

Water Resources Data for Iowa

Water Year 1976



U.S. GEOLOGICAL SURVEY WATER-DATA REPORT IA-76-1

**Prepared in cooperation with the Iowa Geological Survey
and with other State and Federal agencies**

CALENDAR FOR WATER YEAR 1976

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**Prepared in cooperation with the Iowa Geological Survey
and with other State and Federal agencies**

UNITED STATES DEPARTMENT OF THE INTERIOR

CECIL D. ANDRUS, Secretary

GEOLOGICAL SURVEY

V. E. McKelvey, Director

For information on the water program in Iowa write to
District Chief, Water Resources Division
U.S. Geological Survey
P.O. Box 1230
Iowa City, Iowa 52240

Preface

This report was prepared by personnel of the Iowa district of the Water Resources Division of the U.S. Geological Survey under the supervision of S. W. Wiitala, District Chief, and done in cooperation with the State of Iowa and with other agencies.

This report is one of a series issued by Iowa. General direction for the series is by J. S. Cragwall, Jr., Chief Hydrologist, U.S. Geological Survey, and G. W. Whetstone, Assistant Chief Hydrologist for Scientific Publications and Data Management.

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GAGING STATIONS, IN DOWNSTREAM ORDER,
FOR WHICH RECORDS ARE PUBLISHED

VII

[Letter after station name designates type of data:
(d) discharge, (c) chemical, (b) biological,
(m) microbiological, (t) water temperature, (s) sediment]

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WATER RESOURCES DATA FOR IOWA, 1976

INTRODUCTION

Water resources data for the 1975 water year for Iowa consist of records of stage, discharge, and water quality of streams; stage, contents, and water quality of lakes and reservoirs; and water-levels of wells. This report contains discharge records for 112 gaging stations; stage or contents for 8 lakes and reservoirs; water quality for 41 gaging stations, of which 24 have periodic or miscellaneous sampling frequencies, 302 partial-record flow stations and water levels for 43 observation wells. Also included are data for 128 crest-stage partial-record stations and 321 low-flow partial-record stations. Additional water data were collected at various sites, not part of the systematic data collection program, and are published as miscellaneous measurements. These data represent that part of the National Water Data System operated by the U.S. Geological Survey and cooperating State and Federal agencies in Iowa.

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

For water years 1961 through 1974, streamflow data were released by the Geological Survey in annual reports on a State-boundary basis. Water-quality records for water years 1964 through 1974 were similarly released either in separate reports or in conjunction with streamflow records. Beginning with the 1975 water year, water data for streamflow, water quality, and ground water are published as an official Survey report on a State-boundary basis. These official Survey reports carry an identification number consisting of the two-letter State abbreviation, the last two digits of the water year, and the volume number. For example, this report is identified as "U.S. Geological Survey Water-Data Report IA-76-1." Water-Data reports are for sale by the National Technical Information Service, U.S. Department of Commerce, Springfield, Virginia, 22161.

COOPERATION

The U.S. Geological Survey and organizations in the State of Iowa have had cooperative agreements for the systematic collection of streamflow records since 1914, for ground water levels since 1935, and for water-quality records since 1943. Organizations that assisted in collecting data through cooperative agreement with the Survey in 1976 are:

Iowa Geological Survey, Stanley C. Grant, director and state geologist

University of Iowa, Institute of Hydraulic Research, Robert S. Hering, dean of College of Engineering and John F. Kennedy, director

Iowa Department of Transportation, Highway Division, H. E. Gunnerson, director, chief engineer, and Vernon J. Marks, research engineer

Iowa Natural Resources Council, O. R. McMurtry, director

Iowa State University, Richard E. Hasbrook, contracts and grants officer, and Agricultural Experiment Station, Thamon Hazen, assistant director

Linn County, W. G. Harrington, county engineer

City of Cedar Rapids, Donald Canney, mayor

City of Des Moines, Leo L. Johnson, public works director

City of Fort Dodge, Vincent B. Gardner, general manager, department of municipal utilities

Assistance in the form of funds or services was given by the Corps of Engineers, U.S. Army, in collecting flow records for 64 gaging stations, and by the Environmental Protection Agency in collecting records for seven water-quality stations published in this report. Assistance was also furnished by NOAA - National Weather Service, U.S. Department of Commerce.

The following organizations aided in collecting records:

Union Electric Co.; Des Moines Water Works; Hospers Rural Water System No. 1; Ottumwa Water Works; Waterloo Sewage Treatment Plant; University of Iowa; and cities of Ames, Charles City, Clear Lake, Council Bluffs, Iowa City, Marshalltown, Sioux City, and Waterloo.

Organizations that supplied data are acknowledged in station descriptions.

ACKNOWLEDGMENT

Iowa district personnel who contributed significantly to the collection and preparation of the data in this report were: I. L. Burmeister, chief, data section, assisted by O. J. Ramsvick, F. E. Lindstrom, W. J. Matthes, and S. A. Dvorak.

HYDROLOGIC CONDITIONS

Annual runoff for the 1976 water year generally varied from 1 inch in the northwestern part of the state to 7 inches in the extreme south central part. Normal runoff is 2 inches in the Northwest to 8 inches in the Southeast.

The water year began with low-flow conditions. Below normal precipitation during the entire year caused a serious decline in streamflow. Moderate temperatures and little snowfall during the winter period resulted in no accumulation of snow cover and little ice cover on streams. Seasonal thunderstorms in April, May and June caused the usual low-land flooding in many parts of the state but no extreme flooding occurred. Streamflow continued to decline during the remainder of the year with many streams experiencing discharges below their 10 percentile value. See figure 3 for comparative runoff values at three representative gaging stations.

DEFINITION OF TERMS

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

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

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.

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

Bacteria are microscopic unicellular organisms, typically spherical, 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 the organisms which produce colonies within 24 hours when incubated at 35°C \pm 1.0°C on M-Endo medium (nutrient medium for bacterial growth). Their concentrations are expressed as number of colonies per 100 ml of sample.

Fecal coliform bacteria are bacteria that are present in the 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 \pm 0.2°C on M-FC medium (nutrient medium for bacterial growth). Their concentrations are expressed as number of colonies per 100 ml of sample.

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

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

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

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

Ash mass is the mass or amount of residue present after the residue from the dry mass determination has been ashed in a muffle furnace at a temperature of 500°C for 1 hour. The ash mass values of zooplankton and phytoplankton are expressed in grams per cubic meter (g/m^3), and periphyton and benthic organisms in grams per square meter (g/m^2).

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

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

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

Bottom material: See Bed material.

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

Cfs-day is the volume of water represented by flow of 1 cubic foot per second for 24 hours. It is equivalent to 86,400 cubic feet, approximately 1.9835 acre-ft, about 646,000 gallons or 2,445 cubic meters.

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

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

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

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

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

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

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

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

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

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

Dissolved refers to the amount of a substance present in true chemical solution. In practice, however, the term includes all forms of the substance that will pass through a 0.45-micrometer membrane filter, and thus may include some very small (colloidal) suspended particles. Analyses are performed on filtered samples.

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

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

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

Drainage area of a stream at a specified location is that area, measured in a horizontal plane, enclosed by a topographic divide from which direct surface runoff from precipitation normally drains by gravity into the stream above the specified point. Figures of drainage area given herein include all closed basins, or noncontributing areas, within the area unless otherwise noted.

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

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

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

Hardness of water is a physical-chemical characteristic that is commonly recognized by the increased quantity of soap required to produce lather. It is attributable to the presence of alkaline earths (principally calcium and magnesium) and is expressed as equivalent calcium carbonate (CaCO_3).

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

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

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

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

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

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

Organism count/area refers to the number of organisms collected and enumerated in a sample and adjusted to the number per area habitat, usually square meters (m²), acres, or hectares. Periphyton, benthic organisms, and macrophytes are expressed in these terms.

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

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

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

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

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

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

The particle-size distributions given in this report are not necessarily representative of all particles in transport in the stream. Most of the organic material is removed and the sample is subjected to mechanical and chemical dispersion before

analysis in distilled water. Chemical dispersion is not used for native-water analysis.

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

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

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

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 milliliter (cells/ml) of sample.

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

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

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

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

Milligrams of carbon per area or volume per unit time ($\text{mg C}/(\text{m}^2 \cdot \text{time})$ for periphyton and macrophytes and $\text{mg C}/(\text{m}^3 \cdot \text{time})$ for phytoplankton) are units for expressing primary productivity. They define the amount of carbon dioxide consumed as measured by radioactive carbon (carbon 14). The carbon 14 method is of greater sensitivity than the oxygen light and dark bottle method, and is preferred for use in unenriched waters. Unit time may be either the hour or day, depending on the incubation period.

Milligrams of oxygen per area or volume per unit time ($\text{mg O}_2/(\text{m}^2 \cdot \text{time})$ for periphyton and macrophytes and $\text{mg O}_2/(\text{m}^3 \cdot \text{time})$ for phytoplankton) are the units for expressing primary productivity. They define production and respiration rates as estimated from changes in the measured dissolved oxygen concentration. The oxygen light and dark bottle method is preferred if the rate of primary production is sufficient for accurate measurements to be made within 24 hours. Unit time may be either the hour or day, depending on the incubation period.

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

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

characteristics, land usage, and quantity and intensity of precipitation.

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

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

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

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

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

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

Sodium adsorption ratio (SAR) is the expression of relative activity of sodium ions in exchange reactions with soil and is an index of sodium or alkali hazard to the soil. Waters range in respect to sodium hazard from those which can be used for irrigation on almost all soils to those which are generally unsatisfactory for irrigation.

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

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

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

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

Substrate is the physical surface upon which an organism lived.

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

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

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

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

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

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

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

Thermograph is 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 presence of a thermograph or a digital mechanism that automatically records water temperatures 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 mass of dissolved solids in 1 acre-foot of water. It is computed by multiplying the concentration in milligrams per liter by 0.00136.

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

Total (as used in tables of chemical analyses) refers to the amount of a substance that is present both in solution and in suspension. Analyses are performed on representative samples of water-suspended sediment mixtures.

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

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.

WRD is used as an abbreviation for "Water-Resources Data" in the REVISED RECORDS paragraph to refer to State annual basic-data reports published before 1975.

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

DOWNSTREAM ORDER AND STATION NUMBER

Since October 1, 1950, the order of listing hydrologic-station records in Survey reports is in a downstream direction along the main stream. All stations on a tributary entering upstream from a main-stream station are listed between stations on the main stream in the order in which those tributaries enter the main stream. Stations on tributaries entering above all main-stream stations are listed before the first main-stream station. Stations on tributaries to tributaries are listed in a similar manner. In the lists of gaging stations and water-quality stations in the front of this report the rank of tributaries is indicated by indention, each indention representing one rank.

As an added means of identification and each hydrologic station and partial-record station has been assigned a station number. These are in the same downstream order used in this report. In assigning station numbers, no distinction is made between partial-record stations and other stations; therefore, the station number for a partial-record station indicates downstream-order position in a list made up of both types of stations. Gaps are left in the series of numbers to allow for new stations that may be established; hence, the numbers are not consecutive. The complete 8-digit number for each station, such as 05387500, which appears just to the left of the station name, includes the 2-digit part number "05" plus the 6-digit downstream order number "387500."

Downstream order station numbers are not assigned to miscellaneous sites where only random water-quality samples or discharge measurements are taken.

NUMBERING SYSTEM FOR WELLS

Each well is identified by means of (1) a 15-digit number that is based on the grid system of latitude and longitude, and (2) a local number that is provided for continuity with older reports and for other use as dictated by local needs. The former number serves not only to identify the well but also to locate it as a point on a map. For maximum utility, latitude and longitude code numbers are determined to seconds in order that each well may have a unique number. The first six digits represent degrees, minutes, and seconds of latitude; "N" refers to north

latitude and is used to break the string of numbers; the next seven digits are degrees, minutes, and seconds of west longitude; and the number after the decimal point is a sequential number assigned in the order in which the wells are located in a 1second quadrangle.

Latitude and longitude coordinates for wells:

- 1 41°43'15N 091°25'20.1
- 2 41°43'15N 091°25'20.2
- 3 41°43'16N 091°25'19.1

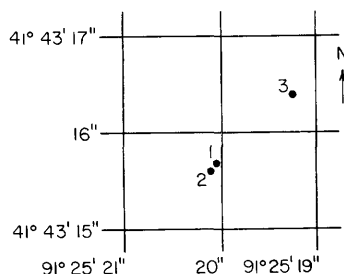


Figure 1. Latitude-longitude well number.

The local well numbers are in accordance with the Bureau of Land Management's system of land subdivision. Each well number is made up of three segments. The first segment indicates the township, the second the range, and the third the section in which the well is situated. The letters after the section number which are assigned in a counter-clockwise direction (beginning with "a" in the northeast quarter), represent subdivisions of the section. The first letter denotes the 160-acre tract, the second the 40-acre tract, and the third the 10-acre tract. Numbers are added as suffixes to distinguish wells in the same tract. Thus, the number 96-20-3cddb1 designates the well in the SE1/4 NW1/4 SE1/4 SW1/4 sec.3, T.96 N., R.20 W.

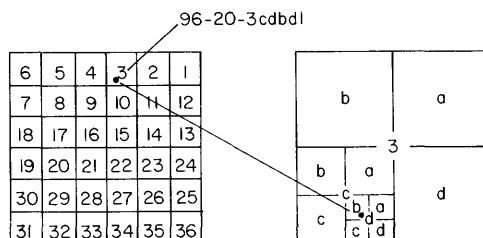


Figure 2. Local well numbering system for well 96-20-3cddb1.

SPECIAL NETWORKS AND PROGRAMS

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

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

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

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

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

EXPLANATION OF STAGE AND WATER-DISCHARGE

Collection and computation of data

The base data collected at gaging stations consist of records of stage and measurements of discharge of streams or canals, and stage, surface area, and contents of lakes or reservoirs. In addition, observations of factors affecting the stage-discharge

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

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

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

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

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

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

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

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

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

Previously published streamflow records of some stations have been found to be in error on the basis of data or information later obtained. Revisions of such records are usually published

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

The type of gage currently in use, the datum of the present gage above mean sea level, and a condensed history of the types, locations, and datums of previous gages used during the period of record are given under "GAGE." In references to datum of gage, the phrase "mean sea level" denotes "Sea Level Datum of 1929" as used by the Topographic Division of the Geological Survey unless otherwise qualified.

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

The average discharge for the number of years indicated is given under "AVERAGE DISCHARGE"; it is not given for stations having fewer than 5 complete years of record or for stations where changes in water development during the period of record cause the figure to have little significance. In addition, the median of yearly mean discharges is given for stream-gaging stations having 10 or more complete years of record if the median differs from the average by more than 10 percent. Under "EXTREMES" are given first, the extremes for the period of record, second, information available outside the period of record, and last, those for the current year. Unless otherwise qualified, the maximum discharge (or contents) is the instantaneous maximum corresponding to the crest stage obtained by use of a water-stage recorder (graphic or digital), a crest-

stage gage, or a nonrecording gage read at the time of the crest. If the maximum gage height did not occur on the same day as the maximum discharge (or contents), it is given separately. Similarly, the minimum is the instantaneous minimum unless otherwise qualified. For some stations peak discharges are listed with EXTREMES FOR THE CURRENT YEAR; if they are, all independent peaks, including the maximum for the year, above the selected base with the time of occurrence and corresponding gage heights are published in tabular format. The base discharge, which is given in the table heading, is selected so that an average of about three peaks a year will be presented. Peak discharges are not published for any canals, ditches, drains, or for any stream for which the peaks are subject to substantial control by man. Time of day is expressed in 24-hour local standard time; for example, 12:30 a.m. is 0030, 1:30 p.m. is 1330. The minimums for these stations are published in a separate paragraph following the table of peaks.

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

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

For most gaging stations on lakes and reservoirs the data presented comprise a description of the station and a monthly

summary table of stage or contents. For some reservoirs a table showing daily contents is given. A skeleton table of capacity at given stages is published for most reservoirs.

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

Accuracy of data

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

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

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

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

computed runoff may occur if adjustments or losses are large in comparison with the observed discharge.

Other data available

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

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

Records of discharge collected by agencies other than the Geological Survey

Records of discharge not published by the Geological Survey were collected during water year 1976 at 58 sites in Iowa by the Corps of Engineers, U.S. Army. The National Water Data Exchange, Water Resources Division, U.S. Geological Survey, National Center, Reston, Va. 22092, maintains an index of such sites. Information on records available at specific sites can be obtained upon request.

EXPLANATION OF WATER QUALITY RECORDS

Collection and examination of data

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

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

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

Water analysis

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

One sample can define adequately the water quality at a given time if the mixture of solutes throughout the stream cross section is homogeneous. However, the concentration of solutes at different locations in the cross section may vary widely with different rates of water discharge, depending on the source of material and the turbulence and mixing of the stream. Some streams must be sampled through several vertical sections to obtain a representative sample needed for an accurate mean concentration and for use in calculating load.

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

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

Water temperature

Water temperatures are measured at most of the water-quality stations. In addition, water temperatures are taken at time of discharge measurements for water-discharge stations. Although these temperatures are measured on different days of the month, an analysis of these data for each month for a long period of record will indicate significant thermal characteristics of the stream. Data have been analyzed for the period of record through 1974 for gaging stations with 10 or more years of record. A summary on monthly maximum, minimum and mean temperatures were published in the 1974 state report. For stations where water temperatures are taken manually once or twice daily, the water temperatures are taken at about the same time each day. Large streams have a small daily temperature change; shallow streams may have a daily range of several degrees and may follow closely the changes in air temperature. Some streams may be affected by waste-heat discharge.

At stations where recording instruments are used, either mean temperatures or maximum and minimum temperatures for each day are published.

Sediment

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

During periods of rapidly changing flow or rapidly changing concentration, samples may have been collected more frequently (twice daily or, in some instances, hourly). The published sediment discharges for days of rapidly changing flow or concentration were computed by the subdivided day method (time-discharge weighted average). Therefore, for those days when the published sediment discharge value differs from the value computed as the product of discharge times mean concentration times 0.0027, the reader can assume that the sediment discharge for that day was computed by the subdivided day method. For periods when no samples are 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 are collected periodically at many verticals in the stream cross section. Although data collected periodically may represent conditions only at the time of observation, 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 periodic measurements of the particle-size distribution of the suspended sediment and bed material are included.

EXPLANATION OF GROUND-WATER LEVEL RECORDS

Collection of the data

Only ground-water level data from a basic national network of observation wells are published herein. These water-level measurements are intended to provide a sampling and historical record of water-level changes in the nation's most important aquifers.

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

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

Water-level measurements in this report are given in feet with reference to either mean sea level (msl) or land-surface datum (lsd). Mean sea level is the datum plane on which the national network of precise levels is based; land-surface datum is a datum plane that is approximately at land surface at each well. If known, the altitude of the land-surface datum above mean sea level is given in the well description. The height of the measuring point (MP) above or below land-surface datum is given in each well description. Water levels in wells equipped with recording gages are reported for every fifth day and the end of each month (eom).

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

PUBLICATIONS ON TECHNIQUES OF WATER-RESOURCES INVESTIGATIONS

Thirty-two manuals by the U.S. Geological Survey have been published to date in the series on techniques describing procedures for planning and executing specialized work in water-resources investigations. The material is grouped under major subject headings called books and is further divided into sections and chapters. For example, Section A of Book 3 (Applications of Hydraulics) is on surface water. The chapter, the unit of publication, is limited to a narrow field of subject matter. This format permits flexibility in revision and publication as the need arises. The reports listed below are for sale by the U.S. Geological Survey, Branch of Distribution, 604 South Picket Street, Alexandria, VA 22304 (authorized agent of the Superintendent of Documents, Government Printing Office).

- NOTE: When ordering any of these publications, please give the title, book number, chapter number, and "U.S. Geological Survey Techniques of Water-Resources Investigations".
- 1-D1. Water temperature-influential factors, field measurement, and data presentation, by H. H. Stevens Jr., J. F. Ficke, and G. F. Smoot: USGS--TWRI Book 1, Chapter D1. 1975. 65 p. \$1.60.
- 2-D1. Application of surface geophysics to ground-water investigations, by A. A. R. Zohdy, G. P. Eaton, and D. R. Mabey: USGS--TWRI Book 2, Chapter D1. 1974. 116 pages. \$1.90.
- 2-E1. Application of borehole geophysics to water-resources investigations, by W. S. Keys and L. M. MacCary: USGS--TWRI Book 2, Chapter E1. 1971. 126 pages. \$1.75.
- 3-A1. General field and office procedures for indirect discharge measurements, by M.A.Benson and Tate Dalrymple: USGS--TWRI Book 3, Chapter A1. 1967. 30 pages. \$0.25.
- 3-A2. Measurement of peak discharge by the slope-area method, by Tate Dalrymple and M. A. Benson: USGS--TWRI Book 3, Chapter A2. 1967. 12 pages. \$0.20.
- 3-A3. Measurement of peak discharge at culverts by indirect methods, by G. L. Bodhaine: USGS--TWRI Book 3, Chapter A3. 1968. 60 pages. \$0.40.
- 3-A4. Measurement of peak discharge at width contractions by indirect methods, by H. F. Matthai: USGS--TWRI Book 3, Chapter A4. 1967. 44 pages. \$1.00.
- 3-A5. Measurement of peak discharge at dams by indirect methods, by Harry Hulsing: USGS--TWRI Book 3, Chapter A5. 1967. 29 pages. \$0.30.
- 3-A6. General procedure for gaging streams, by R. W. Carter and Jacob Davidian: USGS--TWRI Book 3. Chapter A6, 1968, 13 pages. \$0.20.
- 3-A7. Stage measurements at gaging stations, by T. J. Buchanan and W. P. Somers: USGS--TWRI Book 3, Chapter A7. 1968. 28 pages. \$0.45.
- 3-A8. Discharge measurements at gaging stations, by T. J. Buchanan and W. P. Somers: USGS--TWRI Book 3, Chapter A8. 1969. 65 pages. \$1.25.
- 3-A11. Measurement of discharge by moving-boat method, by G. F. Smoot and C. E. Novak: USGS--TWRI Book 3, Chapter A11. 1969. 22 pages. \$0.40.

- 3-A12. Fluorometric procedures for dye tracing, by J. F. Wilson Jr.: USGS--TWRI Book 3, Chapter A12. 1968. 31 pages. \$1.35. Not currently available.
- 3-B1. Aquifer-test design, observation, and data analysis, by R. W. Stallman: USGS--TWRI Book 3, Chapter B1. 1971. 26 pages \$0.70.
- 3-B2. Introduction to ground-water hydraulics-a programed text for self-instruction, by D. S. Bennett: USGS--TWRI Book 3, Chapter B2 1976. 172 pages.
- 3-C1. Fluvial sediment concepts, by H. P. Guy: USGS--TWRI Book 3, Chapter C1. 1970. 55 pages. \$0.65.
- 3-C2. Field methods for measurement of fluvial sediment, by H. P. Guy and V. W. Norman: USGS--TWRI Book 3, Chapter C2, 1970. 59 pages \$0.70.
- 3-C3. Computation of fluvial-sediment discharge, by George Porterfield: USGS--TWRI Book 3, Chapter C3. 1972. 66 pages. \$1.15.
- 4-A1. Some statistical tools in hydrology, by H. C. Riggs: USGS--TWRI Book 4 Chapter A1. 1968. 39 pages. \$0.30.
- 4-A2. Frequency curves, by H. C. Riggs: USGS--TWRI Book 4, Chapter A2. 1968. 15 pages. \$0.20.
- 4-B1. Low-flow investigations, by H. C. Riggs: USGS--TWRI Book 4, Chapter B1. 1972, 18 pages. \$0.65.
- 4-B2. Storage analyses for water supply, by H. C. Riggs and C. H. Hardison: USGS--TWRI Book 4, Chapter B2. 1973. 20 pages. \$0.75.
- 4-B3. Regional analyses of streamflow characteristics, by H. C. Riggs: USGS--TWRI Book 4, Chapter B3. 1973. 15 pages. \$0.75.
- 4-D1. Computation of rate and volume of stream depletion by wells, by C. T. Jenkins: USGS--TWRI Book 4, Chapter D1. 1970. 17 pages. \$0.65.
- 5-A1. Methods for collection and analysis of water samples for dissolved minerals and gases, by Eugene Brown, M. W. Skougstad, and M. J. Fishman: USGS--TWRI Book 5, Chapter A1. 1970. 160 gages. \$2.40.
- 5-A2. Determination of minor elements in water by emission spectroscopy, by P. R. Barnett and E. C. Mallory, Jr.: USGS--TWRI Book 5, Chapter A2. 1971. 31 pages. \$0.80.

- 5-A3. Methods for analysis of organic substances in water, by D. F. Goerlitz and Eugene Brown: USGS--TWRI Book 5, Chapter A3. 1972. 40 pages. \$0.90.
- 5-A4. Methods for collection and analysis of aquatic biological and microbiological samples, by K. V. Slack, R. C. Averett, P. E. Greeson, and R. G. Lipscomb: USGS--TWRI Book 5, Chapter A4. 1973. 165 pages. \$1.95.
- 5-C1. Laboratory theory and methods for sediment analysis, by H. P. Guy: USGS--TWRI Book 5, Chapter C1. 1969. 58 pages. \$0.65.
- 7-C1. Finite-difference model for aquifer simulation in two dimensions with results of numerical experiments, by P. C. Trescott, G. F. Pinder, and S. P. Larson: USGS--TWRI Book 7, Chapter C1. 1976. 116 pages.
- 8-A1. Methods of measuring water levels in deep wells, by M. S. Garber and F. C. Koopman: USGS--TWRI Book 8, Chapter A1. 1968. 23 pages. \$0.70.
- 8-B2. Calibration and maintenance of vertical-axis type current meters, by G. F. Smoot and C. E. Novak: USGS--TWRI Book 8, Chapter B2. 1968. 15 pages. \$0.40.

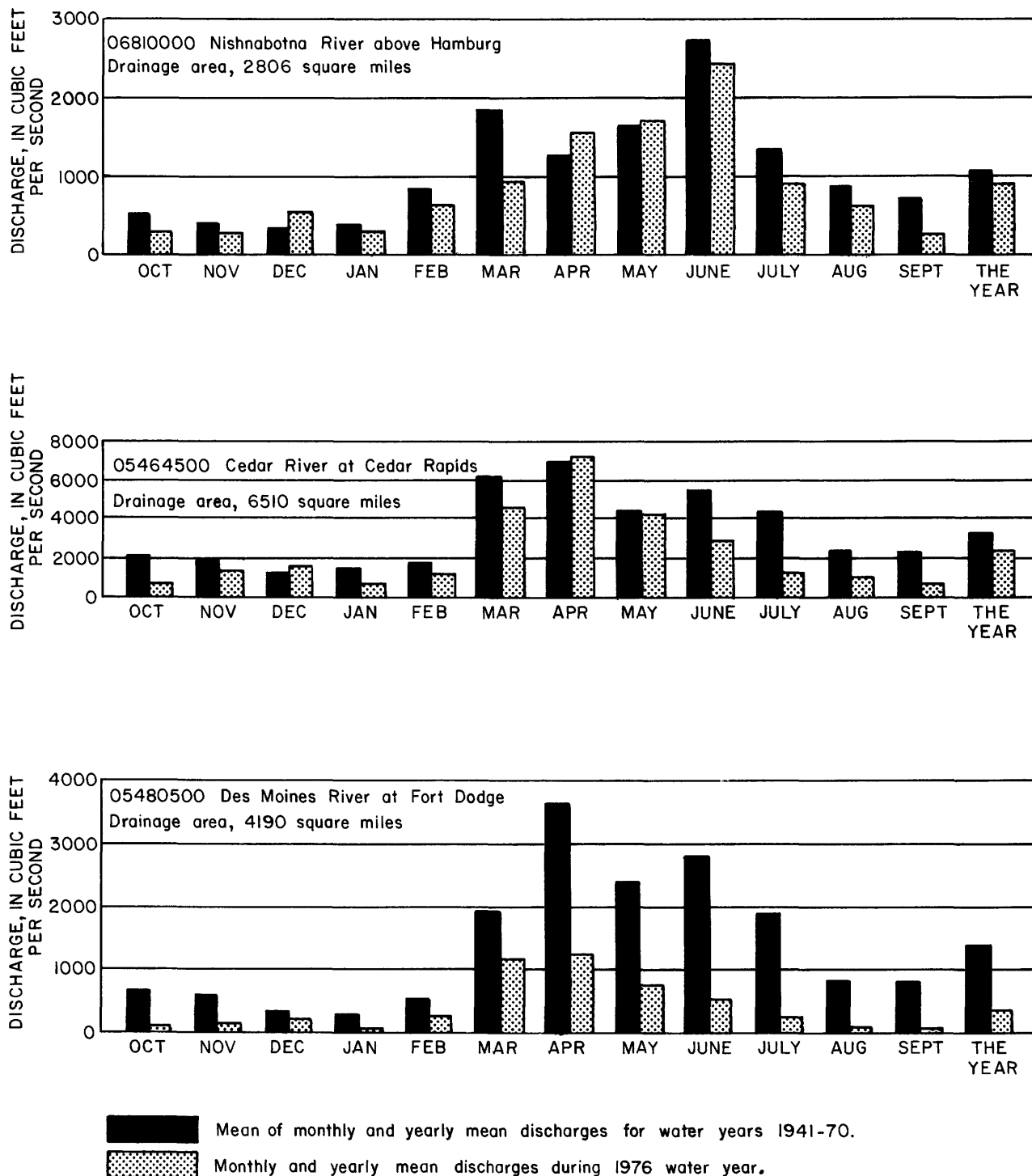


FIGURE 3.--RUNOFF DURING 1976 WATER YEAR COMPARED WITH MEAN RUNOFF FOR PERIOD 1941-70 FOR THREE REPRESENTATIVE GAGING STATIONS

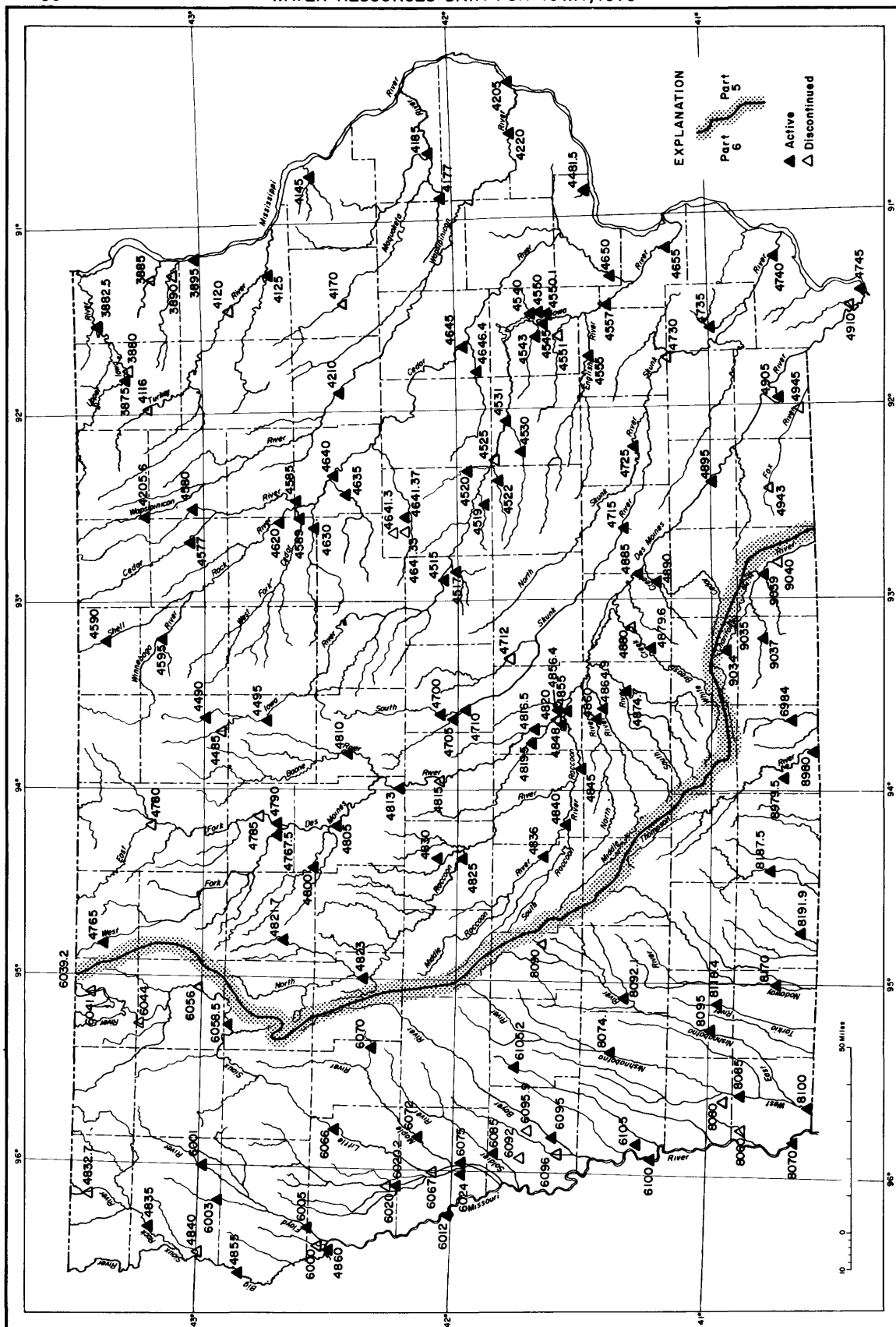


Figure 4.--Map of Iowa showing location of continuous-record gaging stations.

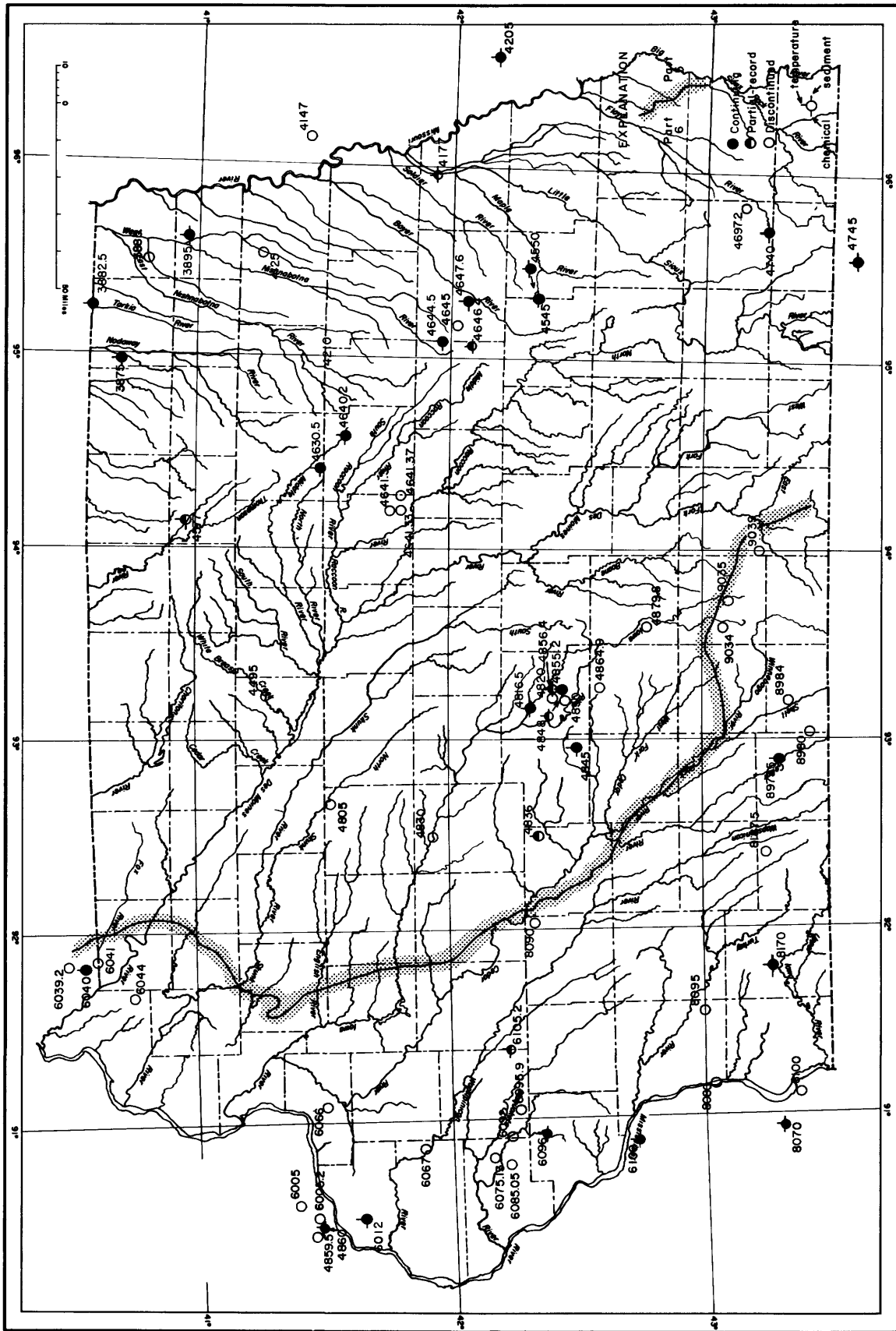


Figure 5.--Map of Iowa showing location of water-quality stations.

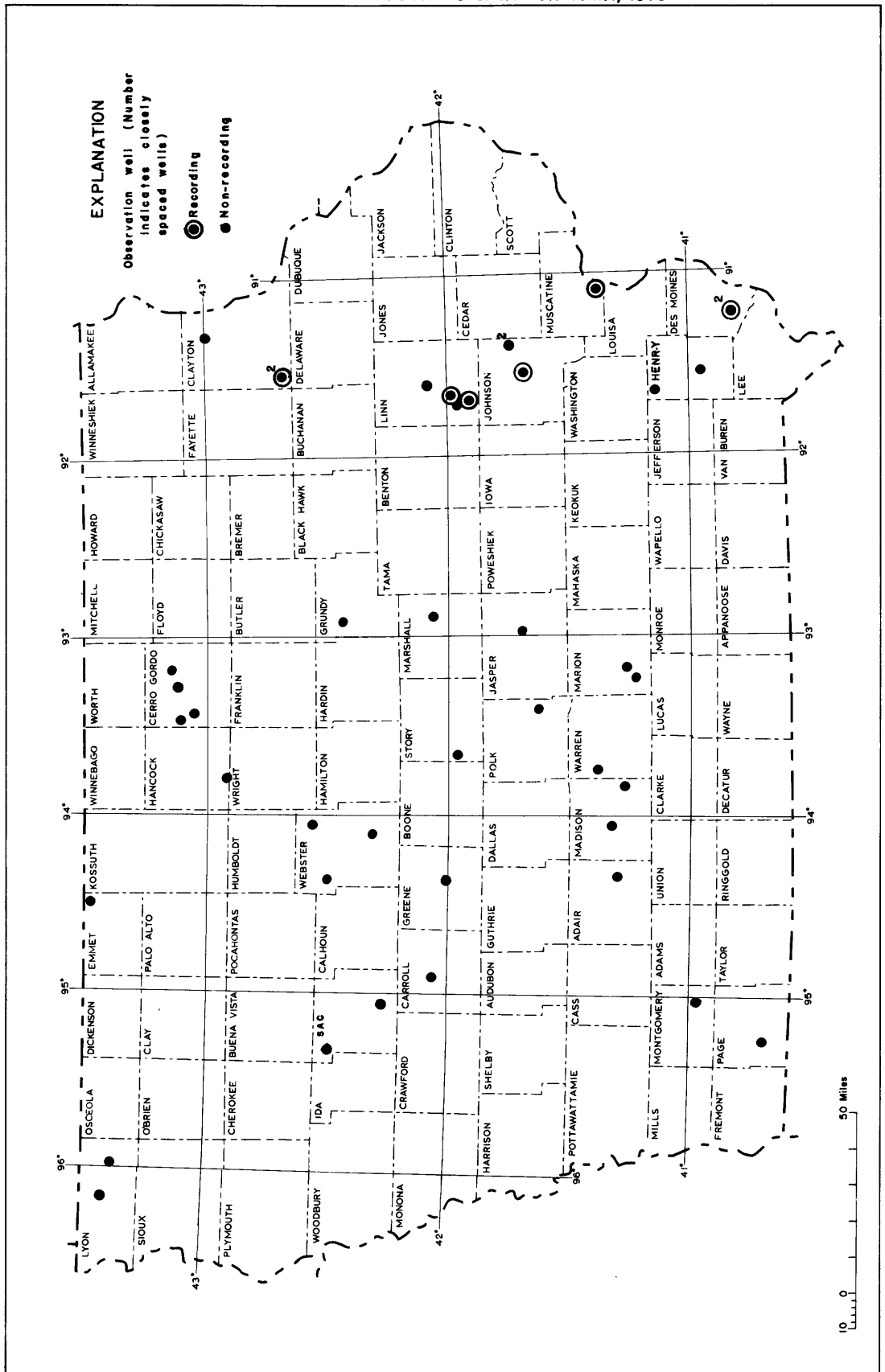


Figure 6.--Location of observation wells in Iowa.

UPPER MISSISSIPPI RIVER BASIN

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UPPER IOWA RIVER BASIN

05387500 UPPER IOWA RIVER AT DECORAH, IA

LOCATION.--Lat 43°18'19", long 91°47'48", in NE1/4 SW1/4 sec.16, T.98 N., R.8 W., Winneshiek County, Hydrologic Unit 07060002, on right bank 1,200 ft (366 m) upstream from bridge on U.S. Highway 52 (city route) in Decorah, 1,500 ft (457 m) downstream from Dry Run cutoff, and 3.0 mi (4.8 km) upstream from Trout Run.

DRAINAGE AREA.--511 mi² (1,323 km²).

WATER-DISCHARGE RECORDS

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

REVISED RECORDS.--WSP 1438: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 850.00 ft (259.080 m) above mean sea level.

REMARKS.--Records good except those for winter period, which are fair.

AVERAGE DISCHARGE.--25 years, 304 ft³/s (8.608 m³/s), 8.08 in/yr (205 mm/yr), 220,200 acre-ft/yr (272 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 20,200 ft³/s (572 m³/s) Mar. 27, 1961, gage height, 13.08 ft (3.987 m); minimum daily, 22 ft³/s (0.62 m³/s) Feb. 2-7, 1959.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum flood known, probably since at least 1913, occurred May 29, 1941, at site of former gaging station near Decorah, 4 mi (6.4 km) downstream, discharge, 28,500 ft³/s (807 m³/s).

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 9,500 ft³/s (269 m³/s) Mar. 12, gage height, 10.75 ft (3.277 m) at 2200 hours, no other peak above base of 4,000 ft³/s (113 m³/s); minimum daily, 63 ft³/s (1.78 m³/s) Sept. 30.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	97	92	111	100	94	138	732	559	336	151	102	79
2	94	91	115	99	138	99	557	513	315	148	100	78
3	94	93	151	124	120	126	467	472	295	148	96	78
4	93	92	148	128	114	101	419	433	280	144	93	77
5	92	92	156	98	144	90	388	407	268	141	109	77
6	91	92	138	81	119	133	364	383	257	135	102	76
7	90	93	105	150	113	132	343	360	246	135	100	76
8	91	92	142	220	70	130	324	344	238	135	100	75
9	91	134	130	132	70	106	310	330	230	129	96	75
10	89	246	128	92	70	106	305	318	226	126	93	74
11	92	146	120	83	72	369	340	305	222	122	95	74
12	94	143	113	76	86	7130	348	295	218	119	95	73
13	94	131	111	68	94	5720	334	320	230	113	97	73
14	93	118	205	76	96	1760	314	327	246	113	107	72
15	91	111	170	68	121	718	310	317	230	110	105	72
16	91	107	105	92	185	523	301	417	210	110	97	71
17	92	105	130	136	146	417	435	525	199	110	110	71
18	92	102	172	108	154	370	2310	612	196	107	230	70
19	92	100	126	73	154	335	2090	532	192	107	161	70
20	93	106	155	101	134	330	1300	463	188	108	129	69
21	94	115	139	72	125	310	1790	416	181	107	116	69
22	93	116	128	72	117	286	1420	388	174	104	110	68
23	95	115	125	73	120	259	1160	371	171	104	107	68
24	102	118	121	73	117	242	1200	355	167	100	102	67
25	96	117	119	75	294	230	1350	341	171	97	100	67
26	95	96	112	100	374	546	1190	330	167	97	100	66
27	97	111	107	124	270	577	914	318	164	97	100	65
28	96	119	104	76	209	395	761	314	161	113	100	65
29	96	134	103	96	178	355	676	424	158	110	92	64
30	93	193	103	74	---	830	616	366	154	110	84	63
31	92	---	101	74	---	902	---	361	---	104	79	---
TOTAL	2895	3520	3993	3014	4099	23851	23368	12236	6490	3654	3307	2142
MEAN	93.4	117	129	97.2	141	769	779	395	216	118	107	71.4
MAX	102	246	205	220	374	7130	2310	612	336	151	230	79
MIN	89	91	101	68	70	96	301	295	154	97	79	63
CFSM	.18	.23	.25	.19	.28	1.50	1.52	.77	.42	.23	.21	.14
IN.	.21	.26	.29	.22	.30	1.74	1.70	.89	.47	.27	.24	.16
AC-FT	5740	6980	7920	5980	8130	47310	46350	24270	12870	7250	6560	4250
CAL YR 1975	TOTAL	111310	MEAN 305	MAX 5250	MIN 57	CFSM .60	IN 8.10	AC-FT 220800				
WTR YR 1976	TOTAL	92569	MEAN 253	MAX 7130	MIN 63	CFSM .50	IN 6.74	AC-FT 183600				

UPPER IOWA RIVER BASIN

05387500 UPPER IOWA RIVER AT DECORAH, IA--Continued

WATER-QUALITY RECORDS

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

PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: October 1962 to September 1964, October 1965 to current year.

SUSPENDED-SEDIMENT DISCHARGE: October 1962 to December 1967.

INSTRUMENTATION.--Temperature recorder since Apr. 12, 1967.

REMARKS.--No record Aug. 28 to Sept. 30.

EXTREMES FOR PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: Maximum, 32.0°C Aug. 23, 1968 and July 11, 1976; minimum, 0.0°C on many days during winter periods.

SEDIMENT CONCENTRATIONS: Maximum daily mean, 8,700 mg/L May 26, 1965; minimum daily mean, 1 mg/L Oct. 21, 1965.

SEDIMENT LOADS: Maximum daily, 62,300 tons (56,500 tonnes) June 10, 1967; minimum daily, 0.1 ton (0.09 tonne) Oct. 21, 1965.

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURES: Maximum, 32.0 July 11; minimum, 0.0°C on many days during winter period.

WATER QUALITY DATA, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976

DAY	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	13.5	10.5	13.0	9.0	1.5	1.0	0.0	0.0	0.0	0.0	0.0	0.0
2	14.0	8.0	11.0	8.5	1.5	1.0	0.0	0.0	0.0	0.0	0.0	0.0
3	15.0	9.5	13.0	10.0	1.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0
4	16.0	10.0	13.0	10.0	1.5	1.0	0.0	0.0	0.0	0.0	0.0	0.0
5	16.0	11.5	11.5	10.5	2.0	1.0	0.0	0.0	0.0	0.0	0.5	0.0
6	16.5	10.0	13.5	11.0	1.5	1.0	0.0	0.0	0.0	0.0	0.0	0.0
7	16.5	10.5	13.5	12.0	1.0	0.5	0.0	0.0	0.0	0.0	1.5	0.0
8	16.5	11.5	13.0	10.0	1.0	1.0	0.0	0.0	0.0	0.0	1.0	0.0
9	15.5	13.0	11.5	9.5	1.5	1.0	0.0	0.0	0.0	0.0	1.5	0.0
10	15.0	10.0	9.5	7.0	2.0	1.5	0.0	0.0	0.0	0.0	4.0	0.0
11	15.0	9.0	7.0	6.5	1.5	1.5	0.0	0.0	0.0	0.0	4.0	0.0
12	16.0	9.5	6.0	5.0	1.5	1.0	0.0	0.0	0.0	0.0	0.0	0.0
13	19.5	14.0	5.0	4.0	2.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0
14	18.5	15.0	4.0	2.0	4.0	2.0	0.0	0.0	0.0	0.0	1.0	0.0
15	15.0	10.5	4.5	2.0	2.0	1.0	0.0	0.0	0.0	0.0	1.5	0.5
16	14.0	7.0	6.5	2.5	1.0	1.0	0.0	0.0	0.0	0.0	2.0	0.5
17	13.0	7.0	6.5	5.0	0.5	0.0	0.0	0.0	0.0	0.0	1.5	0.0
18	12.0	6.5	9.0	6.5	1.0	0.0	0.0	0.0	0.0	0.0	4.5	1.5
19	12.0	6.5	11.0	9.0	0.5	0.0	0.0	0.0	0.0	0.0	8.0	3.5
20	11.5	6.5	10.0	7.0	0.0	0.0	0.0	0.0	0.0	0.0	10.0	8.0
21	13.0	8.0	7.0	3.5	0.0	0.0	0.0	0.0	0.0	0.0	7.0	4.5
22	15.0	9.0	3.5	1.5	0.0	0.0	0.0	0.0	1.0	0.0	6.0	2.0
23	16.0	14.0	3.0	1.0	0.0	0.0	0.0	0.0	1.0	0.0	8.0	3.5
24	16.0	12.0	2.0	1.0	0.0	0.0	0.0	0.0	1.5	0.0	9.5	6.0
25	12.0	9.0	2.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	9.5	6.0
26	11.0	7.0	1.5	1.0	0.0	0.0	0.0	0.0	0.0	0.0	9.0	6.5
27	13.0	8.0	1.5	1.0	0.0	0.0	0.0	0.0	0.5	0.0	6.5	5.5
28	13.5	10.0	1.5	1.0	0.0	0.0	0.0	0.0	0.5	0.0	8.5	4.5
29	11.5	6.5	1.5	1.0	0.0	0.0	0.0	0.0	0.5	0.0	8.0	6.0
30	10.5	6.0	1.5	1.0	0.0	0.0	0.0	0.0	---	---	8.0	5.5
31	11.0	8.0	---	---	0.0	0.0	0.0	0.0	---	---	5.5	4.5
MONTH	19.5	6.0	13.5	1.0	4.0	0.0	0.0	0.0	1.5	0.0	10.0	0.0

05388250 UPPER IOWA RIVER NEAR DORCHESTER, IA

LOCATION.--Lat 43°25'16", long 91°30'31", in SW1/4 NW1/4 sec.1, T.99 N., R.6 W., Allamakee County, Hydrologic Unit 07060002, on right bank at upstream side of bridge on State Highway 76, 650 ft (198 m) upstream from Mineral Creek, 0.5 mi (0.8 km) upstream from Bear Creek, 3.5 mi (5.6 km) south of Dorchester, and 18.1 mi (29.1 km) upstream from mouth.

