) (MG/L) (70303)	DIS- SOLVED SOLIDS (TONS PER DAY) (MG/L) (70302)	HARD- NESS (CA+MG) (MG/L) (00900)	NON- CAR- BONATE HARD- NESS (MG/L) (00902)	SODIUM AD- SORP- TION RATIO (00931)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS) (00095)	PH (UNITS) (00400)	TEMPER- ATURE (DEG C) (00010)
OCT. 03...	.03	.04	100	888	1.21	480	670	490	.3	1200	7.8	10.5
NOV. 01...	.01	.02	100	878	1.19	576	680	490	.4	1230	7.9	5.0
JAN. 08...	.08	.07	80	999	1.36	486	760	510	.3	1360	8.0	.0
MAR. 06...	.03	1.3	100	532	.72	1110	340	220	.7	800	7.5	3.5
JUNE 03...	.02	.55	150	1050	1.43	644	710	530	.8	1370	8.1	20.5
JULY 01...	.03	.11	280	1560	2.12	350	970	810	1.4	1970	8.0	28.0
AUG. 07...	.05	.16	170	847	1.15	238	490	320	1.6	1190	8.1	23.0
SEP. 03...	.01	.06	120	885	1.20	421	650	480	.6	1250	8.0	16.5

TEMPERATURE (°C) OF WATER, WATER YEAR OCTOBER 1973 TO SEPTEMBER 1974

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	13.0	5.0	0.0	0.0	0.0	1.0	---	---	13.0	21.0	26.0	16.0
2	14.0	4.0	3.0	0.0	0.0	3.0	---	---	14.0	20.0	20.0	14.0
3	12.0	4.0	1.0	0.0	0.0	5.0	---	---	15.0	19.0	18.0	12.0
4	10.0	3.0	2.0	0.0	0.0	3.0	---	---	16.0	20.0	18.0	15.0
5	10.0	0.0	0.0	0.0	0.0	4.0	---	---	14.0	19.0	19.0	15.0
6	11.0	1.0	0.0	0.0	0.0	3.0	---	---	13.0	21.0	19.0	16.0
7	12.0	0.0	2.0	0.0	0.0	3.0	---	---	14.0	21.0	20.0	17.0
8	12.0	1.0	4.0	0.0	0.0	1.0	---	---	12.0	22.0	20.0	17.0
9	10.0	2.0	2.0	0.0	0.0	2.0	---	---	13.0	23.0	19.0	15.0
10	9.0	1.0	1.0	0.0	0.0	2.0	---	---	14.0	22.0	19.0	17.0
11	10.0	4.0	3.0	0.0	0.0	4.0	---	---	14.0	21.0	20.0	15.0
12	11.0	3.0	3.0	0.0	0.0	4.0	---	---	15.0	23.0	18.0	12.0
13	10.0	4.0	1.0	0.0	0.0	5.0	---	---	16.0	23.0	19.0	11.0
14	10.0	6.0	0.0	0.0	0.0	4.0	---	---	17.0	21.0	20.0	12.0
15	11.0	2.0	3.0	0.0	1.0	5.0	---	---	17.0	23.0	20.0	14.0
16	9.0	2.0	4.0	2.0	2.0	2.0	---	---	17.0	24.0	19.0	13.0
17	11.0	3.0	3.0	1.0	1.0	4.0	---	---	16.0	24.0	19.0	12.0
18	11.0	4.0	2.0	0.0	3.0	3.0	---	---	17.0	24.0	20.0	12.0
19	10.0	5.0	1.0	0.0	1.0	---	---	---	20.0	25.0	19.0	14.0
20	10.0	2.0	0.0	0.0	2.0	---	---	---	21.0	23.0	21.0	13.0
21	11.0	0.0	1.0	0.0	0.0	---	---	---	20.0	22.0	18.0	10.0
22	10.0	1.0	1.0	0.0	0.0	---	---	---	19.0	25.0	17.0	11.0
23	9.0	2.0	4.0	0.0	0.0	---	---	10.0	17.0	24.0	18.0	12.0
24	---	1.0	3.0	0.0	0.0	---	---	12.0	19.0	24.0	19.0	12.0
25	---	1.0	2.0	0.0	0.0	---	---	12.0	20.0	23.0	20.0	13.0
26	8.0	1.0	2.0	0.0	1.0	---	---	14.0	21.0	24.0	18.0	12.0
27	6.0	0.0	0.0	0.0	1.0	---	---	13.0	20.0	24.0	17.0	12.0
28	6.0	2.0	0.0	0.0	0.0	---	---	16.0	21.0	24.0	18.0	11.0
29	7.0	3.0	0.0	0.0	---	---	---	17.0	20.0	23.0	19.0	11.0
30	6.0	3.0	0.0	0.0	---	---	---	13.0	20.0	22.0	17.0	9.0
31	6.0	---	0.0	0.0	---	---	---	10.0	---	21.0	15.0	---
MONTH	A 10.0	2.5	1.5	0.0	0.5	---	---	---	17.0	22.5	19.0	13.0

A Based on 29 days of data.

CHEYENNE RIVER BASIN

06436800 HORSE CREEK NEAR VALE, S. DAK.

LOCATION.--Lat 44°39'30", long 103°20'17", in SE¼NW¼ sec.13, T.8 N., R.6 E., Butte County, at gaging station, on right bank 600 ft (183 m) downstream from Dry Creek, 2.9 mi (4.7 km) upstream from mouth, and 4.0 mi (6.4 km) northeast of Vale.

DRAINAGE AREA.--530 mi² (1,370 km²), approximately.

PERIOD OF RECORD.--Chemical analyses: August 1964 to September 1968 (monthly), October 1968 to September 1973 (daily), October 1973 to September 1974 (monthly).
Water temperatures: October 1968 to September 1974.

EXTREMES.--1973-74:

Specific conductance: Maximum daily, 8,700 micromhos Apr. 12; minimum daily, 1,650 micromhos July 31.
Water temperatures: Maximum, 33.0°C June 29; minimum, freezing point on several days during November to March.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1973 TO SEPTEMBER 1974

DATE	TIME	INSTANTANEOUS DIS- CHARGE (CFS) (000061)	DIS- SOLVED SILICA (SI02) (MG/L) (00955)	DIS- SOLVED CAL- CIUM (CA) (MG/L) (00915)	DIS- SOLVED MAG- NE- SIUM (MG) (MG/L) (00925)	DIS- SOLVED SODIUM (NA) (MG/L) (00930)	DIS- SOLVED PO- TAS- SIUM (K) (MG/L) (00935)	BICAR- BONATE (HCO3) (MG/L) (00440)	DIS- SOLVED SULFATE (SO4) (MG/L) (00945)	DIS- SOLVED CHLO- RIDE (CL) (MG/L) (00940)	DIS- SOLVED FLUO- RIDE (F) (MG/L) (00950)	DIS- SOLVED NITRATE PLUS NITRITE (N) (MG/L) (00631)
OCT. 04...	1400	30	3.2	230	120	210	8.7	206	1200	31	.5	2.0
NOV. 01...	1100	5.9	2.1	350	330	700	14	387	3000	110	.7	8.8
JAN. 09...	1110	.91	7.1	450	320	630	11	593	3100	100	.5	1.6
MAR. 06...	1030	7.2	2.5	210	220	530	10	273	2200	90	.4	22
APR. 02...	1300	3.5	1.3	320	380	820	13	386	3600	37	.7	15
MAY 01...	1330	1.4	.9	300	370	940	16	295	3600	190	1.2	18
JUNE 03...	1530	69	5.8	210	110	190	9.4	210	1100	31	.6	1.9
JULY 01...	1415	77	9.2	230	100	160	10	227	1100	26	.4	.69
AUG. 08...	1100	112	6.9	220	96	110	11	196	930	16	.5	.44
SEP. 03...	1205	132	7.0	200	75	110	9.8	188	840	18	.5	.70

NOTE.--Carbonate (CO₃) analysis for all samples, 0.0 mg/l.

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25°C), WATER YEAR OCTOBER 1973 TO SEPTEMBER 1974

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2300	3440	4100	5700	2540	4230	6500	5600	2400	2050	1880	1880
2	2300	3500	2380	5700	3600	4700	6200	5700	2380	2100	1980	1900
3	2280	3190	4100	5700	3650	4100	6300	6000	2280	2030	2000	1830
4	2500	3750	3850	5600	3950	2250	6100	5900	2200	1850	1950	1880
5	2520	6350	5300	5600	3550	3000	6000	6600	2150	1830	2000	1980
6	2890	6150	4600	5600	4050	3700	5900	6200	2600	1880	2000	2050
7	2880	6100	5600	5600	3100	3080	5900	6000	2280	1850	1900	2100
8	2920	6650	5100	5600	2900	3200	6000	5900	2200	1800	1900	2100
9	3850	6500	5800	5700	3900	3200	6500	5600	2200	1900	2000	2180
10	3900	6300	3700	5700	3900	1980	6800	5800	2380	1930	1930	2150
11	3890	6200	4000	5650	3900	3280	6300	5900	2000	1830	1880	2200
12	3940	6700	4700	5700	3650	4900	8700	5900	2250	1880	1900	2150
13	3940	6850	5700	5750	2750	5200	7200	6200	2000	1950	1930	2080
14	3950	6700	4800	5600	2850	6100	6000	6100	2200	1880	1900	2230
15	3950	6400	4400	5000	4400	6350	5900	6000	2200	1880	1980	2100
16	3920	6100	5800	4200	2400	4000	5000	5900	2050	1880	1950	2000
17	4100	6350	3950	5100	2900	5500	3200	5900	2000	1850	1930	1980
18	4080	6100	5400	3900	3000	5600	2700	5900	1900	1850	1930	1950
19	4000	6350	3650	3450	2950	4900	3600	6000	1950	1780	1850	2700
20	4120	6800	4300	3400	3400	6250	5800	6100	1950	1830	1950	2150
21	4300	6350	5100	3550	2700	6000	5800	6000	1830	1780	1950	2350
22	4550	6650	4600	2100	3050	4800	5800	7600	2100	1800	1980	2000
23	4450	6500	4700	2100	2150	4700	5200	2850	2400	1780	1930	2550
24	4650	6500	4800	2000	3850	5700	5000	1900	1980	1780	1980	2980
25	4750	6600	5300	2000	4000	5400	5300	2180	1880	1800	1980	3350
26	4750	6750	6000	2080	4000	5600	5500	2450	1900	1830	2000	3150
27	4750	6750	5400	2000	3980	5800	5400	4200	1980	1780	2000	3450
28	5100	6750	5900	3100	3850	5900	5600	3300	2030	1830	2050	3550
29	5200	6500	6300	3100	---	6500	6000	3650	1950	1850	1930	3700
30	5100	6450	5700	3000	---	6450	5600	3700	2000	1830	1980	3800
31	5150	---	5800	3000	---	6250	---	2250	---	1650	1980	---
MONTH	3900	6080	4870	4270	3390	4790	5730	5140	2120	1850	1950	2410

06436800 HORSE CREEK NEAR VALE, S. DAK.--Continued

EXTREMES.--Continued

Period of record:

Dissolved solids (1968-69, 1970-73): Maximum, 8,350 mg/l Jan. 1 to Feb. 28, 1969; minimum, 290 mg/l Feb. 1-28, 1971.

Hardness (1968-69, 1970-73): Maximum, 3,360 mg/l Jan. 1 to Feb. 28, 1969; minimum, 190 mg/l Feb. 1-28, 1971.

Specific conductance (1968-69, 1971-74): Maximum daily, 8,080 micromhos Feb. 1-3, 1969; minimum daily, 626 micromhos Oct. 5, 1972.

Water temperatures (1968-69, 1971-74): Maximum, 33.0°C June 29, 1974; minimum, freezing point on many days during winter period.

REMARKS.--Maximum observed during water year: Dissolved solids, 5,640 mg/l Apr. 2; hardness, 2,400 mg/l Jan. 9, Apr. 2. Minimum observed during water year: Dissolved solids, 1,360 mg/l Sept. 3; hardness, 810 mg/l Sept. 3.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1973 TO SEPTEMBER 1974

DATE	DIS- SOL- VED- PHOS- PHORUS (P) (MG/L) (00666)	TOTAL PHOS- PHORUS (P) (MG/L) (00665)	DIS- SOLVED BORON (B) (UG/L) (01020)	DIS- SOLVED SOLIDS (SUM OF CONSTITUENTS) (MG/L) (70301)	DIS- SOLVED SOLIDS (TONS PER AC-FT) (70303)	DIS- SOLVED SOLIDS (TONS PER DAY) (70302)	HARD- NESS (CA+MG) (MG/L) (00900)	NON- CAR- BONATE HARD- NESS (MG/L) (00902)	SODIUM AD- SORP- TION RATIO (00931)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS) (00095)	PH (UNITS) (00400)	TEMPER- ATURE (DEG C) (00010)
OCT. 04...	.01	.05	360	1910	2.60	155	1100	900	2.8	2430	8.2	7.0
NOV. 01...	.01	.02	980	4740	6.45	75.5	2200	1900	6.4	5680	8.1	3.0
JAN. 09...	.02	.02	1200	4920	6.69	12.1	2400	2000	5.6	5170	7.6	.0
MAR. 06...	.03	.13	500	3500	4.76	68.0	1400	1200	6.1	3830	8.0	2.5
APR. 02...	.02	.08	880	5430	7.38	51.3	2400	2000	7.3	6360	8.1	6.5
MAY 01...	.05	.11	890	5640	7.67	20.5	2300	2000	8.6	6520	8.3	21.0
JUNE 03...	.02	.10	350	1770	2.41	330	980	810	2.6	2330	8.1	24.0
JULY 01...	.05	.19	340	1750	2.38	364	990	800	2.2	2190	7.7	26.0
AUG. 08...	.01	.16	300	1490	2.03	451	940	780	1.6	1930	7.9	23.5
SEP. 03...	.02	.14	270	1360	1.85	485	810	650	1.7	1850	8.0	14.0

TEMPERATURE (°C) OF WATER, WATER YEAR OCTOBER 1973 TO SEPTEMBER 1974

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	11.0	7.0	4.0	---	2.0	3.0	13.0	---	20.0	27.0	24.0	13.0
2	14.0	4.0	3.0	---	2.0	8.0	9.0	---	26.0	23.0	24.0	15.0
3	14.0	3.0	1.0	---	2.0	5.0	9.0	---	24.0	24.0	23.0	17.0
4	12.0	2.0	1.0	1.0	2.0	4.0	11.0	---	26.0	24.0	23.0	19.0
5	14.0	4.0	1.0	1.0	1.0	10.0	5.0	---	18.0	28.0	23.0	17.0
6	13.0	3.0	0.0	0.0	3.0	3.0	13.0	---	11.0	28.0	28.0	19.0
7	15.0	4.0	2.0	2.0	2.0	5.0	9.0	---	18.0	23.0	24.0	20.0
8	13.0	2.0	1.0	0.0	2.0	3.5	15.0	19.0	18.0	26.0	22.0	19.0
9	14.0	3.0	0.0	1.0	3.0	7.0	13.0	24.0	21.0	28.0	22.0	20.0
10	13.0	3.0	2.0	0.0	2.0	0.0	10.0	4.0	20.0	26.0	20.0	19.0
11	11.0	---	2.0	1.0	2.0	3.0	5.0	4.0	21.0	25.0	28.0	15.0
12	12.0	4.0	1.0	1.0	2.0	3.0	5.0	10.0	19.0	20.0	23.0	13.0
13	12.0	6.0	2.0	1.0	2.0	8.0	7.0	14.0	23.0	28.0	22.0	14.0
14	---	6.0	1.0	2.0	10.0	1.0	4.0	---	24.0	28.0	23.0	19.0
15	13.0	---	1.0	---	8.0	0.0	11.0	---	20.0	30.0	23.0	18.0
16	12.0	5.0	1.0	2.0	10.0	0.0	13.0	---	24.0	26.0	22.0	19.0
17	14.0	6.0	2.0	3.0	5.0	9.0	15.0	---	30.0	26.0	18.0	20.0
18	16.0	6.0	2.0	3.0	8.0	8.0	17.0	---	23.0	25.0	25.0	19.0
19	15.0	3.0	1.0	3.0	8.0	0.0	14.0	---	29.0	27.0	22.0	18.0
20	14.0	2.0	1.0	2.0	5.0	3.0	11.0	---	24.0	25.0	20.0	19.0
21	11.0	3.0	1.0	3.0	1.0	6.0	14.0	---	25.0	25.0	21.0	15.0
22	13.0	4.0	2.0	4.0	8.0	2.0	15.0	---	24.0	24.0	25.0	7.0
23	12.0	0.0	2.0	---	0.0	0.0	15.0	---	29.0	23.0	21.0	17.0
24	9.0	1.0	1.0	3.0	0.0	2.0	18.0	---	21.0	24.0	24.0	14.0
25	11.0	---	2.0	4.0	6.0	9.0	21.0	---	30.0	28.0	19.0	20.0
26	11.0	0.0	2.0	4.0	9.0	7.0	21.0	---	25.0	24.0	23.0	6.0
27	9.0	2.0	1.0	3.0	0.0	12.0	20.0	---	29.0	27.0	19.0	11.0
28	12.0	1.0	1.0	4.0	11.0	10.0	14.0	---	23.0	25.0	22.0	13.0
29	9.0	2.0	1.0	3.0	---	12.0	16.0	---	33.0	27.0	24.0	11.0
30	9.0	3.0	1.0	4.0	---	9.0	17.0	---	28.0	24.0	15.0	13.0
31	7.0	---	0.0	2.0	---	6.0	---	15.0	---	24.0	15.0	---
MONTH	A 12.0	B 3.5	1.5	C 2.0	4.0	5.0	12.5	---	23.5	25.5	22.0	16.0

A Based on 30 days of data.

B Based on 27 days of data.

C Based on 26 days of data.

CHEYENNE RIVER BASIN

06437000 BELLE FOURCHE RIVER NEAR STURGIS, S. DAK.

LOCATION.--Lat 44°30'47", long 103°08'11", in SE¼NW¼ sec.3, T.6 N., R.8 E., Meade County, at gaging station, near right bank on downstream side of bridge on State Highway 34, 0.5 mi (0.8 km) upstream from Bear Creek, and 20 mi (32 km) northeast of Sturgis.

DRAINAGE AREA.--5,870 mi² (15,200 km²), approximately.

PERIOD OF RECORD.--Chemical analyses: August 1954 to September 1958, October 1968 to September 1973 (daily), October 1973 to September 1974 (monthly).

Water temperatures: August 1954 to September 1958, October 1968 to September 1973.

Sediment records: October 1955 to September 1958.

EXTREMES.--1973-74:

Specific conductance: Maximum daily, 3,150 micromhos Oct. 12; minimum daily, 1,150 micromhos Apr. 26, 27.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1973 TO SEPTEMBER 1974

DATE	TIME	INSTANTANEOUS DIS- CHARGE (CFS) (00061)	DIS- SOLVED SILICA (SI02) (MG/L) (00955)	DIS- SOLVED CAL- CIUM (CA) (MG/L) (00915)	DIS- SOLVED MAG- NE- SIUM (MG) (MG/L) (00925)	DIS- SOLVED SODIUM (NA) (MG/L) (00930)	DIS- SOLVED PO- TAS- SIUM (K) (MG/L) (00935)	BICAR- BONATE (HC03) (MG/L) (00440)	DIS- SOLVED SULFATE (S04) (MG/L) (00945)	DIS- SOLVED CHLO- RIDE (CL) (MG/L) (00940)	DIS- SOLVED FLUO- RIDE (F) (MG/L) (00950)	DIS- SOLVED NITRITE PLUS NITRATE (N) (MG/L) (00631)
OCT. 03...	1430	179	4.4	210	99	130	12	190	990	18	.5	1.5
NOV. 01...	1430	74	7.7	240	120	160	20	271	1100	22	.7	3.1
08...	1230	94	8.0	270	150	210	34	304	1400	29	.3	4.6
JAN. 09...	1540	8.1	12	420	230	280	30	561	2100	36	.7	3.4
MAR. 06...	1345	72	5.6	190	130	220	20	164	1200	34	.6	8.3
APR. 02...	1015	289	7.7	180	65	63	14	235	640	9.1	.4	1.3
MAY 01...	1030	564	9.6	140	50	76	11	192	550	8.5	.1	1.1
JUNE 03...	1800	278	6.7	210	86	120	13	202	910	16	.6	1.7
JULY 01...	1045	223	8.4	210	85	100	14	206	880	14	.5	1.2
AUG. 09...	1130	336	7.9	220	90	94	16	212	940	13	.5	.96
SEP. 03...	0955	525	7.2	190	75	93	14	186	760	13	.5	1.0

DATE	TIME	INSTANTANEOUS DIS- CHARGE (CFS) (00061)	TEMPER- ATURE (DEG C) (00010)	CYANIDE (CN) (MG/L) (00720)	DIS- SOLVED ARSENIC (AS) (UG/L) (01000)	DIS- SOLVED CAD- MIUM (CD) (UG/L) (01025)	DIS- SOLVED CHRO- MIUM (CR) (UG/L) (01030)	DIS- SOLVED COBALT (CO) (UG/L) (01035)	DIS- SOLVED COPPER (CU) (UG/L) (01040)	DIS- SOLVED IRON (FE) (UG/L) (01046)	DIS- SOLVED LEAD (PB) (UG/L) (01049)
NOV. 08...	1230	94	-1.0	--	50	0	0	0	100	30	0
APR. 02...	1015	289	6.0	.04	29	0	0	0	8	20	6

06437000 BELLE FOURCHE RIVER NEAR STURGIS, S. DAK.--Continued

EXTREMES.--Continued

Period of record:

Dissolved solids (1954-58, 1968-69, 1970-73): Maximum, 5,230 mg/l May 25, 1958; minimum, 761 mg/l

Mar. 1-31, 1972.

Hardness (1954-58, 1968-69, 1970-73): Maximum, 1,960 mg/l Nov. 16-17, 1955; minimum, 390 mg/l Mar. 1-31, 1972.

Specific conductance (1954-58, 1968-71, 1973-74): Maximum daily, 5,770 micromhos May 25, 1958; minimum daily, 650 micromhos Feb. 15, 1971.

Water temperatures (1954-58, 1968-71): Maximum, 30.0°C June 28, July 4, 7, 9, Aug. 7-8, 1970; minimum, freezing point on many days during winter period.

REMARKS.--Maximum observed during water year: Dissolved solids, 3,400 mg/l Jan. 9; hardness, 2,000 mg/l

Jan. 9; specific conductance, 3,750 micromhos Jan. 9; water temperatures, 29.0°C June 18. Minimum observed during water year: Dissolved solids, 945 mg/l May 1; hardness, 560 mg/l May 1; water temperatures, 0.0°C on many days during winter period.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1973 TO SEPTEMBER 1974

DATE	DIS- SOLVED- PHOS- PHORUS (P) (00666)	TOTAL PHOS- PHORUS (P) (00665)	DIS- SOLVED BORON (B) (01020)	DIS- SOLVED SOLIDS (SUM OF CONSTI- TUENTS) (MG/L) (70301)	DIS- SOLVED SOLIDS (TONS PER AC-FT) (70303)	DIS- SOLVED SOLIDS (TONS PER DAY) (70302)	HARD- NESS (CA,MG) (MG/L) (00900)	NON- CAR- BONATE HARD- NESS (MG/L) (00902)	SODIUM AD- SORP- TION RATIO (00931)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS) (00095)	PH (UNITS) (00400)	TEMPER- ATURE (DEG C) (00010)
OCT. 03...	.03	.05	300	1560	2.12	754	930	780	1.9	2020	8.1	13.0
NOV. 01...	.02	.07	340	1820	2.48	364	1100	870	2.1	2310	8.1	4.5
08...	.02	.11	410	2280	3.10	579	1300	1000	2.5	2650	7.9	.0
JAN. 09...	.03	.02	140	3400	4.62	74.	2000	1500	2.7	3750	7.5	.0
MAR. 06...	.04	.36	280	1920	2.61	373	1000	880	3.0	2400	8.1	3.0
APR. 02...	.02	2.3	140	1100	1.50	858	720	530	1.0	1530	7.9	6.0
MAY 01...	.08	1.2	150	945	1.29	1440	560	400	1.4	1210	8.0	14.5
JUNE 03...	.03	.70	260	1470	2.00	1100	880	710	1.8	1950	8.0	24.5
JULY 01...	.03	.51	260	1420	1.93	855	870	710	1.5	1860	7.9	25.0
AUG. 09...	.01	.88	290	1490	2.03	1350	920	750	1.3	1870	8.0	21.0
SEP. 03...	.02	.83	250	1250	1.70	1770	780	630	1.4	1740	8.1	13.5

NOTE.--Carbonate (CO₃) analysis for all samples, 0.0 mg/l.

DATE	DIS- SOLVED MAN- GANESE (MN) (01056)	DIS- SOLVED MOLYB- DENUM (MO) (01060)	DIS- SOLVED NICKEL (NI) (01065)	DIS- SOLVED SILVER (AG) (01075)	DIS- SOLVED STRON- TIUM (SR) (01080)	DIS- SOLVED VANA- DIUM (V) (01085)	DIS- SOLVED ZINC (ZN) (01090)	DIS- SOLVED ALUM- INUM (AL) (01106)	DIS- SOLVED LITHIUM (LI) (01130)	DIS- SOLVED SELE- NIUM (SE) (01145)	TOTAL MERCURY (HG) (71900)
NOV. 08...	560	9	12	1	3100	.0	20	10	150	13	.0
APR. 02...	180	--	8	0	2900	.0	30	--	60	3	.9

CHEYENNE RIVER BASIN

06437000 BELLE FOURCHE RIVER NEAR STURGIS, S. DAK.--Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25°C), WATER YEAR OCTOBER 1973 TO SEPTEMBER 1974

DAY.	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1880	2300	2500	2000	2000	2200	1440	1200	1950	1800	1750	1820
2	1970	2330	2520	1990	2010	2000	1520	1340	1800	1800	1750	1820
3	1950	2350	2550	1980	1990	2150	1510	1210	1850	1900	1850	1800
4	2000	2350	2500	1990	1980	2420	1500	1280	1820	1850	1800	1720
5	2120	2360	2650	1970	1950	2380	1490	1280	1700	1750	1820	1750
6	2150	2550	2600	2000	2000	2300	1480	1290	1750	1880	1800	1800
7	2200	2640	2600	1980	2010	2300	1480	1300	2000	1880	1850	1850
8	2200	2600	2600	1970	2050	2450	1500	1300	1900	1800	1850	1920
9	2140	2510	2590	1940	2020	2300	1470	1270	1800	1750	1820	1950
10	1900	2480	2550	1950	2040	2270	1490	1280	1750	1650	1820	1920
11	2300	2500	2540	1930	2070	2250	1520	1340	1850	1780	1820	1880
12	3150	2440	2540	1910	2120	2350	1700	1350	1700	1800	1800	1950
13	2750	2680	2400	1920	2300	2420	2520	1310	1650	1800	1820	1880
14	2680	2880	2390	1910	2450	2480	2160	1360	1650	1850	1820	1900
15	2620	2950	2390	1920	2300	2800	1820	1360	1700	1850	1850	1850
16	2500	2820	2380	1900	2450	2880	1620	1320	1720	1800	1880	1820
17	2380	2690	2350	1900	2250	2740	1870	1340	1720	1800	1850	1800
18	2350	2650	2320	1750	2330	2700	1750	1370	1680	1800	1850	1750
19	2300	2620	2200	2050	2550	2480	1670	1660	1740	1780	1850	1750
20	2320	2620	2190	2650	2520	2500	1620	1400	1800	1850	1900	1880
21	2320	2700	2190	2550	2620	1550	1520	1410	1800	1750	1900	2080
22	2350	2750	2170	2580	2500	1440	1540	1400	1720	1750	1850	2200
23	2340	2780	2150	2750	2580	1550	1450	1750	1750	1750	1850	2200
24	1940	2690	2130	2450	2500	1500	1380	1600	1900	1700	1850	2250
25	1540	2850	2100	2850	2450	1600	1180	1640	1720	1700	1850	2250
26	1450	2800	2070	1880	2280	1520	1150	1730	1720	1700	1850	2280
27	1540	2700	2050	1970	2260	1520	1150	1880	1820	1750	1800	2320
28	1660	2650	2040	2050	2250	1470	1180	2240	1820	1700	1880	2350
29	1920	2700	2020	2080	---	1520	1190	2100	1900	1750	1900	2280
30	2050	2690	2010	2050	---	1520	1180	2100	1800	1780	1920	2300
31	2150	---	2000	---	---	1550	---	2020	---	1780	1880	---
MONTH	2170	2620	2330	2090	2240	2100	1540	1500	1780	1780	1840	1980

CHEYENNE RIVER BASIN

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06437000 BELLE FOURCHE RIVER NEAR STURGIS, S. DAK.--Continued

TEMPERATURE (°C) OF WATER, WATER YEAR OCTOBER 1973 TO SEPTEMBER 1974

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	11.5	2.5	0.5	---	---	0.5	10.5	12.5	18.5	22.0	19.0	11.0
2	10.0	1.0	---	---	---	1.5	5.5	13.0	23.0	24.5	18.5	13.5
3	9.5	---	0.5	---	---	2.0	3.0	9.0	24.5	19.0	24.0	10.0
4	6.5	---	0.0	---	---	0.0	2.0	15.5	24.0	24.5	17.0	11.0
5	7.5	---	0.0	---	---	1.0	3.5	18.5	18.5	27.5	17.5	13.0
6	10.5	---	---	---	---	2.5	12.0	12.5	21.0	26.0	18.0	13.0
7	14.0	0.0	---	---	---	0.0	7.0	14.0	19.0	28.5	18.5	13.5
8	9.0	---	---	---	---	---	4.5	13.5	---	24.5	19.5	17.0
9	6.0	---	---	---	---	---	7.0	13.5	18.5	23.0	19.5	12.5
10	3.0	0.0	---	---	---	---	7.0	14.0	---	25.5	17.5	13.5
11	4.0	2.0	---	---	---	---	6.0	10.0	15.0	22.0	---	12.0
12	5.0	0.0	---	---	0.0	---	4.5	14.0	17.5	22.0	17.5	10.0
13	11.5	3.5	---	---	0.0	2.0	6.0	10.0	25.0	23.5	24.5	7.5
14	---	3.5	---	---	0.0	1.0	---	6.0	19.5	23.5	24.0	8.0
15	9.0	3.5	---	---	0.5	0.0	6.0	7.5	18.5	22.5	23.5	10.0
16	7.0	4.5	---	---	0.5	3.0	5.5	11.0	22.0	23.0	23.5	---
17	7.5	4.5	---	0.0	0.5	---	8.0	12.0	23.5	24.5	18.5	12.0
18	8.5	1.5	---	0.0	0.0	4.0	9.0	14.0	29.0	23.5	19.5	12.5
19	9.0	0.0	---	0.0	0.0	1.5	9.5	13.0	---	23.5	25.0	12.5
20	14.5	0.0	---	0.5	0.0	0.0	12.0	13.0	28.0	24.0	22.5	11.5
21	14.0	0.0	---	0.0	0.0	0.0	12.0	11.5	21.5	24.0	22.0	7.5
22	8.0	0.0	---	0.0	0.0	0.0	9.5	10.5	23.5	24.5	22.5	10.5
23	9.5	0.0	---	0.0	0.0	0.0	7.0	17.0	24.5	26.5	17.5	8.5
24	---	0.0	---	0.0	---	1.0	10.0	20.0	24.5	24.5	---	8.5
25	10.5	0.0	---	0.0	0.0	0.0	18.0	---	27.0	21.5	---	8.0
26	6.0	0.0	---	0.0	0.0	0.0	18.5	24.0	20.5	22.0	23.0	8.0
27	8.0	0.0	---	0.0	---	1.5	17.5	23.5	27.0	20.0	22.0	8.5
28	3.0	0.0	---	0.0	0.5	4.0	17.0	21.0	26.0	21.5	17.0	11.5
29	4.0	0.0	---	0.0	---	5.5	9.0	14.5	20.5	20.0	17.0	10.5
30	4.0	0.0	---	0.0	---	10.5	10.5	---	27.0	19.5	15.5	3.5
31	3.5	---	---	---	---	10.5	---	18.0	---	19.0	15.5	---
MONTH	A 8.0	B 1.0	---	---	---	C 2.0	A 9.0	A 14.0	22.5	23.0	E 20.0	A 10.5

A Based on 29 days of data.
 B Based on 24 days of data.
 C Based on 25 days of data.

D Based on 27 days of data.
 E Based on 28 days of data.

06439300 CHEYENNE RIVER AT CHERRY CREEK, S. DAK.

LOCATION.--Lat 44°36'10", long 101°29'24", in NE¼NW¼ sec.5, T.7 N., R.22 E., Ziebach County, at gaging station, on left bank 0.5 mi (0.8 km) east of village of Cherry Creek, 0.5 mi (0.8 km) downstream from Cherry Creek, and 1.7 mi (2.7 km) upstream from Plum Creek.

DRAINAGE AREA.--23,900 mi² (61,900 km²), approximately.

PERIOD OF RECORD.--Chemical analyses: June 1972 to September 1974.

Water temperatures: October 1971 to September 1974.

Sediment records: October 1971 to September 1974.

EXTREMES.--1973-74:

Sediment concentrations: Maximum daily, 45,500 mg/l Apr. 13; minimum daily, 270 mg/l Sept. 21.

CHEMICAL ANALYSES, AUGUST 1973 TO SEPTEMBER 1974

DATE	TIME	INSTANTANEOUS DIS- CHARGE (CFS) (00061)	DIS- SOLVED SILICA (SI02) (MG/L) (00955)	DIS- SOLVED CAL- CIUM (CA) (MG/L) (00915)	DIS- SOLVED MAG- NE- SIUM (MG) (MG/L) (00925)	DIS- SOLVED SODIUM (NA) (MG/L) (00930)	DIS- SOLVED PO- TAS- SIUM (K) (MG/L) (00935)	BICAR- BONATE (HC03) (MG/L) (00440)	DIS- SOLVED SULFATE (SO4) (MG/L) (00945)	DIS- SOLVED CHLO- RIDE (CL) (MG/L) (00940)	DIS- SOLVED FLUO- RIDE (F) (MG/L) (00950)	DIS- SOLVED NITRITE PLUS NITRATE (N) (MG/L) (00631)
OCT. 16...	1045	465	12	80	23	170	7.6	171	480	19	.4	2.9

NOTE.--Carbonate (CO₃) analysis for all samples, 0.0 mg/l.

DATE	TIME	TUR- BID- ITY (JTU) (00070)	SUS- PENDED SOLIDS (MG/L) (70299)	CHEM- ICAL OXYGEN DEMAND (HIGH LEVEL) (MG/L) (00340)	DIS- SOLVED NITRATE (N) (MG/L) (00618)	DIS- SOLVED NITRITE (N) (MG/L) (00613)	TOTAL NITRITE PLUS NITRATE (N) (MG/L) (00630)	AMMONIA NITRO- GEN (N) (MG/L) (00610)	ORGANIC NITRO- GEN (N) (MG/L) (00605)	TOTAL KJEL- DAHL NITRO- GEN (N) (MG/L) (00625)	TOTAL NITRO- GEN (N) (MG/L) (00600)	TOTAL ORGANIC CARBON (C) (MG/L) (00680)
OCT. 16...	1045	--	--	--	2.9	.02	3.5	.05	3.4	3.4	6.9	--

SUSPENDED-SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1973 TO SEPTEMBER 1974

DAY	OCTOBER			NOVEMBER			DECEMBER		
	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
1	362	400	391	208	1400	786	202	600	327
2	350	375	354	202	700	382	244	500	329
3	354	350	335	211	500	285	303	450	368
4	400	2200	2380	214	450	260	269	400	291
5	366	5400	5340	234	425	269	237	400	256
6	322	2800	2430	196	400	212	131	415	147
7	284	2200	1690	196	425	225	186	405	203
8	251	1700	1150	180	450	219	177	400	191
9	237	1400	896	254	1100	754	208	390	219
10	241	1300	846	326	6300	5550	199	380	204
11	266	1500	1080	273	1700	1250	214	375	217
12	303	5700	4660	295	1800	1430	200	385	208
13	471	6100	7760	483	10800	14100	180	390	190
14	1260	1800	6120	572	11800	18200	140	385	146
15	767	18200	37700	405	8000	8750	120	380	123
16	445	17200	20700	338	4600	4200	120	370	120
17	346	10400	9720	280	3000	2270	140	375	142
18	291	4300	3380	255	2100	1450	155	383	160
19	255	1100	757	240	1500	972	130	380	133
20	241	400	260	220	626	372	140	380	144
21	234	375	237	180	500	243	150	378	153
22	228	350	215	100	450	122	150	375	152
23	221	351	209	60	425	69	140	372	141
24	208	325	183	60	400	65	130	370	130
25	196	300	159	60	1000	162	130	375	132
26	189	300	153	120	2500	810	120	370	120
27	267	1700	1230	177	2000	956	120	360	117
28	383	12400	12800	167	1500	676	110	355	105
29	346	13300	12400	164	1000	443	110	360	107
30	266	4400	3160	196	750	397	95	365	94
31	224	2500	1510	--	--	--	85	370	85
TOTAL	10574	--	140205	6866	--	65879	5035	--	5454

CHEYENNE RIVER BASIN

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06439300 CHEYENNE RIVER AT CHERRY CREEK, S. DAK.

EXTREMES.--1973-74:--Continued

Sediment discharge: Maximum daily, 294,000 tons Apr. 13; minimum daily, 29 tons Jan. 11.

Period of record:

Sediment concentrations: Maximum daily, 65,000 mg/l June 12, 1972; minimum daily, 80 mg/l Nov. 15-17, 1972.

Sediment discharge: Maximum daily, 2,530,000 tons June 12, 1972; minimum daily, 15 tons Dec. 14, 1972.

REMARKS.--Records poor. Flow affected by ice Nov. 19-26, Dec. 12 to Mar. 3. Sediment-discharge records prior to Oct. 1, 1971, are on file in the District office, Corps of Engineers, Omaha, Nebr.

CHEMICAL ANALYSES, AUGUST 1973 TO SEPTEMBER 1974

DATE	DIS-SOLVED ORTHO. PHOSPHORUS (P) (MG/L) (00671)	TOTAL PHOSPHORUS (P) (MG/L) (00665)	DIS-SOLVED BORON (B) (UG/L) (01020)	DIS-SOLVED SOLIDS (SUM OF CONSTITUENTS) (MG/L) (70301)	DIS-SOLVED SOLIDS (TONS PER AC-FT) (70303)	DIS-SOLVED SOLIDS (TONS PER DAY) (70302)	HARDNESS (CA+MG) (MG/L) (00900)	NON-CARBONATE HARDNESS (MG/L) (00902)	SODIUM ADSORPTION RATIO (00931)	SPECIFIC CONDUCTANCE (MICROMHOS) (00095)	PH (UNITS) (00400)	TEMPERATURE (DEG C) (00010)
OCT. 16...	.04	8.3	--	889	1.31	1210	290	150	4.3	780	8.4	9.0

FIELD DETERMINATIONS

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS) (00061)	TEMPERATURE (DEG C) (00010)	DIS-SOLVED OXYGEN (MG/L) (00300)	BIOCHEMICAL OXYGEN DEMAND (MG/L) (00310)	IMMEDIATE COLIFORM (COL. PER 100 ML) (31501)	FECAL COLIFORM (COL. PER 100 ML) (31616)
OCT. 16...	1045	465	9.0	11.8	.8	12000	35000

SUSPENDED-SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1973 TO SEPTEMBER 1974

DAY	JANUARY			FEBRUARY			MARCH		
	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
1	80	365	79	700	295	558	1700	2000	9180
2	75	370	75	600	296	480	1100	4250	12600
3	85	375	86	500	328	443	1200	5050	16400
4	70	370	70	400	302	326	922	3530	8790
5	60	360	58	300	302	245	613	2120	3510
6	50	350	47	260	466	327	554	1150	1720
7	45	360	44	250	322	217	526	915	1300
8	40	370	40	250	393	265	543	732	1070
9	35	367	35	250	366	247	521	923	1300
10	35	365	34	270	486	354	479	807	1040
11	30	363	29	300	486	394	484	798	1040
12	30	360	29	350	504	476	494	786	1050
13	35	358	34	400	593	640	470	696	883
14	40	355	38	450	676	821	474	815	1040
15	60	350	57	400	612	661	414	586	655
16	100	345	93	500	610	824	338	592	540
17	200	340	184	650	735	1290	310	432	362
18	350	340	321	800	640	1380	295	397	316
19	800	500	1080	1000	830	2240	280	367	277
20	1100	800	2380	1500	912	3690	266	510	366
21	1000	700	1890	1700	880	4040	205	550	304
22	900	600	1460	1500	525	2130	211	780	444
23	800	500	1080	1300	576	2020	400	1020	1100
24	800	450	972	1100	795	2360	576	600	933
25	750	400	810	1000	975	2630	881	450	1070
26	750	375	759	1000	620	1670	451	450	548
27	800	350	756	1200	1050	3400	709	1480	2830
28	900	325	790	1400	800	3020	578	2200	3430
29	1000	500	1350	--	--	--	474	1280	1640
30	1500	600	2430	--	--	--	470	1260	1600
31	950	400	1030	--	--	--	465	1260	1580
TOTAL	13470	--	18140	20330	--	37148	17403	--	78918

CHEYENNE RIVER BASIN

06439300 CHEYENNE RIVER AT CHERRY CREEK, S. DAK.--Continued

SUSPENDED-SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1973 TO SEPTEMBER 1974

DAY	APRIL			MAY			JUNE		
	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
1	436	987	1160	861	2000	4650	565	14200	21700
2	418	931	1050	792	3250	6950	445	13200	15900
3	414	720	805	719	4330	8410	418	9000	10200
4	409	916	1010	639	1600	2760	405	3200	3500
5	414	724	809	607	1220	2000	379	3000	3070
6	432	805	939	583	1180	1860	358	3300	3190
7	436	582	685	543	1050	1540	350	2500	2360
8	436	640	753	521	1020	1430	350	1400	1320
9	436	659	776	532	1200	1720	354	1100	1050
10	432	659	769	595	1950	3130	346	910	850
11	499	860	1160	543	1100	1610	366	850	840
12	589	1120	1780	560	800	1210	489	2580	3410
13	2390	45500	294000	526	738	1050	499	4350	5860
14	1680	27000	122000	460	790	981	460	5520	6860
15	1430	12500	48300	445	766	920	423	2970	3390
16	1690	10200	46500	423	640	731	379	1350	1380
17	1910	12700	65500	414	598	668	342	1250	1150
18	1390	7300	27400	405	665	727	310	1020	854
19	1330	5330	19100	409	770	850	284	630	483
20	1330	3100	11100	432	742	865	273	513	378
21	1080	2600	7580	436	692	815	280	523	395
22	969	2920	7640	409	680	751	266	406	292
23	1080	4300	12500	379	614	628	244	389	256
24	1170	4050	12800	392	597	632	248	527	353
25	1200	5300	17200	470	820	1040	276	492	367
26	1080	3500	10200	418	750	846	266	472	339
27	1010	3200	8730	342	565	522	251	462	313
28	927	3300	8260	280	568	429	241	347	226
29	910	2400	5900	269	435	316	237	468	299
30	952	2530	6500	326	800	704	234	354	224
31	--	--	--	409	12100	13400	--	--	--
TOTAL	28879	--	742906	15139	--	64145	10338	--	90809

PARTICLE-SIZE DISTRIBUTION OF SURFACE BED MATERIAL, WATER YEAR OCTOBER 1973 TO SEPTEMBER 1974

DATE	TIME	TEMPER- ATURE (DEG C) (00010)	NUMBER OF SAM- PLING POINTS (00063)	INSTAN- TANEOUS DIS- CHARGE (CFS) (00061)	BED MAT. FALL DIAM. % FINER THAN (00159)	BED MAT. FALL DIAM. % FINER THAN (00160)	BED MAT. FALL DIAM. % FINER THAN (00161)
					.125 MM	.250 MM	.500 MM
OCT.							
23...	1030	14.0	20	224	0	8	55
NOV.							
20...	1345	.0	1	213	0	3	20
MAR.							
06...	1215	2.0	1	565	0	3	21
APR.							
10...	1200	13.0	2	432	0	8	69
MAY							
09...	1500	18.0	2	539	0	2	39
AUG.							
07...	1430	23.0	2	333	0	7	35
SEP.							
05...	1700	18.5	2	645	0	3	41

CHEYENNE RIVER BASIN

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06439300 CHEYENNE RIVER AT CHERRY CREEK, S. DAK.--Continued

SUSPENDED-SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1973 TO SEPTEMBER 1974

DAY	JULY			AUGUST			SEPTEMBER		
	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
1	224	364	220	322	820	713	334	614	554
2	228	400	246	358	766	740	383	749	775
3	244	467	308	326	532	468	441	1000	1190
4	234	386	244	307	592	491	799	7800	16800
5	249	600	403	299	636	513	639	12700	21900
6	414	6900	7710	303	608	497	560	7000	10600
7	400	6700	7240	322	738	642	460	1100	1370
8	375	3400	3440	322	718	624	392	623	659
9	362	1100	1080	314	744	631	342	609	562
10	342	664	613	379	749	766	342	642	593
11	326	611	538	396	786	840	303	638	522
12	280	349	264	400	680	734	276	438	326
13	273	400	295	494	3800	5070	280	531	401
14	244	530	349	526	7880	11200	284	579	444
15	241	600	390	510	5850	8060	299	574	463
16	248	640	429	479	2400	3100	322	619	538
17	262	800	566	441	1150	1370	375	710	719
18	299	1020	823	405	800	875	338	718	655
19	342	880	813	379	658	673	346	830	775
20	342	660	609	366	694	686	338	390	356
21	996	18000	48400	350	668	631	314	270	229
22	620	7200	12100	326	591	520	262	366	259
23	578	4140	6460	314	544	461	214	324	187
24	554	4150	6210	480	1200	1560	180	295	143
25	543	2200	3230	610	12300	20300	175	369	174
26	499	3170	4270	427	12500	14400	161	316	137
27	441	3900	4640	387	12300	12900	148	504	201
28	400	2850	3080	358	5500	5320	141	406	155
29	354	1520	1450	379	2300	2350	131	370	131
30	314	1000	848	354	1600	1530	125	456	154
31	318	1000	859	334	900	812	--	--	--
TOTAL	11546	--	118127	11967	--	99477	9704	--	61972
TOTAL DISCHARGE FOR YEAR (FT ³ /S-DAYS)									161251
TOTAL SUSPENDED-SEDIMENT DISCHARGE FOR YEAR (TONS)									1523180

PARTICLE-SIZE DISTRIBUTION OF SURFACE BED MATERIAL, WATER YEAR OCTOBER 1973 TO SEPTEMBER 1974

DATE	BED MAT. FALL DIAM. % FINER THAN 1.00 MM (80162)	BED MAT. SIEVE DIAM. % FINER THAN 2.00 MM (80169)	BED MAT. SIEVE DIAM. % FINER THAN 4.00 MM (80170)	BED MAT. SIEVE DIAM. % FINER THAN 8.00 MM (80171)	BED MAT. SIEVE DIAM. % FINER THAN 16.0 MM (80172)	BED MAT. SIEVE DIAM. % FINER THAN 32.0 MM (80173)
OCT. 23...	88	95	97	99	100	--
NOV. 20...	41	51	57	66	90	100
MAR. 06...	36	48	66	85	100	--
APR. 10...	95	99	100	--	--	--
MAY 09...	88	96	98	99	100	--
AUG. 07...	76	91	98	100	--	--
SEP. 05...	86	96	99	100	--	--

CHEYENNE RIVER BASIN

06439300 CHEYENNE RIVER AT CHERRY CREEK, S. DAK.--Continued

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

DATE	TIME	TEMPER- ATURE (DEG C) (00010)	INSTAN- TANEOUS DIS- CHARGE (CFS) (00061)	SUS- PENDE SEDIM- ENT (MG/L) (80154)	SUS- PENDE SEDIM- ENT (T/DAY) (80155)	SUS. SED. FALL DIAM. % FINER THAN .002 MM (70337)	SUS. SED. FALL DIAM. % FINER THAN .004 MM (70338)
APR.							
13...	1400	5.0	2250	53900	327000	56	68
14...	1800	6.0	1510	22500	92700	58	67
JULY							
04...	1900	31.0	234	7790	4920	64	81
07...	1900	32.0	387	5480	5730	16	31
21...	1900	30.0	885	27000	64500	67	82
SEP.							
05...	1700	18.5	645	14600	25400	64	76

DATE	SUS. SED. FALL DIAM. % FINER THAN .016 MM (70340)	SUS. SED. FALL DIAM. % FINER THAN .062 MM (70342)	SUS. SED. FALL DIAM. % FINER THAN .125 MM (70343)	SUS. SED. FALL DIAM. % FINER THAN .250 MM (70344)	SUS. SED. FALL DIAM. % FINER THAN .500 MM (70345)	SUS. SED. FALL DIAM. % FINER THAN 1.00 MM (70346)
APR.						
13...	88	99	100	--	--	--
14...	87	100	--	--	--	--
JULY						
04...	94	97	100	--	--	--
07...	98	99	100	--	--	--
21...	97	100	--	--	--	--
SEP.						
05...	89	93	93	94	98	100

TEMPERATURE (°C) OF WATER, WATER YEAR OCTOBER 1973 TO SEPTEMBER 1974

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	16.5	---	---	---	---	---	5.0	10.0	20.0	24.0	20.0	15.0
2	---	---	---	---	0.0	---	7.0	10.0	19.0	30.0	22.0	17.0
3	---	---	---	---	0.5	---	5.0	12.0	---	29.0	24.0	16.0
4	---	---	---	---	1.0	---	6.0	12.0	---	31.0	22.0	18.0
5	---	---	---	---	2.0	---	10.0	20.0	20.0	29.0	22.0	18.5
6	---	---	---	---	0.0	2.0	10.0	21.0	21.0	30.0	24.0	17.0
7	---	---	---	---	2.0	---	8.0	15.0	22.0	32.0	23.0	19.0
8	---	---	---	---	1.0	---	10.0	14.0	20.0	---	21.0	17.0
9	---	---	---	0.0	2.0	---	15.0	18.0	19.0	---	21.0	20.0
10	---	---	---	---	1.0	---	13.0	16.0	20.0	30.5	20.0	19.0
11	---	---	---	---	2.0	5.0	12.0	12.0	21.0	32.0	23.0	17.0
12	---	---	---	---	3.0	5.0	10.0	14.0	19.0	31.0	24.0	13.0
13	---	---	---	---	2.0	5.0	5.0	13.0	22.0	32.0	21.0	25.0
14	---	---	---	---	1.0	5.0	6.0	12.0	23.0	30.0	23.0	30.0
15	---	---	---	---	2.0	6.0	7.0	12.0	20.0	32.0	20.0	34.0
16	---	---	---	---	2.0	5.0	15.0	14.0	22.0	30.0	24.0	---
17	---	---	---	---	3.0	10.0	15.0	15.0	23.0	31.0	26.0	---
18	---	---	0.0	---	---	8.0	10.0	16.0	22.0	30.0	28.0	---
19	---	---	---	---	2.0	5.0	---	---	23.0	29.0	26.0	27.0
20	---	0.0	---	---	---	5.0	10.0	15.0	22.0	31.0	27.0	---
21	---	---	---	---	0.5	6.0	12.0	17.0	23.0	30.0	24.0	---
22	---	---	---	---	1.0	5.0	12.0	15.0	24.0	31.0	20.0	---
23	14.0	---	---	---	0.5	3.0	15.0	18.0	25.0	30.0	20.0	---
24	---	---	---	---	1.0	5.0	10.0	15.0	24.0	28.0	21.0	---
25	---	---	---	---	2.0	---	---	18.0	25.0	30.0	22.0	---
26	---	---	---	---	2.0	5.0	10.0	19.0	26.0	33.0	24.0	---
27	---	---	---	---	2.0	5.0	20.0	20.0	24.0	26.0	26.0	---
28	---	---	---	---	1.0	5.0	19.0	18.0	27.0	34.0	20.0	---
29	---	---	---	---	---	5.0	18.0	16.0	28.0	32.0	19.0	---
30	---	---	---	---	---	---	15.0	16.0	30.0	---	18.0	---
31	---	---	---	---	---	5.0	---	19.0	---	28.0	17.0	---
MONTH	---	---	---	---	A 1.5	---	B 11.0	C 15.5	B 22.5	B 30.0	22.5	---

A Based on 25 days of data.