DRAINAGE AREA.--770 mi² (1,994 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--September 1936 to June 1975 (gage heights and discharge measurements only), July 1975 to current year.

GAGE.--Water-stage recorder. Datum of gage is 660.00 ft (201.168 m) above mean sea level. Prior to Jan. 6, 1938, nonrecording gage on old bridge at site 0.2 mi (0.3 km) upstream at datum 5.91 ft (1.801 m) higher. Jan. 6, 1938, to Apr. 26, 1948, nonrecording gage at datum 60.00 ft (18.288 m) lower, Apr. 27, 1948 to August 1963, nonrecording gage on old bridge and August 1963 to June 1975 nonrecording gage on new bridge at same datum.

REMARKS.--Water-discharge record good except those for winter period, which are poor.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 14,000 ft³/s (396 m³/s) Mar. 12, 1976, gage height, 17.67 ft (5.386 m); minimum daily, 108 ft³/s (3.06 m³/s) Sept. 16, 1976.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of May 30, 1941, reached a stage of 21.8 ft (6.64 m), from flood profile, discharge, 30,400 ft³/s (861 m³/s) on basis of slope-area determination of peak flow.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 14,000 ft³/s (396 m³/s) Mar. 12, gage height, 17.67 ft (5.386 m) at 1630 hours, no other peak above base of 4,000 ft³/s (113 m³/s); minimum daily, 108 ft³/s (3.06 m³/s) Sept. 16.

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

DAY	JUL	AUG	SEP	DAY	JUL	AUG	SEP	DAY	JUL	AUG	SEP
1	513	244	250	11	480	220	223	21	300	223	205
2	497	235	217	12	450	220	214	22	293	220	202
3	515	235	250	13	460	220	211	23	286	220	202
4	521	235	244	14	470	220	211	24	293	250	199
5	515	226	244	15	380	211	211	25	282	753	199
6	671	220	241	16	367	205	211	26	282	795	196
7	844	220	238	17	340	205	211	27	282	521	193
8	593	220	229	18	300	205	211	28	282	420	190
9	513	220	226	19	300	217	211	29	282	405	193
10	491	220	223	20	300	223	208	30	276	362	202
								31	259	293	---
								TOTAL	12647	8883	6465
								MEAN	408	287	216
								MAX	844	795	250
								MIN	259	205	190
								CFSM	.53	.37	.28
								IN.	.61	.43	.31
								AC-FT	25090	17620	12820

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP		
1	201	174	240	170	170	220	1180	1080	532	305	213	157		
2	193	171	270	165	154	185	851	983	501	297	207	149		
3	188	172	300	140	160	185	690	895	474	298	196	143		
4	186	174	314	130	160	190	590	825	452	301	186	141		
5	184	171	286	145	165	155	530	804	433	303	194	136		
6	181	172	276	165	160	190	490	720	418	296	199	136		
7	178	174	247	200	175	225	460	677	405	304	192	136		
8	178	174	226	410	190	195	430	624	395	296	185	130		
9	181	191	251	340	190	185	400	590	383	288	180	125		
10	180	534	236	250	200	190	388	563	378	280	178	118		
11	177	355	232	200	230	236	410	535	375	276	178	115		
12	178	264	222	190	230	9470	425	515	365	272	182	115		
13	180	248	218	180	225	9020	425	527	368	272	210	113		
14	182	231	280	180	215	3410	415	576	410	269	201	113		
15	179	221	374	180	320	1470	396	544	405	261	213	113		
16	171	212	210	175	330	981	425	632	366	253	209	108		
17	172	207	390	170	280	740	425	811	353	242	207	110		
18	172	200	470	230	225	616	2470	898	347	231	219	113		
19	166	197	210	170	225	563	2580	907	337	217	335	133		
20	174	201	220	175	235	529	1900	782	329	206	270	146		
21	177	210	230	175	190	484	2140	696	325	206	240	141		
22	176	206	220	175	230	428	2300	634	324	198	222	138		
23	180	205	210	180	200	391	1900	603	325	198	205	140		
24	185	200	205	180	170	357	1940	580	325	195	193	137		
25	185	206	200	180	300	327	2040	553	329	191	189	137		
26	176	168	190	175	610	331	1920	532	328	196	185	138		
27	175	200	185	160	520	823	1660	512	322	206	187	139		
28	179	230	180	170	450	739	1430	495	319	243	174	139		
29	174	230	180	170	390	659	1290	594	321	237	168	139		
30	172	270	175	170	---	837	1190	645	317	229	166	137		
31	172	---	175	168	---	1260	---	568	---	227	166	---		
TOTAL	5552	6568	7622	5868	7299	35591	33690	20900	11261	7793	6249	3935		
MEAN	179	219	246	189	252	1148	1123	674	375	251	202	131		
MAX	201	534	470	410	610	9470	2580	1080	532	305	335	157		
MIN	166	168	175	130	154	155	388	495	317	191	166	108		
CFSM	.23	.28	.32	.25	.33	1.49	1.46	.88	.49	.33	.26	.17		
IN.	.27	.32	.37	.28	.35	1.72	1.63	1.01	.54	.38	.30	.19		
AC-FT	11010	13030	15120	11640	14480	70590	66820	41460	22340	15460	12390	7810		
WTR YR 1976	TOTAL	152328	MEAN	416	MAX	9470	MIN	108	CFSM	.54	IN	7.36	AC-FT	302100

05388250 UPPER IOWA RIVER NEAR DORCHESTER, IOWA--Continued.

WATER-QUALITY RECORDS

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

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: July 1975 to current year.

SEDIMENT RECORDS: July 1975 to current year.

REMARKS.--Records of specific conductance are obtained from suspended-sediment samples at time of analysis.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Maximum daily, 635 micromhos Aug. 5, 1975; minimum daily, 215 micromhos Mar. 12, 1976.

SEDIMENT CONCENTRATION: Maximum daily mean, 4,100 mg/L Mar. 27, 1976; minimum daily mean, 7 mg/L Sept. 11, 12, 26, 1975, Jan. 27, 1976.

SEDIMENT LOADS: Maximum daily, 105,000 tons (95,300 tonnes) Mar. 12, 1976; minimum daily, 3.0 tons (2.7 tonnes) Jan. 27, 1976.

EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum daily, 560 micromhos Jan. 13-16; minimum daily, 215 micromhos Mar. 12.

SEDIMENT CONCENTRATIONS: Maximum daily mean, 4,100 mg/L Mar. 12; minimum daily mean, 7 mg/L Jan. 27.

SEDIMENT LOADS: Maximum daily, 105,000 tons (95,300 tonnes) Mar. 12; minimum daily, 3.0 tons (2.7 tonnes) Jan. 27.

WATER QUALITY DATA, JULY 1975 TO SEPTEMBER 1976

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1974 TO SEPTEMBER 1975
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1										505	310	360
2										420	310	390
3										500	310	400
4										510	310	410
5										490	635	390
6										490	350	390
7										505	345	390
8										450	340	370
9										510	350	370
10										520	355	400
11										520	355	400
12										445	355	400
13										515	360	400
14										520	360	410
15										435	360	420
16										330	370	420
17										320	370	390
18										320	380	400
19										320	375	350
20										320	340	370
21										320	340	370
22										320	370	380
23										320	370	400
24										340	370	360
25										320	350	360
26										320	260	350
27										320	320	350
28										330	380	360
29										310	370	370
30										310	370	350
31										310	360	---
MONTH										402	358	383

UPPER IOWA RIVER BASIN

053882500 UPPER IOWA RIVER NEAR DORCHESTER, IA--Continued

WATER-QUALITY RECORDS

WATER QUALITY DATA, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	340	360	365	360	---	440	360	380	380	340	340	345
2	350	360	365	360	400	450	---	380	390	350	350	340
3	330	330	365	385	---	400	360	340	360	360	400	340
4	345	330	325	385	400	360	460	360	360	460	370	340
5	320	320	270	390	---	400	480	370	390	460	400	340
6	330	320	325	420	420	340	410	340	390	470	390	340
7	330	320	325	480	---	360	440	340	390	340	400	340
8	330	330	310	510	420	360	480	340	---	340	380	340
9	320	330	305	520	---	340	480	340	500	330	400	340
10	320	360	320	480	410	330	470	340	440	330	400	360
11	340	420	380	550	---	350	480	360	370	340	400	290
12	340	440	360	550	440	215	440	360	400	320	360	390
13	335	410	300	560	450	280	410	350	400	320	360	300
14	340	430	320	560	450	240	460	340	460	340	360	380
15	340	430	360	560	---	250	---	350	500	350	350	380
16	350	380	270	560	450	270	480	360	500	320	360	400
17	340	380	360	---	440	310	440	360	500	380	360	420
18	340	360	380	---	440	360	400	380	490	360	350	360
19	355	370	400	---	400	400	430	370	490	340	350	---
20	340	355	365	---	420	460	450	370	320	335	340	370
21	340	355	340	520	410	460	445	350	340	340	360	400
22	350	355	380	350	420	480	420	360	360	340	350	355
23	340	340	410	400	430	460	410	380	340	380	340	380
24	340	365	415	---	420	440	400	380	330	390	330	360
25	350	360	415	---	420	400	380	380	330	410	330	320
26	360	360	300	400	360	350	390	380	390	410	340	360
27	360	350	310	---	315	390	380	380	360	400	330	360
28	360	300	325	440	325	440	380	390	330	340	340	400
29	370	300	---	---	390	420	370	390	340	360	350	360
30	360	315	320	---	---	360	370	---	330	380	320	420
31	360	---	330	410	---	360	---	380	---	360	340	---
MONTH	343	357	346	---	---	370	424	363	396	364	360	360
YEAR	MAX	560	MIN	215	MEAN	376						

SUSPENDED-SEDIMENT DISCHARGE (TONS/DAY), WATER YEAR OCTOBER 1974 TO SEPTEMBER 1975

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	513	99	107	244	38	25	250	40	27
2	497	93	125	235	39	25	217	27	16
3	516	97	121	235	37	23	250	23	19
4	521	80	113	235	35	22	244	30	20
5	515	73	102	226	35	21	244	29	19
6	671	295	504	220	34	20	241	29	19
7	544	235	506	220	38	23	238	29	19
8	593	130	200	220	36	21	229	32	20
9	513	162	224	220	31	18	226	27	16
10	491	145	192	220	21	12	223	11	6.6
11	480	128	166	220	24	14	223	7	4.2
12	460	112	139	220	30	18	214	7	4.0
13	460	95	118	220	21	12	211	22	13
14	470	77	98	220	23	14	211	54	31
15	300	50	60	211	15	0.5	211	40	23
16	367	40	48	205	34	19	211	28	16
17	340	45	41	205	34	19	211	17	9.7
18	300	36	29	205	25	14	211	11	6.3
19	300	29	23	217	96	56	211	10	5.7
20	300	34	28	223	107	64	208	14	7.9
21	300	38	31	223	68	41	205	22	12
22	293	43	34	220	61	36	202	35	19
23	286	40	31	220	61	36	202	20	11
24	293	50	40	250	365	260	199	14	7.5
25	282	40	30	753	1420	2890	199	8	4.3
26	282	40	30	795	725	1560	196	7	3.7
27	282	40	30	521	175	246	193	16	8.3
28	282	39	30	420	58	66	190	29	15
29	282	37	28	405	34	37	193	33	17
30	276	37	28	362	22	22	202	15	8.2
31	259	38	27	293	28	22	---	---	---
TOTAL	12647	---	3381	8883	---	5664.5	6465	---	408.4
YEAR	27995		9453.9						

053882500 UPPER IOWA RIVER NEAR DORCHESTER, IA--Continued

WATER-QUALITY RECORDS

WATER QUALITY DATA, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976

SUSPENDED-SEDIMENT DISCHARGE (TONS/DAY), WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976

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	201	15	8.1	174	15	7.0	240	157	102
2	193	9	4.7	171	22	10	270	145	106
3	188	15	7.6	172	25	12	300	135	109
4	186	10	5.0	174	18	8.5	314	135	114
5	184	15	7.5	171	18	8.3	286	116	90
6	181	27	13	172	17	7.9	276	83	62
7	178	39	19	174	28	13	247	75	50
8	178	24	12	174	31	15	226	72	44
9	181	18	8.8	191	46	24	251	70	47
10	180	30	15	534	163	235	236	89	57
11	177	35	17	355	157	150	232	88	55
12	178	46	22	264	168	120	222	84	50
13	180	20	14	248	63	42	218	155	91
14	182	42	21	221	48	30	280	275	208
15	179	55	27	221	33	20	374	296	299
16	171	45	21	212	33	19	210	291	165
17	172	35	16	207	43	24	390	275	290
18	172	45	21	200	32	17	470	170	216
19	166	52	23	197	25	13	210	151	86
20	174	32	15	201	52	28	220	136	81
21	177	34	16	210	101	57	230	125	78
22	176	40	19	206	107	60	220	111	66
23	180	54	26	205	72	40	210	103	58
24	185	20	10	200	140	76	205	103	57
25	185	18	9.0	206	168	93	200	100	54
26	176	21	10	168	85	43	190	116	60
27	175	20	9.5	200	83	45	185	99	49
28	179	22	11	230	103	64	180	91	44
29	174	21	9.9	230	87	54	180	87	42
30	172	16	8.4	270	118	86	175	105	50
31	172	18	8.4	---	---	---	175	100	47
TOTAL	5552	---	434.9	6568	---	1421.7	7622	---	2927

SUSPENDED-SEDIMENT DISCHARGE (TONS/DAY), WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976

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	170	96	45	170	14	6.4	220	50	30
2	165	95	42	154	13	5.4	185	30	15
3	140	75	28	160	9	3.9	185	23	11
4	130	49	17	160	9	3.9	190	71	36
5	145	22	6.6	165	10	4.5	155	56	23
6	165	11	4.9	160	11	4.8	190	50	26
7	200	11	5.9	175	11	5.2	225	52	32
8	410	8	8.9	190	12	6.2	195	58	31
9	340	10	9.2	190	8	4.1	185	59	29
10	250	9	6.1	200	8	4.3	190	54	28
11	200	12	6.5	230	16	9.9	236	560	357
12	190	10	5.1	230	22	14	9470	4100	105000
13	180	11	5.3	225	21	13	9020	1600	39000
14	180	10	4.9	215	22	13	3410	600	5520
15	180	13	6.3	320	43	37	1470	510	2020
16	175	11	5.2	330	28	25	981	295	781
17	170	13	6.0	280	63	48	740	90	180
18	230	18	11	225	45	27	616	67	111
19	170	27	12	225	36	22	563	33	50
20	175	25	12	235	15	9.5	529	26	37
21	175	10	4.7	190	16	8.2	484	32	42
22	175	12	5.7	230	16	9.9	428	28	32
23	180	8	3.9	200	20	11	391	18	19
24	180	10	4.9	170	102	47	357	12	12
25	180	11	5.3	300	189	153	327	25	22
26	175	12	5.7	610	1020	1680	331	44	39
27	160	7	3.0	520	820	1150	823	107	238
28	170	10	4.6	450	265	322	739	70	140
29	170	11	5.0	390	53	56	659	735	1310
30	170	14	6.4	---	---	---	837	1220	2760
31	168	16	7.3	---	---	---	1260	1450	4930
TOTAL	5868	---	306.4	7299	---	3704.2	35591	---	162861

UPPER IOWA RIVER BASIN

053882500 UPPER IOWA RIVER NEAR DORCHESTER, IA--Continued

WATER-QUALITY RECORDS

WATER QUALITY DATA, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976

SUSPENDED-SEDIMENT DISCHARGE (TONS/DAY), WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976

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	1180	1140	3630	1080	69	201	532	30	43
2	851	790	1820	983	65	173	501	22	30
3	690	125	233	895	45	109	474	31	40
4	590	220	350	825	60	452	452	47	57
5	530	88	126	804	26	55	433	56	65
6	490	48	64	720	38	74	418	34	38
7	460	23	29	677	69	126	405	48	52
8	430	13	15	624	40	67	395	58	62
9	400	30	32	590	26	41	383	57	59
10	388	29	30	563	20	30	378	50	51
11	410	65	72	535	20	29	375	42	43
12	425	280	325	515	30	42	365	32	32
13	425	300	344	527	26	37	368	34	34
14	415	31	35	576	38	59	410	48	53
15	396	26	28	544	37	54	405	54	59
16	425	60	69	632	53	90	366	52	51
17	425	29	33	811	91	199	353	69	66
18	2470	263	1750	898	63	153	347	63	59
19	2580	259	1800	907	56	137	337	56	51
20	1900	246	1260	782	45	95	329	51	45
21	2140	722	4170	696	35	66	325	53	47
22	2300	310	1930	634	22	38	324	53	46
23	1900	84	431	603	38	62	325	32	28
24	1940	91	477	580	29	45	325	35	31
25	2040	107	589	553	15	22	329	38	34
26	1920	100	518	532	24	34	328	40	35
27	1660	77	345	512	17	24	322	32	28
28	1430	91	351	495	12	16	319	33	28
29	1290	67	233	594	57	91	321	24	21
30	1190	61	196	645	87	152	317	32	27
31	---	---	---	568	44	67	---	---	---
TOTAL	33690	---	21285	20900	---	2449	11261	---	1315

SUSPENDED-SEDIMENT DISCHARGE (TONS/DAY), WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976

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	305	35	29	213	59	34	157	72	31
2	297	36	29	207	27	15	149	73	29
3	298	36	29	196	23	12	143	63	24
4	301	35	28	186	22	11	141	63	24
5	303	34	28	194	26	14	136	107	39
6	296	34	27	199	24	13	136	60	22
7	304	30	25	192	37	19	136	41	15
8	296	20	16	185	27	13	130	68	24
9	288	33	26	180	33	16	125	50	17
10	280	48	36	178	43	21	118	35	11
11	276	39	29	178	30	14	115	53	16
12	272	25	18	182	25	12	115	34	11
13	272	27	20	210	38	22	113	21	6.4
14	269	50	36	201	19	10	113	37	11
15	261	65	46	213	19	11	113	33	10
16	253	58	40	209	24	14	108	15	4.4
17	242	130	85	207	37	21	110	37	11
18	231	113	70	219	48	28	113	39	12
19	217	48	28	335	118	107	133	23	8.3
20	206	56	31	270	53	39	146	48	19
21	206	38	21	240	19	12	141	43	16
22	198	50	27	222	35	21	138	23	8.6
23	198	70	37	205	46	25	140	21	7.9
24	195	55	29	193	53	28	137	20	7.4
25	191	40	21	189	54	28	137	20	7.4
26	196	45	24	185	66	33	138	22	8.2
27	206	66	37	187	91	46	139	15	5.6
28	243	82	54	174	51	24	139	17	6.4
29	237	72	46	168	45	20	139	14	5.3
30	229	45	28	166	66	30	137	15	5.5
31	227	33	20	166	59	26	---	---	---
TOTAL	7793	---	1020	6249	---	739	3935	---	423.4
YEAR	152328		198886.6						

053882500 UPPER IOWA RIVER NEAR DORCHESTER, IA--Continued

WATER-QUALITY RECORDS

WATER QUALITY DATA, WATER YEAR OCTOBER 1974 TO SEPTEMBER 1975

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)
JULY 15...	1140	21.0	5	352	0	1	5
AUG. 19...	1140	22.0	5	218	2	2	11

DATE	BED MAT. FALL DIAM. % FINER THAN .500 MM (80161)	BED MAT. FALL DIAM. % FINER THAN 1.00 MM (80162)	BED MAT. FALL DIAM. % FINER THAN 2.00 MM (80169)	BED MAT. FALL DIAM. % FINER THAN 4.00 MM (80170)	BED MAT. FALL DIAM. % FINER THAN 8.00 MM (80171)	BED MAT. FALL DIAM. % FINER THAN 16.0 MM (80172)
JULY 15...	51	64	66	70	80	100
AUG. 19...	59	79	83	93	100	--

WATER QUALITY DATA, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976

DATE	TIME	TEMPER- ATURE (DEG C) (00010)	NUMBER OF SAM- PLING POINTS (00063)	INSTAN- TANEOUS DIS- CHARGE (CFS) (00061)	SUS- PEN- DED SED- IMENT DIS- CHARGE (MG/L) (80154)	SUS- PEN- DED 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 .008 MM (70339)	SUS. SED. FALL DIAM. % FINER THAN .016 MM (70340)
JAN. 20...	1400	.0	6	175	28	13	--	--	--	--
MAR. 31...	1435	5.5	--	1180	1910	6090	48	63	76	91
APR. 02...	0700	12.0	--	907	913	2240	42	57	66	89
JUNE 08...	1110	23.0	5	379	--	--	--	--	--	--

DATE	SUS. SED. FALL DIAM. % FINER THAN .062 MM (70342)	SUS. SED. FALL DIAM. % FINER THAN .125 MM (70343)	SUS. SED. FALL DIAM. % FINER THAN .062 MM (70331)	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)	BED MAT. FALL DIAM. % FINER THAN .500 MM (80161)	BED MAT. FALL DIAM. % FINER THAN 1.00 MM (80162)	BED MAT. FALL DIAM. % FINER THAN .062 MM (80164)
------	--	--	--	---	---	---	---	---	---

JAN. 20...	--	--	91	1	2	15	81	96	--
MAR. 31...	99	100	--	--	--	--	--	--	--
APR. 02...	99	--	--	--	--	--	--	--	--
JUNE 08...	--	--	--	--	--	--	--	--	0

DATE	BED MAT. SIEVE DIAM. % FINER THAN .125 MM (80165)	BED MAT. SIEVE DIAM. % FINER THAN .250 MM (80166)	BED MAT. SIEVE DIAM. % FINER THAN .500 MM (80167)	BED MAT. SIEVE DIAM. % FINER THAN 1.00 MM (80168)	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)
------	--	--	--	--	--	--	--	--	--

JAN. 20...	--	--	--	--	99	100	--	--	--
MAR. 31...	--	--	--	--	--	--	--	--	--
APR. 02...	--	--	--	--	--	--	--	--	--
JUNE 08...	1	7	56	68	73	76	81	89	94

MISSISSIPPI RIVER MAIN STEM

053B9500 MISSISSIPPI RIVER AT MCGREGOR, IA

LOCATION.--Lat 43°01'29", long 91°10'21", in SE1/4 SE1/4 sec.22, T.95 N., R.3 W., Clayton County, Hydrologic Unit 07060001, on right bank in city park at east end of Main Street in McGregor, 2.6 mi (4.2 km) upstream from Wisconsin River, 4.3 mi (6.9 km) downstream from Yellow River, and at mile 633.4 (1,019.1 km) upstream from Ohio River.

DRAINAGE AREA.--67,500 mi² (174,800 km²), approximately.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--August 1936 to current year.

REVISED RECORDS.--WRD IA-75-1: 1974.

GAGE.--Water-stage recorder. Datum of gage is 605.30 ft (184.495 m) above mean sea level, adjustment of 1912. Prior to June 1, 1937, and since June 2, 1939, auxiliary water-stage recorder; June 1, 1937 to June 1, 1939, auxiliary nonrecording gage 14.1 mi (22.7 km) upstream in tailwater of dam 9, at datum 5.30 ft (1.615 m) lower.

REMARKS.--Records good except those for winter period, which are fair. Stage-discharge relation affected by backwater from Wisconsin River and Lock and Dam No. 10. Minor flow regulation caused by navigation dams.

COOPERATION.--Auxiliary gage-height and discharge data at Lock and Dam No. 9 furnished by Corps of Engineers.

AVERAGE DISCHARGE.--40 years, 33,720 ft³/s (954.8 m³/s), 6.78 in/yr (172 mm/yr), 24,430,000 acre-ft/yr (30,100 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 276,000 ft³/s (7,820 m³/s) Apr. 24, 1965; maximum gage height, 25.38 ft (7.736 m) Apr. 24, 1965; minimum daily discharge, 6,200 ft³/s (176 m³/s) Dec. 9, 1936; minimum gage height, -0.86 ft (-0.262 m) Aug. 18, 1936.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since at least 1828, that of Apr. 24, 1965.

EXTREMES FOR CURRENT YEAR.--Maximum daily discharge, 125,000 ft³/s (3,540 m³/s) Apr. 8, 9; maximum gage height, 17.21 ft (5.246 m) Apr. 8; minimum daily discharge, 8,000 ft³/s (227 m³/s) Aug. 6, 7; minimum gage height, 5.80 ft (1.768 m) Sept. 30.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	
1	22900	20400	27700	25900	20200	35200	79000	70500	17500	15700	15600	8700	
2	20400	20300	27400	25800	20000	34800	85100	66000	20200	15400	14700	8700	
3	18100	20300	27200	25500	20000	35500	93400	54900	21100	15500	14100	8500	
4	17400	19300	28600	24100	19500	34900	101000	41800	21500	15200	12500	8400	
5	18400	19600	30900	22500	19000	32900	109000	36000	21100	14000	8400	9200	
6	17800	19400	34400	22300	18900	31700	118000	35400	20800	14700	8000	9100	
7	16000	19600	35900	22200	19000	30200	123000	35900	20500	13500	8000	9300	
8	15600	18700	37800	21100	19400	32400	125000	36200	18700	14200	9000	9600	
9	15300	18900	38300	19700	19600	34100	125000	36100	16400	15200	10800	10700	
10	14600	23900	38100	19000	20000	32900	124000	34200	12800	13200	11500	12200	
11	13600	24600	37800	18900	20000	32200	120000	28200	12800	11400	11800	12200	
12	13200	27100	36400	18900	20000	35900	115000	24700	15600	11900	11500	12000	
13	14900	34500	33500	18900	20600	51600	108000	25200	16100	10700	11600	12000	
14	17700	37600	31500	18800	21900	66000	102000	25400	15800	10500	11600	12200	
15	17800	40700	30000	18800	23400	72700	97000	25700	17500	11000	12000	12300	
16	17300	42000	28400	18800	25200	72800	92100	28900	17200	15000	12200	12300	
17	16200	43800	24600	19000	27200	59800	89200	31400	15700	13800	11800	12300	
18	16000	43600	19300	19000	30100	47800	85500	32500	13800	13200	11000	12300	
19	15200	41900	11600	19200	35000	41700	83900	29900	13400	12700	11000	12300	
20	16200	39700	11600	19300	43200	39200	80800	25700	14000	10500	11000	12400	
21	15100	38100	16500	19400	46100	38800	78800	23300	17300	11500	11200	13200	
22	15300	35200	18900	19600	48400	39300	77800	22400	20200	11800	11400	15000	
23	16800	35200	21300	19600	47500	42800	78300	21400	22200	12100	11600	16000	
24	16400	35500	22000	20700	44300	47700	79500	21100	21400	12100	11500	16200	
25	18500	36100	23100	20600	39900	53600	78600	19900	19600	12100	10600	16800	
26	20200	36500	24700	20600	37200	58500	77600	18200	18000	11800	10300	15300	
27	21000	36600	25500	20600	36200	62600	76500	16600	17300	11400	10500	12200	
28	24300	33600	25400	20500	36400	61800	75800	15600	16800	12400	10400	10200	
29	23400	30400	25500	21300	36100	64900	75200	15500	15100	14000	10000	8800	
30	21600	31100	25800	21300	---	70100	74400	15300	16200	15100	9400	8400	
31	20400	---	25900	20500	---	73200	---	15600	---	15600	8800	---	
TOTAL	547600	924200	845600	642400	834300	1467600	2828500	929500	526600	407200	343800	348800	
MEAN	17650	30810	27280	20720	28770	47340	94280	29980	17550	13140	11090	11630	
MAX	24300	43800	38300	25900	48400	73200	125000	70500	22200	15700	15600	16800	
MIN	13200	18700	11600	18800	18900	30200	74400	15300	12800	10500	8000	8400	
CFSM	.26	.46	.40	.31	.43	.70	1.40	.44	.26	.19	.16	.17	
IN.	.30	.51	.47	.35	.46	.81	1.56	.51	.29	.22	.19	.19	
AC-FT	1086000	1833000	1677000	1274000	1655000	2911000	5610000	1844000	1045000	807700	681900	691800	
CAL YR 1975 TOTAL	14835400	MEAN	40640	MAX	183000	MIN	11600	CFSM	.60	IN	8.18	AC-FT	29430000
WTR YR 1976 TOTAL	10646100	MEAN	29090	MAX	125000	MIN	8000	CFSM	.43	IN	5.87	AC-FT	21120000

MISSISSIPPI RIVER MAIN STEM

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05389500 MISSISSIPPI RIVER AT MCGREGOR, IOWA--Continued

WATER-QUALITY RECORDS

LOCATION.--Samples collected at bridge on U.S. Highway 18 1.2 mi (1.9 km) upstream from gage.

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

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: July 1975 to current year.

WATER TEMPERATURES: July 1975 to current year.

SUSPENDED-SEDIMENT DISCHARGE: July 1975 to current year.

REMARKS.--Records of specific conductance are obtained from sediment samples at time of analysis.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SEDIMENT CONCENTRATION: Maximum daily mean, 192 mg/L Mar. 16, 1976; minimum daily mean, 6 mg/L Jan. 11, 12, 22-30, 1976.

SEDIMENT LOADS: Maximum daily, 37,700 tons (34,200 tonnes) Mar. 16, 1976; minimum daily, 249 tons (226 tonnes) Sept. 4, 1976.

EXTREMES FOR CURRENT YEAR.--

SEDIMENT CONCENTRATION: Maximum daily mean, 192 mg/L Mar. 16; minimum daily mean, 6 mg/L Jan. 11, 12, 22-30.

SEDIMENT LOADS: Maximum daily, 37,700 tons (34,200 tonnes) Mar. 16; minimum daily, 249 tons (226 tonnes) Sept. 4.

WATER QUALITY DATA, JULY 1975 TO SEPTEMBER 1976

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1974 TO SEPTEMBER 1975
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1										---	---	---
2										---	---	260
3										---	---	---
4										---	320	---
5										---	---	280
6										---	---	---
7										360	320	---
8										350	---	280
9										---	---	---
10										370	---	---
11										---	330	---
12										360	---	300
13										---	---	---
14										340	320	---
15										---	---	300
16										---	---	---
17										340	---	---
18										---	320	---
19										---	---	---
20										---	350	---
21										320	---	---
22										---	---	290
23										---	---	---
24										320	---	---
25										---	320	---
26										---	---	---
27										---	---	---
28										320	290	---
29										---	---	---
30										---	---	---
31										320	---	---
MONTH										---	---	---

WATER QUALITY DATA, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976
ONCE-DAILY

[illegible]

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1974 TO SEPTEMBER 1975
ONCE-DAILY

[illegible]

WATER-QUALITY RECORDS

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976
ONCE-DAILY

[illegible]

SUSPENDED-SEDIMENT DISCHARGE (TONS/DAY), WATER YEAR OCTOBER 1974 TO SEPTEMBER 1975

JULY				AUGUST			SEPTEMBER		
DAY	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
1	78100	113	23800	20300	17	932	30600	22	1820
2	78400	111	23500	21500	15	871	31100	26	2180
3	78900	107	22800	23900	17	1100	32400	42	3670
4	79000	102	21800	24700	21	1400	31700	44	3770
5	78800	87	18500	26000	23	1610	29000	31	2430
6	79100	66	14100	25300	21	1430	23900	26	1680
7	79800	57	12300	21500	17	987	19700	24	1280
8	81600	52	11500	17900	16	773	16300	22	968
9	82200	50	11100	16700	17	767	13900	21	788
10	83600	52	11700	16700	18	812	12400	22	737
11	82700	44	9820	18100	22	1080	13800	24	894
12	81900	34	7520	19200	22	1140	21300	29	1670
13	79600	35	7520	19000	17	872	24100	31	2020
14	77100	40	8330	19200	13	674	30000	33	2670
15	73800	41	8170	19100	17	877	31400	34	2880
16	70100	41	7760	18500	20	999	32000	37	3200
17	65300	44	7760	17100	18	831	30300	37	3030
18	59500	73	11700	16100	15	652	27800	36	2700
19	56300	79	12000	16000	16	691	25300	34	2320
20	51000	70	9640	16400	30	1330	22900	31	1920
21	47700	56	7210	16100	34	1480	23000	29	1800
22	42000	46	5220	19000	42	2150	22300	26	1570
23	38700	36	3760	26900	49	3560	22100	25	1490
24	36400	30	2950	37000	64	6390	22200	26	1560
25	34600	28	2620	46400	83	10400	22800	26	1600
26	31800	28	2400	48200	87	11300	22800	26	1600
27	30700	32	2650	46600	66	8300	23000	25	1550
28	29800	44	3540	40400	33	3600	22800	30	1850
29	27400	46	3400	36600	24	2370	24500	39	2580
30	25000	35	2360	33500	23	2080	24200	44	2870
31	21200	21	1200	31300	22	1860	---	---	---
TOTAL	1862100	---	298630	775200	---	73318	729600	---	61097
YEAR	14343700		433045						

MISSISSIPPI RIVER MAIN STEM
05389500 MISSISSIPPI RIVER AT MCGREGOR, IA--Continued

WATER-QUALITY RECORDS

WATER QUALITY DATA, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976

SUSPENDED-SEDIMENT DISCHARGE (TONS/DAY), WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976

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	22900	37	2290	20400	44	2420	27700	31	2320
2	20400	32	1760	20300	43	2360	27400	26	1920
3	18100	29	1420	20300	42	2300	27200	31	2280
4	17400	29	1360	19300	40	2080	28600	43	3320
5	18400	28	1390	19600	39	2060	30900	54	4510
6	17800	27	1300	19400	38	1990	34400	55	5110
7	16000	26	1120	19600	36	1910	35900	55	5330
8	15600	23	969	18700	32	1620	37800	45	4590
9	15300	24	991	18900	30	1530	38300	32	3310
10	14600	29	1140	23900	38	2450	38100	21	2160
11	13600	33	1210	24600	50	3320	37800	19	1940
12	13200	31	1100	27100	39	2850	36400	18	1770
13	14900	24	966	34500	40	3730	33500	17	1540
14	17700	21	1000	37600	52	5280	31500	16	1360
15	17800	20	961	40700	65	7140	30000	14	1130
16	17300	24	1120	42000	81	9190	28400	11	843
17	16200	39	1710	43800	96	11400	24600	12	797
18	16000	47	2030	43600	95	11200	19300	46	2400
19	15200	46	1890	41900	87	9840	11600	36	1130
20	16200	39	1710	39700	78	8360	11600	29	908
21	15100	38	1550	38100	68	7000	16500	27	1200
22	15300	38	1570	35200	53	5040	18900	24	1220
23	16800	37	1680	35200	42	3990	21300	22	1270
24	16400	36	1590	35500	44	4220	22000	18	1070
25	18500	33	1650	36100	53	5170	23100	16	998
26	20200	32	1750	36500	61	6010	24700	13	867
27	21000	37	2100	36600	61	6030	25500	10	688
28	24300	56	3670	33600	55	4990	25400	10	686
29	23400	63	3980	30400	49	4020	25500	10	688
30	21600	44	2570	31100	42	3530	25800	9	627
31	20400	44	2420	---	---	---	25900	9	629
TOTAL	547600	---	51967	924200	---	143030	845600	---	58611

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	25900	7	490	20200	8	436	35200	15	1430
2	25800	8	557	20000	9	486	34800	15	1410
3	25500	10	688	20000	11	594	35500	14	1340
4	24100	10	651	19500	12	632	34900	13	1220
5	22500	9	547	19000	14	718	32900	12	1070
6	22300	7	421	18900	13	663	31700	13	1110
7	22200	7	420	19000	15	769	30200	18	1470
8	21100	7	399	19400	13	681	32400	28	2450
9	19700	7	372	19600	12	635	34100	37	3410
10	19000	7	359	20000	11	594	32900	34	3020
11	18900	6	306	20000	11	594	32200	20	1740
12	18900	6	306	20000	11	594	35900	77	7460
13	18900	7	357	20600	11	612	51600	143	19900
14	18800	8	406	21900	12	710	66000	171	30500
15	18800	8	406	23400	13	821	72700	185	36300
16	18800	7	355	25200	24	1630	72800	192	37700
17	19000	7	359	27200	41	3010	59800	173	27900
18	19000	7	359	30100	49	3980	47800	129	16600
19	19200	7	363	35000	51	4820	41700	115	12900
20	19300	7	365	43200	50	5830	39200	106	11200
21	19400	7	367	46100	47	5850	38800	100	10500
22	19600	6	318	48400	41	5360	39300	97	10300
23	19600	6	318	47500	33	4230	42800	93	10700
24	20700	6	335	44300	23	2750	47700	84	10800
25	20600	6	334	39900	14	1510	53600	73	10600
26	20600	6	334	37200	12	1210	58500	62	9790
27	20600	6	334	36200	12	1170	62600	53	8960
28	20500	6	332	36400	13	1280	61800	51	8510
29	21300	6	345	36100	15	1460	64900	50	8760
30	21300	6	345	---	---	---	70100	51	9650
31	20500	7	387	---	---	---	73200	53	10500
TOTAL	642400	---	12235	834300	---	53629	1467600	---	329200

05389500 MISSISSIPPI RIVER AT MCGREGOR, IA--Continued

WATER-QUALITY RECORDS

WATER QUALITY DATA, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976

SUSPENDED-SEDIMENT DISCHARGE (TONS/DAY), WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976

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	79000	63	13400	70500	97	18500	17500	68	3210
2	85100	74	17000	66000	85	15100	20200	68	3710
3	93400	69	17400	54900	71	10500	21100	53	3020
4	101000	59	16100	41800	64	7220	21500	49	2840
5	109000	53	15600	36000	68	6610	21100	60	3420
6	118000	49	15600	35400	74	7070	20800	71	3990
7	125000	32	10600	35900	79	7660	20500	63	3490
8	125000	36	12200	36200	82	8010	18700	47	2370
9	125000	47	15900	36100	82	7990	16400	44	1950
10	124000	48	16100	34200	76	7020	12800	56	1940
11	120000	48	15600	28200	69	5250	12800	58	2000
12	115000	47	14600	24700	62	4130	15600	76	3200
13	108000	44	12800	25200	66	4490	16100	84	3650
14	102000	41	11300	25400	52	3570	15800	74	3160
15	97000	37	9690	25700	53	3680	17500	59	2790
16	92100	39	9700	28900	63	4920	17200	55	2550
17	89200	49	11800	31400	78	6610	15700	42	1780
18	85500	61	14100	32500	80	7020	13800	38	1420
19	83900	73	16500	29900	72	5810	13400	43	1560
20	80800	79	17200	25700	59	4090	14000	39	1470
21	78300	79	16800	23300	52	3270	17300	44	2060
22	77600	75	15800	22400	52	3140	20200	61	3330
23	78300	70	14800	21400	52	3000	22200	78	4680
24	79500	63	13500	21100	51	2910	21400	83	4800
25	78600	52	11000	19900	50	2690	19600	79	4180
26	77600	53	11100	18200	50	2460	18000	72	3500
27	76500	40	8260	16600	50	2240	17300	61	2850
28	75800	47	9620	15600	50	2110	16800	49	2220
29	75200	76	15800	15500	49	2050	15100	41	1670
30	74400	99	19900	15300	52	2150	16200	42	1840
31	---	---	---	15600	58	2440	---	---	---
TOTAL	2826500	---	419770	929500	---	173710	526600	---	84650
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	15700	49	2080	15600	82	3450	8700	25	587
2	15400	65	2700	14700	75	2980	8700	22	517
3	15500	83	3470	14100	64	2440	8500	16	367
4	15200	86	3530	12500	53	1790	8400	11	249
5	14000	84	3180	8400	42	953	9200	13	323
6	14700	78	3100	8000	35	756	9100	21	516
7	13500	68	2480	8000	31	670	9300	31	778
8	14200	54	2070	9000	29	705	9600	36	933
9	15200	44	1810	10800	34	991	10700	39	1130
10	13200	36	1280	11500	45	1400	12200	37	1220
11	11400	31	954	11800	50	1590	12200	35	1150
12	11900	31	996	11500	43	1340	12000	34	1100
13	10700	35	1010	11600	44	1380	12000	32	1040
14	10500	45	1280	11600	56	1750	12200	26	856
15	11000	58	1720	12000	60	1940	12300	21	697
16	15000	78	3160	12200	59	1940	12300	17	565
17	13800	92	3430	11800	54	1720	12300	18	598
18	13200	85	3030	11000	46	1370	12300	19	631
19	12700	75	2570	11000	38	1130	12300	20	664
20	10500	63	1790	11000	33	980	12400	21	703
21	11500	54	1680	11200	32	968	13200	21	748
22	11800	48	1530	11400	32	985	15000	29	1170
23	12100	45	1470	11600	34	1060	16000	29	1250
24	12100	44	1440	11500	35	1090	16200	36	1570
25	12100	43	1400	10600	35	1000	16800	43	1950
26	11800	42	1340	10300	35	973	15300	40	1650
27	11400	41	1260	10500	35	992	12200	28	922
28	12400	65	2180	10400	35	983	10200	17	468
29	14000	87	3290	10000	34	918	8800	14	333
30	15100	89	3590	9400	32	812	8400	11	249
31	15600	87	3660	8800	28	665	---	---	---
TOTAL	407200	---	68480	343800	---	41721	348800	---	24934
YEAR	10646100		1461937						

MISSISSIPPI RIVER MAIN STEM

05389500 MISSISSIPPI RIVER AT MCGREGOR, IA--Continued

WATER-QUALITY RECORDS

WATER QUALITY DATA, WATER YEAR OCTOBER 1974 TO SEPTEMBER 1975

DATE	TIME	TEMPER- ATURE (DEG C) (00010)	NUMBER OF SAM- PLING POINTS (00060)	INSTAN- TANEOUS DIS- CHARGE (CFS) (00061)	BED MAT. FALL DIAM. % FINER THAN (00158)	BED MAT. FALL DIAM. % FINER THAN (00159)	BED MAT. FALL DIAM. % FINER THAN (00160)
AUG. 20...	1100	24.0	6	17700	3	8	21
		BED MAT. FALL DIAM. % FINER THAN (00161)	BED MAT. FALL DIAM. % FINER THAN (00162)	BED MAT. FALL DIAM. % FINER THAN (00163)	BED MAT. FALL DIAM. % FINER THAN (00164)	BED MAT. FALL DIAM. % FINER THAN (00165)	BED MAT. FALL DIAM. % FINER THAN (00166)
DATE		.500 MM (00167)	1.00 MM (00168)	2.00 MM (00169)	4.00 MM (00170)	6.00 MM (00171)	15.0 MM (00172)
AUG. 20...		46	56	69	78	89	100

WATER QUALITY DATA, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976

DATE	TIME	TEMPER- ATURE (DEG C) (00010)	NUMBER OF SAM- PLING POINTS (00060)	INSTAN- TANEOUS DIS- CHARGE (CFS) (00061)	BED MAT. FALL DIAM. % FINER THAN (00158)	BED MAT. FALL DIAM. % FINER THAN (00159)	BED MAT. FALL DIAM. % FINER THAN (00160)	BED MAT. FALL DIAM. % FINER THAN (00161)	BED MAT. FALL DIAM. % FINER THAN (00162)
OCT. 02...	1310	13.0	6	21900	7	12	50	80	80
MAR. 10...	1530	7.0	6	46700	22	24	52	80	94
APR. 06...	1200	5.0	6	124000	17	21	39	51	65
MAY 09...	1500	10.5	5	26100	--	--	--	--	--
JUNE 09...	1745	21.0	5	15000	--	--	--	--	--
AUG. 12...	0845	22.5	6	11000	--	--	--	--	--
SEP. 14...	1500	16.0	6	13400	--	--	--	--	--
		BED MAT. SIEVE DIAM. % FINER THAN (00164)	BED MAT. SIEVE DIAM. % FINER THAN (00165)	BED MAT. SIEVE DIAM. % FINER THAN (00166)	BED MAT. SIEVE DIAM. % FINER THAN (00167)	BED MAT. SIEVE DIAM. % FINER THAN (00168)	BED MAT. SIEVE DIAM. % FINER THAN (00169)	BED MAT. SIEVE DIAM. % FINER THAN (00170)	BED MAT. SIEVE DIAM. % FINER THAN (00171)
DATE		.062 MM (00164)	.125 MM (00165)	.250 MM (00166)	.500 MM (00167)	1.00 MM (00168)	2.00 MM (00169)	4.00 MM (00170)	8.00 MM (00171)
OCT. 02...	--	--	--	--	--	80	88	94	100
MAR. 10...	--	--	--	--	--	94	100	--	--
APR. 06...	--	--	--	--	--	69	82	93	100
MAY 09...	7	11	32	67	73	88	92	95	100
JUNE 09...	5	9	27	80	92	97	98	99	100
AUG. 12...	10	15	43	88	96	98	99	99	100
SEP. 21...	9	15	41	88	100	--	--	--	--

05412500 TURKEY RIVER AT GARBER, IA

LOCATION.--Lat 42°44'24", long 91°15'42", in SE1/4 NW1/4 sec.36, T.92 N., R.4 W., Clayton County, Hydrologic Unit 07060004, on left bank 10 ft (3 m) downstream from bridge on county highway C43, 800 ft (244 m) upstream from Wayman Creek, 1,000 ft (305 m) southeast of Garber, 2,000 ft (610 m) downstream from Elk Creek, 1 mi (1.6 km) downstream from Volga River, and 19.8 mi (31.9 km) upstream from mouth.

DRAINAGE AREA.--1,545 mi² (4,002 km²).

PERIOD OF RECORD.--August 1913 to November 1916, May 1919 to September 1927, April 1929 to September 1930, October 1932 to current year. Monthly discharge only for some periods, published in WSP 1308.

REVISED RECORDS.--WSP 1308: 1922-25 (M), 1927 (M). WSP 1438: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 634.46 ft (193.383 m) above mean sea level. Prior to Feb. 7, 1935, nonrecording gage at same site and datum.

REMARKS.--Records good except those for winter period, which are poor. Several observations of water temperature were made during the year.

COOPERATION.--Eight discharge measurements furnished by Corps of Engineers.