B Based on 28 days of data.

C Based on 29 days of data.

CHEYENNE RIVER BASIN

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06439500 CHEYENNE RIVER NEAR EAGLE BUTTE, S. DAK.

LOCATION.--Lat 44°41'44", long 101°13'08", in NE¼SE¼ sec.32, T.9 N., R.24 E., Haakon County, at discontinued gaging station on downstream side near center of bridge on State Highway 63, 0.5 mi (0.8 km) upstream from Hermaphrodite Creek and 21 mi (33.8 km) south of Eagle Butte.

DRAINAGE AREA.--24,500 mi² (63,500 km²), approximately.

PERIOD OF RECORD.--Chemical analyses: November 1972 to September 1974 (monthly).

REMARKS.--Station is affected by backwater from Oahe Dam; discharge records not available. Miscellaneous samples of chemical data published for June 1972.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1973 TO SEPTEMBER 1974

DATE	TIME	INSTANTANEOUS DIS- CHARGE (CFS) (00061)	DIS- SOLVED SILICA (SiO ₂) (MG/L) (00955)	DIS- SOLVED CAL- CIUM (CA) (MG/L) (00915)	DIS- SOLVED MAG- NE- SIUM (MG) (MG/L) (00925)	DIS- SOLVED SODIUM (NA) (MG/L) (00930)	DIS- SOLVED PO- TAS- SIUM (K) (MG/L) (00935)	BICAR- BONATE (HCO ₃) (MG/L) (00440)	DIS- SOLVED SULFATE (SO ₄) (MG/L) (00945)	DIS- SOLVED CHLO- RIDE (CL) (MG/L) (00940)	DIS- SOLVED FLUO- RIDE (F) (MG/L) (00950)	DIS- SOLVED NITRITE PLUS NITRATE (N) (MG/L) (00631)
OCT. 16...	1200	--	12	62	14	160	6.4	156	410	18	.3	1.7
NOV. 20...	0915	--	9.8	56	71	300	13	246	940	54	.4	1.9
DEC. 18...	1600	--	8.8	88	110	340	16	309	1300	66	.5	2.6
JAN. 09...	1430	--	13	150	140	460	18	364	1600	100	.7	2.9
FEB. 06...	1615	--	11	91	87	380	15	288	1200	160	.6	2.4
APR. 10...	1430	--	6.9	72	67	220	14	169	790	32	.5	.57
MAY 09...	1500	--	9.2	170	62	110	14	179	700	29	.1	.65
JUNE 05...	1400	--	11	87	57	330	14	157	950	37	1.5	.74
JULY 10...	1600	--	9.6	100	53	280	19	130	920	29	.5	.83
AUG. 07...	1500	--	7.4	130	73	250	14	126	1000	26	.5	.75
SEP. 05...	1830	--	16	57	42	250	14	159	660	23	.6	1.1

DATE	DIS- SOL- VED- PHOS- PHORUS (P) (MG/L) (00666)	TOTAL PHOS- PHORUS (P) (MG/L) (00665)	DIS- SOLVED BORON (B) (UG/L) (01020)	DIS- SOLVED SOLIDS (SUM OF CONSTITUENTS) (MG/L) (70301)	DIS- SOLVED SOLIDS (TONS PER AC-FT) (70303)	DIS- SOLVED SOLIDS (TONS PER DAY) (70302)	HARD- NESS (CA, MG) (MG/L) (00900)	NON- CAR- BONATE HARD- NESS (MG/L) (00902)	SODIUM AD- SORP- TION RATIO (00931)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS) (00095)	PH (UNITS) (00400)	TEMPER- ATURE (DEG C) (00010)
OCT. 16...	.04	13	170	767	1.04	--	210	85	4.8	1252	8.1	9.5
NOV. 20...	.06	.62	310	1570	2.14	--	430	230	6.3	2130	8.2	1.0
DEC. 18...	.08	.08	330	2090	2.84	--	670	420	5.7	2732	8.0	.0
JAN. 09...	.11	.09	420	2670	3.63	--	950	650	6.5	3400	7.8	.0
FEB. 06...	.09	.17	400	2100	2.86	--	590	350	6.8	2760	8.0	.0
APR. 10...	.04	.61	190	1290	1.75	--	460	320	4.5	1730	8.0	13.0
MAY 09...	.01	.25	200	1180	1.74	--	680	530	1.8	1600	8.0	18.0
JUNE 05...	.02	.45	250	1570	2.28	--	450	320	6.8	2000	7.9	20.0
JULY 10...	.03	.60	320	1480	2.01	--	470	360	5.6	1940	8.0	30.5
AUG. 07...	.07	.07	340	1570	2.14	--	630	520	4.4	2030	7.9	27.0
SEP. 05...	.04	11	240	1150	1.56	--	320	180	6.1	1630	8.0	18.5

NOTE.--Carbonate (CO₃) analysis for all samples, 0.0 mg/l.

MISSOURI RIVER BASIN

06440000 MISSOURI RIVER AT PIERRE, S. DAK.

LOCATION.--Lat 44°22'25", long 100°22'20", in SE¼ sec.21, T.5 N., R.31 E., Hughes County, at gaging station, near right bank on downstream side of pier of Chicago and North Western Transportation Co. Bridge, 1.3 mi (2.1 km) upstream from Bad River, 5.8 mi (9.3 km) downstream from Oahe Dam, and at mile 1066.5 (1,716 km).

DRAINAGE AREA.--243,500 mi² (630,700 km²), approximately.

PERIOD OF RECORD.--Chemical analyses: July 1971 to September 1973 (daily), October 1973 to September 1974 (monthly).

Water temperatures: July 1971 to September 1974.

EXTREMES.--1973-74:

Specific conductance: Maximum daily, 830 micromhos Dec. 2; minimum daily, 720 micromhos June 13, July 3.

Water temperatures: Maximum, 22.0°C July 20; minimum, 0.5°C Feb. 3, 8.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1973 TO SEPTEMBER 1974

DATE	TIME	INSTAN- TANEOUS DIS- CHARGE (CFS) (00061)	DIS- SOLVED SILICA (SI02) (MG/L) (00955)	DIS- SOLVED CAL- CIUM (CA) (MG/L) (00915)	DIS- SOLVED MAG- NE- SIUM (MG) (MG/L) (00925)	DIS- SOLVED SODIUM (NA) (MG/L) (00930)	DIS- SOLVED PO- TAS- SIUM (K) (MG/L) (00935)	BICAR- BONATE (HCO3) (MG/L) (00440)	DIS- SOLVED SULFATE (SO4) (MG/L) (00945)	DIS- SOLVED CHLO- RIDE (CL) (MG/L) (00940)	DIS- SOLVED FLUO- RIDE (F) (MG/L) (00950)	DIS- SOLVED NITRITE PLUS NITRATE (N) (MG/L) (00631)
OCT.												
16...	1315	26000	6.6	52	21	65	4.7	170	200	8.7	.3	.18
NOV.												
20...	1100	21000	6.8	3.3	6.2	170	5.3	184	220	9.8	.4	.26
DEC.												
19...	0930	38000	6.9	1.9	2.9	190	5.3	185	230	9.8	.5	.31
JAN.												
10...	1530	55500	6.8	2.6	1.4	220	5.3	181	200	9.1	.5	.21
MAR.												
07...	1135	26200	6.4	2.0	4.7	180	5.6	188	220	11	.6	.22
APR.												
10...	1015	45000	6.3	4.5	8.1	180	4.7	191	230	9.5	.4	.18
MAY												
10...	1015	51800	6.5	2.7	5.4	170	5.2	191	210	9.1	.4	.20
JUNE												
21...	0945	28000	6.3	52	20	68	4.2	192	190	9.1	.4	.04
JULY												
11...	1020	29300	6.7	.6	.9	230	5.5	189	190	11	.5	.07
AUG.												
08...	1035	55800	6.8	1.6	3.1	180	4.4	194	190	10	.5	.21
SEP.												
06...	1430	49000	6.9	23	12	120	5.0	189	190	11	.5	.08

DATE	TIME	INSTAN- TANEOUS DIS- CHARGE (CFS) (00061)	TEMPER- ATURE (DEG C) (00010)	DIS- SOLVED NITRATE (N) (MG/L) (00618)	DIS- SOLVED NITRITE (N) (MG/L) (00613)	AMMONIA NITRO- GEN (N) (MG/L) (00610)	ORGANIC NITRO- GEN (N) (MG/L) (00605)	TOTAL KJEL- DAHL NITRO- GEN (N) (MG/L) (00625)	TOTAL NITRO- GEN (N) (MG/L) (00600)	DIS- SOLVED ORTHO. PHOS- PHORUS (P) (MG/L) (00671)	TOTAL PHOS- PHORUS (P) (MG/L) (00665)	DIS- SOL- VED- PHOS- PHORUS (P) (MG/L) (00666)
OCT.												
16...	1315	26000	11.0	.17	.01	.03	.34	.37	.55	.02	.03	.01
NOV.												
20...	1100	21000	5.0	.25	.01	.04	.27	.31	.56	.02	.05	.01
DEC.												
19...	0930	38000	4.0	.31	.00	.02	.25	.27	.65	.01	.02	.00
JAN.												
10...	1530	55500	1.0	.21	.00	.02	.64	.66	.74	.02	.13	.02
MAR.												
07...	1135	26200	4.0	--	--	--	--	--	--	.00	.02	.02
APR.												
10...	1015	45000	4.0	--	--	--	--	--	--	.01	.04	.02
JUNE												
21...	0945	28000	16.0	--	--	--	--	--	--	.01	.02	.01
JULY												
11...	1020	29300	18.5	--	--	--	--	--	--	.01	.02	.01
AUG.												
08...	1035	55800	15.0	--	--	--	--	--	--	.01	.03	.01
SEP.												
06...	1430	49000	18.0	--	--	--	--	--	--	.00	.06	.02

MISSOURI RIVER BASIN

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06440000 MISSOURI RIVER AT PIERRE, S. DAK.--Continued

EXTREMES.--Continued

Period of record:

Dissolved solids: Maximum, 494 mg/l Sept. 1-30, 1971, Jan. 1-31, 1972; minimum, 436 mg/l Sept. 16-30, 1972.

Hardness: Maximum, 250 mg/l Nov. 1-30, 1971; minimum, 210 mg/l Sept. 16-30, 1972.

Specific conductance (1972-74): Maximum daily, 830 micromhos Dec. 2, 1974; minimum daily, 690 micromhos May 18, 24-31, Sept. 2-30, 1973.

Water temperatures (1972-74): Maximum, 22.0°C on several days July to September 1973, July 20, 1974; minimum, freezing point on several days during winter period 1972, 1973.

REMARKS.--Maximum observed during water year: Dissolved solids, 545 mg/l Dec. 17; hardness, 220 mg/l Oct. 16; specific conductance, 840 micromhos Jan. 10. Minimum observed during water year: Dissolved solids, 445 mg/l Jan. 21; hardness, 5 mg/l July 11. Discharge furnished by District Office, U.S. Army Corps of Engineers, Omaha, Nebraska.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1973 TO SEPTEMBER 1974

DATE	DIS- SOL- VED- PHOS- PHORUS (P) (00666)	TOTAL PHOS- PHORUS (P) (00665)	DIS- SOLVED BORON (B) (01020)	DIS- SOLVED SOLIDS (SUM OF CONSTI- TUENTS) (MG/L) (70301)	DIS- SOLVED SOLIDS (TONS PER AC-FT) (70303)	DIS- SOLVED SOLIDS (TONS PER DAY) (70302)	HARD- NESS (CA, MG) (MG/L) (00900)	NON- CAR- BONATE HARD- NESS (MG/L) (00902)	SODIUM AD- SORP- TION RATIO (00931)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS) (00095)	PH (UNITS) (00400)	TEMPER- ATURE (DEG C) (00010)
OCT. 16...	.01	.03	120	447	.62	31900	220	70	1.9	780	8.5	11.0
NOV. 20...	.01	.05	130	516	.67	27900	34	0	13	780	8.8	5.0
DEC. 19...	.00	.02	120	545	.65	49000	17	0	20	770	8.4	4.0
JAN. 10...	.02	.13	120	541	.64	70900	12	0	27	840	8.9	1.0
MAR. 07...	.02	.02	130	524	.71	37100	24	0	16	740	8.3	4.0
APR. 10...	.02	.04	130	539	.73	65500	45	0	12	749	8.3	4.0
MAY 10...	.01	.03	120	503	.67	68700	29	0	14	745	8.2	8.0
JUNE 21...	.01	.02	130	445	.61	33600	210	55	2.0	724	8.1	16.0
JULY 11...	.01	.02	130	542	.74	42900	5	0	44	722	8.5	18.5
AUG. 08...	.01	.03	130	493	.67	74300	17	0	19	726	8.3	15.0
SEP. 06...	.02	.06	120	465	.63	61500	110	0	5.1	729	8.2	18.0

NOTE.--Carbonate (CO₃) analysis for all samples, 0.0 mg/l.

FIELD DETERMINATIONS

DATE	TIME	INSTAN- TANEOUS DIS- CHARGE (CFS) (00061)	TEMPER- ATURE (DEG C) (00010)	DIS- SOLVED OXYGEN (MG/L) (00300)	BIO- CHEM- ICAL OXYGEN DEMAND (MG/L) (00310)	IMME- DIATE COLI- FORM (COL. PER 100 ML) (31501)	FECAL COLI- FORM (COL. PER 100 ML) (31616)	STREP- TOCOCCI (COL- ONIES PER 100 ML) (31679)
OCT. 16...	1315	26000	11.0	10.2	1.0	30	10	--
NOV. 20...	1100	21000	5.0	13.2	--	--	--	--
29...	1520	10800	9.5	9.7	.8	30	<2	--
DEC. 19...	0930	38000	4.0	13.0	1.0	10	<0	--
JAN. 10...	1530	55500	1.0	11.8	1.0	2	<0	--

MISSOURI RIVER BASIN

06440000 MISSOURI RIVER AT PIERRE, S. DAK.--Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25°C), WATER YEAR OCTOBER 1973 TO SEPTEMBER 1974

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	770	780	810	790	780	770	780	770	750	730	750	750
2	770	780	830	790	780	760	780	770	730	730	760	750
3	770	780	820	790	780	780	780	770	740	720	750	750
4	770	780	810	790	780	780	790	770	740	730	750	750
5	770	780	790	790	780	780	780	770	740	730	750	750
6	770	780	810	800	780	760	780	770	750	750	750	750
7	770	780	820	790	780	770	780	770	740	740	750	750
8	770	780	810	790	780	770	780	760	740	730	740	740
9	770	780	820	790	780	770	780	770	740	740	750	750
10	770	780	820	790	780	760	790	780	740	730	750	740
11	760	780	810	790	780	770	780	770	730	740	750	750
12	770	780	820	790	780	780	790	770	730	730	750	750
13	770	780	810	800	780	770	790	770	720	750	750	750
14	780	780	820	790	780	780	790	770	730	740	740	750
15	780	780	790	790	780	790	790	770	750	740	740	750
16	780	780	820	790	780	780	790	770	750	740	750	750
17	780	780	810	800	780	790	790	770	730	740	740	750
18	780	780	820	790	780	780	780	770	730	730	750	760
19	770	780	810	800	780	770	780	770	730	740	750	750
20	780	780	810	790	780	770	780	760	730	770	750	740
21	770	780	820	790	780	770	780	760	740	740	750	750
22	780	780	810	790	780	780	780	760	730	730	750	760
23	770	780	810	800	780	770	780	760	730	730	750	750
24	780	780	810	800	780	780	780	760	730	730	740	750
25	780	790	810	800	780	770	780	760	730	750	750	760
26	780	790	800	800	780	780	780	760	740	740	750	770
27	780	790	810	800	780	770	780	760	740	730	750	750
28	780	790	810	790	780	780	780	760	730	730	750	740
29	780	780	810	800	---	780	780	750	730	740	750	750
30	780	790	810	800	---	780	780	750	730	740	750	750
31	770	---	810	800	---	770	---	750	---	730	750	---
MONTH	774	782	812	794	780	775	783	765	736	737	749	750

MISSOURI RIVER BASIN

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06440000 MISSOURI RIVER AT PIERRE, S. DAK.--Continued

TEMPERATURE (°C) OF WATER, WATER YEAR OCTOBER 1973 TO SEPTEMBER 1974

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

BAD RIVER BASIN

06441500 BAD RIVER NEAR FORT PIERRE, S. DAK.

LOCATION.--Lat 44°19'36", long 100°23'02", in NW¼NW¼ sec.10, T.4 N., R.31 E., Stanley County, at gaging station, on right bank at downstream side of highway bridge, 2.1 mi (3.4 km) south of Fort Pierre, 4.3 mi (6.9 km) downstream from Willow Creek, and 6.0 mi (9.7 km) upstream from mouth.

DRAINAGE AREA.--3,107 mi² (8,047 km²).

PERIOD OF RECORD.--Water temperatures: October 1971 to September 1974.

Sediment records: October 1971 to September 1974.

EXTREMES.--1973-74:

Sediment concentrations: Maximum daily, 97,000 mg/l Apr. 21, minimum daily, no flow for many days.

SUSPENDED-SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1973 TO SEPTEMBER 1974

DAY	OCTOBER			NOVEMBER			DECEMBER		
	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
1	0	0	0	0	0	0			0
2	0	0	0	0	0	0			0
3	0	0	0	0	0	0			0
4	0	0	0	0	0	0			0
5	0	0	0	0	0	0			0
6	0	0	0	0	0	0			0
7	0	0	0	0	0	0			0
8	0	0	0	0	0	0			0
9	0	0	0	0	0	0			0
10	0	0	0	0	0	0			0
11	16	100	4.3	0	0	0			0
12	96	1560	404	0	0	0			0
13	54	980	143	0	0	0			0
14	14	370	14	0	0	0			0
15	4.6	160	2.0	0	0	0			0
16	1.3	100	.35	1.9	100	.51			0
17	.27	60	.04	2.0	800	4.3			0
18	.04	50	.01	.15	400	.16			0
19	.04	50	.01	.10	100	.03			0
20	.03	45	0	.08	50	.01			0
21	0	0	0	.08	50	.01			0
22	0	0	0	.06	40	.01			0
23	0	0	0	.04	40	0			0
24	0	0	0	.04	40	0			0
25	0	0	0	.04	40	0			0
26	0	0	0	0	0	0			0
27	0	0	0	0	0	0			0
28	0	0	0	0	0	0			0
29	0	0	0	0	0	0			0
30	0	0	0	0	0	0			0
31	0	0	0	--	--	--			0
TOTAL	186.28	--	567.71	4.49	--	5.03	0	--	0

PARTICLE-SIZE DISTRIBUTION OF SURFACE BED MATERIAL, WATER YEAR OCTOBER 1973 TO SEPTEMBER 1974

DATE	TIME	TEMPER- ATURE (DEG C) (00010)	NUMBER OF SAM- PLING POINTS (00063)	INSTAN- TANEOUS DIS- CHARGE (CFS) (00061)	BED MAT. FALL DIAM. % FINER THAN .062 MM (80158)	BED MAT. FALL DIAM. % FINER THAN .125 MM (80159)	BED MAT. FALL DIAM. % FINER THAN .250 MM (80160)
APR. 23...	1130	6.0	2	55	8	10	16
MAY 21...	0945	16.0	2	741	2	3	5
23...	0930	13.5	2	187	10	13	22
JUNE 06...	1040	21.0	--	48	12	18	24

BAD RIVER BASIN

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06441500 BAD RIVER NEAR FORT PIERRE, S. DAK.--Continued

EXTREMES.--1973-74:--Continued

Sediment discharge: Maximum daily, 356,000 tons Apr. 21; minimum daily, 0 tons on many days.

Period of record:

Sediment concentrations: Maximum daily, 97,000 mg/l Apr. 21, 1974; minimum daily, no flow for many days each year.

Sediment discharge: Maximum daily, 783,000 tons May 2, 1972; minimum daily, 0 tons on many days each year.

REMARKS.--Records fair. Flow affected by ice Feb. 19-24, Mar. 15-27. No flow Oct. 1-10, Oct. 21 to Nov. 15, Nov. 26 to Feb. 18, Apr. 1-13, June 23 to Sept. 30. Sediment-discharge records prior to Oct. 1, 1971, on file in the District office, Corps of Engineers, Omaha, Nebr. Miscellaneous samples for chemical data published for water years 1946-53.

SUSPENDED-SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1973 TO SEPTEMBER 1974

DAY	JANUARY			FEBRUARY			MARCH		
	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TUNS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TUNS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TUNS/DAY)
1		0		0	0	0	4.6	400	5.0
2		0		0	0	0	1.4	375	1.4
3		0		0	0	0	1.1	350	1.0
4		0		0	0	0	.87	325	.76
5		0		0	0	0	.49	300	.40
6		0		0	0	0	.10	270	.07
7		0		0	0	0	.13	240	.08
8		0		0	0	0	.09	280	.07
9		0		0	0	0	.06	278	.05
10		0		0	0	0	.04	277	.03
11		0		0	0	0	.06	280	.05
12		0		0	0	0	.10	414	.11
13		0		0	0	0	.09	350	.09
14		0		0	0	0	.06	300	.05
15		0		0	0	0	.05	250	.03
16		0		0	0	0	.05	200	.03
17		0		0	0	0	.04	150	.02
18		0		0	0	0	.04	100	.01
19		0		.50	300	.41	.03	80	.01
20		0		5.0	800	11	.02	60	0
21		0		2.5	600	4.1	.01	50	0
22		0		1.8	400	1.9	.01	50	0
23		0		1.5	450	1.8	.01	45	0
24		0		1.3	500	1.8	.01	45	0
25		0		3.3	450	4.0	.01	40	0
26		0		7.5	500	10	.02	40	0
27		0		6.2	450	7.5	.02	50	0
28		0		3.6	425	4.1	.04	50	.01
29		0		--	--	--	.05	45	.01
30		0		--	--	--	.02	45	0
31		0		--	--	--	.01	45	0
TOTAL	0	--	0	33.20	--	46.61	9.63	--	9.28

PARTICLE-SIZE DISTRIBUTION OF SURFACE BED MATERIAL, WATER YEAR OCTOBER 1973 TO SEPTEMBER 1974

DATE	BED MAT. FALL DIAM. % FINER THAN .500 MM (80161)	BED MAT. FALL DIAM. % FINER THAN 1.00 MM (80162)	BED MAT. SIEVE DIAM. % FINER THAN 2.00 MM (80169)	BED MAT. SIEVE DIAM. % FINER THAN 4.00 MM (80170)	BED MAT. SIEVE DIAM. % FINER THAN 8.00 MM (80171)	BED MAT. SIEVE DIAM. % FINER THAN 16.0 MM (80172)
APR. 23...	26	48	61	74	85	100
MAY 21...	16	48	61	74	86	100
23...	40	60	68	78	86	100
JUNE 06...	33	46	54	63	74	100

SUSPENDED-SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1973 TO SEPTEMBER 1974

TEMPERATURE (°C) OF WATER, WATER YEAR OCTOBER 1973 TO SEPTEMBER 1974

[illegible]

BAD RIVER BASIN

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06441500 BAD RIVER NEAR FORT PIERRE, S. DAK.--Continued

SUSPENDED-SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1973 TO SEPTEMBER 1974

DAY	JULY			AUGUST			SEPTEMBER		
	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
1		0			0			0	
2		0			0			0	
3		0			0			0	
4		0			0			0	
5		0			0			0	
6		0			0			0	
7		0			0			0	
8		0			0			0	
9		0			0			0	
10		0			0			0	
11		0			0			0	
12		0			0			0	
13		0			0			0	
14		0			0			0	
15		0			0			0	
16		0			0			0	
17		0			0			0	
18		0			0			0	
19		0			0			0	
20		0			0			0	
21		0			0			0	
22		0			0			0	
23		0			0			0	
24		0			0			0	
25		0			0			0	
26		0			0			0	
27		0			0			0	
28		0			0			0	
29		0			0			0	
30		0			0			0	
31		0			0			--	
TOTAL	0	--	0	0	--	0	0	--	0
TOTAL DISCHARGE FOR YEAR (FT ³ /S-DAYS)									5500.90
TOTAL SUSPENDED-SEDIMENT DISCHARGE FOR YEAR (TONS)									799652.38

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

DATE	TIME	TEMPER- ATURE (DEG C) (00010)	INSTAN- TANEOUS DIS- CHARGE (CFS) (00061)	SUS- PEN- DED SEDI- MENT CHARGE (MG/L) (80154)	SUS- PEN- DED SEDI- MENT CHARGE (T/DAY) (80155)	SUS. SED. FALL DIAM. % FINER THAN .002 MM (70337)	SUS. SED. FALL DIAM. % FINER THAN .004 MM (70338)	SUS. SED. FALL DIAM. % FINER THAN .016 MM (70340)	SUS. SED. FALL DIAM. % FINER THAN .062 MM (70342)	SUS. SED. FALL DIAM. % FINER THAN .125 MM (70343)
APR.										
19...	1750	18.5	32	42100	3640	79	91	92	100	--
21...	1040	10.0	1340	86900	314000	66	80	96	100	--
26...	1740	19.5	52	27300	3830	84	93	96	100	--
27...	1420	20.5	33	14400	1280	83	93	98	100	--
MAY										
21...	0430	15.0	998	83100	224000	69	79	99	100	--
21...	0945	16.0	741	41600	83200	71	81	90	100	--
21...	1725	25.0	342	39900	36800	71	81	91	100	--
22...	1800	17.5	382	28800	29700	78	--	98	100	--
23...	0930	13.5	187	12900	6510	75	89	--	100	--
30...	1730	155	670	91400	165000	68	80	85	99	100
31...	1830	19.0	110	78200	23200	79	91	97	100	--
JUNE										
06...	1040	21.0	48	1520	197	55	84	87	100	--

WHITE RIVER BASIN

06452000 WHITE RIVER NEAR OACOMA, S. DAK.

LOCATION.--Lat 43°44'54", long 99°33'22", in SE&SW¼ sec.3, T.103 N., R.73 W., Lyman County, at gaging station, on left bank at downstream side of bridge on State Highway 47, 1.5 mi (2.4 km) downstream from Wagner Draw, 1.8 mi (2.9 km) upstream from high-water line of Lake Francis Case, and 8.8 mi (14.2 km) southwest of Oacoma.

DRAINAGE AREA.--10,200 mi² (26,400 km²), approximately.

PERIOD OF RECORD.--Chemical analyses: March 1974 to September 1974 (monthly).

Water temperatures: October 1971 to September 1974.

Sediment records: October 1971 to September 1974.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1973 TO SEPTEMBER 1974

DATE	TIME	INSTAN- TANEOUS DIS- CHARGE (CFS) (00061)	DIS- SOLVED SILICA (SI02) (MG/L) (00955)	DIS- SOLVED CAL- CIUM (CA) (MG/L) (00915)	DIS- SOLVED MAG- NE- SIUM (MG) (MG/L) (00925)	DIS- SOLVED SODIUM (NA) (MG/L) (00930)	DIS- SOLVED PO- TAS- SIUM (K) (MG/L) (00935)	BICAR- BONATE (HCO3) (MG/L) (00440)	DIS- SOLVED SULFATE (SO4) (MG/L) (00945)	DIS- SOLVED CHLO- RIDE (CL) (MG/L) (00940)	DIS- SOLVED FLUO- RIDE (F) (MG/L) (00950)	DIS- SOLVED PLUS NITRATE (N) (MG/L) (00631)
MAR. 13...	1415	271	32	34	3.8	66	4.0	183	81	5.8	.4	.31
APR. 18...	1230	790	25	6.1	.8	100	3.4	269	64	4.0	.8	--
MAY 22...	1530	261	20	5.2	.0	180	7.0	141	270	11	.6	--
JUNE 20...	1125	119	36	1.0	1.7	120	6.2	217	88	9.1	1.0	--
JULY 25...	1120	317	29	2.5	.1	140	4.6	230	110	8.3	.9	--
AUG. 21...	1700	60	37	1.2	.1	220	3.5	574	66	6.5	.8	--
SEP. 19...	1040	26	43	12	1.9	86	5.2	213	43	7.2	.6	--

DATE	TIME	INSTAN- TANEOUS DIS- CHARGE (CFS) (00061)	TEMPER- ATURE (DEG C) (00010)	TOTAL NITRITE PLUS NITRATE (N) (MG/L) (00630)	TOTAL KJEL- DAHL NITRO- GEN (N) (MG/L) (00625)	TOTAL NITRO- GEN (N) (MG/L) (00600)	TOTAL PHOS- PHORUS (P) (MG/L) (00665)	TOTAL ORGANIC CARBON (C) (MG/L) (00680)	TUR- BID- ITY (JTU) (00070)	TOTAL PHYTO- PLANK- TON (CELLS PER ML) (60050)
MAR. 13...	1415	271	4.0	.33	.82	1.2	.90	--	--	--
APR. 18...	1230	790	9.5	1.0	2.2	3.2	15	38	8300	0
MAY 22...	1530	261	20.0	.56	13	14	4.9	--	2900	0
JUNE 20...	1125	117	23.0	1.6	1.2	2.8	9.3	--	5100	--
JULY 25...	1120	317	19.5	2.2	5.5	7.7	27	--	15000	22000
AUG. 21...	1700	60	23.0	1.3	3.2	4.5	11	--	6100	56000
SEP. 19...	1040	26	13.0	.25	1.9	2.2	3.6	--	1500	--

NOTE.--Carbonate (CO₃) analysis for all samples, 0.0 mg/l.

WHITE RIVER BASIN

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06452000 WHITE RIVER NEAR OACOMA, S. DAK.--Continued

EXTREMES.--1973-74:

Sediment concentrations: Maximum daily, 72,300 mg/l Apr. 15; no flow July 17-23.

Sediment discharge: Maximum daily, 448,000 tons Apr. 14; minimum daily, 0 tons July 17-23.

Period of record:

Sediment concentrations: Maximum daily, 72,300 mg/l Apr. 15, 1974; no flow July 17-23, 1974.

Sediment discharge: Maximum daily, 1,220,000 tons May 29, 1973; minimum daily, 0 tons July 17-23, 1974.

REMARKS.--Records poor. Flow affected by ice Nov. 20 to Mar. 2. No flow July 17-23. Sediment-discharge records prior to Oct. 1, 1971, on file in District office, Corps of Engineers, Omaha, Nebr. Miscellaneous samples for chemical data published for water years 1946-53, 1969.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1973 TO SEPTEMBER 1974

DATE	DIS-SOLVED-PHOSPHORUS (MG/L) (00666)	TOTAL-PHOSPHORUS (MG/L) (00665)	DIS-SOLVED-BORON (UG/L) (01020)	DIS-SOLVED-SOLIDS (SUM OF CONSTITUENTS) (MG/L) (70301)	DIS-SOLVED-SOLIDS (TONS PER AC-FT) (70303)	DIS-SOLVED-SOLIDS (TONS PER DAY) (70302)	HARD-NESS (CA,MG) (MG/L) (00900)	NON-CARBONATE-HARD-NESS (MG/L) (00902)	SODIUM-ADSORPTION-RATIO (00931)	SPECIFIC-CONDUCTANCE (MICRO-MHOS) (00095)	PH (UNITS) (00400)	TEMPERATURE (DEG C) (00010)
MAR. 13...	--	.90	--	319	.46	247	100	0	2.9	482	7.9	4.0
APR. 18...	--	15	--	340	.45	710	19	0	10	522	8.5	9.5
MAY 22...	--	4.9	--	563	.75	391	13	0	22	823	7.7	20.0
JUNE 20...	--	9.3	--	373	.55	127	10	0	17	558	8.6	23.0
JULY 25...	--	27	--	409	.59	372	7	0	24	691	8.3	19.5
AUG. 21...	--	11	--	625	.51	60.8	3	0	52	519	8.5	23.0
SEP. 19...	--	3.6	--	308	.41	21.1	38	0	6.1	439	8.2	13.0

DATE	TIME	INSTANTANEOUS-DISCHARGE (CFS) (00061)	TEMPERATURE (DEG C) (00010)	DIS-SOLVED-ARSENIC (AS) (UG/L) (01000)	SUS-PENDED-ARSENIC (AS) (UG/L) (01001)	TOTAL-ARSENIC (AS) (UG/L) (01002)	DIS-SOLVED-CADMIUM (CD) (UG/L) (01025)	SUS-PENDED-CADMIUM (CD) (UG/L) (01026)	TOTAL-CADMIUM (CD) (UG/L) (01027)	DIS-SOLVED-CHROMIUM (CR) (UG/L) (01030)	SUS-PENDED-CHROMIUM (CR) (UG/L) (01031)
APR. 18...	1230	790	9.5	6	130	140	0	30	30	0	140
JULY 25...	1120	317	19.5	23	280	300	0	20	20	0	100

DATE	TOTAL-CHROMIUM (CR) (UG/L) (01034)	DIS-SOLVED-COBALT (CO) (UG/L) (01035)	SUS-PENDED-COBALT (CO) (UG/L) (01036)	TOTAL-COBALT (CO) (UG/L) (01037)	DIS-SOLVED-COPPER (CU) (UG/L) (01040)	SUS-PENDED-COPPER (CU) (UG/L) (01041)	TOTAL-COPPER (CU) (UG/L) (01042)	DIS-SOLVED-IRON (FE) (UG/L) (01046)	TOTAL-IRON (FE) (UG/L) (01045)	DIS-SOLVED-LEAD (PB) (UG/L) (01049)	SUS-PENDED-LEAD (PB) (UG/L) (01050)
APR. 18...	140	0	250	250	20	300	320	120	120000	2	300
JULY 25...	100	0	150	150	10	210	220	40	30000	3	400

DATE	TOTAL-LEAD (PB) (UG/L) (01051)	DIS-SOLVED-MANGANESE (MN) (UG/L) (01056)	SUS-PENDED-MANGANESE (MN) (UG/L) (01054)	TOTAL-MANGANESE (MN) (UG/L) (01055)	DIS-SOLVED-SELENIUM (SE) (UG/L) (01145)	SUS-PENDED-SELENIUM (SE) (UG/L) (01146)	TOTAL-SELENIUM (SE) (UG/L) (01147)	DIS-SOLVED-MERCURY (HG) (UG/L) (71890)	SUS-PENDED-MERCURY (HG) (UG/L) (71895)	TOTAL-MERCURY (HG) (UG/L) (71900)
APR. 18...	300	20	8500	8500	8	0	3	.0	.4	.4
JULY 25...	400	0	8800	8800	2	0	0	.0	1.2	1.2

WHITE RIVER BASIN

06452000 WHITE RIVER NEAR OACOMA, S. DAK.--Continued

SUSPENDED-SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1973 TO SEPTEMBER 1974

DAY	OCTOBER			NOVEMBER			DECEMBER		
	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
1	389	25500	26800	92	1240	308	150	1040	421
2	306	22000	18200	92	1390	345	140	1500	567
3	306	19500	16100	88	1230	292	120	1030	334
4	273	17000	12500	94	1510	383	110	750	223
5	240	14500	9400	101	1850	504	90	473	115
6	201	11500	6240	114	1340	412	80	400	86
7	182	9000	4420	101	1280	349	70	339	64
8	155	7000	2930	92	1430	355	60	370	60
9	148	5000	2000	121	2950	964	55	400	59
10	135	3500	1280	103	2950	820	50	435	59
11	218	9000	5300	112	1350	408	45	410	50
12	249	5500	3700	171	5050	2330	40	390	42
13	218	2500	1470	171	4750	2190	39	366	39
14	246	3500	2320	165	4900	2180	37	325	32
15	458	33000	40800	224	8600	5200	35	285	27
16	1090	56500	166000	317	12400	10600	35	245	23
17	1090	37500	110000	398	14600	15700	37	200	20
18	757	27000	55200	350	9800	9260	38	160	16
19	526	20500	29100	291	9700	7620	39	112	12
20	393	16000	17000	230	9400	5840	40	111	12
21	313	13000	11000	150	8320	3370	42	110	12
22	249	11000	7400	100	6410	1730	45	108	13
23	212	7500	4290	90	5960	1450	40	111	12
24	182	7400	3640	90	6200	1510	30	114	9.2
25	158	6300	2690	95	4550	1170	25	116	7.8
26	143	4900	1890	100	5170	1400	25	110	7.4
27	126	4480	1520	110	4420	1310	27	104	7.6
28	121	2760	902	120	3450	1120	25	107	7.2
29	114	2750	846	130	1700	597	20	110	5.9
30	105	1740	493	140	1170	442	15	112	4.5
31	97	1320	346	--	--	--	12	120	3.9
TOTAL	9400	--	565777	4552	--	80159	1616	--	2351.5

PARTICLE-SIZE DISTRIBUTION OF SURFACE BED MATERIAL, WATER YEAR OCTOBER 1973 TO SEPTEMBER 1974

DATE	TIME	TEMPER- ATURE (DEG C) (00010)	NUMBER OF SAM- PLING POINTS (00063)	INSTAN- TANEOUS DIS- CHARGE (CFS) (00061)	BED MAT. FALL DIAM. % FINER THAN .004 MM (80157)	BED MAT. FALL DIAM. % FINER THAN .062 MM (80158)	BED MAT. FALL DIAM. % FINER THAN .125 MM (80159)
OCT.							
04...	1130	11.0	2	274	--	--	0
26...	1300	9.0	1	54	--	0	1
NOV.							
01...	1345	4.0	2	91	--	--	0
29...	1530	1.0	2	132	--	0	2
MAR.							
13...	1430	4.0	1	271	--	0	1
APR.							
18...	1200	9.5	1	790	--	0	2
MAY							
22...	1540	20.0	2	261	--	0	1
JUNE							
20...	1100	23.0	2	119	0	1	3
JULY							
25...	1100	19.5	20	317	--	0	1
AUG.							
21...	1650	23.0	2	60	--	0	3
SEP.							
19...	1030	13.0	2	26	--	4	4

WHITE RIVER BASIN

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06452000 WHITE RIVER NEAR OACOMA, S. DAK.--Continued

SUSPENDED-SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1973 TO SEPTEMBER 1974

DAY	JANUARY			FEBRUARY			MARCH		
	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
1	10	130	3.5	80	1300	281	500	691	933
2	10	140	3.8	80	1150	248	1000	702	1900
3	12	142	4.6	80	1000	216	1360	693	2540
4	14	144	5.4	80	874	189	761	702	1440
5	13	147	5.2	75	850	172	568	714	1090
6	12	147	4.8	75	830	168	455	710	872
7	12	148	4.8	80	810	175	346	723	675
8	12	148	4.8	80	800	173	306	3760	3110
9	12	143	4.6	90	785	191	287	3940	3050
10	11	138	4.1	100	776	210	270	4180	3050
11	10	132	3.6	150	675	273	263	4010	2850
12	10	123	3.3	200	575	311	266	4080	2930
13	11	114	3.4	220	481	286	270	2880	2100
14	12	118	3.8	220	495	294	256	3140	2170
15	20	122	6.6	250	510	344	249	3170	2130
16	29	126	9.9	280	530	401	243	3190	2090
17	32	400	35	300	550	446	237	2600	1660
18	32	595	51	300	570	462	237	1980	1270
19	30	600	49	280	600	454	243	3100	2030
20	50	750	101	250	630	425	246	3310	2200
21	250	700	473	200	670	362	218	2490	1470
22	200	750	405	180	712	346	204	2870	1580
23	100	800	216	160	711	307	201	2240	1220
24	90	800	194	150	687	278	195	3870	2040
25	95	750	192	160	702	303	179	4640	2240
26	95	800	205	170	698	320	179	3400	1640
27	95	2000	513	200	701	379	218	7900	4650
28	90	1980	481	300	705	571	218	10500	6180
29	90	1820	442	--	--	--	198	7630	4080
30	85	1650	379	--	--	--	195	7710	4060
31	80	1480	320	--	--	--	190	5980	3070
TOTAL	1624	--	4132.2	4790	--	8585	10558	--	72320

PARTICLE-SIZE DISTRIBUTION OF SURFACE BED MATERIAL, WATER YEAR OCTOBER 1973 TO SEPTEMBER 1974

DATE	BED MAT. FALL DIAM. % FINER THAN (80160)	BED MAT. FALL DIAM. % FINER THAN (80161)	BED MAT. FALL DIAM. % FINER THAN (80162)	BED MAT. SIEVE DIAM. % FINER THAN (80169)	BED MAT. SIEVE DIAM. % FINER THAN (80170)	BED MAT. SIEVE DIAM. % FINER THAN (80171)	BED MAT. SIEVE DIAM. % FINER THAN (80172)
	.250 MM	.500 MM	1.00 MM	2.00 MM	4.00 MM	8.00 MM	16.0 MM
OCT.							
04...	8	56	91	96	99	100	--
26...	11	47	87	91	93	98	100
NOV.							
01...	1	30	90	98	100	--	--
29...	25	72	96	99	100	--	--
MAR.							
13...	20	75	96	98	100	--	--
APR.							
18...	11	67	97	99	100	--	--
MAY							
22...	13	80	96	97	99	100	--
JUNE							
20...	12	50	89	95	99	100	--
JULY							
25...	6	72	92	94	96	99	100
AUG.							
21...	10	47	85	91	96	98	100
SEP.							
19...	12	53	89	95	98	100	--

WHITE RIVER BASIN

06452000 WHITE RIVER NEAR OACOMA, S. DAK.--Continued

SUSPENDED-SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1973 TO SEPTEMBER 1974

DAY	APRIL			MAY			JUNE		
	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
1	195	6950	3660	450	8590	10400	153	18500	7640
2	187	5620	2840	384	8520	8830	150	18100	7330
3	190	5750	2950	354	7000	6690	150	18200	7370
4	182	4550	2240	321	5000	4330	277	18300	13700
5	179	4000	1930	295	3000	2390	665	19300	34700
6	174	3500	1640	273	1220	899	385	29000	30100
7	176	3000	1430	256	1200	829	309	23500	19600
8	174	2500	1170	240	1180	765	266	12000	8620
9	168	2000	907	240	968	627	295	10800	8600
10	158	1500	640	240	949	615	257	10800	7490
11	187	8500	4290	243	924	606	198	10800	5770
12	207	11500	6430	237	903	578	177	8490	4060
13	198	4500	2410	243	929	610	174	7470	3510
14	2460	67500	448000	227	840	515	226	5500	3360
15	1660	72300	324000	218	685	403	318	10900	9360
16	1370	46000	170000	209	669	378	253	12000	8200
17	1050	37200	105000	207	618	345	191	12400	6390
18	790	29200	62300	201	595	323	165	15300	6820
19	612	22400	37000	184	920	457	138	15500	5780
20	500	13400	18100	209	1380	779	114	14000	4310
21	621	14200	23800	269	2300	1670	94	9200	2330
22	1110	41500	124000	332	3150	2820	88	9160	2180
23	2680	44200	320000	277	2950	2210	75	8990	1820
24	1710	41500	192000	212	2620	1500	69	8970	1670
25	1300	21000	73700	179	1320	638	66	9650	1720
26	976	19000	50100	168	1000	454	66	9700	1730
27	732	19800	39100	163	718	316	55	7480	1110
28	579	10200	15900	179	713	345	53	7500	1070
29	480	9180	11900	160	716	309	49	7500	992
30	398	9510	10200	158	4410	1880	46	7470	928
31	--	--	--	155	18300	7660	--	--	--
TOTAL	21403	--	2057637	7483	--	61171	5522	--	218260

TEMPERATURE (°C) OF WATER, WATER YEAR OCTOBER 1973 TO SEPTEMBER 1974

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

06452000 WHITE RIVER NEAR OACOMA, S. DAK.--Continued

SUSPENDED-SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1973 TO SEPTEMBER 1974

DAY	JULY			AUGUST			SEPTEMBER		
	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
1	44	6400	760	41	23400	2590	67	10500	1900
2	6.2	1200	20	30	21400	1730	66	10500	1870
3	6.2	222	3.7	22	19800	1180	50	10000	1350
4	5.5	207	3.1	16	1800	78	57	10500	1620
5	5.5	234	3.5	7.6	1830	38	47	10000	1270
6	5.5	239	3.5	6.2	1870	31	43	8000	929
7	3.2	241	2.1	4.9	3400	45	37	3000	300
8	2.7	239	1.7	3.2	3000	26	93	9000	2260
9	3.2	256	2.2	2.7	1130	8.2	155	13000	5440
10	1.9	271	1.4	1.9	1080	5.5	135	12000	4370
11	1.3	229	.80	.60	1320	2.1	88	11500	2730
12	1.0	230	.62	.40	1470	1.6	75	11000	2230
13	.80	570	1.2	.40	1820	2.0	73	10500	2070
14	.80	1200	2.6	72	6800	1320	90	10200	2480
15	2.3	680	4.2	443	49500	59200	79	10200	2180
16	.10	330	.09	331	45500	40700	73	10200	2010
17	0	230	0	241	32000	20800	41	10500	1160
18	0	226	0	194	24500	12800	40	8600	929
19	0	228	0	143	21000	8110	25	4400	297
20	0	224	0	84	18500	4200	18	1300	63
21	0	220	0	58	17000	2660	19	700	36
22	0	218	0	49	8000	1060	18	324	16
23	0	215	0	40	1500	162	15	350	14
24	223	48500	29200	40	600	65	15	374	15
25	304	42000	34500	30	480	39	13	310	11
26	245	31600	20900	20	420	23	14	249	9.4
27	162	31500	13800	27	400	29	9.8	240	6.4
28	99	31400	8390	16	350	15	9.8	300	7.9
29	60	31400	5090	13	300	11	11	290	8.6
30	49	32000	4230	17	260	12	7.6	280	5.7
31	44	32500	3860	67	9800	1770	--	--	--
TOTAL	1276.20	--	120780.71	2021.90	--	158713.4	1484.2	--	37588.0
TOTAL DISCHARGE FOR YEAR (FT ³ /S-DAYS)									71730.30
TOTAL SUSPENDED-SEDIMENT DISCHARGE FOR YEAR (TONS)									3387474.81

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25°C), WATER YEAR OCTOBER 1973 TO SEPTEMBER 1974

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	480	---	520	540	1900	550	820	700	700	---
2	---	---	490	1200	520	540	1900	550	820	1410	705	---
3	---	---	480	---	520	530	1900	---	810	1420	725	---
4	---	---	---	---	510	540	1900	---	820	1420	995	---
5	---	---	590	1210	530	540	---	---	810	1420	985	---
6	---	---	---	---	510	530	---	610	660	1430	975	---
7	---	---	590	---	510	540	---	610	620	1420	975	---
8	---	---	---	1240	530	530	---	610	540	1420	970	---
9	---	---	---	---	540	540	---	610	540	1420	2250	---
10	---	---	610	---	510	540	---	590	540	1420	2280	---
11	---	---	---	1220	520	530	---	590	530	1430	---	---
12	---	---	---	---	1150	540	---	590	530	---	---	---
13	---	---	670	1250	---	530	630	580	510	---	2250	---
14	---	---	---	---	---	540	620	590	490	---	670	470
15	---	---	---	---	---	540	630	590	500	---	680	470
16	---	---	---	---	---	530	540	600	600	1300	675	470
17	---	---	---	1000	---	530	540	610	620	1300	---	470
18	---	---	---	1020	---	530	510	620	540	---	---	460
19	---	---	890	1020	---	540	490	600	540	---	---	440
20	---	---	---	710	---	540	480	600	610	---	---	450
21	---	---	---	1020	540	530	480	680	610	---	---	---
22	---	---	1190	690	530	530	600	610	640	---	---	470
23	---	---	---	700	540	530	600	640	600	---	---	---
24	---	---	---	1000	530	530	600	610	610	---	---	460
25	---	---	1190	530	530	530	510	600	620	720	---	---
26	---	---	---	520	540	520	510	610	620	710	---	440
27	---	---	1200	520	530	530	510	600	700	710	---	---
28	---	---	---	520	540	520	520	630	720	720	---	---
29	---	520	---	510	---	1900	520	630	700	710	---	---
30	---	520	1200	520	---	1900	520	630	700	720	---	---
31	---	---	---	520	---	1900	---	820	---	700	---	---
MONTH	---	---	---	---	---	666	---	613	632	---	---	---

WHITE RIVER BASIN

06452000 WHITE RIVER NEAR OACOMA, S. DAK.--Continued

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

DATE	TIME	TEMPER- ATURE (DEG C) (00010)	INSTAN- TANEOUS DIS- CHARGE (CFS) (00061)	SUS- PENDE SED- IMENT (MG/L) (80154)	SUS- PENDE SED- IMENT DIS- CHARGE (T/DAY) (80155)	SUS. SED. FALL DIAM. % FINER THAN .002 MM (70337)	SUS. SED. FALL DIAM. % FINER THAN .004 MM (70338)	SUS. SED. FALL DIAM. % FINER THAN .016 MM (70340)	SUS. SED. FALL DIAM. % FINER THAN .031 MM (70341)	SUS. SED. FALL DIAM. % FINER THAN .062 MM (70342)	SUS. SED. FALL DIAM. % FINER THAN .125 MM (70343)	SUS. SED. FALL DIAM. % FINER THAN .250 MM (70344)
OCT.												
04...	1130	11.0	274	17500	12900	83	94	99	--	100	--	--
18...	1050	13.5	732	28200	55700	66	78	96	--	99	100	--
NOV.												
17...	1500	4.0	393	15300	15100	75	84	98	--	100	--	--
29...	1530	1.0	132	1730	617	77	86	93	--	94	95	100
APR.												
14...	1930	8.0	2560	82000	567000	53	62	82	--	99	100	--
17...	1130	9.0	1070	42600	123000	68	80	97	--	100	--	--
18...	1200	9.5	790	29300	62500	60	73	83	--	99	100	--
18...	1500	13.0	761	33700	69200	74	84	98	--	100	--	--
23...	1630	10.0	2140	47900	277000	55	68	90	--	100	--	--
30...	1830	18.0	412	9640	10700	80	93	96	--	100	--	--
MAY												
22...	1540	20.0	261	11600	8170	70	84	95	--	10	--	--
31...	1130	24.0	152	19400	7960	62	72	92	--	100	--	--
JUNE												
02...	1600	22.0	148	19600	7830	60	72	92	--	100	--	--
04...	1600	20.0	176	21300	10100	60	71	92	--	100	--	--
10...	0900	14.0	261	12000	8460	85	95	99	100	--	--	--
15...	0800	16.0	318	11500	9870	77	86	96	--	100	--	--
20...	1100	23.0	119	14800	4760	90	97	99	--	100	--	--
21...	0900	26.0	94	10300	2610	92	96	98	--	100	--	--
JULY												
01...	0800	19.0	36	8640	840	96	96	97	--	--	--	--
25...	1100	19.5	317	48500	41500	72	86	97	--	100	--	--
25...	2100	22.0	295	33100	26400	86	95	95	--	100	--	--
27...	0800	23.0	171	35100	16200	90	98	99	--	100	--	--
29...	0800	24.0	67	34600	6260	90	97	99	--	100	--	--
30...	1800	24.0	47	39000	4950	90	98	99	--	100	--	--
31...	2000	22.0	42	38100	4320	90	97	99	--	100	--	--
AUG.												
02...	0900	20.0	30	26000	2110	96	98	99	--	100	--	--
03...	2000	21.0	16	22800	985	94	98	99	--	100	--	--
15...	0800	17.0	460	54700	67900	73	88	99	--	100	--	--
21...	1650	23.0	60	18600	3010	95	98	98	--	100	--	--

WHITE RIVER BASIN

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06452000 WHITE RIVER NEAR OACOMA, S. DAK.--Continued

TEMPERATURE (°C) OF WATER, WATER YEAR OCTOBER 1973 TO SEPTEMBER 1974
 (RECORDER WITH TEMPERATURE ATTACHMENT, CONTINUOUS ETHYL ALCOHOL-ACTUATED THERMOGRAPH)

	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	---	---	---	---	---	---	---	---	17.0	14.5	13.0	9.5
2	---	---	---	---	---	---	---	---	20.0	15.0	9.5	9.0
3	---	---	---	---	---	---	---	---	14.0	11.5	12.0	6.0
4	---	---	---	---	---	---	---	---	13.5	10.5	11.5	8.0
5	---	---	---	---	---	---	---	---	14.0	11.0	11.0	11.0
6	---	---	---	---	---	---	---	---	15.5	13.0	15.5	11.0
7	---	---	---	---	---	---	---	---	15.5	13.5	17.0	11.0
8	---	---	---	---	---	---	---	---	16.0	15.0	16.5	13.5
9	---	---	---	---	---	---	---	---	17.0	15.0	15.5	14.5
10	---	---	---	---	---	---	---	---	17.0	14.0	15.5	14.5
11	---	---	---	---	---	---	---	---	18.0	11.5	15.0	13.5
12	---	---	---	---	---	---	---	---	18.5	15.0	13.5	9.0
13	---	---	---	---	---	---	---	---	18.5	15.0	9.0	5.5
14	---	---	---	---	---	---	---	---	21.0	17.0	10.0	5.5
15	---	---	---	---	---	---	---	---	21.0	19.0	10.0	8.5
16	---	---	---	---	---	---	---	---	21.5	19.0	14.5	10.0
17	---	---	---	---	---	---	---	---	21.5	19.0	15.5	12.0
18	---	---	---	---	---	---	---	---	23.0	18.5	17.0	11.0
19	---	---	---	---	---	---	---	---	24.0	20.5	---	---
20	---	---	---	---	---	---	---	---	24.5	23.5	---	---
21	---	---	---	---	---	---	---	---	23.0	18.5	---	---
22	---	---	---	---	---	---	---	---	21.5	17.0	---	---
23	---	---	---	---	---	---	---	---	20.5	18.5	---	---
24	---	---	---	---	---	---	---	---	22.0	18.5	---	---
25	---	---	---	---	---	---	---	---	25.5	20.5	---	---
26	---	---	---	---	---	---	24.0	19.5	24.5	20.0	---	---
27	---	---	---	---	---	---	22.0	18.0	20.0	15.0	---	---
28	---	---	---	---	---	---	21.5	20.0	19.0	15.0	---	---
29	---	---	---	---	---	---	20.5	18.0	18.5	15.0	---	---
30	---	---	---	---	---	---	18.0	14.5	20.5	15.0	---	---
31	---	---	---	---	---	---	17.0	16.0	15.5	13.0	---	---
MONTH	---	---	---	---	---	---	---	---	25.5	10.5	---	---

MISSOURI RIVER MAIN STEM

06467500 MISSOURI RIVER AT YANKTON, S. DAK.

LOCATION.--Lat 42°51'58", long 97°23'37", in SW¼SW¼ sec.18, T.93 N., R.55 W., Yankton County, at gaging station, near left bank in downstream end of left pier of Meridian Highway Bridge on U.S. Highway 81, 5.2 mi (8.4 km) downstream from Gavins Point Dam, 6.0 mi (9.7 km) upstream from James River, and at mile 805.8 (1,296.5 km).

CHEMICAL ANALYSES, AUGUST 1973 TO JANUARY 1974

		INSTAN- TANEOUS DIS- CHARGE (CFS) (00061)	DIS- SOLVED SILICA (SiO2) (MG/L) (00955)	DIS- SOLVED CAL- CIUM (CA) (MG/L) (00915)	DIS- SOLVED MAG- NE- SIUM (MG) (MG/L) (00925)	DIS- SOLVED SODIUM (NA) (MG/L) (00930)	DIS- SOLVED PO- TAS- SIUM (K) (MG/L) (00935)	BICAR- BONATE (HCO3) (MG/L) (00440)
DATE	TIME							
NOV.								
10...	1130	31000	--	--	--	--	--	--
14...	1130	29000	8.8	60	22	67	5.8	182
DEC.								
12...	1230	18900	15	230	97	54	10	341
JAN.								
15...	1545	20200	10	62	22	72	6.0	202

		DIS- SOLVED SULFATE (SO4) (MG/L) (00945)	DIS- SOLVED CHLO- RIDE (CL) (MG/L) (00940)	DIS- SOLVED FLUO- RIDE (F) (MG/L) (00950)	DIS- SOLVED NITRITE PLUS NITRATE (N) (MG/L) (00631)	DIS- SOLVED ORTHO. PHOS- PHORUS (P) (MG/L) (00671)	TOTAL PHOS- PHORUS (P) (MG/L) (00665)	DIS- SOLVED BORON (B) (UG/L) (01020)	DIS- SOLVED SOLIDS (RESI- DUE AT 180 C) (MG/L) (70300)	DIS- SOLVED SOLIDS (SUM OF CONSTI- TUENTS) (MG/L) (70301)
DATE										
NOV.										
10...	--	--	--	--	--	--	--	--	--	--
14...	200	12	.4	.23	.07	.03	--	--	485	471
DEC.										
12...	770	14	.3	.17	.05	.04	--	--	1370	1360
JAN.										
15...	220	12	.5	.19	.01	.05	--	--	514	505

		DIS- SOLVED SOLIDS (TONS PER AC-FT) (70303)	DIS- SOLVED SOLIDS (TONS PER DAY) (70302)	HARD- NESS (CA, MG) (MG/L) (00900)	NON- CAR- BONATE HARD- NESS (MG/L) (00902)	SODIUM AD- SORP- TION RATIO (00931)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS) (00095)	PH (UNITS) (00400)	TEMPER- ATURE (DEG C) (00010)
DATE									
NOV.									
10...	--	--	--	--	--	--	640	8.5	6.0
14...	.66	38000		240	84	1.9	749	8.4	6.0
DEC.									
12...	1.86	69900		970	690	.8	750	8.1	4.0
JAN.									
15...	.70	28000		250	80	2.0	720	8.2	1.0

NOTE.--Carbonate (CO3) analysis for all samples, 0.0 mg/l.

MISSOURI RIVER MAIN STEM

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06467500 MISSOURI RIVER AT YANKTON, S. DAK.--Continued

DRAINAGE AREA.--279,500 mi² (723,900 km²), approximately.

PERIOD OF RECORD.--July 1969 to January 1974 (discontinued).

CHEMICAL ANALYSES, AUGUST 1973 TO JANUARY 1974

DATE	TIME	TUR- BID- ITY (JTU) (00070)	SUS- PENDE D SOLIDS (MG/L) (70299)	CHEM- ICAL OXYGEN DEMAND (HIGH LEVEL) (MG/L) (00340)	DIS- SOLVED NITRATE (N) (MG/L) (00618)	DIS- SOLVED NITRITE (N) (MG/L) (00613)	TOTAL NITRITE PLUS NITRATE (N) (MG/L) (00630)
NOV. 14...	1130	--	--	--	.22	.01	.30
DEC. 12...	1230	--	--	--	.17	.00	.18
JAN. 15...	1545	--	--	--	.19	.00	.20

DATE	AMMONIA NITRO- GEN (N) (MG/L) (00610)	ORGANIC NITRO- GEN (N) (MG/L) (00605)	TOTAL KJEL- DAHL NITRO- GEN (N) (MG/L) (00625)	TOTAL NITRO- GEN (N) (MG/L) (00600)	DIS- SOL- VED- PHOS- PHORUS (P) (MG/L) (00666)	TOTAL PHOS- PHORUS (P) (MG/L) (00665)	TOTAL ORGANIC CARBON (C) (MG/L) (00680)
NOV. 14...	.02	.27	.29	.59	--	.03	--
DEC. 12...	.04	.32	.36	.54	--	.04	--
JAN. 15...	.09	.08	.17	.37	--	.05	--

FIELD DETERMINATIONS

DATE	TIME	INSTAN- TANEOUS DIS- CHARGE (CFS) (00061)	TEMPER- ATURE (DEG C) (00010)	DIS- SOLVED OXYGEN (MG/L) (00300)	BIO- CHEM- ICAL OXYGEN DEMAND (MG/L) (00310)	IMME- DIATE COLI- FORM (COL. PER 100 ML) (31501)	FECAL COLI- FORM (COL. PER 100 ML) (31616)
NOV. 10...	1130	31000	6.0	10.2	2.0	50	30
DEC. 12...	1230	18900	4.0	10.5	1.5	10	<0
JAN. 15...	1545	20200	1.0	12.8	2.0	<5	<5

JAMES RIVER BASIN

06471000 JAMES RIVER AT COLUMBIA, S. DAK.

LOCATION.--Lat 45°37'05", long 98°19'30", in NE&NW¼ sec.29, T.125 N., R.62 W., Brown County, at gaging station, on left bank 10 ft (3 m) downstream from highway bridge, 0.8 mi (1.3 km) northwest of Columbia, 2.4 mi (3.9 km) upstream from Chicago and North Western Transportation Co. bridge, 3.6 mi (5.8 km) upstream from Elm River, and 9.4 mi (15.1 km) downstream from Sand Lake.

DRAINAGE AREA.--7,050 mi² (18,300 km²), approximately.

PERIOD OF RECORD.--Chemical analyses: June 1949 to September 1953 (miscellaneous), October 1966 to September 1973 (daily), October 1954 to August 1964 and October 1973 to September 1974 (monthly).

Water temperatures: October 1966 to September 1974.

Prior to October 1957, published as "near Columbia."

EXTREMES.--1973-74:

Specific conductance: Maximum daily, 2,500 micromhos Mar. 1; minimum daily, 475 micromhos Mar. 23.

Water temperatures: Maximum, 27.0°C July 3; minimum, freezing point on several days November to December.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1973 TO SEPTEMBER 1974

DATE	TIME	INSTANTANEOUS DIS-CHARGE (CFS) (00061)	DIS-SOLVED SILICA (SI02) (MG/L) (00955)	DIS-SOLVED CALCIUM (CA) (MG/L) (00915)	DIS-SOLVED MAGNE-SIUM (MG) (MG/L) (00925)	DIS-SOLVED SODIUM (NA) (MG/L) (00930)	DIS-SOLVED POTAS-SIUM (K) (MG/L) (00935)	BICARBONATE (HCO3) (MG/L) (00440)	DIS-SOLVED SULFATE (SO4) (MG/L) (00945)	DIS-SOLVED CHLORIDE (CL) (MG/L) (00940)	DIS-SOLVED FLUORIDE (F) (MG/L) (00950)	DIS-SOLVED NITRITE PLUS NITRATE (N) (MG/L) (00631)
DEC. 04...	0835	.70	21	7.8	73	320	28	583	440	120	.4	.02
MAR. 27...	0945	22	18	89	79	210	19	556	400	110	.6	.06
MAY 01...	1030	70	7.0	5.3	35	210	14	327	230	61	1.0	.02
JUNE 05...	0945	101	8.7	5.6	29	190	14	309	180	46	.2	.02
JULY 10...	1200	122	22	9.3	28	180	17	337	160	43	.2	.03
AUG. 08...	1200	79	19	8.4	29	170	12	356	150	39	.3	.01
SEP. 05...	0915	68	19	4.0	23	180	8.5	395	140	40	.3	.02

NOTE.--Carbonate (CO₃) analysis for all samples, 0.0 mg/l.

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25°C), WATER YEAR OCTOBER 1973 TO SEPTEMBER 1974

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	1410	1580	---	---	2500	1500	1110	940	1000	950	930
2	---	1400	1580	---	---	1400	1800	1000	1070	1000	940	950
3	---	1430	1720	---	---	1200	1500	1110	1100	990	930	960
4	---	1440	1750	---	---	1400	1480	1120	980	970	920	950
5	---	1440	1760	---	---	1390	1490	1100	940	960	920	950
6	---	1540	1760	---	---	480	1800	1110	950	990	920	960
7	---	1520	1720	---	---	625	1720	1110	940	990	920	960
8	---	1540	2220	---	---	730	1070	1110	940	1000	930	950
9	---	1680	2160	---	---	1050	1220	1070	940	1000	920	950
10	---	1660	2010	---	---	1040	1370	1070	950	1000	930	960
11	1360	1680	2000	---	---	1330	1070	1060	950	1010	910	1080
12	1320	1660	2070	---	---	1400	1480	1090	940	1010	910	1090
13	1330	1120	---	---	---	1430	1120	1070	950	1030	910	1080
14	1320	1510	---	---	---	1520	1130	1100	940	1010	910	1160
15	1360	1680	---	---	---	1520	1470	1060	940	1010	900	1080
16	1340	1390	---	---	---	1340	970	1040	940	1010	920	1160
17	1320	1390	---	---	---	1780	980	1040	950	1020	910	1160
18	1320	1390	---	---	---	1920	970	1030	940	990	920	---
19	1340	1400	---	---	---	1920	1070	1070	950	1000	910	---
20	1360	1480	---	---	---	1760	1040	970	930	980	920	---
21	1360	1550	---	---	---	1390	1010	960	930	1000	920	---
22	1320	1500	---	---	---	500	990	970	930	990	910	---
23	1320	1370	---	---	---	475	990	1040	930	1000	920	---
24	1350	1610	---	---	---	2220	1040	1070	910	1000	940	---
25	1350	1620	---	---	---	1800	1060	1240	930	1010	940	---
26	1360	1600	---	---	---	1800	1050	1040	910	1010	920	---
27	1350	1580	---	---	---	1850	1020	1000	920	1020	930	---
28	1380	1390	---	---	---	1750	1070	960	920	1020	930	---
29	1330	1650	---	---	---	1740	1060	970	910	1020	950	---
30	1360	1750	---	---	---	1700	1060	950	930	1040	950	---
31	1370	---	---	---	---	1680	---	940	---	1040	950	---
MONTH	---	1510	---	---	---	1440	1220	1050	947	1000	925	---

JAMES RIVER BASIN

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06471000 JAMES RIVER AT COLUMBIA, S. DAK.--Continued

EXTREMES.--Continued

Period of record:

Dissolved solids (1966-69, 1970-72): Maximum, 1,190 mg/l Dec. 19-21, 1967; minimum, 282 mg/l Apr. 1-30, 1972.

Hardness (1966-69, 1970-72): Maximum, 503 mg/l Dec. 19-21, 1967; minimum, 160 mg/l Apr. 1-30, 1972.

Specific conductance (1966-74): Maximum daily, 2,500 micromhos Mar. 1, 1974; minimum daily, 240 micromhos Mar. 17, 1972.

Water temperatures (1966-74): Maximum, 32.0°C June 29, July 10, 1970; minimum, freezing point on many days during winter period.

REMARKS.--Maximum observed during water year: Dissolved solids, 1,300 mg/l Dec. 5; hardness, 550 mg/l Dec. 28, Mar. 27; water temperatures, 30.0°C July 10. Minimum observed during water year: Dissolved solids, 605 mg/l Aug. 8; hardness, 100 mg/l Sept. 5. No flow Oct. 1-10, Dec. 13 to Feb. 28, Sept. 18-30.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1973 TO SEPTEMBER 1974

DATE	DIS- SOL- VED- PHOS- PHORUS (P) (00666)	TOTAL PHOS- PHORUS (P) (00665)	DIS- SOLVED BORON (B) (01020)	DIS- SOLVED SOLIDS (SUM OF CONSTITUENTS) (MG/L) (70301)	DIS- SOLVED SOLIDS (TONS PER AC-FT) (70303)	DIS- SOLVED SOLIDS (TONS PER DAY) (70302)	HARD- NESS (CA, MG) (MG/L) (00900)	NON- CAR- BONATE HARD- NESS (MG/L) (00902)	SODIUM AD- SORP- TION RATIO (00931)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS) (00095)	PH (UNITS) (00400)	TEMPER- ATURE (DEG C) (00010)
DEC. 04...	.07	.25	450	1300	1.77	2.46	320	0	7.8	1930	8.3	.0
MAR. 27...	.13	.24	440	1200	1.63	71.3	550	91	3.9	1850	8.1	.0
MAY 01...	.10	.30	400	725	.97	135	160	0	7.3	1110	8.2	12.5
JUNE 05...	.15	.25	350	626	.86	173	130	0	7.2	961	7.6	20.5
JULY 10...	.64	.65	330	628	.85	207	140	0	6.7	943	7.7	30.0
AUG. 08...	.48	.50	340	605	.82	129	140	0	6.2	951	7.7	20.5
SEP. 05...	.33	.50	330	611	.83	112	100	0	7.7	963	--	11.0

TEMPERATURE (°C) OF WATER, WATER YEAR OCTOBER 1973 TO SEPTEMBER 1974

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	9.0	1.0	---	---	1.0	7.0	15.0	17.0	23.0	22.0	15.0
2	---	7.0	1.5	---	---	2.0	7.0	13.0	18.0	27.0	21.0	14.0
3	---	4.0	2.5	---	---	2.0	6.0	12.0	21.0	25.0	20.0	12.5
4	---	2.0	2.0	---	---	3.0	8.0	10.0	20.0	22.0	22.0	16.0
5	---	2.0	0.0	---	---	3.0	8.0	11.0	22.0	23.0	23.0	15.0
6	---	2.5	1.5	---	---	3.0	8.0	12.0	19.0	22.0	19.0	16.0
7	---	1.5	1.0	---	---	0.0	8.0	12.0	20.0	23.0	20.0	17.0
8	---	1.0	2.5	---	---	0.5	3.0	11.0	19.0	24.0	20.0	18.0
9	---	1.0	0.5	---	---	1.0	12.0	12.0	18.0	25.0	21.0	16.0
10	---	0.5	0.0	---	---	0.5	9.0	13.0	17.0	26.0	20.0	17.0
11	10.0	1.0	1.0	---	---	0.5	11.0	12.0	18.0	25.0	19.0	18.0
12	8.0	2.0	0.5	---	---	1.5	8.0	14.0	21.0	24.0	20.0	15.0
13	13.0	6.0	---	---	---	2.0	9.0	12.0	19.0	25.0	19.0	15.0
14	14.0	5.0	---	---	---	2.0	7.0	11.0	18.0	24.0	20.0	12.0
15	12.0	4.0	---	---	---	0.5	8.0	12.0	17.0	26.0	19.0	14.0
16	12.0	2.0	---	---	---	1.0	12.0	16.0	18.0	26.0	20.0	17.0
17	13.0	5.0	---	---	---	1.0	11.0	13.0	21.0	25.0	19.0	16.0
18	9.0	4.0	---	---	---	0.5	12.0	11.0	20.0	26.0	20.0	---
19	10.0	3.0	---	---	---	0.5	15.0	11.0	22.0	24.0	22.0	---
20	10.0	0.5	---	---	---	0.0	14.0	19.0	25.0	24.0	23.0	---
21	13.0	0.5	---	---	---	0.0	9.0	15.0	24.0	25.0	19.0	---
22	15.0	0.5	---	---	---	0.0	8.0	14.0	22.0	25.0	18.0	---
23	17.0	0.0	---	---	---	0.0	7.0	12.0	23.0	25.0	20.0	---
24	16.0	1.0	---	---	---	0.5	12.0	13.0	22.0	24.0	21.0	---
25	13.0	2.5	---	---	---	0.5	17.0	15.0	22.0	23.0	22.0	---
26	10.0	2.0	---	---	---	0.5	14.0	16.0	22.0	24.0	20.0	---
27	10.0	1.0	---	---	---	0.0	12.0	17.0	23.0	22.0	19.0	---
28	9.0	1.0	---	---	---	0.5	16.0	20.0	23.0	23.0	19.0	---
29	11.0	1.0	---	---	---	3.0	14.0	18.0	23.0	21.0	20.0	---
30	10.0	0.5	---	---	---	1.0	12.0	15.0	22.0	20.0	16.0	---
31	8.0	---	---	---	---	---	---	14.0	---	22.0	14.0	---
MONTH	---	2.5	---	---	---	A 1.0	10.0	13.5	20.5	24.0	20.0	---

A Based on 30 days of data.

JAMES RIVER BASIN

06476000 JAMES RIVER AT HURON, S. DAK.

LOCATION.--Lat 44°21'49", long 98°11'56", in SW¼SE¼NE¼ sec.6, T.110 N., R.61 W., Beadle County, at gaging station, on right bank 15 ft (5 m) upstream from city dam at Huron, 135 ft (41 m) downstream from Chicago and North Western Transportation Co. bridge, and 165 ft (50 m) upstream from bridge on business loop U.S. Highway 14.

DRAINAGE AREA.--16,800 mi² (43,500 km²), approximately.

PERIOD OF RECORD.--Chemical analyses: April 1950 to September 1951, August 1956 to September 1973 (daily), October 1973 to September 1974 (monthly).
Water temperatures: August 1956 to September 1974.

EXTREMES.--1973-74:

Specific conductance: Maximum daily, 2,850 micromhos Feb. 28; minimum daily, 725 micromhos Mar. 12.
Water temperatures: Maximum, 26.0°C July 18, 19, 24; minimum, freezing point on many days during November to March.

Period of record:

Dissolved solids (1956-58, 1959-68, 1970-73): Maximum, 2,180 mg/l Mar. 1-20, 1965; minimum, 147 mg/l Apr. 5-7, 1960.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1973 TO SEPTEMBER 1974

DATE	TIME	INSTANTANEOUS DIS- CHARGE (CFS) (00061)	DIS- SOLVED SILICA (SiO ₂) (MG/L) (00955)	DIS- SOLVED CAL- CIUM (CA) (MG/L) (00915)	DIS- SOLVED MAG- NE- SIUM (MG) (MG/L) (00925)	DIS- SOLVED SODIUM (NA) (MG/L) (00930)	DIS- SOLVED PO- TAS- SIUM (K) (MG/L) (00935)	BICAR- BONATE (HCO ₃) (MG/L) (00440)	DIS- SOLVED SULFATE (SO ₄) (MG/L) (00945)	DIS- SOLVED CHLO- RIDE (CL) (MG/L) (00940)	DIS- SOLVED FLUO- RIDE (F) (MG/L) (00950)	DIS- SOLVED NITRITE PLUS NITRATE (N) (MG/L) (00631)
OCT. 30...	1400	.00	20	90	50	170	20	350	400	90	.4	.65
NOV. 30...	1045	.15	16	100	68	200	28	382	470	110	.4	.10
FEB. 27...	1330	24	17	210	110	290	18	638	900	150	.4	.53
MAR. 29...	1330	51	7.0	67	30	80	8.6	217	220	43	.2	.61
APR. 30...	1330	87	13	75	37	150	6.7	297	260	120	.3	1.5
MAY 31...	1530	87	12	67	35	100	6.6	280	230	61	.3	.17
JUNE 28...	1430	51	20	80	40	130	20	0	230	70	.3	.50
JULY 31...	1345	30	20	77	37	130	18	365	220	71	.3	.50
AUG. 27...	1500	35	7.9	78	45	140	19	374	250	79	.3	.00
SEP. 30...	1415	.00	16	73	48	120	20	388	230	55	.3	.01

NOTE.--Carbonate (CO₃) analysis for all samples, 0.0 mg/l.

JAMES RIVER BASIN

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06476000 JAMES RIVER AT HURON, S. DAK.--Continued

EXTREMES.--Continued

Period of record:--Continued

Hardness (1956-58, 1959-68, 1970-73): Maximum, 963 mg/l Mar. 1-20, 1965; minimum, 63 mg/l Apr. 1-4, 1960.

Specific conductance (1956-70, 1971-74): Maximum daily, 3,170 micromhos Mar. 14, 1965; minimum daily, 176 micromhos Mar. 30, Apr. 2, 1960.

Water temperatures (1956-70, 1971-74): Maximum, 31.0°C June 2, 1968; minimum, freezing point on many days during winter period.

REMARKS.--Flow regulated by Arrowwood and Jim Lakes, and by Jamestown reservoir, combined capacity, 246,000 acre-ft (303 hm³). Regulation by Jamestown reservoir, capacity, 229,470 acre-ft (283 hm³), 365 mi (587 km) upstream since May 1953. The city of Huron and Armour and Company divert water from the river immediately upstream from the gage. Average daily pumpage was about 5.0 ft³ (0.142 m³). No flow Oct. 1 to Nov. 6, Nov. 21, 23, Dec. 6-8, Dec. 10-15, Dec. 18 to Feb. 17, Mar. 15-17. Maximum observed during water year: Dissolved solids, 2,020 mg/l Feb. 27; hardness, 980 mg/l Feb. 27. Minimum observed during water year: Dissolved solids, 566 mg/l Mar. 29; hardness, 290 mg/l Mar. 29. Records of specific conductance of daily samples prior to Oct. 1, 1964, on file in District office. Miscellaneous samples for chemical data published for water years 1949, 1952.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1973 TO SEPTEMBER 1974

DATE	DIS- SOL- VED- PHOS- PHORUS (P) (00666)	TOTAL PHOS- PHORUS (P) (00665)	DIS- SOLVED BORON (B) (01020)	DIS- SOLVED SOLIDS (SUM OF CONSTI- TUENTS) (MG/L) (70301)	DIS- SOLVED SOLIDS (TONS PER AC-FT) (70303)	DIS- SOLVED SOLIDS (TONS PER DAY) (70302)	HARD- NESS (CA,MG) (MG/L) (00900)	NON- CAR- BONATE HARD- NESS (MG/L) (00902)	SODIUM AD- SORP- TION RATIO (00931)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS) (00095)	PH (UNITS) (00400)	TEMPER- ATURE (DEG C) (00010)
OCT. 30...	.25	.30	500	1020	1.39	.00	500	210	3.6	1500	8.2	3.0
NOV. 30...	.82	1.1	530	1220	1.66	.49	530	160	3.8	1720	8.6	.0
FEB. 27...	.74	.84	750	2020	2.75	131	980	450	4.0	2640	7.6	.0
MAR. 29...	.27	.34	250	566	.77	77.9	290	110	2.0	936	8.2	5.0
APR. 30...	.32	.67	440	816	1.11	192	340	96	3.5	1340	7.7	12.0
MAY 31...	.32	.39	370	662	.90	156	310	82	2.5	1080	8.0	20.0
JUNE 28...	.80	1.0	480	593	.81	81.7	380	380	3.0	1270	8.1	22.0
JULY 31...	.76	.96	460	779	1.06	63.1	340	10	3.0	1230	8.6	25.0
AUG. 27...	.16	.29	450	810	1.10	76.5	380	63	3.1	1260	8.7	24.0
SEP. 30...	.26	.35	740	776	1.06	.00	380	27	2.7	1260	8.2	11.0

JAMES RIVER BASIN

06476000 JAMES RIVER AT HURON, S. DAK.--Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25°C), WATER YEAR OCTOBER 1973 TO SEPTEMBER 1974

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1650	1700	1760	1920	2200	2750	940	1340	1120	1160	1280	1260
2	1650	1700	1780	1920	2220	2000	960	1310	1100	1140	1260	1250
3	1660	1700	1780	1980	2280	1190	1040	1290	1160	1160	1240	1240
4	1680	1700	1780	2000	2300	1210	1110	1290	1180	1120	1250	1260
5	1670	1710	1780	1980	2350	1130	1140	1280	1230	1120	1200	1260
6	1680	1700	1760	2000	2370	1040	1230	1280	1240	1140	1200	1270
7	1680	1700	1780	2020	2400	900	1200	1290	1270	1150	1230	1260
8	1680	1690	1800	2080	2420	975	1200	1300	1250	1170	1210	1260
9	1630	1730	1820	2070	2400	925	1250	1310	1220	1190	1210	1270
10	1610	1740	1840	2080	2420	940	1280	1310	1200	1180	1200	1260
11	1630	1700	1850	2080	2480	890	1270	1320	1190	1180	1170	1260
12	1680	1630	1850	2110	2500	725	1300	1060	1150	1190	1200	1260
13	1610	1740	1880	2150	2480	810	1300	1340	1140	1200	1210	1260
14	1610	1740	1860	2150	2500	815	1320	1330	1140	1220	1200	1260
15	1620	1690	1860	2180	2500	800	1330	1330	1140	1200	1210	1250
16	1630	1700	1860	2200	2500	790	1280	1330	1130	1220	1240	1250
17	1630	1700	1880	2210	2450	810	1330	1330	1130	1210	1230	1260
18	1600	1700	1880	2200	2450	820	1340	1320	1130	1220	1260	1250
19	1580	1700	1900	2200	2450	770	1330	1290	1120	1210	1240	1260
20	1560	1690	1880	2180	1820	810	1340	1270	1120	1220	1280	1260
21	1640	1710	1930	2220	2020	815	1350	1240	1120	1230	1270	1260
22	1640	1700	1930	2200	1420	820	1340	1210	1100	1220	1280	1260
23	1640	1700	1930	2200	1800	825	1340	1200	1100	1220	1280	1260
24	1640	1710	1910	2180	2450	820	1370	1160	1090	1220	1270	1260
25	1640	1690	1930	2200	2480	810	1370	1140	1080	1230	1260	1250
26	1640	1710	1930	2180	2420	820	1370	1120	1080	1220	1260	1260
27	1640	1720	1900	2180	2420	825	1360	1100	1100	1220	1270	1260
28	1640	1730	1930	2170	2850	830	1340	1050	1120	1210	1290	1270
29	1630	1750	1940	2230	---	865	1340	1040	1120	1210	1260	1260
30	1600	1730	1960	2190	---	860	1300	1030	1130	1230	1280	1260
31	1640	---	1960	2190	---	860	---	1030	---	1200	1230	---
MONTH	1630	1710	1860	2120	2330	976	1270	1230	1150	1190	1240	1260

TEMPERATURE (°C) OF WATER, WATER YEAR OCTOBER 1973 TO SEPTEMBER 1974

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	15.0	7.0	0.0	0.0	0.0	0.0	4.0	15.0	17.0	23.0	22.0	17.0
2	15.0	7.0	0.0	0.0	0.0	0.0	6.0	15.0	18.0	25.0	22.0	16.0
3	15.0	5.0	0.0	0.0	0.0	0.0	5.0	14.0	20.0	25.0	20.0	15.0
4	15.0	3.0	0.0	0.0	0.0	2.0	3.0	13.0	21.0	22.0	19.0	15.0
5	15.0	0.0	0.0	0.0	0.0	2.0	3.0	14.0	22.0	22.0	20.0	16.0
6	15.0	0.0	0.0	0.0	0.0	2.0	3.0	13.0	20.0	24.0	20.0	15.0
7	15.0	4.0	0.0	0.0	0.0	1.0	4.0	14.0	21.0	24.0	21.0	17.0
8	15.0	3.0	0.0	0.0	0.0	2.0	6.0	14.0	21.0	24.0	21.0	17.0
9	14.0	0.0	0.0	0.0	0.0	2.0	8.0	13.0	20.0	25.0	21.0	18.0
10	14.0	0.0	0.0	0.0	0.0	1.0	8.0	14.0	17.0	25.0	21.0	18.0
11	14.0	0.0	0.0	0.0	0.0	2.0	9.0	14.0	17.0	25.0	20.0	19.0
12	13.0	2.0	0.0	0.0	0.0	2.0	10.0	13.0	18.0	25.0	20.0	12.0
13	13.0	4.0	0.0	0.0	0.0	2.0	8.0	13.0	20.0	25.0	21.0	14.0
14	13.0	5.0	0.0	0.0	0.0	2.0	6.0	12.0	20.0	25.0	22.0	15.0
15	12.0	4.0	0.0	0.0	0.0	2.0	6.0	11.0	20.0	25.0	22.0	15.0
16	11.0	4.0	0.0	0.0	0.0	2.0	6.0	12.0	19.0	25.0	22.0	15.0
17	10.0	5.0	0.0	0.0	0.0	2.0	8.0	13.0	19.0	25.0	22.0	17.0
18	10.0	4.0	0.0	0.0	0.0	2.0	10.0	13.0	20.0	26.0	22.0	17.0
19	11.0	4.0	0.0	0.0	0.0	2.0	10.0	13.0	22.0	26.0	22.0	17.0
20	13.0	0.0	0.0	0.0	0.0	1.0	10.0	16.0	23.0	25.0	24.0	17.0
21	15.0	0.0	0.0	0.0	0.0	1.0	12.0	17.0	25.0	25.0	24.0	16.0
22	12.0	0.0	0.0	0.0	0.0	0.0	11.0	18.0	23.0	25.0	22.0	15.0
23	10.0	0.0	0.0	0.0	0.0	0.0	10.0	16.0	24.0	25.0	22.0	14.0
24	13.0	0.0	0.0	0.0	0.0	0.0	10.0	15.0	22.0	26.0	22.0	14.0
25	17.0	0.0	0.0	0.0	0.0	0.0	12.0	16.0	23.0	25.0	23.0	14.0
26	11.0	0.0	0.0	0.0	0.0	0.0	15.0	15.0	23.0	25.0	23.0	15.0
27	11.0	0.0	0.0	0.0	0.0	1.0	15.0	15.0	22.0	24.0	22.0	15.0
28	9.0	0.0	0.0	0.0	0.0	1.0	16.0	20.0	22.0	24.0	22.0	12.0
29	9.0	0.0	0.0	0.0	---	2.0	15.0	20.0	24.0	23.0	20.0	12.0
30	10.0	0.0	0.0	0.0	---	2.0	14.0	19.0	23.0	22.0	20.0	10.0
31	8.0	---	0.0	0.0	---	2.0	---	16.0	---	24.0	16.0	---
MONTH	12.5	2.0	0.0	0.0	0.0	1.5	9.0	14.5	21.0	24.5	21.5	15.5

VERMILLION RIVER BASIN

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06479000 VERMILLION RIVER NEAR WAKONDA, S. DAK.

LOCATION.--Lat 42°59'27", long 96°57'49", in SW¼NW¼ sec.2, T.94 N., R.52 W., Clay County, at gaging station, on left bank 40 ft (12 m) downstream from bridge on State Highway 19, 4.3 mi (6.9 km) downstream from Frog Creek, 7.4 mi (11.9 km) southeast of Wakonda, and 29.6 mi (47.6 km) upstream from mouth.

DRAINAGE AREA.--1,680 mi² (4,351 km²), approximately.

PERIOD OF RECORD.--Chemical analyses: June 1967 to September 1974 (partial-record station), discontinued.

REMARKS.--Miscellaneous samples for chemical data published for water years 1961, 1966, 1967.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1973 TO SEPTEMBER 1974

DATE	TIME	INSTAN- TANEOUS DIS- CHARGE (CFS) (00061)	DIS- SOLVED SILICA (SiO ₂) (MG/L) (00955)	DIS- SOLVED CAL- CIUM (CA) (MG/L) (00915)	DIS- SOLVED MAG- NE- SIUM (MG) (MG/L) (00925)	DIS- SOLVED SODIUM (NA) (MG/L) (00930)	DIS- SOLVED PO- TAS- SIUM (K) (MG/L) (00935)	BICAR- BONATE (HCO ₃) (MG/L) (00440)	DIS- SOLVED SULFATE (SO ₄) (MG/L) (00945)	DIS- SOLVED CHLO- RIDE (CL) (MG/L) (00940)	DIS- SOLVED FLUO- RIDE (F) (MG/L) (00950)	DIS- SOLVED NITRITE PLUS NITRATE (N) (MG/L) (00631)
DEC. 12...	1535	18	12	59	20	64	5.6	193	190	10	.4	.24
MAR. 19...	1350	44	5.3	170	76	42	8.5	249	600	14	.4	.15

DATE	DIS- SOL- VED- PHOS- PHORUS (P) (MG/L) (00666)	TOTAL PHOS- PHORUS (P) (MG/L) (00665)	DIS- SOLVED BORON (B) (UG/L) (01020)	DIS- SOLVED SOLIDS (SUM OF CONSTITUENTS) (MG/L) (70301)	DIS- SOLVED SOLIDS (TONS PER AC-FT) (70303)	DIS- SOLVED SOLIDS (TONS PER DAY) (70302)	HARD- NESS (CA, MG) (MG/L) (00900)	NON- CAR- BONATE HARD- NESS (MG/L) (00902)	SODIUM AD- SORP- TION RATIO (00931)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS) (00095)	PH (UNITS) (00400)	TEMPER- ATURE (DEG C) (00010)
DEC. 12...	.02	.04	120	457	.62	22.2	230	71	1.8	720	8.3	.0
MAR. 19...	.01	.15	190	1040	1.41	124	740	530	.7	1420	8.1	3.0

NOTE:--Carbonate (CO₃) analysis for all samples, 0.0 mg/l.

BIG SIOUX RIVER BASIN

06479515 WILLOW CREEK NEAR WATERTOWN, S. DAK.

LOCATION.--Lat 44°54'17", long 97°03'31", in NE¼NW¼ sec.34, T.117 N., R.52 W., Codington County, at gaging station, on right bank 5 ft (2 m) downstream from bridge, 2.8 mi (4.5 km) east of Watertown, and 4.7 mi (7.6 km) upstream from mouth.

DRAINAGE AREA.--125 mi² (324 km²), approximately.

PERIOD OF RECORD.--Chemical analyses: October 1970 to June 1974 (partial-record station), discontinued.
Sediment records: October 1971 to June 1974 (partial-record station), discontinued.

REMARKS.--Miscellaneous samples for chemical data published for water year 1970.

CHEMICAL ANALYSES, OCTOBER 1973 TO JUNE 1974

DATE	TIME	INSTAN- TANEOUS DIS- CHARGE (CFS) (00061)	DIS- SOLVED SILICA (SiO2) (MG/L) (00955)	DIS- SOLVED CAL- CIUM (CA) (MG/L) (00915)	DIS- SOLVED MAG- NE- SIUM (MG) (00925)	DIS- SOLVED SODIUM (NA) (MG/L) (00930)	DIS- SOLVED PO- TAS- SIUM (K) (MG/L) (00935)	BICAR- BONATE (HCO3) (MG/L) (00440)	DIS- SOLVED SULFATE (SO4) (MG/L) (00945)	DIS- SOLVED CHLO- RIDE (CL) (MG/L) (00940)	DIS- SOLVED FLUO- RIDE (F) (MG/L) (00950)	DIS- SOLVED NITRITE PLUS NITRATE (N) (MG/L) (00631)
DEC. 04...	1530	.23	9.6	140	84	43	6.4	329	500	6.7	.2	.03
MAR. 08...	0930	7.7	8.5	46	15	3.4	7.1	106	97	3.7	.3	.49
JUNE 05...	0935	.75	12	110	57	19	5.8	275	300	5.1	1.4	.00

DATE	DIS- SOL- VED- PHOS- PHORUS (P) (MG/L) (00666)	TOTAL PHOS- PHORUS (P) (MG/L) (00665)	DIS- SOLVED BORON (B) (UG/L) (01020)	DIS- SOLVED SOLIDS (SUM OF CONSTI- TUENTS) (MG/L) (70301)	DIS- SOLVED SOLIDS (TONS PER AC-FT) (70303)	DIS- SOLVED SOLIDS (TONS PER DAY) (70302)	HARD- NESS (CA.MG) (MG/L) (00900)	NON- CAR- BONATE HARD- NESS (MG/L) (00902)	SODIUM AD- SORP- TION RATIO (00931)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS) (00095)	PH (UNITS) (00400)	TEMPER- ATURE (DEG C) (00010)
DEC. 04...	.02	.09	260	953	1.30	.59	700	430	.7	1310	8.1	1.0
MAR. 08...	.19	.22	90	236	.32	4.91	180	90	.1	392	7.5	.0
JUNE 05...	.09	.16	150	646	.88	1.31	510	280	.4	938	7.9	21.0

NOTE.--Carbonate (CO₃) analysis for all samples, 0.0 mg/l.

SUSPENDED-SEDIMENT DISCHARGE MEASUREMENTS, WATER YEAR OCTOBER 1973 TO SEPTEMBER 1974

DATE	TIME	TEMPER- ATURE (DEG C) (00010)	INSTAN- TANEOUS DIS- CHARGE (CFS) (00061)	SUS- PENDE DI- MENT CHARGE (MG/L) (80154)	SUS- PENDE SEDIMENT DIS- CHARGE (T/DAY) (80155)
DEC. 04...	1525	1.0	.23	109	.07
MAR. 08...	0930	.0	7.7	37	.77
APR. 03...	1045	.0	1.5	90	.36
MAY 08...	1630	9.0	.95	118	.30
JUNE 05...	0935	21.0	.75	107	.22

06479529 STRAY HORSE CREEK NEAR CASTLEWOOD, S. DAK.

LOCATION.--Lat 44°43'52", long 96°57'23", in NE¼NE¼NW¼ sec.33, T.115 N., R.51 W., Hamlin County, at gaging station, on right bank at downstream side of highway bridge on State Highway 22, 3.5 mi (5.6 km) east of Castlewood, 6.4 mi (10.3 km) upstream from mouth, and 7.0 mi (11.3 km) north of Dempster.

DRAINAGE AREA.--73.7 mi² (191 km²), approximately.

PERIOD OF RECORD.--Chemical analyses: October 1970 to July 1974 (partial-record station), discontinued. Sediment records: October 1970 to July 1974 (partial-record station), discontinued.

REMARKS.--Miscellaneous samples for chemical and sediment data published for water year 1970.

CHEMICAL ANALYSES, OCTOBER 1973 TO JULY 1974

DATE	TIME	INSTAN- TANEOUS DIS- CHARGE (CFS) (00061)	DIS- SOLVED SILICA (SI02) (MG/L) (00955)	DIS- SOLVED CAL- CIUM (CA) (MG/L) (00915)	DIS- SOLVED MAG- NE- SIUM (MG) (MG/L) (00925)	DIS- SOLVED SODIUM (NA) (MG/L) (00930)	DIS- SOLVED PO- TAS- SIUM (K) (MG/L) (00935)	BICAR- BONATE (HCO3) (MG/L) (00440)	DIS- SOLVED SULFATE (SO4) (MG/L) (00945)	DIS- SOLVED CHLO- RIDE (CL) (MG/L) (00940)	DIS- SOLVED FLUO- RIDE (F) (MG/L) (00950)	DIS- SOLVED NITRITE PLUS NITRATE (N) (MG/L) (00631)
DEC. 04...	1310	.12	5.4	160	100	50	7.1	226	670	11	.1	2.1
MAR. 07...	1645	13	6.5	37	12	3.7	7.1	94	69	4.2	.4	.48
JUNE 04...	1820	1.6	4.1	120	56	16	5.8	199	370	7.2	1.4	.00
DATE	DIS- SOL- VED- PHOS- PHORUS (P) (MG/L) (00666)	TOTAL PHOS- PHORUS (P) (MG/L) (00665)	DIS- SOLVED BORON (B) (UG/L) (01020)	DIS- SOLVED SOLIDS (SUM OF CONSTI- TUENTS) (MG/L) (70301)	DIS- SOLVED SOLIDS (TONS PER AC-FT) (70303)	DIS- SOLVED SOLIDS (TONS PER DAY) (70302)	HARD- NESS (CA+MG) (MG/L) (00900)	NON- CAR- BONATE HARD- NESS (MG/L) (00902)	SODIUM AD- SORP- TION RATIO (00931)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS) (00095)	PH (UNITS) (00400)	TEMPER- ATURE (DEG C) (00010)
DEC. 04...	.02	.05	430	1120	1.52	.36	810	630	.8	1500	7.9	1.0
MAR. 07...	.28	.37	70	189	.26	6.63	140	65	.1	327	7.5	.0
JUNE 04...	1.3	1.4	110	679	.92	2.93	530	370	.3	988	8.2	26.0

NOTE.--Carbonate (CO₃) analysis for all samples, 0.0 mg/l.