AVERAGE DISCHARGE.--56 years (1913-16, 1919-27, 1929-30, 1932-76), 905 ft³/s (25.63 m³/s), 7.95 in/yr (202 mm/yr), 655,700 acre-ft/yr (808 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 32,300 ft³/s (915 m³/s) Feb. 23, 1922, gage height, 28.06 ft (8.553 m), from floodmark; minimum daily, 49 ft³/s (1.39 m³/s) Jan. 28, 29, 1940.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since at least 1890, that of Feb. 23, 1922.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 8,000 ft³/s (227 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage Height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage Height (ft) (m)
Mar. 12	2230	*18,300 518	*22.18 6.760	Apr. 22	0800	8,220 233	15.68 4.779

Minimum daily discharge, 144 ft³/s (4.08 m³/s) Jan. 3.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	299	242	310	180	186	1220	1670	1800	865	351	417	238
2	283	246	310	180	154	756	1400	1660	799	338	359	224
3	269	270	320	144	172	564	1120	1500	722	324	359	217
4	263	290	350	150	170	711	1000	1370	670	313	362	214
5	255	278	465	178	160	819	880	1280	623	308	368	204
6	250	266	430	190	170	451	790	1200	588	302	354	201
7	242	258	342	184	174	540	718	1110	565	301	318	197
8	242	258	370	182	200	537	664	1060	537	306	306	191
9	237	266	370	176	220	797	616	1000	512	298	290	181
10	242	318	362	174	250	1450	585	928	496	284	282	170
11	242	545	350	166	280	1870	580	862	493	274	278	173
12	242	420	338	164	300	13900	570	838	482	262	266	169
13	242	370	306	164	330	13100	545	856	472	253	266	161
14	242	338	366	164	324	5130	525	946	529	248	270	162
15	241	322	370	164	357	2620	550	900	543	243	278	156
16	234	310	358	174	432	1740	1200	907	500	239	286	158
17	236	302	228	160	394	1280	988	1110	474	236	346	161
18	238	294	176	160	447	1140	2310	1100	455	231	1710	159
19	238	282	242	168	598	1070	6570	1160	436	227	1020	186
20	250	279	250	168	718	1010	4270	1060	420	238	640	236
21	250	301	264	174	779	915	4700	959	407	344	440	222
22	242	296	250	176	602	783	7510	901	392	250	386	195
23	242	282	240	176	660	684	4520	857	385	244	346	183
24	246	281	230	178	606	624	4210	820	378	251	326	166
25	258	277	224	186	912	579	4430	775	382	257	314	162
26	258	258	218	190	1910	552	4320	732	377	243	334	162
27	254	250	200	180	4200	572	3290	693	368	231	298	160
28	250	250	190	190	4450	581	2580	660	358	3940	274	158
29	242	276	190	190	2370	765	2230	726	358	944	262	156
30	238	560	192	190	---	933	1980	995	358	605	246	152
31	238	---	186	176	---	1410	---	983	---	496	242	---
TOTAL	7705	9185	8997	5396	22525	59103	67321	31758	14944	13381	12243	5474
MEAN	249	306	290	174	777	1907	2244	1024	498	432	395	182
MAX	299	560	465	190	4450	13900	7510	1800	865	3940	1710	238
MIN	234	242	176	144	154	451	525	660	358	227	242	152
CFSM	.16	.20	.19	.11	.50	1.23	1.45	.66	.32	.28	.26	.12
IN	.19	.22	.22	.13	.54	1.42	1.62	.76	.36	.32	.29	.13
AC-FT	15200	18220	17850	10700	44680	117200	133500	62990	29640	26540	24280	10860
CAL YR 1975	TOTAL	358399	MEAN 982	MAX 15000	MIN 176	CFSM .64	IN 8.63	AC-FT 710900				
WTR YR 1976	TOTAL	258032	MEAN 705	MAX 13900	MIN 144	CFSM .46	IN 6.21	AC-FT 511800				

05414500 LITTLE MAQUOKETA RIVER NEAR DURANGO, IA

LOCATION.--Lat 42°33'18", Long 90°44'46". in NW1/4 NE1/4 sec.5, T.89 N., R.2 E., Dubuque County, Hydrologic Unit 07060003, on left bank 10 ft (3 m) upstream from bridge on county highway, 300 ft (91 m) upstream from Cloie Branch, 1.7 mi (2.7 km) east of Durango, 5.6 mi (9.0 km) northwest of court house at Dubuque, and 6.4 mi (10.3 km) upstream from mouth.

DRAINAGE AREA.--130 mi² (337 km²).

PERIOD OF RECORD.--October 1934 to current year.

REVISED RECORDS.--WSP 1508: 1935-38, 1939 (M), 1940, 1943 (M), 1946, 1948.

GAGE.--Water-stage recorder. Datum of gage is 612.03 ft (186.547 m) above mean sea level. Prior to Jan. 5, 1939, nonrecording gage at same site and datum.

REMARKS.--Records excellent except those for winter period, which are good. Several observations of water temperature were made during the year.

COOPERATION.--Eight discharge measurements furnished by Corps of Engineers.

AVERAGE DISCHARGE.--42 years, 87.0 ft³/s (2.454 m³/s), 9.09 in/yr (231 mm/yr), 63,030 acre-ft/yr (77.7 hm³/yr); median of yearly mean discharges, 73 ft³/s (2.07 m³/s), 7.6 in/yr (193 mm/yr), 52,900 acre-ft/yr (65.2 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 40,000 ft³/s (1,130 m³/s) Aug. 2, 1972, gage height, 23.13 ft (7.050 m) in gage well, 23.8 ft (7.25 m), from floodmarks, on basis of slope-area measurement of peak flow; minimum daily, 5 ft³/s (142 dm³/s) July 12, 13, 1936.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of June 15, 1925, reached a stage of about 22.1 ft (6.74 m), discharge, about 29,000 ft³/s (821 m³/s), computed by Corps of Engineers.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 6,900 ft³/s (195 m³/s) Mar. 4, gage height, 14.94 ft (4.554 m) at 2130 hours, no other peak above base of 3,000 ft³/s (85.0 m³/s); minimum daily, 12 ft³/s (0.340 m³/s) Jan. 10.

REVISIONS.--Revised figures of discharge for Dec. 17-31, 1974, for calendar year 1974, and for water year 1975, superseding those published in the report for 1975, are given herein.

Dec. 17.....53	Dec. 21.....50	Dec. 25.....37	Dec. 29.....45
18.....49	22.....46	26.....38	30.....39
19.....48	23.....45	27.....45	31.....41
20.....42	24.....41	28.....45	

MONTH	TOTAL	MEAN	MAX	MIN	CFSM	IN	AC-FT
December 1974	1,483	47.8	71	37	.37	.42	2,940
CAL YR 1974	56,003	153	3,510	31	1.18	16.03	111,140
WTR YR 1975	36,584	100	2,020	24	.77	10.47	72 550

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	24	26	55	20	19	81	66	100	39	22	18	18
2	24	26	49	20	19	73	58	90	36	21	17	18
3	24	28	42	16	18	63	54	78	32	20	16	18
4	24	29	38	15	18	1400	49	69	31	19	15	17
5	24	31	44	14	18	599	47	69	29	19	20	16
6	24	30	41	19	18	194	46	75	28	19	19	16
7	24	30	35	22	18	305	43	59	28	20	17	16
8	25	30	34	16	18	194	41	54	27	20	16	16
9	25	30	34	13	19	233	39	51	26	19	16	15
10	25	49	33	12	19	155	39	50	25	18	16	15
11	25	35	34	13	20	134	46	49	26	16	16	15
12	25	31	33	14	21	735	40	45	25	16	19	16
13	25	30	33	15	23	175	38	55	29	16	88	15
14	26	28	44	16	26	109	39	61	51	16	34	15
15	26	28	42	15	42	85	45	55	34	15	25	15
16	26	28	25	14	53	72	44	58	27	18	19	16
17	26	28	19	14	65	61	71	63	25	15	21	16
18	26	27	18	13	918	64	94	50	24	15	20	18
19	26	27	18	13	194	64	87	46	24	15	18	23
20	26	29	23	14	174	68	102	43	23	16	17	29
21	26	32	21	14	327	61	358	42	22	18	17	25
22	26	28	20	14	101	52	197	39	22	19	16	24
23	26	27	20	14	83	50	205	39	23	21	17	24
24	26	28	19	14	122	50	311	37	24	18	17	24
25	32	27	21	14	456	49	434	35	26	16	62	24
26	32	26	21	15	901	51	250	35	23	16	57	24
27	29	28	20	14	717	75	184	34	22	17	23	24
28	28	27	19	14	269	57	149	33	29	53	30	24
29	27	162	19	16	145	60	127	66	26	37	25	24
30	26	320	20	17	---	68	113	85	25	22	19	25
31	26	---	20	18	---	65	---	44	---	20	19	---
TOTAL	804	1305	915	472	4841	5542	3416	1709	831	612	749	585
MEAN	25.9	43.5	29.5	15.2	167	179	114	55.1	27.7	19.7	24.2	19.5
MAX	32	320	56	22	918	1400	434	100	51	53	88	29
MIN	24	26	18	12	18	49	38	33	22	15	15	15
CFSM	.20	.33	.23	.12	1.28	1.38	.88	.42	.21	.15	.19	.15
IN.	.23	.37	.26	.14	1.39	1.59	.96	.49	.24	.18	.21	.17
AC-FT	1590	2590	1810	936	9600	10990	6780	3390	1650	1210	1490	1160
CAL YR 1975	TOTAL	35065	MEAN 96.1	MAX 2020	MIN 18	CFSM .74	IN 10.03	AC-FT 69550				
WTR YR 1976	TOTAL	21781	MEAN 59.5	MAX 1400	MIN 12	CFSM .46	IN 6.23	AC-FT 43200				

05417700 BEAR CREEK NEAR MONMOUTH, IA

LOCATION.--Lat 42°02'18", long 90°52'59", in NE1/4 SE1/4 sec.31, T.84 N., R.1 E., Jackson County, Hydrologic Unit 07060006, on right bank 15 ft (5 m) downstream from bridge on county highway, 1.6 mi (2.6 km) upstream from Rat Run, 2.8 mi (4.5 km) south of Monmouth, and 8.2 mi (13.2 km) upstream from mouth.

DRAINAGE AREA.--61.3 mi² (159 km²).

PERIOD OF RECORD.--October 1957 to September 1976 (discontinued).

REVISED RECORDS.--WSP 1708: 1959.

GAGE.--Water-stage recorder and concrete control. Datum of gage is 728.80 ft (222.138 m) above mean sea level.

REMARKS.--Records good except those for winter period, which are poor. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--19 years, 44.9 ft³/s (1.271 m³/s), 9.95 in/yr (253 mm/yr), 32,530 acre-ft/yr (40.1 hm³/yr); median of yearly mean discharges, 39 ft³/s (1.10 m³/s), 8.6 in/yr (218 mm/yr), 28,300 acre-ft/yr (34.9 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 7,340 ft³/s (208 m³/s) Sept. 21, 1965, gage height, 13.76 ft (4.194 m); minimum daily, 1.8 ft³/s (0.051 m³/s) Dec. 8-12, 1958.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in June 1944 reached a stage of about 21.5 ft (6.55 m), from floodmark, from information by local residents, discharge not determined.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 972 ft³/s (27.5 m³/s) Mar. 5, gage height, 8.21 ft (2.502 m), no peak above base of 1,000 ft³/s (28.3 m³/s); minimum daily, 2.3 ft³/s (0.07 m³/s) Jan. 8.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	9.3	9.7	41	8.0	4.4	17	19	32	14	7.3	4.4	3.1
2	8.3	11	22	8.0	3.6	16	17	31	14	6.9	4.3	3.1
3	7.9	10	17	4.2	4.3	16	16	26	13	6.4	4.2	3.1
4	7.7	10	14	3.6	5.2	241	15	22	12	6.3	4.2	3.1
5	7.9	9.8	16	2.7	4.9	447	14	23	11	6.1	4.3	3.1
6	7.6	9.4	15	3.4	6.0	60	14	126	10	6.0	4.4	3.1
7	7.5	10	12	3.3	6.5	39	13	51	9.8	5.9	4.1	3.1
8	7.6	10	13	2.3	7.2	29	12	39	9.3	5.9	4.0	3.3
9	7.6	10	13	2.5	7.0	26	12	35	8.9	5.8	4.0	3.8
10	7.3	11	12	2.7	7.8	21	12	31	9.0	5.8	3.9	3.3
11	7.2	12	13	2.9	8.6	17	13	27	9.5	5.6	3.9	4.5
12	7.6	11	12	3.0	11	76	12	24	9.0	5.4	4.0	3.7
13	7.7	9.7	12	3.2	12	38	13	30	9.2	5.3	4.1	3.6
14	8.0	9.0	13	3.1	9.6	31	13	25	16	5.3	4.0	3.6
15	7.6	9.1	12	3.3	16	27	17	19	14	6.2	4.0	3.7
16	7.2	9.3	8.3	3.6	25	24	17	20	12	6.1	3.7	3.7
17	7.3	9.6	6.9	2.7	28	19	15	18	11	5.4	3.7	3.6
18	7.3	8.9	5.8	3.0	144	23	20	16	11	5.2	3.8	3.6
19	6.3	8.7	5.9	3.3	37	20	20	15	11	5.3	3.6	3.8
20	7.9	9.4	7.4	3.4	19	18	19	15	10	5.7	3.6	2.9
21	8.1	10	7.4	3.4	83	17	36	14	10	6.3	3.5	3.9
22	8.0	9.7	7.5	3.4	25	15	35	13	10	6.3	3.4	3.8
23	8.3	8.2	7.8	3.6	21	15	32	14	12	6.0	3.3	3.8
24	8.5	3.7	7.8	3.8	80	19	51	13	12	5.7	3.4	4.3
25	8.6	8.4	2.0	3.9	226	18	62	13	10	5.3	3.3	4.1
26	8.5	6.6	8.8	3.9	85	18	59	13	9.4	5.4	3.3	4.3
27	8.3	6.6	8.0	3.9	34	25	47	13	9.1	5.4	3.2	4.3
28	8.0	8.0	7.8	4.7	25	20	40	13	8.9	5.2	3.3	4.1
29	7.5	8.9	7.9	4.5	20	19	37	14	9.0	5.4	3.2	4.1
30	7.5	112	8.0	4.3	---	22	34	17	7.8	4.9	3.1	4.1
31	8.0	---	6.7	4.2	---	20	---	15	---	4.6	3.1	---
TOTAL	244.1	384.7	357.0	115.8	968.1	1413	736	777	321.9	178.4	116.3	110.6
MEAN	7.87	12.8	11.5	3.74	33.4	45.6	24.5	25.1	10.7	5.75	3.75	3.69
MAX	9.3	112	41	8.0	226	147	62	126	16	7.3	4.4	4.5
MIN	7.2	6.6	5.8	2.3	3.6	15	12	13	7.8	4.6	3.1	3.1
CFSM	.13	.21	.19	.06	.54	.74	.40	.41	.17	.09	.06	.06
IN.	.15	.23	.22	.07	.59	.86	.45	.47	.20	.11	.07	.07
AC-FT	484	763	708	230	1920	2800	1460	1540	638	354	231	219
CAL YR 1975 TOTAL	14075.3			MEAN 38.6	MAX 997	MIN 5.8	CFSM .63	IN 8.54	AC-FT 27920			
WTR YR 1976 TOTAL	5722.9			MEAN 15.6	MAX 447	MIN 2.3	CFSM .25	IN 3.47	AC-FT 11350			

MAQUOKETA RIVER BASIN

05418500 MAQUOKETA RIVER NEAR MAQUOKETA, IA

LOCATION.--Lat 42°05'05", long 90°38'04", in SW1/4 NE1/4 sec.17, T.84 N., R.3 E., Jackson County, Hydrologic Unit 07060006, on right bank 500 ft (152 m) upstream from bridge on State Highway 62, 1,200 ft (366 m) upstream from Prairie Creek, 2.0 mi (3.2 km) northeast of Maquoketa, 2.2 mi (3.5 km) downstream from North Fork, and 26.7 mi (43.0 km) upstream from mouth.

DRAINAGE AREA.--1,553 mi² (4,022 km²).

PERIOD OF RECORD.--September 1913 to current year. Prior to October 1939, published as "below North Fork near Maquoketa". Monthly discharge only for some periods, published in WSP 1308.

REVISED RECORDS.--WSP 405: 1914. WSP 1438: Drainage area. WSP 1508: 1914-17, 1919-25, 1926 (M), 1929, 1933-34 (M), 1943.

GAGE.--Water-stage recorder. Datum of gage is 626.52 ft (190.963 m) above mean sea level, adjustment of 1912. Prior to July 14, 1924, nonrecording gage, and July 15, 1924 to Sept. 30, 1972, recording gage at same site at datum 10.00 ft (3.048 m) higher.

REMARKS.--Records good except those for winter period, which are poor. Diurnal fluctuation caused by powerplant 4 mi (6.4 km) above station. Several observations of water temperature were made during the year. National Weather Service gage height telemeter at station.

COOPERATION.--Eight discharge measurements furnished by Corps of Engineers.

AVERAGE DISCHARGE.--63 years, 1,018 ft³/s (28.83 m³/s), 8.90 in/yr (226 mm/yr), 737,500 acre-ft/yr (909 km³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 48,000 ft³/s (1,360 m³/s) June 27, 1944, gage height, 24.70 ft (7.529 m) at datum then in use; minimum daily, 105 ft³/s (2.97 m³/s) Feb. 11-20, 1936.

EXTREMES OUTSIDE PERIOD OF RECORD.--A flood, probably in 1903, reached a stage of 23.5 ft (7.16 m), discharge, 43,000 ft³/s (1,220 m³/s), at datum in use prior to Oct. 1, 1972.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 13,000 ft³/s (368 m³/s) Mar. 5, gage height, 24.54 ft (7.480 m) at 1345 hours, no other peak above base of 7,500 ft³/s (212 m³/s); minimum daily, 208 ft³/s (5.89 m³/s) Sept. 30.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	511	460	1450	436	360	1510	990	1670	778	497	523	331
2	503	460	827	446	320	1180	997	1320	715	449	499	326
3	511	478	771	530	320	1010	1150	1170	716	443	414	328
4	511	497	712	460	320	2220	984	1020	655	410	432	331
5	478	478	662	540	320	10500	845	998	548	401	406	304
6	451	475	608	530	320	3420	777	1330	618	407	398	319
7	440	457	578	440	320	1790	756	1140	753	421	391	317
8	457	507	531	390	330	1610	713	1250	655	424	366	317
9	454	439	539	400	340	1570	651	1260	643	392	360	320
10	444	488	537	380	410	1370	666	917	496	407	359	315
11	441	477	516	390	470	1490	692	889	541	395	355	307
12	439	467	500	430	530	2160	663	1120	538	380	358	289
13	435	476	520	440	600	3670	680	915	488	377	370	313
14	452	453	467	430	580	3340	762	1150	579	386	382	314
15	460	468	530	450	510	2030	1010	1040	582	379	433	302
16	471	420	502	400	571	1300	859	1190	552	402	397	299
17	464	452	470	320	809	1120	903	934	456	390	377	302
18	462	435	530	330	1700	1060	827	857	499	364	362	303
19	427	432	750	320	1970	1030	877	1040	519	366	345	308
20	427	430	740	330	1190	1010	798	934	450	454	355	342
21	431	425	750	330	1560	949	960	884	457	871	365	349
22	467	420	710	330	1170	927	1300	852	456	440	338	333
23	467	415	700	340	756	973	1960	830	458	412	355	309
24	460	410	680	350	936	946	2110	801	550	396	348	304
25	465	405	660	360	2400	911	2350	693	544	377	329	279
26	461	385	580	370	3110	947	2540	768	535	369	350	308
27	448	350	620	350	3220	979	2120	720	525	367	451	344
28	428	379	595	330	3420	974	1920	685	517	382	370	535
29	411	486	511	340	2330	977	1640	873	482	401	353	301
30	410	1230	453	350	---	852	1530	968	471	663	347	208
31	432	---	502	350	---	924	---	817	---	693	340	---
TOTAL	14118	14154	19511	12192	31192	54749	35030	31035	16816	13515	11828	9557
MEAN	455	472	629	393	1076	1766	1168	1001	561	436	382	319
MAX	511	1230	1450	540	3420	10500	2540	1670	778	871	523	535
MIN	410	350	453	320	320	852	651	685	450	364	329	208
CFSM	.29	.30	.41	.25	.69	1.14	.75	.64	.36	.28	.25	.21
IN.	.34	.34	.47	.29	.75	1.31	.84	.74	.40	.32	.28	.23
AC-FT	28000	28070	38700	24180	61870	108600	69480	61560	33350	26810	23460	18950
CAL YR 1975	TOTAL	436202	MEAN	1195	MAX	27000	MIN	334	CFSM	.77	IN	10.45
WTR YR 1976	TOTAL	263697	MEAN	720	MAX	10500	MIN	208	CFSM	.46	IN	6.32
									AC-FT	865200		
									AC-FT	523000		

MISSISSIPPI RIVER MAIN STEM

53

05420500 MISSISSIPPI RIVER AT CLINTON, IA
(National stream-quality accounting network station)

LOCATION.--Lat 41°46'53", long 90°15'04", in NW1/4 sec.34, T.81 N., R.6 E., Clinton County, Hydrologic Unit 07080101, on right bank at foot of Seventh Avenue in Camanche, 5.0 mi (8.0 km) upstream from Wapsipinicon River, 6.4 mi (10.3 km) downstream from Clinton, 10.6 mi (17.1 km) downstream from dam 13, and at mile 511.8 (823.5 km) upstream from Ohio River. Prior to June 6, 1969, at site 400 ft (122 m) downstream.

DRAINAGE AREA.--85,600 mi² (221,700 km²), approximately, at Fulton-Lyons Bridge where discharge measurements are made.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--June to August 1873 (fragmentary), October 1873 to current year (October 1932 to September 1939, published as "at Le Claire").

REVISED RECORDS.--WRD IA-75-1: 1974.

GAGE.--Water-stage recorder. Datum of gage is 562.68 ft (171.50 m) above mean sea level. Oct. 1, 1955, to June 5, 1969, water-stage recorder at site 400 ft (121 m) downstream at same datum. Auxiliary water-stage recorder at dam 13 since Oct. 1, 1958. See WSP 1728 for history of changes prior to Oct. 1, 1955.

REMARKS.--Records good except those for winter period, which are poor. Minor flow regulation caused by navigation dams.

COOPERATION.--Four discharge measurements and discharge data at Lock and Dam No. 13 furnished by Corps of Engineers.

AVERAGE DISCHARGE.--103 years, 47,290 ft³/s (1,339 m³/s), 7.50 in/yr (191 mm/yr), 34,260,000 acre-ft/yr (42,200 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 307,000 ft³/s (8,690 m³/s) Apr. 28, 1965; maximum gage height, 24.65 ft (7.513 m) Apr. 28, 1965; minimum daily discharge, 6,500 ft³/s (184 m³/s) Dec. 25-27, 1933.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage known since at least 1828 that of Apr. 28, 1965.

EXTREMES FOR CURRENT YEAR.--Maximum daily discharge, 154,000 ft³/s (4,360 m³/s) Apr. 11; maximum gage height, 17.20 ft (5.243 m) Apr. 11; minimum daily discharge, 14,100 ft³/s (399 m³/s) Sept. 9; minimum gage height, 8.23 ft (2.509 m) Aug. 10.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	33700	29200	49900	32700	25600	61400	85600	111000	28400	20000	21700	14800
2	33700	29700	43200	32400	25500	57600	88200	108000	31700	20900	20400	16500
3	30500	25700	39100	31800	25300	54800	95400	102000	32300	22100	18600	17500
4	28700	29700	35100	30700	24500	55500	99300	91000	30000	22300	18500	15300
5	27500	30000	36900	30700	24600	69000	108000	79600	26700	22300	18000	14800
6	25900	29800	44500	28200	24900	65400	119000	67500	26200	21200	14800	15200
7	26300	29300	48300	27200	24900	50400	127000	57400	26200	20800	15600	14500
8	23900	28100	47700	24200	25000	49500	135000	52500	27900	19900	15100	14500
9	22600	28900	48500	23100	25800	49900	144000	52100	29100	20400	14300	14100
10	22000	31100	49800	22800	26100	50600	151000	51800	27600	19800	14700	16100
11	21200	32200	50100	22600	26200	51700	154000	49300	22600	17500	16400	17900
12	21400	36100	50300	22400	26300	53800	153000	43900	20100	15500	17600	17700
13	23600	38400	49500	22500	26900	62300	151000	39600	20200	16000	17600	17000
14	26000	41800	48500	22600	28300	75400	146000	38900	23600	16300	18100	15800
15	29000	44600	48100	22700	27800	81600	140000	38400	29700	16900	19500	14500
16	28300	45500	43400	22800	28700	83100	132000	37600	28300	18400	19100	14500
17	26000	50200	33000	22800	33000	83100	123000	39500	26000	21000	19900	15200
18	23500	53500	20000	22800	40000	83800	116000	43600	21600	21000	18600	14900
19	23700	57200	17100	23200	47200	76000	109000	46000	21300	20600	17500	14200
20	23500	55000	20500	23500	50700	65300	106000	44100	22800	20000	17200	14600
21	22600	53100	22200	23600	51000	60600	104000	39200	22400	17900	16200	15700
22	24600	50400	21600	23800	46800	54700	104000	38700	23000	17600	17400	17200
23	24500	46600	21400	24300	46100	52900	102000	35900	26000	16700	16700	17100
24	24500	44500	23200	24300	47300	55800	103000	35500	28900	18000	16200	18000
25	23900	46000	26600	24600	49700	59400	103000	36900	29600	18500	14900	18600
26	25400	45400	29800	24600	56100	62800	106000	34700	28500	18800	16200	17100
27	27400	46100	31000	25800	56500	70900	112000	31400	25000	18300	16500	17000
28	30400	46200	31700	25900	60000	73600	114000	27600	23300	19400	15700	16600
29	33600	44300	34300	26000	62900	74500	113000	26400	21300	28200	15600	16000
30	32000	46400	33100	25800	---	75800	112000	27000	19000	26500	16700	15200
31	29500	---	33000	25600	---	81400	---	28000	---	21700	16200	---
TOTAL	819400	1219000	1131400	786000	1063700	2002600	3555500	1555100	769300	614500	531600	478100
MEAN	26430	40630	36500	25350	36680	64600	118500	50160	25640	19820	17150	15940
MAX	33700	57200	50300	32700	62900	83800	154000	111000	32300	28200	21700	18600
MIN	21200	28100	17100	22400	24500	49500	85600	26400	19000	15500	14300	14100
CFSM	.21	.47	.43	.30	.43	.75	1.38	.59	.30	.23	.20	.19
IN-	.36	.53	.49	.34	.46	.87	1.55	.68	.33	.27	.23	.21
AC-FT	1625000	2418000	2244000	1559000	2110000	3972000	7052000	3085000	1526000	1219000	1054000	948300
CAL YR 1975 TOTAL	18978300			MEAN 52000	MAX 214000	MIN 17100	CFSM .61	IN 8.25	AC-FT 37640000			
WTR YR 1976 TOTAL	14526200			MEAN 39690	MAX 154000	MIN 14100	CFSM .46	IN 6.31	AC-FT 28810000			

MISSISSIPPI RIVER MAIN STEM

05420500 MISSISSIPPI RIVER AT CLINTON, IA--Continued
(National Stream-quality accounting network station)

WATER-QUALITY RECORDS

LOCATION.--Samples collected at bridge on State Highway 136 in Clinton, 6.4 mi (10.3 km) upstream from discharge station.

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

REMARKS.--Recorded water temperature data for station 05420400 at Dam 13 available since June 1969 in reports of Water Resources Data for Illinois.

WATER QUALITY DATA, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976

ONCE-DAILY											
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	SEP
1	290	340	280	320	340	320	260	240	260	290	310
2	290	340	370	320	340	300	260	240	270	290	310
3	290	350	300	320	340	280	260	240	270	290	310
4	300	340	270	310	360	280	240	240	260	300	310
5	300	340	290	260	360	280	240	240	270	300	320
6	300	340	290	320	360	280	240	240	270	300	320
7	300	340	290	320	360	280	240	260	270	300	310
8	310	340	280	320	360	280	240	260	270	300	310
9	310	340	290	300	340	280	240	260	280	290	310
10	310	340	290	380	360	280	240	260	280	290	320
11	320	320	260	360	340	280	240	260	270	290	320
12	310	350	330	360	320	280	240	260	280	290	320
13	320	290	330	360	320	260	240	260	280	290	320
14	310	380	320	360	320	280	220	260	280	280	320
15	320	320	230	360	340	280	---	260	280	280	330
16	320	360	280	360	340	280	220	260	280	290	330
17	320	380	380	360	320	280	220	260	280	290	320
18	330	380	300	360	320	280	220	260	290	290	320
19	330	380	280	360	320	280	220	260	290	300	330
20	330	310	280	360	320	280	220	250	290	300	330
21	330	380	280	360	320	280	240	250	280	290	330
22	340	320	330	340	320	280	240	260	280	290	310
23	340	310	300	340	320	280	240	260	290	290	310
24	330	380	270	360	300	260	240	260	290	290	300
25	330	380	330	360	300	260	240	260	300	290	300
26	340	380	330	360	300	260	240	260	300	290	290
27	340	360	320	360	300	280	240	260	300	240	290
28	330	340	320	360	300	260	240	260	300	280	290
29	330	320	330	360	300	260	240	260	300	280	300
30	330	300	280	360	---	260	240	260	300	280	300
31	340	---	320	360	---	260	---	260	---	280	---
MONTH	319	345	305	345	329	277	238	255	282	290	315
YEAR	MAX	380	MIN	220	MEAN	299					

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976

ONCE-DAILY											
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	SEP
1	15.0	12.0	4.0	1.0	1.0	3.0	11.0	12.0	19.0	24.0	24.5
2	14.0	13.0	4.0	0.0	1.0	3.0	11.5	12.5	20.0	24.0	24.0
3	15.0	13.0	4.0	0.0	0.5	3.5	11.0	12.0	20.0	23.0	22.0
4	15.0	12.0	5.0	0.0	0.5	3.0	11.5	11.5	20.0	23.0	23.0
5	15.0	13.0	5.0	0.0	1.0	4.0	12.0	12.0	20.5	23.5	24.0
6	16.0	13.0	4.0	0.0	1.0	4.0	12.0	12.0	20.0	24.0	22.5
7	16.0	13.0	4.0	1.0	0.0	3.5	12.0	12.5	20.0	24.0	22.0
8	17.0	14.0	5.0	0.0	1.0	4.5	12.0	13.0	20.5	24.5	20.5
9	17.0	13.0	5.0	1.0	1.0	5.0	12.5	14.0	21.0	24.5	21.0
10	16.0	13.0	5.0	0.0	1.0	4.5	12.5	15.0	21.0	25.0	20.5
11	16.0	14.0	4.0	0.0	2.0	4.0	13.0	16.0	21.0	25.0	19.0
12	17.0	13.0	4.0	0.0	2.0	4.5	13.0	17.0	21.0	24.5	19.0
13	17.0	10.0	1.0	0.0	1.0	4.0	13.0	18.0	21.0	25.0	19.0
14	17.0	12.0	2.0	0.0	1.0	4.0	13.0	17.5	21.0	24.5	19.0
15	16.0	11.0	3.0	0.0	1.0	4.0	13.5	16.5	22.0	25.0	19.0
16	15.0	6.0	2.0	0.5	0.0	3.5	13.5	17.0	22.0	26.0	18.5
17	14.0	8.0	2.0	0.5	0.0	4.0	14.0	16.5	22.0	26.0	18.0
18	13.0	9.0	1.0	0.0	1.0	4.5	14.0	17.0	22.0	26.0	19.0
19	12.0	7.0	1.0	0.0	2.0	6.0	14.5	17.0	23.0	25.5	18.5
20	13.0	6.0	0.0	0.5	2.0	6.0	14.5	16.5	23.0	26.0	19.0
21	15.0	6.0	0.0	0.0	2.0	6.5	14.5	16.0	24.0	27.0	18.5
22	14.0	5.0	1.0	0.5	1.0	7.5	14.0	16.0	24.0	26.0	18.0
23	13.0	4.0	0.0	1.0	2.0	8.0	14.0	17.0	24.5	27.0	17.5
24	12.0	4.0	1.0	1.0	2.0	8.5	14.0	17.0	26.0	27.0	18.0
25	13.0	2.0	2.0	1.0	3.0	9.0	14.0	17.0	25.0	26.5	17.5
26	12.0	0.0	1.0	1.0	4.0	9.0	13.5	17.5	25.0	26.0	17.5
27	13.0	1.0	1.0	1.0	4.0	10.0	13.5	17.5	26.0	26.0	17.5
28	11.0	1.0	4.0	1.0	3.0	10.0	13.0	18.0	25.0	26.0	17.0
29	12.0	2.0	1.0	0.5	4.0	11.0	13.5	18.5	25.0	26.0	17.0
30	11.0	3.0	2.0	0.5	---	10.5	13.0	18.5	25.0	26.0	17.0
31	12.0	---	0.0	0.5	---	10.5	---	18.5	---	26.0	---
MONTH	14.5	8.5	2.5	0.5	1.5	6.0	13.0	15.5	22.5	25.0	20.0
YEAR	MAX	27.0	MIN	0.0	MEAN	13.0					

05420500 MISSISSIPPI RIVER AT CLINTON, IA--Continued
(National stream-quality accounting network station)

WATER-QUALITY RECORDS

WATER QUALITY DATA, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976

DATE	TIME	INSTAN- TANEOUS DIS- CHARGE (CFS) (00061)	DIS- SOLVED SILICA (SI02) (MG/L) (00055)	TOTAL IRON (FE) (UG/L) (01045)	DIS- SOLVED IRON (FE) (UG/L) (01045)	TOTAL MAN- GANESE (MN) (UG/L) (01055)	SUS- PEN- DED MAN- GANESE (MN) (UG/L) (01054)	DIS- SOLVED MAN- GANESE (MN) (UG/L) (01056)	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)
OCT												
20...	1230	25600	.2	--	--	--	--	--	38	16	8.5	2.9
NOV												
19...	1200	62100	.4	--	--	--	--	--	41	16	8.7	2.5
DEC												
16...	1230	38900	8.2	690	160	60	30	30	33	13	7.0	2.2
JAN												
13...	1130	55700	11	--	--	--	--	--	44	17	9.2	2.2
FEB												
21...	1445	50400	11	--	--	--	--	--	37	11	8.5	3.0
MAR												
22...	1140	57600	9.1	--	--	--	--	--	28	12	7.4	3.5
APR												
16...	1500	156000	9.1	--	--	--	--	--	26	9.3	5.6	2.4
MAY												
17...	1130	44800	.5	--	--	--	--	--	34	13	5.8	2.4
JUN												
17...	1120	26000	2.6	1400	520	160	70	90	22	10	4.0	1.4
JUL												
19...	1120	20600	6.6	--	--	--	--	--	39	17	8.5	2.4
AUG												
23...	1230	16600	1.4	--	--	--	--	--	40	20	12	2.8
SEP												
21...	1200	16100	.7	440	350	130	0	140	43	19	8.9	2.2

DATE	BICAR- BONATE (HCO3) (MG/L) (00440)	CAR- BONATE (CO3) (MG/L) (00445)	ALKA- LINIT- 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)	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 NITRO- GEN (N) (MG/L) (71887)	TOTAL PHOS- PHORUS (P) (MG/L) (00665)	DIS- SOLVED SOLIDS (RESI- DUE AT 180 C) (MG/L) (70300)
OCT												
20...	145	0	119	18	10	.2	.04	.70	.74	3.3	.12	196
NOV												
19...	162	9	148	18	11	.4	.06	1.1	1.2	5.1	.15	182
DEC												
16...	134	0	110	18	9.8	.2	--	--	--	--	--	--
JAN												
20...	185	--	152	20	12	.2	.90	.68	1.6	7.0	.11	216
FEB												
24...	141	0	116	18	11	.2	1.0	1.2	2.2	9.7	.18	184
MAR												
27...	134	0	102	16	8.5	.2	.93	1.5	2.4	11	.23	158
APR												
12...	103	9	84	19	7.5	.4	.68	1.2	1.9	8.3	.14	146
MAY												
17...	134	0	110	20	7.5	.2	.16	1.2	1.4	6.0	.23	148
JUN												
27...	155	0	127	12	5.3	.2	.30	.77	1.1	4.7	.17	146
JUL												
19...	132	0	108	21	10	.3	.33	.84	1.2	5.2	.18	212
AUG												
23...	177	0	145	22	16	.3	.13	.75	.89	3.9	.15	248
SEP												
21...	173	0	142	20	11	.2	.08	.67	.75	3.3	.12	219

DATE	TOTAL FILT- RABLE RESIDUE (MG/L) (00515)	DIS- SOLVED SOLIDS (SUM OF CONSTI- TUENTS) (MG/L) (70301)	DIS- SOLVED SOLIDS (TONS PER AC-FT DAY) (70303)	DIS- SOLVED SOLIDS (TONS PER DAY) (70302)	TOTAL NON- FILT- RABLE RESIDUE (MG/L) (00530)	HARD- NESS (CAL/MG (MG/L) (00900)	NON- CAR- BONATE HARD- NESS (MG/L) (00902)	PERCENT SODIUM (00932)	SODIUM AD- SCRP- TION RATIO (00931)	SPE- CIFIC CON- DUCT- ANCE (MICRO- PHOS) (00095)	PH (UNITS) (00400)
OCT											
20...	--	165	.27	13500	--	160	42	10	.3	320	8.0
NOV											
19...	--	187	.25	30500	--	170	20	10	.3	340	8.8
DEC											
16...	--	158	.21	16600	--	140	26	10	.3	310	8.7
JAN											
20...	--	207	.29	32500	--	180	28	10	.3	360	8.9
FEB											
24...	--	169	.25	25000	--	140	22	12	.3	300	7.9
MAR											
22...	--	146	.21	24600	--	120	18	12	.3	210	8.0
APR											
12...	--	130	.20	62300	--	100	19	10	.2	--	--
MAY											
17...	--	149	.20	17900	--	140	29	8	.2	260	9.6
JUN											
28...	--	135	.20	10400	--	96	0	8	.2	300	8.8
JUL											
19...	--	170	.29	11800	--	170	59	10	.3	240	8.4
AUG											
23...	--	208	.34	11100	--	180	37	12	.4	280	8.4
SEP											
21...	--	191	.30	9520	--	190	44	9	.3	270	7.6

MISSISSIPPI RIVER MAIN STEM

05420500 MISSISSIPPI RIVER AT CLINTON, IA--Continued
(National stream-quality accounting network station)

WATER-QUALITY RECORDS

WATER QUALITY DATA, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976

DATE	TEMPER- ATURE (DEG C) (00010)	TUR- BID- ITY (JTU) (00370)	CARBON DIOXIDE (CO2) (MG/L) (00435)	TOTAL PHYTO- PLANK- TON (CELLS PER ML) (60050)	PERI- PHYTON BIOMASS TOTAL DRY WEIGHT G/SQ M (00572)	PERI- PHYTON BIOMASS ASH WEIGHT G/SQ M (00572)	UNCOR- RECTED PERI- PHYTON CHLORO- PHYLL A MG/SQ M (32228)	UNCOR- RECTED PERI- PHYTON CHLORO- PHYLL B MG/SQ M (32226)	FECAL COLI- FORM (COL. PER 100 ML) (31516)	STREP- TOCOCCI (COL- ONIES PER 100 ML) (31679)	TOTAL ORGANIC CARBON (C) (MG/L) (00680)
OCT 29...	13.0	8	2.3	22000	37.0	33.0	27.0	1.60	80	4	--
NOV 19...	8.0	20	.5	21000	--	--	--	--	420	280	--
DEC 15...	2.0	5	.4	4000	--	--	--	--	1000	450	--
JAN 20...	2.0	3	.4	7700	--	--	--	--	430	140	--
FEB 24...	2.0	20	2.8	1400	--	--	--	--	58	340	--
MAR 22...	6.5	30	2.0	3800	--	--	--	--	550	160	--
APR 12...	12.0	5	--	26000	--	--	--	--	--	--	--
MAY 17...	16.0	43	.1	28000	--	--	--	--	240	120	--
JUN 23...	26.0	20	.4	14000	21.8	16.5	76.4	13.8	53	50	--
JUL 19...	24.0	20	.8	44000	--	--	--	--	--	--	--
AUG 23...	25.5	8	1.1	3700	--	--	--	--	70	63	--
SEP 21...	19.0	7	7.0	37000	24.1	19.4	11.1	.780	90	41	4.6

DATE	TOTAL ARSENIC (AS) (UG/L) (01002)	SUS- PENDED ARSENIC (AS) (UG/L) (01001)	DIS- SOLVED ARSENIC (AS) (UG/L) (01000)	TOTAL CAD- MIUM (CD) (UG/L) (01027)	SUS- PENDED CAD- MIUM (CD) (UG/L) (01026)	DIS- SOLVED CAD- MIUM (CD) (UG/L) (01025)	TOTAL CHRO- MIUM (CR) (UG/L) (01034)	SUS- PENDED CHRO- MIUM (CR) (UG/L) (01031)	DIS- SOLVED CHRO- MIUM (CR) (UG/L) (01030)	TOTAL COBALT (CO) (UG/L) (01037)	SUS- PENDED COBALT (CO) (UG/L) (01036)	DIS- SOLVED COBALT (CO) (UG/L) (01035)
DEC 16...	1	1	0	3	3	0	<10	<10	0	0	0	0
JUN 28...	3	2	1	0	0	0	10	10	0	0	0	0
SEP 21...	3	0	3	1	0	1	20	20	0	0	0	1

DATE	TOTAL COPPER (CU) (UG/L) (01042)	SUS- PENDED COPPER (CU) (UG/L) (01041)	DIS- SOLVED COPPER (CU) (UG/L) (01040)	TOTAL LEAD (PB) (UG/L) (01051)	SUS- PENDED LEAD (PB) (UG/L) (01050)	DIS- SOLVED LEAD (PB) (UG/L) (01049)	TOTAL MERCURY (HG) (UG/L) (71900)	SUS- PENDED MERCURY (HG) (UG/L) (71895)	DIS- SOLVED MERCURY (HG) (UG/L) (71890)	TOTAL SELE- NIUM (SE) (UG/L) (01147)	SUS- PENDED SELE- NIUM (SE) (UG/L) (01146)
DEC 16...	4	0	8	19	14	5	.0	.0	.0	0	0
JUN 28...	9	4	5	10	6	4	.9	.7	.2	0	0
SEP 21...	14	4	10	8	0	10	.2	.0	.2	0	0

DATE	DIS- SOLVED SELE- NIUM (SE) (UG/L) (01145)	TOTAL ZINC (ZN) (UG/L) (01092)	SUS- PENDED ZINC (ZN) (UG/L) (01091)	DIS- SOLVED ZINC (ZN) (UG/L) (01090)	DIS- SOLVED GROSS ALPHA AS (UG/L) (80030)	SUS- PENDED GROSS ALPHA AS (UG/L) (80040)	DIS- SOLVED GROSS BETA AS (PC/L) (03515)	SUS- PENDED GROSS BETA AS (PC/L) (03516)	DIS- SOLVED GROSS BETA AS SR90 /Y90 (PC/L) (80050)	SUS- PENDED GROSS BETA AS SR90 /Y90 (PC/L) (80060)	DIS- SOLVED RA-226 (RADON METHOD) (PC/L) (09511)
DEC 16...	0	30	20	10	--	--	--	--	--	--	--
JUN 28...	0	50	40	10	--	--	--	--	--	--	--
SEP 21...	0	60	20	40	--	--	--	--	--	--	--

05420500 MISSISSIPPI RIVER AT CLINTON, IA--Continued
(National stream-quality accounting network station)

WATER-QUALITY RECORDS

WATER QUALITY DATA, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976

DATE	TIME	TEMPER- ATURE (DEG C) (00010)	INSTAN- TANEOUS DIS- CHARGE (CFS) (00061)	SUS- PENDE DIS- MENT (MG/L) (80154)	SUS- PENDE MENT CHARGE (T/DAY) (80155)	SUS. SED. SIEVE DIAM. % FINER THAN .062 MM (70331)
OCT.						
20...	1230	13.0	25600	35	2420	--
NOV.						
19...	1200	8.0	62100	78	13100	--
DEC.						
16...	1230	2.0	38900	14	1470	--
JAN.						
20...	1130	2.0	55700	64	9630	92
FEB.						
24...	1445	2.0	50400	60	8170	98
MAR.						
22...	1140	6.5	57600	91	14200	--
APR.						
12...	1500	12.0	156000	97	40900	--
MAY						
17...	1130	16.0	44800	108	13100	--
JUNE						
20...	1120	26.0	26000	290	20400	--
JULY						
19...	1130	24.0	20500	22	1220	--
AUG.						
23...	1230	25.5	16600	58	2600	--
SEP.						
21...	1200	19.0	16100	36	1570	--

IDENTIFICATION OF PHYTOPLANKTON

OCT. 20, 1975
1230 HOURS

22,000 CELLS/ML

ORGANISM NAME	COMMON NAME	CELLS/ML	PER CENT	
CHLOROPHYTA	GREEN ALGAE			
.CHLOROPHYCEAE				
..CHLOROCOCCALES				
...MICRACTINIACEAE				
D ...MICRACTINIUM		4,400	20	
...OOCYSTACEAE				
...ANKISTRODESMUS		170	1	
L ...TETRAEDRON			0	
...SCENEDESMACEAE				
...CRUCIGENIA		590	3	
...SCENEDESMUS		1,000	5	
...TETRASTRUM		330	2	
TOTALS		6,500	31	1.553=DIVERSITY
CHRYSTOPHYTA				
.BACILLARIOPHYCEAE	DIATOMS			
..CENTRALES	CENTRIC			
...COSCINODISCACEAE				
...CYCLOTELLA		3,100	14	
...MELOSIRA		1,800	8	
...STEPHANODISCUS		670	3	
..PENNALES	PENNATE			
...NITZSCHIAEAE				
L ...NITZSCHIA			0	
TOTALS		5,700	25	1.457=DIVERSITY
CYANOPHYTA	BLUE-GREEN ALGAE			
.MYXOPHYCEAE				
..CHROOCOCCALES	COCCOID			
...CHROOCOCCACEAE				
D ...AGMENELLUM		9,400	42	
...OSCILLATORIALES	FILAMENTOUS			
...OSCILLATORIAEAE		500	2	
...PHORMIDIUM				
TOTALS		9,900	44	0.290=DIVERSITY

NOTE: D - DOMINANT ORGANISM; GREATER OR EQUAL TO 15%
L - LESS THAN 1%; MAY NOT HAVE BEEN ACTUALLY COUNTED
ANALYSIS METHOD: SEDGWICK-RAFTER CHAMBER, 200-X MICROSCOPE
DIVERSITY INDICES, BASED ON ACTUAL COUNTS:

PHYL/DIV 1.543
CLASS 1.543
ORDER 1.701
FAMILY 2.023
GENERA 2.507

MISSISSIPPI RIVER MAIN STEM

05420500 MISSISSIPPI RIVER AT CLINTON, IA--Continued
(National stream-quality accounting network station)

WATER-QUALITY RECORDS

WATER QUALITY DATA, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976

IDENTIFICATION OF PHYTOPLANKTON

NOV. 19, 1975

1200 HOURS

21,000 CELLS/ML

ORGANISM NAME	COMMON NAME	CELLS/ML	PER CENT	
CHLOROPHYTA	GREEN ALGAE			
L ....PEDIASTRUM			0	
...MICRACTINIACEAE				
L ....MICRACTINIUM			0	
...SCENEDESMACEAE				
L ....CRUCIGENIA			0	
CHRYSOPHYTA				
...BACILLARIOPHYCEAE	DIATOMS			
...CENTRALES	CENTRIC			
...COSCINODISCACEAE				
...CYCLOTELLA		1,100	5	
D ....MELOSIRA		3,900	18	
D ....STEPHANODISCUS		11,000	54	
...PENNALES	PENNATE			
...FRAGILARIACEAE				
...COCONEIS		230	1	
...FRAGILARIACEAE				
L ....SYNEDRA			0	
...NAVICULACEAE	NAVICULOID			
...NAVICULA		600	3	
...NITZSCHACEAE				
L ....NITZSCHIA			0	
...TABELLARIACEAE				
L ....TABELLARIA			0	
TOTALS		17,000	81	1.405=DIVERSITY
CYANOPHYTA	BLUE-GREEN ALGAE			
...HYXOPHYCEAE				
...OSCILLATORIALES	FILAMENTOUS			
...OSCILLATORIAACEAE				
D ....PHORMIDIUM		3,900	18	
TOTALS		3,900	18	0.000=DIVERSITY

DIVERSITY INDICES, BASED ON ACTUAL COUNTS:

PHYL/DIV 0.686
CLASS 0.686
ORDER 0.929
FAMILY 0.964
GENERA 1.235

IDENTIFICATION OF PHYTOPLANKTON

MAR. 22, 1976

1140 HOURS

3,800 CELLS/ML

ORGANISM NAME	COMMON NAME	CELLS/ML	PER CENT	
CHLOROPHYTA	GREEN ALGAE			
L ....ANKISTRODESMUS			0	
...VOLVOCALES				
...CHLAMYDOMONADACEAE				
...CHLAMYDOMONAS		260	7	
TOTALS		260	7	0.000=DIVERSITY
CHRYSOPHYTA				
...BACILLARIOPHYCEAE	DIATOMS			
...CENTRALES	CENTRIC			
...COSCINODISCACEAE				
...MELOSIRA		260	7	
D ....STEPHANODISCUS		2,500	66	
...PENNALES	PENNATE			
...FRAGILARIACEAE				
...ASTERICHELLA		130	3	
...NAVICULACEAE	NAVICULOID			
L ....NAVICULA			0	
...NITZSCHACEAE				
...NITZSCHIA		260	7	
...SURIRELLACEAE				
...SURIRELLA		130	3	
TOTALS		3,200	86	1.255=DIVERSITY
EUGLENOPHYTA	EUGLENOIDS			
...EUGLENOPHYCEAE				
...EUGLENALES				
...EUGLENACEAE				
...EUGLENA		260	7	
TOTALS		260	7	0.000=DIVERSITY