SUSPENDED-SEDIMENT DISCHARGE MEASUREMENTS, WATER YEAR OCTOBER 1973 TO SEPTEMBER 1974

DATE	TIME	INSTAN- TANEOUS DIS- CHARGE (CFS) (00061)	TEMPER- ATURE (DEG C) (00010)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS) (00095)	SUS- PEN- DED SEDIM- ENT DIS- CHARGE (MG/L) (80154)	SUS- PEN- DED SEDIM- ENT DIS- CHARGE (T/DAY) (80155)
JULY, 1973						
05...	1625	.06	31.0	--	--	--
05...	1640	.06	31.0	990	--	--
AUG.						
07...	1100	.02	26.0	--	--	--
07...	1115	.02	26.0	1040	--	--
SEP.						
05...	1525	.03	23.0	--	--	--
05...	1535	.03	24.0	1310	--	--
OCT.						
04...	0840	.04	10.0	--	133	.01
04...	1000	.04	10.0	1240	--	--
NOV.						
06...	1440	.06	2.0	--	106	.02
06...	1540	.06	2.0	1450	--	--
DEC.						
04...	1305	.12	1.0	1600	149	.05
04...	1310	--	1.0	1500	--	--
JAN., 1974						
08...	1345	.02	.0	2000	178	.01
MAR.						
07...	1645	13	.0	327	47	1.6
07...	1650	13	.0	310	--	--
APR.						
02...	1500	2.6	.0	--	89	.62
MAY						
07...	1615	.64	10.0	930	113	.20
JUNE						
04...	1745	1.6	26.0	940	94	.41
04...	1820	1.6	26.0	988	--	--

06479640 HIDEWOOD CREEK NEAR ESTELLINE, S. DAK.

LOCATION.--Lat 44°36'42", long 96°54'17", in SW¼NW¼ sec.12, T.113 N., R.51 W., Hamlin County, at gaging station, on left bank at upstream side of highway bridge, 2.7 mi (4.3 km) north of Estelline, 2.8 mi (4.5 km) southeast of Dempster, and 4.7 mi (7.6 km) upstream from mouth.

DRAINAGE AREA.--164 mi² (425 km²), approximately.

PERIOD OF RECORD.--Chemical analyses: October 1970 to July 1974 (partial-record station), discontinued.
Sediment records: October 1970 to July 1974 (partial-record station), discontinued.

REMARKS.--Miscellaneous samples for chemical and sediment data published for water year 1970.

CHEMICAL ANALYSES, OCTOBER 1973 TO JULY 1974

DATE	TIME	INSTAN-	DIS-	DIS-	DIS-	DIS-	DIS-	BICAR-	DIS-	DIS-	DIS-	DIS-
		TANEOUS	SOLVED	SOLVED	SOLVED	SOLVED	SOLVED		SOLVED	SOLVED	SOLVED	SOLVED
		DIS-	SILICA	CAL-	MAG-	DIS-	PO-	BONATE	SULFATE	CHLO-	FLUO-	NITRITE
		CHARGE	(SI02)	CIUM	NE-	SOLVED	TAS-	(HCO3)	(SO4)	RIDE	RIDE	PLUS
		(CFS)	(MG/L)	(CA)	SIUM	SODIUM	SIUM	(MG/L)	(MG/L)	(CL)	(F)	NITRATE
		(00061)	(00955)	(00915)	(MG)	(NA)	(K)	(MG/L)	(MG/L)	(MG/L)	(MG/L)	(N)
					(00925)	(00930)	(00935)	(00440)	(00945)	(00940)	(00950)	(00631)
DEC.												
04...	1115	1.2	16	160	74	55	4.7	338	500	5.3	.2	.36
MAR.												
07...	1520	29	9.7	42	14	5.8	7.2	128	65	4.9	.3	.43
JUNE												
04...	1655	3.5	11	100	46	33	4.9	234	290	27	1.4	.00
DATE	TIME	DIS-	DIS-	DIS-	DIS-	DIS-	DIS-	NON-	SODIUM	SPE-	PH	TEMPER-
		SOL-	SOLVED	SOLVED	SOLVED	SOLVED	SOLVED	CAR-	AD-	CIFIC		
		VED-	BORON	(SUM OF	SOLIDS	SOLIDS	HARD-	BONATE	SORP-	DUCTI-		
		PHOS-	(B)	CONSTI-	(TONS	(TONS	NESS	HARD-	TION	ANCE		
		PHORUS	(UG/L)	TUENTS)	PER	PER	(CA+MG)	NESS	RATIO	(MICRO-	(UNITS)	ATURE
		(P)	(01020)	(70301)	(70303)	(70302)	(MG/L)	(MG/L)	(00931)	MMOS)	(00400)	(DEG C)
		(00666)	(00665)	(01020)	(70301)	(70302)	(00900)	(00902)	(00931)	(00095)	(00400)	(00010)
DEC.												
04...	.01	.04	220	984	1.34	3.19	700	430	.9	1440	8.1	.0
MAR.												
07...	.19	.19	80	214	.29	16.8	160	58	.2	347	7.6	.0
JUNE												
04...	.03	.32	130	629	.86	5.94	440	250	.7	955	8.2	29.0

NOTE.--Carbonate (CO₃) analysis for all samples, 0.0 mg/l.

SUSPENDED-SEDIMENT DISCHARGE MEASUREMENTS, WATER YEAR OCTOBER 1973 TO SEPTEMBER 1974

DATE	TIME	INSTAN- TANEOUS DIS- CHARGE (CFS) (00061)	TEMPER- ATURE (DEG C) (00010)	SPE- CIFIC CON- DUCTI- ANCE (MICRO- MHOS) (00095)	SUS- PENDED SEDI- MENT DIS- CHARGE (MG/L) (80154)	SUS- PENDED MENT CHARGE (T/DAY) (80155)
JULY, 1973						
06...	1050	1.9	25.0	--	--	--
06...	1100	1.8	25.0	900	--	--
AUG.						
02...	0945	.45	24.0	--	--	--
07...	0955	.45	24.0	950	--	--
SEP.						
05...	1425	.35	19.5	--	--	--
05...	1435	.35	19.5	1060	--	--
OCT.						
04...	1010	.32	2.0	--	158	.14
04...	1100	.32	12.0	965	--	--
NOV.						
06...	1430	.56	1.0	1160	117	.18
DEC.						
04...	1115	1.2	.0	1440	120	.27
JAN., 1974						
08...	1200	.09	.0	--	153	.04
MAR.						
07...	1520	29	.0	368	49	3.8
APR.						
02...	1245	12	3.0	--	96	3.1
MAY						
07...	1500	2.4	12.0	--	139	.90
JUNE						
04...	1155	3.5	29.0	--	114	1.1
04...	1655	3.5	29.0	955	--	--
JULY						
10...	1410	.20	31.0	--	294	.16
10...	1415	.20	31.0	1170	--	--

BIG SIOUX RIVER BASIN

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06479910 SIXMILE CREEK NEAR BROOKINGS, S. DAK.

LOCATION.--Lat 44°20'46", long 96°44'51", in NE¼SE¼ sec.7, T.110 N., R.49 W., Brookings County, at gaging station, on left bank 8.0 ft (2 m) downstream from highway bridge, 0.7 mi (1.1 km) upstream from Interstate Highway 29 and 2.7 mi (4.3 km) northeast of Brookings.

DRAINAGE AREA.--54.0 mi² (140 km²), approximately.

PERIOD OF RECORD.--Chemical analyses: October 1970 to June 1974 (partial-record station), discontinued.
Sediment records: October 1970 to June 1974 (partial-record station), discontinued.

CHEMICAL ANALYSES, OCTOBER 1973 TO JUNE 1974

DATE	TIME	INSTAN- TANEOUS DIS- CHARGE (CFS) (00061)	DIS- SOLVED SILICA (SI02) (MG/L) (00955)	DIS- SOLVED CAL- CIUM (CA) (MG/L) (00915)	DIS- SOLVED MAG- NE- SIUM (MG) (MG/L) (00925)	DIS- SOLVED SODIUM (NA) (MG/L) (00930)	DIS- SOLVED PO- TAS- SIUM (K) (MG/L) (00935)	BICAR- BONATE (HCO3) (MG/L) (00440)	DIS- SOLVED SULFATE (SO4) (MG/L) (00945)	DIS- SOLVED CHLO- RIDE (CL) (MG/L) (00940)	DIS- SOLVED FLUO- RIDE (F) (MG/L) (00950)	DIS- SOLVED NITRITE PLUS NITRATE (N) (MG/L) (00631)
DEC. 04...	0900	1.4	20	150	62	30	4.0	381	340	4.1	.2	1.1
MAR. 07...	1245	6.6	13	52	18	7.2	7.2	154	89	5.3	.4	.89
JUNE 04...	1230	1.6	17	94	48	24	3.2	265	240	8.6	1.3	.00

NOTE.--Carbonate (CO₃) analysis for all samples, 0.0 mg/l.

DATE	DIS- SOL- VED- PHOS- PHORUS (P) (00666)	TOTAL PHOS- PHORUS (P) (00665)	DIS- SOLVED BORON (B) (UG/L) (01020)	DIS- SOLVED SOLIDS (SUM OF CONSTITUENTS) (MG/L) (70301)	DIS- SOLVED SOLIDS (TONS PER AC-FT) (70303)	DIS- SOLVED SOLIDS (TONS PER DAY) (70302)	HARD- NESS (CA,MG) (MG/L) (00900)	NON- CAR- BONATE HARD- NESS (MG/L) (00902)	SODIUM AD- SORP- TION RATIO (00931)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS) (00095)	PH (UNITS) (00400)	TEMPER- ATURE (DEG C) (00010)
DEC. 04...	.02	.03	200	803	1.09	3.04	630	320	.5	1120	8.0	.0
MAR. 07...	.25	.32	90	273	.37	4.86	200	78	.2	450	7.6	.0
JUNE 04...	.05	.32	190	567	.77	2.45	430	220	.5	867	8.3	26.0

SUSPENDED-SEDIMENT DISCHARGE MEASUREMENTS, WATER YEAR OCTOBER 1973 TO SEPTEMBER 1974

DATE	TIME	TEMPER- ATURE (DEG C) (00010)	INSTAN- TANEOUS DIS- CHARGE (CFS) (00061)	SUS- PEN- DED SEDI- MENT DIS- CHARGE (MG/L) (80154)	SUS- PEN- DED SEDI- MENT DIS- CHARGE (T/DAY) (80155)
OCT. 02...	1345	16.0	.11	98	.03
NOV. 06...	1330	1.0	.62	84	.14
DEC. 04...	0845	.0	1.4	140	.53
JAN. 09...	0955	.0	.30	83	.07
FEB. 12...	1110	.0	.14	174	.07
MAR. 07...	1245	.0	6.6	54	.96
APR. 03...	1430	1.0	3.8	106	1.1
MAY 07...	1045	9.0	1.6	93	.40
JUNE 04...	1230	26.0	1.6	114	.49

BIG SIOUX RIVER BASIN

06480000 BIG SIOUX RIVER NEAR BROOKINGS, S. DAK.

LOCATION.--Lat 44°10'48", long 96°44'55", in NW¼NW¼ sec.8, T.108 N., R.49 W., Moody County, at gaging station, on right bank 3.0 ft (1 m) downstream from highway bridge, 2.2 mi (3.5 km) downstream from Medary Creek, and 9.5 mi (15.3 km) southeast of Brookings.

DRAINAGE AREA.--4,420 mi² (11,450 km²), approximately, of which about 1,970 mi² (5,100 km²) is probably noncontributing.

CHEMICAL ANALYSES, OCTOBER 1973 TO JUNE 1974

DATE	TIME	INSTAN- TANEOUS DIS- CHARGE (CFS) (00061)	DIS- SOLVED SILICA (SI02) (MG/L) (00955)	DIS- SOLVED CAL- CIUM (CA) (MG/L) (00915)	DIS- SOLVED MAG- NIUM (MG) (MG/L) (00925)	DIS- SOLVED SODIUM (NA) (MG/L) (00930)	DIS- SOLVED PO- TAS- SIUM (K) (MG/L) (00935)	BICAR- BONATE (HCO3) (MG/L) (00440)	DIS- SOLVED SULFATE (SO4) (MG/L) (00945)	DIS- SOLVED CHLO- RIDE (CL) (MG/L) (00940)	DIS- SOLVED FLUO- RIDE (F) (MG/L) (00950)	DIS- SOLVED NITRITE PLUS NITRATE (N) (MG/L) (00631)
JUNE 04...	1035	86	14	93	48	32	5.6	294	240	23	1.3	.00

NOTE.--Carbonate (CO₃) analysis for all samples, 0.0 mg/l.

DATE	TIME	INSTAN- TANEOUS DIS- CHARGE (CFS) (00061)	TEMPER- ATURE (DEG C) (00010)	DIS- SOLVED ARSENIC (AS) (UG/L) (01000)	DIS- SOLVED CAD- MIUM (CD) (UG/L) (01025)	DIS- SOLVED CHRO- MIUM (CR) (UG/L) (01030)	DIS- SOLVED COBALT (CO) (UG/L) (01035)	DIS- SOLVED COPPER (CU) (UG/L) (01040)	DIS- SOLVED IRON (FE) (UG/L) (01046)	DIS- SOLVED LEAD (PB) (UG/L) (01049)	DIS- SOLVED MAN- GANESE (MN) (UG/L) (01056)
DEC. 05...	1040	16	.0	3	1	0	0	2	30	3	310

FIELD DETERMINATIONS

DATE	TIME	INSTAN- TANEOUS DIS- CHARGE (CFS) (00061)	TEMPER- ATURE (DEG C) (00010)	DIS- SOLVED OXYGEN (MG/L) (00300)	BIO- CHEM- ICAL OXYGEN DEMAND (MG/L) (00310)	IMME- DIATE COLI- FORM (COL. PER 100 ML) (31501)	FECAL COLI- FORM (COL. PER 100 ML) (31616)	STREP- TOCOCCI (COL- ONIES PER 100 ML) (31679)
APR. 18...	1030	108	9.5	--	--	--	50	50

BIG SIOUX RIVER BASIN

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06480000 BIG SIOUX RIVER NEAR BROOKINGS, S. DAK.--Continued

PERIOD OF RECORD.--Chemical analyses: July 1967 to September 1969, October 1969 to June 1974 (partial-record station), discontinued.

Sediment records: October 1970 to September 1974 (partial-record station), discontinued.

REMARKS.--Miscellaneous samples for chemical data published for water years 1960-62, 1966-67, and for suspended-sediment data for water years 1967, 1970.

CHEMICAL ANALYSES, OCTOBER 1973 TO JUNE 1974

DATE	DIS-SOLVED-PHOSPHORUS (P) (MG/L) (00666)	TOTAL-PHOSPHORUS (P) (MG/L) (00665)	DIS-SOLVED-BORON (B) (UG/L) (01020)	DIS-SOLVED-SOLIDS (SUM OF TUENTS) (MG/L) (70301)	DIS-SOLVED-SOLIDS (TONS PER AC-FT) (70303)	DIS-SOLVED-SOLIDS (TONS PER DAY) (70302)	HARD-NESS (CA,MG) (MG/L) (00900)	NON-CARBONATE HARD-NESS (MG/L) (00902)	SODIUM AD-SORPTION RATIO (00931)	SPECIFIC CONDUCTANCE (MICRO-MHOS) (00095)	PH (UNITS) (00400)	TEMPERATURE (DEG C) (00010)
JUNE 04...	.07	.10	150	602	.82	140	430	190	.7	934	7.9	21.0

DATE	DIS-SOLVED-MOLYBDENUM (MO) (UG/L) (01060)	DIS-SOLVED-NICKEL (NI) (UG/L) (01065)	DIS-SOLVED-SILVER (AG) (UG/L) (01075)	DIS-SOLVED-STRONTIUM (SR) (UG/L) (01080)	DIS-SOLVED-VANADIUM (V) (UG/L) (01085)	DIS-SOLVED-ZINC (ZN) (UG/L) (01090)	DIS-SOLVED-ALUMINUM (AL) (UG/L) (01106)	DIS-SOLVED-LITHIUM (LI) (UG/L) (01130)	DIS-SOLVED-SELENIUM (SE) (UG/L) (01145)	TOTAL-MERCURY (HG) (UG/L) (71900)
DEC. 05...	4	6	1	370	.0	0	10	30	5	.0

SUSPENDED-SEDIMENT DISCHARGE MEASUREMENTS, WATER YEAR OCTOBER 1973 TO SEPTEMBER 1974

DATE	TIME	TEMPERATURE (DEG C) (00010)	INSTANTANEOUS DISCHARGE (CFS) (00061)	SUSPENDED SEDIMENT (MG/L) (80154)	SUSPENDED SEDIMENT DISCHARGE (T/DAY) (80155)
OCT. 02...	1100	13.0	21	11	6.5
NOV. 06...	1200	2.0	21	112	6.4
DEC. 05...	1000	.0	16	93	4.0
JAN. 09...	1255	.0	6.5	91	1.6
FEB. 12...	1300	.0	6.8	89	1.6
MAR. 07...	1125	1.5	740	154	308
APR. 03...	1630	.0	91	100	25
MAY 07...	0930	12.0	46	142	18
JUNE 04...	1035	21.0	86	126	29
JULY 10...	1125	25.0	15	192	7.8
AUG. 06...	0930	18.0	3.3	145	1.3
SEP. 03...	1230	17.0	2.2	129	.77

BIG SIOUX RIVER BASIN

06481000 BIG SIOUX RIVER NEAR DELL RAPIDS, S. DAK.

LOCATION.--Lat 43°47'25", long 96°44'42", in NW¼NW¼ sec.29, T.104 N., R.49 W., Minnehaha County, at gaging station, on left bank at downstream side of highway bridge, 0.2 mi (0.3 km) downstream from confluence of divided channels and 3.0 mi (4.8 km) southwest of Dell Rapids.

DRAINAGE AREA.--5,060 mi² (13,100 km²), approximately, of which about 1,970 mi² (5,100 km²) is probably noncontributing.

PERIOD OF RECORD.--Chemical analyses: October 1967 to September 1973 (daily), October 1973 to September 1974 (monthly).

Water temperatures: October 1967 to September 1974.

Sediment records: October 1967 to September 1974.

EXTREMES.--1973-74:

Specific conductance: Maximum daily, 1,370 micromhos Jan. 13; minimum daily, 225 micromhos Mar. 8.

Water temperatures: Maximum, 33.5°C July 7, 12, 16, 20; minimum, freezing point on many days December to February.

Sediment concentrations: Maximum daily, 619 mg/l Apr. 19; minimum daily, 90 mg/l Jan. 10.

Sediment discharge: Maximum daily, 555 tons Mar. 9; minimum daily, 1.2 tons Aug. 8.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1973 TO SEPTEMBER 1974

DATE	TIME	INSTAN- TANEOUS DIS- CHARGE (CFS) (00061)	DIS- SOLVED SILICA (SI02) (MG/L) (00955)	DIS- SOLVED CAL- CIUM (CA) (MG/L) (00915)	DIS- SOLVED MAG- NE- SIUM (MG) (MG/L) (00925)	DIS- SOLVED SODIUM (NA) (MG/L) (00930)	DIS- SOLVED PO- TAS- SIUM (K) (MG/L) (00935)	BICAR- BONATE (HCO3) (MG/L) (00440)
NOV. 08...	1030	33	9.5	92	43	34	6.1	282
DEC. 04...	1215	17	4.8	83	45	34	5.0	240
JAN. 10...	1330	14	23	150	59	57	6.9	436
MAR. 06...	1215	551	7.9	24	8.6	3.5	8.0	99
19...	1100	188	--	--	--	--	--	--
APR. 09...	1050	137	4.7	80	41	33	5.2	219
24...	1115	132	--	--	--	--	--	--
MAY 06...	1300	76	.2	89	48	36	6.2	254
21...	1200	218	--	--	--	--	--	--
JUNE 11...	1030	116	13	97	44	27	5.9	295
25...	1100	44	--	--	--	--	--	--
AUG. 05...	1245	5.5	2.1	75	49	48	6.8	211
20...	1045	26	--	--	--	--	--	--
SEP. 05...	1030	9.9	8.1	77	45	44	7.5	220
16...	1005	9.1	--	--	--	--	--	--

NOTE.--Carbonate (CO₃) analysis for all samples, 0.0 mg/l.

DATE	TIME	TOTAL ARSENIC (AS) (UG/L) (01002)	TOTAL COPPER (CU) (UG/L) (01042)	TOTAL IRON (FE) (UG/L) (01045)	TOTAL MAN- GANESE (MN) (UG/L) (01055)	TOTAL LEAD (PB) (UG/L) (01051)	TOTAL SELE- NIUM (SE) (UG/L) (01147)	TOTAL ZINC (ZN) (UG/L) (01092)	TOTAL MERCURY (HG) (UG/L) (71900)
APR. 24...	1115	1	<10	--	450	<100	2	80	.0
MAY 21...	1200	8	<10	--	280	<100	2	20	.0
JUNE 25...	1100	10	<10	--	830	<100	1	30	.0
AUG. 20...	1045	5	<10	2600	650	<100	1	80	.0
SEP. 16...	1005	3	<10	1100	440	<100	3	10	.0

06481000 BIG SIOUX RIVER NEAR DELL RAPIDS, S. DAK.--Continued

EXTREMES.--Continued

Period of record:

Dissolved solids (1967-68, 1970-73): Maximum, 876 mg/l Feb. 1-29, 1972; minimum, 172 mg/l Mar. 12-23, 1972.

Hardness (1967-68, 1970-73): Maximum, 650 mg/l Feb. 1-29, 1972; minimum, 120 mg/l Mar. 12-23, 1972.

Specific conductance (1967-70, 1973): Maximum daily, 1,370 micromhos Jan. 13, 1974; minimum daily,

138 micromhos Apr. 9, 1969.

Water temperatures (1967-71, 1974): Maximum, 33.5°C July 7, 12, 16, 20, 1974; minimum, freezing point on many days during winter period.

Sediment concentrations (1968-74): Maximum daily, 619 mg/l Apr. 19, 1974; minimum daily, 2 mg/l Feb. 5, 1970.

Sediment discharge: Maximum daily, 40,600 tons Apr. 9, 1969; minimum daily, 0.12 tons Mar. 5, 1969, Feb. 5, 1970.

REMARKS.--Sediment records good. Maximum observed during water year: Dissolved solids, 902 mg/l Jan. 10; hardness, 620 mg/l Jan. 10. Minimum observed during water year: Dissolved solids, 110 mg/l Aug. 20; hardness, 95 mg/l Mar. 6. Flow affected by ice Nov. 30 to Mar. 18, Mar. 24, 25. Miscellaneous samples of chemical data published for water years 1960-62, 1967.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1973 TO SEPTEMBER 1974

DATE	DIS- SOLVED SULFATE (SO4) (MG/L) (00945)	DIS- SOLVED CHLORIDE (CL) (MG/L) (00940)	DIS- SOLVED FLUORIDE (F) (MG/L) (00950)	DIS- SOLVED NITRITE PLUS NITRATE (N) (MG/L) (00631)	DIS- SOLVED ORTHO. PHOS- PHORUS (P) (MG/L) (00671)	TOTAL PHOS- PHORUS (P) (MG/L) (00665)	DIS- SOLVED BORON (B) (UG/L) (01020)	DIS- SOLVED SOLIDS (RESI- DUE AT 180 C) (MG/L) (70300)	DIS- SOLVED SOLIDS (SUM OF CONSTI- TUENTS) (MG/L) (70301)
NOV.									
08...	210	28	.3	.43	.03	.19	--	536	564
DEC.									
04...	220	28	.2	.03	.04	.24	--	485	539
JAN.									
10...	290	47	.4	2.3	.40	.42	--	902	860
MAR.									
06...	26	4.8	.3	.65	.29	.54	70	169	136
19...	--	--	--	--	--	.31	--	437	--
APR.									
09...	210	25	.3	.01	.01	.33	110	509	508
24...	--	--	--	--	--	.22	--	626	--
MAY									
06...	240	28	.5	.03	.04	.36	150	596	574
21...	--	--	--	--	--	.30	--	632	--
JUNE									
11...	200	21	.4	.03	.09	.13	120	609	554
25...	--	--	--	--	--	.53	--	615	--
AUG.									
05...	250	40	.3	.03	.08	.37	220	622	576
20...	--	--	--	--	--	.53	--	110	--
SEP.									
05...	230	37	.4	.00	.10	.55	180	605	558
16...	--	--	--	--	--	.38	--	643	--

DATE	DIS- SOLVED SOLIDS (TONS PER AC-FT) (70303)	DIS- SOLVED SOLIDS (TONS PER DAY) (70302)	HARD- NESS (CA,MG) (MG/L) (00900)	NON- CAR- BONATE HARD- NESS (MG/L) (00902)	SODIUM AD- SORP- TION RATIO (00931)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS) (00095)	PH (UNITS) (00400)	TEMPER- ATURE (DEG C) (00010)
NOV.								
08...	.73	56.6	410	180	.7	889	8.2	1.0
DEC.								
04...	.66	22.3	390	200	.7	830	8.2	.0
JAN.								
10...	1.23	34.1	620	260	1.0	1290	7.6	.0
MAR.								
06...	.23	251	95	14	.2	238	7.4	1.0
19...	.59	222	--	--	--	679	8.1	2.0
APR.								
09...	.69	188	370	190	.7	799	8.4	8.0
24...	.85	223	--	--	--	946	8.7	10.0
MAY								
06...	.81	122	420	210	.8	914	7.9	15.0
21...	.86	372	--	--	--	915	8.5	20.0
JUNE								
11...	.83	191	420	180	.6	891	7.8	16.0
25...	.84	73.1	--	--	--	901	7.8	22.5
AUG.								
05...	.85	9.24	390	220	1.1	922	8.3	23.0
20...	.15	7.72	--	--	--	730	7.8	23.5
SEP.								
05...	.82	16.2	380	200	1.0	891	8.7	15.0
16...	.87	15.8	--	--	--	949	8.1	14.0

BIG SIOUX RIVER BASIN

06481000 BIG SIOUX RIVER NEAR DELL RAPIDS, S. DAK.--Continued

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1973 TO SEPTEMBER 1974

DATE	TIME	TUR- BID- ITY (JTU) (00070)	SUS- PENDE D SOLIDS (MG/L) (70299)	CHEM- ICAL OXYGEN DEMAND (HIGH LEVEL) (MG/L) (00340)	DIS- SOLVED NITRATE (N) (MG/L) (00618)	DIS- SOLVED NITRITE (N) (MG/L) (00613)	TOTAL NITRITE PLUS NITRATE (N) (MG/L) (00630)
NOV.							
08...	1030	--	--	--	.41	.02	.41
DEC.							
04...	1215	--	--	--	.01	.02	.12
JAN.							
10...	1330	--	--	--	2.2	.06	2.3
MAR.							
06...	1215	10	36	47	--	--	.63
19...	1100	8	17	23	--	--	.60
APR.							
09...	1050	20	63	58	--	--	.01
24...	1115	20	60	35	--	--	.00
MAY							
06...	1300	10	34	41	--	--	.05
21...	1200	10	36	46	--	--	.01
JUNE							
11...	1030	20	54	12	--	--	.31
25...	1100	20	36	70	--	--	.00
AUG.							
05...	1245	20	52	44	--	--	.03
20...	1045	30	100	43	--	--	.28
SEP.							
05...	1030	30	104	46	--	--	.89
16...	1005	20	50	37	--	--	.00

SUSPENDED-SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1973 TO SEPTEMBER 1974

DAY	OCTOBER			NOVEMBER			DECEMBER		
	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
1	45	115	14	39	125	13	30	108	8.7
2	39	122	13	37	130	13	25	107	7.2
3	33	125	11	39	140	15	20	107	5.8
4	31	131	11	35	150	14	17	100	4.6
5	31	135	11	35	157	15	15	110	4.5
6	32	140	12	37	155	15	16	120	5.2
7	31	145	12	36	150	15	17	125	5.7
8	31	152	13	32	144	12	18	130	6.3
9	55	165	25	34	140	13	19	135	6.9
10	98	235	62	36	136	13	18	140	6.8
11	71	196	38	36	132	13	16	150	6.5
12	64	190	33	37	128	13	16	160	6.9
13	58	185	29	36	130	13	15	176	7.1
14	61	180	30	36	135	13	15	170	6.9
15	57	175	27	34	141	13	15	165	6.7
16	53	173	25	37	140	14	15	160	6.5
17	51	170	23	37	138	14	15	150	6.1
18	47	165	21	36	136	13	15	140	5.7
19	44	160	19	38	134	14	15	130	5.3
20	41	158	17	38	132	14	15	118	4.8
21	39	156	16	40	130	14	15	120	4.9
22	41	156	17	41	127	14	14	125	4.7
23	41	155	17	39	124	13	14	125	4.7
24	41	160	18	40	122	13	14	130	4.9
25	41	170	19	40	123	13	13	135	4.7
26	37	175	17	39	124	13	13	135	4.7
27	37	170	17	38	124	13	13	140	4.9
28	37	165	16	36	115	11	12	143	4.6
29	39	154	16	36	109	11	12	150	4.9
30	37	140	14	35	108	10	12	160	5.2
31	37	130	13	--	--	--	12	170	5.5
TOTAL	1400	--	626	1109	--	397	491	--	177.9

06481000 BIG SIOUX RIVER NEAR DELL RAPIDS, S. DAK.--Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25°C), WATER YEAR OCTOBER 1973 TO SEPTEMBER 1974

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	700	850	780	1150	1070	400	870	890	970	890	860	830
2	670	840	810	1110	1070	400	760	880	920	870	870	830
3	690	840	840	1090	1080	280	790	860	960	870	880	840
4	725	850	850	1070	1100	230	760	870	970	880	880	840
5	730	860	880	1140	1090	230	760	870	940	890	870	830
6	720	840	900	1120	1080	270	760	850	890	900	900	820
7	730	860	940	1200	1110	260	770	880	900	900	910	850
8	730	850	960	1140	1130	225	760	890	910	920	920	860
9	680	880	960	1100	1130	280	730	850	900	910	950	870
10	585	900	980	1190	1110	330	760	870	880	880	890	870
11	670	920	1010	1200	1110	380	760	850	870	900	850	840
12	690	940	1030	1220	920	330	770	830	910	910	820	840
13	695	910	1060	1370	1110	330	770	810	870	890	870	840
14	700	920	1040	1360	1060	460	750	810	880	850	870	860
15	680	880	1020	1300	1060	500	760	820	880	810	770	870
16	705	890	1050	1210	1070	490	780	830	870	870	750	870
17	710	900	1070	1140	1070	530	760	820	860	850	690	860
18	685	870	1070	1160	1070	570	780	810	840	870	740	870
19	690	860	1080	1080	1050	600	800	820	820	870	720	880
20	695	840	1090	1110	1000	640	850	850	840	860	740	900
21	720	820	1090	1140	700	580	870	880	850	870	750	900
22	715	810	1080	1140	750	610	880	890	850	860	740	900
23	735	800	1080	1140	900	640	860	900	860	870	740	910
24	730	790	1090	1130	1000	760	850	950	860	890	750	900
25	720	800	1090	1100	1100	750	860	960	880	860	770	890
26	730	790	1110	1100	1200	770	870	970	910	870	790	930
27	745	780	1120	1110	1200	740	850	930	920	890	810	950
28	740	780	1130	780	1200	760	860	920	920	890	820	960
29	760	780	1140	960	---	810	860	950	910	880	820	960
30	750	780	1160	1110	---	810	840	930	900	870	860	970
31	760	---	1160	1100	---	760	---	930	---	890	880	---
MONTH	709	848	1020	1140	1060	507	803	876	891	878	822	878

SUSPENDED-SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1973 TO SEPTEMBER 1974

DAY	JANUARY			FEBRUARY			MARCH		
	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
1	11	180	5.3	15	146	5.9	100	100	27
2	12	190	6.2	15	145	5.9	100	195	53
3	13	201	7.1	15	145	5.9	150	100	41
4	13	195	6.8	15	140	5.7	300	125	101
5	14	190	7.2	14	140	5.3	550	98	146
6	14	185	7.0	14	135	5.1	500	95	128
7	14	180	6.8	14	135	5.1	550	93	138
8	14	182	6.9	14	130	4.9	900	95	231
9	14	125	4.7	13	130	4.6	1370	150	555
10	14	90	3.4	13	125	4.4	875	125	295
11	14	125	4.7	13	125	4.4	498	104	140
12	13	150	5.3	13	120	4.2	359	105	102
13	13	175	6.1	13	120	4.2	305	130	107
14	14	203	7.7	13	115	4.0	281	150	114
15	15	200	8.1	13	115	4.0	284	188	144
16	17	195	9.0	15	115	4.7	248	170	114
17	17	190	8.7	25	110	7.4	255	150	103
18	17	185	8.5	50	110	15	260	138	97
19	16	180	7.8	50	105	14	182	140	69
20	15	175	7.1	75	100	20	228	140	86
21	15	165	6.7	150	150	61	215	145	84
22	15	150	6.1	125	150	51	185	150	75
23	15	150	6.1	120	140	45	144	155	60
24	15	150	6.1	110	130	39	120	160	52
25	16	150	6.5	100	125	34	95	163	42
26	17	150	6.9	90	120	29	102	165	45
27	18	145	7.0	75	115	23	118	170	54
28	19	145	7.4	75	110	22	125	170	57
29	20	145	7.8	--	--	--	123	175	58
30	20	145	7.8	--	--	--	146	178	70
31	17	145	6.7	--	--	--	150	160	65
TOTAL	471	--	209.5	1267	--	438.7	9818	--	3453

BIG SIOUX RIVER BASIN

06481000 BIG SIOUX RIVER NEAR DELL RAPIDS, S. DAK.--Continued

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1973 TO SEPTEMBER 1974

DATE	AMMONIA NITRO- GEN (N) (MG/L) (00610)	ORGANIC NITRO- GEN (N) (MG/L) (00605)	TOTAL KJEL- DAHL- NITRO- GEN (N) (MG/L) (00625)	TOTAL NITRO- GEN (N) (MG/L) (00600)	DIS- SOL- VED- PHOS- PHORUS (P) (MG/L) (00666)	TOTAL PHOS- PHORUS (P) (MG/L) (00665)	TOTAL ORGANIC CARBON (C) (MG/L) (00680)
NOV.							
08...	.10	1.8	1.9	2.3	--	.19	--
DEC.							
04...	.33	1.8	2.1	2.2	--	.24	--
JAN.							
10...	1.5	.40	1.9	4.2	--	.42	--
MAR.							
06...	.95	1.4	2.3	2.9	.41	.54	16
19...	.98	.92	1.9	2.5	--	.31	8.1
APR.							
09...	.17	1.9	2.1	2.1	.02	.33	15
24...	.17	1.4	1.6	1.6	--	.22	11
MAY							
06...	.14	2.0	2.1	2.2	.04	.36	9.8
21...	.09	1.5	1.6	1.6	--	.30	12
JUNE							
11...	--	--	--	--	.09	.13	10
25...	1.2	.90	2.1	2.1	--	.53	9.3
AUG.							
05...	.04	2.1	2.1	2.1	.12	.37	9.4
20...	.37	1.5	1.9	2.2	--	.53	15
SEP.							
05...	.12	2.9	3.0	3.9	.15	.55	19
16...	.20	1.8	2.0	2.0	--	.38	9.1

SUSPENDED-SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1973 TO SEPTEMBER 1974

DAY	APRIL			MAY			JUNE		
	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
1	125	145	49	94	220	56	123	218	72
2	141	123	47	89	210	50	134	191	69
3	146	115	45	79	143	31	137	175	65
4	137	102	38	69	494	92	139	180	68
5	144	125	49	77	324	67	125	193	65
6	137	145	54	77	151	31	125	126	43
7	137	165	61	75	129	26	134	158	57
8	137	185	68	77	160	33	120	231	75
9	137	212	78	69	154	29	118	240	76
10	155	245	103	77	141	29	116	245	77
11	158	250	107	88	140	33	116	228	71
12	160	260	112	98	140	37	116	297	93
13	162	262	115	109	144	42	100	214	58
14	168	336	152	96	175	45	98	247	65
15	190	230	118	109	132	39	98	230	61
16	218	345	203	109	154	45	90	220	53
17	198	193	103	116	135	42	83	211	47
18	175	249	118	120	173	56	75	207	42
19	190	619	318	200	158	85	73	172	34
20	172	450	209	235	244	155	62	199	33
21	156	480	202	220	228	135	59	208	33
22	139	517	194	230	245	152	59	137	22
23	127	368	126	240	255	165	54	165	24
24	132	350	125	218	218	128	49	193	26
25	120	206	67	212	241	138	44	189	22
26	118	200	64	185	274	137	42	182	21
27	111	194	58	168	249	113	44	228	27
28	107	175	51	155	222	93	36	173	17
29	91	208	51	162	173	76	35	157	15
30	98	227	60	132	271	97	33	155	14
31	--	--	--	123	192	64	--	--	--
TOTAL	4386	--	3145	4108	--	2321	2637	--	1445

BIG SIOUX RIVER BASIN

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06481000 BIG SIOUX RIVER NEAR DELL RAPIDS, S. DAK.--Continued

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1973 TO SEPTEMBER 1974

FIELD DETERMINATIONS

DATE	TIME	INSTAN- TANEOUS DIS- CHARGE (CFS) (00061)	TEMPER- ATURE (DEG C) (00010)	DIS- SOLVED OXYGEN (MG/L) (00300)	BIO- CHEM- ICAL OXYGEN DEMAND (MG/L) (00310)	IMME- DIATE COLI- FORM (COL. PER 100 ML) (31501)	FECAL COLI- FORM (COL. PER 100 ML) (31616)
NOV.							
08...	1000	33	1.0	6.4	2.5	3200	80
DEC.							
04...	1215	17	.0	--	2.0	3600	<0
JAN.							
10...	1330	14	.0	8.4	1.5	3600	1200
MAR.							
06...	1215	551	1.0	10.0	--	20	40
19...	1030	188	1.0	11.2	--	2600	780
APR.							
09...	1050	137	8.0	12.4	--	1840	500
24...	1115	132	10.0	9.9	--	2000	220
MAY							
06...	1300	76	15.0	14.4	--	180	170
21...	1200	218	20.0	9.5	--	2800	1180
JUNE							
11...	1030	116	16.0	8.7	--	3400	1660
25...	1100	44	22.5	9.4	--	600	450
JULY							
18...	1105	21	26.5	9.1	--	820	720
AUG.							
05...	1245	5.5	23.0	14.3	--	440	120
20...	1045	26	23.5	6.9	--	1440	1120
SEP.							
05...	1030	9.9	15.0	140	--	270	140
16...	1005	9.1	14.0	9.2	--	410	240

SUSPENDED-SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1973 TO SEPTEMBER 1974

DAY	JULY			AUGUST			SEPTEMBER		
	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
1	32	152	13	7.0	200	3.8	11	160	4.8
2	29	179	14	6.0	212	3.4	11	170	5.0
3	29	175	14	5.6	181	2.7	11	177	5.3
4	30	173	14	5.9	141	2.2	11	156	4.6
5	30	180	15	5.7	148	2.3	10	125	3.4
6	31	188	16	4.1	187	2.1	9.5	140	3.6
7	29	212	17	2.9	218	1.7	9.1	160	3.9
8	28	176	13	2.2	200	1.2	9.1	158	3.9
9	27	229	17	5.5	200	3.0	9.8	156	4.1
10	27	225	16	13	204	7.2	9.9	150	4.0
11	28	227	17	21	200	11	9.9	153	4.1
12	25	186	13	24	153	9.9	9.7	144	3.8
13	26	182	13	25	177	12	9.8	110	2.9
14	24	179	12	26	194	14	9.9	138	3.7
15	24	172	11	26	133	9.3	9.3	165	4.1
16	23	150	9.3	25	150	10	9.2	193	4.8
17	22	132	7.8	27	173	13	9.0	174	4.2
18	21	169	9.6	28	171	13	8.5	143	3.3
19	21	173	9.8	27	166	12	7.9	190	4.1
20	20	120	6.5	26	160	11	7.0	165	3.1
21	18	182	8.8	24	150	9.7	6.1	148	2.4
22	17	169	7.8	24	160	10	6.0	144	2.3
23	15	165	6.7	23	175	11	6.8	150	2.8
24	13	160	5.6	22	194	12	6.6	160	2.9
25	11	156	4.6	21	163	9.2	7.6	165	3.4
26	12	212	6.9	20	135	7.3	7.7	170	3.5
27	14	169	6.4	19	148	7.6	7.1	141	2.7
28	13	198	6.9	17	149	6.8	6.7	130	2.4
29	11	180	5.3	15	138	5.6	6.2	125	2.1
30	9.3	139	3.5	13	146	5.1	6.3	120	2.0
31	8.2	152	3.4	12	126	4.1	--	--	--
TOTAL	667.5	--	323.9	522.9	--	233.2	258.7	--	107.2

TOTAL DISCHARGE FOR YEAR (FT³/S-DAYS)

27136.1

TOTAL SUSPENDED-SEDIMENT DISCHARGE FOR YEAR (TONS)

12877.4

BIG SIOUX RIVER BASIN

06481000 BIG SIOUX RIVER NEAR DELL RAPIDS, S. DAK.--Continued

TEMPERATURE (°C) OF WATER, WATER YEAR OCTOBER 1973 TO SEPTEMBER 1974

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	18.0	5.5	3.5	---	0.0	---	8.0	---	21.0	30.0	26.5	---
2	19.0	5.5	3.5	0.0	0.0	4.5	9.0	21.0	21.0	31.5	20.0	16.5
3	14.5	4.5	1.0	0.0	0.0	3.5	8.0	18.0	26.0	33.0	21.0	19.0
4	16.5	4.5	0.0	0.0	0.0	2.0	5.5	18.0	26.5	29.0	25.5	21.0
5	15.5	2.0	0.0	0.0	0.0	4.5	10.0	15.5	26.0	29.0	26.5	---
6	15.5	3.5	0.0	0.0	0.0	3.5	13.0	16.5	25.5	31.0	25.5	21.0
7	18.0	3.5	0.0	0.0	0.0	3.5	14.5	15.5	26.0	33.5	25.5	25.5
8	20.0	2.0	0.0	0.0	0.0	2.0	14.5	12.0	24.5	31.0	22.0	---
9	20.0	1.0	0.0	0.0	0.0	2.0	15.5	16.5	---	29.0	---	22.0
10	15.5	2.0	0.0	0.0	0.0	1.0	15.5	13.5	21.0	28.0	22.0	25.5
11	15.5	---	0.0	0.0	3.5	1.0	---	---	21.0	26.5	---	16.5
12	14.5	10.0	0.0	0.0	3.5	4.5	---	---	23.5	33.5	26.5	13.5
13	14.5	8.0	0.0	0.0	0.0	2.0	9.0	13.5	26.0	32.0	26.5	16.5
14	21.0	6.5	0.0	1.0	0.0	2.0	4.5	12.0	26.0	31.5	24.5	21.0
15	14.5	4.5	0.0	1.0	0.0	3.5	10.0	13.5	22.0	32.0	26.5	21.5
16	13.0	4.0	0.0	2.0	1.0	2.0	14.5	18.0	---	33.5	28.0	23.5
17	14.5	5.5	0.0	1.0	---	---	18.0	16.5	23.5	29.0	26.5	22.0
18	14.0	4.5	0.0	1.0	---	2.0	16.5	14.5	28.0	31.5	29.0	24.5
19	15.5	6.5	0.0	0.0	---	3.5	14.5	15.5	29.0	32.0	28.0	22.0
20	14.5	5.5	0.0	0.0	---	1.0	16.5	21.0	32.0	33.5	---	15.5
21	15.5	---	0.0	0.0	---	1.0	---	23.5	31.0	29.0	25.5	13.5
22	15.5	---	0.0	0.0	---	1.0	14.5	---	28.0	32.0	25.5	14.5
23	18.0	3.5	0.0	0.0	---	1.0	15.5	19.0	28.0	32.0	25.5	14.5
24	15.5	4.5	0.0	1.0	---	2.0	15.5	21.0	26.5	25.5	25.5	---
25	14.5	3.5	0.0	1.0	---	5.5	20.0	21.0	26.5	30.0	28.0	21.0
26	11.0	4.5	0.0	2.0	---	3.5	19.0	21.0	26.5	31.0	26.0	18.5
27	10.0	4.5	0.0	1.0	---	4.5	22.0	22.0	26.5	30.0	25.5	15.5
28	9.0	3.5	0.0	1.0	---	4.5	22.0	25.5	28.0	26.5	22.0	10.0
29	10.0	6.5	0.0	1.0	---	5.5	16.5	24.5	29.0	25.5	22.0	---
30	9.0	2.0	0.0	2.0	---	6.5	18.0	20.0	28.0	26.5	21.0	10.0
31	5.0	---	0.0	0.0	---	5.5	---	21.0	---	21.0	16.5	---
MONTH	14.5	A 4.5	0.0	B 0.5	---	C 3.0	A 14.0	A 18.0	D 26.0	30.0	D 25.0	E 18.5

A Based on 27 days of data.

D Based on 28 days of data.

B Based on 30 days of data.

E Based on 25 days of data.

C Based on 29 days of data.

06481500 SKUNK CREEK AT SIOUX FALLS, S. DAK.
(Formerly published as Skunk Creek near Sioux Falls)

LOCATION.--Lat 43°32'01", long 96°47'26", in NW¼SW¼ sec.24, T.101 N., R.50 W., Minnehaha County, at gaging station, on right bank 5.0 ft (2 m) downstream from bridge on Marion Road, 1.3 mi (2.1 km) upstream from mouth, 1.8 mi (2.9 km) downstream from small right-bank tributary, and 4.0 mi (6.4 km) southwest of Sioux Falls.

DRAINAGE AREA.--570 mi² (1,480 km²), approximately.

PERIOD OF RECORD.--Chemical analyses: November 1971 to June 1974 (partial-record station), discontinued. Sediment records: October 1971 to September 1974 (partial-record station), discontinued.

REMARKS.--Prior to October 1971, sampling site was 1.9 mi (3.1 km) upstream. Miscellaneous samples for chemical data published for water years 1962, 1967, and for suspended-sediment data for water year 1970.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1973 TO JUNE 1974

DATE	TIME	INSTAN- TANEOUS DIS- CHARGE (CFS) (00061)	DIS- SOLVED SILICA (SI02) (MG/L) (00955)	DIS- SOLVED CAL- CIUM (CA) (MG/L) (00915)	DIS- SOLVED MAG- NE- SIUM (MG) (MG/L) (00925)	DIS- SOLVED SODIUM (NA) (MG/L) (00930)	DIS- SOLVED PO- TAS- SIUM (K) (MG/L) (00935)	BICAR- BONATE (HCO3) (MG/L) (00440)	DIS- SOLVED SULFATE (SO4) (MG/L) (00945)	DIS- SOLVED CHLO- RIDE (CL) (MG/L) (00940)	DIS- SOLVED FLUO- RIDE (F) (MG/L) (00950)	DIS- SOLVED PLUS NITRATE (N) (MG/L) (00631)
DEC. 03...	1300	6.8	9.9	120	56	27	7.4	304	290	22	.3	.28
MAR. 08...	1600	23	9.5	67	26	15	7.8	189	150	11	.4	.68
JUNE 07...	1425	63	9.1	61	29	18	6.9	157	160	10	.2	.73

DATE	DIS- SOL- VED- PHOS- PHORUS (P) (MG/L) (00666)	TOTAL PHOS- PHORUS (P) (MG/L) (00665)	DIS- SOLVED BORON (B) (UG/L) (01020)	DIS- SOLVED SOLIDS (SUM OF CONSTI- TUENTS) (MG/L) (70301)	DIS- SOLVED SOLIDS (TONS PER AC-FT) (70303)	DIS- SOLVED SOLIDS (TONS PER DAY) (70302)	HARD- NESS (CA, MG) (MG/L) (00900)	NON- CAR- BONATE HARD- NESS (MG/L) (00902)	SODIUM AD- SORP- TION RATIO (00931)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS) (00095)	PH (UNITS) (00400)	TEMPER- ATURE (DEG C) (00010)
DEC. 03...	.05	.12	70	684	.93	12.6	530	280	.5	1040	8.3	.0
MAR. 08...	.13	.22	60	383	.52	23.8	270	120	.4	613	8.0	3.0
JUNE 07...	.18	.28	70	375	.51	63.8	270	140	.5	638	7.6	22.0

NOTE.--Carbonate (CO₃) analysis for all samples, 0.0 mg/l.

SUSPENDED-SEDIMENT DISCHARGE MEASUREMENTS, WATER YEAR OCTOBER 1973 TO SEPTEMBER 1974

DATE	TIME	TEMPER- ATURE (DEG C) (00010)	INSTAN- TANEOUS DIS- CHARGE (CFS) (00061)	SUS- PEN- DED SEDI- MENT DIS- CHARGE (MG/L) (80154)	SUS- PEN- DED SEDI- MENT DIS- CHARGE (T/DAY) (80155)
OCT. 05...	1540	15.0	4.4	98	1.2
NOV. 07...	1430	5.0	5.7	92	1.4
DEC. 03...	1300	.0	6.8	79	1.4
JAN. 10...	1440	.0	2.2	109	.65
FEB. 13...	1430	.0	45	70	8.5
MAR. 08...	1600	3.0	23	55	3.4
APR. 05...	0930	2.0	21	130	7.4
MAY 06...	1525	15.0	8.0	142	3.1
JUNE 07...	1425	22.0	62	159	27
JULY 01...	1145	23.0	2.7	127	.93
AUG. 08...	1430	21.0	.44	211	.25
SEP. 06...	0945	18.0	1.1	77	.23

BIG SIOUX RIVER BASIN

06482020 BIG SIOUX RIVER AT NORTH CLIFF AVENUE, AT SIOUX FALLS, S. DAK.

LOCATION.--Lat 43°34'01", long 96°42'39", in SW¼NW¼ sec.10, T.101 N., R.49 W., Minnehaha County, at gaging station, on right bank 20 ft (6 m) downstream from bridge on North Cliff Avenue and 4.1 mi (6.6 km) upstream from Slip Up Creek.