DIVERSITY INDICES, BASED ON ACTUAL COUNTS:

PHYL/DIV 0.717
CLASS 0.717
ORDER 1.264
FAMILY 1.470
GENERA 1.799

05420500 MISSISSIPPI RIVER AT CLINTON, IA--Continued
(National stream-quality accounting network station)

WATER-QUALITY RECORDS

WATER QUALITY DATA, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976

IDENTIFICATION OF PHYTOPLANKTON		APR. 12, 1976 1500 HOURS		
28,000	CELLS/ML			
ORGANISM NAME	COMMON NAME	CELLS/ML	PER CENT	
CHLOROPHYTA	GREEN ALGAE			
...MICRACETINIUM		1,900	7	
	TOTALS	1,900	7	0.000=DIVERSITY
CHRYSOPHYTA				
...BACILLARIOPHYCEAE	DIATOMS			
...CENTRALES	CENTRIC			
...CCSCINODISCACEAE				
D ...CYCLOTELLA		16,000	61	
...MELOSIRA		2,600	10	
L ...STEFANODISCUS			0	
...PENNATES	PENNATE			
...FRAGILARIACEAE				
...ASTERIONELLA		480	2	
...NAVICULACEAE	NAVICULOID			
L ...NAVICULA			0	
...NITZSCHACEAE				
...NITZSCHIA		960	4	
...SURIRELLACEAE				
L ...SURIRELLA			0	
	TOTALS	20,000	77	0.998=DIVERSITY
CYANOPHYTA	BLUE-GREEN ALGAE			
...MYXOPHYCEAE				
...OSCILLATORIALES	FILAMENTOUS			
...OSCILLATORIACEAE				
...LYRGSYA		960	4	
...OSCILLATORIA		3,100	12	
	TOTALS	4,100	16	0.787=DIVERSITY
PHYL/DIV 0.996				
CLASS 0.996				
ORDER 1.203				
FAMILY 1.337				
GENERA 1.665				

IDENTIFICATION OF PHYTOPLANKTON		MAY 17, 1976 1130 HOURS		
28,000	CELLS/ML			
ORGANISM NAME	COMMON NAME	CELLS/ML	PER CENT	
CHLOROPHYTA	GREEN ALGAE			
...MICRACETINIUM		340	1	
...COCCYSTACEAE				
...ANKISTRUMESMUS		690	2	
...POLYDRIONDIS		170	1	
...SCENODESMACEAE				
...ACTINASTRUM		520	2	
...CRUCIGERIA		690	2	
...SCENEDEMUS		2,700	10	
	TOTALS	5,200	18	2.015=DIVERSITY
CHRYSOPHYTA				
...BACILLARIOPHYCEAE	DIATOMS			
...CENTRALES	CENTRIC			
...CCSCINODISCACEAE				
D ...CYCLOTELLA		11,000	38	
D ...MELOSIRA		9,100	32	
...PENNATES	PENNATE			
...DIATOMACEAE				
...DIATOMA		520	2	
...FRAGILARIACEAE				
...FRAGILARIA		170	1	
...NAVICULACEAE	NAVICULOID			
...NAVICULA		170	1	
...NITZSCHACEAE				
...NITZSCHIA		690	2	
...SURIRELLACEAE				
...SURIRELLA		170	1	
	TOTALS	22,000	77	1.478=DIVERSITY
CYANOPHYTA	BLUE-GREEN ALGAE			
...MYXOPHYCEAE				
...OSCILLATORIALES	FILAMENTOUS			
...OSCILLATORIACEAE				
...OSCILLATORIA		1,200	4	
	TOTALS	1,200	4	0.000=DIVERSITY
EUGLENOPHYTA	EUGLENOIDS			
...EUGLENOPHYCEAE				
...EUGLENALES				
...EUGLENACEAE				
...TRACHELOMONAS		170	1	
	TOTALS	170	1	0.000=DIVERSITY
PHYL/DIV 0.980				
CLASS 0.980				
ORDER 1.267				
FAMILY 1.592				
GENERA 2.484				

MISSISSIPPI RIVER MAIN STEM

05420500 MISSISSIPPI RIVER AT CLINTON, IA--Continued
(National stream-quality accounting network station)

WATER-QUALITY RECORDS

WATER QUALITY DATA, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976

IDENTIFICATION OF PHYTOPLANKTON		JUNE 26, 1976 1120 HOURS		
14,000 CELLS/ML				
__ORGANISM__NAME__	__COMMON__NAME__	CELLS/ML	PER_CENT	
CHLOROPHYTA	GREEN ALGAE			
L ....SCHROEDERIA			0	
....HYDRODICTYACEAE				
....FEDIASTRUM		1,500	11	
....OOCYSTACEAE				
L ....CHODATELLA			0	
....SELENASTRUM		100	1	
....SCENEDESMACEAE				
....SCENEDESMUS		520	4	
....TETRASTRUM		620	4	
	TOTALS	2,600	20	1.682=DIVERSITY
CHRYSTOPHYTA				
..BACILLARIOPHYCEAE	DIATOMS			
..CENTRALES	CENTRIC			
..COSCINODISCACEAE				
....CYCLOTELLA		1,000	7	
....MELOSIRA		210	1	
....STEPHANODISCUS		100	1	
..PENNALES	PENNALE			
..NAVICULACEAE	NAVICULOID			
L ....GYROSIGMA			0	
....NITZSCHIA				
L ....NITZSCHIA			0	
	TOTALS	1,400	9	1.183=DIVERSITY
CYANOPHYTA	BLUE-GREEN ALGAE			
..MYXOPHYCEAE				
..CHROOCOCCALES	COCCOID			
..CHROOCOCCACEAE				
....ANACYSTIS				
D ....A.INSERTA		9,300	65	
....ANACYSTIS		460	3	
	TOTALS	9,700	69	0.276=DIVERSITY
PHYL/DIV 1.161 CLASS 1.161 ORDER 1.184 FAMILY 1.445 GENERA 1.620				

IDENTIFICATION OF PHYTOPLANKTON		JULY 19, 1976 1130 HOURS		
44,000 CELLS/ML				
__ORGANISM__NAME__	__COMMON__NAME__	CELLS/ML	PER_CENT	
CHLOROPHYTA	GREEN ALGAE			
....MICRACTINIUM		5,500	12	
....OOCYSTACEAE				
....OOCYSTIS		250	1	
....SCENEDESMACEAE				
....SCENEDESMUS		370	1	
	TOTALS	6,100	14	0.575=DIVERSITY
CHRYSTOPHYTA				
..BACILLARIOPHYCEAE	DIATOMS			
..CENTRALES	CENTRIC			
..COSCINODISCACEAE				
....CYCLOTELLA		440	1	
....MELOSIRA		1,700	4	
..PENNALES	PENNALE			
..ACHNANTHACEAE				
L ....ACHNANTHES			0	
....NITZSCHIA				
L ....NITZSCHIA			0	
	TOTALS	2,200	5	1.058=DIVERSITY
CYANOPHYTA	BLUE-GREEN ALGAE			
..MYXOPHYCEAE				
..CHROOCOCCALES	COCCOID			
..CHROOCOCCACEAE				
....AGMENELLUM		250	1	
D ....ANACYSTIS		35,000	80	
	TOTALS	36,000	81	0.060=DIVERSITY
EUGLENOPHYTA	EUGLENIDS			
..CRYPTOPHYCEAE	CRYPTOMONADS			
..CRYPTOMONIDAE				
..CRYPTOMONODACEAE				
L ....CRYPTOMONAS			0	
	TOTALS	62	0	0.000=DIVERSITY
PHYL/DIV 0.876 CLASS 0.876 ORDER 0.892 FAMILY 0.975 GENERA 1.059				

05420500 MISSISSIPPI RIVER AT CLINTON, IA--Continued
(National stream-quality accounting network station)

WATER-QUALITY RECORDS

WATER QUALITY DATA, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976

IDENTIFICATION OF PHYTOPLANKTON

AUG. 25, 1976
1230 HOURS

3,700 CELLS/ML

ORGANISM NAME	COMMON NAME	CELLS/ML	PER CENT	
CHLOROPHYTA	GREEN ALGAE			
....COELASTRUM		85	2	
....OOCYSTACEAE		28	1	
....SELENASTRUM				
....SCENEDESMACEAE		110	3	
....CRUCIGENIA			0	
L ....SCENEDESMUS				
....TETRASPORALES				
....PALMELLACEAE		92	3	
....SPHAEROCYSTIS				
....VOLVOCALES				
....CHLAMYDOMONADACEAE			0	
L ....CHLAMYDOMONAS				
TOTALS		330	9	1.977=DIVERSITY
CHRYSOPHYTA				
..BACILLARIOPHYCEAE	DIATOMS			
..CENTRALES	CENTRIC			
..COSCINODISCEAE		35	1	
....CYCLOTELLA		71	2	
....MEIOSIRA				
..PENNALES	PENNATE			
....FRAGILARIACEAE			0	
L ....SYNEDRA				
....NITZSCHACEAE			0	
L ....NITZSCHIA				
TOTALS		120	3	1.450=DIVERSITY
CYANOPHYTA	BLUE-GREEN ALGAE			
..MYXOPHYCEAE				
..CHROOCOCCALES	COCCOID			
..CHROOCOCCACEAE		2,600	72	
D ....ANACYSTIS				
..OSCILLATORIALES	FILAMENTOUS			
..OSCILLATORIAEAE		570	15	
D ....OSCILLATORIA				
TOTALS		3,200	87	0.672=DIVERSITY
PHYL/DIV 0.637				
CLASS 0.637				
ORDER 1.333				
FAMILY 1.424				
GENERA 1.451				

IDENTIFICATION OF PHYTOPLANKTON

SEP. 21, 1976
1200 HOURS

37,000 CELLS/ML

ORGANISM NAME	COMMON NAME	CELLS/ML	PER CENT	
CHLOROPHYTA	GREEN ALGAE			
L ....ANKISTRODESMUS			0	
....SCENEDESMACEAE		200	1	
....CRUCIGENIA		300	1	
....SCENEDESMUS				
TOTALS		650	2	1.526=DIVERSITY
CHRYSOPHYTA				
..BACILLARIOPHYCEAE	DIATOMS			
..CENTRALES	CENTRIC			
..COSCINODISCEAE		1,100	3	
....MEIOSIRA		300	1	
....STEPHANODISCUS				
..PENNALES	PENNATE			
....NAVICULACEAE	NAVICULOID		0	
L ....NAVICULA				
....NITZSCHACEAE		200	1	
....NITZSCHIA				
TOTALS		1,800	5	1.495=DIVERSITY
CYANOPHYTA	BLUE-GREEN ALGAE			
..MYXOPHYCEAE				
..CHROOCOCCALES	COCCOID			
..CHROOCOCCACEAE		4,600	12	
....AGMENELLUM		28,000	75	
D ....ANACYSTIS				
..OSCILLATORIALES	FILAMENTOUS			
..OSCILLATORIAEAE		2,300	6	
....OSCILLATORIA				
TOTALS		35,000	93	0.898=DIVERSITY
PHYL/DIV 0.401				
CLASS 0.401				
ORDER 0.765				
FAMILY 0.788				
GENERA 1.339				

WAPSIPINICON RIVER BASIN

05420560 WAPSIPINICON RIVER NEAR ELMA, IA

LOCATION.--Lat 43°14'34", long 92°31'48", in NW1/4 NW1/4 sec.8, T.97 N., R.14 W., Howard County, Hydrologic Unit 07080102, on right bank 10 ft (3 m) downstream from bridge on county highway B17, 0.2 mi (0.3 km) downstream from small left-bank tributary, 4.8 mi (7.7 km) west of Elma, and at mile 217.9 (350.6 km).

DRAINAGE AREA.--95.2 mi² (247 km²).

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

GAGE.--Water-stage recorder. Datum of gage is 1,130.05 ft (344.44 m) above mean sea level (revised).

REMARKS.--Records good except those for winter period, which are poor. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--18 years, 60.0 ft³/s (1.70 m³/s), 8.56 in/yr (217 mm/yr), 43.470 acre-ft/yr (53.6 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 10,100 ft³/s (286 m³/s) June 4, 1974, gage height, 14.94 ft (4.554 m), from high-water mark in well; minimum daily, 1.9 ft³/s (0.054 m³/s) Feb. 4-8, 1959.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 726 ft³/s (20.6 m³/s) Apr. 18, gage height, 10.96 ft (3.341 m) at 2400 hours, no other peak above base of 600 ft³/s (17.0 m³/s); maximum gage height, 14.49 ft (4.417 m) Mar. 13, backwater from ice; minimum daily discharge, 4.6 ft³/s (0.13 m³/s) Sept. 10.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	7.9	9.1	55	8.8	8.6	17	124	56	29	9.1	8.5	5.9
2	7.8	9.1	36	8.8	8.7	16	91	50	25	8.8	7.5	5.8
3	7.9	9.1	25	8.8	8.8	15	74	44	22	8.3	7.2	5.6
4	8.0	9.8	21	8.7	8.9	15	64	40	18	8.0	7.0	5.4
5	8.6	9.1	20	8.7	9.1	15	56	38	18	8.0	9.8	5.4
6	7.9	9.1	34	8.7	9.3	15	51	36	16	7.8	10	4.7
7	8.5	9.1	22	8.7	9.5	14	46	33	15	7.3	8.8	4.9
8	9.3	9.4	18	8.7	9.8	14	42	30	14	7.5	8.2	5.0
9	10	14	15	8.7	10	14	38	28	14	7.3	7.8	5.4
10	8.8	46	14	8.7	10	14	35	27	14	6.9	6.8	4.6
11	10	33	14	8.7	11	14	33	26	14	6.5	7.2	5.0
12	11	19	13	8.7	11	15	32	24	13	6.3	7.5	5.0
13	11	14	12	8.7	11	250	30	24	18	6.2	7.2	4.8
14	11	11	11	8.7	12	134	29	30	26	6.2	7.5	5.3
15	11	10	11	8.7	15	100	29	33	23	6.4	7.8	5.6
16	10	10	10	8.7	20	78	34	46	17	6.8	7.5	5.3
17	10	10	9.5	8.7	31	63	62	84	15	6.8	8.0	5.7
18	9.7	9.8	9.0	8.6	26	54	531	96	15	6.3	8.1	5.7
19	9.7	9.8	9.0	8.6	23	52	456	73	13	6.6	7.4	6.1
20	10	12	9.0	8.6	21	54	164	63	13	7.1	6.7	6.4
21	9.8	19	9.0	8.6	20	43	233	59	12	7.0	6.4	6.2
22	9.7	18	9.0	8.6	19	34	174	52	11	6.5	6.3	5.8
23	10	16	9.0	8.6	18	30	144	44	11	6.3	6.4	5.9
24	12	13	9.0	8.6	18	29	238	37	10	5.8	6.1	5.7
25	14	17	9.0	8.6	18	27	237	32	11	5.5	6.1	5.7
26	12	18	9.0	8.6	20	158	176	28	11	5.8	6.2	6.3
27	10	15	8.9	8.6	21	117	116	26	12	6.3	6.4	5.9
28	8.8	15	8.8	8.6	20	64	87	31	10	14	6.3	5.9
29	8.8	15	8.8	8.6	19	60	71	44	9.8	15	5.4	6.0
30	9.1	46	8.8	8.6	---	301	63	38	9.4	11	5.5	6.0
31	8.8	---	8.8	8.6	---	257	---	34	---	9.2	5.9	---
TOTAL	301.1	464.4	465.6	268.6	446.7	2083	3560	1306	459.2	236.6	223.5	167.0
MEAN	9.71	15.5	15.0	8.66	15.4	67.2	119	42.1	15.3	7.63	7.21	5.57
MAX	14	46	55	8.8	31	301	531	96	29	15	10	6.4
MIN	7.8	9.1	8.8	8.6	8.6	14	29	24	9.4	5.5	5.4	4.6
CFSM	.10	.16	.16	.09	.16	.71	1.25	.44	.16	.08	.08	.06
IN.	.12	.18	.18	.10	.17	.81	1.39	.51	.18	.09	.09	.07
AC-FT	597	921	924	533	886	4130	7060	2590	911	469	443	331
CAL YR 1975 TOTAL	18433.2			MEAN 50.5	MAX 2040	MIN 7.8	CFSM .53	IN 7.20	AC-FT 36560			
WTR YR 1976 TOTAL	9981.7			MEAN 27.3	MAX 531	MIN 4.6	CFSM .29	IN 3.90	AC-FT 19800			

05421000 WAPSIPINICON RIVER AT INDEPENDENCE, IA

LOCATION.--Lat 42°27'49", long 91°53'42", in SE1/4 sec.4, T.88 N., R.9 W., Buchanan County, Hydrologic Unit 07080102, on right bank at Sixth Street in Independence, 1,800 ft (549 m) downstream from dam at abandoned hydroelectric plant, 4.9 mi (7.9 km) downstream from Otter Creek, 9.7 mi (15.6 km) upstream from Pine Creek, and at mile 142.5 (229.3 km).

DRAINAGE AREA.--1,048 mi² (2,714 km²).

PERIOD OF RECORD.--July 1933 to current year.

REVISED RECORDS.--WSP 1438: Drainage area. WSP 1508: 1938-39, 1940 (M), 1947.

GAGE.--Water-stage recorder and concrete control. Datum of gage is 882.85 ft (269.093 m) above mean sea level. Prior to May 24, 1941, nonrecording gage in tailrace of powerplant 1,800 ft (549 m) upstream at datum 80.00 ft (24.38 m) lower.

REMARKS.--Records excellent. Several observations of water temperature were made during the year. National Weather Service gage height telemeter at station.

AVERAGE DISCHARGE.--43 years, 569 ft³/s (16.11 m³/s), 7.37 in/yr (187 mm/yr), 412,200 acre-ft/yr (508 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 26,800 ft³/s (759 m³/s) July 18, 1968, gage height, 21.11 ft (6.434 m); minimum daily, about 7.0 ft³/s (0.20 m³/s) many times in period 1933-34.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since at least 1901, that of July 18, 1968.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 7,600 ft³/s (215 m³/s) Apr. 22, gage height, 11.07 ft (3.374 m) at 1300 hours, no other peak above base of 4,000 ft³/s (113 m³/s); minimum daily, 13 ft³/s (0.37 m³/s) Sept. 13-23.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	62	62	128	98	52	618	1050	1620	515	96	122	41
2	56	67	145	98	51	429	1030	1300	445	93	104	41
3	56	74	164	86	50	320	1140	1030	391	89	93	38
4	56	76	182	78	50	210	1020	901	345	86	86	38
5	54	73	222	71	48	199	936	797	308	79	89	30
6	52	74	188	70	48	200	716	702	290	73	79	30
7	50	74	144	70	46	210	594	662	266	70	76	30
8	49	73	177	61	46	181	520	612	235	64	73	25
9	50	73	177	56	46	234	453	512	216	58	67	23
10	49	87	173	54	46	292	408	465	210	58	67	23
11	46	97	169	52	48	322	375	422	199	55	64	20
12	45	153	144	52	52	1360	348	386	164	52	67	16
13	46	114	149	53	56	2870	327	397	170	52	64	12
14	47	107	165	54	60	2930	315	397	210	52	61	12
15	49	108	131	54	74	2260	332	399	240	52	58	13
16	47	103	104	54	86	1910	313	443	150	52	58	12
17	48	101	88	53	84	2140	447	464	135	52	55	13
18	48	95	102	52	86	2070	845	496	200	52	58	13
19	50	92	109	50	83	1760	1300	615	178	52	58	15
20	51	106	137	50	90	1490	1950	717	161	52	55	13
21	53	111	149	50	99	892	4370	715	147	52	55	13
22	53	94	138	50	87	679	7300	640	135	55	55	13
23	54	94	125	50	100	563	6830	567	124	64	52	13
24	63	99	118	50	101	494	5840	505	127	86	52	15
25	59	95	114	51	108	428	4960	452	123	73	52	15
26	55	82	111	52	134	415	4230	406	114	64	52	15
27	58	80	109	51	270	378	3350	370	124	58	52	18
28	62	83	106	50	366	358	2810	338	126	175	49	18
29	56	118	104	52	495	398	2470	359	113	408	47	18
30	54	219	101	51	---	569	2030	496	106	228	47	18
31	58	---	101	50	---	853	---	649	---	160	47	---
TOTAL	1636	2884	4274	1823	2962	28032	58609	18834	6275	2715	2014	616
MEAN	52.8	96.1	138	58.8	102	904	1954	608	209	87.6	65.0	20.5
MAX	63	219	222	98	495	2930	7300	1620	515	408	122	41
MIN	45	62	88	50	46	181	313	338	106	52	47	13
CFSM	.05	.09	.13	.06	.10	.86	1.86	.58	.20	.08	.06	.02
IN.	.06	.10	.15	.06	.11	1.00	2.08	.67	.22	.10	.07	.02
AC-FT	3250	5720	8480	3620	5880	55600	116300	37360	12450	5390	3990	1220
CAL YR 1975	TOTAL	204195	MEAN 559	MAX 7070	MIN 45	CFSM .53	IN 7.25	AC-FT 405000				
WTR YR 1976	TOTAL	130674	MEAN 357	MAX 7300	MIN 13	CFSM .34	IN 4.64	AC-FT 259200				

WAPSIPINICON RIVER BASIN

05422000 WAPSIPINICON RIVER NEAR DE WITT, IA

LOCATION.--Lat 41°46'01", long 90°32'05", in SW1/4 NE1/4 sec.6, T.80 N., R.4 E., Clinton County, Hydrologic Unit 07080103, on left bank 5 ft (2 m) upstream from bridge on U.S. Highway 61, 0.9 mi (1.4 km) downstream from Silver Creek, 4.0 mi (6.4 km) south of water tower in De Witt, 6.2 mi (10.0 km) upstream from Brophy Creek, and 18.2 mi (29.3 km) upstream from mouth.

DRAINAGE AREA.--2,330 mi² (6,034 km²).

PERIOD OF RECORD.--June 1934 to current year.

REVISED RECORDS.--WSP 1308: 1937 (M). WSP 1438: Drainage area. WSP 1708: 1951.

GAGE.--Water-stage recorder. Datum of gage is 598.81 ft (182.517 m) above mean sea level.

REMARKS.--Records good except those for winter period, which are poor. Several observations of water temperature were made during the year.

COOPERATION.--Nine discharge measurements furnished by Corps of Engineers.

AVERAGE DISCHARGE.--42 years, 1,460 ft³/s (41.34 m³/s), 8.51 in/yr (216 mm/yr), 1,057,800 acre-ft/yr (1,304 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 29,900 ft³/s (847 m³/s) May 17, 1974, gage height, 13.07 ft (3.924 m); minimum daily, 70 ft³/s (1.98 m³/s) Jan. 17-24, 1940.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 8,520 ft³/s (241 m³/s) Apr. 30, gage height, 11.18 ft (3.408 m) at 0045 hours, no other peak above base of 6,000 ft³/s (170 m³/s); minimum daily, 119 ft³/s (3.37 m³/s) Sept. 19, 21, 22.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	245	236	400	230	170	977	1210	7280	952	379	228	168
2	242	247	470	228	170	982	1290	5390	955	385	292	165
3	232	252	420	236	170	950	1430	3950	987	372	315	158
4	224	260	430	242	170	1240	1530	3220	963	358	280	151
5	217	274	586	226	168	4370	1580	2780	894	345	272	148
6	214	251	522	210	166	4300	1600	2610	838	334	261	146
7	216	249	490	216	164	2580	1580	2490	785	324	244	144
8	215	251	476	222	166	1820	1490	2070	740	318	230	142
9	213	282	469	224	176	1570	1350	1880	698	310	211	139
10	210	337	458	206	194	1440	1230	1750	668	297	203	135
11	208	297	441	188	212	1330	1150	1650	645	283	200	131
12	206	296	434	180	240	1260	1080	1530	619	273	202	131
13	200	289	427	170	270	1520	1020	1460	602	264	204	126
14	198	280	458	164	292	2340	980	1430	688	255	195	126
15	203	277	490	158	330	2720	955	1390	703	261	197	126
16	209	281	350	160	350	2840	940	1350	640	275	211	126
17	210	298	204	160	308	3010	930	1490	594	264	198	126
18	211	296	310	154	330	3080	930	1310	570	244	190	122
19	211	293	206	154	398	2790	975	1240	560	231	184	119
20	213	299	210	154	430	2700	1000	1240	529	229	183	120
21	214	307	272	154	560	2710	1200	1210	488	256	180	119
22	210	306	260	156	500	2540	1620	1190	486	263	176	119
23	213	301	248	156	520	2300	2320	1230	489	252	172	120
24	214	301	250	158	488	1820	3550	1230	496	236	170	121
25	224	307	246	160	653	1560	4730	1190	470	223	171	122
26	220	258	244	162	800	1410	5730	1120	450	216	174	137
27	224	250	240	164	844	1470	6270	1060	442	214	165	132
28	223	250	238	166	893	1370	6980	1000	474	217	167	126
29	223	306	232	168	921	1280	7490	972	433	225	168	124
30	226	500	228	170	---	1260	7750	1020	441	222	166	120
31	226	---	230	170	---	1220	---	1000	---	218	168	---
TOTAL	6714	8631	10939	5666	11053	62759	71890	59772	19299	8543	6377	3989
MEAN	217	288	353	183	381	2024	2396	1928	643	276	206	133
MAX	245	500	586	242	921	4370	7750	7280	987	385	315	168
MIN	198	236	204	154	164	950	930	972	433	214	165	119
CFSM	.09	.12	.15	.08	.16	.87	1.03	.83	.28	.12	.09	.06
IN.	.11	.14	.17	.09	.18	1.00	1.15	.95	.31	.14	.10	.06
AC-FT	13320	17120	21700	11240	21920	124500	142600	118600	38280	16950	12650	7910
CAL YR 1975	TOTAL	502915	MEAN	1378	MAX	11100	MIN 198	CFSM .59	IN 8.03	AC-FT	997500	
WTR YR 1976	TOTAL	275632	MEAN	753	MAX	7750	MIN 119	CFSM .32	IN 4.40	AC-FT	546700	

05448150 PINE CREEK NEAR MUSCATINE, IA

LOCATION.--Lat 41°28'03", Long 90°52'04", in SE1/4 SE1/4 sec.17, T.77 N., R.1 E., Muscatine County, Hydrologic Unit 07080101, on right bank in Old Pine Creek Mill at Wildcat Den State Park, 9.8 miles (15.8 km) NE of Muscatine, and 1.5 miles (2.4 km) upstream from mouth.

DRAINAGE AREA.--38.9 sq mi (100.8 km²).

PERIOD OF RECORD.--October 1975 to September 1976.

GAGE.--Water-stage recorder and mill dam control.

REMARKS.--Records fair except those for winter period, which are poor.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 4,550 ft³/s (129 m³/s) July 20, 1976, gage height, 16.22 ft (4.944 m), from rating curve extended above 218 ft³/s (6.17 m³/s) on basis of indirect measurement of peak flow over dam of 3,670 ft³/s (104 m³/s), gage height, 15.80 ft (4.82 m) Mar. 4, 1976; minimum, 0.92 ft³/s (0.026 m³/s) Sept. 8, 10, 1976.

EXTREMES FOR CURRENT YEAR.--Peak discharge above base of 700 ft³/s (19.82 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage Height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage Height (ft) (m)
Nov. 29	2205	1,110 31.4	12.07 3.679	Apr. 24	0555	1,120 31.7	12.09 3.685
Mar. 4	1835	3,670 104	15.80 4.816	July 20	2220	*4,550 129	*16.22 4.944

Minimum daily discharge, 0.92 ft³/s (0.026 m³/s) Sept. 8, 10.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.2	3.1	35	3.1	3.7	30	29	46	16	6.4	4.1	1.7
2	2.5	3.0	45	3.4	2.2	33	26	46	14	5.5	3.8	1.6
3	2.5	8.6	19	2.0	4.2	40	23	30	11	5.2	3.3	1.6
4	2.5	5.7	17	2.4	4.6	1190	21	34	9.5	4.9	3.3	1.6
5	2.5	4.1	18	2.5	5.0	206	20	34	8.6	4.4	3.8	1.4
6	1.8	3.6	22	2.5	5.0	80	20	69	4.4	3.0	4.9	1.0
7	1.7	3.6	15	2.7	6.6	49	18	44	4.2	3.6	3.8	1.0
8	1.0	3.0	15	2.8	5.6	36	16	37	3.9	3.6	3.2	.92
9	1.5	72	14	2.9	10	35	16	33	3.3	3.1	3.0	1.0
10	2.1	46	13	3.0	27	32	16	30	6.1	2.8	2.8	.92
11	1.5	12	13	3.1	12	26	15	25	3.9	2.7	3.0	1.6
12	1.6	0.6	12	3.0	6.6	45	14	22	3.6	2.3	2.2	1.6
13	1.6	6.9	12	3.1	12	70	14	25	4.9	2.0	5.2	1.6
14	1.8	5.5	94	4.0	10	20	14	28	20	2.2	3.8	1.7
15	2.2	5.7	44	3.1	15	25	14	30	12	27	3.1	1.7
16	1.7	5.5	13	3.7	17	22	14	32	7.8	5.1	2.8	1.9
17	1.7	5.5	7.0	6.4	18	21	14	27	6.0	4.4	2.8	1.9
18	2.2	5.2	5.0	5.4	37	20	17	22	5.7	3.6	3.3	.9
19	1.0	4.9	6.0	5.2	27	19	14	21	6.0	3.0	2.7	1.0
20	2.4	5.7	7.0	4.9	22	16	21	19	4.9	526	2.3	1.7
21	2.5	6.4	5.0	4.0	39	12	24	17	4.7	210	2.2	1.6
22	3.1	4.7	5.2	3.6	38	12	17	15	7.8	20	2.2	1.4
23	3.6	4.4	5.2	3.6	35	12	35	16	7.3	14	1.9	1.6
24	6.1	5.2	4.3	4.0	30	15	410	15	7.3	10	2.0	1.4
25	7.2	4.7	4.4	4.0	29	18	272	14	7.0	7.3	4.4	1.9
26	4.4	2.8	4.0	4.0	27	29	114	13	5.7	6.9	10	10
27	2.7	4.1	3.4	3.7	25	65	79	12	6.4	7.2	2.7	3.8
28	2.5	7.3	3.4	3.7	24	35	65	12	11	10	2.2	2.5
29	1.5	114	3.4	3.7	24	33	56	25	13	6.9	1.0	1.2
30	2.3	134	2.7	3.7	---	39	52	37	9.5	5.7	1.6	1.0
31	2.3	---	0.1	3.4	---	31	---	19	---	4.9	1.7	---
TOTAL	79.0	506.9	471.1	110.6	521.3	2295	1480	875	235.4	937.1	119.9	57.64
MEAN	2.55	16.9	15.2	3.57	18.0	74.0	49.3	28.2	7.85	30.2	3.87	1.92
MAX	7.2	134	94	6.4	39	1190	410	69	20	526	22	10
MIN	1.0	2.8	3.1	2.0	2.2	12	14	12	3.0	2.2	1.6	.92
CFSM	.66	.43	.39	.09	.46	1.88	1.25	.72	.20	.77	.10	.05
FN	.07	.48	.44	.10	.49	2.17	1.40	.83	.22	.83	.11	.05
AC-FT	157	1010	934	219	1030	4650	2940	1740	467	1860	233	114
WTP YR 1976	TOTAL	7688.94	MEAN	21.0	MAX	1190	MIN	.92	CFSM	.53	IN	7.26
									AC-FT	15250		

05449000 EAST BRANCH IOWA RIVER NEAR KLEMME, IA

LOCATION.--Lat 43°00'31", long 93°37'42", in NE1/4 NW1/4 sec.36, T.95 N., R.24 W., Hancock County, Hydrologic Unit 07080207, on left bank 15 ft (5 m) downstream from bridge on county highway 855, 1.2 mi (1.9 km) west of Chicago, Rock Island and Pacific Railroad crossing in Klemme, 1.5 mi (2.4 km) upstream from Drainage ditch 9, 18.2 mi (29.3 km) upstream from confluence with West Branch Iowa River, and at mile 341.0 (548.7 km).

DRAINAGE AREA.--133 mi² (344 km²).

PERIOD OF RECORD.--April 1948 to September 1976 (discontinued). Prior to October 1958, published as East Fork Iowa River near Klemme.

REVISED RECORDS.--WSP 1438: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 1,179.33 ft (359.46 m) above mean sea level. Apr. 1, 1948, to Sept. 30, 1955, nonrecording gage at site 0.6 mi (1.0 km) upstream at datum 0.80 ft (0.24 m) higher. Oct. 1, 1955, to Sept. 30, 1969, at present site and datum 0.31 ft (0.09 m) lower.

REMARKS.--Records good except those for winter period, which are poor. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--28 years, 56.5 ft³/s (1.60 m³/s), 5.77 in/yr (147 mm/yr), 40,930 acre-ft/yr (50.5 hm³/yr); median of yearly mean discharges, 44 ft³/s (1.25 m³/s), 4.5 in/yr (114 mm/yr), 31,900 acre-ft/yr (39.3 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 5,960 ft³/s (169 m³/s) June 19, 1954, gage height, 11.2 ft (3.41 m), from floodmark, site and datum then in use; maximum gage height, 10.67 ft (3.252 m) Sept. 6, 1955, backwater from ice; minimum daily discharge, 0.2 ft³/s (0.006 m³/s) Feb. 22-26, 1959.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in June 1944 reached a stage of about 10 ft (3 m), from information by local residents, former site and datum.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 436 ft³/s (12.3 m³/s) Mar. 31, gage height, 6.37 ft (1.942 m), no peak above base of 700 ft³/s (19.8 m³/s); maximum gage height, 7.55 ft (2.301 m) Mar. 13, backwater from ice; minimum daily discharge, 2.6 ft³/s (0.074 m³/s) Dec. 30, 31.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP		
1	8.7	5.6	9.0	2.7	4.4	7.7	256	84	135	16	9.8	5.0		
2	7.5	5.9	10	2.7	4.2	8.5	167	75	104	15	8.2	4.1		
3	7.8	6.3	12	2.9	4.2	9.0	125	66	84	15	7.4	4.6		
4	8.2	5.9	11	3.0	4.2	9.7	102	64	72	14	7.0	4.2		
5	8.2	6.1	11	3.2	4.1	10	91	67	64	13	7.8	3.9		
6	7.9	5.7	10	3.4	4.1	11	79	57	58	12	7.4	3.7		
7	7.4	6.0	9.3	3.6	4.2	11	70	53	51	14	6.7	4.1		
8	7.9	6.1	8.1	3.9	4.3	10	62	51	47	12	6.7	4.6		
9	8.8	13	7.6	4.1	4.5	10	56	50	43	11	6.7	5.1		
10	10	19	7.0	4.4	4.7	11	53	50	47	11	7.0	4.4		
11	10	11	6.4	4.6	4.9	12	46	47	49	11	7.0	4.2		
12	7.8	9.3	5.9	4.8	5.3	35	42	48	40	9.8	7.0	3.7		
13	7.6	9.8	5.4	4.9	5.6	100	41	52	37	10	6.7	4.3		
14	8.9	10	5.0	5.0	6.1	86	42	50	34	9.8	8.2	4.6		
15	6.9	11	4.6	5.1	6.6	76	41	49	38	16	6.7	4.3		
16	7.0	9.2	4.3	5.1	7.0	66	45	73	34	14	6.3	4.5		
17	7.7	8.3	4.1	5.1	7.7	60	49	137	29	13	6.5	4.6		
18	7.2	6.7	3.8	5.1	6.9	63	82	128	28	11	6.4	4.8		
19	7.4	7.3	3.6	5.1	6.2	76	96	111	25	9.8	5.8	6.9		
20	7.9	8.6	3.4	5.1	6.8	80	87	101	23	12	5.3	5.9		
21	8.8	8.0	3.2	5.1	7.2	53	89	87	22	15	5.1	3.9		
22	6.4	9.6	3.2	5.2	7.7	41	86	83	21	14	5.0	3.6		
23	6.2	9.1	3.1	5.2	7.2	36	87	88	19	14	5.0	3.5		
24	6.7	8.4	3.0	5.2	6.6	32	114	91	19	9.8	5.2	3.4		
25	6.3	8.0	2.9	5.2	6.0	29	185	84	21	7.4	4.8	3.8		
26	5.7	7.6	2.8	5.1	6.4	79	176	77	20	9.4	4.7	3.9		
27	8.4	7.4	2.8	5.0	6.7	82	135	70	20	12	5.1	4.1		
28	6.7	9.0	2.7	4.9	6.8	56	112	73	18	35	4.5	4.2		
29	5.0	10	2.7	4.8	7.0	55	100	182	19	15	4.1	4.0		
30	5.0	12	2.6	4.7	---	230	92	244	19	11	4.2	3.9		
31	5.3	---	2.6	4.6	---	407	---	183	---	15	4.7	---		
TOTAL	231.3	259.9	173.1	138.8	167.6	1851.9	2808	2675	1240	407.0	193.0	129.8		
MEAN	7.46	8.66	5.58	4.48	5.78	59.7	93.6	86.3	41.3	13.1	6.23	4.33		
MAX	10	19	12	5.2	7.7	407	256	244	135	35	9.8	6.9		
MIN	5.0	5.6	2.6	2.7	4.1	7.7	41	47	18	7.4	4.1	3.4		
CFSM	.06	.07	.04	.03	.04	.45	.70	.65	.31	.10	.05	.03		
IN.	.06	.07	.05	.04	.05	.52	.79	.75	.35	.11	.05	.04		
AC-FT	459	516	343	275	332	3670	5570	5310	2460	807	383	257		
CAL YR 1975	TOTAL	21015.4	MEAN	57.6	MAX	1130	MIN	2.6	CFSM	.43	IN	5.88	AC-FT	41680
WTR YR 1976	TOTAL	10275.4	MEAN	28.1	MAX	407	MIN	2.6	CFSM	.21	IN	2.87	AC-FT	20380

05449500 IOWA RIVER NEAR ROWAN, IA

LOCATION.--Lat 42°45'36", long 93°37'23", in NW1/4 NE1/4 sec.25, T.92 N., R.24 W., Wright County, Hydrologic Unit 07080207, on left bank 10 ft (3 m) downstream from bridge on county highway C38, 0.9 mi (1.4 km) downstream from Drainage ditch 123, 3.8 mi (6.1 km) northwest of Rowan, 10.7 mi (17.2 km) downstream from confluence of East and West Branches, and at mile 316.4 (509.1 km).

DRAINAGE AREA.--429 mi² (1,111 km²).

PERIOD OF RECORD.--October 1940 to September 1976 (discontinued).

REVISED RECORDS.--WSP 1308: 1942-43 (M). WSP 1438: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 1,143.35 ft (348.49 m) above mean sea level. Prior to Oct. 14, 1948, nonrecording gage at same site and datum.

REMARKS.--Records good except those for winter period and periods of no gage height record, which are poor. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--36 years, 189 ft³/s (5.35 m³/s), 5.98 in/yr (152 mm/yr), 136,900 acre-ft/yr (169 hm³/yr); median of yearly mean discharges, 180 ft³/s (5.10 m³/s), 5.7 in/yr (145 mm/yr), 130,000 acre-ft/yr (160 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 8,460 ft³/s (240 m³/s) June 21, 1954, gage height, 14.88 ft (4.535 m); minimum daily, 2.9 ft³/s (0.082 m³/s) Jan. 21-23, 1959.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 826 ft³/s (23.4 m³/s) Apr. 1, gage height, 7.97 ft (2.429 m), no peak above base of 1,200 ft³/s (34.0 m³/s); maximum gage height, 8.05 ft (2.457 m) Mar. 14, backwater from ice; minimum daily discharge, 12 ft³/s (0.34 m³/s) Sept. 7-9, 13-18, 26-28, 30.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	30	19	30	15	19	25	810	268	277	57	36	14
2	29	22	40	15	19	24	641	247	229	52	31	15
3	26	23	53	15	18	29	393	225	197	50	28	14
4	25	22	51	16	18	35	296	206	175	47	26	14
5	23	22	48	16	18	35	247	189	161	44	23	13
6	23	22	45	17	18	34	220	181	150	42	23	13
7	22	23	41	18	18	32	195	163	142	42	22	12
8	22	22	39	18	19	31	173	155	134	42	21	12
9	22	22	36	19	20	30	159	149	127	40	20	12
10	22	58	34	19	20	30	147	144	126	38	19	13
11	25	52	31	20	21	31	142	140	127	37	21	14
12	25	40	29	20	22	100	128	133	126	34	22	13
13	24	28	26	20	24	400	118	138	117	33	20	12
14	22	26	25	21	25	480	115	139	136	32	21	12
15	22	27	24	21	27	300	114	133	130	33	22	12
16	23	29	23	21	29	230	110	162	142	34	21	12
17	21	30	22	21	31	188	113	263	133	35	20	12
18	21	28	21	21	35	186	165	336	111	34	19	12
19	21	25	20	21	32	205	242	304	101	33	18	14
20	21	27	20	20	31	228	258	261	92	34	17	16
21	21	30	19	20	28	209	250	233	85	33	17	17
22	25	33	19	20	25	157	258	217	79	33	16	16
23	27	34	18	20	32	125	255	249	73	34	15	14
24	24	31	17	20	35	108	282	278	71	32	14	13
25	23	27	17	20	28	104	373	263	68	30	15	13
26	25	26	16	20	24	95	486	235	65	30	17	12
27	24	24	16	20	26	167	454	212	63	27	15	12
28	22	28	16	20	27	173	368	197	59	53	14	12
29	24	35	15	20	29	139	313	196	57	79	14	13
30	23	45	15	20	---	249	286	273	59	54	13	12
31	20	---	15	19	---	636	---	324	---	41	15	---
TOTAL	727	890	841	593	718	4815	8112	6613	3612	1239	615	395
MEAN	23.5	29.7	27.1	19.1	24.8	155	270	213	120	40.0	19.8	13.2
MAX	30	58	53	21	35	636	810	336	277	79	36	17
MIN	20	19	15	15	18	24	110	133	57	27	13	12
CFSM	.05	.07	.06	.04	.06	.36	.63	.50	.28	.09	.05	.03
IN.	.06	.08	.07	.05	.06	.42	.70	.57	.31	.11	.05	.03
AC-FT	1440	1770	1670	1180	1420	9550	16090	13120	7160	2460	1220	783
CAL YR 1975	TOTAL	68986	MEAN	189	MAX	3180	MIN	15	CFSM	.44	IN	5.98
WTR YR 1976	TOTAL	29170	MEAN	79.7	MAX	810	MIN	12	CFSM	.19	IN	2.53
									AC-FT	136800		
									AC-FT	57860		

05451500 IOWA RIVER AT MARSHALLTOWN, IA

LOCATION.--Lat 42°03'57", long 92°54'27", in SE1/4 SE1/4 sec.23, T.84N., R.18 W., Marshall County, Hydrologic Unit 07080208, on right bank 10 ft (3 m) downstream from State Highway 14 bridge, 1,500 ft (457 m) upstream from Burnett Creek, 2.2 mi (3.5 km) upstream from Linn Creek, and at mile 222.8 (358.5 km).

DRAINAGE AREA.--1,564 mi² (4,050 km²), including that of Burnett Creek.

PERIOD OF RECORD.--October 1902 to September 1903, October 1914 to September 1927, October 1932 to current year. Monthly discharge only for some periods, published in WSP 1308.

REVISED RECORDS.--WSP 1438: Drainage area. WSP 1558: 1915-18, 1919 (M), 1920, 1921-23 (M), 1924-27, 1933, 1934 (M), 1936, 1938, 1947 (M).

GAGE.--Water-stage recorder. Datum of gage is 853.10 ft (260.025 m) above mean sea level. See WSP 1728 for history of changes prior to Sept. 21, 1934.

REMARKS.--Records good except those for winter period, which are poor. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--58 years (1902-3, 1914-27, 1932-76), 776 ft³/s (22.06 m³/s), 6.74 in/yr (171 mm/yr), 562,200 acre-ft/yr (693 hm³/yr); median of yearly mean discharges, 690 ft³/s (19.5 m³/s), 6.0 in/yr (152 mm/yr), 500,000 acre-ft/yr (616 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 42,000 ft³/s (1,190 m³/s) June 4, 1918, gage height, 17.74 ft (5.407 m), from floodmark, from rating curve extended above 19,000 ft³/s (538 m³/s) on basis of velocity-area study; maximum gage height, 19.38 ft (5.907 m) June 23, 1974; minimum daily discharge, 9 ft³/s (0.255 dm³/s) Jan. 9, 10, 1940.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 5,000 ft³/s (142 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage Height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage Height (ft) (m)
Mar. 13	1100	6,380 181	16.09 4.904	June 15	0415	6,580 186	16.17 4.929
Apr. 19	1115	*8,840 250	*17.27 5.264				

Minimum daily discharge, 54 ft³/s (1.53 m³/s) Sept. 15, 16, 18.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	142	106	103	73	90	456	1780	1750	1270	543	194	81
2	134	106	135	69	86	329	1520	2040	1300	509	185	91
3	129	113	185	65	83	270	1410	1480	1260	481	165	93
4	127	119	190	66	82	194	1340	1350	1180	453	148	92
5	126	112	200	76	80	171	1260	1240	1100	424	141	89
6	125	108	170	77	79	236	1060	1200	993	402	136	88
7	122	107	160	76	76	276	972	1150	909	379	128	87
8	120	105	172	69	77	207	871	1090	863	357	125	83
9	119	113	183	60	79	256	798	943	819	334	120	75
10	118	151	178	62	84	410	762	872	807	314	117	62
11	117	144	174	66	88	371	712	778	857	294	116	57
12	118	137	165	68	104	4110	672	763	809	278	125	55
13	116	144	158	72	120	5810	638	840	1010	263	119	55
14	114	139	155	72	130	3270	618	834	5530	249	148	56
15	114	133	131	74	144	2530	1500	803	5160	237	157	54
16	114	126	125	74	166	1980	855	921	2930	226	139	54
17	116	120	113	74	180	1660	1290	1190	2190	214	131	56
18	115	116	115	75	183	1380	5550	1210	1700	207	169	54
19	114	113	130	76	162	1240	7920	1210	1410	200	135	59
20	116	120	150	76	144	1250	4830	1230	1210	209	116	62
21	117	127	152	77	107	1160	5380	1180	1080	256	119	66
22	112	123	150	79	81	1010	4320	1090	985	267	100	63
23	109	123	142	82	168	920	3800	1700	883	213	93	50
24	111	129	133	85	196	850	5060	2740	789	187	92	60
25	116	103	115	88	159	758	3960	2530	750	173	91	57
26	119	100	106	89	199	700	3210	2080	690	166	89	57
27	117	93	108	89	506	660	2740	1730	698	165	86	60
28	112	115	103	90	991	601	2400	1530	694	213	85	65
29	108	140	79	88	817	599	2170	1990	630	252	82	63
30	106	185	80	88	---	989	1870	1570	588	199	80	62
31	105	---	78	90	---	1830	---	1380	---	175	77	---
TOTAL	3648	3670	4338	2365	5461	36483	71268	42414	41094	8839	3808	2016
MEAN	118	122	140	76.3	188	1177	2376	1368	1370	285	123	67.2
MAX	142	185	200	90	991	5810	7920	2740	5530	543	194	93
MIN	105	93	78	60	76	171	618	763	588	165	77	54
CFSM	.08	.08	.09	.05	.12	.75	1.52	.87	.88	.18	.08	.04
IN.	.09	.09	.10	.06	.13	.87	1.70	1.01	.98	.21	.09	.05
AC-FT	7240	7280	8600	4690	10830	72360	141400	84130	81510	17530	7550	4000
CAL YR 1975	TOTAL	347677	MEAN 953	MAX 10300	MIN 78	CFSM .61	IN 8.27	AC-FT 689600				
WTR YR 1976	TOTAL	225404	MEAN 616	MAX 7920	MIN 54	CFSM .39	IN 5.36	AC-FT 447100				

05451700 TIMBER CREEK NEAR MARSHALLTOWN, IA

LOCATION.--Lat 42°00'25", long 92°51'15", in SE1/4 SW1/4 sec.8, T.83 N., R.17 W., Marshall County, Hydrologic Unit 07080208, on left bank 20 ft (6 m) downstream from bridge on U.S. Highway 30, 3.5 mi (5.6 km) upstream from mouth, and 4.1 mi (6.6 km) southeast of court house in Marshalltown.

DRAINAGE AREA.--118 mi² (306 km²).

PERIOD OF RECORD.--October 1949 to current year.

REVISED RECORDS.--WSP 1708: 1950-55, 1957-59.

GAGE.--Water-stage recorder. Datum of gage is 849.44 ft (258.909 m) above mean sea level.

REMARKS.--Records good except those for winter period, which are poor. Several observations of water temperature were made during the year.

COOPERATION.--Seven discharge measurements furnished by Corps of Engineers.