DRAINAGE AREA.--5,770 mi² (14,940 km²), approximately, of which about 1,970 mi² (5,100 km²) is probably noncontributing.

PERIOD OF RECORD.--Chemical analyses: August 1973 to September 1974.

CHEMICAL ANALYSES, AUGUST 1973 TO SEPTEMBER 1974

DATE	TIME	INSTANTANEOUS DIS- CHARGE (CFS) (00061)	DIS- SOLVED SILICA (SI02) (MG/L) (00955)	DIS- SOLVED CAL- CIUM (CA) (MG/L) (00915)	DIS- SOLVED MAG- NE- SIUM (MG) (MG/L) (00925)	DIS- SOLVED SODIUM (NA) (MG/L) (00930)	DIS- SOLVED PO- TAS- SIUM (K) (MG/L) (00935)	BICAR- BONATE (HCO3) (MG/L) (00440)	DIS- SOLVED SULFATE (SO4) (MG/L) (00945)	DIS- SOLVED CHLO- RIDE (CL) (MG/L) (00940)	DIS- SOLVED FLUO- RIDE (F) (MG/L) (00950)	DIS- SOLVED NITRITE PLUS NITRATE (N) (MG/L) (00631)
NOV. 08...	1245	58	14	84	42	250	16	358	190	340	.7	.16
DEC. 04...	1400	40	13	75	40	200	13	232	260	260	1.0	.08
JAN. 10...	1210	30	24	100	44	270	15	473	280	340	1.2	.80
MAR. 06...	1720	685	8.1	32	11	7.7	8.0	114	42	8.7	--	--
19...	1030	232	--	--	--	--	--	--	--	--	--	--
APR. 09...	1145	186	--	--	--	--	--	--	--	--	--	--
24...	1025	158	--	--	--	--	--	--	--	--	--	--
MAY 06...	1400	106	--	--	--	--	--	--	--	--	--	--
21...	1330	252	--	--	--	--	--	--	--	--	--	--
JUNE 11...	1120	182	--	--	--	--	--	--	--	--	--	--
25...	1010	92	--	--	--	--	--	--	--	--	--	--
AUG. 05...	1445	25	--	--	--	--	--	--	--	--	--	--
20...	1145	30	--	--	--	--	--	--	--	--	--	--
SEP. 05...	1115	26	23	75	37	360	22	349	240	470	--	--
16...	1055	25	--	--	--	--	--	--	--	--	--	--

DATE	DIS- SOLVED ORTHO. PHOS- PHORUS (P) (MG/L) (00671)	TOTAL PHOS- PHORUS (P) (MG/L) (00665)	DIS- SOLVED BORON (B) (UG/L) (01020)	DIS- SOLVED SOLIDS (RESI- DUE AT 180 C) (MG/L) (70300)	DIS- SOLVED SOLIDS (TONS PER AC-FT) (70303)	DIS- SOLVED SOLIDS (TONS PER DAY) (70302)	HARD- NESS (CA, MG) (MG/L) (00900)	NON- CAR- BONATE HARD- NESS (MG/L) (00902)	SODIUM AD- SORP- TION RATIO (00931)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS) (00095)	PH (UNITS) (00400)	TEMPER- ATURE (DEG C) (00010)
NOV. 08...	3.6	4.4	--	1140	1.55	179	380	89	5.6	2040	7.7	7.0
DEC. 04...	6.4	6.4	--	972	1.32	105	350	160	4.6	1760	7.7	5.0
JAN. 10...	6.7	15	--	1280	1.74	104	430	43	5.7	2300	7.4	6.0
MAR. 06...	--	.54	--	210	.29	388	130	32	.3	312	7.4	2.0
19...	--	.76	--	442	.60	276	--	--	--	708	6.7	1.0
APR. 09...	--	1.4	--	611	.83	307	--	--	--	971	8.5	9.5
24...	--	1.2	--	733	1.00	368	--	--	--	1100	8.4	11.0
MAY 06...	--	2.6	--	730	.99	286	--	--	--	1150	8.2	16.5
21...	--	.48	--	591	.80	402	--	--	--	899	8.4	21.5
JUNE 11...	--	.81	--	612	.83	301	--	--	--	922	8.1	18.5
25...	--	.98	--	664	.90	164	--	--	--	980	7.6	23.0
AUG. 05...	--	9.6	--	1010	1.37	68.2	--	--	--	1400	7.4	26.0
20...	--	6.8	--	114	.16	9.23	--	--	--	1400	7.3	26.0
SEP. 05...	--	12	--	1400	1.90	98.3	340	53	8.5	2440	7.4	21.5
16...	--	10	--	988	1.34	66.7	--	--	--	1860	7.4	21.5

BIG SIOUX RIVER BASIN

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06482020 BIG SIOUX RIVER AT NORTH CLIFF AVENUE, AT SIOUX FALLS, S. DAK.--Continued

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1973 TO SEPTEMBER 1974

DATE	TIME	TUR- BID- ITY (JTU) (00070)	SUS- PENDE D SOLIDS (MG/L) (70299)	CHEM- ICAL OXYGEN DEMAND (HIGH LEVEL) (MG/L) (00340)	DIS- SOLVED NITRATE (N) (MG/L) (00618)	DIS- SOLVED NITRITE (N) (MG/L) (00613)	TOTAL NITRITE PLUS NITRATE (N) (MG/L) (00630)	AMMONIA NITRO- GEN (N) (MG/L) (00610)	ORGANIC NITRO- GEN (N) (MG/L) (00605)	TOTAL KJEL- DAHL NITRO- GEN (N) (MG/L) (00625)	TOTAL NITRO- GEN (N) (MG/L) (00600)	TOTAL ORGANIC CARBON (C) (MG/L) (00680)
NOV. 08...	1245	--	--	--	.11	.05	.17	20	.00	1.2	1.4	--
DEC. 04...	1400	--	--	--	.04	.04	3.3	24	3.0	27	30	--
JAN. 10...	1210	--	--	--	.59	.21	.30	12	30	42	42	--
MAR. 06...	1720	30	109	55	--	--	.01	1.0	1.6	2.6	2.6	17
19...	1030	10	22	28	--	--	.54	2.2	1.0	3.2	3.7	9.2
APR. 09...	1145	10	44	57	--	--	.05	3.7	2.9	6.6	6.7	15
24...	1025	20	39	44	--	--	.06	2.6	2.0	4.6	4.7	10
MAY 06...	1400	20	49	39	--	--	.38	6.6	1.5	8.1	8.5	13
21...	1330	20	43	42	--	--	.03	.09	1.8	1.9	1.9	9.1
JUNE 11...	1120	20	35	12	--	--	.04	1.4	.30	1.7	1.7	9.9
25...	1010	20	46	31	--	--	.00	1.4	1.1	2.5	2.5	10
AUG. 05...	1445	4	3	3	--	--	1.7	16	3.0	19	21	.7
20...	1145	9	28	42	--	--	.58	.27	18	18	19	17
SEP. 05...	1115	5	13	68	--	--	.00	30	5.0	35	35	21
16...	1055	5	9	50	--	--	.38	12	6.0	18	18	17

DATE	TIME	TOTAL ARSENIC (AS) (UG/L) (01002)	TOTAL COPPER (CU) (UG/L) (01042)	TOTAL IRON (FE) (UG/L) (01045)	TOTAL MAN- GANESE (MN) (UG/L) (01055)	TOTAL LEAD (PB) (UG/L) (01051)	TOTAL SELE- NIUM (SE) (UG/L) (01147)	TOTAL ZINC (ZN) (UG/L) (01092)	TOTAL MERCURY (HG) (UG/L) (71900)
APR. 24...	1025	2	10	--	530	<100	4	180	.0
MAY 21...	1330	6	10	--	470	<100	3	30	.0
JUNE 25...	1010	7	10	--	720	<100	1	30	.0
AUG. 20...	1145	3	<10	510	410	<100	0	50	1.0
SEP. 16...	1055	3	<10	400	310	<100	0	20	.0

BIG SIOUX RIVER BASIN

06482020 BIG SIOUX RIVER AT NORTH CLIFF AVENUE, AT SIOUX FALLS, S. DAK.--Continued

CHEMICAL ANALYSES, AUGUST 1973 TO SEPTEMBER 1974

FIELD DETERMINATIONS

DATE	TIME	INSTAN- TANEOUS DIS- CHARGE (CFS) (000061)	TEMPER- ATURE (DEG C) (00010)	DIS- SOLVED OXYGEN (MG/L) (00300)	BIO- CHEM- ICAL OXYGEN DEMAND (MG/L) (00310)	IMME- DIATE COLI- FORM (COL. PER 100 ML) (31501)	FECAL COLI- FORM (COL. PER 100 ML) (31616)
NOV.							
08...	1230	58	--	10.6	6.8	1300000	59000
DEC.							
04...	1400	40	5.0	12.6	5.2	1000000	50000
JAN.							
10...	1210	30	6.0	9.8	5.0	2350000	1900000
MAR.							
06...	1720	685	2.0	12.1	--	2200	3100
19...	1100	232	--	11.8	--	10900	8000
APR.							
09...	1145	186	9.5	10.2	--	360000	60000
24...	1025	158	11.0	9.3	--	92000	14000
MAY							
06...	1400	106	16.5	11.2	--	56000	20000
21...	1330	252	21.5	8.9	--	70000	5000
JUNE							
11...	1120	182	18.5	8.0	--	24000	1000
25...	1010	92	23.0	1.0	--	39000	2500
JULY							
18...	1010	28	--	5.4	--	<0	<0
AUG.							
05...	1445	25	26.0	9.2	--	<0	<0
20...	1145	30	26.0	9.7	--	<0	<0
SEP.							
05...	1115	26	21.5	9.5	--	360	100
16...	1055	25	21.5	6.5	--	360	50

BIG SIOUX RIVER BASIN

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06482610 SPLIT ROCK CREEK AT CORSON, S. DAK.

LOCATION.--Lat 43°36'59", long 96°33'54", in NE&NW¼ sec.26, T.102 N., R.48 W., Minnehaha County, at gaging station, on left bank 6 ft (2 m) downstream from highway bridge, 0.3 mi (0.5 km) east of Corson and 3.4 mi (5.5 km) upstream from mouth.

DRAINAGE AREA.--475 mi² (1,230 km²), approximately.

PERIOD OF RECORD.--Chemical analyses: October 1970 to June 1974 (partial-record station), discontinued.
Sediment records: October 1970 to September 1974 (partial-record station), discontinued.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1973 TO JUNE 1974

DATE	TIME	INSTAN- TANEOUS DIS- CHARGE (CFS) (00061)	DIS- SOLVED SILICA (SI02) (MG/L) (00955)	DIS- SOLVED CAL- CIUM (CA) (MG/L) (00915)	DIS- SOLVED MAG- NE- SIUM (MG) (MG/L) (00925)	DIS- SOLVED SODIUM (NA) (MG/L) (00930)	DIS- SOLVED PO- TAS- SIUM (K) (MG/L) (00935)	BICAR- BONATE (HCO3) (MG/L) (00440)	DIS- SOLVED SULFATE (SO4) (MG/L) (00945)	DIS- SOLVED CHLO- RIDE (CL) (MG/L) (00940)	DIS- SOLVED FLUO- RIDE (F) (MG/L) (00950)	DIS- SOLVED NITRITE PLUS NITRATE (N) (MG/L) (00631)
DEC. 03...	1515	24	.2	58	34	28	3.9	229	100	30	.4	.02
MAR. 06...	1445	258	7.8	29	11	7.7	8.7	116	27	12	.3	1.0
JUNE 07...	0935	31	6.2	86	40	28	6.1	337	110	26	.4	.54

DATE	DIS- SOL- VED- PHOS- PHORUS (P) (MG/L) (00666)	TOTAL PHOS- PHORUS (P) (MG/L) (00665)	DIS- SOLVED BORON (B) (UG/L) (01020)	DIS- SOLVED SOLIDS (SUM OF CONSTI- TUENTS) (MG/L) (70301)	DIS- SOLVED SOLIDS (TONS PER AC-FT) (70303)	DIS- SOLVED SOLIDS (TONS PER DAY) (70302)	HARD- NESS PER (CA,MG) (MG/L) (00900)	NON- CAR- BONATE HARD- NESS (MG/L) (00902)	SODIUM AD- SORP- TION RATIO (00931)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS) (00095)	PH (UNITS) (00400)	TEMPER- ATURE (DEG C) (00010)
DEC. 03...	.01	.17	60	378	.51	24.5	280	80	.7	641	8.6	.0
MAR. 06...	.43	.58	70	166	.23	116	120	23	.3	295	7.4	5.0
JUNE 07...	.16	--	120	471	.64	39.4	380	100	.6	790	8.2	20.0

NOTE.--Carbonate (CO₃) analysis for all samples, 0.0 mg/l.

SUSPENDED-SEDIMENT DISCHARGE MEASUREMENTS, WATER YEAR OCTOBER 1973 TO SEPTEMBER 1974

DATE	TIME	TEMPER- ATURE (DEG C) (00010)	INSTAN- TANEOUS DIS- CHARGE (CFS) (00061)	SUS- PENDE SEDI- MENT DIS- CHARGE (MG/L) (80154)	SUS- PENDE SEDI- MENT DIS- CHARGE (T/DAY) (80155)
OCT. 05...	0925	10.0	13	49	1.7
NOV. 07...	1245	4.0	21	77	4.4
DEC. 03...	1500	.0	24	122	7.9
JAN. 09...	1555	.0	7.6	68	1.4
FEB. 13...	0950	.0	14	79	3.0
MAR. 06...	1445	5.0	258	84	59
APR. 04...	1645	4.0	48	91	12
MAY 06...	1130	12.0	22	81	4.8
JUNE 07...	0935	20.0	31	105	8.8
JULY 02...	1515	27.5	6.3	128	2.2
AUG. 05...	1115	22.0	4.7	97	1.2
SEP. 05...	1545	19.0	4.6	85	1.1

BIG SIOUX RIVER BASIN

06485500 BIG SIOUX RIVER AT AKRON, IOWA

LOCATION.--Lat 42°49'42", long 96°33'45", in NE¼SW¼ sec.31, T.93 N., R.48 W., Plymouth County, Iowa, at gaging station, on left bank at west edge of Akron, 0.6 mi (1.0 km) downstream from bridge on State Highway 48, and 2.3 mi (3.7 km) upstream from Union Creek.

DRAINAGE AREA.--9,030 mi² (23,390 km²), approximately, of which about 1,970 mi² (5,100 km²) is probably noncontributing.

PERIOD OF RECORD.--Chemical analyses: June 1967 to September 1974 (partial-record station).

Sediment records: September 1970 to September 1974 (partial-record station).

REMARKS.--Miscellaneous samples for chemical data published for water years 1962, 1966-67, and for sediment data for water year 1967.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1973 TO SEPTEMBER 1974

DATE	TIME	INSTAN- TANEOUS DIS- CHARGE (CFS) (00061)	DIS- SOLVED SILICA (SI02) (MG/L) (00955)	DIS- SOLVED CAL- CIUM (CA) (MG/L) (00915)	DIS- SOLVED MAG- NE- SIUM (MG) (MG/L) (00925)	DIS- SOLVED SODIUM (NA) (MG/L) (00930)	DIS- SOLVED PO- TAS- SIUM (K) (MG/L) (00935)	BICAR- BONATE (HCO3) (MG/L) (00440)	DIS- SOLVED SULFATE (SO4) (MG/L) (00945)	DIS- SOLVED CHLO- RIDE (CL) (MG/L) (00940)	DIS- SOLVED FLUO- RIDE (F) (MG/L) (00950)	DIS- SOLVED NITRITE PLUS NITRATE (N) (MG/L) (00631)
DEC. 10...	1130	201	7.4	130	55	57	6.7	370	260	61	.5	5.7
APR. 09...	1210	663	4.8	100	41	34	5.4	264	210	42	.4	1.8
MAY 24...	1040	710	1.5	85	40	32	5.7	269	190	31	.9	.23
JUNE 24...	1130	662	9.9	68	26	30	8.2	177	150	20	.5	1.9

DATE	DIS- SOLVED PHOS- PHORUS (P) (MG/L) (00666)	TOTAL PHOS- PHORUS (P) (MG/L) (00665)	DIS- SOLVED BORON (B) (UG/L) (01020)	DIS- SOLVED SOLIDS (SUM OF CONSTI- TUENTS) (MG/L) (70301)	DIS- SOLVED SOLIDS (TONS PER AC-FT) (MG/L) (70303)	DIS- SOLVED SOLIDS (TONS PER DAY) (MG/L) (70302)	HARD- NESS (CA,MG) (MG/L) (00900)	NON- CAR- BONATE HARD- NESS (MG/L) (00902)	SODIUM AD- SORP- TION RATIO (00931)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS) (00095)	PH (UNITS) (00400)	TEMPER- ATURE (DEG C) (00010)
DEC. 10...	.21	.79	130	788	1.07	428	550	250	1.1	1210	8.2	.0
APR. 09...	.26	.64	90	587	.80	1050	420	180	.7	939	8.7	8.0
MAY 24...	.20	.19	110	520	.71	997	380	160	.7	740	8.8	17.0
JUNE 24...	.20	.58	100	409	.56	731	280	130	.8	655	7.7	23.0

NOTE.--Carbonate (CO₃) analysis for all samples, 0.0 mg/l.

SUSPENDED-SEDIMENT DISCHARGE MEASUREMENTS, WATER YEAR OCTOBER 1973 TO SEPTEMBER 1974

DATE	TIME	TEMPER- ATURE (DEG C) (00010)	INSTAN- TANEOUS DIS- CHARGE (CFS) (00061)	SUS- PENDE SEDI- MENT (MG/L) (80154)	SUS- PENDE SEDI- MENT DIS- CHARGE (T/DAY) (80155)
OCT. 12...	1110	14.0	1700	1200	5510
NOV. 23...	1000	.0	334	114	103
DEC. 10...	1120	.0	201	102	55
JAN. 24...	1015	.0	118	121	39
FEB. 08...	1450	.0	133	117	42
MAR. 06...	1130	2.0	1490	768	3090
APR. 09...	1130	8.0	663	173	310
MAY 09...	1020	13.0	319	176	152
JUNE 10...	1115	15.0	452	291	355
AUG. 08...	1100	21.0	72	154	30
SEP. 24...	1030	14.0	80	151	33

BIG SIOUX RIVER BASIN

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06485500 BIG SIOUX RIVER AT AKRON, IOWA--Continued

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1973 TO SEPTEMBER 1974

DATE	TIME	INSTAN- TANEOUS DIS- CHARGE (CFS) (00061)	TEMPER- ATURE (DEG C) (00010)	DIS- SOLVED ARSENIC (AS) (UG/L) (01000)	TOTAL ARSENIC (AS) (UG/L) (01002)	DIS- SOLVED CAD- MIUM (CD) (UG/L) (01025)	DIS- SOLVED CHRO- MIUM (CR) (UG/L) (01030)	DIS- SOLVED COBALT (CO) (UG/L) (01035)	DIS- SOLVED COPPER (CU) (UG/L) (01040)
DEC. 10...	1130	201	.0	3	--	1	0	0	0
MAY 24...	1040	710	17.0	--	6	--	--	--	--

DATE	TOTAL COPPER (CU) (UG/L) (01042)	DIS- SOLVED IRON (FE) (UG/L) (01046)	DIS- SOLVED LEAD (PB) (UG/L) (01049)	TOTAL LEAD (PB) (UG/L) (01051)	DIS- SOLVED MAN- GANESE (MN) (UG/L) (01056)	TOTAL MAN- GANESE (MN) (UG/L) (01055)	DIS- SOLVED MOLYB- DENUM (MO) (UG/L) (01060)	DIS- SOLVED NICKEL (NI) (UG/L) (01065)	DIS- SOLVED SILVER (AG) (UG/L) (01075)
DEC. 10...	--	20	1	--	100	--	3	5	1
MAY 24...	10	--	--	<100	--	880	--	--	--

DATE	DIS- SOLVED STRON- TIUM (SR) (UG/L) (01080)	DIS- SOLVED VANA- DIUM (V) (UG/L) (01085)	DIS- SOLVED ZINC (ZN) (UG/L) (01090)	TOTAL ZINC (ZN) (UG/L) (01092)	DIS- SOLVED ALUM- INUM (AL) (UG/L) (01106)	DIS- SOLVED LITHIUM (LI) (UG/L) (01130)	DIS- SOLVED SELE- NIUM (SE) (UG/L) (01145)	TOTAL SELE- NIUM (SE) (UG/L) (01147)	TOTAL MERCURY (HG) (UG/L) (71900)
DEC. 10...	560	.0	30	--	20	30	7	--	.1
MAY 24...	--	--	--	50	--	--	--	0	.0

FIELD DETERMINATIONS

DATE	TIME	INSTAN- TANEOUS DIS- CHARGE (CFS) (00061)	TEMPER- ATURE (DEG C) (00010)	DIS- SOLVED OXYGEN (MG/L) (00300)	BIO- CHEM- ICAL OXYGEN DEMAND (MG/L) (00310)	IMME- DIATE COLI- FORM (COL. PER (31501)	FECAL COLI- FORM (COL. PER (31616)	STREP- TOCOCCI (COL- ONIES PER (31679)
MAY 24...	1040	710	17.0	10.0	--	--	150	20

06485500 BIG SIOUX RIVER AT AKRON, IOWA--Continued

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1973 TO SEPTEMBER 1974

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ANALYSES OF SAMPLES COLLECTED AT MISCELLANEOUS SITES
CHEMICAL ANALYSES, WATER YEAR OCTOBER 1973 TO SEPTEMBER 1973

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GRAND RIVER BASIN

06357000 SHADEHILL RESERVOIR AT SHADEHILL, S. DAK. (LAT 45 45 12 LONG 102 12 12)

DATE	TIME	INSTAN- TANEOUS DIS- CHARGE (CFS) (00061)	DIS- SOLVED SILICA (SI02) (MG/L) (00955)	DIS- SOLVED CAL- CIUM (CA) (MG/L) (00915)	DIS- SOLVED MAG- NE- SIUM (MG) (MG/L) (00925)	DIS- SOLVED SODIUM (NA) (MG/L) (00930)	DIS- SOLVED PO- TAS- SIUM (K) (MG/L) (00935)	BICAR- BONATE (HCO3) (MG/L) (00440)	DIS- SOLVED SULFATE (SO4) (MG/L) (00945)	DIS- SOLVED CHLO- RIDE (CL) (MG/L) (00940)	DIS- SOLVED FLUO- RIDE (F) (MG/L) (00950)	DIS- SOLVED NITRITE PLUS NITRATE (N) (MG/L) (00631)
OCT., 1973												
17...	1500	--	6.4	41	29	260	8.8	326	480	4.7	.4	.18
APR., 1974												
23...	1400	--	5.6	41	29	260	8.5	352	470	5.6	.4	.11
JULY												
23...	1100	--	5.5	44	31	280	9.7	364	520	6.3	.3	.09

DATE	DIS- SOL- VED- PHOS- PHORUS (P) (MG/L) (00666)	TOTAL PHOS- PHORUS (P) (MG/L) (00665)	DIS- SOLVED BORON (B) (UG/L) (01020)	DIS- SOLVED SOLIDS (SUM OF CONSTI- TUENTS) (MG/L) (70301)	DIS- SOLVED SOLIDS (TONS PER AC-FT) (70303)	DIS- SOLVED SOLIDS (TONS PER DAY) (70302)	HARD- NESS (CA, MG) (MG/L) (00900)	NON- CAR- BONATE HARD- NESS (MG/L) (00902)	SODIUM AD- SORP- TION RATIO (00931)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS) (00095)	PH (UNITS) (00400)	TEMPER- ATURE (DEG C) (00010)
OCT., 1973												
17...	.05	.04	450	1000	1.36	--	220	0	7.6	1470	8.6	12.5
APR., 1974												
23...	.03	.08	430	1000	1.36	--	220	0	7.6	1520	8.5	7.0
JULY												
23...	.02	.32	450	1090	1.48	--	240	0	7.9	1630	8.6	24.0

FIELD DETERMINATIONS

CHEYENNE RIVER BASIN

DATE	TIME	INSTAN- TANEOUS DIS- CHARGE (CFS) (00061)	TEMPER- ATURE (DEG C) (00010)	PH (UNITS) (00400)	DIS- SOLVED OXYGEN (MG/L) (00300)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS) (00095)
------	------	--	--	--------------------------	---	---

431811103485900 - COTTONWOOD CR AT EDMONT S.DAK. (LAT 43 18 11 LONG 103 48 59)

JULY, 1973						
10...	1245	E.05	25.0	7.4	8.4	5700
25...	1040	E25	20.0	7.7	6.4	3000
AUG.						
07...	1040	E.10	20.5	7.6	8.8	5100
21...	1345	E.10	27.0	7.7	9.2	4900
SEP.						
11...	1220	E.10	18.0	7.4	6.6	5000
26...	1330	E.40	16.5	7.7	7.6	5000
OCT.						
16...	1050	E.10	12.0	7.4	7.5	4700
29...	1300	E.10	11.0	7.6	10.4	6300
NOV.						
12...	1055	E1.3	6.0	7.5	11.6	6500
28...	1050	E11	4.0	7.4	--	5000
DEC.						
11...	1040	E.40	3.5	7.3	10.4	5800
27...	1105	E.10	1.0	7.4	8.7	5000
JAN., 1974						
16...	0845	E.21	2.5	6.8	13.2	5100
28...	1050	--	.0	7.3	11.2	5400
FEB.						
13...	0930	E9.0	.0	8.1	--	3300
25...	1245	E3.0	3.5	7.9	8.8	4800
MAR.						
13...	1120	E2.0	7.5	7.5	9.3	4500
25...	1130	E.30	7.0	7.4	10.2	5000
APR.						
10...	0815	E.30	11.5	7.6	9.1	5700
23...	0935	E6.0	10.0	8.2	9.7	4800
MAY						
06...	1130	E.50	21.0	8.2	14.2	5750
22...	1200	E.80	21.0	7.3	9.6	4440
JUNE						
10...	1430	E2.5	29.5	5.8	2.4	4800
19...	1330	--	33.5	6.0	13.0	3900
E Estimated						

ANALYSES OF SAMPLES COLLECTED AT MISCELLANEOUS SITES
CHEMICAL ANALYSES, WATER YEAR OCTOBER 1973 TO SEPTEMBER 1974

FIELD DETERMINATIONS

CHEYENNE RIVER BASIN

DATE	TIME	INSTAN- TANEOUS DIS- CHARGE (CFS) (00061)	TEMPER- ATURE (DEG C) (00010)	PH (UNITS) (00400)	DIS- SOLVED OXYGEN (MG/L) (00300)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS) (00095)
431723103492600 - COTTONWOOD CR NR EDMONT S.DAK. (LAT 43 17 23 LONG 103 49 26)						
JULY, 1973						
10...	1200	E.05	20.0	7.5	8.6	5850
25...	1015	E25	20.0	7.6	7.2	2720
AUG.						
07...	1015	E.04	16.0	7.5	7.4	6000
21...	1300	E.02	27.0	7.7	10.0	6100
SEP.						
11...	1200	E.02	16.0	7.4	6.3	6020
26...	1300	E.10	15.0	7.8	10.8	6200
OCT.						
16...	1025	E.05	8.0	7.4	7.7	6000
29...	1230	E.03	10.0	8.0	12.0	6600
NOV.						
12...	1030	E.60	4.0	8.6	12.7	5600
28...	1020	--	1.0	7.6	12.7	5800
DEC.						
11...	1015	E.40	.5	7.8	11.9	7500
27...	1030	E.05	.0	7.6	10.1	5800
JAN., 1974						
16...	0905	E.20	.5	7.3	12.2	5900
28...	1115	E1.0	.0	7.3	10.3	5400
FEB.						
13...	1010	E8.0	.0	8.1	--	3350
25...	1230	E2.5	2.0	8.0	8.8	5100
MAR.						
13...	1100	E2.5	5.5	7.7	9.7	5000
25...	1045	E.30	2.0	7.6	12.6	5800
APR.						
10...	0845	E.50	9.0	7.8	9.3	6000
23...	1005	E6.0	10.5	8.2	10.3	4900
MAY						
06...	1230	E.60	21.5	8.2	11.3	6080
22...	1230	E.30	20.0	7.9	9.2	6020
JUNE						
10...	1400	E.10	26.0	7.2	10.4	6000
19...	1300	E.01	32.0	7.0	11.4	6000

431849103471600 - CHEYENNE R ABV. RED CANYON NR EDMONT S.DAK. (LAT 43 18 49 LONG 103 47 16)

JULY, 1973						
25...	0945	--	18.5	--	--	--
AUG.						
07...	0940	--	18.5	8.1	8.6	3500
21...	1430	E4.0	34.5	8.3	9.9	4800
SEP.						
11...	1245	E950	16.0	7.5	8.4	545
26...	1400	E45	.1	8.2	9.0	2850
OCT.						
16...	1000	--	12.0	8.1	12.1	3850
29...	1330	E85	9.0	8.1	11.2	2140
NOV.						
12...	0950	--	3.0	8.0	12.2	4000
28...	1000	--	.5	7.8	13.3	4800
DEC.						
11...	0950	E14	.0	7.7	12.8	5200
27...	1010	--	.5	7.7	11.6	5000
JAN., 1974						
16...	0945	--	.0	6.9	13.0	5500
28...	1000	--	.0	7.4	12.6	2340
FEB.						
13...	0845	--	.0	8.1	--	2780
25...	1315	F58	3.5	8.0	8.3	2100
MAR.						
13...	1300	E76	5.5	8.0	9.1	5000
25...	1000	E59	.5	7.8	12.4	4500
APR.						
10...	1030	E21	11.0	8.2	10.3	4050
23...	0900	--	10.0	8.0	10.8	3600
MAY						
06...	1030	F19	18.5	8.4	13.7	5000
22...	1300	E9.5	20.5	8.2	9.2	4800
JUNE						
10...	1500	E4.0	28.5	7.6	10.2	5000
19...	1400	E.40	36.0	7.2	9.4	5000

E Estimated

ANALYSES OF SAMPLES COLLECTED AT MISCELLANEOUS SITES
 CHEMICAL ANALYSES, WATER YEAR OCTOBER 1973 TO SEPTEMBER 1973

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FIELD DETERMINATIONS

CROW CREEK BASIN

DATE	TIME	INSTAN- TANEOUS DIS- CHARGE (CFS) (00061)	TEMPER- ATURE (DEG C) (00010)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS) (00095)
06442950 - CROW CREEK NEAR GANN VALLEY, S. DAK. (LAT 43 59 29 LONG 099 13 07)				
AUG., 1973				
08...	1610	.00	--	--
SEP.				
07...	1100	.00	--	--
OCT.				
04...	1540	.00	--	--
NOV.				
01...	1635	.00	--	--
30...	0845	.00	--	--
DEC.				
19...	1550	.00	--	--
FEB., 1974				
14...	0930	12	.0	370
19...	1150	317	2.0	320
MAR.				
14...	1125	7.6	2.0	660
APR.				
18...	0805	5.6	7.5	1230
MAY				
23...	0840	30	15.0	620
JUNE				
20...	0815	1.5	23.0	1040
JULY				
25...	0830	.00	--	--
AUG.				
22...	0810	.00	--	--
SEP.				
19...	1245	.00	--	--

WHITE RIVER BASIN

06445980 - WHITE CLAY C NR OGLALA, S. DAK. (LAT 43 08 46 LONG 102 40 58)

JULY, 1973				
10...	1140	1.2	21.0	555
AUG.				
06...	1245	1.8	22.5	510
27...	1030	1.1	20.0	550
SEP.				
25...	1105	2.1	11.5	680
OCT.				
23...	1200	2.2	11.0	610
NOV.				
19...	1245	6.2	1.5	645
DEC.				
17...	1130	9.2	.0	--
JAN., 1974				
14...	1400	3.8	.0	--
FEB.				
11...	1205	8.8	.0	650
MAR.				
12...	1030	13	3.0	455
APR.				
08...	1100	12	5.5	550
MAY				
08...	1015	9.4	14.5	550
JUNE				
12...	1130	4.8	17.0	530
JULY				
10...	0835	.88	20.5	590
30...	1300	1.4	22.5	550
AUG.				
27...	1015	.00	--	--
SEP.				
24...	0900	.00	--	--

ANALYSES OF SAMPLES COLLECTED AT MISCELLANEOUS SITES
CHEMICAL ANALYSES, WATER YEAR OCTOBER 1973 TO SEPTEMBER 1973

FIELD DETERMINATIONS

WHITE RIVER BASIN

DATE	TIME	INSTAN- TANEOUS DIS- CHARGE (CFS) (00061)	TEMPER- ATURE (DEG C) (00010)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS) (00095)
------	------	--	--	---

06449100 - LITTLE WHITE RIVER NEAR VETAL, S. DAK. (LAT 43 06 03 LONG 101 13 49)

JULY, 1973				
10...	0925	20	22.0	320
AUG.				
09...	1000	18	21.0	300
SEP.				
05...	1030	18	16.0	300
OCT.				
02...	1030	34	15.0	365
31...	0815	40	4.5	--
NOV.				
28...	0925	37	.0	--
DEC.				
18...	0750	17	.0	290
JAN., 1974				
15...	1000	50	.0	530
FEB.				
12...	0745	60	.5	360
MAR.				
12...	0900	64	2.0	280
APR.				
16...	1300	114	9.0	310
MAY				
21...	1015	41	14.0	368
JUNE				
18...	1110	28	22.0	340
JULY				
23...	1215	16	23.0	295
AUG.				
20...	1025	15	19.0	300
SEP.				
17...	1310	18	20.5	295

06449250 - SPRING CREEK NEAR ST. FRANCIS, S. DAK. (LAT 43 04 21 LONG 101 01 49)

JULY, 1973				
10...	1335	.01	30.0	480
AUG.				
09...	1130	.00	--	--
SEP.				
05...	1100	.00	--	--
OCT.				
02...	1340	.00	--	--
31...	0925	.00	--	--
NOV.				
28...	1030	.00	--	--
DEC.				
18...	0940	.23	.0	--
JAN., 1974				
15...	1115	.00	--	--
FEB.				
12...	0930	6.0	.0	--
MAR.				
12...	1125	8.6	2.5	350
APR.				
16...	1630	12	12.0	410
MAY				
21...	1320	8.9	18.0	400
JUNE				
18...	1440	.35	25.0	430
JULY				
23...	1455	.00	--	--
AUG.				
20...	1500	.00	--	--
SEP.				
17...	1700	.00	--	--

ANALYSES OF SAMPLES COLLECTED AT MISCELLANEOUS SITES
 CHEMICAL ANALYSES, WATER YEAR OCTOBER 1973 TO SEPTEMBER 1973

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FIELD DETERMINATIONS

JAMES RIVER BASIN

DATE	TIME	INSTAN- TANEOUS DIS- CHARGE (CFS) (00061)	TEMPER- ATURE (DEG C) (00010)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MMOS) (00095)
06473000 - JAMES RIVER AT ASHTON, S. DAK. (LAT 45 00 02 LONG 098 28 57)				
JULY, 1973				
17...	0825	.00	--	--
AUG.				
14...	0750	.00	--	--
SEP.				
11...	0830	.00	--	--
OCT.				
10...	0745	.00	--	--
NOV.				
06...	1430	.00	--	--
DEC.				
03...	1450	.00	--	--
JAN., 1974				
09...	1200	.00	--	--
FEB.				
20...	1455	3.6	1.0	330
MAR.				
26...	0920	69	.0	1100
APR.				
30...	1225	60	14.0	1280
JUNE				
04...	1230	117	22.5	--
JULY				
09...	0855	89	26.0	1120
AUG.				
07...	1315	75	23.0	--
SEP.				
04...	1000	45	11.5	920

06473750 - WOLF C NR REE HEIGHTS S DAK (LAT 44 36 25 LONG 099 13 54)

JULY, 1973				
16...	0910	.00	--	--
SEP.				
10...	1000	.00	--	--
OCT.				
09...	1045	.00	--	--
NOV.				
06...	1020	.00	--	--
DEC.				
03...	1045	.00	--	--
JAN., 1974				
08...	1135	.00	--	--
FEB.				
19...	0950	.00	--	--
MAR.				
25...	1140	.00	--	--
APR.				
29...	1330	.00	--	--
JUNE				
03...	1250	.00	--	--
JULY				
08...	0840	.00	--	--
AUG.				
06...	1200	.00	--	--

ANALYSES OF SAMPLES COLLECTED AT MISCELLANEOUS SITES
 CHEMICAL ANALYSES, WATER YEAR OCTOBER 1973 TO SEPTEMBER 1973

FIELD DETERMINATIONS

JAMES RIVER BASIN

DATE	TIME	INSTAN- TANEOUS DIS- CHARGE (CFS) (00061)	TEMPER- ATURE (DEG C) (00010)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS) (00095)
06474000 - TURTLE CREEK NEAR TULARE, S. DAK. (LAT 44 44 06 LONG 098 35 09)				
JULY, 1973				
16...	1445	.00	--	--
AUG.				
13...	1255	.00	--	--
JULY, 1973				
16...	1445	.00	--	--
SEP.				
10...	1430	.00	--	--
OCT.				
09...	1400	.00	--	--
NOV.				
06...	1235	.00	--	--
DEC.				
03...	1325	.25	2.0	--
JAN., 1974				
08...	1635	.00	--	--
FEB.				
19...	1350	.96	1.5	1800
MAR.				
25...	1100	.27	5.5	690
APR.				
29...	1635	.26	15	--
JUNE				
03...	1635	.91	26	--
JULY				
08...	1410	.00	--	--
AUG.				
06...	1505	.00	--	--
SEP.				
03...	1340	.00	--	--
06474300 - MEDICINE CREEK NEAR ZELL, S. DAK. (LAT 44 45 52 LONG 098 42 13)				
JULY, 1973				
16...	1300	.03	27.0	480
AUG.				
13...	1235	.05	21.5	--
JULY, 1973				
16...	1300	.03	27.0	480
SEP.				
10...	1350	.02	26.0	510
OCT.				
09...	1325	.04	20.0	--
NOV.				
06...	1210	.03	--	1800
DEC.				
03...	1235	.02	1.0	--
JAN., 1974				
08...	1340	.00	--	--
FEB.				
09...	1600	.00	--	--
MAR.				
25...	1305	.03	2.0	2000
APR.				
29...	1545	.02	12	--
JUNE				
03...	1525	.65	26	--
JULY				
08...	1315	.04	28.0	1810
AUG.				
06...	1440	.00	--	--
SEP.				
03...	1320	.00	--	--

ANALYSES OF SAMPLES COLLECTED AT MISCELLANEOUS SITES
 CHEMICAL ANALYSES, WATER YEAR OCTOBER 1973 TO SEPTEMBER 1973

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FIELD DETERMINATIONS

JAMES RIVER BASIN

DATE	TIME	INSTAN- TANEOUS DIS- CHARGE (CFS) (000061)	TEMPER- ATURE (DEG C) (00010)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS) (00095)
------	------	---	--	---

06475000 - JAMES RIVER NEAR REDFIELD, S. DAK. (LAT 44 55 13 LONG 098 25 52)

JULY, 1973				
17...	0730	.00	--	--
AUG.				
13...	1625	.00	--	--
SEP.				
10...	1630	.00	--	--
OCT.				
09...	1525	.00	--	--
NOV.				
06...	1335	.00	--	--
DEC.				
03...	1415	.00	--	--
JAN., 1974				
09...	1130	.00	--	--
FEB.				
19...	1440	.00	--	--
MAR.				
25...	1640	72	1.5	1550
APR.				
30...	1000	62	12.5	1300
JUNE				
04...	0940	117	22	--
JULY				
08...	1730	91	30	1180
AUG.				
06...	1750	71	22.5	1040
SEP.				
03...	1615	40	12.5	920

ANALYSES OF SAMPLES COLLECTED AT MISCELLANEOUS SITES
 CHEMICAL ANALYSES, WATER YEAR OCTOBER 1973 TO SEPTEMBER 1973

BIG SIOUX RIVER BASIN

06482830 - REAVER CREEK NEAR CANTON, S. DAK. (LAT 43 19 04 LONG 096 36 31)

DATE	TIME	INSTAN- TANEOUS DIS- CHARGE (CFS) (00061)	DIS- SOLVED SILICA (SI02) (MG/L) (00955)	DIS- SOLVED CAL- CIUM (CA) (MG/L) (00915)	DIS- SOLVED MAG- NE- SIUM (MG) (MG/L) (00925)	DIS- SOLVED SODIUM (NA) (MG/L) (00930)	DIS- SOLVED PO- TAS- SIUM (K) (MG/L) (00935)	BICAR- BONATE (HCO3) (MG/L) (00440)	DIS- SOLVED SULFATE (SO4) (MG/L) (00945)	DIS- SOLVED CHLO- RIDE (CL) (MG/L) (00940)	DIS- SOLVED FLUO- RIDE (F) (MG/L) (00950)	DIS- SOLVED NITRITE PLUS NITRATE (N) (MG/L) (00631)
DEC. 03...	1100	1.7	17	390	150	70	10	408	1300	4.3	.3	.94
MAR. 08...	1730	3.0	12	280	110	46	7.9	307	980	4.0	.3	.28
JUNE 11...	1300	3.0	16	300	130	62	9.7	270	1200	5.7	.3	.21

DATE	DIS- SOL- VED- PHOS- PHORUS (P) (MG/L) (00666)	TOTAL PHOS- PHORUS (P) (MG/L) (00665)	DIS- SOLVED BORON (B) (UG/L) (01020)	DIS- SOLVED SOLIDS (SUM OF CONSTI- TUENTS) (MG/L) (70301)	DIS- SOLVED SOLIDS (TONS PER AC-FT) (MG/L) (70303)	DIS- SOLVED SOLIDS (TONS PER DAY) (MG/L) (70302)	HARD- NESS (CA+MG) (MG/L) (00900)	NON- CAR- BONATE HARD- NESS (MG/L) (00902)	SODIUM AD- SORP- TION RATIO (00931)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS) (00095)	PH (UNITS) (00400)	TEMPER- ATURE (DEG C) (00010)
DEC. 03...	.01	.04	290	2150	2.92	9.87	1600	1300	.8	2480	8.0	.0
MAR. 08...	.03	.07	180	1590	2.16	13.0	1200	900	.6	1900	8.0	7.5
JUNE 11...	.01	.02	280	1860	2.53	15.1	1300	1100	.8	2170	7.9	20.0

NOTE.--Carbonate (CO₃) analysis for all samples, 0.0 mg/l.

MISCELLANEOUS ANALYSES OF GROUND WATER IN SOUTH DAKOTA

CHEMICAL ANALYSES, OCTOBER 1973 TO SEPTEMBER 1974

STATION NUMBER	LOCAL IDENTIFIER	COUNTY	SITE	DATE OF SAMPLE	TIME	DIS-SOLVED SILICA (SI02) (UG/L) (00955)	DIS-SOLVED IRON (FE) (UG/L) (01046)	DIS-SOLVED MANGANESE (MN) (UG/L) (01055)	DIS-SOLVED CALCIUM (CA) (UG/L) (00915)
451431098061000	121N61W360DDD	013	GW	73-10-18	1445	29	60	--	280
		013	GW	74-05-14	1420	27	490	--	300
451802098183002	121N62W 9CCCC2	013	GW	73-10-18	1525	35	10	--	68
		013	GW	74-05-16	1645	36	90	--	74
451759098333500	121N63W15AAA48	013	GW	73-10-19	1305	29	20	--	79
		013	GW	74-05-14	1600	28	1100	--	71
451436098233200	121N63W340DDD	013	GW	73-10-19	1330	28	20	--	130
		013	GW	74-05-16	1600	31	30	--	130
451947098355504	121N65W 1AAAA4	013	GW	73-10-19	1210	25	10	--	340
		013	GW	74-05-17	0840	25	30	--	320
451436098394500	121N65W34CCCC	013	GW	74-05-16	1435	33	1000	--	160
452312098210400	122N63W120DDD	013	GW	73-10-18	1600	31	10	--	64
		013	GW	74-05-15	0950	31	430	--	61
452312098283002	122N64W13AAAA2	013	GW	73-10-19	1030	28	120	--	85
		013	GW	74-05-15	1115	28	260	--	88
452915098271501	123N63W 88888	013	GW	73-10-19	0940	28	490	--	170
452915098271500		013	GW	74-05-15	0755	30	2100	--	310
452456098233100	123N63W340DDD	013	GW	73-10-19	1105	29	290	--	200
		013	GW	74-05-15	1030	30	910	--	210
453428098194202	124N62W 888882	013	GW	73-10-19	0750	28	30	--	60
		013	GW	74-05-14	0910	27	40	--	66
454431098271300	124N63W 5CCCC	013	GW	73-10-19	0905	26	30	--	89
		013	GW	74-05-14	0810	29	490	--	86
453800098222000	125N63W13CCCC	013	GW	73-10-19	0825	26	50	--	340
		013	GW	74-05-14	0900	26	900	--	350
444253103440000	9N3E27ADD8	019	GW	74-05-22	1200	25	80	20	360
444450103065000	9N8E14B8	019	GW	74-05-22	1400	32	4700	100	430
425545098222500	94N64W26DBA	023	GW	74-06-06	0930	9.6	3200	180	210
430826098190600	96N63W 8CDC	023	GW	74-06-06	1105	8.8	3500	170	230
44351097320701	113N56W150DD01	025	GW	74-05-31	--	9.8	50	40	11
443300097320401	113N56W34DADA1	025	GW	74-05-31	--	30	14000	1400	310
444237097424803	114N57W 5C8883	025	GW	74-06-10	--	29	1100	630	110
444127097430702	114N57W 7DDCR2	025	GW	74-06-10	--	29	200	3900	220
443753097402801	114N57W34CCCC1	025	GW	74-05-31	--	29	350	430	84
444116097513001	114N59W13AAAB1	025	GW	74-06-10	--	29	2700	1200	220
444453097475401	115N58W210DCD1	025	GW	74-06-12	--	29	430	4200	240
445137097293901	116N56W13AAAD1	025	GW	74-05-31	--	33	1900	180	98
445132097302501	116N56W17AAD01	025	GW	74-06-12	--	34	1400	210	120
445243097435101	116N57W 6CCDC1	025	GW	74-06-12	--	29	2300	920	190
445140097392001	116N57W15AAAA1	025	GW	74-05-23	--	34	3500	170	98
445631097424401	116N57W208CCD1	025	GW	74-06-12	--	30	20000	2800	420
445205097485801	116N58W 8DAAD1	025	GW	74-05-23	--	29	2400	3600	230
445227097451801	116N58W11AAD81	025	GW	74-05-23	--	30	4700	950	270
445724097345501	117N56W 8ACDD1	025	GW	74-05-30	--	32	150	240	130
445439097562501	117N59W28C8CA1	025	GW	74-05-30	--	9.5	80	30	7.1
450047097503501	118N58W19DAAC1	025	GW	74-06-12	--	31	1300	230	130
450017097453601	118N58W26AADD1	025	GW	74-05-30	--	31	540	180	150
450005097480601	118N58W28AADD1	025	GW	74-06-12	--	29	80	3400	270
450024097511601	118N58W30BABA1	025	GW	74-06-11	--	27	13000	1400	200
450851097315801	119N56W028CB01	025	GW	74-05-22	--	29	130	3500	350
450636097372501	119N57W130CCD1	025	GW	74-05-22	--	18	1400	80	170
450712097415901	119N57W17AAD01	025	GW	74-05-22	--	30	600	250	210
450539097435501	119N57W30BABA1	025	GW	74-05-22	--	21	180	4000	560
450539097435502	119N57W30BABA2	025	GW	74-05-22	--	26	1400	410	500
450615097492901	119N58W20ADCA1	025	GW	74-05-30	--	28	80	250	59
450740097562501	119N59W 9CCCCA1	025	GW	74-06-11	--	6.7	50	30	11
445808096442300		039	GW	73-10-18	1100	30	30	670	140
445715096484701	BULLHEAD LAKE - 117N50W1	039	LK	74-05-21	0900	13	--	--	53
444423096272701	CORB CREEK - 115N47W27C8	039	SW	74-06-20	0925	9.2	--	--	120
443832096304701	COTTONWOOD SLOUGH - 114N	039	LK	74-05-29	1355	2.8	--	--	50
445000096423201	EAST COTEAU LAKE - 116N4	039	LK	74-05-22	1315	9.5	--	--	90
443527096282501	FISH LAKE - 113N47W16CD8	039	LK	74-05-30	1115	.2	--	--	70
443935096311501	FOX LAKE - 114N48W25AAAA	039	LK	74-05-29	1055	.3	--	--	55
444350096405801	HIDEWOOD CREEK - 115N49W	039	SW	74-06-05	1320	14	--	--	160
445234096391901	LAKE ALICE - 116N49W 1C0	039	LK	74-05-22	1340	7.9	--	--	82

MISCELLANEOUS ANALYSES OF GROUND WATER IN SOUTH DAKOTA

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CHEMICAL ANALYSES, OCTOBER 1973 TO SEPTEMBER 1974

STATION NUMBER	DATE OF SAMPLE	DIS-SOLVED MAG-NE-SIUM (MG) (00925)	DIS-SOLVED SODIUM (NA) (MG/L) (00930)	DIS-SOLVED POTAS-SIUM (K) (MG/L) (00935)	BICAR-BONATE (HCO3) (MG/L) (00440)	CAR-BONATE (CO3) (MG/L) (00445)	ALKA-LINITY AS CAC03 (MG/L) (00410)	DIS-SOLVED SULFATE (SO4) (MG/L) (00945)	DIS-SOLVED CHLO-RIDE (CL) (MG/L) (00940)	DIS-SOLVED FLUO-RIDE (F) (MG/L) (00950)	DIS-SOLVED NITRITE PLUS NITRATE (N) (MG/L) (00631)
451431098061000	73-10-18	250	1800	14	1100	0	902	4300	150	.3	4.8
	74-05-14	300	1800	19	1010	0	828	4600	160	.6	3.5
451802098183002	73-10-18	44	8.9	5.6	322	0	264	110	15	.0	.17
	74-05-16	44	5.9	5.8	301	0	247	96	29	.2	.07
451759098333500	73-10-19	21	410	12	556	0	456	350	250	.2	.33
	74-05-14	20	470	12	592	0	486	440	260	.4	.02
451436098233200	73-10-19	33	200	18	355	0	291	300	200	.2	.00
	74-05-16	35	190	16	377	0	309	300	200	.3	.02
451947098355504	73-10-19	120	56	13	376	0	308	1000	63	.2	.00
	74-05-17	110	34	11	370	0	303	910	87	.2	.02
451436098394500	74-05-16	31	130	13	364	0	299	270	170	.3	.08
452312098210400	73-10-18	16	720	9.9	919	0	754	310	510	.0	.06
	74-05-15	16	700	12	926	0	760	300	510	.2	.01
452312098283002	73-10-19	26	740	17	568	0	466	100	940	.4	.07
	74-05-15	26	730	16	623	0	511	99	930	.4	.01
452915098271501	73-10-19	110	360	12	684	0	561	840	150	.5	.05
452915098271500	74-05-15	150	500	14	640	0	525	1600	230	.5	.06
452456098233100	73-10-19	54	240	14	397	0	326	720	96	.3	.04
	74-05-15	56	220	13	449	0	368	720	95	.2	.02
453428098194202	73-10-19	20	6.5	6.8	288	0	236	14	2.4	.4	.25
	74-05-14	22	6.3	7.3	310	0	254	9.0	2.3	.5	1.9
454431098271300	73-10-19	26	28	4.4	314	0	258	81	20	.1	.06
	74-05-14	27	28	4.1	344	0	282	80	21	.3	.01
453800098222000	73-10-19	340	1200	26	419	0	344	3400	640	.5	.12
	74-05-14	400	1300	27	452	0	371	3900	580	.7	.18
444253103440000	74-05-22	85	31	11	171	0	140	1100	42	2.7	.09
444450103065000	74-05-22	83	610	50	152	0	125	1800	580	3.7	.01
425545098222500	74-06-06	43	90	22	190	0	156	660	51	2.9	.00
430826098190600	74-06-06	52	150	20	191	0	157	780	100	2.6	.00
443518097320701	74-05-31	3.3	880	6.6	435	0	357	1100	340	5.6	.36
443300097320401	74-05-31	98	170	15	351	--	288	1200	25	.2	.03
444237097424803	74-06-10	39	12	4.2	377	--	309	150	3.2	.3	.00
444127097430702	74-06-10	54	140	13	220	--	180	810	18	.2	.00
443753097402801	74-05-31	32	8.8	4.6	305	--	250	100	6.7	.0	1.3
444116097513001	74-06-10	69	150	12	333	--	273	840	28	.3	.00
444453097475401	74-06-12	61	130	11	278	--	228	880	11	.3	.01
445137097293901	74-05-31	43	460	9.3	441	--	362	980	58	.1	.02
445132097302501	74-06-12	41	620	8.0	430	--	353	1300	80	.2	.00
445243097435101	74-06-12	66	49	7.6	523	--	429	370	48	.6	.07
445140097392001	74-05-23	35	710	7.9	591	--	485	1200	130	.5	.01
445031097424401	74-06-12	140	140	14	456	--	374	1500	12	.2	.00
445205097485801	74-05-23	77	160	7.3	325	--	267	920	12	.3	.03
445227097451801	74-05-23	97	140	9.4	324	--	266	1100	12	.1	.03
445724097345501	74-05-30	78	360	10	389	--	319	1000	52	.1	.23
445439097562501	74-05-30	2.0	760	8.8	474	2	392	1000	220	5.5	.08
450047097503501	74-06-12	74	280	9.2	442	--	363	850	15	.2	.00
450017097453601	74-05-30	100	130	7.9	481	--	395	650	7.2	.1	.06
450005097480601	74-06-12	87	210	15	280	--	230	1200	11	.3	.05
450024097511601	74-06-11	67	200	14	386	--	317	910	8.4	.3	.00
450851097315801	74-05-22	94	76	8.6	400	--	328	1100	5.1	.2	.03
450636097372501	74-05-22	89	93	2.3	251	--	206	750	3.9	.3	.12
450712097415901	74-05-22	150	110	7.3	493	--	404	940	5.5	.1	.08
450539097435501	74-05-22	250	130	19	596	--	489	2200	25	.1	9.5
450539097435502	74-05-22	380	130	15	445	--	365	2600	27	.3	9.6
450615097492901	74-05-30	48	10	2.3	342	--	281	80	4.1	.4	1.8
450740097562501	74-06-11	2.4	730	12	383	--	314	970	230	3.9	.18
445808096442300	73-10-18	43	54	9.0	243	--	396	240	2.6	.4	.01
445715096484701	74-05-21	150	25	24	311	0	255	510	11	.3	.06
444423096272701	74-06-20	42	8.9	4.3	359	0	294	170	3.2	.3	.03
443832096304701	74-05-29	49	13	17	359	9	309	51	8.2	.5	.00
445000096423201	74-05-22	50	12	9.1	229	0	188	270	6.1	.4	.01
443527096282501	74-05-30	50	13	9.9	193	0	158	230	8.2	.2	.02
443935096311501	74-05-29	58	23	17	398	8	340	82	15	.5	.00
444350096405801	74-06-05	64	78	5.4	365	0	299	320	140	1.5	.01
445238096391901	74-05-22	160	45	30	320	14	286	650	12	.4	.03

MISCELLANEOUS ANALYSES OF GROUND WATER IN SOUTH DAKOTA

CHEMICAL ANALYSES, OCTOBER 1973 TO SEPTEMBER 1974

STATION NUMBER	DATE OF SAMPLE	AMMONIA NITROGEN (N) (MG/L) (00610)	TOTAL NITRITE (N) (MG/L) (00615)	TOTAL NITRATE (N) (MG/L) (00620)	TOTAL NITRITE PLUS NITRATE (N) (MG/L) (00630)	DIS-SOLVED SOLIDS (RESIDUE AT 180 C) (MG/L) (70300)	DIS-SOLVED SOLIDS (SUM OF CONSTITUENTS) (MG/L) (70301)	HARD-NESS (CA+MG) (MG/L) (00900)	NON-CARBONATE HARD-NESS (MG/L) (00902)	PERCENT SODIUM (00932)	SODIUM ADSORPTION RATIO (00931)
451431098061000	73-10-18	--	--	--	--	--	7390	1700	830	69	19
	74-05-14	--	--	--	--	--	7720	2000	1200	66	18
451802098183002	73-10-18	--	--	--	--	--	446	350	87	5	.2
	74-05-16	--	--	--	--	--	440	370	120	3	.1
451759098333500	73-10-19	--	--	--	--	--	1430	280	0	75	11
	74-05-14	--	--	--	--	--	1600	260	0	79	13
451436098233200	73-10-19	--	--	--	--	--	1090	460	170	47	4.1
	74-05-16	--	--	--	--	--	1090	470	160	46	3.8
451947098355504	73-10-19	--	--	--	--	--	1800	1300	1000	8	.7
	74-05-17	--	--	--	--	--	1680	1300	950	6	.4
451436098394500	74-05-16	--	--	--	--	--	989	530	230	34	2.5
452312098210400	73-10-18	--	--	--	--	--	2120	230	0	87	21
	74-05-15	--	--	--	--	--	2090	220	0	87	21
452312098283002	73-10-19	--	--	--	--	--	2220	320	0	83	18
	74-05-15	--	--	--	--	--	2230	330	0	82	18
452915098271501	73-10-19	--	--	--	--	--	2010	880	320	47	5.3
452915098271500	74-05-15	--	--	--	--	--	3150	1400	870	44	5.8
452456098233100	73-10-19	--	--	--	--	--	1550	720	400	41	3.9
	74-05-15	--	--	--	--	--	1570	760	390	38	3.5
453428098194202	73-10-19	--	--	--	--	--	283	230	0	6	.2
	74-05-14	--	--	--	--	--	302	260	1	5	.2
454431098271300	73-10-19	--	--	--	--	--	430	330	72	15	.7
	74-05-14	--	--	--	--	--	446	330	44	16	.7
453800098222000	73-10-19	--	--	--	--	--	6180	2200	1900	53	11
	74-05-14	--	--	--	--	--	6810	2500	2200	53	11
444253103440000	74-05-22	--	--	--	--	1950	1750	1300	1100	5	.4
444450103065000	74-05-22	--	--	--	--	3790	3680	1400	1300	47	7.1
425545098222500	74-06-06	--	--	--	--	1260	1190	710	550	21	1.5
430826098190600	74-06-06	--	--	--	--	1580	1450	800	640	29	2.3
443518097320701	74-05-31	--	--	--	--	--	2580	41	0	97	60
443300097320401	74-05-31	--	--	--	--	--	2040	1200	890	24	2.2
444237097424803	74-06-10	--	--	--	--	--	535	440	130	6	.3
444127097430702	74-06-10	--	--	--	--	--	1400	770	590	28	2.2
443753097402801	74-05-31	--	--	--	--	427	423	340	92	5	.2
444116097513001	74-06-10	--	--	--	--	--	1520	830	560	28	2.3
444453097475401	74-06-12	--	--	--	--	--	1500	850	620	25	1.9
445137097293901	74-05-31	--	--	--	--	--	1910	420	60	70	9.7
445132097302501	74-06-12	--	--	--	--	--	2420	470	120	74	12
445243097435101	74-06-12	--	--	--	--	1050	1020	750	320	12	.8
445140097392001	74-05-23	--	--	--	--	--	2510	390	0	79	16
445031097424401	74-06-12	--	--	--	--	--	2500	1600	1300	16	1.5
445205097485801	74-05-23	--	--	--	--	--	1600	890	620	28	2.3
445227097451801	74-05-23	--	--	--	--	--	1820	1100	810	22	1.9
445724097345501	74-05-30	--	--	--	--	--	1860	650	330	54	6.2
445439097562501	74-05-30	--	--	--	--	--	2250	26	0	98	65
450047097503501	74-06-12	--	--	--	--	1680	1610	630	270	49	4.9
450017097453601	74-05-30	--	--	--	--	--	1320	790	390	26	2.0
450005097480601	74-06-12	--	--	--	--	--	1970	1000	800	30	2.8
450024097511601	74-06-11	--	--	--	--	--	1630	780	460	35	3.1
450851097315801	74-05-22	--	--	--	--	--	1860	1300	930	12	.9
450636097372501	74-05-22	--	--	--	--	--	1250	790	590	20	1.4
450712097415901	74-05-22	--	--	--	--	--	1700	1100	740	17	1.4
450539097435501	74-05-22	--	--	--	--	--	3550	2400	1900	10	1.1
450539097435502	74-05-22	--	--	--	--	--	3940	2800	2400	9	1.1
450615097492901	74-05-30	--	--	--	--	--	409	350	64	6	.2
450740097562501	74-06-11	--	--	--	--	2220	2160	38	0	97	52
445808096442300	73-10-18	--	--	--	--	--	758	530	130	18	1.0
445715096484701	74-05-21	--	--	--	--	--	940	750	490	7	.4
444423096272701	74-06-20	--	--	--	--	--	535	470	180	4	.2
443832096304701	74-05-29	--	--	--	--	--	378	330	17	8	.3
445000096423201	74-05-22	--	--	--	--	--	560	430	240	6	.3
443527096282501	74-05-30	--	--	--	--	--	477	380	220	7	.3
443935096311501	74-05-29	--	--	--	--	--	455	380	36	11	.5
444350096405801	74-06-05	--	--	--	--	--	963	660	360	20	1.3
445238096391901	74-05-22	--	--	--	--	--	1160	860	580	10	.7

CHEMICAL ANALYSES, OCTOBER 1973 TO SEPTEMBER 1974

STATION NUMBER	DATE OF SAMPLE	BROMIDE (BR) (MG/L) (71870)	IODIDE (I) (MG/L) (71865)	CYANIDE (CN) (MG/L) (00720)	SPECIFIC CONDUCTANCE (MICRO-MHOS) (00095)	PH (UNITS) (00400)	TEMPERATURE (DEG C) (00010)	DISSOLVED BORON (B) (UG/L) (01020)
451431098061000	73-10-18	--	--	--	9890	7.3	10.5	1400
	74-05-14	--	--	--	9110	7.3	8.5	1100
451802098183002	73-10-18	--	--	--	665	7.5	8.0	130
	74-05-16	--	--	--	701	7.7	8.2	80
451759098333500	73-10-19	--	--	--	2220	7.4	7.9	940
	74-05-14	--	--	--	2480	7.4	6.9	1100
451436098233200	73-10-19	--	--	--	1740	7.9	8.5	990
	74-05-16	--	--	--	1750	7.7	8.5	1000
451947098355504	73-10-19	--	--	--	2220	7.3	8.5	110
	74-05-17	--	--	--	2110	7.4	8.5	90
451436098394500	74-05-16	--	--	--	1550	7.3	8.5	830
452312098210400	73-10-18	--	--	--	3470	7.4	8.2	2400
	74-05-15	--	--	--	3470	7.3	8.2	2400
452312098283002	73-10-19	--	--	--	3770	7.6	8.1	2000
	74-05-15	--	--	--	3960	7.5	8.2	2000
452915098271501	73-10-19	--	--	--	2750	7.3	--	470
452915098271500	74-05-15	--	--	--	4020	7.3	8.5	330
452456098233100	73-10-19	--	--	--	2140	7.4	7.9	940
	74-05-15	--	--	--	2130	7.7	8.0	830
453428098194202	73-10-19	--	--	--	459	7.8	8.0	780
	74-05-14	--	--	--	493	7.8	6.9	40
454431098271300	73-10-19	--	--	--	720	7.5	--	70
	74-05-14	--	--	--	713	7.5	8.0	70
453800098222000	73-10-19	--	--	--	7980	7.3	--	780
	74-05-14	--	--	--	8160	7.2	7.5	760
444253103440000	74-05-22	.2	.01	--	2120	7.1	51.1	120
444450103065000	74-05-22	1.4	.03	--	4840	7.1	58.9	720
425545098222500	74-06-06	.2	.02	--	1650	7.4	19.4	710
430826098190600	74-06-06	.6	.04	--	2040	7.5	15.6	740
443518097320701	74-05-31	--	--	--	3960	8.4	16.0	4600
4433300097320401	74-05-31	--	--	--	2450	7.5	12.0	900
444237097424803	74-06-10	--	--	--	825	7.5	10.0	70
444127097430702	74-06-10	--	--	--	1850	7.8	10.0	580
443753097402801	74-05-31	.1	.00	--	654	7.6	10.0	40
444116097513001	74-06-10	--	--	--	1980	6.9	10.0	670
444453097475401	74-06-12	--	--	--	1910	7.2	11.0	470
445137097293901	74-05-31	--	--	--	2690	7.6	11.0	1100
445132097302501	74-06-12	--	--	--	3370	7.9	11.5	1200
445243097435101	74-06-12	.3	.01	--	1460	7.0	11.0	240
445140097392001	74-05-23	--	--	--	3510	7.8	11.0	1500
445031097424401	74-06-12	--	--	--	2860	7.3	12.0	810
445205097485801	74-05-23	--	--	--	2050	7.9	10.0	570
445227097451801	74-05-23	--	--	--	2170	7.3	11.0	850
445724097345501	74-05-30	.4	.20	--	2500	7.8	12.0	1400
445439097562501	74-05-30	.6	.22	--	3360	8.5	18.0	4000
450047097503501	74-06-12	.2	.02	--	2220	7.9	10.5	790
450017097453601	74-05-30	--	--	--	1770	7.8	10.5	590
450005097480601	74-06-12	--	--	--	2430	7.7	9.5	1400
450024097511601	74-06-11	--	--	--	2090	7.2	9.5	1000
450851097315801	74-05-22	--	--	--	2210	7.4	10.0	510
450636097372501	74-05-22	--	--	--	1640	7.8	10.0	810
450712097415901	74-05-22	--	--	--	2090	7.5	10.0	690
450539097435501	74-05-22	--	--	--	3750	6.8	9.0	580
450539097435502	74-05-22	--	--	--	4100	7.1	9.0	420
450615097492901	74-05-30	--	--	--	662	8.0	9.0	80
450740097562501	74-06-11	1.0	.06	--	3320	8.3	12.0	3000
445808096442300	73-10-18	--	--	--	1120	7.4	8.8	440
445715096484701	74-05-21	--	--	--	1370	8.3	16.0	130
444423096272701	74-06-20	--	--	--	856	7.9	20.0	100
443832096304701	74-05-29	--	--	--	642	8.4	21.3	110
445000096423201	74-05-22	--	--	--	860	7.9	17.0	130
443527096282501	74-05-30	--	--	--	752	8.3	17.5	90
443935096311501	74-05-29	--	--	--	720	8.4	19.2	140
444350096405801	74-06-05	--	--	--	1490	8.1	24.6	130
445238096391901	74-05-22	--	--	--	1670	8.5	16.0	20

MISCELLANEOUS ANALYSES OF GROUND WATER IN SOUTH DAKOTA

CHEMICAL ANALYSES, OCTOBER 1973 TO SEPTEMBER 1974

STATION NUMBER	LOCAL IDENTIFIER	COUNTY	SITE	DATE OF SAMPLE	TIME	DIS-SOLVED SILICA (SI02) (MG/L) (00955)	DIS-SOLVED IRON (FE) (UG/L) (01046)	DIS-SOLVED MANGANESE (MN) (UG/L) (01056)	DIS-SOLVED CALCIUM (CA) (MG/L) (00915)
443333096321201	LAKE ASTORIA - 113N48W25	039	LK	74-05-30	0945	21	--	--	46
444259096273301	LAKE CULVER - 114N47W 38	039	LK	74-05-16	1015	10	--	--	120
444305096284301	LAKE OLIVER - 115N47W33C	039	LK	74-05-16	0945	3.5	--	--	87
445638096270601	LOST CREEK - 117N47W15BC	039	SW	74-06-21	1010	26	--	--	150
444912096270501	MONIGHAN CREEK - 116N47W	039	SW	74-06-04	1410	16	--	--	190
445808096271801	SALT LAKE - 117N47W 3CB8	039	LK	74-05-29	0900	1.2	--	--	330
445607096484501	SCHOOL LAKE - 117N50W15C	039	LK	74-05-21	1045	13	--	--	58
443516096320501	SINGSAAS SLOUGH - 113N48	039	LK	74-05-30	1035	6.5	--	--	84
444927096432301	SOUTH COTEAU LAKE - 116N	039	LK	74-05-22	0945	.3	--	--	62
444145097284201	SOUTH SLOUGH - 114N47W 9	039	LK	74-05-16	1130	1.5	--	--	110
443241096395101	T113N R49W 35 DDDC1 RUSS	039	GW	74-08-22	1350	19	50	590	380
444813096270501	WEST BRANCH LAC QUI PARL	039	SW	74-06-04	0930	26	--	--	120
445427096471801	WIGDALE LAKE - 117N50W26	039	LK	74-05-21	1300	8.7	--	--	55
443426096370901	113N48W20CCCD	039	GW	74-06-19	1300	23	10	0	99
443429096363802	113N48W20DCC#2	039	GW	74-06-19	1315	16	10	310	110
443240096395302	113N49W35D00C#2	039	GW	74-08-22	1400	30	30	40	130
444117096404001	114N49W1488AD	039	GW	74-08-22	1305	31	700	180	420
444045096493701	114N50W16DACA	039	GW	74-08-22	0940	24	30	770	140
444747096272001	115N47W 3CBAC	039	GW	74-05-09	1100	25	20	200	110
444723096322401	115N48W1288B	039	GW	74-08-22	1050	30	20	430	120
444532096503701	115N50W218CB8	039	GW	74-08-22	1000	30	40	190	440
445058096313001	116N48W130DC	039	GW	74-08-22	1120	33	30	50	170
445142096394501	116N49W13880B	039	GW	74-06-26	0900	29	4100	800	230
445003096510301	116N50W20DCCD	039	GW	74-06-28	0930	33	110	10	99
444847096514901	116N50W32CB88	039	GW	74-06-26	1500	28	200	3100	330
445728096365901	117N48W 8BCDB	039	GW	74-08-21	0935	29	50	1600	270
431945099052000	98N70W118B	053	GW	74-06-05	1430	16	1700	150	300
440428101391000	1N20E1ACDD	055	GW	74-05-23	1015	36	30	0	230
442630101591500	6N18E31ABDCL	055	GW	74-05-22	1730	24	70	0	2.6
443329096550801	BIG SIOUX RIVER - 113N51	057	SW	74-06-04	1555	17	--	--	93
444630097031201	BIG SIOUX RIVER - 115N52	057	SW	74-06-04	1925	21	--	--	76
443608097034501	DRY LAKE - 113N52W1588AA	057	LK	74-05-14	0945	16	--	--	79
444710097075801	FIVE PONDS - 115N53W12AB	057	LK	74-05-22	0825	3.6	--	--	78
443339097083701	LAKE ALBERT - 113N53W25C	057	LK	74-05-15	1350	1.2	--	--	57
443933097024201	LAKE FLORENCE - 114N52W2	057	LK	74-05-14	1050	15	--	--	45
443944097134701	LAKE MARSH - 114N53W19DD	057	LK	74-05-14	1245	12	--	--	320
443447097105301	LAKE MARY - 113N53W22HDC	057	LK	74-05-15	0915	1.5	--	--	94
443352097095301	LAKE ST JOHN - 113N53W26	057	LK	74-05-15	1120	1.2	--	--	77
444810096552801	STRAY HORSE CREEK - 115N	057	SW	74-06-05	0855	13	--	--	110
443437096540801	113N51W24CCCD	057	GW	74-06-18	1300	17	10	0	77
443429096550401	113N51W26AAC	057	GW	74-06-06	1445	24	20	0	84
443602097024901	113N52W15AADA	057	GW	74-07-03	1055	29	20	1200	130
443607057032001	113N52W15A88A	057	GW	74-07-02	1115	25	20	90	100
443608097033701	113N52W158AAB	057	GW	74-07-02	1030	24	20	4600	71
443555097041501	113N52W16AAC	057	GW	74-08-08	1330	24	1100	650	480
443536097051501	113N52W17DAAA	057	GW	74-07-15	1350	29	20	20	250
443509097045801	113N52W2188AA	057	GW	74-07-15	1330	27	20	240	120
443450097024301	113N52W23CCDC	057	GW	74-08-12	1630	31	20	1600	150
443434097024301	113N52W23CC8A	057	GW	74-08-12	1615	29	0	0	160
443430097024201	113N52W23CC8D	057	GW	74-08-12	1545	28	20	1300	200
443609097130801	113N53W17ABDA1	057	GW	74-05-10	1100	29	20	1500	190
443537097130801	113N53W170CAA	057	GW	74-05-10	1100	24	20	370	150
443305097184901	113N54W33UADD	057	GW	74-08-06	1055	29	50	320	170
444018096575901	114N51W20AADA	057	GW	74-08-13	0915	29	20	0	170
443806096571101	114N51W33UDDC#	057	GW	74-06-27	1030	25	120	770	94

MISCELLANEOUS ANALYSES OF GROUND WATER IN SOUTH DAKOTA

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CHEMICAL ANALYSES, OCTOBER 1973 TO SEPTEMBER 1974

STATION	NUMBER	DATE OF SAMPLE	DIS- SOLVED MAG- NE- SIUM (MG) (00925)	DIS- SOLVED SODIUM (NA) (MG/L) (00930)	DIS- SOLVED PO- TAS- SIUM (K) (MG/L) (00935)	BICAR- BONATE (HCO3) (MG/L) (00440)	CAR- BONATE (CO3) (MG/L) (00445)	ALKA- LITY AS CAC03 (MG/L) (00410)	DIS- SOLVED SULFATE (SO4) (MG/L) (00945)	DIS- SOLVED CHLO- RIDE (CL) (MG/L) (00940)	DIS- SOLVED FLUO- RIDE (F) (MG/L) (00950)	DIS- SOLVED NITR- PLUS NITRATE (N) (MG/L) (00631)
443333096321201	74-05-30	93	54	26	479	28	440	150	42	.5	.01	
444259096273301	74-05-16	240	68	33	293	5	249	1200	17	.5	.01	
444305096284301	74-05-16	270	87	37	305	16	277	1200	15	.8	.01	
445638096270601	74-06-21	84	39	10	170	0	139	660	6.5	.3	.11	
444912096270501	74-06-04	77	18	7.5	354	0	290	510	3.6	1.5	.03	
445808096271801	74-05-29	390	2800	87	323	0	265	5800	1100	.2	.00	
445607096484501	74-05-21	35	10	8.9	219	0	180	140	4.5	.4	.02	
443516096320501	74-05-30	84	21	9.0	134	1	112	470	10	.4	.00	
444927096432301	74-05-22	48	13	8.2	197	0	162	200	5.5	.3	.02	
444145097284201	74-05-16	100	23	11	164	0	135	580	5.6	.5	.01	
443241096395101	74-08-22	120	200	10	380	0	312	1500	1.8	.3	.13	
444813096270501	74-06-04	44	14	5.3	374	0	307	190	11	1.4	.33	
445427096471801	74-05-21	25	9.3	8.3	228	0	187	70	7.2	.5	.01	
443426096370901	74-06-19	31	7.4	.9	322	0	264	120	6.1	.5	.04	
443429096363802	74-06-19	35	6.6	1.8	327	0	268	160	8.3	.4	.29	
443240096395302	74-08-22	66	23	4.0	427	0	350	220	32	.8	12	
444117096404001	74-08-22	180	230	12	357	0	293	1900	1.5	.2	.00	
444045096493701	74-08-22	56	21	3.3	451	0	370	180	53	.1	1.6	
444474096272001	74-05-09	42	11	5.2	378	0	310	170	6.3	.3	.02	
444723096322401	74-08-22	27	16	4.3	367	0	301	140	1.4	.4	.03	
444532096503701	74-08-22	180	23	11	378	0	310	1600	5.5	.2	1.5	
445058096313001	74-08-22	86	84	13	421	0	345	630	3.8	.3	.05	
445142096394501	74-06-26	51	22	6.5	426	0	349	460	3.9	.3	.04	
445003096510301	74-06-28	62	32	2.8	361	0	296	180	45	.3	6.7	
444847096514901	74-06-26	150	190	9.8	372	0	305	1500	8.4	.3	.00	
445728096365901	74-08-21	75	100	12	272	0	223	950	6.9	.3	.02	
431945099052000	74-06-05	58	65	20	155	0	127	780	97	2.3	.00	
440428101391000	74-05-23	59	17	6.6	158	0	130	670	20	2.0	.01	
442630101591500	74-05-22	42	820	3.2	1730	0	1420	7.3	250	6.0	.01	
443329096550801	74-06-04	45	40	7.6	310	0	254	200	33	1.5	.33	
444630097031201	74-06-04	36	52	7.7	292	6	249	130	59	.4	.37	
443608097034501	74-05-14	69	54	15	331	0	271	290	26	.3	.18	
4444710097075801	74-05-22	66	50	21	474	9	404	170	13	.7	.03	
443339097083701	74-05-15	88	72	27	258	0	212	440	16	.2	.03	
443933097024201	74-05-14	43	19	5.9	262	0	215	120	4.2	.3	.03	
4439440971134701	74-05-14	190	170	44	121	0	99	1700	21	.3	.01	
443447097105301	74-05-15	84	63	19	220	0	180	520	13	.3	.02	
443352097095301	74-05-15	78	59	20	220	0	180	440	14	.2	.02	
444810096552801	74-06-05	46	11	5.5	253	0	208	270	8.0	1.4	.02	
443437096540801	74-06-18	33	10	2.1	309	0	253	53	8.4	2.5	8.8	
443429096550401	74-06-06	38	8.8	2.3	327	0	268	53	9.5	.6	11	
443602097024901	74-07-03	57	36	5.0	412	0	338	310	2.5	.3	.03	
443607097032001	74-07-02	35	33	8.1	413	0	339	92	24	.1	.18	
443608097033701	74-07-02	100	54	12	330	0	271	430	6.9	.2	.02	
443555097041501	74-08-08	170	72	11	394	--	323	1700	20	.4	.84	
443536097051501	74-07-15	91	30	7.5	423	0	347	700	4.4	.4	.42	
443509097045801	74-07-15	45	13	5.1	253	0	208	100	14	.3	51	
443450097024301	74-08-12	47	47	6.4	456	0	374	280	4.2	.3	.04	
443434097024301	74-08-12	64	12	4.3	454	0	372	280	15	.3	1.8	
443430097024201	74-08-12	65	35	9.0	480	0	394	400	3.1	.3	.05	
4436090971130801	74-05-10	77	45	12	400	0	328	560	7.3	.2	.19	
4435370971130801	74-05-10	58	29	5.6	411	0	337	340	7.7	.2	.91	
443305097184901	74-08-06	50	99	11	458	--	376	450	6.1	.5	.44	
444018096575901	74-08-13	93	75	4.4	436	0	358	270	120	.5	48	
443806096571101	74-06-27	43	17	5.4	415	0	340	110	4.9	.3	.00	

MISCELLANEOUS ANALYSES OF GROUND WATER IN SOUTH DAKOTA

CHEMICAL ANALYSES, OCTOBER 1973 TO SEPTEMBER 1974

STATION	NUMBER	DATE OF SAMPLE	AMMONIA NITRO- GEN (N) (00610)	TOTAL NITRITE (N) (00615)	TOTAL NITRATE (N) (00620)	TOTAL NITRITE PLUS NITRATE (N) (00630)	DIS- SOLVED SOLIDS (RESI- DUE AT 180 C) (MG/L) (70300)	DIS- SOLVED SOLIDS (SUM OF CONSTI- TUENTS) (MG/L) (70301)	HARD- NESS (CA+MG) (MG/L) (00900)	NON- CAR- BONATE HARD- NESS (MG/L) (00902)	PERCENT SODIUM (00932)	SODIUM AD- SORP- TION RATIO (00931)
443333096321201		74-05-30	--	--	--	--	--	697	500	58	18	1.1
444259096273301		74-05-16	--	--	--	--	--	1840	1300	1000	10	.8
444305096284301		74-05-16	--	--	--	--	--	1870	1300	1100	12	1.0
445638096270601		74-06-21	--	--	--	--	--	1060	720	580	10	.6
444912096270501		74-06-04	--	--	--	--	--	998	790	500	5	.3
445808096271801		74-05-29	--	--	--	--	--	11700	2400	2200	71	25
445607096484501		74-05-21	--	--	--	--	--	378	290	110	7	.3
443516096320501		74-05-30	--	--	--	--	--	752	560	440	7	.4
444927096432301		74-05-22	--	--	--	--	--	435	350	190	7	.3
444145097284201		74-05-16	--	--	--	--	--	913	690	550	7	.4
443241096395101		74-08-22	--	--	--	--	--	2420	1400	1100	23	2.3
444813096270501		74-06-04	--	--	--	--	--	598	480	170	6	.3
445427096471801		74-05-21	--	--	--	--	--	297	240	53	7	.3
443426096370901		74-06-19	--	--	--	--	--	447	370	110	4	.2
443429096363802		74-06-19	--	--	--	--	--	501	420	150	3	.1
443240096395302		74-08-22	--	--	--	--	--	770	600	250	8	.4
444117096404001		74-08-22	--	--	--	--	--	2950	1800	1500	22	2.4
444045096493701		74-08-22	--	--	--	--	--	708	580	210	7	.4
444747096272001		74-05-09	--	--	--	--	--	557	450	140	5	.2
444723096322401		74-08-22	--	--	--	--	--	521	410	110	8	.3
444532096503701		74-08-22	--	--	--	--	--	2460	1800	1500	3	.2
445058096313001		74-08-22	--	--	--	--	--	1230	780	430	19	1.3
445142096394501		74-06-26	--	--	--	--	--	1020	790	440	6	.3
445003096510301		74-06-28	--	--	--	--	--	662	500	210	12	.6
444847096514901		74-06-26	--	--	--	--	--	2400	1400	1100	22	2.2
445728096365901		74-08-21	--	--	--	--	--	1580	980	760	18	1.4
431945099052000		74-06-05	--	--	--	--	1570	1420	1000	870	12	.9
440428101391000		74-05-23	--	--	--	--	1190	1120	820	690	4	.3
442630101591500		74-05-22	--	--	--	--	1980	1980	8	0	99	125
443329096550801		74-06-04	--	--	--	--	--	592	420	160	17	.9
444630097031201		74-06-04	--	--	--	--	--	537	340	88	25	1.2
443608097034501		74-05-14	--	--	--	--	--	714	480	210	19	1.1
444710097075801		74-05-22	--	--	--	--	--	646	470	63	18	1.0
443339097083701		74-05-15	--	--	--	--	--	829	500	290	23	1.4
443933097024201		74-05-14	--	--	--	--	--	382	290	75	12	.5
443944097134701		74-05-14	--	--	--	--	--	2520	1600	1500	18	1.9
443447097105301		74-05-15	--	--	--	--	--	904	580	400	18	1.1
443352097095301		74-05-15	--	--	--	--	--	798	510	330	19	1.1
444810096552801		74-06-05	--	--	--	--	--	590	460	260	5	.2
443437096540801		74-06-18	--	--	--	--	--	395	330	75	6	.2
443429096550401		74-06-06	--	--	--	--	--	430	370	98	5	.2
443602097024901		74-07-03	--	--	--	--	--	775	560	220	12	.7
443607097032001		74-07-02	--	--	--	--	--	523	390	55	15	.7
443608097033701		74-07-02	--	--	--	--	--	866	590	320	16	1.0
443555097041501		74-08-08	--	--	--	--	--	2680	1900	1600	8	.7
443536097051501		74-07-15	--	--	--	--	--	1320	1000	650	6	.4
443509097045801		74-07-15	--	--	--	--	--	675	490	280	5	.3
443450097024301		74-08-12	--	--	--	--	--	793	570	190	15	.9
443434097024301		74-08-12	--	--	--	--	--	797	660	290	4	.2
443430097024201		74-08-12	--	--	--	--	--	979	770	370	9	.6
443609097130801		74-05-10	--	--	--	--	--	1120	790	460	11	.7
443537097130801		74-05-10	--	--	--	--	--	822	610	280	9	.5
443305097184901		74-08-06	--	--	--	--	--	1040	630	250	25	1.7
444018096575901		74-08-13	--	--	--	--	--	1190	810	450	17	1.1
443806096571101		74-06-27	--	--	--	--	--	505	410	71	8	.4

CHEMICAL ANALYSES, OCTOBER 1973 TO SEPTEMBER 1974

STATION NUMBER	DATE OF SAMPLE	BROMIDE (BR) (MG/L) (71870)	IODIDE (I) (MG/L) (71865)	CYANIDE (CN) (MG/L) (00720)	SPECIFIC CONDUCTANCE (MICRO-MHOS) (00095)	PH (UNITS) (00400)	TEMPERATURE (DEG C) (00010)	DISSOLVED BORON (B) (UG/L) (01020)
443333096321201	74-05-30	--	--	--	1090	8.7	17.5	120
444259096273301	74-05-16	--	--	--	2270	8.4	10.1	180
444305096284301	74-05-16	--	--	--	2360	9.5	10.0	290
445638096270601	74-06-21	--	--	--	1410	7.5	22.0	340
444912096270501	74-06-04	--	--	--	1360	8.2	22.3	200
445808096271801	74-05-29	--	--	--	13700	8.3	17.6	17000
445607096484501	74-05-21	--	--	--	605	7.9	16.0	70
443516096320501	74-05-30	--	--	--	1060	8.4	16.0	119
444927096432301	74-05-22	--	--	--	717	7.9	15.8	100
444145097284201	74-05-16	--	--	--	1240	7.9	10.0	230
443241096395101	74-08-22	--	--	--	2920	7.2	9.0	380
444813096270501	74-06-04	--	--	--	906	8.0	14.0	80
445427096471801	74-05-21	--	--	--	515	7.5	19.0	100
443426096370901	74-06-19	--	--	--	744	7.8	7.0	50
443429096363802	74-06-19	--	--	--	790	7.6	7.8	40
443240096395302	74-08-22	--	--	--	1180	7.4	10.6	80
444117096404001	74-08-22	--	--	--	3410	7.2	10.5	800
444045096493701	74-08-22	--	--	--	1110	7.2	9.5	50
444747096272001	74-05-09	--	--	--	855	8.2	8.0	50
444723096322401	74-08-22	--	--	--	774	7.4	9.0	140
444532096503701	74-08-22	--	--	--	3030	6.9	10.5	1700
445058096313001	74-08-22	--	--	--	1710	7.3	12.5	1100
445142096394501	74-06-26	--	--	--	1420	7.1	9.0	250
445003096510301	74-06-28	--	--	--	1060	7.6	9.8	160
444847096514901	74-06-26	--	--	--	2870	7.6	9.0	780
445728096365901	74-08-21	--	--	--	2040	7.3	10.0	990
431945099052000	74-06-05	.7	.01	--	1930	7.3	33.3	200
440428101391000	74-05-23	.1	.00	--	1420	7.1	66.7	70
442630101591500	74-05-22	2.6	.86	--	3170	8.1	41.0	4600
443329096550801	74-06-04	--	--	--	941	7.9	28.0	190
444630097031201	74-06-04	--	--	--	861	8.5	27.0	240
443608097034501	74-05-14	--	--	--	1080	8.3	9.6	220
444710097075801	74-05-22	--	--	--	1030	8.4	17.0	240
443339097083701	74-05-15	--	--	--	1270	8.3	10.8	350
443933097024201	74-05-14	--	--	--	634	8.0	9.6	90
443944097134701	74-05-14	--	--	--	3020	7.7	9.5	1000
443447097105301	74-05-15	--	--	--	1320	7.8	8.4	280
443352097095301	74-05-15	--	--	--	1170	8.2	9.3	300
444810096552801	74-06-05	--	--	--	878	7.6	19.5	90
443437096540801	74-06-18	--	--	--	655	7.6	10.0	60
443429096550401	74-06-06	--	--	--	710	7.8	14.0	80
443602097024901	74-07-03	--	--	--	1120	7.8	12.5	180
443607097032001	74-07-02	--	--	--	842	7.5	11.5	100
443608097033701	74-07-02	--	--	--	1070	7.7	20.0	290
443555097041501	74-08-08	--	--	--	3020	--	11.5	310
443536097051501	74-07-15	--	--	--	1720	7.4	--	240
443509097045801	74-07-15	--	--	--	976	7.7	--	80
443450097024301	74-08-12	--	--	--	1170	7.4	--	290
443434097024301	74-08-12	--	--	--	1170	7.4	11.8	120
443430097024201	74-08-12	--	--	--	1380	7.5	11.5	350
443609097130801	74-05-10	--	--	--	1500	7.6	9.5	290
443537097130801	74-05-10	--	--	--	1180	7.7	8.2	110
443305097184901	74-08-06	--	--	--	1460	--	9.7	1000
444018096575901	74-08-13	--	--	--	1790	7.3	10.4	200
443806096571101	74-06-27	--	--	--	809	7.6	11.8	100

MISCELLANEOUS ANALYSES OF GROUND WATER IN SOUTH DAKOTA

CHEMICAL ANALYSES, OCTOBER 1973 TO SEPTEMBER 1974

STATION NUMBER	LOCAL IDENTIFIER	COUNTY	SITE	DATE OF SAMPLE	TIME	DIS-SOLVED SILICA (SI02) (MG/L) (00955)	DIS-SOLVED IRON (FE) (UG/L) (01046)	DIS-SOLVED MANGANESE (MN) (UG/L) (01056)	DIS-SOLVED CALCIUM (CA) (MG/L) (00915)
444226097113601	114N53W 40DDA	057	GW	74-08-06	1145	25	60	100	61
443820097211401	114N54W310ADA	057	GW	74-08-06	1020	33	10	460	170
444313097233901	114N55W 2AAAA	057	GW	74-08-06	0935	32	50	230	130
444315096562501	115N51W34C0CC	057	GW	74-06-27	0940	31	110	1100	300
444620097171101	115N54W1409C	057	GW	74-08-06	0900	33	20	210	120
444548097230501	115N55W248AA	057	GW	74-05-10	0920	32	50	90	78
443148098443601	112N66W 3DDDC	059	GW	73-10-24	0940	30	2100	--	110
443652098482301	113N66W 8BCCB	059	GW	73-10-24	1050	26	200	--	230
444113098480501	114N66W17BCCB	059	GW	73-10-24	1230	27	260	--	120
444130098422001	114N66W13AAAD	059	GW	73-10-24	1300	31	70	--	63
444357098493001	115N66W31BCBB	059	GW	73-10-24	1345	29	6800	--	170
444217098553601	114N67W 8BBCC	059	GW	73-10-24	1430	31	6300	--	140
444927098492501	116N67W25DDDD	059	GW	73-10-24	1530	27	190	--	98
442135099161501	110N70W 5CDA	059	GW	73-10-26	1315	30	1100	--	100
442634099140501	111N70W 3 DCC	059	GW	74-09-06	1100	31	2000	1900	150
444831099265801	115N72W 1BBBB	069	GW	73-10-26	1115	29	290	720	80
443948099270601	114N72W25BBBB	069	GW	73-10-30	1200	30	30	630	52
435805101350000	1S22E10CC	071	GW	74-05-23	1110	29	500	60	20
435655100314500	1S22E19ABA	071	GW	74-05-23	1200	27	180	20	8.2
434955101312000	2S22E28ABD	071	GW	74-05-23	1330	25	60	150	57
440730100532500	2N27E170DD	075	GW	74-06-04	0940	20	20	0	4.1
434905100444500	3S28E3AAA	075	GW	74-05-23	1515	30	790	170	250
434505100060500	103N78W10AC	085	GW	74-06-04	1515	20	1900	50	180
434205100293000	43N27W14DBB	095	GW	74-05-23	1700	21	60	0	9.6
434402096364700	EROS LAKE, SW 1	099	LK	73-11-13	1245	2.6	--	--	24
433659096335400	SPLIT ROCK CR AT CORSON.	099	SW	73-11-13	1550	.1	--	--	58
433853096341700	SPLIT ROCK CREEK, SW 5	099	SW	73-11-13	1500	9.2	--	--	82
433939096330400	SPLIT ROCK CREEK, SW 6	099	SW	73-11-13	1530	.1	--	--	54
434137096341500	TRIBUTARY TO WEST PIPEST	099	SW	73-11-13	1345	11	--	--	84
434210096331600	WEST PIPESTONE CREEK, SW	099	SW	73-11-13	1400	1.3	--	--	54
434022096344300		099	SW	73-11-13	1430	8.0	--	--	78
434508096372700	103N48W 5CACA	099	GW	73-11-14	1225	26	--	--	130
		099	GW	74-03-12	1500	18	--	--	160
434414096380300	103N48W 7DAC	099	GW	73-11-14	0800	27	--	--	93
		099	GW	74-03-12	1345	18	--	--	92
434432096364200	103N48W 8ADA	099	GW	73-11-14	1100	29	--	--	180
		099	GW	74-03-13	0915	24	--	--	140
434435096374802	103N48W 8BCCB2	099	GW	73-11-14	0845	17	--	--	210
		099	GW	74-03-12	1420	17	--	--	210
434357096364200	103N48W 80DDD	099	GW	73-11-14	0945	28	--	--	99

CHEMICAL ANALYSES, OCTOBER 1973 TO SEPTEMBER 1974

STATION	NUMBER	DATE OF SAMPLE	DIS- SOLVED MAG- NE- SIUM (MG/L) (00925)	DIS- SOLVED SODIUM (NA) (MG/L) (00930)	DIS- SOLVED PO- TAS- SIUM (K) (MG/L) (00935)	BICAR- BONATE (HCO3) (MG/L) (00440)	CAR- BONATE (CO3) (MG/L) (00445)	ALKA- LINITY AS CACO3 (MG/L) (00410)	DIS- SOLVED SULFATE (SO4) (MG/L) (00945)	DIS- SOLVED CHLO- RIDE (CL) (MG/L) (00940)	DIS- SOLVED FLUO- RIDE (F) (MG/L) (00950)	DIS- SOLVED NITRITE PLUS NITRATE (N) (MG/L) (00631)
			(MG/L) (00925)	(MG/L) (00930)	(MG/L) (00935)	(MG/L) (00440)	(MG/L) (00445)	(MG/L) (00410)	(MG/L) (00945)	(MG/L) (00940)	(MG/L) (00950)	(MG/L) (00631)
444226097113601	74-08-06		22	640	11	764	0	627	28	660	.2	3.6
443820097211401	74-08-06		52	120	17	341	--	280	580	14	.3	1.9
444313097233901	74-08-06		65	340	16	412	--	338	940	44	.2	.02
444315096562501	74-06-27		140	170	6.4	685	0	562	1100	5.5	.3	.24
444620097171101	74-08-06		48	650	12	411	--	337	1200	250	.2	3.5
444548097230501	74-05-10		27	680	8.3	527	0	432	560	510	.2	.57
443148098443601	73-10-24		35	53	5.6	324	0	266	210	24	.0	.00
443652098482301	73-10-24		84	240	17	451	0	370	870	110	.2	5.0
444113098480501	73-10-24		40	110	6.0	381	0	313	280	71	.3	1.8
444130098422001	73-10-24		18	3.7	4.6	230	0	189	20	3.0	.1	8.6
444357098493001	73-10-24		61	60	7.8	403	0	331	330	67	.1	.04
444217098553601	73-10-24		43	83	9.6	419	0	344	260	58	.1	.00
444927098492501	73-10-24		29	230	13	496	0	407	320	86	.1	.00
442135099161501	73-10-26		33	79	14	416	0	341	200	10	.3	.00
442634099140501	74-09-06		42	100	15	417	--	342	400	15	.2	.06
444831099265801	73-10-26		20	75	9.9	318	0	261	160	6.9	.3	.00
443948099270601	73-10-30		13	460	1.2	781	0	641	190	240	.5	.02
435805101350000	74-05-23		5.2	1500	11	700	0	574	2300	230	4.1	.03
435655100314500	74-05-23		1.1	780	7.0	988	0	810	810	100	.2	.09
434955101312000	74-05-23		11	500	12	220	0	180	990	68	1.2	.01
440730100532500	74-06-04		.9	840	5.5	1580	0	1300	6.8	430	2.9	.00
434905100444500	74-05-23		54	270	21	155	0	127	1200	100	1.1	.02
434505100060500	74-06-04		42	250	22	173	0	142	800	120	2.1	.00
434205100293000	74-05-23		2.0	690	10	947	0	777	370	310	4.0	.02
434402096364700	73-11-13		12	8.7	4.3	135	0	111	16	2.2	.4	.03
433659096335400	73-11-13		34	27	4.8	232	0	190	100	25	.3	.02
433853096341700	73-11-13		33	17	5.7	349	0	286	76	9.0	.3	1.3
433939096330400	73-11-13		34	29	4.3	232	0	190	100	28	.3	.05
434137096341500	73-11-13		34	15	6.6	402	0	330	43	7.5	.3	.08
434210096331600	73-11-13		30	17	7.4	282	0	231	51	7.0	.3	.23
434022096344300	73-11-13		32	17	6.2	345	0	283	61	8.8	.3	1.2
434508096372700	73-11-14		30	17	4.1	376	0	308	160	1.4	.7	.08
	74-03-12		38	17	4.2	372	0	305	290	1.4	.8	.08
434414096380300	73-11-14		61	24	1.8	526	0	431	50	20	.9	4.4
	74-03-12		57	24	1.9	508	0	417	51	27	.9	.32
434432096364200	73-11-14		110	34	3.4	627	0	514	90	99	.4	67
	74-03-13		76	26	3.5	635	0	521	59	39	.5	27
434435096374802	73-11-14		65	23	3.9	363	0	298	490	3.8	.6	.10
	74-03-12		63	23	4.0	368	0	302	520	3.6	.8	.08
434357096364200	73-11-14		37	21	5.0	440	0	361	91	5.3	1.1	.08