AVERAGE DISCHARGE.--27 years, 66.7 ft³/s (1.889 m³/s), 7.68 in/yr (195 mm/yr), 48,320 acre-ft/yr (59.6 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 8,090 ft³/s (229 m³/s) June 9, 1974, gage height, 17.57 ft (5.355 m), from rating curve extended above 5,200 ft³/s on basis of contracted-opening measurement of peak flow; no flow July 24-26, Oct. 4-12, 1956.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in June 1947 reached a stage of 16.8 ft (5.12 m), discharge, 5,700 ft³/s (161 m³/s).

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 1,000 ft³/s (28.3 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage Height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage Height (ft) (m)
Feb. 27	0115	1,130	32.0	10.57	3.222	June 14	0800
May 29	0830	2,130	60.9	12.90	3.932	*2,230	63.2
						a*10.00	3.962

Minimum daily discharge, 1.8 ft³/s (0.051 m³/s) Sept. 22-24.

a From graph based on gage readings.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	11	10	34	5.3	7.0	62	63	150	117	72	19	3.0
2	10	11	26	5.5	6.8	54	58	153	107	69	10	2.6
3	9.6	11	21	3.7	6.0	48	54	130	97	65	17	2.6
4	9.8	11	18	3.4	6.0	56	51	122	92	62	16	2.4
5	10	10	17	3.6	5.9	98	49	118	89	59	15	3.2
6	10	9.5	13	4.1	6.0	90	44	108	93	57	15	3.2
7	9.7	8.7	13	5.5	5.7	87	41	102	82	54	14	3.0
8	8.8	8.6	13	5.2	5.5	84	38	100	79	51	14	2.6
9	9.9	8.8	12	5.4	5.6	80	37	97	75	48	13	2.5
10	10	15	11	5.4	7.1	78	37	93	78	46	12	2.4
11	9.5	11	11	5.6	7.0	76	35	90	83	43	13	2.8
12	11	9.0	11	5.9	9.6	388	35	88	74	41	17	3.1
13	10	9.7	11	6.1	12	142	32	91	165	39	16	3.6
14	11	8.9	12	7.0	10	106	32	92	1330	37	15	2.6
15	9.3	9.6	11	7.2	16	86	38	89	197	36	14	2.6
16	9.3	10	10	7.1	20	76	33	96	131	34	11	2.5
17	9.6	9.4	8.0	7.9	23	71	40	117	114	32	9.9	2.5
18	11	8.4	7.0	7.8	20	69	364	109	105	31	11	2.4
19	11	8.2	6.3	7.1	18	67	278	103	98	28	8.9	4.3
20	11	9.2	7.8	7.0	20	66	194	97	98	29	7.6	3.6
21	9.7	11	10	7.0	12	59	395	89	89	29	7.6	2.0
22	9.3	8.9	12	7.0	13	52	224	87	86	34	7.3	1.8
23	9.9	8.6	11	7.1	13	51	210	95	82	29	5.0	1.8
24	8.9	8.2	10	7.0	14	49	424	100	84	26	5.0	1.8
25	9.5	9.6	9.3	6.9	37	48	350	89	83	23	4.8	2.0
26	10	8.1	8.2	7.1	304	50	263	83	77	21	4.8	2.5
27	10	9.9	7.0	7.6	646	50	216	81	129	21	4.5	2.7
28	9.3	10	6.2	9.0	275	47	187	209	156	40	3.8	2.2
29	9.0	23	5.9	7.6	94	48	169	1250	97	28	5.0	2.2
30	8.8	85	6.3	7.6	---	69	156	210	80	22	4.5	2.0
31	9.2	---	5.2	7.6	---	74	---	133	---	20	3.2	---
TOTAL	305.1	379.3	364.2	197.3	1625.1	2481	4145	4571	4267	1226	331.9	78.6
MEAN	9.84	12.6	11.7	6.36	56.0	80.0	138	147	142	39.5	10.7	2.62
MAX	11	85	34	9.0	646	388	424	1250	1330	72	19	4.3
MIN	8.6	8.1	5.2	3.4	5.5	47	32	81	74	20	3.2	1.8
CFSM	.08	.11	.10	.05	.47	.68	1.17	1.25	1.20	.33	.09	.02
IN.	.10	.12	.11	.06	.51	.78	1.31	1.44	1.35	.39	.10	.02
AC-FT	605	752	722	391	3220	4920	8220	9070	8460	2430	658	156
CAL YR 1975	TOTAL	32123.6	MEAN	88.0	MAX	2140	MIN	5.2	CFSM	.75	IN	10.13
WTR YR 1976	TOTAL	19971.5	MEAN	54.6	MAX	1330	MIN	1.8	CFSM	.46	IN	6.30
									AC-FT	63720		
										39610		

IOWA RIVER BASIN

05451900 RICHLAND CREEK NEAR HAVEN, IA

LOCATION.--Lat 41°53'58", long 92°28'27", in SE1/4 NE1/4 sec.21, T.82 N., R.14 W., Tama County, Hydrologic Unit 07080208, on right bank 5 ft (1 m) upstream from bridge on county highway, 0.6 mi (1.0 km) northeast of Haven, and 2.0 mi (4.5 km) upstream from mouth.

DRAINAGE AREA.--56.1 mi² (145 km²).

PERIOD OF RECORD.--October 1949 to current year.

REVISED RECORDS.--WSP 1708: 1950-55, 1956 (M), 1957, 1958 (M), 1959.

GAGE.--Water-stage recorder. Datum of gage is 788.69 ft (240.393 m) above mean sea level. Prior to Oct. 1, 1971, at datum 10 ft (3.05 m) higher.

REMARKS.--Records good except those for winter period, which are fair. Several observations of water temperature were made during the year.

COOPERATION.--Five discharge measurement furnished by Corps of Engineers.

AVERAGE DISCHARGE.--27 years, 33.3 ft³/s (0.943 m³/s), 8.06 in/yr (205 mm/yr), 24,130 acre-ft/yr (29.8 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 7,000 ft³/s (198 m³/s) May 28, 1974, gage height, 24.00 ft (7.315 m); minimum daily, 0.1 ft³/s (2.8 dm³/s) on several days in 1949, 1953-54, 1956.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in June 1918 reached a stage of 24.3 ft (7.41 m), discharge not determined.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 1,000 ft³/s (28.3 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage Height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage Height (ft) (m)
Feb. 25	2145	1,040 29.5	16.75 5.105	June 14	0445	1,150 32.6	17.22 5.249
Apr 24	1015	*1,380 39.1	*17.83 5.435				

Minimum daily discharge, 0.68 ft³/s (0.019 m³/s) Sept. 29.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5.2	4.6	18	1.5	2.3	32	29	76	28	24	5.6	1.6
2	4.8	4.9	14	1.6	2.1	29	28	74	26	20	5.2	1.2
3	4.7	5.5	12	1.9	2.0	26	25	65	24	18	5.0	1.1
4	4.6	5.1	10	2.0	2.0	101	24	61	23	16	4.7	1.1
5	4.3	4.7	10	2.6	2.0	117	21	69	22	14	4.4	1.1
6	4.1	4.7	8.6	2.6	2.1	68	19	59	22	13	4.4	.98
7	4.1	5.0	8.7	2.5	2.1	51	18	51	21	13	4.2	1.0
8	4.1	5.0	8.5	2.8	2.1	43	17	48	20	14	4.0	1.1
9	4.0	5.4	8.0	3.2	2.5	35	16	48	20	13	3.8	1.2
10	3.7	7.6	7.5	3.4	2.4	39	16	46	23	12	3.6	1.2
11	3.8	4.8	7.2	3.2	3.5	40	16	43	21	11	3.5	1.2
12	4.0	4.8	7.2	3.1	6.0	192	15	42	20	11	4.0	1.1
13	4.2	5.0	7.3	2.8	6.4	84	15	43	59	11	3.7	1.1
14	4.1	4.0	10	2.6	6.0	61	15	41	420	10	3.7	1.3
15	3.5	4.9	7.6	2.6	9.0	49	23	43	55	10	3.3	1.2
16	3.3	4.8	8.5	2.6	11	41	16	50	41	9.7	3.2	1.1
17	3.5	4.2	12	2.6	15	40	34	51	37	9.7	3.2	1.1
18	3.5	3.8	10	2.5	10	36	189	46	33	8.1	2.8	1.2
19	3.7	3.8	10	2.4	8.8	34	93	43	30	8.1	2.8	1.7
20	3.7	5.2	11	2.8	8.9	32	92	40	30	8.4	2.8	1.7
21	3.8	5.2	11	2.6	11	30	217	37	29	8.7	2.4	1.3
22	4.0	3.9	12	2.6	13	29	114	36	24	8.7	2.4	1.0
23	4.0	3.4	11	2.7	13	28	368	38	24	8.7	2.8	.99
24	4.3	4.3	8.5	2.5	16	27	688	36	27	8.1	2.3	.98
25	4.6	3.0	6.8	2.5	42	23	243	32	26	7.1	2.3	.98
26	4.4	4.2	4.5	3.0	384	24	164	30	23	6.8	2.3	1.5
27	4.1	3.9	3.5	3.0	308	23	124	28	23	6.8	2.0	1.1
28	4.4	4.0	2.9	2.8	96	21	105	38	25	11	1.9	.74
29	4.6	25	2.2	2.8	44	22	95	63	50	8.3	2.0	.68
30	5.3	50	1.8	2.5	---	31	85	35	30	6.2	2.0	.69
31	4.1	---	1.5	2.7	---	30	---	31	---	5.9	2.0	---
TOTAL	128.5	204.7	261.9	81.0	1033.2	1438	2924	1443	1256	340.3	102.3	34.24
MEAN	4.15	6.82	8.45	2.61	35.6	46.4	97.5	46.5	41.9	11.0	3.30	1.14
MAX	5.3	50	18	3.4	384	192	688	76	420	24	5.6	1.7
MIN	3.3	3.0	1.5	1.5	2.0	21	15	28	20	5.9	1.9	.68
CFSM	.07	.12	.15	.05	.63	.83	1.74	.83	.75	.20	.06	.02
IN.	.09	.14	.17	.05	.69	.95	1.94	.96	.83	.23	.07	.02
AC-FT	255	406	519	161	2050	2850	5800	2860	2490	675	203	68
CAL YR 1975	TOTAL	15182.30	MEAN 41.6	MAX 1310	MIN 1.5	CFSM .74	IN 10.07	AC-FT 30110				
WTR YR 1976	TOTAL	9247.14	MEAN 25.3	MAX 688	MIN .68	CFSM .45	IN 6.13	AC-FT 18340				

05452000 SALT CREEK NEAR ELBERON, IA

LOCATION.--Lat 41°57'51", long 92°18'47", in NW1/4 NW1/4 sec.36, T.83 N., R.13 W., Tama County, Hydrologic Unit 07000205, near center of span on downstream side of bridge on U.S. Highway 30, 2.0 mi (3.2 km) upstream from Hog Run, 3.0 mi (4.8 km) south of Elberon, and 9.0 mi (14.5 km) upstream from mouth.

DRAINAGE AREA.--201 mi² (521 km²).

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

REVISED RECORDS.--WSP 1438: Drainage area. WSP 1558: 1946.

GAGE.--Water-stage recorder. Datum of gage is 781.58 ft (238.226 m) above mean sea level (Iowa Highway Commission bench mark). Prior to Oct. 15, 1945, and June 14, 1947, to Feb. 10, 1949, nonrecording gage on upstream side of bridge at present datum.

REMARKS.--Records good except those for winter period, which are poor. Several observations of water temperature were made during the year.

COOPERATION.--Six discharge measurements furnished by Corps of Engineers.

AVERAGE DISCHARGE.--31 years, 124 ft³/s (3.511 m³/s), 8.38 in/yr (213 mm/yr), 89,840 acre-ft/yr (111 hm³/yr); mean of yearly mean discharges, 110 ft³/s (3.12 m³/s), 7.4 in/yr (188 mm/yr), 79,700 acre-ft/yr (98.3 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge observed, 35,000 ft³/s (991 m³/s) June 13, 1947, gage height, 17.6 ft (5.36 m) from rating curve extended above 17,000 ft³/s (481 m³/s); maximum gage height, 17.78 ft (5.419 m) July 10, 1969; minimum daily discharge, 2.4 ft³/s (68 dm³/s) Jan. 16-29, 1954.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of June 16, 1944, reached a stage of 19.9 ft (6.07 m), from floodmark at downstream side of bridge, discharge, about 30,000 ft³/s (850 m³/s).

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

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage Height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage Height (ft) (m)
Feb. 26	0100	1,760 49.8	10.27 4.045	Apr. 24	1415	*2,170 61.5	*13.82 4.212
Apr. 21	2000	2,000 56.3	12.69 4.173				

Minimum daily discharge, 5.7 ft³/s (0.161 m³/s) Sept. 13.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	16	16	44	3.7	6.1	82	72	238	94	60	16	6.9
2	15	16	34	3.8	5.9	66	63	245	64	55	15	7.0
3	15	17	24	6.0	6.0	60	58	214	77	52	14	7.1
4	14	16	20	3.3	6.0	156	55	192	72	49	14	6.7
5	14	15	21	3.3	5.7	304	54	189	68	46	14	6.4
6	14	15	14	3.6	5.8	159	51	168	66	44	13	6.5
7	14	15	13	3.6	5.9	149	46	151	64	44	12	6.2
8	15	15	15	3.8	6.0	138	44	145	61	40	12	5.9
9	14	16	14	4.0	7.6	115	42	138	58	38	11	5.8
10	14	19	14	4.4	9.6	128	41	131	63	35	11	5.8
11	14	18	13	4.5	11	100	40	121	64	32	11	6.1
12	14	16	12	4.6	13	999	37	115	57	31	14	5.8
13	14	15	13	4.5	18	276	38	122	62	30	12	5.7
14	14	14	19	4.4	19	169	38	115	620	28	12	6.1
15	14	17	13	5.0	21	131	103	111	202	27	11	6.2
16	14	16	15	5.0	35	102	63	116	144	25	10	6.3
17	15	15	16	5.7	30	87	99	127	115	24	9.9	6.3
18	15	15	11	5.7	27	88	488	114	100	24	9.7	6.6
19	15	15	11	5.8	25	80	275	107	90	22	9.5	9.3
20	15	18	12	5.6	24	78	228	100	82	24	9.3	13
21	15	20	14	5.8	32	67	1340	92	79	25	9.1	7.7
22	15	13	14	5.6	25	60	665	86	77	23	8.9	6.8
23	15	14	14	5.7	27	60	930	93	75	24	8.8	6.6
24	15	17	12	5.6	28	57	1790	88	73	21	8.6	6.3
25	15	13	9.6	5.5	67	53	893	80	73	19	8.4	6.9
26	14	16	8.2	6.0	438	56	593	76	73	19	8.3	8.1
27	15	14	6.4	5.8	886	60	409	72	73	19	8.1	8.6
28	15	18	5.5	6.2	640	52	334	71	81	27	7.9	9.0
29	14	40	4.9	6.1	155	53	289	121	80	25	7.5	8.2
30	14	120	4.4	6.0	---	83	261	151	68	19	7.8	7.9
31	15	---	4.5	6.2	---	82	---	110	---	17	7.1	---
TOTAL	451	604	445.5	154.9	2585.8	4150	9439	3999	3015	968	330.9	211.8
MEAN	14.5	20.1	14.4	5.00	89.2	134	315	129	101	31.2	10.7	7.06
MAX	16	120	44	6.2	886	999	1790	245	620	60	16	13
MIN	14	13	4.4	3.3	5.7	52	37	71	57	17	7.1	5.7
CFSM	.07	.10	.07	.02	.44	.67	1.57	.64	.50	.16	.05	.04
IN.	.08	.11	.08	.03	.48	.77	1.75	.74	.56	.18	.06	.04
AC-FT	895	1200	884	307	5130	8230	18720	7930	5980	1920	656	420

CAL YR 1975	TOTAL	52621.5	MEAN 144	MAX 4430	MIN 4.4	CFSM .72	IN 9.74	AC-FT 104400
WTR YR 1976	TOTAL	26354.9	MEAN 72.0	MAX 1790	MIN 3.3	CFSM .36	IN 4.86	AC-FT 52270

05452200 WALNUT CREEK NEAR HARTWICK, IA

LOCATION.--Lat 41°50'06", long 92°23'10", in SE1/4 SW1/4 sec.8, T.81 N., R.13 W., Poweshiek County, Hydrologic Unit 07080208, on left bank 5 ft (2 m) upstream from bridge on county highway V21. 1.2 mi (1.9 km) downstream from North Walnut Creek, 4.0 mi (6.4 km) northwest of Hartwick, and 6.5 mi (10.5 km) upstream from mouth.

DRAINAGE AREA.--70.9 mi² (184 km²).

PERIOD OF RECORD.-- October 1949 to current year.

REVISED RECORDS.--WSP 1558: 1950 (P), 1951-57.

GAGE.--Water-stage recorder. Datum of gage is 786.59 ft (239.753 m) above mean sea level.

REMARKS.--Records good except those for winter period, which are poor. Several observations of water temperature were made during the year.

COOPERATION.--Six discharge measurements furnished by Corps of Engineers.

AVERAGE DISCHARGE.--27 years, 41.8 ft³/s (1.184 m³/s), 8.01 in/yr (203 mm/yr), 30,280 acre-ft/yr (37.3 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 5,650 ft³/s (160 m³/s) May 28, 1974, gage height, 15.90 ft (4.846 m), from rating curve extended above 2,600 ft³/s (73.6 m³/s) on basis of contracted-opening and flow-over-embankment measurement of peak flow; no flow at times for most years.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in June 1947 reached a stage of 17.7 ft (5.39 m), from information by local residents, discharge not determined.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 1,000 ft³/s (28.3 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage Height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage Height (ft) (m)
Feb. 26	1900	1,020 28.9	11.21 3.417	Apr. 24	1200	*1,870 53.0	*13.50 4.115

Minimum daily discharge, 0.73 ft³/s (0.021 m³/s) Sept. 6-8.

a From graph based on gage readings.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.3	4.3	24	1.8	3.2	31	41	112	29	21	6.1	1.2
2	4.2	4.7	21	1.9	2.9	27	38	105	26	21	5.9	1.0
3	4.0	5.1	15	2.0	2.8	24	34	85	24	20	5.3	.90
4	3.7	4.6	13	2.0	2.7	144	32	80	23	19	4.8	.79
5	3.7	4.1	12	2.1	2.6	162	29	80	23	19	4.3	.79
6	3.8	4.0	9.1	2.2	2.4	80	27	75	22	18	3.7	.73
7	3.8	4.0	9.5	2.3	2.6	49	28	67	22	17	3.0	.73
8	3.6	4.0	9.7	2.6	2.9	39	27	63	21	15	2.9	.73
9	3.6	4.3	8.9	2.6	3.8	39	26	62	20	15	2.7	.75
10	3.6	4.7	8.5	2.6	5.2	40	25	56	26	15	2.6	.85
11	3.7	4.3	8.4	2.6	6.7	43	24	56	23	14	2.6	.99
12	3.6	4.2	7.7	2.6	8.4	109	23	54	22	13	2.9	1.1
13	3.2	4.2	8.8	3.1	8.4	102	23	56	42	13	2.5	.99
14	3.3	3.8	18	3.8	8.0	61	23	57	257	13	2.4	.98
15	3.4	4.0	12	3.7	11	50	32	58	57	12	2.2	.98
16	3.6	4.0	13	3.7	16	46	31	68	45	11	2.0	1.1
17	3.9	3.6	14	3.8	13	46	40	73	38	11	2.0	1.0
18	4.0	3.5	14	3.8	11	45	110	59	30	11	1.8	1.1
19	4.1	3.5	16	3.7	9.4	46	72	54	31	10	1.8	1.5
20	4.0	4.6	17	3.7	10	46	82	50	31	9.4	1.7	1.6
21	3.9	4.2	15	3.6	11	45	285	46	26	8.1	1.7	1.3
22	3.7	3.3	15	3.7	12	43	161	43	25	9.2	1.7	1.4
23	3.5	3.4	13	3.6	13	43	532	44	24	14	1.6	1.5
24	3.6	3.5	11	3.6	18	43	1340	42	24	15	1.6	1.5
25	4.0	3.6	9.0	3.6	126	42	405	41	23	14	1.6	1.6
26	4.0	3.7	6.8	3.6	375	42	317	37	21	12	1.5	1.6
27	3.9	3.8	5.0	3.6	157	44	183	36	22	9.1	1.4	1.5
28	3.8	6.6	3.7	3.6	87	44	134	31	42	12	1.3	1.6
29	3.9	106	3.0	3.6	43	45	123	40	31	10	1.3	1.6
30	3.9	65	2.3	3.4	---	46	115	33	23	8.6	1.3	1.6
31	3.9	---	1.9	3.3	---	43	---	30	---	7.6	1.2	---
TOTAL	117.2	286.6	345.3	95.8	975.0	1709	4362	1794	1073	417.0	79.4	34.91
MEAN	3.78	9.55	11.1	3.09	33.6	55.1	145	57.9	35.8	13.5	2.56	1.16
MAX	4.3	106	24	3.8	375	162	1340	112	257	21	6.1	1.6
MIN	3.2	3.3	1.9	1.8	2.4	24	23	30	20	7.6	1.2	.73
CFSM	.05	.13	.16	.04	.47	.78	2.05	.82	.50	.19	.04	.02
IN.	.06	.15	.18	.05	.51	.90	2.29	.94	.56	.22	.04	.02
AC-FT	232	568	685	190	1930	3390	8650	3560	2130	827	157	69
CAL YR 1975	TOTAL	16731.80	MEAN 45.8	MAX 1100	MIN 1.9	CFSM .65	IN 8.78	AC-FT 33190				
WTR YR 1976	TOTAL	11289.21	MEAN 30.8	MAX 1340	MIN .73	CFSM .43	IN 5.92	AC-FT 22390				

05453000 SIG BEAR CREEK AT LADORA, IA

LOCATION.--Lat 41°44'58", long 92°10'55", in SW1/4 SW1/4 sec.7, T.60 N., R.11 W., Iowa County, Hydrologic Unit 07080208, on left bank 10 ft (3 m) downstream from bridge on county highway V52, 0.4 mi (0.6 km) south of Ladora, 1.2 mi (1.9 km) downstream from Coats Creek, 2.8 mi (4.5 km) upstream from Little Bear Creek, and 8.1 mi (13.0 km) upstream from mouth.

DRAINAGE AREA.--189 mi² (490 km²).

PERIOD OF RECORD.--October 1945 to current year. Prior to October 1966, published as Bear Creek at Ladora.

REVISED RECORDS.--WSP 1308: 1947 (M). WSP 1438: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 754.94 ft (230.106 m) above mean sea level. Prior to June 26, 1946, nonrecording gage at same site and datum.

REMARKS.--Records good except those for winter period, which are poor. Several observations of water temperature were made during the year.

COOPERATION.--Nine discharge measurements furnished by Corps of Engineers.

AVERAGE DISCHARGE.--31 years, 117 ft³/s (3.313 m³/s), 8.41 in/yr (214 mm/yr), 84,770 acre-ft/yr (105 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 10,500 ft³/s (297 m³/s) Mar. 30, 1960, gage height, 14.60 ft (4.450 m); no flow Jan. 22 to Feb. 8, 1956.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 4,460 ft³/s (126 m³/s) Apr. 24, gage height, 12.18 ft (3.712 m) at 1600 hours, no other peak above base of 2,000 (56.6 m³/s); minimum daily, 3.5 ft³/s (0.099 m³/s) Sept. 13-14.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP		
1	14	12	52	6.6	12	86	109	311	97	64	17	5.4		
2	12	12	66	6.6	11	86	101	276	89	58	16	5.4		
3	12	13	60	5.6	10	81	97	259	83	55	15	5.3		
4	11	14	50	5.7	9.3	314	92	250	76	52	14	4.9		
5	11	12	40	5.8	9.4	591	87	233	73	48	14	4.5		
6	11	9.8	31	6.2	9.0	224	84	213	69	48	15	4.4		
7	11	10	25	6.6	9.2	194	82	193	67	45	13	4.4		
8	11	9.5	29	7.6	9.2	155	80	183	63	41	12	4.2		
9	11	9.8	27	8.0	11	146	79	173	58	39	12	3.7		
10	11	12	25	8.2	14	144	77	165	70	36	11	4.0		
11	11	12	25	8.2	16	141	76	151	76	33	11	4.2		
12	10	9.9	23	8.8	18	283	74	148	61	32	13	4.1		
13	11	10	23	9.8	26	255	72	156	81	32	11	3.5		
14	10	9.2	32	10	33	208	72	160	526	30	11	3.5		
15	8.3	9.8	43	10	40	172	73	165	216	30	11	3.8		
16	8.9	10	22	11	44	152	75	208	135	28	10	4.0		
17	9.8	11	23	11	54	136	99	227	112	26	10	4.0		
18	10	9.8	21	11	71	132	206	201	101	26	11	4.1		
19	9.8	9.5	15	11	37	118	256	183	91	25	9.5	4.1		
20	11	12	17	11	31	116	195	168	83	25	8.3	5.4		
21	10	14	19	11	28	98	642	157	76	24	7.5	5.7		
22	10	11	19	11	25	88	456	145	70	39	7.2	4.9		
23	10	9.8	18	11	26	89	642	140	66	33	6.9	4.6		
24	9.5	12	16	11	124	90	3060	136	63	28	6.9	4.0		
25	9.2	9.5	14	12	344	84	1130	124	63	22	6.9	4.9		
26	9.5	12	13	12	448	87	715	115	55	21	7.2	5.7		
27	10	15	11	12	452	109	534	107	68	21	7.2	6.3		
28	10	16	9.4	12	225	87	443	103	337	25	6.6	6.0		
29	9.8	179	8.6	12	115	92	388	126	114	26	5.7	6.0		
30	10	385	8.0	12	---	126	350	119	87	20	5.7	5.7		
31	10	---	7.4	12	---	120	---	104	---	18	5.4	---		
TOTAL	322.8	860.6	792.4	296.7	2261.1	4804	10457	5399	3226	1050	318.0	140.7		
MEAN	10.4	29.4	25.6	9.57	78.0	155	349	174	108	33.9	10.3	4.69		
MAX	14	385	66	12	452	591	3060	311	526	64	17	6.3		
MIN	8.3	9.2	7.4	5.6	9.0	81	72	103	55	18	5.4	3.5		
CFSM	.06	.16	.14	.05	.41	.82	1.85	.92	.57	.18	.05	.02		
IN.	.06	.17	.16	.06	.45	.95	2.06	1.06	.63	.21	.06	.03		
AC-FT	640	1750	1570	589	4480	9520	20740	10710	6400	2080	631	279		
CAL YR 1975	TOTAL	40685.8	MEAN	111	MAX	2650	MIN	7.4	CFSM	.59	IN	8.01	AC-FT	80700
WTR YR 1976	TOTAL	29948.3	MEAN	81.8	MAX	3060	MIN	3.5	CFSM	.43	IN	5.89	AC-FT	59400

05453100 IOWA RIVER AT MARENGO, IA

LOCATION.--Lat 41°48'41", long 92°03'42", in SW1/4 NE1/4 sec.24, T.81 N., R.11 W., Iowa County, Hydrologic Unit 07080208, on right bank 10 ft (3 m) downstream from abandoned highway bridge, 0.7 mi (1.1 km) downstream from Big Bear Creek, 0.8 mi (1.3 km) north of Marengo, 4.9 mi (7.9 km) upstream from Hilton Creek, and at mile 139.4 (224.3 km).

DRAINAGE AREA.--2,794 mi² (7,236 km²).

PERIOD OF RECORD.--October 1956 to current year. Monthly discharge only for some periods, published in WSP 1728.

REVISED RECORDS.--WSP 1558: 1957.

GAGE.--Water-stage recorder. Datum of gage is 720.52 ft (219.614 m) above mean sea level.

REMARKS.--Records good except those for winter period, which are poor. Several observations of water temperature were made during the year. Corps of Engineers gage height telemeters at station.

COOPERATION.--Eighteen discharge measurements furnished by Corps of Engineers.

AVERAGE DISCHARGE.--20 years. 1,724 ft³/s (48.82 m³/s), 8.38 in/yr (213 mm/yr), 1,249,000 acre-ft/yr (1,540 km³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 30,800 ft³/s (872 m³/s) Mar. 31, 1960, gage height, 19.21 ft (5.855 m); maximum gage height, 19.79 ft (6.032 m) July 12, 1969; minimum daily discharge, 54 ft³/s (1.53 m³/s), estimated, Oct. 11, 12, 1956.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 17,700 ft³/s (501 m³/s) Apr. 24, gage height, 17.91 ft (5.459 m) at 1715 hours; no other peak above base of 6,000 ft³/s (170 m³/s); minimum daily discharge, 112 ft³/s (3.17 m³/s) Sept. 24-26.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	301	253	650	187	200	1870	1730	4520	2430	1340	428	168
2	298	256	590	184	199	1550	2180	3920	2160	1200	400	162
3	292	260	520	171	197	1210	2150	3560	2000	1110	381	158
4	284	257	465	173	191	1650	2040	3220	1920	1040	377	156
5	274	257	505	171	190	3050	2000	2950	1800	987	369	157
6	268	256	540	171	190	1690	1930	2840	1690	935	354	153
7	258	262	530	170	190	1470	1750	2550	1590	905	337	153
8	251	256	500	172	190	1360	1560	2390	1510	851	324	152
9	248	261	479	172	191	1330	1440	2260	1440	801	311	150
10	238	266	472	172	195	1310	1340	2120	1410	758	295	147
11	230	272	467	171	198	1420	1270	2020	1420	720	288	145
12	228	289	452	170	222	2000	1200	1890	1380	680	289	141
13	225	308	438	165	270	3710	1150	1790	1400	645	285	134
14	222	301	457	169	310	4310	1110	1780	2820	617	277	128
15	219	304	488	176	358	4460	1150	1790	4190	601	272	124
16	210	307	417	178	408	4620	1270	1860	4220	572	270	121
17	213	307	385	180	498	3660	1610	1890	4400	546	273	117
18	217	298	370	184	581	2880	1650	1970	4720	531	272	116
19	224	289	363	190	490	2500	3520	2110	3830	510	259	113
20	233	294	350	188	444	2250	4180	2040	2620	498	249	121
21	237	297	347	190	464	2010	5990	2000	2210	492	257	128
22	241	297	347	193	413	1880	7790	1960	1920	505	238	120
23	244	292	327	195	390	1740	11400	1900	1730	536	229	116
24	242	294	308	197	494	1620	15700	1930	1650	547	222	112
25	238	284	295	199	985	1490	15300	2600	1570	494	212	112
26	237	261	270	198	1550	1420	12300	3060	1470	457	205	112
27	237	253	250	199	2650	1390	10000	2870	1400	437	199	113
28	242	272	230	200	2990	1290	9090	2550	1660	434	192	116
29	243	419	208	200	2690	1230	7550	2460	1690	451	186	119
30	247	1030	197	204	---	1250	5800	3170	1530	472	180	119
31	245	---	189	204	---	1340	---	3190	---	466	173	---
TOTAL	7586	9252	12406	5693	18338	65000	137160	77160	65780	21138	8603	3983
MEAN	245	308	400	184	632	2097	4572	2489	2193	682	278	133
MAX	301	1030	650	204	2990	4620	15700	4520	4720	1340	428	168
MIN	210	253	189	165	190	1210	1110	1780	1380	434	173	112
CFSM	.09	.11	.14	.07	.23	.75	1.64	.89	.78	.24	.10	.05
IN.	.10	.12	.17	.08	.24	.87	1.83	1.03	.88	.28	.11	.05
AC-FT	15050	18350	24610	11290	36370	128900	272100	153000	130500	41930	17060	7900
CAL YR 1975	TOTAL	692233	MEAN	1897	MAX	19700	MIN 189	CFSM .68	IN 9.22	AC-FT	1373000	
WTR YR 1976	TOTAL	432099	MEAN	1181	MAX	15700	MIN 112	CFSM .42	IN 5.75	AC-FT	857100	

05453510 CORALVILLE LAKE NEAR CORALVILLE, IA

LOCATION.--Lat 41°43'29", long 91°31'40", in SW1/4 NE1/4 sec.22, T.80 N., R.6 W., Johnson County, Hydrologic Unit 07080208, at outlet works at left end of Coralville Dam on Iowa River, 2.3 mi (3.7 km) upstream from Rapid Creek, 4.3 mi (6.9 km) northeast of Coralville Post Office and at mile 83.3 (134.0 km).

DRAINAGE AREA.--3,115 mi² (8,067 km²).

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

GAGE.--Water-stage recorder. Datum of gage is at mean sea level (levels by Corps of Engineers).

REMARKS.--Reservoir is formed by earthfill dam completed in 1957. Storage began in September 1958. Releases controlled by three gates, 8.33 ft (2.539 m) wide and 20 ft (6 m) high, into forechamber of 23-ft (7 m) diameter concrete conduit through dam. Inlet invert elevation at 646.0 ft (197 m). No dead storage. Maximum design discharge through gates is 20,000 ft³/s (566 m³/s). Ungated spillway is concrete overflow section 500 ft (152 m) in length at elevation 712 ft (217 m) above mean sea level, contents, 469,000 acre-ft (578 hm³). Reservoir is used for flood control, low-flow augmentation, conservation and recreation. Normal operation will maintain an elevation of 670 ft (204 m) Feb. 15 to June 15, 680 ft (207 m) June 15 to Sept. 25, 683 ft (208 m) Sept. 25 to Dec. 15, and 680 ft (207 m) December 15 to Feb. 1 with a minimum release of 150 ft³/s (4.25 m³/s) and maximum release of 10,000 ft³/s (283 m³/s) Dec. 15 to May 1 and 6,000 ft³/s (170 m³/s) May 1 to Dec. 15. Minimum observed elevation on Jan. 15, 1975 is approximate due to freezing of gages.

COOPERATION.--Records furnished by Corps of Engineers.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 472,000 acre-ft (582 hm³) July 21, 1969, elevation, 711.85 ft (216.972 m); minimum daily contents, 456 acre-ft (0.562 hm³) Jan. 15, 1975; minimum observed elevation, 658.77 ft (200.793 m) Mar. 10, 1959.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 157,000 acre-ft (194 hm³) May 2, elevation, 694.62 ft (211.720 m); minimum daily contents, 10,700 acre-ft (13.2 hm³) Apr. 19; minimum observed elevation, 669.95 ft (204.201 m) Apr. 20.

Capacity table (elevation, in feet, and contents, in acre-ft)

665	5,000	683	55,000	700	232,000
670	10,600	685	69,000	705	327,000
675	21,000	690	108,000	710	427,000
680	40,300	695	162,000	712	469,000

CONTENTS, IN ACRE-FEET, AT 2400, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	52200	59400	61100	40700	37500	12500	11000	155000	41300	41300	40500	42000
2	52500	59700	60000	40600	35800	11600	12100	155000	40800	41100	40600	42000
3	52800	59800	59600	40300	33800	11600	13100	151000	40300	40800	40700	42000
4	53200	59800	59800	40100	31800	13400	13300	147000	39900	40700	40700	42000
5	53500	59700	60000	39900	29800	15900	13100	141000	39700	40500	40900	42100
6	53800	59400	60000	40000	28000	16500	12500	135000	39600	40400	41100	42100
7	54100	59600	60300	40000	26400	14900	11900	129000	39400	40400	41300	42100
8	54400	59500	60300	39900	24800	13300	11700	122000	39500	40200	41500	42100
9	52700	59600	60100	39800	23600	12200	11500	114000	39500	40300	41600	42100
10	55000	59600	59900	39800	22600	11600	11400	106000	39300	40400	41800	42100
11	55300	59500	59700	39700	21500	11400	11200	98200	39400	40400	42000	42100
12	55600	59800	59500	39600	20500	12600	11100	91100	39700	40300	42100	42100
13	55800	59600	59000	39600	19700	14200	11100	85000	40300	40500	42100	42100
14	56100	59400	59200	39600	19400	16000	11200	79000	41800	40600	42000	42000
15	56300	59400	58200	39600	19600	16300	11100	73300	42800	40700	42000	42000
16	56500	59300	56700	39600	19900	15900	11000	67600	43400	40500	42200	42000
17	56800	59200	55100	39700	19900	15100	11700	62100	44800	40100	42200	41900
18	57000	59200	53400	39800	19400	14000	12700	57100	46000	40000	42300	41900
19	57300	58900	51900	39900	18700	12800	10700	53000	47000	40200	42300	41900
20	57500	59700	50600	40000	18000	12100	11200	48800	45900	40500	42400	41800
21	57800	59700	49300	40100	18100	11600	13800	45100	43800	40700	42400	41800
22	58000	59400	48500	40200	18800	11600	16800	41600	42800	41000	42400	41800
23	58100	59400	48000	40300	18700	11600	18200	39200	42400	41300	42400	41700
24	58400	59500	47600	40400	18600	11700	35400	37900	41600	41700	42400	41700
25	58600	59500	47300	40400	18700	11600	69900	38000	41100	41900	42400	41700
26	58800	59700	47000	40500	19100	11700	102000	39400	41000	41600	42300	41700
27	59000	59600	46800	40600	19200	11500	127000	39200	41200	41100	42300	41700
28	59000	59400	46600	40700	19500	11400	141000	39200	41100	41200	42200	41600
29	59100	61100	46200	40700	19700	11600	149000	40800	41200	40800	42200	41600
30	59200	62600	45800	40400	---	11100	154000	40600	41500	40500	42100	41600
31	59200	---	45500	39200	---	10900	---	41900	---	40300	42000	---
MAX	59200	62600	61100	40700	37500	16500	154000	156000	47000	41900	42400	42100
MIN	52200	58900	45500	39200	18000	10900	10700	37900	39300	40000	40500	41600
+	683.09	683.68	680.22	679.69	671.58	670.19	694.34	680.40	680.34	680.06	680.24	680.25
*	+7,300	+3,400	-17,100	-6,300	-19,500	-8,800	+143,100	-112,100	-400	-1,200	+1,700	-400
CAL YR 1975.....	MAX 245,000	MIN 456	*+32,300									
WTR YR 1976.....	MAX 156,000	MIN 10,700	*-10,300									

+ Elevation, in feet, at end of month.

* Change in contents, in acre-feet.

05454000 RAPID CREEK NEAR IOWA CITY, IA

LOCATION.--Lat. 41°41'19", long 91°29'15", in NE1/4 NE1/4 sec.35, T.80 N., R.6 W., Johnson County, Hydrologic Unit 07080209, on left bank 80 ft (24 m) upstream from bridge on State Highway 1, 3.5 mi (5.6 km) northeast of Iowa City, and 4.7 mi (7.6 km) upstream from mouth.

DRAINAGE AREA.--25.3 mi² (65.5 km²).

PERIOD OF RECORD.--October 1937 to current year. Monthly discharge only for some periods, published in WSP 1308.

REVISED RECORDS.--WSP 1558: 1941 (M), 1943 (P), 1944 (M); 1946. WSP 1708: 1951 (P), 1952, WRD IOWA 1967: Drainage area.

GAGE.--Water-stage recorder and concrete control with sharp-crested weir. Datum of gage is 673.72 ft (205.350 m) above mean sea level.

REMARKS.--Records good except those for winter period, which are poor. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--39 years, 15.4 ft³/s (0.436 m³/s), 8.27 in/yr (210 mm/yr), 11,160 acre-ft/yr (13.8 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 6,100 ft³/s (173 m³/s) May 23, 1965, gage height, 14.10 ft (4.298 m); from rating curve extended above 3,600 ft³/s (102 m³/s) on basis of contracted-opening measurement of peak flow; maximum gage height, 14.93 ft (4.551 m) July 17, 1972; no flow at times most years.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 184 ft³/s (5.21 m³/s) Apr. 24, gage height, 5.68 ft (1.731 m), no peak above base of 600 ft³/s (17.0 m³/s); no flow Jan. 7-13, 17-23, Feb. 3-9, Sept. 5-25.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.16	.32	2.2	.36	.02	2.4	3.6	17	4.3	2.8	.14	.01
2	.13	.38	1.2	.46	.01	2.3	3.2	16	4.2	2.2	.09	.01
3	.11	.56	1.2	.17	0	10	3.0	13	3.3	1.8	.05	.01
4	.11	.30	1.1	.05	0	60	2.6	12	2.6	1.5	.05	.01
5	.11	.32	1.2	.02	0	50	2.4	11	2.4	1.2	.47	0
6	.10	.28	.93	.01	0	25	2.7	9.1	2.2	1.1	3.2	0
7	.09	.44	.68	0	0	12	2.8	7.6	2.4	1.0	.13	0
8	.08	.47	.62	0	0	9.7	2.5	6.7	2.4	.94	.10	0
9	.08	.64	.65	0	0	7.0	2.3	5.7	2.6	.71	.06	0
10	.07	.70	.65	0	.05	6.3	2.4	5.4	2.8	.59	.05	0
11	.07	.61	.65	0	.50	5.4	2.4	4.8	2.9	.41	.89	0
12	.06	.40	.64	0	1.6	12	2.0	4.4	3.0	.29	7.0	0
13	.08	.32	.66	0	2.6	9.2	2.0	6.7	3.2	.19	1.7	0
14	.10	.26	1.5	.01	4.0	8.0	2.3	5.8	21	.16	.47	0
15	.09	.26	1.0	.02	7.0	6.6	2.5	7.6	11	9.5	.22	0
16	.09	.23	.50	.01	4.0	5.8	2.4	8.1	6.6	2.6	.10	0
17	.09	.21	.13	0	2.2	5.1	4.6	7.0	5.2	.66	3.7	0
18	.09	.27	.05	0	3.0	5.3	4.4	6.3	4.5	.34	1.0	0
19	.10	.28	.07	0	3.5	4.9	3.6	6.6	4.1	.25	.38	0
20	.12	.77	.15	0	4.5	4.6	7.3	6.3	3.6	.96	.15	0
21	.13	.97	.19	0	6.0	3.8	13	5.6	3.2	5.0	.08	0
22	.14	.61	.19	0	10	3.0	10	5.4	2.8	2.9	.05	0
23	.14	.41	.20	0	20	3.2	15	5.7	2.6	1.0	.05	0
24	.17	.40	.22	.01	43	3.3	89	5.5	2.7	.58	.04	0
25	.22	.38	.28	.03	37	3.0	63	4.6	2.7	.27	.03	0
26	.17	.25	.36	.02	23	3.3	43	4.4	1.9	.27	.02	.03
27	.16	.34	.36	.01	10	4.3	32	4.3	4.8	.29	.02	.03
28	.14	.45	.32	.01	2.2	3.0	26	4.3	9.8	2.1	.05	.03
29	.12	4.7	.34	.01	2.3	3.6	21	5.6	9.8	1.1	.02	.02
30	.12	12	.41	.02	---	5.2	19	6.0	4.9	.47	.02	.02
31	.12	---	.41	.03	---	3.9	---	4.2	---	.22	.01	---
TOTAL	3.53	28.62	19.06	1.25	186.48	291.2	392.0	222.7	139.5	43.40	20.34	.17
MEAN	.12	.95	.61	.040	6.43	9.39	13.1	7.18	4.65	1.40	.66	.006
MAX	.22	12	2.2	.46	43	60	89	17	21	9.5	7.0	.03
MIN	.07	.21	.05	0	0	2.3	2.0	4.2	1.9	.16	.01	0
CFSM	.004	.04	.02	.001	.25	.27	.52	.28	.18	.06	.03	0
IN.	.005	.04	.03	.002	.27	.43	.58	.33	.21	.06	.03	.0002
AC-FT	7.1	57	38	2.5	370	578	776	442	277	86	40	.3
CAL YR 1975 TOTAL	4071.56			MEAN 11.2	MAX 500	MIN .01	CFSM .44	IN 5.99	AC-FT 8080			
WTR YR 1976 TOTAL	1348.30			MEAN 3.68	MAX 89	MIN 0	CFSM .15	IN 1.98	AC-FT 2670			

LOCATION.--Lat 41°40'36", long 91°35'55", in NE1/4 SE1/4 sec.1, T.79 N., R.7 W., Johnson County, Hydrologic Unit 07080209, on left bank about 50 ft (15 m) upstream from bridge on county highway, 1.1 mi (1.8 km) west of post office in Coralville, 1.5 mi (2.4 km) downstream from Deer Creek and 2.7 mi (4.3 km) upstream from mouth.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,030 ft³/s (29.2 m³/s) Apr. 24, gage height, 9.06 ft (2.76 m) at 1045 hours, no other peak above base of 1,000 ft³/s (28.3 m³/s); minimum daily 1.5 ft³/s (0.113 m³/s) Sept. 11, 13-17, 20-23.

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6.4	4.8	52	8.0	5.0	25	33	159	54	26	6.9	2.3
2	5.5	5.6	58	9.6	4.1	23	29	146	40	24	6.4	2.3
3	5.7	8.3	31	7.1	3.3	23	26	132	37	22	6.0	2.1
4	4.9	6.3	24	5.8	2.6	236	24	115	34	21	5.8	2.0
5	4.8	4.7	22	5.0	2.3	199	22	102	31	19	6.2	1.8
6	4.7	4.3	19	4.4	2.6	138	21	90	30	18	8.1	1.7
7	4.9	4.9	15	3.3	3.2	91	19	80	29	18	10	1.6
8	5.4	4.8	15	2.9	3.8	64	18	72	29	18	7.5	1.6
9	4.6	5.8	15	2.2	4.7	61	17	65	29	17	6.2	1.6
10	4.6	11	13	2.3	6.0	62	17	58	29	17	6.0	1.6
11	4.2	6.9	13	2.3	7.2	58	16	62	29	16	6.9	1.5
12	4.3	5.7	12	2.4	8.8	69	15	64	29	16	19	1.6
13	4.4	5.1	12	2.9	11	91	15	69	29	16	24	1.5
14	4.2	5.1	17	3.5	14	89	15	70	30	15	15	1.5
15	5.0	5.5	19	3.9	15	80	15	70	40	25	8.7	1.5
16	4.4	5.6	11	4.1	19	66	15	70	40	17	5.6	1.5
17	4.7	5.6	12	3.6	23	56	31	72	40	12	5.4	1.5
18	4.4	5.4	8.8	3.7	27	51	44	73	37	11	6.0	1.6
19	4.4	5.4	9.0	4.1	46	50	38	73	35	10	5.0	1.8
20	4.3	7.4	12	4.0	28	47	54	70	35	13	4.1	1.5
21	4.4	8.8	13	4.5	40	39	253	63	35	15	3.7	1.5
22	4.2	6.4	12	4.4	28	32	303	61	34	14	3.5	1.5
23	4.2	5.4	12	4.7	33	30	224	57	28	12	3.3	1.5
24	4.6	5.1	12	4.5	60	30	885	53	21	11	3.1	1.6
25	6.9	4.7	11	4.6	203	28	652	49	21	9.0	3.1	1.6
26	5.0	3.1	11	4.5	71	27	346	47	21	8.1	3.0	1.9
27	4.3	4.3	9.5	4.4	43	31	240	43	21	8.1	2.9	1.9
28	4.0	4.3	8.8	4.7	34	28	192	42	23	11	2.8	1.8
29	4.0	66	9.4	5.0	28	27	174	50	24	10	2.6	1.9
30	3.9	307	9.8	5.3	---	38	169	60	27	8.1	2.5	1.7
31	3.8	---	9.8	5.1	---	40	---	51	---	7.2	2.4	---
TOTAL	145.0	533.3	508.1	136.8	776.6	1929	3922	2288	941	464.5	201.7	51.0
MEAN	4.68	17.8	16.4	4.41	25.8	62.2	131	73.8	31.4	15.0	6.51	1.70
MAX	6.9	307	58	9.6	203	236	885	159	54	26	24	2.3
MIN	3.8	3.1	8.8	2.2	2.3	23	15	42	21	7.2	2.4	1.5
CFSM	.05	.18	.17	.04	.27	.63	1.34	.75	.32	.15	.07	.02
IN.	.05	.20	.19	.05	.29	.73	1.49	.87	.36	.18	.08	.02
AC-FT	288	1060	1010	271	1540	3830	7780	4540	1870	921	400	101
WAL YR 1975	TOTAL	16907.0		MEAN 46.3	MAX 1500	MIN 3.1	CFSM .47	IN 6.41	AC-FT	33540		
CALR YR 1976	TOTAL											

05454500 IOWA RIVER AT IOWA CITY, IA

LOCATION.--Lat 41°39'24", Long 91°32'27". in SE1/4 SE1/4 sec.9, T.79 N., R.6 W., Johnson County, Hydrologic Unit 07080209, on right bank 25 ft (8 m) downstream from Hydraulics Laboratory of University of Iowa in Iowa City, 175 ft (53 m) downstream from University Dam, 0.8 mi (1.3 km) upstream from Ralston Creek. 3.6 mi (5.8 km) downstream from Clear Creek, and at mile 74.2 (119.4 km).

DRAINAGE AREA.--3,271 mi² (8,472 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--June 1903 to current year. Monthly discharge only for some periods, published in WSP 1308.