MISCELLANEOUS ANALYSES OF GROUND WATER IN SOUTH DAKOTA

CHEMICAL ANALYSES, OCTOBER 1973 TO SEPTEMBER 1974

STATION	NUMBER	DATE OF SAMPLE	AMMONIA NITRO- GEN (N) (MG/L) (00610)	TOTAL NITRITE (N) (MG/L) (00615)	TOTAL NITRATE (N) (MG/L) (00620)	TOTAL NITRITE PLUS NITRATE (N) (MG/L) (00630)	DIS- SOLVED SOLIDS (RESI- DUE AT 180 C) (MG/L) (70300)	DIS- SOLVED SOLIDS (SUM OF CONSTI- TUENTS) (MG/L) (70301)	HARD- NESS (CA+MG) (MG/L) (00900)	NON- CAR- BONATE HARD- NESS (MG/L) (00902)	PERCENT SODIUM (00932)	SODIUM AD- SORP- TION RATIO (00931)
444226097113601	74-08-06	--	--	--	--	--	--	1840	240	0	84	18
443820097211401	74-08-06	--	--	--	--	--	--	1160	640	360	28	2.1
444313097233901	74-08-06	--	--	--	--	--	--	1770	590	250	55	6.1
444315096562501	74-06-27	--	--	--	--	--	--	2090	1300	760	22	2.0
444620097171101	74-08-06	--	--	--	--	--	--	2530	500	160	73	13
444548097230501	74-05-10	--	--	--	--	--	--	2160	310	0	82	17
443148098443601	73-10-24	--	--	--	--	--	--	630	420	150	21	1.1
443652098482301	73-10-24	--	--	--	--	--	--	1820	920	550	36	3.4
444113098480501	73-10-24	--	--	--	--	--	--	851	460	150	34	2.2
444130098422001	73-10-24	--	--	--	--	--	--	296	230	43	3	.1
444357098493001	73-10-24	--	--	--	--	--	--	931	680	350	16	1.0
444217098553601	73-10-24	--	--	--	--	--	--	838	530	180	25	1.6
444927098492501	73-10-24	--	--	--	--	--	--	1050	360	0	57	5.2
442135099161501	73-10-26	--	--	--	--	--	--	673	390	44	30	1.8
442634099140501	74-09-06	--	--	--	--	--	1010	965	550	210	28	1.9
444831099265801	73-10-26	--	--	--	--	--	--	540	280	22	36	1.9
443948099270601	73-10-30	--	--	--	--	--	--	1370	180	0	84	15
435805101350000	74-05-23	--	--	--	--	--	4740	4450	72	0	97	77
435655100314500	74-05-23	--	--	--	--	--	2180	2220	25	0	98	68
434955101312000	74-05-23	--	--	--	--	--	1780	1780	190	9	84	16
440730100532500	74-06-04	--	--	--	--	--	2110	2100	14	0	99	98
434905100444500	74-05-23	--	--	--	--	--	2020	2010	850	730	40	4.0
434505100060500	74-06-04	--	--	--	--	--	1650	1530	630	490	46	4.4
434205100293000	74-05-23	--	--	--	--	--	1890	1890	33	0	97	53
434402096364700	73-11-13	.11	.01	.02	.03	--	--	137	110	0	14	.4
433659096335400	73-11-13	.03	.01	.01	.02	--	--	364	280	95	17	.7
433853096341700	73-11-13	.26	.02	1.3	1.3	--	--	410	340	54	10	.4
433939096330400	73-11-13	.05	.01	.02	.03	--	--	364	270	85	18	.8
434137096341500	73-11-13	.09	.01	.15	.16	--	--	400	350	20	8	.4
434210096331600	73-11-13	.26	.02	.19	.21	--	--	308	260	27	12	.5
434022096344300	73-11-13	.33	.03	1.2	1.2	--	--	387	330	44	10	.4
434508096372700	73-11-14	.02	.01	.07	.08	--	--	555	450	140	8	.4
	74-03-12	.08	.00	.19	.19	--	--	713	560	250	6	.3
434414096380300	73-11-14	.01	.01	4.4	4.4	--	--	557	480	52	10	.5
	74-03-12	.07	.00	3.6	3.6	--	--	524	460	48	10	.5
434432096364200	73-11-14	.01	.01	68	68	--	--	1150	900	390	8	.5
	74-03-13	.10	.02	27	27	--	--	801	660	140	8	.4
434435096374802	73-11-14	.02	.01	.12	.13	--	--	993	790	490	6	.4
	74-03-12	.07	.00	.10	.10	--	--	1020	780	480	6	.4
434357096364200	73-11-14	.01	.00	.06	.06	--	--	505	400	39	10	.5

MISCELLANEOUS ANALYSES OF GROUND WATER IN SOUTH DAKOTA

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CHEMICAL ANALYSES, OCTOBER 1973 TO SEPTEMBER 1974

STATION NUMBER	DATE OF SAMPLE	BROMIDE (BR) (MG/L) (71870)	IODIDE (I) (MG/L) (71865)	CYANIDE (CN) (MG/L) (00720)	SPECIFIC CONDUCTANCE (MICRO-MHOS) (00095)	PH (UNITS) (00400)	TEMPERATURE (DEG C) (00010)	DISSOLVED BORON (B) (UG/L) (01020)
444226097113601	74-08-06	--	--	--	3260	7.6	10.3	1900
443820097211401	74-08-06	--	--	--	1590	--	--	910
444313097233901	74-08-06	--	--	--	2480	--	11.0	1400
444315096562501	74-06-27	--	--	--	2620	7.3	8.9	560
444620097171101	74-08-06	--	--	--	3620	--	--	1700
444548097230501	74-05-10	--	--	--	3640	7.9	--	1700
443148098443601	73-10-24	--	--	--	958	7.5	9.0	110
443652098482301	73-10-24	--	--	--	2500	7.7	17.0	370
444113098480501	73-10-24	--	--	--	1320	7.6	--	420
444130098422001	73-10-24	--	--	--	446	7.7	11.0	70
444357098493001	73-10-24	--	--	--	1410	7.3	--	80
444217098553601	73-10-24	--	--	--	1270	7.3	--	100
444927098492501	73-10-24	--	--	--	1620	7.5	8.2	340
442135099161501	73-10-26	--	--	--	1030	7.4	--	260
442634099140501	74-09-06	.1	.01	--	1390	--	8.2	400
444831099265801	73-10-26	--	--	--	825	7.6	--	330
443948099270601	73-10-30	--	--	--	2280	8.2	--	720
435805101350000	74-05-23	1.2	.16	--	6520	7.6	34.5	2000
435655100314500	74-05-23	.5	.14	--	3230	7.7	47.8	1700
434955101312000	74-05-23	.5	.03	--	2480	7.6	50.0	490
440730100532500	74-06-04	2.6	1.7	--	3520	8.0	47.2	3700
434905100444500	74-05-23	.4	.02	--	2520	7.1	60.0	350
434505100060500	74-06-04	.8	.06	--	2220	7.4	43.3	530
434205100293000	74-05-23	.8	.64	--	3030	7.8	42.8	4300
434402096364700	73-11-13	.1	.00	.00	249	8.1	--	70
433659096335400	73-11-13	.1	.00	.00	625	8.2	--	60
433853096341700	73-11-13	.1	.00	.00	688	8.2	--	50
433939096330400	73-11-13	.1	.00	.00	635	8.3	--	70
434137096341500	73-11-13	.1	.00	.00	691	7.9	--	50
434210096331600	73-11-13	.1	.00	.00	551	8.3	--	40
434022096344300	73-11-13	.1	.00	.00	664	8.0	--	50
434508096372700	73-11-14	.0	.00	.00	859	7.4	--	180
	74-03-12	.0	.00	.00	1040	7.1	--	200
434414096380300	73-11-14	.3	.00	.00	937	7.5	--	110
	74-03-12	.2	.00	.00	919	7.3	3.0	50
434432096364200	73-11-14	.8	.00	.00	1790	7.2	--	1000
	74-03-13	.3	.00	.00	1270	7.3	4.5	160
434435096374802	73-11-14	.1	.00	.00	1370	7.3	--	280
	74-03-12	.1	.01	.00	1370	7.4	--	270
434357096364200	73-11-14	.0	.00	.00	821	7.3	--	210

MISCELLANEOUS ANALYSES OF GROUND WATER IN SOUTH DAKOTA

CHEMICAL ANALYSES, OCTOBER 1973 TO SEPTEMBER 1974

STATION NUMBER	LOCAL IDENT- I- FIEN	COUNTY	SITE	DATE OF SAMPLE	TIME	DIS- SOLVED SILICA (SI02) (MG/L) (00955)	DIS- SOLVED IRON (FE) (UG/L) (01046)	DIS- SOLVED MAN- GANESE (MN) (UG/L) (01055)	DIS- SOLVED CAL- CIUM (CA) (MG/L) (00915)
434357096364200	103N48W 8DDDD	099	GW	74-03-13	1010	28	--	--	110
434429096361800	103N48W 9BDCB	099	GW	73-11-14	1135	29	--	--	95
		099	GW	74-03-12	1545	29	--	--	92
434400096362200	103N48W 9CCDA	099	GW	73-11-14	1015	27	--	--	220
		099	GW	74-03-13	1315	27	--	--	190
434332096371500	103N48W17ACCC	099	GW	73-11-14	1325	24	--	--	120
		099	GW	74-03-13	1045	24	--	--	130
434339096381100	103N48W18ACA	099	GW	73-11-14	1400	25	--	--	300
		099	GW	74-03-13	1130	24	--	--	310
440820104004000	COLD CR SPRINGS NR RUCK	103	SP	74-09-05	1400	14	--	--	72
435950102142000	1N16E31CDA	103	GW	74-05-23	0830	18	80	30	2.4
443731098203000	115N63W 10DDD	115	GW	73-10-18	1030	29	40	--	32
		115	GW	74-05-13	1510	29	210	--	33
445344098221600	116N63W 28AAA	115	GW	73-10-23	0945	29	10	--	430
		115	GW	74-05-16	1150	30	10	--	510
445000098225500	116N63W27AADA	115	GW	73-10-18	1045	27	4600	--	390
		115	GW	74-05-13	1550	27	2200	--	250
445535098304500	117N64W26BRRR	115	GW	73-10-23	1055	28	10	--	470
		115	GW	74-05-16	1300	28	30	--	450
445900098135000	118N61W31CCCC	115	GW	73-10-18	1300	28	150	--	320
		115	GW	74-05-17	1225	27	2300	--	290
450315098194502	118N62W 8BBBR2	115	GW	73-10-18	1335	29	23000	--	590
		115	GW	74-05-17	1040	29	19000	--	590
450920098122500	119N61W 6AAAA	115	GW	73-10-18	1410	31	50	--	50
		115	GW	74-05-17	1130	31	1700	--	46
450609098342700	119N64W20CCCC	115	GW	73-10-19	1510	29	20	--	310
		115	GW	74-05-17	0935	27	150	--	280
451200098240002	120N63W22ABR2	115	GW	73-10-19	1355	28	50	--	540
		115	GW	74-05-16	1535	28	170	--	570
451023098381000	120N65W35BRRR	115	GW	73-10-19	1440	32	20	--	76
		115	GW	74-05-15	1350	34	170	--	75
443525101003000	7-25E4BCB	117	GW	74-06-03	1445	18	30	20	17
433310099491500	101N75W168BBA	123	GW	74-06-05	0930	24	1100	70	330
433620099413500	102N74W28CDA	123	GW	74-06-05	1100	20	3100	--	360
433920100044500	102N77W8C9BB	123	GW	74-06-04	1615	19	1900	110	300

MISCELLANEOUS ANALYSES OF GROUND WATER IN SOUTH DAKOTA

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CHEMICAL ANALYSES, OCTOBER 1973 TO SEPTEMBER 1974

STATION NUMBER	DATE OF SAMPLE	DIS-SOLVED MAG-NE-SIUM (MG) (00925)	DIS-SOLVED SODIUM (NA) (MG/L) (00930)	DIS-SOLVED PO-TAS-SIUM (K) (MG/L) (00935)	BICAR-BONATE (HCO3) (MG/L) (00440)	CAR-BONATE (CO3) (MG/L) (00445)	ALKA-LINITY AS CaCO3 (MG/L) (00410)	DIS-SOLVED SULFATE (SO4) (MG/L) (00945)	DIS-SOLVED CHLO-RIDE (CL) (MG/L) (00940)	DIS-SOLVED FLUO-RIDE (F) (MG/L) (00950)	DIS-SOLVED NITRITE PLUS NITRATE (N) (MG/L) (00631)
434357096364200	74-03-13	37	21	4.5	455	0	373	86	5.7	1.3	.15
434429096361800	73-11-14	35	21	3.7	412	0	338	89	3.1	.5	2.9
	74-03-12	34	20	2.9	418	0	343	53	3.6	.7	3.4
434400096362200	73-11-14	120	35	8.9	661	0	542	100	130	.5	83
	74-03-13	120	31	6.6	584	0	479	84	90	.7	97
434332096371500	73-11-14	27	18	4.2	391	0	321	150	1.1	.3	.13
	74-03-13	26	17	3.8	394	0	323	150	1.1	1.4	.03
434339096381100	73-11-14	97	33	6.6	392	0	322	890	7.5	.3	.08
	74-03-13	90	33	5.9	395	0	324	870	9.5	1.0	.09
440820104004000	74-09-05	21	1.2	.6	316	--	259	3.1	2.6	.1	.08
435950102142000	74-05-23	.3	260	2.7	391	13	342	200	9.0	2.9	.01
443731098203000	73-10-18	12	140	7.7	447	0	367	49	8.6	.3	.60
	74-05-13	12	130	8.2	447	0	367	53	8.4	.5	.01
445344098221600	73-10-23	110	41	7.9	388	0	316	1200	46	.5	2.4
	74-05-16	130	49	9.3	356	0	292	1500	46	.6	2.2
445000098225500	73-10-18	140	69	11	352	0	289	1300	42	.3	.13
	74-05-13	110	49	9.8	397	0	326	780	33	.4	.00
445535098304500	73-10-23	340	1800	150	793	0	650	4500	820	.5	.76
	74-05-16	420	1700	35	853	0	700	4800	700	.3	1.0
445900098135000	73-10-18	92	390	15	553	0	454	1400	110	.1	.09
	74-05-17	92	380	18	597	0	490	1300	110	.2	.01
450315098194502	73-10-18	200	340	23	466	0	382	2400	70	.1	.05
	74-05-17	200	320	27	471	0	386	2500	73	.4	.03
450920098122500	73-10-18	16	350	7.0	662	0	543	140	180	.2	.05
	74-05-17	15	340	7.4	655	0	537	150	180	.4	.07
450609098342700	73-10-19	160	440	16	475	0	390	1700	190	.2	.46
	74-05-17	210	370	12	430	0	353	1800	93	.5	1.8
451200098240002	73-10-19	420	250	18	455	0	373	2600	320	.4	.02
	74-05-16	470	250	17	489	0	401	2900	310	.4	.20
451023098381000	73-10-19	29	56	7.8	392	0	322	87	26	.3	1.2
	74-05-15	27	50	7.8	377	0	309	76	23	.5	.03
443525101003000	74-06-03	6.7	2500	13	1090	0	894	22	3400	1.2	.01
433310099491500	74-06-05	67	75	16	147	0	121	880	160	2.8	.00
433620099413500	74-06-05	74	120	20	147	0	121	940	260	2.7	.00
433920100044500	74-06-04	64	100	19	150	0	123	900	94	2.5	.00

MISCELLANEOUS ANALYSES OF GROUND WATER IN SOUTH DAKOTA

CHEMICAL ANALYSES, OCTOBER 1973 TO SEPTEMBER 1974

STATION NUMBER	DATE OF SAMPLE	AMMONIA NITROGEN (MG/L) (00610)	TOTAL NITRITE (MG/L) (00615)	TOTAL NITRATE (MG/L) (00620)	TOTAL NITRITE PLUS NITRATE (MG/L) (00630)	DIS-SOLVED SOLIDS (RESIDUE AT 180 C) (MG/L) (70300)	DIS-SOLVED SOLIDS (SUM OF CONSTITUENTS) (MG/L) (70301)	HARDNESS (CA, MG) (MG/L) (00900)	NON-CARBONATE HARDNESS (MG/L) (00902)	PERCENT SODIUM (00932)	SODIUM ADSORPTION RATIO (00931)
434357096364200	74-03-13	.02	.00	.33	.33	--	519	430	54	10	.4
434429096361800	73-11-14	.00	.02	2.9	2.9	--	492	380	43	11	.5
	74-03-12	.04	.00	3.4	3.4	--	456	370	27	10	.5
434400096362200	73-11-14	.01	.01	85	85	--	1340	1000	500	7	.5
	74-03-13	.07	.00	94	94	--	1270	970	490	6	.4
434332096371500	73-11-14	.31	.01	.11	.12	--	538	410	90	9	.4
	74-03-13	.26	.04	.04	.08	--	548	430	110	8	.4
434339096381100	73-11-14	.57	.01	.02	.03	--	1550	1100	830	6	.4
	74-03-13	.59	.03	.05	.08	--	1540	1100	820	6	.4
440820104004000	74-09-05	--	--	--	--	--	271	270	7	1	.0
435950102142000	74-05-23	--	--	--	--	712	702	7	0	98	42
443731098203000	73-10-18	--	--	--	--	--	502	130	0	69	5.4
	74-05-13	--	--	--	--	--	496	130	0	67	4.9
445344098221600	73-10-23	--	--	--	--	--	2070	1500	1200	5	.5
	74-05-16	--	--	--	--	--	2460	1800	1500	6	.5
445000098225500	73-10-18	--	--	--	--	--	2160	1600	1300	9	.8
	74-05-13	--	--	--	--	--	1460	1100	750	9	.7
445535098304500	73-10-23	--	--	--	--	--	8500	2600	1900	59	15
	74-05-16	--	--	--	--	--	8560	2900	2200	56	14
445900098135000	73-10-18	--	--	--	--	--	2630	1200	720	42	4.9
	74-05-17	--	--	--	--	--	2510	1100	610	42	5.0
450315098194502	73-10-18	--	--	--	--	--	3910	2300	1900	24	3.1
	74-05-17	--	--	--	--	--	3990	2300	1900	23	2.9
450920098122500	73-10-18	--	--	--	--	--	1100	190	0	79	11
	74-05-17	--	--	--	--	--	1100	180	0	80	11
450609098342700	73-10-19	--	--	--	--	--	3080	1400	1000	40	5.1
	74-05-17	--	--	--	--	--	3010	1600	1200	34	4.1
451200098240002	73-10-19	--	--	--	--	--	4400	3100	2700	15	2.0
	74-05-16	--	--	--	--	--	4790	3400	3000	14	1.9
451023098381000	73-10-19	--	--	--	--	--	513	310	0	28	1.4
	74-05-15	--	--	--	--	--	446	300	0	26	1.3
443525101003000	74-06-03	--	--	--	--	5970	6570	71	0	98	130
433310099491500	74-06-05	--	--	--	--	1740	1640	1100	990	13	1.0
433620099413500	74-06-05	--	--	--	--	2020	1870	1200	1100	18	1.5
433920100044500	74-06-04	--	--	--	--	1740	1580	1000	900	17	1.4

MISCELLANEOUS ANALYSES OF GROUND WATER IN SOUTH DAKOTA

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CHEMICAL ANALYSES, OCTOBER 1973 TO SEPTEMBER 1974

STATION NUMBER	DATE OF SAMPLE	BROMIDE (BR) (MG/L) (71870)	IODIDE (I) (MG/L) (71865)	CYANIDE (CN) (MG/L) (00720)	SPECIFIC CONDUCTANCE (MICRO- MHOS) (00095)	PH (UNITS) (00400)	TEMPERATURE (DEG C) (00010)	DISSOLVED BORON (B) (UG/L) (01020)
434357096364200	74-03-13	.1	.00	.00	838	7.1	--	190
434429096361800	73-11-14	.0	.00	.00	778	7.5	--	100
	74-03-12	.0	.00	.00	733	7.4	--	100
434400096362200	73-11-14	.9	.10	.00	2080	7.0	--	980
	74-03-13	.9	.02	.01	1920	6.8	--	110
434332096371500	73-11-14	.1	.00	.00	851	7.4	--	270
	74-03-13	.0	.00	.00	845	7.2	--	260
434339096381100	73-11-14	.2	.00	.00	1920	7.4	--	460
	74-03-13	.0	.01	.00	1930	7.2	--	470
440820104004000	74-09-05	--	--	--	476	--	7.0	20
435950102142000	74-05-23	.1	.01	--	1140	8.7	--	160
443731098203000	73-10-18	--	--	--	795	7.8	8.2	170
	74-05-13	--	--	--	791	7.6	8.5	630
445344098221600	73-10-23	--	--	--	2010	7.3	8.7	220
	74-05-16	--	--	--	2730	7.2	9.0	240
445000098225500	73-10-18	--	--	--	2490	7.2	8.2	290
	74-05-13	--	--	--	1930	7.1	8.3	250
445535098304500	73-10-23	--	--	--	10200	7.0	9.0	930
	74-05-16	--	--	--	10200	7.0	9.2	830
445900098135000	73-10-18	--	--	--	3230	7.3	8.0	550
	74-05-17	--	--	--	3240	7.1	8.2	500
450315098194502	73-10-18	--	--	--	4350	6.9	8.0	1500
	74-05-17	--	--	--	4350	6.9	8.2	1400
450920098122500	73-10-18	--	--	--	1800	7.5	8.0	1100
	74-05-17	--	--	--	1790	7.5	8.3	1100
450609098342700	73-10-19	--	--	--	3840	7.3	8.0	860
	74-05-17	--	--	--	3660	7.4	8.0	820
451200098240002	73-10-19	--	--	--	5000	7.1	8.2	590
	74-05-16	--	--	--	5330	7.6	8.0	590
451023098381000	73-10-19	--	--	--	800	7.6	8.5	220
	74-05-15	--	--	--	774	7.5	8.8	170
443525101003000	74-06-03	33	13	--	11500	7.7	--	7600
433310099491500	74-06-05	.9	.01	--	2160	7.2	53.9	160
433620099413500	74-06-05	.9	.02	--	2540	7.1	45.6	250
433920100044500	74-06-04	.4	.02	--	2100	7.2	43.3	170

South Dakota 3-digit Numeric County Code

013 Brown	053 Gregory	071 Jackson	103 Pennington
019 Butte	055 Haakon	075 Jones	115 Spink
023 Charles Mix	057 Hamlin	085 Lyman	117 Stanley
025 Clark	059 Hand	095 Mellette	123 Tripp
039 Deuel	069 Hyde	099 Minnehaha	

MISCELLANEOUS ANALYSES OF GROUND WATER IN SOUTH DAKOTA

CHEMICAL ANALYSES, OCTOBER 1973 TO SEPTEMBER 1974

STATION NUMBER	LOCAL IDENTIFIER	COUNTY	SITE	DATE OF SAMPLE	TIME	DIS-SOLVED ALUMINUM (AL) (UG/L) (01106)	TOTAL ALUMINUM (AL) (UG/L) (01105)	DIS-SOLVED ARSENIC (AS) (UG/L) (01000)	DIS-SOLVED BARIUM (BA) (UG/L) (01005)
451431098061000	121N61W360DDD	013	GW	73-10-18	1445	--	--	--	--
		013	GW	74-05-14	1420	--	--	--	--
451802098183002	121N62W 9CCCC2	013	GW	73-10-18	1525	--	--	--	--
		013	GW	74-05-16	1645	--	--	--	--
451759098333500	121N63W15AAAB	013	GW	73-10-19	1305	--	--	--	--
		013	GW	74-05-14	1600	--	--	--	--
451436098233203	121N63W340DDD	013	GW	73-10-19	1330	--	--	--	--
		013	GW	74-05-16	1600	--	--	--	--
451947098355504	121N65W 1AAAA4	013	GW	73-10-19	1210	--	--	--	--
		013	GW	74-05-17	0840	--	--	--	--
451436098394500	121N65W34CCCC	013	GW	74-05-16	1435	--	--	--	--
452312098210400	122N63W120DDD	013	GW	73-10-18	1600	--	--	--	--
		013	GW	74-05-15	0950	--	--	--	--
452312098283002	122N64W13AAAA2	013	GW	73-10-19	1030	--	--	--	--
		013	GW	74-05-15	1115	--	--	--	--
452915098271501	123N63W 88BBB	013	GW	73-10-19	0940	--	--	--	--
452915098271500		013	GW	74-05-15	0755	--	--	--	--
452456098233100	123N63W340DDD	013	GW	73-10-19	1105	--	--	--	--
		013	GW	74-05-15	1030	--	--	--	--
453428098194202	124N62W 88BBB2	013	GW	73-10-19	0750	--	--	--	--
		013	GW	74-05-14	0910	--	--	--	--
454431098271300	124N63W 5CCCC	013	GW	73-10-19	0905	--	--	--	--
		013	GW	74-05-14	0810	--	--	--	--
453800098222000	125N63W13CCCC	013	GW	73-10-19	0825	--	--	--	--
		013	GW	74-05-14	0900	--	--	--	--
444253103440000	9N3E27ADDB	019	GW	74-05-22	1200	0	--	4	0
444450103065000	9N8E14BB	019	GW	74-05-22	1400	0	--	8	0
425545098222500	94N64W26DBA	023	GW	74-06-06	0930	40	--	0	100
430826098190600	96N63W 8CDC	023	GW	74-06-06	1105	40	--	0	0
443518097320701	113N56W150DDQ1	025	GW	74-05-31	--	--	--	--	--
443300097320401	113N56W340ADA1	025	GW	74-05-31	--	--	--	--	--
444237097424803	114N57W 5C8BB3	025	GW	74-06-10	--	--	--	--	--
444127097430702	114N57W 7DDCB2	025	GW	74-06-10	--	--	--	--	--
443735097402801	114N57W34CCCC1	025	GW	74-05-31	--	0	--	2	100
444116097513001	114N59W13AAAB1	025	GW	74-06-10	--	--	--	--	--
444453097475401	115N58W210DCD1	025	GW	74-06-12	--	--	--	--	--
445137097293901	116N56W13AAAD1	025	GW	74-05-31	--	--	--	--	--
445132097302501	116N56W17AADD1	025	GW	74-06-12	--	--	--	--	--
445243097435101	116N57W 6CCDC1	025	GW	74-06-12	--	0	--	4	100
445140097392001	116N57W15AAAA1	025	GW	74-05-23	--	--	--	--	--
445031097424401	116N57W208CCD1	025	GW	74-06-12	--	--	--	--	--
445205097485801	116N58W 8DAAD1	025	GW	74-05-23	--	--	--	--	--
445227097451801	116N58W11AADB1	025	GW	74-05-23	--	--	--	--	--
445724097345501	117N56W 8ACDD1	025	GW	74-05-30	--	0	--	0	100
445439097562501	117N59W28CB8A1	025	GW	74-05-30	--	0	--	0	100
450047097503501	118N58W19DAAC1	025	GW	74-06-12	--	20	--	1	100
450017097453601	118N58W26AADD1	025	GW	74-05-30	--	--	--	--	--
450005097480601	118N58W28AADD1	025	GW	74-06-12	--	--	--	--	--
450024097511601	118N58W308ABB1	025	GW	74-06-11	--	--	--	--	--
450851097315801	119N56W028CB01	025	GW	74-05-22	--	--	--	--	--
450636097372501	119N57W130CCD1	025	GW	74-05-22	--	--	--	--	--
450712097415901	119N57W17AADD1	025	GW	74-05-22	--	--	--	--	--
450539097435501	119N57W308ABA1	025	GW	74-05-22	--	--	--	--	--
450539097435502	119N57W308ABA2	025	GW	74-05-22	--	--	--	--	--
450615097492901	119N58W20ADC81	025	GW	74-05-30	--	--	--	--	--
450740097562501	119N59W 9CCCA1	025	GW	74-06-11	--	0	--	0	0
445808096442300		039	GW	73-10-18	1100	--	--	--	--
443241096395101	T113N R49W 35 DDDC1 RUSS	039	GW	74-08-22	1350	--	--	--	--
443426096370901	113N48W20CCCD	039	GW	74-06-19	1300	--	--	--	--
443429096363802	113N48W20DCCB2	039	GW	74-06-19	1315	--	--	--	--
443240096395302	113N49W350DDC2	039	GW	74-08-22	1400	--	--	--	--
444117096404001	114N49W148BAD	039	GW	74-08-22	1305	--	--	--	--
444045096493701	114N50W160ACA	039	GW	74-08-22	0940	--	--	--	--
4444747096272001	115N47W 3CBAC	039	GW	74-05-09	1100	--	--	--	--
444723096322401	115N48W12BBB	039	GW	74-08-22	1050	--	--	--	--

CHEMICAL ANALYSES, OCTOBER 1973 TO SEPTEMBER 1974

STATION	NUMBER	DATE OF SAMPLE	TOTAL BARIUM (BA) (UG/L) (01007)	DIS- SOLVED BERYL- LIUM (BE) (UG/L) (01010)	TOTAL BERYL- LIUM (BE) (UG/L) (01012)	DIS- SOLVED BISMUTH (BI) (UG/L) (01015)	TOTAL BISMUTH (BI) (UG/L) (01017)	DIS- SOLVED BORON (B) (UG/L) (01020)	TOTAL BORON (B) (UG/L) (01022)	DIS- SOLVED CAD- MIUM (CD) (UG/L) (01025)	TOTAL CAD- MIUM (CD) (UG/L) (01027)	DIS- SOLVED CHRO- MIUM (CR) (UG/L) (01030)
451431098061000		73-10-18	--	--	--	--	--	1400	--	--	--	--
		74-05-14	--	--	--	--	--	1100	--	--	--	--
451802098183002		73-10-18	--	--	--	--	--	130	--	--	--	--
		74-05-16	--	--	--	--	--	80	--	--	--	--
451759098333500		73-10-19	--	--	--	--	--	940	--	--	--	--
		74-05-14	--	--	--	--	--	1100	--	--	--	--
451436098233200		73-10-19	--	--	--	--	--	990	--	--	--	--
		74-05-16	--	--	--	--	--	1000	--	--	--	--
451947098355504		73-10-19	--	--	--	--	--	110	--	--	--	--
		74-05-17	--	--	--	--	--	90	--	--	--	--
451436098394500		74-05-16	--	--	--	--	--	830	--	--	--	--
452312098210400		73-10-18	--	--	--	--	--	2400	--	--	--	--
		74-05-15	--	--	--	--	--	2400	--	--	--	--
452312098283002		73-10-19	--	--	--	--	--	2000	--	--	--	--
		74-05-15	--	--	--	--	--	2000	--	--	--	--
452915098271501		73-10-19	--	--	--	--	--	470	--	--	--	--
452915098271500		74-05-15	--	--	--	--	--	330	--	--	--	--
452456098233100		73-10-19	--	--	--	--	--	840	--	--	--	--
		74-05-15	--	--	--	--	--	830	--	--	--	--
453428098194202		73-10-19	--	--	--	--	--	780	--	--	--	--
		74-05-14	--	--	--	--	--	40	--	--	--	--
454431098271300		73-10-19	--	--	--	--	--	70	--	--	--	--
		74-05-14	--	--	--	--	--	70	--	--	--	--
453800098222000		73-10-19	--	--	--	--	--	780	--	--	--	--
		74-05-14	--	--	--	--	--	760	--	--	--	--
444253103440000		74-05-22	--	--	--	--	--	120	--	0	--	0
444450103065000		74-05-22	--	--	--	--	--	720	--	1	--	0
425545098222500		74-06-06	--	--	--	--	--	710	--	1	--	0
430826098190600		74-06-06	--	--	--	--	--	740	--	2	--	0
443518097320701		74-05-31	--	--	--	--	--	4600	--	--	--	--
443300097320401		74-05-31	--	--	--	--	--	900	--	--	--	--
444237097424803		74-06-10	--	--	--	--	--	70	--	--	--	--
444127097430702		74-06-10	--	--	--	--	--	580	--	--	--	--
443753097402801		74-05-31	--	--	--	--	--	40	--	1	--	0
444116097513001		74-06-10	--	--	--	--	--	670	--	--	--	--
444453097475401		74-06-12	--	--	--	--	--	470	--	--	--	--
445137097293901		74-05-31	--	--	--	--	--	1100	--	--	--	--
445132097302501		74-06-12	--	--	--	--	--	1200	--	--	--	--
445243097435101		74-06-12	--	--	--	--	--	240	--	1	--	0
445140097392001		74-05-23	--	--	--	--	--	1500	--	--	--	--
445031097424401		74-06-12	--	--	--	--	--	810	--	--	--	--
445205097485801		74-05-23	--	--	--	--	--	670	--	--	--	--
445227097451801		74-05-23	--	--	--	--	--	850	--	--	--	--
445724097345501		74-05-30	--	--	--	--	--	1400	--	1	--	0
445439097562501		74-05-30	--	--	--	--	--	4000	--	1	--	0
450047097503501		74-06-12	--	--	--	--	--	790	--	1	--	0
450017097453601		74-05-30	--	--	--	--	--	590	--	--	--	--
450005097480601		74-06-12	--	--	--	--	--	1400	--	--	--	--
450024097511601		74-06-11	--	--	--	--	--	1000	--	--	--	--
450851097315801		74-05-22	--	--	--	--	--	510	--	--	--	--
450636097372501		74-05-22	--	--	--	--	--	810	--	--	--	--
450712097415901		74-05-22	--	--	--	--	--	690	--	--	--	--
450539097435501		74-05-22	--	--	--	--	--	580	--	--	--	--
450539097435502		74-05-22	--	--	--	--	--	420	--	--	--	--
450615097492901		74-05-30	--	--	--	--	--	80	--	--	--	--
450740097562501		74-06-11	--	--	--	--	--	3000	--	1	--	0
445808096442300		73-10-18	--	--	--	--	--	440	--	--	--	--
443241096395101		74-08-22	--	--	--	--	--	380	--	--	--	--
443426096370901		74-06-19	--	--	--	--	--	50	--	--	--	--
443429096363802		74-06-19	--	--	--	--	--	40	--	--	--	--
443240096395302		74-08-22	--	--	--	--	--	80	--	--	--	--
444117096404001		74-08-22	--	--	--	--	--	800	--	--	--	--
444045096493701		74-08-22	--	--	--	--	--	50	--	--	--	--
444747096272001		74-05-09	--	--	--	--	--	50	--	--	--	--
444723096322401		74-08-22	--	--	--	--	--	140	--	--	--	--

CHEMICAL ANALYSES, OCTOBER 1973 TO SEPTEMBER 1974

[illegible]

CHEMICAL ANALYSES, OCTOBER 1973 TO SEPTEMBER 1974

STATION	NUMBER	DATE OF SAMPLE	TOTAL IRON (FE) (01045)	TOTAL MERCURY (HG) (71900)	DIS- SOLVED LEAD (PB) (01049)	TOTAL LEAD (PB) (01051)	DIS- SOLVED LITHIUM (LI) (01130)	TOTAL LITHIUM (LI) (01132)	DIS- SOLVED MAN- GANESE (MN) (01056)	TOTAL MAN- GANESE (MN) (01055)	DIS- SOLVED MOLYB- DENUM (MO) (01060)	TOTAL MOLYB- DENUM (MO) (01062)
451431098061000		73-10-18	--	--	--	--	--	--	--	--	--	--
		74-05-14	--	--	--	--	--	--	--	--	--	--
451802098183002		73-10-18	--	--	--	--	--	--	--	--	--	--
		74-05-16	--	--	--	--	--	--	--	--	--	--
451759098333500		73-10-19	--	--	--	--	--	--	--	--	--	--
		74-05-14	--	--	--	--	--	--	--	--	--	--
451436098233200		73-10-19	--	--	--	--	--	--	--	--	--	--
		74-05-16	--	--	--	--	--	--	--	--	--	--
451947098355504		73-10-19	--	--	--	--	--	--	--	--	--	--
		74-05-17	--	--	--	--	--	--	--	--	--	--
451436098394500		74-05-16	--	--	--	--	--	--	--	--	--	--
452312098210400		73-10-18	--	--	--	--	--	--	--	--	--	--
		74-05-15	--	--	--	--	--	--	--	--	--	--
452312098283002		73-10-19	--	--	--	--	--	--	--	--	--	--
		74-05-15	--	--	--	--	--	--	--	--	--	--
452915098271501		73-10-19	--	--	--	--	--	--	--	--	--	--
452915098271500		74-05-15	--	--	--	--	--	--	--	--	--	--
452456098233100		73-10-19	--	--	--	--	--	--	--	--	--	--
		74-05-15	--	--	--	--	--	--	--	--	--	--
453428098194202		73-10-19	--	--	--	--	--	--	--	--	--	--
		74-05-14	--	--	--	--	--	--	--	--	--	--
454431098271300		73-10-19	--	--	--	--	--	--	--	--	--	--
		74-05-14	--	--	--	--	--	--	--	--	--	--
453800098222000		73-10-19	--	--	--	--	--	--	--	--	--	--
		74-05-14	--	--	--	--	--	--	--	--	--	--
444253103440000		74-05-22	--	.0	1	--	40	--	20	--	36	--
444450103065000		74-05-22	--	.0	0	--	480	--	100	--	120	--
425545098222500		74-06-06	--	.9	7	--	230	--	180	--	0	--
430826098190600		74-06-06	--	.0	7	--	210	--	170	--	0	--
443518097320701		74-05-31	--	--	--	--	--	--	40	--	--	--
443300097320401		74-05-31	--	--	--	--	--	--	1400	--	--	--
444237097424803		74-06-10	--	--	--	--	--	--	630	--	--	--
444127097430702		74-06-10	--	--	--	--	--	--	3900	--	--	--
443753097402801		74-05-31	--	.0	9	--	20	--	430	--	3	--
444116097513001		74-06-10	--	--	--	--	--	--	1200	--	--	--
444453097475401		74-06-12	--	--	--	--	--	--	4200	--	--	--
445137097293901		74-05-31	--	--	--	--	--	--	180	--	--	--
445132097302501		74-06-12	--	--	--	--	--	--	210	--	--	--
445243097435101		74-06-12	--	.0	2	--	60	--	920	--	2	--
445140097392001		74-05-23	--	--	--	--	--	--	170	--	--	--
445031097424401		74-06-12	--	--	--	--	--	--	2800	--	--	--
445205097485801		74-05-23	--	--	--	--	--	--	3600	--	--	--
445227097451801		74-05-23	--	--	--	--	--	--	960	--	--	--
445724097345501		74-05-30	--	.0	5	--	130	--	240	--	12	--
445439097562501		74-05-30	--	.0	3	--	120	--	30	--	5	--
450047097503501		74-06-12	--	.0	9	--	120	--	230	--	6	--
450017097453601		74-05-30	--	--	--	--	--	--	180	--	--	--
450005097480601		74-06-12	--	--	--	--	--	--	3400	--	--	--
450024097511601		74-06-11	--	--	--	--	--	--	1400	--	--	--
450851097315801		74-05-22	--	--	--	--	--	--	3500	--	--	--
450636097372501		74-05-22	--	--	--	--	--	--	80	--	--	--
450712097415901		74-05-22	--	--	--	--	--	--	260	--	--	--
450539097435501		74-05-22	--	--	--	--	--	--	4000	--	--	--
450539097435502		74-05-22	--	--	--	--	--	--	410	--	--	--
450615097492901		74-05-30	--	--	--	--	--	--	260	--	--	--
450740097562501		74-06-11	--	.0	4	--	170	--	30	--	7	--
445808096442300		73-10-18	--	--	--	--	--	--	670	--	--	--
443241096395101		74-08-22	--	--	--	--	--	--	590	--	--	--
443426096370901		74-06-19	--	--	--	--	--	--	0	--	--	--
443429096363802		74-06-19	--	--	--	--	--	--	310	--	--	--
443240096395302		74-08-22	--	--	--	--	--	--	40	--	--	--
444117096404001		74-08-22	--	--	--	--	--	--	180	--	--	--
444045096493701		74-08-22	--	--	--	--	--	--	770	--	--	--
444747096272001		74-05-09	--	--	--	--	--	--	200	--	--	--
444723096322401		74-08-22	--	--	--	--	--	--	430	--	--	--

CHEMICAL ANALYSES, OCTOBER 1973 TO SEPTEMBER 1974

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CHEMICAL ANALYSES, OCTOBER 1973 TO SEPTEMBER 1974

STATION NUMBER	DATE OF SAMPLE	TOTAL TI- TANIUM (TI) (UG/L) (01152)	DIS- SOLVED VANA- DIUM (V) (UG/L) (01085)	TOTAL VANA- DIUM (V) (UG/L) (01087)	DIS- SOLVED ZINC (ZN) (UG/L) (01090)	TOTAL ZINC (ZN) (UG/L) (01092)	DIS- SOLVED ZIR- CONIUM (ZR) (UG/L) (01160)	TOTAL ZIR- CONIUM (ZR) (UG/L) (01162)
451431098061000	73-10-18	--	--	--	--	--	--	--
	74-05-14	--	--	--	--	--	--	--
451802098183002	73-10-18	--	--	--	--	--	--	--
	74-05-16	--	--	--	--	--	--	--
451759098333500	73-10-19	--	--	--	--	--	--	--
	74-05-14	--	--	--	--	--	--	--
451436098233200	73-10-19	--	--	--	--	--	--	--
	74-05-16	--	--	--	--	--	--	--
451947098355504	73-10-19	--	--	--	--	--	--	--
	74-05-17	--	--	--	--	--	--	--
451436098394500	74-05-16	--	--	--	--	--	--	--
452312098210400	73-10-18	--	--	--	--	--	--	--
	74-05-15	--	--	--	--	--	--	--
452312098283002	73-10-19	--	--	--	--	--	--	--
	74-05-15	--	--	--	--	--	--	--
452915098271501	73-10-19	--	--	--	--	--	--	--
452915098271500	74-05-15	--	--	--	--	--	--	--
452456098233100	73-10-19	--	--	--	--	--	--	--
	74-05-15	--	--	--	--	--	--	--
453428098194202	73-10-19	--	--	--	--	--	--	--
	74-05-14	--	--	--	--	--	--	--
454431098271300	73-10-19	--	--	--	--	--	--	--
	74-05-14	--	--	--	--	--	--	--
453800098222000	73-10-19	--	--	--	--	--	--	--
	74-05-14	--	--	--	--	--	--	--
444253103440000	74-05-22	--	5.6	--	10	--	--	--
444450103065000	74-05-22	--	7.0	--	20	--	--	--
425545098222500	74-06-06	--	1.5	--	30	--	--	--
430826098190600	74-06-06	--	1.9	--	30	--	--	--
443518097320701	74-05-31	--	--	--	--	--	--	--
443300097320401	74-05-31	--	--	--	--	--	--	--
444237097424803	74-06-10	--	--	--	--	--	--	--
444127097430702	74-06-10	--	--	--	--	--	--	--
443753097402801	74-05-31	--	.0	--	140	--	--	--
444116097513001	74-06-10	--	--	--	--	--	--	--
444453097475401	74-06-12	--	--	--	--	--	--	--
445137097293901	74-05-31	--	--	--	--	--	--	--
445132097302501	74-06-12	--	--	--	--	--	--	--
445243097435101	74-06-12	--	.8	--	30	--	--	--
445140097392001	74-05-23	--	--	--	--	--	--	--
445031097424401	74-06-12	--	--	--	--	--	--	--
445205097485801	74-05-23	--	--	--	--	--	--	--
445227097451801	74-05-23	--	--	--	--	--	--	--
445724097345501	74-05-30	--	.3	--	50	--	--	--
445439097562501	74-05-30	--	2.2	--	40	--	--	--
450047097503501	74-06-12	--	.0	--	170	--	--	--
450017097453601	74-05-30	--	--	--	--	--	--	--
450005097480601	74-06-12	--	--	--	--	--	--	--
450024097511601	74-06-11	--	--	--	--	--	--	--
450851097315801	74-05-22	--	--	--	--	--	--	--
450636097372501	74-05-22	--	--	--	--	--	--	--
450712097415901	74-05-22	--	--	--	--	--	--	--
450539097435501	74-05-22	--	--	--	--	--	--	--
450539097435502	74-05-22	--	--	--	--	--	--	--
450615097492901	74-05-30	--	--	--	--	--	--	--
450740097562501	74-06-11	--	2.2	--	140	--	--	--
445808096442300	73-10-18	--	--	--	--	--	--	--
443241096395101	74-08-22	--	--	--	--	--	--	--
443426096370901	74-06-19	--	--	--	--	--	--	--
443429096363802	74-06-19	--	--	--	--	--	--	--
443240096395302	74-08-22	--	--	--	--	--	--	--
444117096404001	74-08-22	--	--	--	--	--	--	--
444045096493701	74-08-22	--	--	--	--	--	--	--
444747096272001	74-05-09	--	--	--	--	--	--	--
444723096322401	74-08-22	--	--	--	--	--	--	--

CHEMICAL ANALYSES, OCTOBER 1973 TO SEPTEMBER 1974

STATION NUMBER	LOCAL IDENTIFIER	COUNTY	SITE	DATE OF SAMPLE	TIME	DIS-SOLVED ALUMINUM (AL) (UG/L) (01106)	TOTAL ALUMINUM (AL) (UG/L) (01105)	DIS-SOLVED ARSENIC (AS) (UG/L) (01000)	DIS-SOLVED BARIUM (BA) (UG/L) (01005)
444532096503701	115N50W218CBB	039	GW	74-08-22	1000	--	--	--	--
445058096313001	116N48W13DDC	039	GW	74-08-22	1120	--	--	--	--
445142096394501	116N49W138BDB	039	GW	74-06-26	0900	0	--	13	--
445003096510301	116N50W200CDC	039	GW	74-06-28	0930	--	--	--	--
444847096514901	116N50W32CBBB	039	GW	74-06-26	1500	--	--	--	--
445728096365901	117N48W 88CDB	039	GW	74-08-21	0935	--	--	--	--
431945099052000	98N70W118B	053	GW	74-06-05	1430	20	--	3	0
440428101391000	1N20E1ACDD	055	GW	74-05-23	1015	10	--	2	0
442630101591500	6N18E31ABDCL	055	GW	74-05-22	1730	0	--	0	0
443437096540801	113N51W24CCCD	057	GW	74-06-18	1300	0	--	0	--
443429096550401	113N51W268AAC	057	GW	74-06-06	1445	--	--	--	--
443602097024901	113N52W15AADA	057	GW	74-07-03	1055	--	--	--	--
443607097032001	113N52W15ABBA	057	GW	74-07-02	1115	--	--	--	--
443608097033701	113N52W15BAB	057	GW	74-07-02	1030	--	--	--	--
443555097041501	113N52W16AACC	057	GW	74-08-08	1330	--	--	--	--
443536097051501	113N52W17DAAA	057	GW	74-07-15	1350	--	--	--	--
443509097045801	113N52W218BAA	057	GW	74-07-15	1330	--	--	--	--
443450097024301	113N52W238CDC	057	GW	74-08-12	1630	--	--	--	--
443434097024301	113N52W23CCBA	057	GW	74-08-12	1615	--	--	--	--
443430097024201	113N52W23CCBD	057	GW	74-08-12	1545	--	--	--	--
443609097130801	113N53W17ABDA1	057	GW	74-05-10	1100	--	--	--	--
443537097130801	113N53W17DCAA	057	GW	74-05-10	1100	--	--	--	--
443305097184901	113N54W330ADD	057	GW	74-08-06	1055	--	--	--	--
444018096575901	114N51W20AADA	057	GW	74-08-13	0915	--	--	--	--
443806096571101	114N51W330DCB	057	GW	74-06-27	1030	--	--	--	--
444226097113601	114N53W 40DDA	057	GW	74-08-06	1145	--	--	--	--
443820097211401	114N54W310ADA	057	GW	74-08-06	1020	--	--	--	--
444313097233901	114N55W 2AAAA	057	GW	74-08-06	0935	--	--	--	--
444315096562501	115N51W34CDDC	057	GW	74-06-27	0940	--	--	--	--
444620097171101	115N54W14DBC	057	GW	74-08-06	0900	--	--	--	--
444548097230501	115N55W24BAA	057	GW	74-05-10	0920	--	--	--	--
443148098443601	112N66W 3DDDC	059	GW	73-10-24	0940	--	--	--	--
443652098482301	113N66W 8BCCB	059	GW	73-10-24	1050	--	--	--	--
444113098480501	114N66W17BCCB	059	GW	73-10-24	1230	--	--	--	--
444130098422001	114N66W13AAAD	059	GW	73-10-24	1300	--	--	--	--
444357098493001	115N66W31BCBB	059	GW	73-10-24	1345	--	--	--	--
444217098553601	114N67W 8BCCB	059	GW	73-10-24	1430	--	--	--	--
444927098492501	116N67W25DDDD	059	GW	73-10-24	1530	--	--	--	--
442135099161501	110N70W 5CDA	059	GW	73-10-26	1315	--	--	--	--
442634099140501	111N70W 3 DCC	059	GW	74-09-06	1100	0	--	6	0
444831099265801	115N72W 1BBBB	069	GW	73-10-26	1115	10	--	1	--
443948099270601	114N72W25BBBB	069	GW	73-10-30	1200	10	--	20	--
435805101350000	1S22E10CC	071	GW	74-05-23	1110	0	--	1	0
435655100314500	1S22E19ABA	071	GW	74-05-23	1200	0	--	1	0
434955101312000	2S22E28ABD	071	GW	74-05-23	1330	0	--	1	0
440730100532500	2N27E17DDD	075	GW	74-06-04	0940	0	--	1	200
434905100444500	3S28E3AAA	075	GW	74-05-23	1515	10	--	2	0
434505100060500	103N78W1DAC	085	GW	74-06-04	1515	20	--	1	0
434205100293000	43N27W14DBB	095	GW	74-05-23	1700	10	--	1	0
434402096364700	EROS LAKE, SW 1	099	LK	73-11-13	1215	--	460	--	--
433659096335400	SPLIT ROCK CR AT CORSON,	099	SW	73-11-13	1550	--	800	--	--
433853096341700	SPLIT ROCK CREEK, SW 5	099	SW	73-11-13	1500	--	120	--	--
433939096330400	SPLIT ROCK CREEK, SW 6	099	SW	73-11-13	1530	--	500	--	--
434137096341500	TRIBUTARY TO WEST PIPEST	099	SW	73-11-13	1345	--	650	--	--
434210096331600	WEST PIPESTONE CREEK, SW	099	SW	73-11-13	1400	--	140	--	--