GAGE.--Water-stage recorder. Datum of gage is 29.00 ft (8.839 m) above Iowa City datum, and 617.27 ft (188.144 m) above mean sea level. Oct. 1, 1934, to Sept. 30, 1972, at datum 10.00 ft (3.05 m) higher. See WSP 1708 for history of changes prior to Oct. 1, 1934.

REMARKS.--Records excellent. Diurnal fluctuation at low stages caused by power plant above station. Flow regulated by Coralville Lake (station 05453510) 9.1 mi (14.6 km) upstream, since Sept. 17, 1958. Corps of Engineers gage height telemeter at station.

AVERAGE DISCHARGE.--73 years, 1,643 ft³/s (46.52 m³/s), 6.82 in/yr (173 mm/yr), 1,190,000 acre-ft/yr (1,470 hm³/yr); median of yearly mean discharges, 1,453 ft³/s (41.1 m³/s), 6.0 in/yr (152 mm/yr), 1,053,000 acre-ft/yr (1,300 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 42,500 ft³/s (1,204 m³/s) June 8, 1918, gage height, 19.6 ft (5.974 m) from graph based on gage readings, site and datum then in use; minimum daily, 29 ft³/s (0.82 m³/s) Oct. 21, 22, 1916, regulated.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of July 17, 1881, reached a stage of 21.1 ft (6.43 m), from floodmarks at site and datum in use 1913-21, from information by local resident, discharge, 51,000 ft³/s (1,440 m³/s). Maximum stage known since at least 1850, about 3 ft (1 m) higher than that of July 17, 1881, occurred in June 1851, discharge 70,000 ft³/s (1,980 m³/s), estimated.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 7,350 ft³/s (208 m³/s) Apr. 24, gage height, 18.72 ft (5.706 m); minimum daily, 132 ft³/s (3.74 m³/s) Sept. 17.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	157	165	1730	496	1030	3190	1420	6090	2980	1530	375	195
2	157	165	1500	449	1140	2610	1510	6090	2910	1390	340	172
3	156	192	1090	356	1220	1660	1940	6070	2380	1190	333	155
4	152	270	666	379	1190	2290	2080	6030	2220	1050	336	150
5	155	330	534	335	1170	3240	2170	6010	1960	998	312	148
6	155	330	520	307	1070	3150	2240	5950	1900	934	305	150
7	158	330	517	282	982	2890	2140	5900	1740	874	279	148
8	158	330	588	262	960	2420	1860	5960	1510	832	266	152
9	158	347	654	237	852	2000	1620	6110	1460	736	270	150
10	155	344	651	236	755	1740	1450	6050	1360	710	270	145
11	155	322	660	235	743	1550	1350	5980	1250	665	305	145
12	155	322	732	233	734	1630	1260	5550	1190	615	336	145
13	155	316	730	212	616	2230	1130	4970	1210	580	364	142
14	155	319	747	171	453	3070	1070	4880	1420	530	361	138
15	155	319	960	173	470	3940	1050	4870	2760	615	326	145
16	155	319	1160	168	544	4510	1100	4890	3840	625	270	135
17	155	358	1150	171	637	4480	1280	4780	3830	685	277	132
18	158	305	1140	173	874	4370	1540	4580	3830	494	249	135
19	158	226	999	170	993	3730	2200	4080	3840	382	235	148
20	158	242	657	169	951	3090	3410	4010	3840	364	232	135
21	158	387	855	171	765	2610	4090	3960	3600	378	232	135
22	158	372	754	170	516	2130	5510	3910	2800	368	232	135
23	160	294	570	171	608	2090	5970	3520	2210	358	229	135
24	160	215	509	171	755	1910	5600	3040	2190	344	226	135
25	160	270	453	175	1100	1820	2260	2320	1970	406	226	135
26	158	303	451	171	1310	1630	1540	2170	1590	510	226	152
27	155	252	451	172	1870	1580	1710	2170	1470	600	223	145
28	156	254	449	172	2590	1440	3910	2830	1600	530	211	152
29	158	342	471	183	2910	1380	5420	2940	1670	600	205	158
30	162	1380	496	349	---	1490	6080	3100	1550	560	202	150
31	160	---	495	738	---	1500	---	3090	---	450	200	---
TOTAL	4867	9920	23539	7897	29808	77370	75910	142480	68080	20903	8444	4397
MEAN	157	331	759	255	1028	2496	2530	4596	2259	674	272	147
MAX	162	1380	1730	738	2910	4510	6080	6110	3840	1530	375	195
MIN	152	165	449	168	453	1380	1050	2170	1190	344	200	132
AC-FT	9650	19680	46690	15660	59120	153500	150600	282600	135000	41460	16750	8720
CAL YR 1975 TOTAL	740827			MEAN 2030	MAX 10200	MIN 152				AC-FT 1469000		
WTR YR 1976 TOTAL	472615			MEAN 1294	MAX 6110	MIN 132				AC-FT 939400		

WATER-QUALITY RECORDS

SUSPENDED-SEDIMENT DISCHARGE: October 1943 to current year.

Dec. 16, 1963.

SEDIMENT LOADS: Maximum daily, 9.620 tons (8.730 tonnes) Mar. 5; minimum daily, 6.0 tons (5.4 tonnes) Jan. 27.

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	400	---	400	---	---	420	500	---	560	520	---	460
	440	---	480	---	600	260	---	---	560	440	480	460
	470	470	490	---	600	340	---	360	560	---	490	440
	---	560	500	---	550	340	---	370	560	---	440	---
2	470	400	560	520	520	340	420	360	---	---	490	---
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3	470	400	---	560	560	---	520	390	---	440	510	---
	440	470	---	570	---	---	---	410	550	540	---	450
	470	---	---	580	---	320	---	---	530	540	---	---
	490	---	---	---	570	---	520	---	540	---	480	460
4	470	470	---	---	560	340	---	---	560	---	480	440
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5	---	500	510	560	560	---	---	400	560	---	470	---
	---	500	510	600	600	---	520	490	---	---	500	---
	---	500	---	600	600	---	520	---	---	540	480	450
	460	560	---	540	540	---	520	480	460	540	---	450
6	460	---	490	---	---	400	500	---	550	530	---	450
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7	460	---	490	---	---	400	500	---	560	530	480	450
	470	400	500	510	510	340	---	500	560	---	480	390
	---	470	500	480	480	---	---	500	560	---	470	---
	---	470	460	470	470	310	500	510	---	500	490	---
8	---	460	---	470	470	---	---	500	---	460	---	---
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9	460	400	---	---	---	---	460	---	500	500	---	400
	470	---	480	---	---	400	---	---	360	460	---	450
	---	---	420	460	460	---	300	---	---	---	480	---
	---	470	500	450	450	460	---	500	---	---	480	480
10	---	460	---	420	420	420	---	490	400	---	480	---
	---	---	---	---	---	---	360	500	---	460	480	---
	---	---	---	---	---	---	300	480	---	---	480	---
	---	---	---	---	---	---	300	540	440	---	---	400
11	---	---	---	---	---	500	---	---	500	---	---	480
	---	---	---	---	---	520	360	---	500	460	460	---
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12	---	---	---	---	---	---	---	---	---	---	---	---
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IOWA RIVER BASIN
05454500 IOWA RIVER AT IOWA CITY, IA--Continued

WATER-QUALITY RECORDS

WATER QUALITY DATA, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	14.0	---	3.0	---	---	4.5	10.0	---	20.0	26.0	---	23.5
2	12.0	---	3.0	---	2.0	3.5	---	---	19.0	22.0	23.5	21.5
3	12.0	15.0	3.0	---	2.5	3.5	---	10.5	19.0	---	24.0	25.0
4	---	15.0	5.0	---	2.0	2.0	---	11.0	19.5	---	24.5	---
5	---	15.0	4.5	1.0	2.0	1.0	11.5	14.0	---	---	27.0	---
6	14.5	14.0	---	1.0	1.0	---	12.0	12.5	---	24.0	24.0	---
7	14.5	14.5	---	0.0	---	---	---	12.0	21.5	24.5	---	22.0
8	16.0	---	3.0	0.0	---	2.0	11.0	---	22.0	24.0	---	---
9	17.0	---	3.0	0.0	5.0	---	11.5	---	22.5	---	25.0	22.0
10	15.0	11.0	---	---	4.0	4.0	---	13.0	23.5	---	24.0	19.0
11	---	10.5	2.0	---	3.5	---	---	14.0	23.0	---	25.0	---
12	---	9.5	2.5	3.0	4.5	---	10.0	14.5	---	---	24.0	---
13	---	7.5	---	2.0	4.0	---	11.5	---	---	26.0	26.5	23.5
14	20.0	8.5	---	1.0	4.5	---	13.5	16.0	23.0	27.5	---	20.5
15	17.0	---	1.0	3.0	---	5.0	16.0	---	24.0	26.5	---	20.5
16	14.0	---	1.0	0.5	---	3.5	17.0	---	26.0	24.5	24.0	24.0
17	13.0	13.0	0.0	---	2.5	3.0	---	10.5	23.5	---	23.0	24.0
18	---	11.0	0.0	---	2.0	---	---	15.0	23.0	---	24.0	---
19	---	9.5	2.5	2.0	2.0	7.5	10.0	15.0	---	26.0	27.0	---
20	12.0	10.0	---	---	4.0	---	16.5	17.5	---	29.0	---	---
21	13.5	7.0	---	---	---	---	15.0	---	21.5	27.0	---	18.5
22	14.0	---	2.0	2.5	---	9.0	---	---	25.0	24.5	---	16.0
23	---	---	1.0	3.5	4.0	---	13.0	---	21.0	---	26.0	---
24	17.0	5.0	1.5	---	5.0	10.0	---	17.0	---	---	24.0	17.0
25	---	4.0	---	---	6.0	12.0	---	17.0	21.0	---	24.5	---
26	---	---	---	1.5	---	---	14.0	17.5	---	25.5	---	---
27	---	---	---	0.5	4.5	---	11.0	17.5	---	---	27.0	16.0
28	12.0	---	---	3.5	---	---	10.5	17.5	23.0	---	---	16.0
29	10.0	---	0.5	1.5	---	11.0	---	---	---	---	---	17.0
30	10.0	---	2.5	---	---	9.0	14.5	---	22.0	26.5	26.0	17.5
31	---	---	1.0	2.5	---	10.0	---	---	---	---	23.0	---
MONTH	---	---	---	---	---	---	---	---	---	---	---	---

SUSPENDED-SEDIMENT DISCHARGE (TONS/DAY), WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976

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	157	51	22	165	27	12	1730	69	322
2	157	52	22	165	28	12	1500	49	198
3	156	56	24	192	28	15	1090	27	79
4	152	58	24	270	25	18	666	20	36
5	155	53	22	330	27	24	534	16	23
6	155	52	22	330	31	28	520	15	21
7	158	46	20	330	34	30	517	14	20
8	158	34	15	330	34	30	588	13	21
9	158	44	19	347	34	32	654	9	16
10	155	42	18	344	34	32	651	10	18
11	155	46	19	322	33	29	660	17	30
12	155	49	21	322	34	30	732	24	47
13	155	49	21	316	27	23	730	24	47
14	155	46	19	319	35	30	747	23	46
15	155	38	16	319	40	34	960	32	83
16	155	37	15	319	35	30	1160	26	81
17	155	31	13	358	45	43	1150	16	50
18	158	25	11	305	44	36	1140	17	52
19	158	21	9.0	226	29	18	999	29	78
20	158	22	9.4	242	30	20	857	35	81
21	158	26	11	387	43	45	855	28	65
22	158	29	12	372	26	26	754	18	37
23	160	31	13	294	22	17	570	13	20
24	160	34	15	215	18	10	509	18	25
25	160	33	14	270	18	13	453	18	22
26	158	33	14	303	20	16	451	17	21
27	155	32	13	252	23	16	451	16	19
28	158	30	13	254	21	14	449	20	24
29	158	29	12	342	26	24	471	24	31
30	162	22	9.6	1380	77	287	496	17	23
31	160	25	11	---	---	---	495	18	24
TOTAL	4867	---	494.0	9920	---	994	23539	---	1660

05454500 IOWA RIVER AT IOWA CITY, IA--Continued

WATER-QUALITY RECORDS

WATER QUALITY DATA, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976

SUSPENDED-SEDIMENT DISCHARGE (TONS/DAY), WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976

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	496	21	28	1030	14	39	3190	390	3360
2	449	17	21	1140	18	55	2610	362	2550
3	396	19	20	1220	27	89	1660	306	1370
4	379	27	28	1190	55	177	2290	540	3340
5	335	22	20	1170	46	145	3240	1100	9620
6	307	14	12	1070	45	130	3150	875	7440
7	282	18	14	982	44	117	2890	545	4250
8	262	32	23	960	51	132	2420	269	1760
9	237	16	10	852	66	152	2000	153	826
10	236	21	13	755	62	126	1740	102	479
11	235	30	19	743	61	122	1550	93	389
12	233	33	21	734	39	77	1630	92	405
13	212	13	7.4	616	66	110	2230	126	759
14	171	15	6.9	453	77	94	3070	198	1640
15	173	36	17	470	54	69	3940	329	3500
16	168	31	14	544	55	81	4510	462	5630
17	171	31	14	637	45	77	4480	412	4980
18	173	42	20	874	42	99	4370	360	4250
19	170	58	27	993	40	107	3730	217	2190
20	169	58	26	951	23	59	3090	160	1330
21	171	53	24	765	16	33	2610	243	1710
22	170	47	22	516	15	21	2130	327	1880
23	171	14	6.5	608	22	36	2090	203	1150
24	171	16	7.4	755	46	94	1910	166	856
25	175	25	12	1100	94	279	1820	177	870
26	171	23	11	1310	87	308	1630	167	735
27	172	13	6.0	1870	126	636	1580	148	631
28	172	35	16	2590	229	1600	1440	117	455
29	183	34	17	2910	335	2630	1380	97	361
30	349	20	19	---	---	---	1490	119	479
31	738	13	26	---	---	---	1500	110	445
TOTAL	7897	---	528.2	29808	---	7694	77370	---	69640
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	1420	118	452	6090	118	1940	2980	66	531
2	1510	105	428	6090	104	1710	2910	57	448
3	1940	165	864	6070	103	1690	2380	65	418
4	2080	112	629	6030	117	1900	2220	66	395
5	2170	113	662	6010	73	1180	1960	67	355
6	2240	98	593	5950	67	1080	1900	68	349
7	2140	98	566	5900	62	988	1740	65	305
8	1860	115	578	5960	60	965	1510	54	220
9	1620	110	481	6110	57	940	1460	54	213
10	1450	103	403	6050	54	882	1360	67	246
11	1350	110	401	5980	48	775	1250	61	206
12	1260	121	412	5550	50	749	1190	58	186
13	1130	114	348	4970	75	1010	1210	58	189
14	1070	114	329	4880	65	856	1420	117	449
15	1050	123	349	4870	59	776	2760	188	1400
16	1100	116	345	4890	57	753	3840	189	1960
17	1280	115	397	4780	55	710	3830	152	1570
18	1540	134	557	4580	54	668	3830	151	1560
19	2200	116	689	4080	58	639	3840	176	1820
20	3410	258	2380	4010	64	693	3840	196	2030
21	4090	381	4210	3960	59	631	3600	198	1920
22	5510	511	7600	3910	53	560	2800	182	1380
23	5970	411	6620	3520	56	532	2210	155	925
24	5600	378	5720	3040	73	599	2190	105	621
25	2260	322	1960	2320	80	501	1970	67	355
26	1540	263	1090	2170	83	486	1590	60	258
27	1710	175	808	2750	89	661	1470	62	246
28	3910	215	2270	2830	53	405	1600	85	367
29	5420	209	3060	2940	52	413	1670	63	284
30	6080	182	2990	3100	60	502	1550	73	306
31	---	---	---	3090	82	684	---	---	---
TOTAL	75910	---	48191	142480	---	26879	68080	---	21514

IOWA RIVER BASIN
05454500 IOWA RIVER AT IOWA CITY, IA--Continued

WATER-QUALITY RECORDS

WATER QUALITY DATA, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976
SUSPENDED-SEDIMENT DISCHARGE (TONS/DAY), WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976

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	1530	71	293	375	59	60	195	37	19
2	1390	57	214	340	47	43	172	41	19
3	1190	53	170	333	50	45	155	41	17
4	1050	54	153	336	57	52	150	41	17
5	998	57	154	312	62	52	148	39	16
6	934	64	161	305	50	41	150	37	15
7	874	71	168	270	47	34	148	36	14
8	832	67	151	266	48	34	152	38	16
9	736	64	127	270	52	38	150	40	16
10	710	63	121	270	48	35	145	43	17
11	665	61	110	305	52	43	145	49	19
12	615	56	93	336	55	50	145	53	21
13	580	53	83	364	69	68	142	51	20
14	530	65	93	361	67	65	138	38	14
15	615	80	133	326	60	53	145	35	14
16	625	79	133	270	53	39	135	31	11
17	685	102	189	277	52	39	132	31	11
18	494	91	121	249	46	31	135	33	12
19	382	75	77	235	61	39	148	40	16
20	364	87	86	232	67	42	135	35	13
21	378	68	69	232	63	39	135	33	12
22	368	98	97	232	55	34	135	34	12
23	358	93	90	229	44	27	135	37	13
24	344	80	74	226	38	23	135	39	14
25	406	86	94	226	36	22	135	39	14
26	510	100	138	226	35	21	152	48	20
27	600	112	181	223	41	25	145	42	16
28	530	97	139	211	39	22	152	43	18
29	600	119	193	205	39	22	158	38	16
30	560	113	171	202	44	24	150	34	14
31	450	87	106	200	33	18	---	---	---
TOTAL	20903	---	4182	8444	---	1180	4397	---	466
YEAR	473615		183427.2						

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 .125 MM (80159)	BED MAT. FALL DIAM. % FINER THAN .250 MM (80160)	BED MAT. FALL DIAM. % FINER THAN .500 MM (80161)	BED MAT. FALL DIAM. % FINER THAN 1.00 MM (80162)
APR. 05...	1100	12.0	3	2250	0	4	45	68
JUNE 01...	1300	21.5	4	3020	--	--	--	--
DATE		BED MAT. SIEVE DIAM. % FINER THAN .125 MM (80165)	BED MAT. SIEVE DIAM. % FINER THAN .250 MM (80166)	BED MAT. SIEVE DIAM. % FINER THAN .500 MM (80167)	BED MAT. SIEVE DIAM. % FINER THAN 1.00 MM (80168)	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 16.0 MM (80172)
APR. 06...	--	--	--	--	69	82	100	--
JUNE 01...	0	2	46	82	90	94	97	100

05455000 RALSTON CREEK AT IOWA CITY, IA

LOCATION.--Lat 41°39'50", long 91°30'48", in SE1/4 NW1/4 sec.11, T.79 N., R.6 W., Johnson County, Hydrologic Unit 07080209, on left bank 10 ft (3 m) upstream from bridge on Rochester Avenue, 1.0 mi (1.6 km) northeast of post office in Iowa City and 2.2 mi (3.5 km) upstream from mouth.

DRAINAGE AREA.--3.01 mi² (7.80 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--September 1924 to current year.

REVISED RECORDS.--WSP 1508: 1933, 1935-37, 1940-41 (M); 1942, 1943 (M), 1948-51, 1952 (P), 1953, 1954 (M), 1955. WRD Iowa. 1967: 1965-66.

GAGE.--Water stage recorder and V-notch sharp-crested weir. Datum of gage is 663.27 ft, revised (202.165 m) above mean sea level (University of Iowa bench mark).

REMARKS.--Records good except those for winter period, which are poor.

AVERAGE DISCHARGE.--52 years, 1.69 ft³/s (0.048 m³/s), 7.62 in/yr (194 mm/yr), 1,220 acre-ft/yr (1.50 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,940 ft³/s (54.9 m³/s) Sept. 21, 1965, gage height, 6.90 ft (2.103 m); maximum gage height, 9.06 ft (2.761 m) July 16, 1956; no flow at times during most years.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 122 ft³/s (3.46 m³/s) Apr. 24, gage height, 3.67 ft (1.119 m) at 0530 hours, no peak above base of 200 ft³/s (5.66 m³/s); no flow Jan. 5-14, 17-23, Feb. 3-7, July 12-13, Aug. 31-Sept. 25, Sept. 27-30.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.04	.51	.26	.11	.02	.45	.47	3.0	1.0	.21	.04	0
2	.03	.66	.23	.13	.02	.44	.38	2.7	.81	.18	.03	0
3	.02	.15	.20	.06	0	.37	.34	1.9	.83	.14	.01	0
4	.02	.10	.24	.03	0	.28	.28	1.7	1.5	.09	.01	0
5	.12	.07	.24	0	0	6.5	.30	1.7	.29	.11	1.4	0
6	.02	.74	.10	0	0	2.8	.27	1.5	.42	.08	7.4	0
7	.01	.12	.21	0	0	1.9	.24	1.2	.36	.10	.24	0
8	.01	.12	.29	0	.02	1.2	.22	1.1	.18	.07	.13	0
9	.02	.18	.17	0	.05	.71	.21	1.0	.20	.04	.08	0
10	.03	.22	.18	0	.10	.68	.22	.79	.60	.06	.05	0
11	.02	.18	.17	0	.20	.62	.24	.42	.25	.06	5.6	0
12	.02	.15	.15	0	.20	3.5	.16	.41	.20	0	6.8	0
13	.02	.21	.17	0	.40	1.2	.22	1.5	.37	0	1.2	0
14	.02	.21	.76	0	.60	.87	.21	.60	3.8	.01	.34	0
15	.03	.15	.21	.01	1.3	.65	.23	2.6	.63	4.2	.14	0
16	.02	.16	.15	.01	1.0	.59	.22	1.3	.50	.41	.14	0
17	.02	.71	.06	0	.40	.50	1.1	.87	.30	.13	2.9	0
18	.03	.07	.02	0	.60	.59	.72	.78	.27	.07	.37	0
19	.02	.08	.02	0	.70	.59	.31	.78	.22	.07	.18	0
20	.03	.29	.08	0	.80	.59	4.8	.62	.20	.26	.13	0
21	.02	.35	.10	0	1.0	.30	5.7	.38	.19	2.3	.09	0
22	.04	.17	.10	0	2.0	.30	2.4	.38	.13	2.4	.02	0
23	.05	.08	.12	0	4.0	.30	6.7	.43	.12	.29	.02	0
24	.09	.11	.11	.01	8.0	.35	34	.33	.19	.19	.02	0
25	.11	.10	.13	.05	7.0	.51	12	.28	.18	.14	.02	0
26	.06	.07	.14	.03	4.5	.63	7.0	.25	.06	.09	.03	.10
27	.03	.10	.11	.03	1.0	1.5	5.1	.22	2.4	.17	.02	0
28	.04	.13	.10	.02	.41	1.5	3.8	.22	.80	.66	.21	0
29	.09	7.2	.11	.01	.50	.60	3.1	6.3	2.2	.18	.04	0
30	.02	5.7	.13	.03	---	1.7	3.7	4.2	.42	.08	.01	0
31	.03	---	.12	.05	---	.52	---	1.4	---	.07	0	---
TOTAL	1.05	19.02	5.29	1.73	35.81	60.39	94.66	40.85	19.02	12.86	27.67	.10
MEAN	.024	.63	.17	.049	1.22	1.06	3.16	1.32	.65	.41	.09	.003
MAX	.11	7.2	.76	1.0	8.0	.77	.34	6.3	3.8	4.2	7.4	.10
MIN	.01	.07	.02	0	0	.35	.18	.22	.06	0	0	0
CFRM	.01	.21	.06	.076	.41	.05	1.05	.44	.22	.14	.30	0
IN	.01	.23	.07	.067	.44	.75	1.17	.50	.24	.16	.34	.001
AC-FT	2.1	35	10	1.7	71	120	100	81	29	26	55	.2

GAL YR 1975 TOTAL 540.09 MEAN 1.48 MAX 76 MIN 0 CFM 4.2 IN 6.67 AC-FT 1070
 YR 1976 TOTAL 318.11 MEAN .87 MAX 34 MIN 0 CFM .25 IN 3.93 AC-FT 631

IOWA RIVER BASIN

05455000 RALSTON CREEK AT IOWA CITY, IA--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--April 1952 to current year.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: April 1968 to current year.

WATER TEMPERATURES: October 1960 to current year.

SUSPENDED-SEDIMENT DISCHARGE: April 1952 to current year.

REMARKS.--Records of specific conductance are obtained from suspended-sediment samples at time of analysis. No flow Jan. 5-14, 17-23, Feb. 3-7, July 12, 13, Aug. 31 to Sept. 25, Sept. 27-30.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Maximum daily, 8,000 micromhos Dec. 24, 1973; minimum daily, 170 micromhos July 17, 1972.

WATER TEMPERATURES: Maximum daily, 31.0°C July 21, 1968; minimum daily, 0.0°C on many days during winter periods each year.

SEDIMENT CONCENTRATION: Maximum daily mean, 9,300 mg/L Aug. 20, 1975; minimum daily mean, 0 mg/L on many days in 1953-59, 1963-68, 1971, 1975, 1976.

SEDIMENT LOADS: Maximum daily, 4,300 tons (3,900 tonnes) May 23, 1966; minimum daily, 0 ton (0 tonne) on many days in 1953-59, 1963-68, 1971, 1972, 1975, 1976.

EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum daily, 1,500 micromhos Jan. 29; minimum daily, 240 micromhos Aug. 6.

WATER TEMPERATURES: Maximum daily, 28.0°C July 9, 23, 24; minimum daily, 0.0°C on many days during winter months.

SEDIMENT CONCENTRATIONS: Maximum daily mean, 1,340 mg/L Mar. 4; minimum daily mean, 0 mg/L on many days.

SEDIMENT LOADS: Maximum daily, 159 tons (144 tonnes) Mar. 4; minimum daily, 0 ton (0 tonne) on many days.

WATER QUALITY DATA, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	550	530	675	490	730	430	500	450	480	510	510	600
2	520	460	520	500	870	550	500	450	340	500	540	600
3	540	480	640	520	---	560	480	440	500	480	500	---
4	530	510	640	540	---	440	480	440	490	480	500	---
5	520	500	650	---	---	550	480	450	460	490	500	---
6	530	495	630	---	---	540	470	450	420	460	240	---
7	540	505	620	---	---	500	470	440	450	460	520	---
8	530	540	590	---	800	480	460	430	440	480	580	---
9	580	510	560	---	650	480	460	430	440	470	610	---
10	560	550	550	---	600	480	420	440	480	490	620	---
11	570	530	550	---	610	480	480	440	460	500	570	---
12	610	540	540	---	600	500	460	440	460	---	450	---
13	610	540	530	---	540	520	460	480	440	---	620	---
14	620	540	535	---	540	500	460	460	500	---	560	---
15	630	520	570	---	500	480	460	480	530	320	590	---
16	630	520	560	---	500	470	460	510	480	420	540	---
17	630	525	600	---	550	470	440	480	460	540	400	---
18	620	520	660	---	590	420	470	440	480	550	400	---
19	610	490	650	---	625	520	440	440	480	520	460	---
20	610	520	650	---	650	500	410	460	450	500	520	---
21	610	520	600	---	600	480	---	460	440	310	560	---
22	610	530	550	---	640	500	---	---	---	520	520	---
23	610	540	550	---	750	370	475	440	440	580	470	---
24	620	500	510	---	590	480	425	470	465	500	540	---
25	510	650	560	---	565	470	560	480	460	540	520	---
26	480	520	560	---	550	460	500	---	460	490	---	---
27	480	500	580	---	560	480	470	440	700	530	---	---
28	485	1220	580	780	545	500	460	420	480	530	300	---
29	485	1230	550	1500	550	500	460	410	450	500	540	---
30	480	700	460	1200	---	390	420	480	550	500	570	---
31	400	---	480	950	---	500	---	460	---	500	540	---
MONTH	561	575	577	---	615	484	465	452	472	488	510	---
YEAR	MAX	1500	NIN	240	MEAN	528						

054550000 RALSTON CREEK AT IOWA CITY, IA--Continued

WATER-QUALITY RECORDS

WATER QUALITY DATA, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	9.0	12.0	0.0	0.0	0.0	0.0	15.0	17.0	15.0	23.0	20.0	21.0
2	7.0	14.0	0.0	0.0	0.0	1.0	15.0	11.0	22.0	24.0	17.0	16.0
3	8.0	14.0	0.0	0.0	---	1.0	13.0	15.0	22.0	23.0	20.0	---
4	9.0	13.0	0.0	0.0	---	2.0	15.0	18.0	22.0	23.0	21.0	---
5	10.0	14.0	2.0	---	---	0.0	17.0	18.0	23.0	23.0	20.0	---
6	11.0	12.0	0.0	---	---	3.0	20.0	15.0	22.0	25.0	18.0	---
7	12.0	12.0	0.0	---	---	4.0	17.0	15.0	11.0	24.0	15.0	---
8	12.0	10.0	0.0	---	2.0	4.0	8.0	9.0	24.0	25.0	21.0	---
9	15.0	13.0	1.0	---	2.5	2.0	7.0	15.0	25.0	28.0	16.0	---
10	14.0	10.0	1.0	---	2.0	3.0	19.0	22.0	22.0	25.0	24.0	---
11	13.0	8.0	0.0	---	2.0	2.0	15.0	14.0	27.0	25.0	24.0	---
12	16.0	5.0	0.0	---	2.0	4.0	7.0	21.0	27.5	---	23.0	---
13	15.0	3.0	4.0	---	2.0	7.0	6.0	14.0	25.0	---	24.0	---
14	13.0	3.0	1.0	---	2.0	7.0	18.0	15.0	22.0	---	23.0	---
15	15.0	7.0	0.0	---	2.0	6.0	21.0	18.0	27.0	24.0	22.0	---
16	9.0	8.0	0.0	---	2.0	2.0	18.0	18.0	23.0	24.0	20.0	---
17	8.0	10.0	0.0	---	1.0	0.0	16.0	18.0	19.0	19.0	24.0	---
18	9.0	10.0	0.0	---	1.0	12.0	11.0	20.0	19.0	18.0	23.0	---
19	9.0	7.0	0.0	---	0.0	11.0	17.0	19.0	23.0	22.0	24.0	---
20	13.0	8.0	1.0	---	1.0	12.0	11.5	21.0	23.0	27.0	20.0	---
21	13.0	3.0	1.0	---	0.0	10.0	11.0	23.0	22.0	23.0	18.0	---
22	14.0	1.0	0.0	---	0.0	12.0	11.0	14.0	21.0	22.0	20.0	---
23	14.0	0.0	0.0	---	0.0	14.0	11.5	13.0	22.0	28.0	25.0	---
24	15.0	0.5	0.0	---	1.0	15.0	10.5	19.0	24.0	28.0	25.0	---
25	12.0	0.0	0.0	---	1.0	15.0	11.0	10.0	22.0	26.0	24.0	---
26	9.0	1.0	0.0	---	2.0	14.0	---	21.0	23.0	23.0	26.0	---
27	12.0	0.0	0.0	---	1.0	7.0	11.0	21.0	23.0	23.0	25.0	---
28	10.0	1.0	1.0	0.0	1.0	11.0	15.0	14.0	26.0	25.0	18.0	---
29	8.0	1.0	0.0	0.0	1.0	10.0	15.0	14.0	22.0	26.0	21.0	---
30	11.0	0.0	0.0	0.0	---	7.0	17.0	15.0	23.0	27.0	23.0	---
31	10.0	---	0.0	0.0	---	8.0	---	14.0	---	20.0	18.0	---
MONTH	11.5	6.5	0.5	---	1.0	6.5	14.0	16.5	22.5	24.0	21.5	---
YEAR	MAX	28.0	MIN	0.0	MEAN	12.5						

SUSPENDED-SEDIMENT DISCHARGE (TONS/DAY), WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976

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	.04	76	.01	.51	68	.09	.26	94	.07
2	.03	77	.01	.56	62	.09	.23	64	.04
3	.02	52	0	.15	49	.02	.23	62	.04
4	.02	56	0	.10	61	.02	.24	54	.03
5	.02	69	0	.07	56	.01	.24	52	.03
6	.02	80	0	.74	61	.12	.18	44	.02
7	.02	41	0	.12	42	.01	.21	84	.05
8	.01	62	0	.12	43	.01	.29	89	.07
9	.02	140	.01	.18	53	.03	.17	107	.05
10	.03	97	.01	.22	49	.03	.18	81	.04
11	.02	70	0	.18	46	.02	.17	63	.03
12	.02	60	0	.15	64	.03	.15	90	.04
13	.02	45	0	.20	57	.03	.17	98	.04
14	.02	28	0	.21	64	.04	.76	111	.23
15	.03	31	0	.19	44	.02	.21	78	.04
16	.02	34	0	.16	29	.01	.15	87	.04
17	.02	44	0	.71	28	.05	.06	123	.02
18	.03	39	0	.07	20	0	.02	135	.01
19	.02	37	0	.08	43	.01	.02	129	.01
20	.03	38	0	.29	35	.03	.08	103	.02
21	.03	33	0	.35	25	.02	.10	67	.02
22	.04	28	0	.17	67	.03	.10	55	.01
23	.05	34	0	.08	79	.02	.12	83	.03
24	.09	63	.02	.11	73	.02	.11	90	.03
25	.11	92	.03	.10	63	.02	.13	148	.05
26	.06	91	.01	.07	61	.01	.14	100	.04
27	.03	102	.01	.10	64	.02	.11	83	.02
28	.04	113	.01	.13	35	.01	.10	43	.01
29	.09	101	.02	7.2	128	2.5	.11	51	.02
30	.02	95	.01	5.7	197	3.0	.13	61	.02
31	.03	102	.01	---	---	---	.12	62	.02
TOTAL	1.05	---	.16	19.02	---	6.32	5.29	---	1.19

IOWA RIVER BASIN

054550000 RALSTON CREEK AT IOWA CITY, IA--Continued

WATER-QUALITY RECORDS

WATER QUALITY DATA, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976

SUSPENDED-SEDIMENT DISCHARGE (TONS/DAY), WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976

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	.11	59	.02	.03	38	0	.45	38	.05
2	.13	55	.02	.02	37	0	.44	44	.05
3	.06	55	.01	0	0	0	.37	34	.03
4	.03	55	0	0	0	0	27	1340	159
5	0	48	0	0	0	0	6.5	160	3.2
6	0	0	0	0	0	0	2.8	126	.95
7	0	0	0	0	0	0	1.9	62	.32
8	0	0	0	.02	125	.01	1.2	68	.22
9	0	0	0	.05	98	.01	.71	54	.10
10	0	0	0	.10	68	.02	.68	68	.12
11	0	0	0	.20	34	.02	.52	62	.10
12	0	0	0	.30	25	.02	3.5	91	.86
13	0	0	0	.48	13	.02	1.2	69	.22
14	0	0	0	.60	16	.03	.87	27	.06
15	.01	24	0	1.3	9	.03	.65	35	.06
16	.01	47	0	1.0	7	.02	.59	31	.05
17	0	0	0	.40	27	.03	.50	46	.06
18	0	0	0	.60	26	.04	.59	44	.07
19	0	0	0	.70	25	.05	.59	83	.13
20	0	0	0	.80	20	.04	.59	74	.12
21	0	0	0	1.0	45	.12	.39	45	.05
22	0	0	0	2.0	65	.35	.36	57	.06
23	0	0	0	4.0	123	1.3	.58	46	.07
24	.01	25	0	8.0	86	1.9	.35	38	.04
25	.05	48	.01	7.0	30	.57	.51	27	.04
26	.03	56	0	4.5	18	.22	.63	42	.07
27	.03	63	.01	1.8	45	.22	1.5	61	.25
28	.02	50	0	.41	37	.04	1.5	48	.19
29	.01	61	0	.50	31	.04	.60	28	.05
30	.03	69	.01	---	---	---	1.7	48	.22
31	.05	75	.01	---	---	---	.52	61	.09
TOTAL	.58	---	.09	35.81	---	5.10	60.39	---	166.90

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	.47	64	.08	3.0	80	.65	1.0	50	.14
2	.38	26	.03	2.7	56	.41	.81	58	.13
3	.34	17	.02	1.9	52	.27	.83	79	.18
4	.28	12	.01	1.7	55	.25	1.5	184	.75
5	.30	9	.01	1.7	44	.20	.29	71	.06
6	.27	32	.02	1.5	51	.21	.42	48	.05
7	.24	59	.04	1.2	38	.12	.36	80	.08
8	.22	71	.04	1.1	65	.19	.18	37	.02
9	.21	100	.06	1.0	67	.18	.20	32	.02
10	.22	54	.03	.79	51	.11	.60	40	.06
11	.24	82	.05	.42	43	.05	.25	28	.02
12	.18	73	.04	.41	40	.04	.20	47	.03
13	.22	82	.05	1.5	120	.49	.37	62	.06
14	.21	79	.04	.60	84	.14	3.8	87	.89
15	.23	73	.05	2.6	122	.86	.83	41	.09
16	.22	72	.04	1.3	103	.36	.50	42	.06
17	1.1	260	.77	.87	87	.20	.30	49	.04
18	.72	678	1.3	.78	73	.15	.27	65	.05
19	.31	165	.15	.78	62	.17	.22	110	.07
20	4.8	282	3.7	.62	90	.15	.20	60	.03
21	5.7	120	1.8	.38	67	.07	.19	50	.03
22	2.4	138	.89	.38	90	.09	.13	74	.03
23	6.7	280	5.1	.43	60	.07	.12	55	.02
24	34	952	148	.33	66	.06	.19	61	.03
25	12	145	4.7	.28	98	.07	.18	65	.03
26	7.0	88	1.7	.25	52	.04	.06	86	.01
27	5.1	71	.98	.22	44	.03	2.4	215	1.4
28	3.8	77	.79	.22	53	.03	.80	90	.19
29	3.1	87	.73	6.3	296	5.0	2.2	343	2.0
30	3.7	148	1.5	4.2	95	1.1	.42	108	.12
31	---	---	---	1.4	55	.21	---	---	---
TOTAL	94.66	---	172.72	40.86	---	11.97	19.82	---	6.69

054550000 RALSTON CREEK AT IOWA CITY, IA--Continued

WATER-QUALITY RECORDS

WATER QUALITY DATA, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976

SUSPENDED-SEDIMENT DISCHARGE (TONS/DAY), WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976

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	.21	65	.04	.04	80	.01	0	0	0
2	.18	80	.04	.03	94	.01	0	0	0
3	.14	106	.04	.01	64	0	0	0	0
4	.09	144	.03	.01	45	0	0	0	0
5	.11	103	.03	1.4	116	1.6	0	0	0
6	.08	97	.02	7.4	310	10	0	0	0
7	.10	118	.03	.24	33	.02	0	0	0
8	.07	94	.02	.13	27	.01	0	0	0
9	.04	74	.01	.08	31	.01	0	0	0
10	.06	136	.02	.05	28	0	0	0	0
11	.06	121	.02	5.6	221	22	0	0	0
12	0	0	0	6.8	328	19	0	0	0
13	0	0	0	1.2	75	.24	0	0	0
14	.01	50	0	.34	37	.03	0	0	0
15	4.2	1040	16	.14	38	.01	0	0	0
16	.41	55	.06	.14	44	.02	0	0	0
17	.13	24	.01	2.9	347	5.7	0	0	0
18	.07	25	0	.37	425	.42	0	0	0
19	.07	38	.01	.18	150	.07	0	0	0
20	.26	102	.07	.13	44	.02	0	0	0
21	2.3	560	3.5	.09	47	.01	0	0	0
22	2.4	110	.71	.02	60	0	0	0	0
23	.29	50	.04	.02	66	0	0	0	0
24	.19	48	.02	.02	48	0	0	0	0
25	.14	46	.02	.02	60	0	0	0	0
26	.09	60	.01	.03	52	0	.10	100	.03
27	.17	68	.03	.02	52	0	0	0	0
28	.66	154	.27	.21	126	.07	0	0	0
29	.18	91	.04	.04	79	.01	0	0	0
30	.08	90	.02	.01	57	0	0	0	0
31	.07	53	.01	0	0	0	---	---	---
TOTAL	12.86	---	21.12	27.67	---	59.26	.10	---	.03
YEAR	318.11		451.55						

DATE	TIME	TEMPER- ATURE (DEG C) (00010)	INSTAN- TANEOUS DIS- CHARGE (CFS) (00061)	SUS- PENDE DISEN- TMENT CHARGE (MG/L) (80154)	SUS- PENDE DISEN- TMENT CHARGE (T/DAY) (80155)	SUS- SED- FALL DIAM. % FINER THAN (70337)	SUS- SED- FALL DIAM. % FINER THAN (70338)	SUS- SED- FALL DIAM. % FINER THAN (70339)	SUS- SED- FALL DIAM. % FINER THAN (70340)	SUS- SED- FALL DIAM. % FINER THAN (70342)
JULY 15...	1545	24.0	9.1	951	23	56	73	85	93	99

05455010 SOUTH BRANCH RALSTON CREEK AT IOWA CITY, IA

LOCATION.--Lat 41°39'05", Long 91°30'27", in SW1/4 NE1/4 sec.14, T.79 N., R.6 W., Johnson County, Hydrologic Unit 07060209, on right bank 60 ft (18 m) downstream from bridge on Muscatine Avenue in Iowa City, and 1.2 mi (1.9 km) upstream from mouth.

DRAINAGE AREA.--2.94 mi² (7.61 km²).

PERIOD OF RECORD.--October 1963 to current year.

REVISED RECORDS.--WRD Iowa 1966: Drainage area.

GAGE.--Water-stage recorder and V-notch sharp-crested weir. Datum of gage is 678.03 ft (206.664 m) above mean sea level.

REMARKS.--Records good except those for winter period, which are poor. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--13 years, 2.58 ft³/s (0.073 m³/s), 11.92 in/yr (303 mm/yr), 1,870 acre-ft/yr (2.31 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,070 ft³/s (30.3 m³/s) July 17, 1972, gage height, 9.47 ft (2.886 m); no flow at times most years.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of July 14, 1962, reached a stage of 10.5 ft (3.20 m), from flood profile, discharge not determined.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 140 ft³/s (3.96 m³/s) Apr. 24, gage height, 4.13 ft (1.259 m) at 0350 hours, no other peak above base of 200 ft³/s (5.66 m³/s); no flow Oct. 8-13, 16-19, Jan. 23-30, Feb. 3-12, Aug. 31-Sept. 8, Sept. 10-18, Sept. 20-25, and Sept. 28-30.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP		
1	.04	1.0	.28	.15	.02	.68	.50	1.8	.75	.38	.09	0		
2	.03	.47	.27	.16	.01	.47	.50	1.8	.71	.30	.05	0		
3	.02	.71	.22	.14	0	.40	.45	1.2	.61	.27	.03	0		
4	.02	.07	.23	.05	0	36	.38	1.2	.55	.23	.02	0		
5	.02	.08	.24	.01	0	5.5	.38	1.9	.47	.20	3.5	0		
6	.01	.06	.17	.30	0	6.5	.36	1.4	.40	.18	2.9	0		
7	.01	.28	.16	1.0	0	1.4	.34	1.9	.40	.24	.55	0		
8	0	.06	.18	.09	0	1.2	.32	1.6	.38	.17	.27	0		
9	0	1.2	.18	.01	0	.88	.32	.75	.32	.17	.10	.08		
10	0	.15	.18	.01	0	.79	.55	.68	.79	.11	.08	0		
11	0	.07	.17	.01	0	1.5	.75	.58	.38	.11	11	0		
12	0	.16	.17	.01	0	3.8	.55	.55	.38	.10	3.5	0		
13	0	.12	.23	.50	.08	1.4	.55	3.5	.79	.08	3.2	0		
14	.10	.04	1.8	.90	.20	1.1	.47	.64	4.8	.24	.38	0		
15	.02	.05	.23	.20	.70	.88	.42	4.1	.79	4.8	.40	0		
16	0	.05	.18	.05	1.0	.71	.42	.88	.71	.36	.27	0		
17	0	.04	.15	.02	.30	.71	3.2	.71	.52	.26	6.1	0		
18	0	.04	.14	.01	.50	.68	1.6	.58	.47	.20	.55	0		
19	0	.03	.13	.01	.70	.64	.30	.52	.40	.20	.38	.32		
20	.01	1.2	.13	.01	.80	.58	7.6	.50	.32	.52	.30	0		
21	.02	.27	.12	.01	.84	.45	3.6	.42	.30	.88	.27	0		
22	.02	.07	.09	.01	1.2	.58	1.0	.40	.32	.79	.24	0		
23	.01	.06	.11	0	1.5	.79	7.0	.79	.29	.40	.23	0		
24	.69	.17	.12	0	2.0	.42	31	.50	.24	.26	.21	0		
25	.07	.12	.16	0	.80	.50	11	.38	.21	.21	.21	0		
26	.02	.05	.18	0	.71	2.6	6.1	.36	.21	.29	.16	2.4		
27	.02	.09	.16	0	.71	.58	4.1	.34	1.4	.32	.12	.01		
28	.02	.15	.17	0	.52	.47	2.9	.34	.47	1.8	2.1	0		
29	.07	7.4	.14	0	.47	1.4	2.1	5.7	3.2	.17	.11	0		
30	.08	.91	.16	0	---	1.4	3.5	1.8	.55	.15	.01	0		
31	.03	---	.14	.02	---	.58	---	.94	---	.11	0	---		
TOTAL	1.33	15.17	6.99	3.68	13.06	75.59	92.26	38.76	22.13	14.50	37.33	2.81		
MEAN	.043	.51	.23	.12	.45	2.44	3.08	1.25	.74	.47	1.20	.094		
MAX	.69	7.4	1.8	1.0	2.0	.36	.31	5.7	4.8	4.8	.11	2.4		
MIN	0	.03	.09	0	0	.40	.30	.34	.21	.08	0	0		
CFSM	.01	.17	.08	.04	.15	.83	1.05	.43	.25	.16	.41	.03		
IN	.02	.19	.09	.05	.17	.96	1.17	.49	.28	.16	.47	.04		
AC-FT	2.6	30	14	7.3	26	150	183	77	44	29	74	5.6		
CAL YR 1975	TOTAL	573.27	MEAN	1.57	MAX	41	MIN	0	CFSM	.53	IN	7.25	AC-FT	1140
WTR YR 1976	TOTAL	323.61	MEAN	.88	MAX	36	MIN	0	CFSM	.30	IN	4.09	AC-FT	642

05455500 ENGLISH RIVER AT KALONA, IA

LOCATION.--Lat 41°27'59", long 91°42'55", in SE1/4 SE1/4 sec.13, T.77 N., R.8 W., Washington County, Hydrologic Unit 07080209, on right bank 30 ft (9 m) upstream from bridge on State Highway 1, 0.8 mi (1.3 km) south of Kalona, 1.1 mi (1.8 km) upstream from Camp Creek, 4.5 mi (7.2 km) downstream from Smith Creek, and 14.5 mi (23.3 km) upstream from mouth.

DRAINAGE AREA.--573 mi² (1,484 km²).

PERIOD OF RECORD.--September 1939 to current year.

REVISED RECORDS.--WSP 1438: Drainage area. WSP 1558: 1940 (M), 1941, WSP 1708: 1956, 1957 (P), 1958 (P).

GAGE.--Water-stage recorder. Datum of gage is 633.45 ft (193.076 m) above mean sea level (levels by Corps of Engineers). Prior to Dec. 27, 1939, nonrecording gage 30 ft (9 m) downstream at same datum.

REMARKS.--Records good except those for winter period, which are fair. Several observations of water temperature were made during the year. Corps of Engineers gage height telemeter at station.

COOPERATION.--Seven discharge measurements furnished by Corps of Engineers.

AVERAGE DISCHARGE.--37 years, 367 ft³/s (10.39 m³/s), 8.70 in/yr (221 mm/yr), 265,900 acre-ft/yr (328 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 20,000 ft³/s (566 m³/s) Sept. 21, 1965, gage height, 21.45 ft (6.538 m); minimum daily, 1.1 ft³/s (0.031 m³/s) Jan. 20-27, 1956.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in June 1930 reached a stage of 19.9 ft (6.07 m) from floodmark, from information by local residents, discharge, 18,500 ft³/s (524 m³/s).

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 10,100 ft³/s (286 m³/s) Apr. 25, gage height, 18.05 ft (5.502 m) at 1800 hours, no other peak above base of 4,000 ft³/s (113 m³/s); minimum daily, 12 ft³/s (0.34 m³/s) Sept. 5.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	22	25	1920	43	37	249	245	920	294	182	64	16
2	24	28	952	38	37	230	219	790	245	133	61	15
3	21	39	434	31	33	228	204	709	214	114	63	15
4	21	54	334	30	30	835	188	603	186	101	64	14
5	21	47	305	28	27	2030	174	551	167	91	63	12
6	21	36	280	27	26	1660	168	649	152	83	65	13
7	20	32	234	26	24	1020	162	506	140	83	66	15
8	16	30	214	27	24	688	151	440	132	81	75	21
9	15	32	212	28	26	585	142	404	124	71	75	25
10	14	57	202	30	27	535	138	377	122	64	69	23
11	13	60	194	31	39	513	137	348	141	58	65	22
12	13	50	180	32	60	622	127	310	143	53	134	22
13	13	45	168	32	90	885	121	302	118	56	195	23
14	15	44	196	33	120	679	124	308	257	57	125	23
15	19	44	325	34	140	550	128	323	781	71	118	25
16	19	44	243	35	185	470	127	776	430	110	120	23
17	16	44	181	36	280	406	169	1110	281	68	114	22
18	16	44	190	37	315	379	260	656	219	53	110	23
19	16	44	240	36	606	367	293	494	185	46	102	23
20	15	45	192	34	283	343	334	419	161	51	82	25
21	17	45	170	35	199	303	1540	356	144	203	68	26
22	17	45	142	36	338	252	3440	315	132	154	56	26
23	19	43	116	36	226	235	2940	284	120	171	51	24
24	18	37	110	37	327	237	6130	275	119	102	47	21
25	20	37	99	37	830	226	9230	257	134	74	41	18
26	24	44	90	38	716	215	7630	230	114	58	33	17
27	20	31	80	38	473	228	3510	209	135	53	28	21
28	19	24	67	38	370	241	1720	195	530	55	23	22
29	16	63	57	37	292	222	1320	216	566	62	22	23
30	15	2420	55	37	---	241	1070	480	255	75	20	24
31	15	---	49	37	---	264	---	408	---	76	18	---
TOTAL	550	3633	8231	1054	6180	15938	42141	14220	6851	2709	2237	622
MEAN	17.7	121	266	34.0	213	514	1405	459	228	87.4	72.2	20.7
MAX	24	2420	1920	43	830	2030	9230	1110	781	203	195	26
MIN	13	24	49	26	24	215	121	195	114	46	18	12
CFSM	.03	.21	.46	.06	.37	.90	2.45	.80	.40	.15	.13	.04
IN-	.04	.24	.53	.07	.40	1.03	2.74	.92	.44	.18	.15	.04
AC-FT	1090	7210	16330	2090	12260	31610	83590	28210	13590	5370	4440	1230
CAL YR 1975	TOTAL	100483	MEAN 275	MAX 6310	MIN 13	CFSM .48	IN 6.52	AC-FT 199300				
WTR YR 1976	TOTAL	104366	MEAN 285	MAX 9230	MIN 12	CFSM .50	IN 6.78	AC-FT 207000				

05455700 IOWA RIVER NEAR LONE TREE, IA

LOCATION.--Lat 41°25'15", Long 91°28'25", in NW1/4 NE1/4 sec.6, T.76 N., R.5 W., Louisa County, Hydrologic Unit 07060209, on left bank 10 ft (3 m) downstream from bridge on county highway W66, 5 mi (8.0 km) southwest of Lone Tree, 6.2 mi (10.0 km) downstream from English River, and at mile 47.2 (75.9 km).

DRAINAGE AREA.--4,293 mi² (11,118 km²).

PERIOD OF RECORD.--October 1956 to current year.

GAGE.--Water-stage recorder. Datum of gage is 588.16 ft (179.271 m) above mean sea level. Prior to Dec. 28, 1956, nonrecording gage at same site and datum.

REMARKS.--Records good except those for winter period, which are poor. Flow regulated by Coralville Lake (station 05453510) 36.1 mi (58.1 km) upstream since Sept. 17, 1958. Several observations of water temperature were made during the year. Corps of Engineers gage height telemeter at station.

COOPERATION.--Eleven discharge measurements furnished by Corps of Engineers.

AVERAGE DISCHARGE.--20 years, 1,785 ft³/s (50.55 m³/s), 8.84 in/yr (225 mm/yr), 2,024,000 acre-ft/yr (2,495 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 35,700 ft³/s (110 m³/s) May 19, 1974, gage height, 18.97 ft (5.782 m); maximum gage height, 20.27 ft (6.178 m) Sept. 22, 1955; minimum daily discharge, 75 ft³/s (2.12 m³/s) Dec. 8, 1956.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of May 25, 1944, reached a stage of 19.94 ft (6.078 m), discharge not determined, from information by Corps of Engineers.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 15,200 ft³/s (430 m³/s) Apr. 26, gage height, 15.21 ft (4.636 m); minimum daily, 185 ft³/s (5.24 m³/s) Sept. 28.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	238	268	4720	590	730	3420	1950	7240	3750	2270	585	319
2	236	275	3130	590	1030	3550	1870	7060	3710	2140	490	290
3	232	288	2110	570	1200	2520	2090	6920	3280	1880	466	230
4	227	319	1430	540	1350	3380	2420	6770	2970	1680	458	218
5	218	386	995	500	1490	8240	2440	6670	2770	1500	453	215
6	219	407	894	470	1510	6990	2560	6880	2570	1540	498	215
7	210	400	828	450	1500	4910	2550	6600	2520	1310	427	215
8	216	400	782	430	1400	3830	2370	6400	2230	1270	415	215
9	215	405	870	390	1200	3240	2040	6520	2150	1180	395	215
10	215	416	886	360	974	2830	1890	6480	2060	1050	375	215
11	213	427	875	300	811	2590	1680	6370	1960	986	379	212
12	213	422	895	310	807	2570	1610	6240	1850	881	902	212
13	211	417	917	290	825	3160	1410	5560	1800	839	742	212
14	212	402	976	260	678	3740	1340	5410	2030	772	670	206
15	214	399	1060	230	610	4410	1260	5360	2830	902	545	191
16	212	392	1490	230	592	5080	1300	5630	4470	1140	475	209
17	215	389	1340	230	762	5100	1320	6350	4400	1000	411	191
18	212	410	1500	240	945	5040	1850	5820	4420	867	440	185
19	209	408	1170	240	1360	4740	2080	5200	4280	645	391	206
20	209	341	1100	240	1460	3820	3360	4880	4250	555	355	215
21	211	350	1000	245	1330	3610	4280	4740	4210	1310	339	206
22	209	469	1060	245	969	2760	7910	4620	3640	1060	331	197
23	208	444	1000	245	878	2630	9180	4480	2910	818	327	203
24	211	370	1020	245	1030	2490	11300	3910	2730	675	323	197
25	222	330	860	250	1540	2400	13400	3500	2700	570	323	197
26	223	381	600	255	2480	2210	14700	2870	2340	630	319	221
27	231	380	550	240	2240	2160	10800	3150	2090	748	319	218
28	234	345	600	250	2770	2010	6160	3400	2350	797	319	206
29	235	372	580	260	3130	1870	6710	3490	2260	760	319	215
30	236	2140	500	260	---	1900	7280	4480	2540	804	319	215
31	243	---	500	360	---	2040	---	4260	---	697	319	---
TOTAL	6817	13152	36428	10345	37701	109240	131110	167260	88070	33276	13437	6461
MEAN	220	438	1175	334	1300	3524	4370	5395	2936	1073	433	215
MAX	243	2140	4720	590	3130	8240	14700	7240	4470	2270	902	319
MIN	208	268	550	250	610	1870	1260	2870	1800	555	319	185
AC-FT	13520	25090	72250	20520	74780	216700	260100	331800	174700	66000	26650	12820
CAL YR 1975	TOTAL	941212	MEAN	2579	MAX	15100	MIN	208	AC-FT	1867000		
WTR YR 1976	TOTAL	653297	MEAN	1785	MAX	14700	MIN	185	AC-FT	1296000		

05457700 CEDAR RIVER AT CHARLES CITY, IA

LOCATION.--Lat 43°03'45", long 92°40'23", in SE1/4 NE1/4, sec.12, T.9S N., R.16 W., Floyd County, Hydrologic Unit 07080201, on right bank 800 ft (244 m) downstream from bridge on U.S. Highway 18 (Brantingham Street) in Charles City, 10.6 mi (17.1 km) upstream from Gizzard Creek, and at mile 252.9 (406.9 km) upstream from mouth of Iowa River.

DRAINAGE AREA.--1,054 mi² (2,730 km²).

PERIOD OF RECORD.--October 1964 to current year.

GAGE.--Water-stage recorder. Datum of gage is 973.02 ft (296.58 m) above mean sea level.

REMARKS.--Records good except those for winter period, which are poor. Occasional minor regulation by dam 0.2 mi (0.3 km) above gage. Daily wire-weight gage readings available in district office for period Sept. 13, 1945, to June 30, 1954, at same site and datum. Discharge not published for this period because of extreme regulation of streamflow by power dam 0.2 mi (0.3 km) upstream. Several observations of water temperature were made during the year. National Weather Service gage height telemeters at station.

AVERAGE DISCHARGE.--12 years, 687 ft³/s (19.5 m³/s), 8.85 in/yr (225 mm/yr), 497,700 acre-ft/yr (614 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 21,000 ft³/s (595 m³/s) Apr. 7, 1965, gage height, 19.14 ft (5.834 m); maximum gage height, 21.64 ft (6.596 m) Mar. 2, 1965, backwater from ice; minimum daily discharge, 86 ft³/s (2.44 m³/s) Dec. 1, 1966.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Mar. 27, 1961, reached a stage of 21.6 ft (6.58 m), from floodmarks, discharge, 29,200 ft³/s (827 m³/s).

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 2,500 ft³/s (71 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage Height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Mar. 13	0730	*7,640 216	*10.62 3.237	Apr. 1	0145	2,980 84	5.98 1.823

Minimum daily discharge, 112 ft³/s (3.17 m³/s) Sept. 15, 16, 24-26.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	215	198	350	260	156	244	2700	662	477	258	177	124
2	210	200	325	278	156	236	1810	514	432	247	172	119
3	210	203	400	315	156	190	1320	561	405	231	162	121
4	205	200	435	360	158	150	1080	515	383	222	155	117
5	205	200	455	286	158	186	904	497	362	215	184	116
6	205	200	480	260	160	224	797	477	349	205	176	116
7	200	201	400	256	160	250	730	451	335	199	183	116
8	200	202	479	252	166	257	675	429	327	195	175	116
9	200	254	472	250	170	262	527	414	318	192	162	116
10	205	321	417	250	177	254	572	400	322	188	155	113
11	200	461	350	250	180	260	541	388	327	183	156	115
12	200	420	320	250	201	3280	495	378	330	177	157	114
13	205	355	350	250	213	7050	454	403	320	173	154	116
14	205	308	410	244	216	4030	446	424	346	171	158	116
15	205	260	520	234	250	1840	447	439	323	172	155	112
16	205	270	505	224	300	954	434	542	311	170	155	112
17	200	263	485	214	370	671	491	754	299	168	164	116
18	200	254	460	204	369	523	997	996	289	165	153	116
19	200	240	410	200	310	478	1080	823	273	167	153	121
20	200	270	440	200	289	502	1070	718	264	170	150	117
21	200	343	435	198	250	550	1100	636	256	172	144	115
22	200	438	419	194	240	534	944	586	249	171	141	117
23	205	410	382	188	230	437	922	559	241	169	136	114
24	225	392	365	178	220	393	1010	529	240	164	133	112
25	215	260	348	166	240	368	1130	500	240	158	130	112
26	210	240	344	162	275	411	1270	478	244	165	130	112
27	205	245	326	158	315	447	1150	457	251	162	131	116
28	200	260	302	158	300	415	952	451	262	197	128	119
29	200	292	288	156	286	418	806	600	342	177	123	119
30	195	322	280	156	---	796	719	539	308	184	125	120
31	196	---	274	156	---	2220	---	498	---	189	124	---
TOTAL	6326	8506	12226	6908	6672	28840	27683	16618	9425	5796	4701	3485
MEAN	204	264	394	223	230	930	923	536	314	187	152	116
MAX	225	461	520	360	370	7050	2700	896	477	268	184	124
MIN	195	198	274	156	156	150	434	378	240	158	123	112
CFSM	.19	.27	.37	.21	.22	.88	.88	.51	.30	.18	.14	.11
IN.	.22	.30	.43	.24	.24	1.02	.98	.59	.33	.20	.17	.12
AC-FT	12550	16870	24250	13700	13230	57200	54910	32960	18690	11480	9320	6910

CAL YR 1975	TOTAL	269094	MEAN 737	MAX 8780	MIN 150	CFSM .70	IN 9.50	AC-FT 533700
WTR YR 1976	TOTAL	127176	MEAN 375	MAX 7050	MIN 112	CFSM .36	IN 4.84	AC-FT 272100

05458000 LITTLE CEDAR RIVER NEAR IONIA, IA

LOCATION.--Lat 43°02'05", long 92°30'05", in SW1/4 NE1/4 sec.21, T.9S N., R.14 W., Chickasaw County, Hydrologic Unit 07080201, on left bank 12 ft (4 m) downstream from bridge on county highway B57, 2.4 mi (3.9 km) west of Ionia, 6.4 mi (10.3 km) upstream from mouth, and 7.6 mi (12.2 km) downstream from Beaver Creek.

DRAINAGE AREA.--306 mi² (793 km²).

PERIOD OF RECORD.--October 1954 to current year.

REVISED RECORDS.--WSP 1438: Drainage area. WSP 1708: 1959.

GAGE.--Water-stage recorder. Datum of gage is 973.35 ft (296.68 m) above mean sea level.

REMARKS.--Records good except those for winter period, which are poor. Several observations of water temperature were made during the year. National Weather Service gage height telemeter at station.

AVERAGE DISCHARGE.--22 years, 156 ft³/s (4.42 m³/s), 6.92 in/yr (176 mm/yr), 113,000 acre-ft/yr (139 hm³/yr); median of yearly mean discharges, 140 ft³/s (3.96 m³/s), 6.2 in/yr (157 mm/yr), 101,000 acre-ft/yr (125 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 10,800 ft³/s (306 m³/s) Mar. 27, 1961, gage height, 15.58 ft (4.749 m); minimum daily, 3.0 ft³/s (0.085 m³/s) Feb. 4-9, 1959.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of June 22, 1954, reached a stage of 11.37 ft (3.466 m), discharge, 4,600 ft³/s (130 m³/s).

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 1,200 ft³/s (34.0 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Mar. 12	--	1,300 37	ice jam	Apr. 18	1115	*1,750 49.6	7.63 2.326
Mar. 14	0315	ice jam	*9.79 2.984				

Minimum daily discharge, 13 ft³/s (0.37 m³/s) Sept. 9-13.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	28	26	45	38	16	33	528	280	132	41	28	16
2	28	26	65	36	16	29	354	257	125	39	26	16
3	27	28	70	34	16	24	278	235	113	38	24	16
4	26	28	66	26	16	22	239	212	105	37	23	16
5	26	27	57	24	16	28	213	197	96	36	23	15
6	26	28	50	23	16	34	195	183	87	35	23	15
7	26	28	57	23	16	38	179	175	83	34	26	14
8	26	28	62	23	17	41	158	160	76	32	26	14
9	26	36	60	23	17	44	144	145	72	31	24	13
10	25	60	57	23	18	45	135	135	73	30	23	13
11	26	76	52	23	18	70	129	127	72	28	23	13
12	26	69	38	23	21	800	126	122	70	25	24	13
13	26	54	63	23	22	1000	110	130	76	26	23	13
14	27	44	67	22	22	500	103	141	78	26	29	14
15	26	41	26	22	25	340	101	143	85	26	25	14
16	26	41	58	21	31	220	111	193	73	25	23	14
17	26	40	60	21	37	182	238	316	65	26	26	14
18	26	38	62	21	36	156	1460	334	61	26	26	15
19	26	36	66	21	35	142	1130	282	59	26	24	16
20	27	42	71	21	35	140	681	235	55	28	22	16
21	28	46	66	20	37	133	1030	204	52	27	21	17
22	27	50	63	20	41	113	681	179	49	26	21	16
23	28	39	58	19	48	97	656	167	47	26	20	16
24	30	28	53	18	55	87	887	151	47	25	20	16
25	34	22	50	17	62	81	910	135	47	23	19	15
26	33	32	46	17	70	95	652	118	47	26	19	15
27	32	38	44	16	73	255	470	104	47	25	19	15
28	30	43	42	16	56	153	380	104	47	36	18	16
29	28	49	40	16	50	132	334	130	45	36	17	17
30	26	66	40	16	---	391	300	143	42	37	17	17
31	26	---	38	16	---	770	---	141	---	34	16	---
TOTAL	848	1209	1692	682	938	6195	12912	5578	2126	937	698	450
MEAN	27.4	40.3	54.6	22.0	32.3	200	430	180	70.9	30.2	22.5	15.0
MAX	34	76	71	38	73	1000	1460	334	132	41	29	17
MIN	25	22	26	16	16	22	101	104	42	23	16	13
CFSM	.09	.13	.18	.07	.11	.65	1.41	.59	.23	.10	.07	.05
IN.	.10	.15	.21	.08	.11	.75	1.57	.68	.26	.11	.08	.05
AC-FT	1680	2400	3360	1350	1860	12290	25610	11060	4220	1860	1380	893
CAL YR 1975	TOTAL	51988	MEAN 142	MAX 3600	MIN 22	CFSM .46	IN 6.32	AC-FT	103100			
WTR YR 1976	TOTAL	34265	MEAN 93.6	MAX 1460	MIN 13	CFSM .31	IN 4.17	AC-FT	67960			

05458500 CEDAR RIVER AT JANESVILLE, IA

LOCATION.--Lat 42°38'54", Long 92°27'54", in NE1/4 SW1/4 sec.35, T.91 N., R.14 W., Bremer County, Hydrologic Unit 07080201, on left bank 300 ft (91 m) downstream from bridge on county highway at Janesville, 3.6 mi (5.8 km) upstream from West Fork Cedar River, and at mile 207.7 (334.2 km) upstream from mouth of Iowa River.

DRAINAGE AREA.--1,661 mi² (4,301 km²).

PERIOD OF RECORD.--October 1904 to Sept. 1906, October 1914 to September 1927, October 1932 to September 1942, October 1945 to current year. Monthly discharge only for some periods, published in WSP 1308. Published as Red Cedar River at Janesville, 1905-6.

REVISED RECORDS.--WSP 1438: Drainage area. WSP 1558: 1906 (M), 1915-16 (M), 1917, 1918-19 (M), 1920-27, 1933-37 (M), 1940-42 (M).

GAGE.--Water-stage recorder. Datum of gage is 868.26 ft (264.646 m) above mean sea level. Prior to July 26, 1919, nonrecording gage at site 1,000 ft (305 m) downstream at datum 4.0 ft (1.2 m) lower. July 26, 1919, to Sept. 30, 1927, Nov. 14, 1932, to Sept. 30, 1942, and Apr. 26, 1946, to Nov. 10, 1949, nonrecording gage at county bridge 300 ft (91 m) upstream at same datum.

REMARKS.--Records good except those for winter period, which are poor. Diurnal fluctuation during low water caused by powerplant at Waverly, 10 mi (16.1 km) upstream. Several observations of water temperature were made during the year. National Weather Service gage height telemeter at station.

AVERAGE DISCHARGE.--56 years (1904-6, 1914-27, 1932-42, 1945-76), 780 ft³/s (22.09 m³/s), 6.38 in/yr (162 mm/yr), 565,100 acre-ft/yr (697 hm³/yr); median of yearly mean discharges, 700 ft³/s (19.8 m³/s), 5.7 in/yr (145 mm/yr) 507,000 acre-ft/yr (625 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 37,000 ft³/s (1,050 m³/s) Mar. 28, 1961, gage height, 16.33 ft (4.977 m); minimum daily, 28 ft³/s (0.79 m³/s) Oct. 21, 1922.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Mar. 17, 1945, reached a stage of 16.2 ft (4.94 m), from floodmark at site 300 ft (91 m) upstream, discharge, 34,300 ft³/s (971 m³/s). Flood of Mar. 16, 1929, reached a stage of about 16 ft (5 m), from information by City of Waterloo, discharge not determined.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 4,000 ft³/s (113 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage Height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage Height (ft) (m)
Mar. 14	2345	*9,260 262	*8.58 2.615	Apr. 19	0345	4,090 116	4.71 1.436

Minimum daily discharge, 146 ft³/s (4.13 m³/s) Sept. 18.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	330	268	457	365	220	498	2220	1340	775	427	311	204
2	306	278	648	360	218	429	3000	1230	748	439	299	272
3	274	299	524	345	215	406	2550	1140	678	388	284	216
4	255	291	642	335	210	368	1910	1010	648	377	273	157
5	282	284	692	325	208	328	1510	937	620	362	336	161
6	318	301	744	305	205	364	1260	902	593	351	296	186
7	247	287	678	275	202	356	1130	837	586	350	228	187
8	275	259	622	250	198	356	1060	785	551	333	249	210
9	275	304	594	240	202	442	971	742	528	321	323	196
10	274	459	602	235	215	430	890	730	511	312	264	194
11	272	441	577	230	222	401	849	689	520	307	265	149
12	271	419	522	230	230	2300	825	653	501	299	257	165
13	340	567	483	220	242	4020	727	640	518	290	226	212
14	388	522	529	225	265	7820	716	674	558	283	280	171
15	236	455	474	230	310	7480	771	676	558	289	258	239
16	279	418	450	228	340	3410	826	735	519	292	313	221
17	264	409	395	225	369	1960	747	948	521	282	233	178
18	211	361	350	222	410	1350	2450	1250	510	278	233	146
19	219	356	450	220	422	1100	3860	1150	428	280	300	187
20	250	390	500	220	422	962	2890	1240	452	284	254	251
21	270	391	540	218	400	923	2680	1130	436	288	192	243
22	277	373	535	215	320	888	2950	1010	432	288	229	194
23	278	438	525	215	390	853	2330	961	419	307	257	224
24	281	547	495	215	400	775	2330	897	452	271	203	209
25	291	461	460	220	396	698	2480	837	413	270	225	153
26	309	463	440	222	425	644	2420	593	363	269	270	153
27	298	396	425	222	548	649	2210	434	384	294	231	213
28	298	552	405	222	648	754	2050	682	435	496	169	201
29	293	368	395	210	542	711	1730	691	381	411	199	226
30	277	507	385	202	---	867	1480	778	424	341	247	218
31	269	---	375	210	---	1170	---	829	---	290	169	---
TOTAL	8707	11864	15913	7656	9394	43712	54022	27150	15462	10069	7873	5946
MEAN	281	395	513	247	324	1410	1801	876	515	325	254	198
MAX	388	567	744	365	648	7820	3860	1340	775	496	336	272
MIN	211	259	350	202	198	328	716	434	363	259	169	146
CFSM	.17	.24	.31	.15	.20	.85	1.08	.53	.31	.20	.15	.12
IN.	.20	.27	.36	.17	.21	.98	1.21	.61	.35	.23	.18	.13
AC-FT	17270	23530	31560	15190	18630	86700	107200	53850	30670	19970	15620	11790
CAL YR 1975	TOTAL	378670	MEAN	1037	MAX	11000	MIN	197	CFSM	.62	IN	8.48
WTR YR 1976	TOTAL	217768	MEAN	595	MAX	7820	MIN	146	CFSM	.36	IN	4.88
									AC-FT	751100	AC-FT	431900

05458900 WEST FORK CEDAR RIVER AT FINCHFORD, IA

LOCATION.--Lat 42°37'50", long 92°32'24", in SW1/4 SE1/4 sec.6, T.90 N., R.14 W., Black Hawk County, Hydrologic Unit 07081204, on left bank 100 ft (30 m) downstream from bridge on county highway C55 at Finchford, 3.2 mi (5.1 km) upstream from Shell Rock River, and 5.0 mi (8.0 km) upstream from mouth.

DRAINAGE AREA.--846 mi² (2,191 km²).

PERIOD OF RECORD.--October 1945 to current year. Prior to October 1955, published as West Fork Shell Rock River at Finchford.

REVISED RECORDS.--WSP 1438: Drainage area. WSP 1558: 1946 (M), 1947.

GAGE.--Water-stage recorder. Datum of gage is 867.54 ft (264.426 m) above mean sea level (revised). Prior to June 10, 1955, nonrecording gage at same site and datum.

REMARKS.--Records good except those for winter period, which are poor. An authorized diversion is made into Big Marsh, 16 mi (25.7 km) upstream from gage, of 2,100 acre-ft each year between September 1 and November 15. Net effect on daily flows at gage is unknown. Several observations of water temperature were made during the year. National Weather Service gage height telemeter at station.

AVERAGE DISCHARGE.--31 years, 450 ft³/s (12.74 m³/s), 7.22 in/yr (183 mm/yr), 326,000 acre-ft/yr (402 hm³/yr); median of yearly mean discharges, 350 ft³/s (9.9 m³/s), 5.6 in/yr (142 mm/yr), 254,000 acre-ft/yr (313 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 31,900 ft³/s (903 m³/s) June 27, 1951, gage height, 17.28 ft (5.267 m), from floodmarks; minimum daily, 5.9 ft³/s (167 dm³/s) Feb. 26, 27, 1959.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in March 1929 reached a stage of about 14 ft (4 m), from information by local resident, discharge, about 12,800 ft³/s (362 m³/s).

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 2,500 ft³/s (70.8 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage Height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage Height (ft) (m)
Mar. 15	1115	*3,150 89.2	*10.88 3.316	Apr. 20	0645	2,710 76.7	10.42 3.176

Minimum daily discharge, 27 ft³/s (0.76 m³/s) Sept. 28-30.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	51	52	85	106	46	201	1020	900	818	169	208	53
2	51	55	267	104	46	154	1070	829	704	162	182	42
3	50	57	399	100	46	143	823	757	623	156	161	40
4	49	57	344	91	46	130	662	692	562	150	146	38
5	48	58	291	81	46	114	568	642	510	144	136	36
6	48	60	227	70	46	111	508	604	471	140	128	35
7	47	72	214	63	45	147	461	571	440	136	121	34
8	46	70	206	57	45	130	412	536	411	134	118	33
9	46	77	198	53	48	134	383	512	387	133	114	33
10	47	96	180	50	51	143	355	494	374	127	109	33
11	47	126	169	49	55	167	333	473	367	121	103	31
12	45	155	161	48	61	1150	311	454	374	115	101	31
13	43	144	145	49	70	1600	293	449	364	109	102	31
14	43	127	150	50	60	2110	280	462	382	104	115	31
15	44	115	140	49	96	3040	365	465	381	102	112	31
16	44	107	125	49	110	2070	457	482	411	98	122	31
17	44	102	150	49	130	955	471	616	415	95	120	30
18	44	97	180	49	160	722	1940	805	351	92	113	29
19	45	93	200	49	175	633	2600	902	317	89	125	34
20	45	96	190	48	168	593	2650	830	290	88	106	30
21	45	103	175	48	110	604	2390	734	274	89	97	30
22	45	103	155	48	121	559	1920	652	258	89	85	29
23	47	97	140	48	154	478	1710	633	239	90	77	28
24	47	97	132	48	150	427	1720	641	223	88	72	28
25	49	108	125	48	129	391	1650	652	207	84	75	28
26	52	109	120	48	128	371	1580	642	202	81	80	28
27	53	105	117	47	175	355	1550	602	198	80	76	28
28	51	123	113	47	253	344	1360	565	191	96	73	27
29	51	133	112	47	227	355	1140	596	182	132	70	27
30	50	129	110	46	---	454	997	723	174	184	68	27
31	50	---	108	46	---	672	---	906	---	223	63	---
TOTAL	1467	2923	5428	1785	3017	19457	31979	19841	11100	3700	3378	966
MEAN	47.3	97.4	175	57.6	104	628	1066	640	370	119	109	32.2
MAX	53	155	399	106	253	3040	2650	906	818	223	208	53
MIN	43	52	85	46	45	111	280	449	174	80	63	27
CFSM	.06	.12	.21	.07	.12	.74	1.26	.76	.44	.14	.13	.04
IN.	.06	.13	.24	.08	.13	.86	1.41	.87	.49	.16	.15	.04
AC-FT	2910	5800	10770	3540	5980	38590	63430	39350	22020	7340	6700	1920
CAL YR 1975	TOTAL	187217	MEAN 513	MAX 6310	MIN 43	CFSM .61	IN 8.23	AC-FT 371300				
WTR YR 1976	TOTAL	105041	MEAN 287	MAX 3040	MIN 27	CFSM .34	IN 4.62	AC-FT 208300				

05459000 SHELL ROCK RIVER NEAR NORTHWOOD, IA

LOCATION.--Lat 43°24'51", long 93°13'14". in NW1/4 NW1/4 sec.9, T.99 N., R.20 W., Worth County, Hydrologic Unit 07080202, on right bank 50 ft (15 m) downstream from bridge on county highway A27, 1.3 mi (2.1 km) downstream from Drainage ditch 2, 2.0 mi (3.2 km) south of Northwood, 3.7 mi (6.0 km) upstream from Elk Creek, and 84.5 mi (136.0 km) upstream from mouth.

DRAINAGE AREA.--300 mi² (777 km²).

PERIOD OF RECORD.--October 1945 to current year. Prior to April 1948 monthly discharge only, published in WSP 1308.

REVISED RECORDS.--WSP 1308: 1948 (M). WSP 1438: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 1,176.48 ft (358.59 m) above mean sea level. Prior to May 17, 1956, nonrecording gage at same site and datum.

REMARKS.--Records good except those for winter period, which are poor. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--31 years, 144 ft³/s (4.08 m³/s), 6.52 in/yr (166 mm/yr), 104,300 acre-ft/yr (129 hm³/yr); median of yearly mean discharges, 130 ft³/s (3.68 m³/s), 5.9 in/yr (150 mm/yr), 94,200 acre-ft/yr (116 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 3,400 ft³/s (96.3 m³/s) Apr. 8, 1965, gage height, 12.07 ft (3.679 m), backwater from ice; minimum daily, 0.3 ft³/s (0.008m³/s) Feb. 17-26, 1959.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 696 ft³/s (19.7 m³/s) Mar. 31, gage height, 6.46 ft (1.969 m), no peak above base of 700 ft³/s (19.8 m³/s); maximum gage height, 6.98 ft (2.128 m) Mar. 12, backwater from ice; minimum daily discharge, 5.4 ft³/s (0.15 m³/s) Aug. 22-24.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP		
1	36	23	142	42	34	55	559	168	101	31	17	6.0		
2	40	23	152	42	33	61	443	139	91	28	17	6.4		
3	38	23	158	41	32	65	382	128	80	26	16	6.0		
4	36	23	163	41	31	67	346	120	74	26	15	5.7		
5	34	23	166	40	31	67	314	110	66	24	17	5.7		
6	34	23	164	40	31	66	295	99	60	24	17	5.7		
7	35	23	150	39	31	65	271	91	57	24	14	5.7		
8	33	23	110	38	32	64	250	85	53	24	12	5.9		
9	31	33	94	38	33	65	230	81	50	22	9.9	7.0		
10	31	68	82	37	36	64	207	79	50	21	8.4	7.7		
11	33	47	64	37	38	64	195	96	48	19	7.6	7.1		
12	32	34	72	36	41	400	174	94	50	19	6.0	6.9		
13	30	33	57	35	43	360	152	108	47	19	5.7	6.6		
14	31	37	66	35	45	385	141	208	45	17	6.4	6.9		
15	28	39	70	33	54	355	141	231	41	17	6.8	7.2		
16	28	35	75	33	62	300	211	250	41	18	6.8	7.4		
17	28	33	80	33	59	270	209	222	40	17	7.6	7.4		
18	28	33	45	34	57	242	196	200	39	17	8.0	8.2		
19	28	33	49	34	54	244	222	184	40	17	7.2	8.2		
20	28	50	52	34	56	250	207	157	37	18	6.4	7.8		
21	28	70	56	34	60	226	217	146	35	19	6.0	7.6		
22	28	82	59	34	63	214	266	139	32	17	5.4	7.6		
23	28	62	57	34	60	193	309	140	30	16	5.4	7.8		
24	27	69	55	34	54	176	275	130	32	15	5.4	7.7		
25	26	122	53	34	53	169	242	120	34	14	5.7	7.6		
26	26	104	51	34	51	164	223	108	35	13	7.2	9.0		
27	23	86	49	34	48	189	210	93	39	15	7.2	8.7		
28	23	82	48	34	43	168	201	95	36	19	6.8	8.6		
29	22	110	46	34	41	160	191	107	33	20	6.4	8.3		
30	22	132	45	34	---	417	187	113	33	19	6.4	8.0		
31	22	---	43	34	---	678	---	113	---	19	6.0	---		
TOTAL	917	1578	2573	1116	1306	6263	7466	4154	1449	614	279.7	216.4		
MEAN	29.6	52.6	83.0	36.0	45.0	202	249	134	48.3	19.8	9.02	7.21		
MAX	40	132	166	42	63	678	559	250	101	31	17	9.0		
MIN	22	23	43	33	31	55	141	79	30	13	5.4	5.7		
CFSM	.10	.18	.28	.12	.15	.67	.83	.45	.16	.07	.03	.02		
IN.	.11	.20	.32	.14	.16	.78	.93	.52	.18	.08	.03	.03		
AC-FT	1820	3130	5100	2210	2590	12420	14810	8240	2870	1220	555	429		
CAL YR 1975	TOTAL	81468.0	MEAN	223	MAX	1390	MIN	22	CFSM	.74	IN	10.10	AC-FT	161600
WTR YR 1976	TOTAL	27932.1	MEAN	76.3	MAX	678	MIN	5.4	CFSM	.25	IN	3.46	AC-FT	55400

05459500 WINNEBAGO RIVER AT MASON CITY, IA

LOCATION.--Lat 43°09'54", long 93°11'33", in NE1/4 NW1/4 sec.3, T.96 N., R.20 W., Cerro Gordo County, Hydrologic Unit 07080203, on right bank 650 ft (198 m) upstream from Thirteenth Street Bridge in Mason City, 0.1 mi (0.2 km) downstream from Calmus Creek, and 1.0 mi (1.6 km) upstream from Willow Creek.

DRAINAGE AREA.--526 mi² (1,362 km²).

PERIOD OF RECORD.--October 1932 to current year. Prior to December 1932, monthly discharge only, published in WSP 1308. Prior to October 1959, published as Lime Creek at Mason City.

REVISED RECORDS.--WSP 825: 1935-36, WSP 1438: Drainage area. WSP 1558: 1933-37, 1943 (M), 1945, 1948.

GAGE.--Water-stage recorder and concrete control. Datum of gage is 1,069.59 ft (326.01 m) above mean sea level. Prior to Oct. 15, 1934, nonrecording gage at datum 6.47 ft (1.97 m) lower. Oct. 15 to Nov. 6, 1934, nonrecording gage at different datum, and Nov. 7, 1934, to Mar. 22, 1935, nonrecording gage at present datum.

REMARKS.--Records good except those for winter period, which are poor. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--44 years, 239 ft³/s (6.77 m³/s), 6.17 in/yr (157 mm/yr), 173,200 acre-ft/yr (214 hm³/yr); median of yearly mean discharges, 210 ft³/s (5.95 m³/s), 5.4 in/yr (137 mm/yr), 152,000 acre-ft/yr (187 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 10,800 ft³/s (306 m³/s) Mar. 30, 1933, gage height, 15.7 ft (4.79 m), present datum; minimum daily, 2.5 ft³/s (0.071 m³/s) Dec. 29-31, 1933, Aug. 5, 1934.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, about 3,100 ft³/s (88 m³/s) Mar. 12, gage height, 9.00 ft (2.743 m) backwater from ice, no other peak above base of 2,000 ft³/s (56.6 m³/s); minimum daily, 11 ft³/s (0.31 m³/s) Aug. 23, 24.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	64	48	142	45	28	50	1120	323	283	76	50	17
2	51	49	134	44	28	52	864	293	241	71	42	17
3	57	50	126	43	27	57	705	265	201	68	30	16
4	54	51	120	42	27	60	606	248	185	63	26	14
5	53	52	114	41	26	63	529	242	174	61	46	33
6	52	54	110	41	26	67	468	216	170	67	37	17
7	57	56	140	40	25	70	414	195	148	84	26	14
8	56	55	164	40	25	73	365	191	142	69	24	14
9	62	113	122	39	26	75	322	185	138	66	19	14
10	57	182	106	39	26	82	291	178	138	56	16	15
11	57	161	92	38	28	96	261	162	140	46	16	17
12	56	135	80	38	29	1500	236	155	131	40	17	15
13	53	116	106	37	31	1110	222	184	141	37	17	16
14	54	98	150	37	36	920	213	191	142	33	23	18
15	57	84	212	37	66	700	241	186	142	53	20	19
16	53	84	186	36	82	470	250	296	128	53	22	20
17	55	83	164	36	89	460	232	521	118	39	28	20
18	51	78	144	36	91	452	487	464	113	40	31	20
19	49	78	124	36	94	481	521	397	114	40	26	22
20	48	90	108	35	95	497	433	347	105	53	18	18
21	50	100	96	35	88	427	439	303	97	44	15	19
22	50	86	84	34	70	327	432	279	95	43	13	17
23	52	74	75	34	76	268	404	285	89	40	11	18
24	53	66	68	33	83	234	499	266	92	31	11	18
25	47	59	60	33	90	209	641	241	99	25	12	18
26	45	65	56	32	100	352	588	219	91	25	13	18
27	46	70	52	31	114	361	504	203	102	33	15	21
28	45	74	49	30	90	299	447	332	101	67	15	22
29	50	90	47	30	78	332	399	425	88	57	14	22
30	49	150	46	29	---	1080	363	375	86	52	14	22
31	49	---	45	28	---	1550	---	328	---	48	14	---
TOTAL	1642	2551	3322	1129	1694	12774	13496	8495	4034	1580	681	551
MEAN	53.0	85.0	107	36.4	58.4	412	450	274	134	51.0	22.0	18.4
MAX	64	182	212	45	114	1550	1120	521	283	84	50	33
MIN	45	48	45	28	25	50	213	155	86	25	11	14
CFSM	.10	.16	.20	.07	.11	.78	.86	.52	.25	.10	.04	.03
IN./	.12	.18	.23	.08	.12	.90	.95	.60	.29	.11	.05	.04
AC-FT	3260	5060	6590	2240	3360	25340	26770	16850	8000	3130	1350	1090
CAL YR 1975	TOTAL	116531	MEAN 319	MAX	4200	MIN 22	CFSM .61	IN 8.24	AC-FT	231100		
WTR YR 1976	TOTAL	51949	MEAN 142	MAX	1550	MIN 11	CFSM .27	IN 3.67	AC-FT	103000		

LOCATION.--Lat 43°08'01", long 93°22'57", in SE1/4 NE1/4 sec.13, T.96 N., R.22 W., Cerro Gordo County, Hydrologic Unit 07080203, at the public bathing beach in the town of Clear Lake near dam across Clear Creek.

PERIOD OF RECORD.--May 1933 to current year. No winter records 1933-52. Record fragmentary Nov. 1952 to June 1959.

REMARKS.--Lake is formed by concrete dam on Clear Creek with ungated overflow spillway 50 ft (15 m) long at elevation 1,226.84 ft (373.94 m) above mean sea level. Dam constructed in 1903. A previous outlet works had been constructed in 1887. Lake is used for conservation and recreation. Area of lake is approximately 3,600 acres (1,460 hm²).

EXTREMES FOR CURRENT YEAR.--Maximum gage height, 4.78 ft (1.457 m) Mar. 12; minimum, 2.84 ft (0.866 m) Sept. 28.

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.92	3.61	3.86	3.93	3.87	3.87	4.29	4.47	4.44	4.04	3.68	3.18
2	3.90	3.60	3.84	3.93	3.87	3.87	4.28	4.46	4.43	4.03	3.66	3.17
3	3.94	3.59	3.83	3.93	3.86	3.88	4.31	4.46	4.42	4.01	3.66	3.16
4	3.90	3.58	3.83	3.93	3.86	3.90	4.27	4.46	4.40	4.00	3.65	3.14
5	3.90	3.59	3.84	3.93	3.86	3.93	4.29	4.43	4.38	4.00	3.63	3.11
6	3.84	3.61	3.83	3.93	3.86	3.94	4.27	4.37	4.37	3.99	3.59	3.10
7	3.80	3.62	3.84	3.93	3.86	3.94	4.25	4.35	4.39	3.95	3.57	3.08
8	3.84	3.60	3.83	3.93	3.86	3.94	4.25	4.37	4.38	3.92	3.56	3.06
9	3.86	3.65	3.83	3.93	3.86	3.94	4.29	4.40	4.38	3.94	3.53	3.05
10	3.82	3.83	3.84	3.93	3.86	3.94	4.29	4.38	4.38	3.94	3.50	3.03
11	3.78	3.79	3.83	3.93	3.85	4.03	4.20	4.31	4.34	3.89	3.50	3.01
12	3.80	3.83	3.83	3.93	3.85	4.44	4.22	4.31	4.35	3.81	3.50	3.00
13	3.84	3.73	3.83	3.93	3.84	4.12	4.24	4.31	4.34	3.83	3.48	3.00
14	3.80	3.74	4.03	3.93	3.84	4.11	4.27	4.32	4.34	3.80	3.46	3.00
15	3.81	3.74	3.99	3.93	3.97	4.10	4.27	4.31	4.36	3.79	3.44	2.97
16	3.73	3.73	3.97	3.91	3.90	4.10	4.31	4.38	4.26	3.73	3.42	2.94
17	3.70	3.73	3.96	3.90	3.89	4.10	4.28	4.42	4.24	3.72	3.41	2.93
18	3.70	3.74	3.95	3.90	3.89	4.11	4.38	4.41	4.21	3.70	3.42	2.92
19	3.70	3.73	3.95	3.90	3.89	4.11	4.37	4.46	4.19	3.69	3.41	2.96
20	3.70	3.79	3.94	3.90	3.88	4.12	4.34	4.44	4.19	3.68	3.40	3.00
21	3.68	3.84	3.94	3.89	3.88	4.15	4.36	4.39	4.17	3.65	3.38	2.98
22	3.70	3.84	3.94	3.89	3.88	4.12	4.37	4.38	4.14	3.63	3.36	2.94
23	3.75	3.79	3.94	3.88	3.89	4.15	4.37	4.40	4.11	3.63	3.34	2.92
24	3.88	3.77	3.94	3.88	3.89	4.14	4.39	4.40	4.12	3.61	3.32	2.90
25	3.73	3.77	3.93	3.88	3.89	4.10	4.43	4.40	4.14	3.60	3.30	2.89
26	3.71	3.76	3.93	3.88	3.89	4.12	4.45	4.40	4.12	3.59	3.30	2.87
27	3.67	3.77	3.93	3.88	3.89	4.13	4.45	4.41	4.10	3.56	3.30	2.86
28	3.65	3.76	3.93	3.88	3.89	4.11	4.45	4.43	4.10	3.74	3.27	2.85
29	3.63	3.81	3.93	3.87	3.89	4.13	4.47	4.44	4.07	3.68	3.24	2.86
30	3.63	3.86	3.93	3.87	---	4.28	4.48	4.46	4.05	3.70	3.22	2.86
31	3.64	---	3.93	3.87	---	4.31	---	4.46	---	3.70	3.21	---
MEAN	3.77	3.73	3.90	3.91	3.88	4.07	4.33	4.40	4.26	3.79	3.44	2.99
MAX	3.94	3.86	4.03	3.93	3.97	4.44	4.48	4.47	4.44	4.04	3.68	3.18
MIN	3.63	3.58	3.83	3.87	3.84	3.87	4.20	4.31	4.05	3.56	3.21	2.85

05462000 SHELL ROCK RIVER AT SHELL ROCK, IA

LOCATION.--Lat 42°39'10", long 92°35'46", in NE1/4 NW1/4 sec.11, T.91 N., R.15 W., Butler County, Hydrologic Unit 07080202, on right bank 400 ft (122 m) upstream from bridge on county highway C45 in Shell Rock, 2.2 mi (3.5 km) downstream from Curry Creek, and 10.4 mi (16.7 km) upstream from mouth.

DRAINAGE AREA.--1,746 mi² (4,522 km²).

PERIOD OF RECORD.--June 1953 to current year. Prior to July 1953, monthly discharge only, published in WSP 1728.

REVISED RECORDS.--WSP 1438: Drainage area.

GAGE.--Water-stage recorder. Rockfill dam since Oct. 19, 1957. Datum of gage is 885.34 ft (269.852 m) above mean sea level.

REMARKS.--Records good except those for winter period, which are poor. Diurnal fluctuation at low stages caused by powerplant at Greene. Several observations of water temperature were made during the year. National Weather Service gage height telemeter at station.

AVERAGE DISCHARGE.--23 years, 868 ft³/s (24.58 m³/s), 6.75 in/yr (171 mm/yr), 628,900 acre-ft/yr (775 hm³/yr); median of yearly mean discharges, 695 ft³/s (19.7 m³/s), 5.4 in/yr (137 mm/yr), 504,000 acre-ft/yr (621 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 33,500 ft³/s (949 m³/s) Mar. 28, 1961, gage height, 16.26 ft (4.956 m); minimum daily, 39 ft³/s (1.10 m³/s) Feb. 4-9, 1959.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in 1856 reached a stage of 17.7 ft (5.39 m) at bridge 400 ft (122 m) downstream, from information furnished by Corps of Engineers, discharge, about 45,000 ft³/s (1,270 m³/s).

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 6,790 ft³/s (192 m³/s) Mar. 13, gage height, 11.52 ft (3.511 m) at 1615 hours, no other peak above base of 4,000 ft³/s (113 m³/s); minimum daily, 134 ft³/s (3.79 m³/s) Sept. 12.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	224	224	255	350	203	391	2970	1270	1380	385	265	150
2	217	222	350	340	178	277	2350	1190	1200	371	254	148
3	213	238	590	277	185	230	1970	1110	1080	361	246	150
4	212	233	580	248	178	200	1690	1040	976	355	230	152
5	210	229	550	245	176	240	1520	998	886	344	234	147
6	203	228	500	282	166	294	1380	937	825	338	237	143
7	197	229	500	253	157	325	1270	872	771	337	253	141
8	196	241	580	220	161	322	1170	834	726	340	239	144
9	199	266	600	211	161	348	1080	816	689	338	223	144
10	201	367	540	208	180	335	1010	804	671	330	209	140
11	198	615	490	205	199	338	948	773	671	322	212	137
12	195	622	450	204	214	3100	881	745	635	315	227	134
13	200	499	435	217	234	6250	834	757	629	306	223	138
14	205	419	475	219	239	3510	802	791	657	300	221	141
15	205	380	500	219	289	2100	900	810	659	302	207	136
16	206	351	540	217	331	1750	826	867	606	304	218	137
17	209	336	400	208	440	1360	1100	1130	551	295	207	141
18	213	326	300	198	450	1160	2320	1560	540	299	207	142
19	220	319	350	195	350	1040	1880	1500	500	298	209	160
20	231	332	500	190	341	1070	1730	1340	465	307	200	170
21	233	379	550	188	331	1080	1840	1200	454	271	197	172
22	227	501	540	191	341	1010	1630	1110	428	229	193	162
23	226	542	510	193	260	865	1600	1080	406	231	188	155
24	237	553	480	198	291	794	1640	1050	392	228	177	152
25	256	407	450	201	340	727	1820	1010	394	211	168	151
26	233	294	420	214	344	717	2090	948	394	187	138	152
27	223	288	405	174	381	935	1900	889	404	199	153	155
28	223	419	390	187	438	945	1650	844	401	376	156	154
29	219	474	380	187	440	879	1490	1420	405	358	155	155
30	217	468	370	187	---	1020	1370	2000	402	340	150	157
31	216	---	360	187	---	2470	---	1630	---	312	152	---
TOTAL	6664	11001	14340	6813	8008	36092	45661	33325	19197	9489	6348	4460
MEAN	215	367	453	220	276	1164	1522	1075	640	306	205	149
MAX	256	622	600	350	450	6260	2970	2000	1380	385	265	172
MIN	195	222	255	174	157	200	802	745	392	187	138	134
CFSM	.12	.21	.27	.13	.16	.67	.87	.62	.37	.18	.12	.09
IN.	.14	.23	.31	.15	.17	.77	.97	.71	.41	.20	.14	.10
AC-FT	13220	21820	28440	13510	15880	71590	90570	66100	38080	18820	12590	8850
CAL YR 1975	TOTAL	374350	MEAN	1026	MAX	10500	MIN	90	CFSM	.59	IN	7.98
WTR YR 1976	TOTAL	201398	MEAN	550	MAX	6260	MIN	134	CFSM	.32	IN	4.29
									AC-FT	742500		
									AC-FT	399500		

05463000 BEAVER CREEK AT NEW HARTFORD, IA

LOCATION.--Lat 42°30'50", long 92°37'55", in SE1/4 SE1/4 sec.28, T.90 N., R.15 W., Butler County, Hydrologic Unit 07080205, on downstream side of center bridge pier of bridge on county highway T55, 0.2 mi (0.3 km) north of New Hartford, and 8 mi (12.9 km) upstream from mouth.

DRAINAGE AREA.--347 mi² (899 km²).

PERIOD OF RECORD.--October 1945 to current year. Prior to April 1948, monthly discharge only, published in WSP 1308.

REVISED RECORDS.--WSP 1438: Drainage area. WSP 1558: 1948-49. WSP 1708: 1947 (M).