CHEMICAL ANALYSES, OCTOBER 1973 TO SEPTEMBER 1974

STATION	NUMBER	DATE OF SAMPLE	TOTAL BARIUM (BA) (UG/L) (01007)	DIS- SOLVED BERYL- LIUM (BE) (UG/L) (01010)	TOTAL BERYL- LIUM (BE) (UG/L) (01012)	DIS- SOLVED BISMUTH (BI) (UG/L) (01015)	TOTAL BISMUTH (BI) (UG/L) (01017)	DIS- SOLVED BORON (B) (UG/L) (01020)	TOTAL BORON (B) (UG/L) (01022)	DIS- SOLVED CAD- MIUM (CD) (UG/L) (01025)	TOTAL CAD- MIUM (CD) (UG/L) (01027)	DIS- SOLVED CHRO- MIUM (CR) (UG/L) (01030)
444532096503701	74-08-22	--	--	--	--	--	--	1700	--	--	--	--
445058096313001	74-08-22	--	--	--	--	--	--	1100	--	--	--	--
445142096394501	74-06-26	--	--	--	--	--	--	250	--	0	--	0
445003096510301	74-06-28	--	--	--	--	--	--	160	--	--	--	--
444847096514901	74-06-26	--	--	--	--	--	--	780	--	--	--	--
445728096365901	74-08-21	--	--	--	--	--	--	990	--	--	--	--
431945099052000	74-06-05	--	--	--	--	--	--	200	--	0	--	0
440428101391000	74-05-23	--	--	--	--	--	--	70	--	0	--	0
442630101591500	74-05-22	--	--	--	--	--	--	4600	--	0	--	0
443437096540801	74-06-18	--	--	--	--	--	--	60	--	0	--	0
443429096550401	74-06-06	--	--	--	--	--	--	80	--	--	--	--
443602097024901	74-07-03	--	--	--	--	--	--	180	--	--	--	--
443607097032001	74-07-02	--	--	--	--	--	--	100	--	--	--	--
443608097033701	74-07-02	--	--	--	--	--	--	290	--	--	--	--
443555097041501	74-08-08	--	--	--	--	--	--	310	--	--	--	--
443536097051501	74-07-15	--	--	--	--	--	--	240	--	--	--	--
443509097045801	74-07-15	--	--	--	--	--	--	80	--	--	--	--
443450097024301	74-08-12	--	--	--	--	--	--	290	--	--	--	--
443434097024301	74-08-12	--	--	--	--	--	--	120	--	--	--	--
443430097024201	74-08-12	--	--	--	--	--	--	350	--	--	--	--
443609097130801	74-05-10	--	--	--	--	--	--	290	--	--	--	--
443537097130801	74-05-10	--	--	--	--	--	--	110	--	--	--	--
443305097184901	74-08-06	--	--	--	--	--	--	1000	--	--	--	--
444018096575901	74-08-13	--	--	--	--	--	--	200	--	--	--	--
443806096571101	74-06-27	--	--	--	--	--	--	100	--	--	--	--
444226097113601	74-08-06	--	--	--	--	--	--	1900	--	--	--	--
443820097211401	74-08-06	--	--	--	--	--	--	910	--	--	--	--
444313097233901	74-08-06	--	--	--	--	--	--	1400	--	--	--	--
444315096562501	74-06-27	--	--	--	--	--	--	560	--	--	--	--
444620097171101	74-08-06	--	--	--	--	--	--	1700	--	--	--	--
444548097230501	74-05-10	--	--	--	--	--	--	1700	--	--	--	--
443148098443601	73-10-24	--	--	--	--	--	--	110	--	--	--	--
443652098482301	73-10-24	--	--	--	--	--	--	370	--	--	--	--
444113098480501	73-10-24	--	--	--	--	--	--	420	--	--	--	--
444130098422001	73-10-24	--	--	--	--	--	--	70	--	--	--	--
444357098493001	73-10-24	--	--	--	--	--	--	80	--	--	--	--
444217098553601	73-10-24	--	--	--	--	--	--	100	--	--	--	--
444927098492501	73-10-24	--	--	--	--	--	--	340	--	--	--	--
442135099161501	73-10-26	--	--	--	--	--	--	260	--	--	--	--
442634099140501	74-09-06	--	--	--	--	--	--	400	--	<1	--	0
444831099265801	73-10-26	--	--	--	--	--	--	330	--	0	--	0
443948099270601	73-10-30	--	--	--	--	--	--	720	--	0	--	0
435805101350000	74-05-23	--	--	--	--	--	--	2000	--	0	--	0
435655100314500	74-05-23	--	--	--	--	--	--	1700	--	0	--	0
434955101312000	74-05-23	--	--	--	--	--	--	490	--	0	--	0
440730100532500	74-06-04	--	--	--	--	--	--	3700	--	0	--	0
434905100444500	74-05-23	--	--	--	--	--	--	350	--	1	--	0
434505100060500	74-06-04	--	--	--	--	--	--	530	--	0	--	0
434205100293000	74-05-23	--	--	--	--	--	--	4300	--	0	--	0
434402096364700	73-11-13	96	--	0	--	<4	--	--	60	--	<2	--
433659096335400	73-11-13	100	--	<2	--	<9	60	50	--	--	<4	--
433853096341700	73-11-13	150	--	<2	--	<9	50	54	--	--	<5	--
433939096330400	73-11-13	80	--	<2	--	<8	70	50	--	--	<4	--
434137096341500	73-11-13	210	--	<2	--	<10	50	45	--	--	<5	--
434210096331600	73-11-13	120	--	<2	--	<8	40	38	--	--	<4	--

MISCELLANEOUS ANALYSES OF GROUND WATER IN SOUTH DAKOTA

CHEMICAL ANALYSES, OCTOBER 1973 TO SEPTEMBER 1974

STATION	NUMBER	DATE OF SAMPLE	TOTAL CHROMIUM (CR) (UG/L) (01034)	DIS- SOLVED COPPER (CU) (UG/L) (01040)	TOTAL COPPER (CU) (UG/L) (01042)	DIS- SOLVED COBALT (CO) (UG/L) (01035)	TOTAL COBALT (CO) (UG/L) (01037)	DIS- SOLVED GALLIUM (GA) (UG/L) (01120)	TOTAL GALLIUM (GA) (UG/L) (01122)	DIS- SOLVED GER- MANIUM (GE) (UG/L) (01125)	TOTAL GER- MANIUM (GE) (UG/L) (01127)	DIS- SOLVED IRON (FE) (UG/L) (01046)
444532096503701		74-08-22	--	--	--	--	--	--	--	--	--	40
445058096313001		74-08-22	--	--	--	--	--	--	--	--	--	30
445142096394501		74-06-26	--	0	--	0	--	--	--	--	--	4100
445003096510301		74-06-28	--	--	--	--	--	--	--	--	--	110
444847096514901		74-06-26	--	--	--	--	--	--	--	--	--	200
445728096365901		74-08-21	--	--	--	--	--	--	--	--	--	50
431945099052000		74-06-05	--	0	--	1	--	--	--	--	--	1700
440428101391000		74-05-23	--	0	--	0	--	--	--	--	--	30
442630101591500		74-05-22	--	2	--	0	--	--	--	--	--	70
443437096540801		74-06-18	--	2	--	0	--	--	--	--	--	10
443429096550401		74-06-06	--	--	--	--	--	--	--	--	--	20
443602097024901		74-07-03	--	--	--	--	--	--	--	--	--	20
443607097032001		74-07-02	--	--	--	--	--	--	--	--	--	20
443608097033701		74-07-02	--	--	--	--	--	--	--	--	--	20
443555097041501		74-08-08	--	--	--	--	--	--	--	--	--	1100
443536097051501		74-07-15	--	--	--	--	--	--	--	--	--	20
443509097045801		74-07-15	--	--	--	--	--	--	--	--	--	20
443450097024301		74-08-12	--	--	--	--	--	--	--	--	--	20
443434097024301		74-08-12	--	--	--	--	--	--	--	--	--	0
443430097024201		74-08-12	--	--	--	--	--	--	--	--	--	20
443609097130801		74-05-10	--	--	--	--	--	--	--	--	--	20
443537097130801		74-05-10	--	--	--	--	--	--	--	--	--	20
443305097184901		74-08-06	--	--	--	--	--	--	--	--	--	50
444018096575901		74-08-13	--	--	--	--	--	--	--	--	--	20
443806096571101		74-06-27	--	--	--	--	--	--	--	--	--	120
444226097113601		74-08-06	--	--	--	--	--	--	--	--	--	60
443820097211401		74-08-06	--	--	--	--	--	--	--	--	--	10
444313097233901		74-08-06	--	--	--	--	--	--	--	--	--	50
444315096562501		74-06-27	--	--	--	--	--	--	--	--	--	110
444620097171101		74-08-06	--	--	--	--	--	--	--	--	--	20
444548097230501		74-05-10	--	--	--	--	--	--	--	--	--	50
443148098443601		73-10-24	--	--	--	--	--	--	--	--	--	2100
443652098482301		73-10-24	--	--	--	--	--	--	--	--	--	200
444113098480501		73-10-24	--	--	--	--	--	--	--	--	--	260
444130098422001		73-10-24	--	--	--	--	--	--	--	--	--	70
444357098493001		73-10-24	--	--	--	--	--	--	--	--	--	6800
444217098553601		73-10-24	--	--	--	--	--	--	--	--	--	6300
444927098492501		73-10-24	--	--	--	--	--	--	--	--	--	190
442135099161501		73-10-26	--	--	--	--	--	--	--	--	--	1100
442634099140501		74-09-06	--	0	--	0	--	--	--	--	--	2000
444831099265801		73-10-26	--	0	--	0	--	--	--	--	--	290
443948099270601		73-10-30	--	3	--	1	--	--	--	--	--	30
435805101350000		74-05-23	--	2	--	0	--	--	--	--	--	500
435655100314500		74-05-23	--	0	--	0	--	--	--	--	--	180
434955101312000		74-05-23	--	0	--	0	--	--	--	--	--	60
440730100532500		74-06-04	--	0	--	1	--	--	--	--	--	20
434905100444500		74-05-23	--	0	--	0	--	--	--	--	--	790
434505100060500		74-06-04	--	0	--	1	--	--	--	--	--	1900
434205100293000		74-05-23	--	0	--	0	--	--	--	--	--	60
434402096364700		73-11-13	5	--	2	--	<4	--	<2	--	<4	--
433659096335400		73-11-13	<4	--	2	--	<9	--	<4	--	<9	--
433853096341700		73-11-13	<5	--	2	--	<9	--	<4	--	<9	--
433939096330400		73-11-13	<4	--	2	--	<8	--	<4	--	<8	--
434137096341500		73-11-13	<5	--	3	--	<10	--	<5	--	<10	--
434210096331600		73-11-13	<4	--	2	--	<8	--	<4	--	<8	--

MISCELLANEOUS ANALYSES OF GROUND WATER IN SOUTH DAKOTA

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CHEMICAL ANALYSES, OCTOBER 1973 TO SEPTEMBER 1974

STATION NUMBER	DATE OF SAMPLE	TOTAL IRON (FE) (UG/L) (01045)	TOTAL MERCURY (HG) (UG/L) (71900)	DIS-SOLVED LEAD (PB) (UG/L) (01049)	TOTAL LEAD (PB) (UG/L) (01051)	DIS-SOLVED LITHIUM (LI) (UG/L) (01130)	TOTAL LITHIUM (LI) (UG/L) (01132)	DIS-SOLVED MANGANESE (MN) (UG/L) (01056)	TOTAL MANGANESE (MN) (UG/L) (01055)	DIS-SOLVED MOLYBDENUM (MO) (UG/L) (01060)	TOTAL MOLYBDENUM (MO) (UG/L) (01062)
444532096503701	74-08-22	--	--	--	--	--	--	190	--	--	--
445058096313001	74-08-22	--	--	--	--	--	--	50	--	--	--
445142096394501	74-06-26	--	.0	4	--	70	--	800	--	8	--
445003096510301	74-06-28	--	--	--	--	--	--	10	--	--	--
444847096514901	74-06-26	--	--	--	--	--	--	3100	--	--	--
445728096365901	74-08-21	--	--	--	--	--	--	1600	--	--	--
431945099052000	74-06-05	--	.0	0	--	120	--	160	--	5	--
440428101391000	74-05-23	--	.0	1	--	30	--	0	--	15	--
442630101591500	74-05-22	--	.0	1	--	130	--	0	--	1	--
443437096540801	74-06-18	--	.0	0	--	10	--	0	--	7	--
443429096550401	74-06-06	--	--	--	--	--	--	0	--	--	--
443602097024901	74-07-03	--	--	--	--	--	--	1200	--	--	--
443607097032001	74-07-02	--	--	--	--	--	--	90	--	--	--
443608097033701	74-07-02	--	--	--	--	--	--	4600	--	--	--
443555097041501	74-08-08	--	--	--	--	--	--	650	--	--	--
443536097051501	74-07-15	--	--	--	--	--	--	20	--	--	--
443509097045801	74-07-15	--	--	--	--	--	--	280	--	--	--
443450097024301	74-08-12	--	--	--	--	--	--	1600	--	--	--
443434097024301	74-08-12	--	--	--	--	--	--	0	--	--	--
443430097024201	74-08-12	--	--	--	--	--	--	1300	--	--	--
443609097130801	74-05-10	--	--	--	--	--	--	1500	--	--	--
443537097130801	74-05-10	--	--	--	--	--	--	370	--	--	--
443305097184901	74-08-06	--	--	--	--	--	--	320	--	--	--
444018096575901	74-08-13	--	--	--	--	--	--	0	--	--	--
443806096571101	74-06-27	--	--	--	--	--	--	770	--	--	--
444226097113601	74-08-06	--	--	--	--	--	--	100	--	--	--
443820097211401	74-08-06	--	--	--	--	--	--	460	--	--	--
444313097233901	74-08-06	--	--	--	--	--	--	230	--	--	--
444315096562501	74-06-27	--	--	--	--	--	--	1100	--	--	--
444620097171101	74-08-06	--	--	--	--	--	--	210	--	--	--
444548097230501	74-05-10	--	--	--	--	--	--	90	--	--	--
443148098443601	73-10-24	--	--	--	--	--	--	--	--	--	--
443652098482301	73-10-24	--	--	--	--	--	--	--	--	--	--
444113098480501	73-10-24	--	--	--	--	--	--	--	--	--	--
444130098422001	73-10-24	--	--	--	--	--	--	--	--	--	--
444357098493001	73-10-24	--	--	--	--	--	--	--	--	--	--
444217098553601	73-10-24	--	--	--	--	--	--	--	--	--	--
444927098492501	73-10-24	--	--	--	--	--	--	--	--	--	--
442135099161501	73-10-26	--	--	--	--	--	--	--	--	--	--
442634099140501	74-09-06	--	.0	1	--	130	--	1900	--	8	--
444831099265801	73-10-26	--	.0	0	--	70	--	720	--	23	--
443948099270601	73-10-30	--	.0	0	--	140	--	630	--	32	--
435805101350000	74-05-23	--	.0	2	--	570	--	60	--	6	--
435655100314500	74-05-23	--	.0	0	--	310	--	20	--	4	--
434955101312000	74-05-23	--	.0	1	--	300	--	150	--	3	--
440730100532500	74-06-04	--	.0	1	--	190	--	0	--	0	--
434905100444500	74-05-23	--	.0	0	--	220	--	170	--	1	--
434505100060500	74-06-04	--	.0	1	--	160	--	50	--	4	--
434205100293000	74-05-23	--	.0	0	--	170	--	0	--	0	--
434402096364700	73-11-13	470	--	--	<4	--	4	--	60	--	5
433659096335400	73-11-13	650	.0	--	<9	--	18	--	150	--	<4
433853096341700	73-11-13	380	.0	--	<9	--	18	--	230	--	<4
433939096330400	73-11-13	330	.0	--	<8	--	20	--	110	--	<4
434137096341500	73-11-13	970	.0	--	<10	--	14	--	400	--	<5
434210096331600	73-11-13	150	.0	--	<8	--	17	--	90	--	<4

MISCELLANEOUS ANALYSES OF GROUND WATER IN SOUTH DAKOTA

CHEMICAL ANALYSES, OCTOBER 1973 TO SEPTEMBER 1974

STATION	NUMBER	DATE OF SAMPLE	DIS- SOLVED NICKEL (NI) (UG/L) (01065)	TOTAL NICKEL (NI) (UG/L) (01067)	DIS- SOLVED SELE- NIUM (SE) (UG/L) (01145)	DIS- SOLVED SILVER (AG) (UG/L) (01075)	TOTAL SILVER (AG) (UG/L) (01077)	DIS- SOLVED STRON- TIUM (SR) (UG/L) (01080)	TOTAL STRON- TIUM (SR) (UG/L) (01082)	DIS- SOLVED TIN (SN) (UG/L) (01100)	TOTAL TIN (SN) (UG/L) (01102)	DIS- SOLVED TI- TANIUM (TI) (UG/L) (01150)
444532096503701		74-08-22	--	--	--	--	--	--	--	--	--	--
445058096313001		74-08-22	--	--	--	--	--	--	--	--	--	--
445142096394501		74-06-26	1	--	1	0	--	940	--	--	--	--
445003096510301		74-06-28	--	--	--	--	--	--	--	--	--	--
444847096514901		74-06-26	--	--	--	--	--	--	--	--	--	--
445728096365901		74-08-21	--	--	--	--	--	--	--	--	--	--
431945099052000		74-06-05	0	--	0	0	--	6100	--	--	--	--
440428101391000		74-05-23	0	--	1	0	--	5000	--	--	--	--
442630101591500		74-05-22	0	--	1	0	--	190	--	--	--	--
443437096540801		74-06-18	4	--	2	0	--	230	--	--	--	--
443429096550401		74-06-06	--	--	--	--	--	--	--	--	--	--
443602097024901		74-07-03	--	--	--	--	--	--	--	--	--	--
443607097032001		74-07-02	--	--	--	--	--	--	--	--	--	--
443608097033701		74-07-02	--	--	--	--	--	--	--	--	--	--
443555097041501		74-08-08	--	--	--	--	--	--	--	--	--	--
443536097051501		74-07-15	--	--	--	--	--	--	--	--	--	--
443509097045801		74-07-15	--	--	--	--	--	--	--	--	--	--
443450097024301		74-08-12	--	--	--	--	--	--	--	--	--	--
443434097024301		74-08-12	--	--	--	--	--	--	--	--	--	--
443430097024201		74-08-12	--	--	--	--	--	--	--	--	--	--
443609097130801		74-05-10	--	--	--	--	--	--	--	--	--	--
443537097130801		74-05-10	--	--	--	--	--	--	--	--	--	--
443305097184901		74-08-06	--	--	--	--	--	--	--	--	--	--
444018096575901		74-08-13	--	--	--	--	--	--	--	--	--	--
443806096571101		74-06-27	--	--	--	--	--	--	--	--	--	--
444226097113601		74-08-06	--	--	--	--	--	--	--	--	--	--
443820097211401		74-08-06	--	--	--	--	--	--	--	--	--	--
444313097233901		74-08-06	--	--	--	--	--	--	--	--	--	--
444315096562501		74-06-27	--	--	--	--	--	--	--	--	--	--
444620097171101		74-08-06	--	--	--	--	--	--	--	--	--	--
444548097230501		74-05-10	--	--	--	--	--	--	--	--	--	--
443148098443601		73-10-24	--	--	--	--	--	--	--	--	--	--
443652098482301		73-10-24	--	--	--	--	--	--	--	--	--	--
444113098480501		73-10-24	--	--	--	--	--	--	--	--	--	--
444130098422001		73-10-24	--	--	--	--	--	--	--	--	--	--
444357098493001		73-10-24	--	--	--	--	--	--	--	--	--	--
444217098553601		73-10-24	--	--	--	--	--	--	--	--	--	--
444927098492501		73-10-24	--	--	--	--	--	--	--	--	--	--
442135099161501		73-10-26	--	--	--	--	--	--	--	--	--	--
442634099140501		74-09-06	1	--	0	0	--	1100	--	--	--	--
444831099265801		73-10-26	3	--	6	0	--	560	--	--	--	--
443948099270601		73-10-30	11	--	8	0	--	550	--	--	--	--
435805101350000		74-05-23	1	--	0	0	--	130	--	--	--	--
435655100314500		74-05-23	1	--	0	0	--	370	--	--	--	--
434955101312000		74-05-23	1	--	0	0	--	1700	--	--	--	--
440730100532500		74-06-04	6	--	0	0	--	230	--	--	--	--
434905100444500		74-05-23	0	--	1	0	--	6700	--	--	--	--
434505100060500		74-06-04	7	--	0	0	--	4800	--	--	--	--
434205100293000		74-05-23	0	--	0	0	--	530	--	--	--	--
434402096364700		73-11-13	--	5	--	--	0	--	150	--	<4	--
433659096335400		73-11-13	--	<9	--	--	<2	--	310	--	<9	--
433853096341700		73-11-13	--	<9	--	--	<2	--	350	--	<9	--
433939096330400		73-11-13	--	<8	--	--	<2	--	300	--	<8	--
434137096341500		73-11-13	--	<10	--	--	<2	--	270	--	<10	--
434210096331600		73-11-13	--	<8	--	--	<1	--	300	--	<8	--

MISCELLANEOUS ANALYSES OF GROUND WATER IN SOUTH DAKOTA

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CHEMICAL ANALYSES, OCTOBER 1973 TO SEPTEMBER 1974

STATION NUMBER	DATE OF SAMPLE	TOTAL TITANIUM (TI) (UG/L) (01152)	DIS-SOLVED VANADIUM (V) (UG/L) (01085)	TOTAL VANADIUM (V) (UG/L) (01087)	DIS-SOLVED ZINC (ZN) (UG/L) (01090)	TOTAL ZINC (ZN) (UG/L) (01092)	DIS-SOLVED ZIRCONIUM (ZR) (UG/L) (01160)	TOTAL ZIRCONIUM (ZR) (UG/L) (01162)
444532096503701	74-08-22	--	--	--	--	--	--	--
445058096313001	74-08-22	--	--	--	--	--	--	--
445142096394501	74-06-26	--	2.8	--	10	--	--	--
445003096510301	74-06-28	--	--	--	--	--	--	--
444847096514901	74-06-26	--	--	--	--	--	--	--
445728096365901	74-08-21	--	--	--	--	--	--	--
431945099052000	74-06-05	--	1.1	--	30	--	--	--
440428101391000	74-05-23	--	.0	--	10	--	--	--
442630101591500	74-05-22	--	6.6	--	0	--	--	--
443437096540801	74-06-18	--	.0	--	10	--	--	--
443429096550401	74-06-06	--	--	--	--	--	--	--
443602097024901	74-07-03	--	--	--	--	--	--	--
443607097032001	74-07-02	--	--	--	--	--	--	--
443608097033701	74-07-02	--	--	--	--	--	--	--
443555097041501	74-08-08	--	--	--	--	--	--	--
443536097051501	74-07-15	--	--	--	--	--	--	--
443509097045801	74-07-15	--	--	--	--	--	--	--
443450097024301	74-08-12	--	--	--	--	--	--	--
443434097024301	74-08-12	--	--	--	--	--	--	--
443430097024201	74-08-12	--	--	--	--	--	--	--
443609097130801	74-05-10	--	--	--	--	--	--	--
443537097130801	74-05-10	--	--	--	--	--	--	--
443305097184901	74-08-06	--	--	--	--	--	--	--
444018096575901	74-08-13	--	--	--	--	--	--	--
443806096571101	74-06-27	--	--	--	--	--	--	--
444226097113601	74-08-06	--	--	--	--	--	--	--
443820097211401	74-08-06	--	--	--	--	--	--	--
444313097233901	74-08-06	--	--	--	--	--	--	--
444315096562501	74-06-27	--	--	--	--	--	--	--
444620097171101	74-08-06	--	--	--	--	--	--	--
444548097230501	74-05-10	--	--	--	--	--	--	--
443148098443601	73-10-24	--	--	--	--	--	--	--
443652098482301	73-10-24	--	--	--	--	--	--	--
444113098480501	73-10-24	--	--	--	--	--	--	--
444130098422001	73-10-24	--	--	--	--	--	--	--
444357098493001	73-10-24	--	--	--	--	--	--	--
444217098553601	73-10-24	--	--	--	--	--	--	--
444927098492501	73-10-24	--	--	--	--	--	--	--
442135099161501	73-10-26	--	--	--	--	--	--	--
442634099140501	74-09-06	--	.0	--	20	--	--	--
444831099265801	73-10-26	--	1.7	--	30	--	--	--
443948099270601	73-10-30	--	2.0	--	40	--	--	--
435805101350000	74-05-23	--	3.0	--	10	--	--	--
435655100314500	74-05-23	--	.8	--	0	--	--	--
434955101312000	74-05-23	--	.4	--	20	--	--	--
440730100532500	74-06-04	--	4.0	--	20	--	--	--
434905100444500	74-05-23	--	5.2	--	20	--	--	--
434505100060500	74-06-04	--	2.3	--	30	--	--	--
434205100293000	74-05-23	--	15	--	10	--	--	--
434402096364700	73-11-13	22	--	2.0	--	17	--	<4
433659096335400	73-11-13	43	--	4.0	--	<9	--	<9
433853096341700	73-11-13	<5	--	<5.0	--	<8	--	<9
433939096330400	73-11-13	20	--	44.0	--	<8	--	<10
434137096341500	73-11-13	30	--	5.0	--	<10	--	<10
434210096331600	73-11-13	<4	--	<4.0	--	<8	--	<8

MISCELLANEOUS ANALYSES OF GROUND WATER IN SOUTH DAKOTA

CHEMICAL ANALYSES, OCTOBER 1973 TO SEPTEMBER 1974

STATION NUMBER	LOCAL IDENTIFIER	COUNTY	SITE	DATE OF SAMPLE	TIME	DIS-SOLVED ALUMINUM	TOTAL ALUMINUM	DIS-SOLVED ARSENIC	DIS-SOLVED BARIUM
						(AL) (UG/L) (01106)	(AL) (UG/L) (01105)	(AS) (UG/L) (01000)	(BA) (UG/L) (01005)
434022096344300	WEST PIPESTONE CREEK, SW	099	SW	73-11-13	1430	--	200	--	--
434508096372700	103N48W 5CACA	099	GW	74-03-12	1501	45	--	--	25
434414096380300	103N48W 7DAC	099	GW	73-11-14	0800	--	25	--	--
		099	GW	74-03-12	1346	20	--	--	290
434432096364200	103N48W 8ADA	099	GW	73-11-14	1100	--	6	--	--
		099	GW	74-03-13	0916	20	--	--	120
434435096374802	103N48W 8BCCB2	099	GW	74-03-12	1421	70	--	--	100
434357096364200	103N48W 8DDDD	099	GW	73-11-14	0945	--	3	--	--
		099	GW	74-03-13	1011	15	--	--	40
434429096361800	103N48W 9BDCB	099	GW	73-11-14	1135	--	5	--	--
		099	GW	74-03-12	1546	25	--	--	150
434400096362200	103N48W 9CCDA	099	GW	73-11-14	1015	--	8	--	--
		099	GW	74-03-13	1316	50	--	--	250
434332096371500	103N48W17ACCC	099	GW	74-03-13	1046	40	--	--	100
434339096381100	103N48W18ACA	099	GW	74-03-13	1131	60	--	<90	<11
435950102142000	116E31CDA	103	GW	74-05-23	0830	10	--	0	0
443731098203000	115N63W 10DDD	115	GW	73-10-18	1030	--	--	--	--
		115	GW	74-05-13	1510	--	--	--	--
445344098221600	116N63W 2BAAA	115	GW	73-10-23	0945	--	--	--	--
		115	GW	74-05-16	1150	--	--	--	--
445000098225500	116N63W27AADA	115	GW	73-10-18	1045	--	--	--	--
		115	GW	74-05-13	1550	--	--	--	--
445535098304500	117N64W26BBB	115	GW	73-10-23	1055	--	--	--	--
		115	GW	74-05-16	1300	--	--	--	--
445900098135000	118N61W31CCCC	115	GW	73-10-18	1300	--	--	--	--
		115	GW	74-05-17	1225	--	--	--	--
450315098194502	118N62W 8BBB82	115	GW	73-10-18	1335	--	--	--	--
		115	GW	74-05-17	1040	--	--	--	--
450920098122500	119N61W 6AAAA	115	GW	73-10-18	1410	--	--	--	--
		115	GW	74-05-17	1130	--	--	--	--
450609098342700	119N64W20CCCC	115	GW	73-10-19	1510	--	--	--	--
		115	GW	74-05-17	0935	--	--	--	--
451200098240002	120N63W22ABB2	115	GW	73-10-19	1355	--	--	--	--
		115	GW	74-05-16	1535	--	--	--	--
451023098381000	120N65W35BBB	115	GW	73-10-19	1440	--	--	--	--
		115	GW	74-05-15	1350	--	--	--	--
443525101003000	7N25E48CB	117	GW	74-06-03	1445	10	--	0	700
433310099491500	101N75W168BBA	123	GW	74-06-05	0930	40	--	6	100
433620099413500	102N74W28CDA	123	GW	74-06-05	1100	40	--	2	--
433920100044500	102N77W8CB8B	123	GW	74-06-04	1615	0	--	2	200

MISCELLANEOUS ANALYSES OF GROUND WATER IN SOUTH DAKOTA

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CHEMICAL ANALYSES, OCTOBER 1973 TO SEPTEMBER 1974

STATION	NUMBER	DATE OF SAMPLE	TOTAL BARIUM (BA) (UG/L) (01007)	DIS- SOLVED BERYL- LIUM (BE) (UG/L) (01010)	TOTAL BERYL- LIUM (BE) (UG/L) (01012)	DIS- SOLVED BISMUTH (BI) (UG/L) (01015)	TOTAL BISMUTH (BI) (UG/L) (01017)	DIS- SOLVED BORON (B) (UG/L) (01020)	TOTAL BORON (B) (UG/L) (01022)	DIS- SOLVED CAD- MIUM (CD) (UG/L) (01025)	TOTAL CAD- MIUM (CD) (UG/L) (01027)	DIS- SOLVED CHRO- MIUM (CR) (UG/L) (01030)
434022096344300		73-11-13	160	--	<2	--	<9	50	45	--	<4	--
434508096372700		74-03-12	--	<3	--	<13	--	290	--	<7	--	<7
434414096380300		73-11-14	300	--	<3	--	<13	110	65	--	<6	--
		74-03-12	--	<3	--	<12	--	30	--	<6	--	<6
434432096364200		73-11-14	130	--	<5	--	<22	1000	80	--	<10	--
		74-03-13	--	<4	--	<17	--	60	--	<8	--	<8
434435096374802		74-03-12	--	<4	--	<20	--	350	--	<9	--	<9
434357096364200		73-11-14	37	--	<3	--	<12	210	160	--	<6	--
		74-03-13	--	<3	--	<11	--	190	--	<6	--	<6
434429096361800		73-11-14	140	--	<3	--	<11	100	100	--	<5	--
		74-03-12	--	<3	--	<10	--	100	--	<5	--	<5
434400096362200		73-11-14	250	--	<5	--	<25	980	50	--	<11	--
		74-03-13	--	<6	--	<25	--	50	--	<11	--	<11
434332096371500		74-03-13	--	<3	--	<11	--	330	--	<6	--	<6
434339096381100		74-03-13	--	<1	--	<2	--	750	--	<11	--	<1
435950102142000		74-05-23	--	--	--	--	--	160	--	0	--	0
443731098203000		73-10-18	--	--	--	--	--	170	--	--	--	--
		74-05-13	--	--	--	--	--	630	--	--	--	--
445344098221600		73-10-23	--	--	--	--	--	220	--	--	--	--
		74-05-16	--	--	--	--	--	240	--	--	--	--
445000098225500		73-10-18	--	--	--	--	--	290	--	--	--	--
		74-05-13	--	--	--	--	--	250	--	--	--	--
445535098304500		73-10-23	--	--	--	--	--	930	--	--	--	--
		74-05-16	--	--	--	--	--	830	--	--	--	--
445900098135000		73-10-18	--	--	--	--	--	550	--	--	--	--
		74-05-17	--	--	--	--	--	500	--	--	--	--
450315098194502		73-10-18	--	--	--	--	--	1500	--	--	--	--
		74-05-17	--	--	--	--	--	1400	--	--	--	--
450920098122500		73-10-18	--	--	--	--	--	1100	--	--	--	--
		74-05-17	--	--	--	--	--	1100	--	--	--	--
450609098342700		73-10-19	--	--	--	--	--	860	--	--	--	--
		74-05-17	--	--	--	--	--	820	--	--	--	--
451200098240002		73-10-19	--	--	--	--	--	590	--	--	--	--
		74-05-16	--	--	--	--	--	590	--	--	--	--
451023098381000		73-10-19	--	--	--	--	--	220	--	--	--	--
		74-05-15	--	--	--	--	--	170	--	--	--	--
443525101003000		74-06-03	--	--	--	--	--	7600	--	0	--	0
433310099491500		74-06-05	--	--	--	--	--	160	--	1	--	0
433620099413500		74-06-05	--	--	--	--	--	250	--	--	--	--
433920100044500		74-06-04	--	--	--	--	--	170	--	0	--	0

MISCELLANEOUS ANALYSES OF GROUND WATER IN SOUTH DAKOTA

CHEMICAL ANALYSES, OCTOBER 1973 TO SEPTEMBER 1974

STATION NUMBER	DATE OF SAMPLE	TOTAL CHROMIUM (CR) (UG/L) (01034)	DIS-SOLVED COPPER (CU) (UG/L) (01040)	TOTAL COPPER (CU) (UG/L) (01042)	DIS-SOLVED COBALT (CO) (UG/L) (01035)	TOTAL COBALT (CO) (UG/L) (01037)	DIS-SOLVED GALLIUM (GA) (UG/L) (01120)	TOTAL GALLIUM (GA) (UG/L) (01122)	DIS-SOLVED GERMANIUM (GE) (UG/L) (01125)	TOTAL GERMANIUM (GE) (UG/L) (01127)	DIS-SOLVED IRON (FE) (UG/L) (01046)
434022096344300	73-11-13	<4	--	2	--	<9	--	<4	--	<9	--
434508096372700	74-03-12	--	<3	--	<7	--	<3	--	<10	--	20
434414096380300	73-11-14	<6	--	6	--	<13	--	<6	--	<13	--
	74-03-12	--	3	--	<6	--	<3	--	<9	--	20
434432096364200	73-11-14	<10	--	7	--	<22	--	<10	--	<22	--
	74-03-13	--	<4	--	<8	--	<4	--	<12	--	70
434435096374802	74-03-12	--	<4	--	<9	--	<4	--	<12	--	100
434357096364200	73-11-14	<6	--	3	--	<12	--	<5	--	<12	--
	74-03-13	--	10	--	<6	--	<3	--	<8	--	58
434429096361800	73-11-14	<5	--	10	--	<11	--	<5	--	<11	--
	74-03-12	--	10	--	<5	--	<3	--	<7	--	110
434400096362200	73-11-14	<11	--	10	--	<25	--	<10	--	<25	--
	74-03-13	--	10	--	<11	--	<6	--	<16	--	40
434332096371500	74-03-13	--	<3	--	<6	--	<3	--	<8	--	500
434339096381100	74-03-13	--	<6	--	<5	--	<6	--	<17	--	4300
435950102142000	74-05-23	--	0	--	0	--	--	--	--	--	80
443731098203000	73-10-18	--	--	--	--	--	--	--	--	--	40
	74-05-13	--	--	--	--	--	--	--	--	--	210
445344098221600	73-10-23	--	--	--	--	--	--	--	--	--	10
	74-05-16	--	--	--	--	--	--	--	--	--	10
445000098225500	73-10-18	--	--	--	--	--	--	--	--	--	4600
	74-05-13	--	--	--	--	--	--	--	--	--	2200
445535098304500	73-10-23	--	--	--	--	--	--	--	--	--	10
	74-05-16	--	--	--	--	--	--	--	--	--	30
445900098135000	73-10-18	--	--	--	--	--	--	--	--	--	150
	74-05-17	--	--	--	--	--	--	--	--	--	2300
450315098194502	73-10-18	--	--	--	--	--	--	--	--	--	23000
	74-05-17	--	--	--	--	--	--	--	--	--	19000
450920098122500	73-10-18	--	--	--	--	--	--	--	--	--	50
	74-05-17	--	--	--	--	--	--	--	--	--	1700
450609098342700	73-10-19	--	--	--	--	--	--	--	--	--	20
	74-05-17	--	--	--	--	--	--	--	--	--	150
451200098240002	73-10-19	--	--	--	--	--	--	--	--	--	50
	74-05-16	--	--	--	--	--	--	--	--	--	170
451023098381000	73-10-19	--	--	--	--	--	--	--	--	--	20
	74-05-15	--	--	--	--	--	--	--	--	--	170
443525101003000	74-06-03	--	0	--	1	--	--	--	--	--	30
433310099491500	74-06-05	--	0	--	1	--	--	--	--	--	1100
433620099413500	74-06-05	--	--	--	--	--	--	--	--	--	3100
433920100044500	74-06-04	--	0	--	2	--	--	--	--	--	1900

MISCELLANEOUS ANALYSES OF GROUND WATER IN SOUTH DAKOTA

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CHEMICAL ANALYSES, OCTOBER 1973 TO SEPTEMBER 1974

STATION	NUMBER	DATE OF SAMPLE	TOTAL IRON (FE) (01045)	TOTAL MERCURY (HG) (71900)	DIS- SOLVED LEAD (PB) (01049)	TOTAL LEAD (PB) (01051)	DIS- SOLVED LITHIUM (LI) (01130)	TOTAL LITHIUM (LI) (01132)	DIS- SOLVED MAN- GANESE (MN) (01056)	TOTAL MAN- GANESE (MN) (01055)	DIS- SOLVED MOLYB- DENUM (MO) (01060)	TOTAL MOLYB- DENUM (MO) (01062)
434022096344300		73-11-13	500	.0	--	<9	--	16	--	270	--	<4
434508096372700		74-03-12	--	--	<7	--	75	--	20	--	5	--
434414096380300		73-11-14	50	.0	--	<13	--	40	--	7	--	<6
		74-03-12	--	--	<6	--	40	--	<6	--	<3	--
434432096364200		73-11-14	15	.0	--	<22	--	50	--	<15	--	<10
		74-03-13	--	--	<8	--	30	--	<8	--	<4	--
434435096374802		74-03-12	--	--	<9	--	100	--	420	--	6	--
434357096364200		73-11-14	65	.0	--	<12	--	70	--	50	--	4
		74-03-13	--	--	<6	--	75	--	40	--	4	--
434429096361800		73-11-14	80	.0	--	<11	--	50	--	8	--	5
		74-03-12	--	--	<5	--	45	--	<5	--	3	--
434400096362200		73-11-14	<10	.0	--	<25	--	30	--	<17	--	<10
		74-03-13	--	--	<11	--	23	--	<11	--	<6	--
434332096371500		74-03-13	--	--	<6	--	75	--	300	--	15	--
434339096381100		74-03-13	--	--	<5	--	170	--	1600	--	<2	--
435950102142000		74-05-23	--	.0	1	--	80	--	30	--	7	--
443731098203000		73-10-18	--	--	--	--	--	--	--	--	--	--
		74-05-13	--	--	--	--	--	--	--	--	--	--
445344098221600		73-10-23	--	--	--	--	--	--	--	--	--	--
		74-05-16	--	--	--	--	--	--	--	--	--	--
445000098225500		73-10-18	--	--	--	--	--	--	--	--	--	--
		74-05-13	--	--	--	--	--	--	--	--	--	--
445535098304500		73-10-23	--	--	--	--	--	--	--	--	--	--
		74-05-16	--	--	--	--	--	--	--	--	--	--
445900098135000		73-10-18	--	--	--	--	--	--	--	--	--	--
		74-05-17	--	--	--	--	--	--	--	--	--	--
450315098194502		73-10-18	--	--	--	--	--	--	--	--	--	--
		74-05-17	--	--	--	--	--	--	--	--	--	--
450920098122500		73-10-18	--	--	--	--	--	--	--	--	--	--
		74-05-17	--	--	--	--	--	--	--	--	--	--
450609098342700		73-10-19	--	--	--	--	--	--	--	--	--	--
		74-05-17	--	--	--	--	--	--	--	--	--	--
451200098240002		73-10-19	--	--	--	--	--	--	--	--	--	--
		74-05-16	--	--	--	--	--	--	--	--	--	--
451023098381000		73-10-19	--	--	--	--	--	--	--	--	--	--
		74-05-15	--	--	--	--	--	--	--	--	--	--
443525101003000		74-06-03	--	.0	0	--	420	--	20	--	1	--
433310099491500		74-06-05	--	.0	12	--	90	--	70	--	5	--
433620099413500		74-06-05	--	.0	--	--	120	--	--	--	5	--
433920100044500		74-06-04	--	.0	4	--	120	--	110	--	6	--

MISCELLANEOUS ANALYSES OF GROUND WATER IN SOUTH DAKOTA

CHEMICAL ANALYSES, OCTOBER 1973 TO SEPTEMBER 1974

STATION	NUMBER	DATE OF SAMPLE	DIS- SOLVED NICKEL (NI) (UG/L) (01065)	TOTAL NICKEL (NI) (UG/L) (01067)	DIS- SOLVED SELE- NIUM (SE) (UG/L) (01145)	DIS- SOLVED SILVER (AG) (UG/L) (01075)	TOTAL SILVER (AG) (UG/L) (01077)	DIS- SOLVED STRON- TIUM (SR) (UG/L) (01080)	TOTAL STRON- TIUM (SR) (UG/L) (01082)	DIS- SOLVED TIN (SN) (UG/L) (01100)	TOTAL TIN (SN) (UG/L) (01102)	DIS- SOLVED TI- TANIUM (TI) (UG/L) (01150)
434022096344300	73-11-13		--	<9	--	--	<2	--	300	--	<9	--
434508096372700	74-03-12		<7	--	--	<2	--	700	--	<13	--	<7
434414096380300	73-11-14		--	<13	--	--	<2	--	470	--	<13	--
74-03-12			<6	--	--	<2	--	500	--	<12	--	<6
434432096364200	73-11-14		--	<22	--	--	<4	--	700	--	<22	--
74-03-13			<8	--	--	<2	--	580	--	<17	--	<8
434435096374802	74-03-12		<9	--	--	<2	--	1000	--	<20	--	<9
434357096364200	73-11-14		--	<12	--	--	<2	--	540	--	<12	--
74-03-13			<6	--	--	<2	--	500	--	<11	--	<6
434429096361800	73-11-14		--	<11	--	--	<2	--	500	--	<11	--
74-03-12			<5	--	--	<1	--	400	--	<10	--	<5
434400096362200	73-11-14		--	<25	--	--	<4	--	750	--	<25	--
74-03-13			<11	--	--	<3	--	700	--	<25	--	<11
434332096371500	74-03-13		<6	--	--	<2	--	700	--	<11	--	<6
434339096381100	74-03-13		8	--	--	0	--	2000	--	<25	--	0
435950102142000	74-05-23		1	--	1	0	--	70	--	--	--	--
443731098203000	73-10-18		--	--	--	--	--	--	--	--	--	--
74-05-13			--	--	--	--	--	--	--	--	--	--
445344098221600	73-10-23		--	--	--	--	--	--	--	--	--	--
74-05-16			--	--	--	--	--	--	--	--	--	--
445000098225500	73-10-18		--	--	--	--	--	--	--	--	--	--
74-05-13			--	--	--	--	--	--	--	--	--	--
445535098304500	73-10-23		--	--	--	--	--	--	--	--	--	--
74-05-16			--	--	--	--	--	--	--	--	--	--
445900098135000	73-10-18		--	--	--	--	--	--	--	--	--	--
74-05-17			--	--	--	--	--	--	--	--	--	--
450315098194502	73-10-18		--	--	--	--	--	--	--	--	--	--
74-05-17			--	--	--	--	--	--	--	--	--	--
450920098122500	73-10-18		--	--	--	--	--	--	--	--	--	--
74-05-17			--	--	--	--	--	--	--	--	--	--
450609098342700	73-10-19		--	--	--	--	--	--	--	--	--	--
74-05-17			--	--	--	--	--	--	--	--	--	--
451200098240002	73-10-19		--	--	--	--	--	--	--	--	--	--
74-05-16			--	--	--	--	--	--	--	--	--	--
451023098381000	73-10-19		--	--	--	--	--	--	--	--	--	--
74-05-15			--	--	--	--	--	--	--	--	--	--
443525101003000	74-06-03		11	--	3	0	--	70	--	--	--	--
433310099491500	74-06-05		7	--	0	0	--	6700	--	--	--	--
433620099413500	74-06-05		--	--	0	--	--	--	--	--	--	--
433920100044500	74-06-04		9	--	0	0	--	7500	--	--	--	--

MISCELLANEOUS ANALYSES OF GROUND WATER IN SOUTH DAKOTA

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CHEMICAL ANALYSES, OCTOBER 1973 TO SEPTEMBER 1974

STATION NUMBER	DATE OF SAMPLE	TOTAL TI- TANIUM (TI) (UG/L) (01152)	DIS- SOLVED VANA- DIUM (V) (UG/L) (01085)	TOTAL VANA- DIUM (V) (UG/L) (01087)	DIS- SOLVED ZINC (ZN) (UG/L) (01090)	TOTAL ZINC (ZN) (UG/L) (01092)	DIS- SOLVED ZIR- CONIUM (ZR) (UG/L) (01160)	TOTAL ZIR- CONIUM (ZR) (UG/L) (01162)
434022096344300	73-11-13	11	--	<4.0	--	<8	--	<9
434508096372700	74-03-12	--	<7.0	--	580	--	<13	--
434414096380300	73-11-14	<6	--	<6.0	--	360	--	<13
	74-03-12	--	<6.0	--	1000	--	<12	--
434432096364200	73-11-14	<10	--	<10	--	360	--	<22
	74-03-13	--	8.0	--	1200	--	<17	--
434435096374802	74-03-12	--	<9.0	--	1600	--	<20	--
434357096364200	73-11-14	<6	--	<6.0	--	5000	--	<12
	74-03-13	--	<6.0	--	3000	--	<11	--
434429096361800	73-11-14	<5	--	<5.0	--	520	--	<11
	74-03-12	--	<5.0	--	270	--	<10	--
434400096362200	73-11-14	<11	--	<11	--	80	--	<25
	74-03-13	--	<11	--	210	--	<25	--
434332096371500	74-03-13	--	<6.0	--	230	--	<11	--
434339096381100	74-03-13	--	<11	--	140	--	<3	--
435950102142000	74-05-23	--	.0	--	0	--	--	--
443731098203000	73-10-18	--	--	--	--	--	--	--
	74-05-13	--	--	--	--	--	--	--
445344098221600	73-10-23	--	--	--	--	--	--	--
	74-05-16	--	--	--	--	--	--	--
445000098225500	73-10-18	--	--	--	--	--	--	--
	74-05-13	--	--	--	--	--	--	--
445535098304500	73-10-23	--	--	--	--	--	--	--
	74-05-16	--	--	--	--	--	--	--
445900098135000	73-10-18	--	--	--	--	--	--	--
	74-05-17	--	--	--	--	--	--	--
450315098194502	73-10-18	--	--	--	--	--	--	--
	74-05-17	--	--	--	--	--	--	--
450920098122500	73-10-18	--	--	--	--	--	--	--
	74-05-17	--	--	--	--	--	--	--
450609098342700	73-10-19	--	--	--	--	--	--	--
	74-05-17	--	--	--	--	--	--	--
451200098240002	73-10-19	--	--	--	--	--	--	--
	74-05-16	--	--	--	--	--	--	--
451023098381000	73-10-19	--	--	--	--	--	--	--
	74-05-15	--	--	--	--	--	--	--
443525101003000	74-06-03	--	60	--	50	--	--	--
433310099491500	74-06-05	--	2.5	--	20	--	--	--
433620099413500	74-06-05	--	3.9	--	10	--	--	--
433920100044500	74-06-04	--	6.9	--	30	--	--	--

South Dakota 3-digit Numeric County Code

013 Brown
019 Butte
023 Charles Mix
025 Clark
039 Deuel

053 Gregory
055 Haakon
057 Hamlin
059 Hand
069 Hyde

071 Jackson
075 Jones
085 Lyman
095 Mellette
099 Minnehaha

103 Pennington
115 Spink
117 Stanley
123 Tripp

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U. S. DEPARTMENT OF THE INTERIOR
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