GAGE.--Water-stage recorder. Datum of gage is 882.44 ft (268.968 m) above mean sea level. Prior to July 14, 1959, nonrecording gage at same site and datum.

REMARKS.--Records good except those for winter period, which are poor. Several observations of water temperature were made during the year. National Weather Service gage height telemeter at station.

AVERAGE DISCHARGE.--31 years, 188 ft³/s (5.324 m³/s), 7.36 in/yr (187 mm/yr), 136,200 acre-ft/yr (168 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 18,000 ft³/s (510 m³/s) June 13, 1947, gage height, 13.5 ft (4.11 m), from graph based on gage readings, from rating curve extended above 14,000 ft³/s (396 m³/s); minimum daily, 2.3 ft³/s (65 dm³/s) Jan. 20-24, 1956.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 1,400 ft³/s (39.6 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage Height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage Height (ft) (m)
Mar. 13	1245	4,750 135	10.44 3.182	Apr. 19	0400	*4,930 140	*10.59 3.228

Minimum daily discharge, 11 ft³/s (0.31 m³/s) Jan. 4, 5, Sept. 16, 18.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	28	25	72	15	16	140	392	363	238	93	59	20
2	27	23	74	14	16	100	296	337	220	88	50	19
3	26	25	70	12	16	84	247	309	205	83	44	18
4	25	31	63	11	17	100	213	278	192	80	41	17
5	25	27	56	11	17	105	192	265	181	76	41	17
6	24	25	100	12	17	110	178	242	173	74	38	16
7	25	25	84	12	19	87	164	221	167	71	35	15
8	24	25	76	12	20	84	154	211	160	68	34	15
9	24	27	54	12	23	78	146	205	152	65	33	15
10	23	49	43	12	25	95	138	196	150	62	33	15
11	23	51	40	12	28	139	132	187	152	58	32	14
12	24	37	32	12	32	1460	124	181	143	55	31	15
13	24	32	33	12	37	3760	118	165	140	54	30	15
14	24	28	48	12	43	1460	115	190	280	52	31	15
15	23	29	90	12	50	506	151	180	324	51	31	14
16	23	30	80	12	60	336	214	205	270	48	28	11
17	23	28	61	12	56	269	206	420	228	47	34	12
18	23	27	54	12	50	240	1940	430	194	45	365	11
19	24	27	44	12	45	247	3980	343	174	43	128	15
20	25	29	40	12	40	275	1550	294	160	46	80	17
21	25	30	39	12	64	258	1610	259	148	48	61	16
22	24	25	36	13	54	215	1550	239	139	52	50	14
23	24	27	34	13	45	195	951	297	133	47	43	13
24	24	31	32	14	37	183	1390	408	126	44	37	12
25	23	22	30	14	30	171	1070	360	122	40	33	13
26	22	30	28	13	28	165	797	305	112	38	31	13
27	23	40	25	13	60	163	617	269	109	39	29	14
28	29	32	23	14	76	154	514	248	105	102	25	14
29	26	30	21	14	150	153	451	289	101	113	24	14
30	24	62	19	14	---	294	404	297	97	74	23	15
31	24	---	17	15	---	528	---	263	---	68	21	---
TOTAL	755	929	1517	392	1171	12154	20004	8476	5095	1924	1575	444
MEAN	24.4	31.0	48.9	12.6	40.4	392	667	273	170	62.1	50.8	14.8
MAX	29	62	100	15	150	3760	3980	430	324	113	365	20
MIN	22	22	17	11	16	78	115	180	97	38	21	11
CFSM	.07	.09	.14	.04	.12	1.13	1.92	.79	.49	.18	.15	.04
IN.	.08	.10	.16	.04	.13	1.30	2.14	.91	.55	.21	.17	.05
AC-FT	1500	1840	3010	778	2320	24110	39680	16810	10110	3820	3120	881
CAL YR 1975	TOTAL	67917	MEAN 186	MAX 4380	MIN 17	CFSM .54	IN 7.28	AC-FT 134700				
WTR YR 1976	TOTAL	54436	MEAN 149	MAX 3980	MIN 11	CFSM .43	IN 5.84	AC-FT 108000				

05463050 CEDAR RIVER AT CEDAR FALLS, IA

LOCATION.--Lat 42°32'20", long 92°26'58", in NW1/4 NE1/4 sec.12, T.89 N., R.14 W., Black Hawk County, Hydrologic Unit 07080205, at bridge on U.S. Highway 20 at Cedar Falls, 1.1 mi (1.8 km) upstream from Dry Run, and at mile 196.0 (315.4 km) above mouth of Iowa River.

DRAINAGE AREA.--4,734 mi² (12,261 km²).

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

REMARKS.--Water discharge estimated on basis of records at gaging station 8.1 mi (13.0 km) downstream at Waterloo. No significant inflow between gaging station and sampling site.

WATER QUALITY DATA, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976

DATE	TIME	INSTAN- TANEOUS DIS- CHARGE (CFS) (00061)	TOTAL CAL- CIUM (CA) (MG/L) (00916)	TOTAL MAG- NE- SIUM (MG) (MG/L) (00927)	TOTAL SODIUM (NA) (MG/L) (00929)	TOTAL PO- TAS- SIUM (K) (MG/L) (00937)	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)
OCT 20...	1200	690	53	23	--	2.8	190	--	156	45	20
NOV 17...	1145	1130	--	--	--	--	258	--	212	1.9	1.1
DEC 15...	1100	1430	75	22	--	2.1	261	--	214	43	22
JAN 19...	1200	620	82	27	--	2.6	317	--	260	51	25
FEB 17...	1145	1050	63	19	--	1.9	228	--	187	37	18
MAR 22...	1200	3500	59	18	--	3.8	205	--	168	39	19
APR 28...	1135	7960	76	22	9.0	2.7	234	--	192	41	25
MAY 24...	1335	3500	72	22	9.4	2.2	226	3	190	43	24
JUN 14...	1225	2200	73	22	10	2.4	215	--	176	39	20
JUL 27...	1250	730	43	21	12	2.5	161	--	132	39	19
AUG 25...	1130	600	39	17	12	2.4	180	0	148	36	19
SEP 21...	1320	680	39	18	13	2.5	169	0	139	37	20

DATE	TOTAL NITRITE PLUS NITRATE (N) (MG/L) (00630)	TOTAL AMMONIA NITRO- GEN (N) (MG/L) (00610)	TOTAL ORGANIC NITRO- GEN (N) (MG/L) (00605)	TOTAL KJEL- DAHL NITRO- GEN (N) (MG/L) (00625)	TOTAL NITRO- GEN (N) (MG/L) (00600)	TOTAL NITRO- GEN (NO3) (MG/L) (71887)	TOTAL PHOS- PHORUS (P) (MG/L) (00665)	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)
OCT 20...	.24	.01	2.6	2.6	2.8	13	.17	241	.33	449
NOV 17...	2.5	.02	1.6	1.6	4.1	18	.20	351	.48	1070
DEC 15...	3.8	.28	.53	.81	4.6	20	.18	342	.47	1320
JAN 19...	4.1	.18	.69	.87	5.0	22	.21	382	.52	639
FEB 17...	2.7	.28	.67	.95	3.7	16	.16	310	.42	879
MAR 22...	4.2	.66	1.4	2.1	6.3	28	.37	300	.41	2840
APR 28...	8.0	.03	1.4	1.4	9.4	42	.20	376	.51	8080
MAY 24...	6.1	.01	2.1	2.1	8.2	36	.13	332	.45	3140
JUN 14...	3.3	.04	1.5	1.5	4.8	21	.20	332	.45	1970
JUL 27...	.00	.01	.18	.19	.19	.84	.16	222	.30	438
AUG 25...	.01	.34	1.8	2.1	2.1	9.3	.17	190	.26	308
SEP 21...	.06	.61	1.8	2.4	2.5	11	.19	221	.30	406

05463050 CEDAR RIVER AT CEDAR FALLS, IA--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976

DATE	TOTAL RESI- DUE (MG/L) (00500)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS) (00095)	PH (UNITS) (00400)	TEMPER- ATURE (DEG C) (00010)	TUR- BID- ITY (NTU) (00076)	DIS- SOLVED OXYGEN (MG/L) (00300)	PER- CENT SATUR- ATION (00301)	CHEM- ICAL OXYGEN DEMAND (HIGH LEVEL) (MG/L) (00340)	CARBON DIOXIDE (CO2) (MG/L) (00405)	FECAL COLI- FORM (COL. PER 100 ML) (31616)
OCT 20...	282	410	8.6	12.0	15	10.7	99	10	.8	50
NOV 17...	367	510	8.2	9.5	5	10.6	93	10	2.6	230
DEC 15...	342	540	8.3	2.0	2	13.0	94	10	2.1	660
JAN 19...	416	640	8.2	.0	2	14.1	98	16	3.2	240
FEB 17...	302	380	8.2	1.0	1	13.8	97	10	2.3	190
MAR 22...	376	450	8.1	6.0	20	--	--	24	2.6	230
APR 28...	460	510	8.3	13.0	20	10.6	100	65	1.9	390
MAY 24...	422	510	8.1	16.0	10	9.9	99	14	3.0	310
JUN 14...	376	500	8.4	22.0	15	6.2	70	16	1.4	780
JUL 27...	286	360	8.1	26.0	10	7.3	89	12	2.0	240
AUG 25...	230	380	8.7	26.0	8	7.8	95	26	.6	13
SEP 21...	302	320	8.5	17.0	15	9.5	98	13	.9	100

05463500 BLACK HAWK CREEK AT HUDSON, IA

LOCATION.--Lat 42°24'28", long 92°27'47", in SW1/4 NE1/4 sec.27, T.88 N., R.14 W., Black Hawk County, Hydrologic Unit 07080205, on left bank 35 ft (11 m) downstream from bridge on State Highway 58, 0.2 mi (0.3 km) northwest of Chicago Great Western Railway tracks at the west edge of Hudson, 4.5 mi (7.2 km) upstream from Prescotts Creek, and 9.6 mi (15.4 km) upstream from mouth.

DRAINAGE AREA.--303 mi² (785 km²).

PERIOD OF RECORD.--April 1952 to current year.

REVISED RECORDS.--WSP 1438: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 865.03 ft (263.661 m) above mean sea level.

REMARKS.--Records good except those for winter period, which are poor. Several observations of water temperature were made during the year. National Weather Service gage height telemeter at station.

AVERAGE DISCHARGE.--24 years, 161 ft³/s (4.559 m³/s), 7.22 in/yr (183 mm/yr), 116,600 acre-ft/yr (144 hm³/yr); median of yearly mean discharges, 130 ft³/s (3.68 m³/s), 5.8 in/yr (147 mm/yr), 94,200 acre-ft/yr (116 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 19,300 ft³/s (547 m³/s) July 9, 1969, gage height, 18.23 ft (5.557 m); minimum daily, 1.9 ft³/s (54 dm³/s) Jan. 21-23, July 30, 1956.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 1,200 ft³/s (34.0 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage Height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage Height (ft) (m)
Mar. 13	2030	*2,520 71.4	*14.43 4.398	Apr. 22	0330	1,280 36.2	11.73 3.575
Apr. 19	1330	1,280 36.2	11.72 3.572				

Minimum daily discharge, 8.4 ft³/s (0.24 m³/s) Jan. 4, 5.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	22	21	75	10	11	110	232	309	339	93	38	20
2	20	21	90	9.5	12	80	179	286	281	89	35	19
3	20	23	66	9.0	12	60	152	256	239	84	33	17
4	21	24	52	8.4	13	52	131	229	213	80	32	16
5	20	23	56	8.4	13	70	119	228	193	77	30	15
6	20	22	42	8.6	14	80	111	206	179	75	29	14
7	19	22	42	8.7	15	70	102	189	169	73	28	13
8	20	22	43	8.8	16	78	94	179	158	69	27	12
9	20	23	35	9.0	18	89	90	174	148	66	26	12
10	20	39	32	9.0	21	191	85	166	169	62	24	12
11	20	38	31	9.0	25	168	82	158	164	59	24	12
12	21	28	27	9.0	30	891	76	150	149	56	24	12
13	20	25	29	9.0	34	1980	74	154	141	53	24	12
14	20	23	35	9.0	36	1010	73	151	700	52	25	12
15	20	25	35	9.0	41	347	82	144	515	49	26	12
16	20	24	34	9.0	45	252	78	148	318	49	26	12
17	20	23	30	9.1	42	198	83	168	250	47	26	12
18	21	23	25	9.1	39	177	594	199	213	45	211	12
19	21	23	24	9.0	36	164	1170	183	187	43	68	12
20	21	25	23	9.1	35	173	687	164	171	43	51	13
21	21	27	21	9.1	34	170	1030	155	158	46	46	13
22	21	22	19	9.1	33	146	1100	146	146	48	40	14
23	21	24	17	9.2	32	132	714	197	136	47	38	13
24	20	28	16	9.4	32	126	893	293	134	44	36	14
25	20	29	15	9.5	33	114	771	248	132	40	32	14
26	20	25	14	9.6	45	109	640	210	118	39	30	14
27	21	27	13	9.7	130	102	518	185	116	39	28	14
28	21	29	12	9.8	210	94	437	171	110	45	26	14
29	20	34	11	10	300	95	382	443	105	60	24	14
30	20	97	11	11	---	182	341	896	101	50	23	14
31	20	---	10	11	---	324	---	448	---	43	21	---
TOTAL	631	839	985	287.1	1357	7835	11120	7233	6152	1766	1151	409
MEAN	20.4	28.0	31.8	9.26	46.8	253	371	233	205	57.0	37.1	13.6
MAX	22	97	90	11	300	1980	1170	896	700	93	211	20
MIN	19	21	10	8.4	11	52	73	144	101	39	21	12
CFSM	.07	.09	.10	.03	.15	.83	1.22	.77	.68	.19	.12	.04
IN.	.08	.10	.12	.04	.17	.96	1.37	.89	.76	.22	.14	.05
AC-FT	1250	1660	1950	569	2690	15540	22060	14350	12200	3500	2280	811
CAL YR 1975 TOTAL	69210.0			MEAN 190	MAX 4000	MIN 10	CFSM .63	IN 8.50	AC-FT 137300			
WTR YR 1976 TOTAL	39765.1			MEAN 109	MAX 1980	MIN 8.4	CFSM .36	IN 4.88	AC-FT 78870			

05464000 CEDAR RIVER AT WATERLOO, IA

LOCATION.--Lat 42°29'44", long 92°20'03", in NW1/4 NW1/4 sec.25, T.89 N., R.13 W., Black Hawk County, Hydrologic Unit 07080205, on left bank at foot of East Seventh Street, 0.3 mi (0.5 km) upstream from Eleventh Avenue Bridge in Waterloo, 1.1 mi (1.8 km) downstream from Black Hawk Creek, and at mile 187.9 (302.3 km) above mouth of Iowa River.

DRAINAGE AREA.--5,146 mi² (13,328 km²).

PERIOD OF RECORD.--October 1940 to current year. Prior to April 1941, monthly discharge only, published in WSP 1308.

REVISED RECORDS.--WSP 1438: Drainage area. WSP 1558: 1950.

GAGE.--Water-stage recorder. Datum of gage is 824.14 ft (251.198 m) above mean sea level.

REMARKS.--Records good except those for winter period, which are fair. Slight diurnal fluctuation during low flow caused by powerplant above station. Several observations of water temperature were made during the year. National Weather Service gage height telemeter at station.

AVERAGE DISCHARGE.--36 years, 2,772 ft³/s (78.49 m³/s), 7.32 in/yr (186 mm/yr), 2,008,000 acre-ft/yr (2,480 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 76,700 ft³/s (2,170 m³/s) Mar. 29, 1961, gage height, 21.86 ft (6.663 m); minimum daily, 152 ft³/s (4.30 m³/s) Jan. 28, 1959.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Mar. 16, 1929, reached a stage of about 20 ft (6 m), determined by Corps of Engineers, from information by City of Waterloo, discharge, 65,000 ft³/s (1,840 m³/s). Flood of Apr. 2, 1933, reached a stage about 0.5 ft (0.15 m) lower than Mar. 16, 1929, from information by City of Waterloo, discharge, 61,000 ft³/s (1,730 m³/s).

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 13,000 ft³/s (368 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage Height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage Height (ft) (m)
Mar. 14	1745	*17,200 487	*10.58 3.225	Apr. 19	2230	13,500 382	9.36 2.853

Minimum daily discharge, 480 ft³/s (13.6 m³/s) Sept. 26.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	
1	862	744	790	1030	612	1850	6680	4890	4240	1300	962	563	
2	865	766	895	1030	613	1440	7600	4530	3460	1260	900	591	
3	822	814	1530	1000	601	1220	7100	4180	3180	1230	849	598	
4	806	815	1990	942	597	1070	5840	3800	2900	1140	800	567	
5	778	802	1950	900	585	840	4720	3530	2650	1110	776	528	
6	788	798	1760	832	575	902	4280	3170	2460	1090	782	538	
7	802	810	1460	756	562	1140	3840	3070	2350	1080	777	549	
8	775	788	1670	679	550	1130	3510	2880	2220	1040	690	536	
9	782	960	1670	669	571	1210	3080	2720	2090	1030	699	539	
10	760	1010	1630	659	616	1400	2940	2600	2090	999	746	541	
11	748	1250	1550	643	614	1430	2780	2500	2040	935	674	508	
12	751	1290	1450	638	652	4910	2610	2340	1970	910	693	488	
13	764	1330	1350	607	687	10700	2450	2360	1990	887	682	499	
14	891	1320	1410	635	691	16000	2340	2170	2420	799	705	522	
15	746	1200	1330	654	845	15600	2360	2400	2820	824	722	520	
16	710	1100	1050	644	968	12000	2760	2490	2360	835	705	540	
17	736	1050	960	633	1040	6930	2890	2910	2230	831	767	519	
18	706	1020	800	625	1170	4780	5560	3990	2000	816	889	500	
19	674	979	1180	630	1240	4020	11500	4640	1890	822	1020	562	
20	699	1020	1370	617	1250	3660	12200	4120	1750	866	834	583	
21	729	1040	1520	603	1100	3540	10200	3760	1670	858	739	604	
22	744	1020	1520	615	813	3390	10400	3490	1600	846	665	570	
23	763	1110	1480	601	1100	3100	8920	3340	1520	837	675	536	
24	787	1210	1380	612	1140	2800	8280	3450	1520	830	680	531	
25	748	1240	1300	622	1120	2550	8630	3400	1460	788	699	512	
26	775	992	1260	636	1130	2220	8240	3160	1420	774	679	480	
27	788	824	1200	615	1390	2260	7780	2660	1400	763	658	482	
28	775	885	1160	633	2230	2540	7020	2640	1380	1320	625	513	
29	767	1290	1140	603	2030	2570	6150	2990	1350	1220	569	517	
30	754	1390	1110	571	---	3000	5340	4690	1320	1160	583	525	
31	761	---	1050	585	---	4120	---	4710	---	1060	601	---	
TOTAL	23856	30867	41915	21519	27092	124322	178100	103580	63750	30260	22845	16061	
MEAN	770	1029	1352	694	934	4010	5937	3341	2125	976	737	535	
MAX	891	1390	1990	1030	2230	16000	12200	4890	4240	1320	1020	604	
MIN	674	744	790	571	550	840	2340	2170	1320	763	569	480	
CFSM	.15	.20	.26	.13	.18	.78	1.15	.65	.41	.19	.14	.10	
IN.	.17	.22	.30	.16	.20	.90	1.29	.75	.46	.22	.17	.12	
AC-FT	47320	61220	83140	42680	53740	246600	353300	205500	126400	60020	45310	31860	
CAL YR 1975 TOTAL	1135957	MEAN	3112	MAX	23300	MIN	587	CFSM	.60	IN	8.21	AC-FT	2253000
WTR YR 1976 TOTAL	684167	MEAN	1869	MAX	16000	MIN	480	CFSM	.36	IN	4.95	AC-FT	1357000

IOWA RIVER BASIN

05464020 CEDAR RIVER NEAR GILBERTVILLE, IA

LOCATION.--Lat. 42°24'54", Long 92°13'00", in SW1/4 SW1/4 sec.23, T.88 N., R.12 W., Black Hawk County, Hydrologic Unit 07080205, at bridge on county highway D38 at Gilbertville, 1.4 mi (2.2 km) upstream from Indian Creek, and at mile 176.5 (284.0 km) above mouth of Iowa River.

DRAINAGE AREA.--5,234 mi² (13,556 km²).

PERIOD OF RECORD.--Water years 1971, 1975 to current year.

REMARKS.--Water discharge estimated on basis of records at gaging station 11.4 mi (18.3 km) upstream at Waterloo. No significant inflow between gaging station and sampling site.

WATER QUALITY DATA, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976

DATE	TIME	INSTANTANEOUS DIS-CHARGE (CFS) (00061)	TOTAL CALCIUM (CA) (MG/L) (00916)	TOTAL MAGNESIUM (MG) (MG/L) (00927)	TOTAL SODIUM (NA) (MG/L) (00929)	TOTAL POTASSIUM (K) (MG/L) (00937)	BICARBONATE (HCO3) (MG/L) (00440)	CARBONATE (CO3) (MG/L) (00445)	ALKALINITY AS CaCO3 (MG/L) (00410)	DIS-SOLVED SULFATE (SO4) (MG/L) (00945)	DIS-SOLVED CHLORIDE (CL) (MG/L) (00940)
OCT 20...	1105	690	46	22	--	3.0	183	--	150	48	25
NOV 17...	1300	1130	66	17	--	3.6	248	--	203	3.5	4.5
DEC 15...	1025	1430	77	22	--	2.2	263	--	216	44	24
JAN 19...	1100	620	78	26	--	2.5	308	--	253	52	34
FEB 17...	1040	1050	68	19	--	2.1	226	--	185	38	24
MAR 22...	1110	3500	66	17	--	3.6	203	--	167	38	19
APR 28...	1040	7960	76	21	9.4	3.0	223	--	183	41	24
MAY 24...	1225	3500	72	23	9.7	2.2	221	9	196	48	24
JUN 14...	1120	2200	61	21	10	2.1	203	--	167	40	20
JUL 27...	1130	730	42	20	17	2.7	175	--	144	42	26
AUG 25...	1015	600	35	18	21	3.1	171	0	140	39	34
SEP 21...	1220	680	39	17	18	2.8	161	0	132	40	30

DATE	TOTAL NITRITE PLUS NITRATE (N) (MG/L) (00630)	TOTAL AMMONIA NITROGEN (N) (MG/L) (00610)	TOTAL ORGANIC NITROGEN (N) (MG/L) (00605)	TOTAL KJEL-DAHL NITROGEN (N) (MG/L) (00625)	TOTAL NITROGEN (N) (MG/L) (00600)	TOTAL NITROGEN (NO3) (MG/L) (71887)	TOTAL PHOSPHORUS (P) (MG/L) (00665)	DIS-SOLVED SOLIDS (RESIDUE AT 180 C) (MG/L) (70300)	DIS-SOLVED SOLIDS (TONS PER AC-FT) (70303)	DIS-SOLVED SOLIDS (TONS PER DAY) (70302)
OCT 20...	.49	.01	3.0	3.0	3.5	15	.44	294	.40	548
NOV 17...	2.4	.02	1.7	1.7	4.1	18	.31	332	.45	1010
DEC 15...	4.0	.26	.50	.76	4.8	21	.26	348	.47	1340
JAN 19...	4.4	.27	.73	1.0	5.4	24	.40	416	.57	696
FEB 17...	3.0	.21	.69	.90	3.9	17	.33	320	.44	907
MAR 22...	4.1	.70	.90	1.6	5.7	25	.38	288	.39	2720
APR 28...	8.4	.03	1.5	1.5	9.9	44	.24	358	.49	7700
MAY 24...	5.7	.01	1.8	1.8	7.5	33	.14	326	.44	3080
JUN 14...	4.0	.08	1.7	1.8	5.8	26	.25	328	.45	1950
JUL 27...	.33	.02	.31	.33	.66	2.9	.41	258	.35	509
AUG 25...	.63	.33	2.1	2.4	3.0	13	.49	210	.29	340
SEP 21...	.73	.65	2.3	2.9	3.6	16	.51	244	.33	448

05464020 CEDAR RIVER NEAR GILBERTVILLE, IA--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976

DATE	TOTAL RESI- DUE (MG/L) (00500)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS) (00095)	PH (UNITS) (00400)	TEMPER- ATURE (DEG C) (00010)	TUR- BID- ITY (NTU) (00076)	DIS- SOLVED OXYGEN (MG/L) (00300)	PER- CENT SATUR- ATION (00301)	CHEM- ICAL OXYGEN DEMAND (HIGH LEVEL) (MG/L) (00340)	CARBON DIOXIDE (CO2) (MG/L) (00405)	FECAL COLI- FORM (COL. PER 100 ML) (31616)
OCT										
20...	326	410	8.7	12.5	15	10.6	99	16	.6	240
NOV										
17...	361	400	8.2	10.5	5	10.0	89	12	2.5	20
DEC										
15...	356	520	8.2	3.0	3	12.8	95	8	2.7	180
JAN										
19...	426	680	8.1	.0	2	14.3	99	8	3.9	70
FEB										
17...	312	480	8.1	1.0	3	13.8	97	10	2.9	25
MAR										
22...	374	460	8.2	7.0	25	--	--	24	2.0	200
APR										
28...	476	520	8.2	13.0	30	10.7	101	23	2.3	1100
MAY										
24...	420	540	8.2	17.0	9	9.4	97	27	2.4	270
JUN										
14...	380	390	8.2	22.0	15	6.6	75	20	2.0	1200
JUL										
27...	350	430	8.2	26.0	5	7.2	88	7	1.8	8850
AUG										
25...	244	360	8.4	25.0	5	8.0	95	31	1.1	180
SEP										
21...	306	350	8.7	17.0	15	9.6	99	17	.5	160

05464137 FOURMILE CREEK NEAR TRAER, IA

LOCATION.--Lat 42°12'07", long 92°33'44", NW1/4 SE1/4 sec.2, T.85 N., R.15 W., Tama County, Hydrologic Unit 07080205, on left bank 10 ft (3 m) downstream from bridge on county highway T69, 2.0 mi (3.2 km) upstream from mouth, and 5.0 mi (8.0 km) northwest of Traer.

DRAINAGE AREA.--19.51 mi² (50.53 km²).

PERIOD OF RECORD.--July 1962 to September 1974, October 1975 to September 1976.

GAGE.--Water-stage recorder and V-notch sharp-crested weir. Datum of gage is 905.87 ft (276.109 m) above mean sea level.

REMARKS.--Records good except those for winter period, which are poor. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--13 years (water years 1963-74, 1976), 11.8 ft³/s (0.334 m³/s), 8.21 in/yr (209 mm/yr), 8,550 acre-ft/yr (10.5 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,040 ft³/s (29.5 m³/s) June 22, 1974, gage height, 12.91 ft (3.935 m); maximum gage height, 13.41 ft (4.087 m) Feb. 19, 1971, backwater from ice; minimum daily discharge, 0.04 ft³/s (0.001 m³/s) Aug. 31, 1976.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 197 ft³/s (5.30 m³/s) Mar. 12, gage height, 9.92 ft (3.024 m) at 0645 hours, no peak above base of 400 ft³/s (11.3 m³/s); minimum daily, 0.04 ft³/s (0.001 m³/s) Aug. 31.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP		
1	1.3	1.3	4.9	1.5	.82	7.2	9.8	22	11	5.3	.78	.34		
2	1.2	1.3	3.5	1.2	.70	4.3	8.3	24	9.9	5.0	.69	.17		
3	1.2	1.4	3.0	1.0	.80	2.0	7.4	20	9.2	4.7	.65	.20		
4	1.3	1.5	2.8	.70	1.0	3.4	6.4	18	8.6	4.4	.62	.27		
5	1.2	1.4	3.1	1.0	1.5	5.0	5.9	17	8.0	4.2	.57	.15		
6	1.2	1.4	2.2	.88	2.5	2.7	5.4	15	7.8	4.0	.55	.15		
7	1.1	1.4	2.5	.70	1.8	6.2	4.9	14	7.4	3.8	.52	.23		
8	1.2	1.3	2.3	.60	1.6	6.2	4.6	14	6.9	3.5	.46	.11		
9	1.2	1.8	2.2	.74	1.4	22	4.3	13	4.7	3.3	.46	.19		
10	1.2	2.2	2.1	.98	1.3	17	4.2	13	5.8	2.9	.37	.08		
11	1.2	1.4	2.0	1.2	1.2	14	4.0	12	6.8	2.7	.39	.13		
12	1.3	1.3	1.8	1.1	1.1	111	3.7	12	6.4	2.5	.65	.10		
13	1.2	1.2	2.1	1.0	1.1	27	3.8	12	16	2.4	.80	.08		
14	1.2	1.1	3.2	.90	1.0	14	3.9	11	58	2.2	.42	.24		
15	1.2	1.3	2.1	.80	1.0	11	5.6	11	21	2.0	.48	.15		
16	1.2	1.2	2.0	.70	.98	9.9	4.5	13	16	1.9	.31	.23		
17	1.2	1.2	1.3	.60	.96	8.3	18	15	13	1.8	.47	.24		
18	1.3	1.2	.82	.50	.94	8.2	79	14	12	1.7	.47	.19		
19	1.3	1.1	1.3	.60	.93	8.4	42	12	11	1.6	.32	.36		
20	1.3	1.6	1.9	.70	.92	9.5	42	11	9.8	1.9	.36	.48		
21	1.3	1.4	1.9	.76	.90	8.5	66	10	9.1	1.9	.47	.20		
22	1.3	1.0	1.8	.80	1.0	7.6	42	10	8.7	1.6	.65	.16		
23	1.3	1.1	1.8	.86	1.2	7.2	72	11	8.0	1.5	.41	.14		
24	1.2	1.1	1.7	.90	1.7	6.8	69	11	8.4	1.2	.17	.14		
25	1.2	1.0	1.7	1.0	3.5	6.3	52	9.8	7.5	1.1	.30	.15		
26	1.2	1.1	1.7	.70	20	6.1	42	9.0	6.9	.98	.27	.26		
27	1.3	1.0	1.6	.40	87	5.5	36	8.4	6.4	1.0	.22	.24		
28	1.3	1.2	1.4	.60	39	5.2	31	8.3	6.3	2.3	.18	.23		
29	1.2	6.0	1.2	.90	16	5.9	27	23	6.3	1.2	.12	.25		
30	1.2	10	1.1	1.1	---	16	24	14	5.7	.99	.14	.28		
31	1.2	---	1.3	1.0	---	12	---	12	---	.90	.04	---		
TOTAL	38.2	52.5	64.32	26.42	193.85	384.4	728.7	419.5	322.6	76.47	13.31	6.14		
MEAN	1.23	1.75	2.07	.85	6.68	12.4	24.3	13.5	10.8	2.47	.43	.20		
MAX	1.3	10	4.9	1.5	.87	111	79	24	58	5.3	.80	.48		
MIN	1.1	1.0	.82	.40	.70	2.0	3.7	8.3	4.7	.90	.04	.08		
CFSM	.06	.09	.11	.04	.34	.64	1.25	.69	.55	.13	.02	.01		
IN.	.07	.10	.12	.05	.37	.73	1.39	.80	.62	.15	.03	.01		
AC-FT	76	104	128	52	385	762	1450	832	640	152	26	12		
WTR YR 1976	TOTAL	2326.41	MEAN	6.36	MAX	111	MIN	.04	CFSM	.33	IN	4.44	AC-FT	4610

05464450 CEDAR RIVER NEAR PALO, IA

LOCATION.--Lat 42°03'09", long 91°46'16", in NE1/4 NE1/4 sec.33, T.84 N., R.8 W., Linn County, Hydrologic Unit 07080205, at bridge on county highway E36, 1.2 mi (1.9 km) upstream from Otter Creek, 1.5 mi (2.4 km) southeast of Palo, 2.4 mi (3.9 km) downstream from Bear Creek, and at mile 124.2 (199.8 km) above mouth of Iowa River.

DRAINAGE AREA.--6,380 mi² (16,524 km²).

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

REMARKS.--Water discharge estimated on basis of records at gaging station 11.5 mi (18.5 km) downstream at Cedar Rapids. No significant inflow between gaging station and sampling site.

WATER QUALITY DATA, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976

DATE	TIME	INSTAN- TANEOUS DIS- CHARGE (CFS) (00061)	TOTAL CAL- CIUM (CA) (MG/L) (00916)	TOTAL MAG- NE- SIUM (MG) (MG/L) (00927)	TOTAL SODIUM (NA) (MG/L) (00929)	TOTAL PO- TAS- SIUM (K) (MG/L) (00937)	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)
OCT 20...	0940	790	45	22	--	29	169	--	139	23	27
NOV 17...	1445	1120	77	23	--	2.6	252	--	207	1.3	1.2
DEC 15...	0915	1540	70	22	--	2.3	261	--	214	47	24
JAN 19...	0930	700	82	26	--	2.6	303	--	249	52	29
FEB 17...	0920	700	62	18	--	2.0	211	--	173	38	20
MAR 22...	0935	4360	88	17	--	3.7	189	--	155	38	18
APR 28...	0915	10900	68	19	8.2	2.8	198	--	162	41	22
MAY 24...	1030	4150	68	21	9.8	2.3	225	8	198	43	25
JUN 14...	1000	3910	62	22	9.5	4.6	171	--	140	37	18
JUL 27...	0955	848	34	19	14	2.6	147	--	121	44	24
AUG 25...	0830	775	36	16	13	2.6	160	0	131	38	21
SEP 21...	1040	680	50	20	1.0	2.9	180	0	148	49	110

DATE	TOTAL NITRITE PLUS NITRATE (N) (MG/L) (00630)	TOTAL AMMONIA NITRO- GEN (N) (MG/L) (00610)	TOTAL ORGANIC NITRO- GEN (N) (MG/L) (00605)	TOTAL KJEL- DAHL NITRO- GEN (N) (MG/L) (00625)	TOTAL NITRO- GEN (N) (MG/L) (00600)	TOTAL NITRO- GEN (NO3) (MG/L) (71887)	TOTAL PHOS- PHORUS (P) (MG/L) (00665)	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)
OCT 20...	.08	.01	3.0	3.0	3.1	14	.34	237	.32	506
NOV 17...	1.9	.06	2.3	2.4	4.3	19	.28	325	.44	983
DEC 15...	3.9	.42	.78	1.2	5.1	23	.28	350	.48	1460
JAN 19...	4.1	.30	.59	.89	5.0	22	.35	392	.53	741
FEB 17...	2.7	.13	.97	1.1	3.8	17	.28	294	.40	556
MAR 22...	4.0	.56	1.4	2.0	6.0	27	.37	278	.38	3270
APR 28...	8.9	.01	1.7	1.7	11	47	.27	284	.39	8360
MAY 24...	6.4	.01	2.7	2.7	9.1	40	.03	338	.46	3790
JUN 14...	4.7	.14	3.5	3.6	8.3	37	.51	284	.39	3000
JUL 27...	.00	.01	.25	.26	.26	1.2	.24	214	.29	490
AUG 25...	.00	.03	2.0	2.0	2.0	8.9	.27	170	.23	356
SEP 21...	.37	.46	2.2	2.7	3.1	14	.38	295	.40	542

IOWA RIVER BASIN

05464450 CEDAR RIVER NEAR PALO, IA--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976

DATE	TOTAL RESI- DUE (MG/L) {00500}	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS) {00095}	PH (UNITS) {00400}	TEMPER- ATURE (DEG C) {00010}	TUR- BID- ITY (NTU) {00076}	DIS- SOLVED OXYGEN (MG/L) {00300}	PER- CENT SATUR- ATION {00301}	CHEM- ICAL OXYGEN DEMAND (HIGH LEVEL) (MG/L) {00340}	CARBON DIOXIDE (CO2) (MG/L) {00405}	FECAL COLI- FORM (COL. PER 100 ML) {31616}
OCT 20...	282	420	8.4	11.0	10	11.0	99	14	1.1	20
NOV 17...	379	400	8.3	10.5	7	9.8	88	16	2.0	290
DEC 15...	370	510	8.3	4.0	5	12.7	97	10	2.1	1850
JAN 19...	444	600	8.2	.0	2	13.7	95	8	3.1	260
FEB 17...	292	380	8.2	1.0	3	13.7	96	10	2.1	430
MAR 22...	374	440	8.0	6.0	35	--	--	22	3.0	280
APR 28...	466	490	8.2	12.5	50	10.5	99	56	2.0	1350
MAY 24...	450	520	8.2	16.5	15	9.6	98	13	2.4	360
JUN 14...	966	450	8.3	21.0	90	6.9	77	17	1.4	33400
JUL 27...	292	330	8.5	25.0	8	7.2	86	10	.7	130
AUG 25...	230	420	9.2	23.5	5	7.9	93	26	.2	18
SEP 21...	325	370	8.9	16.0	10	9.5	95	19	.4	80

05464500 CEDAR RIVER AT CEDAR RAPIDS, IA

LOCATION.--Lat 41°58'14", long 91°40'01", in SE1/4 NW1/4 sec.28, T.83 N., R.7 W., Linn County, Hydrologic Unit 07080205, on right bank 400 ft (122 m) upstream from bridge on Eighth Avenue in Cedar Rapids, 2.7 mi (4.3 km) upstream from Prairie Creek, and at mile 112.7 (181.3 km) upstream from mouth of Iowa River.

DRAINAGE AREA.--6,510 mi² (16,861 km²).

PERIOD OF RECORD.--October 1902 to current year. Monthly discharge only for some periods, published in WSP 1308.

REVISED RECORDS.--WSP 955: 1924. WSP 1308: 1904, 1906-13, 1915, 1917, 1919-24, 1928, 1930. WSP 1438: Drainage area. WSP 1558: 1915-18 (M), 1920 (M), 1922 (M), 1929, 1933, 1943.

GAGE.--Water-stage recorder. Datum of gage is 700.47 ft (213.503 m) above mean sea level. Prior to Aug. 20, 1920, nonrecording gage at same site and datum.

REMARKS.--Records good except those for winter period, which are fair. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--74 years, 3,262 ft³/s (92.37 m³/s), 6.80 in/yr (173 mm/yr), 2,363,000 acre-ft/yr (2,910 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 73,000 ft³/s (2,070 m³/s) Mar. 31, 1961, gage height, 19.66 ft (5.992 m); maximum gage height, 20.0 ft (6.10 m) Mar. 18, 1929; minimum discharge, 53 ft³/s (1.50 m³/s) Jan. 6, 1950, caused by construction operations upstream; minimum daily, 212 ft³/s (6.00 m³/s) Dec. 10, 1949.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in June 1851 reached a stage of about 20 ft (6 m), discharge, 65,000 ft³/s (1,840 m³/s), estimated.

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

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage Height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage Height (ft) (m)
Mar. 17	1645	15,100 428	7.22 2.201	Apr. 22	1230	*16,100 456	*7.42 2.262

Minimum daily discharge, 452 ft³/s (12.8 m³/s) Dec. 19.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP		
1	1160	838	1610	1260	680	3010	3760	7310	5380	1690	1260	637		
2	848	848	989	1240	710	2600	5170	6540	5000	1640	1140	640		
3	941	851	1120	1400	710	2290	6680	5940	4540	1590	1040	627		
4	947	867	1350	1150	710	2100	7130	5390	3900	1530	977	619		
5	887	903	2490	603	680	1900	6340	5180	3660	1470	939	618		
6	876	902	2050	781	680	1800	5300	5020	3270	1380	886	601		
7	831	901	2050	925	660	1810	4660	4550	3200	1340	872	593		
8	813	873	1900	960	640	1690	4280	4090	2970	1310	879	572		
9	836	902	1730	840	630	1760	3920	3980	2860	1260	855	567		
10	828	914	1790	767	660	1790	3560	3700	2820	1210	801	566		
11	814	1020	1830	719	680	1800	3260	3560	2750	1170	812	567		
12	814	1100	1800	724	700	2380	3070	3420	2630	1110	858	560		
13	815	1320	1750	724	740	4020	5010	3350	2610	1070	837	558		
14	812	1300	1720	731	760	7620	2850	3300	2980	1030	821	542		
15	813	1380	1620	736	800	9990	2920	3160	2920	1030	828	527		
16	861	1380	1370	748	960	12400	2880	3310	3730	939	801	546		
17	860	1290	1030	772	1100	14700	3140	3820	3360	931	826	547		
18	817	1190	506	725	1200	13100	3390	3750	2980	921	829	561		
19	807	1150	452	701	1320	7260	4760	4170	2780	894	847	598		
20	798	1170	727	690	1400	5170	8190	4890	2540	955	924	634		
21	774	1160	1260	680	1400	4580	11900	4760	2340	950	1030	653		
22	764	1160	1760	690	1240	4290	15600	4530	2200	1030	908	621		
23	776	1130	1640	710	960	4110	15300	4160	2130	1010	814	631		
24	821	1140	1720	700	1240	3880	15300	4060	2040	958	753	613		
25	822	1210	1710	700	1500	3510	14900	3900	1990	934	746	590		
26	833	1240	1560	710	1600	3280	13100	3970	1920	905	753	596		
27	818	1080	1500	720	1600	3170	12000	3850	1900	861	756	582		
28	823	1020	1390	700	2700	2780	10700	3470	1900	916	750	559		
29	830	1510	1340	720	2950	2890	9550	4100	1830	1090	721	560		
30	818	1920	1330	680	---	3230	8410	4180	1770	1440	687	566		
31	825	---	1260	660	---	3440	---	5010	---	1340	647	---		
TOTAL	26082	33669	46054	24866	31610	138350	215030	134420	86900	35904	26597	17641		
MEAN	841	1122	1495	802	1090	4463	7168	4336	2897	1158	858	538		
MAX	1160	1920	2490	1400	2950	14700	15600	7310	5380	1690	1260	653		
MIN	764	838	452	603	630	1690	2850	3160	1770	861	647	527		
CFSM	.13	.17	.23	.12	.17	.69	1.10	.67	.45	.18	.13	.09		
IN.	.15	.19	.26	.14	.18	.79	1.23	.77	.50	.21	.15	.10		
AC-FT	51730	66780	91940	49320	62700	274400	426500	266600	172400	71220	52760	34590		
CAL YR 1975	TOTAL	1535170	MEAN	4206	MAX	31900	MIN	452	CFSM	.65	IN	8.77	AC-FT	3045000
WTR YR 1976	TOTAL	817423	MEAN	2233	MAX	15600	MIN	452	CFSM	.34	IN	4.67	AC-FT	1621000

05464640 PRAIRIE CREEK AT FAIRFAX, IA

LOCATION.--Lat 41°55'22", long 91°47'02", in SE1/4 SW1/4 sec.9, T.82 N., R.8 W., Linn County, Hydrologic Unit 07080205, on right bank 12 ft (4 m) upstream from bridge on State Highway 149 at west side of Fairfax, and 10.7 mi (17.2 km) upstream from mouth.

DRAINAGE AREA.--178 mi² (461 km²).

PERIOD OF RECORD.--October 1955 to current year.

GAGE.--Water-stage recorder. Datum of gage is 737.00 ft (224.638 m) above mean sea level.

REMARKS.--Records good except those for winter period, which are poor. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--10 years, 136 ft³/s (3.851 m³/s), 10.38 in/yr (264 mm/yr), 98,530 acre-ft/yr (121 hm³/yr); median of yearly mean discharges, 110 ft³/s (3.12 m³/s), 8.4 in/yr (213 mm/yr), 79,700 ac-ft/yr (98.3 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 6,160 ft³/s (174 m³/s) May 16, 1974, gage height, 13.66 ft (4.164 m); minimum daily, 2.8 ft³/s (0.08 m³/s) Sept. 11, 14-16, 1976.

EXTREMES OUTSIDE PERIOD OF RECORD.--An outstanding flood occurred in June 1944, stage and discharge unknown.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 2,350 ft³/s (66.5 m³/s) Apr. 25, gage height, 9.01 ft (2.746 m) at 0315 hours, no other peak above base of 1,200 ft³/s (34.0 m³/s); minimum daily, 2.8 ft³/s (0.08 m³/s) Sept. 11, 14-16.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	9.8	9.6	10	12	6.2	98	82	267	191	70	18	4.2
2	8.5	12	10	11	7.4	80	72	249	168	68	16	4.0
3	8.6	11	10	7.6	7.8	69	69	229	155	64	14	4.0
4	9.1	11	10	6.0	6.8	151	62	205	143	64	13	3.5
5	8.3	8.2	10	5.4	7.0	702	59	202	129	62	13	3.2
6	8.2	9.8	10	5.0	7.8	268	57	322	108	60	13	4.2
7	7.9	11	9.0	5.6	11	182	55	203	106	74	12	4.2
8	8.4	9.9	9.0	6.2	13	142	50	176	101	72	12	3.2
9	8.6	9.9	9.0	5.8	14	127	48	163	101	70	11	3.1
10	8.7	13	9.0	5.8	14	117	47	151	108	68	12	3.3
11	7.6	11	9.6	5.2	15	118	46	140	125	66	10	2.8
12	9.2	11	8.5	5.2	17	216	43	127	96	64	14	2.9
13	9.7	11	9.0	4.4	26	263	43	129	113	62	12	3.0
14	9.6	8.9	14	4.7	36	177	45	125	561	70	10	2.8
15	9.6	10	14	5.2	38	138	67	123	292	64	9.0	2.8
16	8.8	10	16	4.7	48	118	71	161	198	80	8.0	2.8
17	8.5	9.9	12	5.2	38	100	121	222	161	86	8.6	3.2
18	9.3	9.1	8.6	6.0	46	97	147	180	133	82	8.6	2.9
19	11	9.0	9.2	6.2	48	91	179	157	111	78	7.6	3.7
20	12	10	11	6.2	42	86	157	142	102	190	6.9	7.7
21	10	13	12	6.2	43	75	863	131	94	450	6.2	5.8
22	11	10	12	5.8	49	66	1310	120	87	200	6.2	4.3
23	12	8.4	12	5.8	52	65	658	116	80	190	5.8	3.1
24	11	11	13	5.6	53	66	1700	113	85	140	5.8	3.8
25	10	11	13	5.6	123	61	1720	109	83	100	5.5	3.1
26	9.7	11	13	6.2	239	62	838	99	68	76	5.5	4.0
27	8.0	11	12	6.2	483	70	530	87	64	42	5.1	4.3
28	8.0	11	11	8.0	347	71	413	100	68	60	4.8	4.6
29	8.0	11	11	7.2	141	70	339	543	78	38	4.4	5.4
30	7.5	10	12	6.8	---	75	303	318	74	30	4.2	5.1
31	8.1	---	13	6.8	---	85	---	223	---	24	4.2	---
TOTAL	284.7	312.7	341.9	193.6	1989.0	4106	10194	5632	3983	2864	286.4	115.1
MEAN	9.18	10.4	11.0	6.25	68.6	132	340	182	133	92.4	9.24	3.84
MAX	12	13	16	12	483	702	1720	543	561	450	18	7.7
MIN	7.5	8.2	8.5	4.4	6.2	61	43	87	64	24	4.2	2.8
CFSM	.05	.06	.06	.04	.39	.74	1.91	1.02	.75	.52	.05	.02
IN.	.06	.07	.07	.04	.42	.86	2.13	1.18	.83	.60	.06	.02
AC-FT	565	620	678	384	3950	8140	20220	11170	7900	5680	568	228
CAL YR 1975	TOTAL	38296.4	MEAN 105	MAX 3210	MIN 7.5	CFSM .59	IN 8.00	AC-FT 75960				
WTR YR 1976	TOTAL	30302.4	MEAN 82.8	MAX 1720	MIN 2.8	CFSM .47	IN 6.33	AC-FT 60100				

05464700 CEDAR RIVER NEAR BERTRAM, IA

LOCATION.--Lat 41°56'02", long 91°32'54", in SE1/4 NW1/4 sec.9, T.82 N., R.6 W., Linn County, Hydrologic Unit 07080206, at bridge on U.S. Highway 30, 0.2 mi (0.3 km) downstream from Big Creek, 1.7 mi (2.7 km) southwest of Bertram, and at mile 103.1 (165.9 km) above mouth of Iowa River.

DRAINAGE AREA.--6,955 mi² (18,013 km²).

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

REMARKS.--Water discharge estimated on basis of records at gaging station 9.6 mi (15.4 km) upstream at Cedar Rapids. No significant inflow between gaging station and sampling site.

WATER QUALITY DATA, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976

DATE	TIME	INSTANTANEOUS DIS- CHARGE (CFS) (00061)	TOTAL CAL- CIUM (CA) (MG/L) (00916)	TOTAL MAG- NE- SIUM (MG) (MG/L) (00927)	TOTAL SODIUM (NA) (MG/L) (00929)	TOTAL PO- TAS- SIUM (K) (MG/L) (00937)	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)
OCT 20...	0840	790	51	22	--	3.4	186	--	153	46	43
NOV 17...	1600	1120	74	23	--	2.9	256	--	210	4.1	4.2
DEC 15...	0810	1540	81	22	--	2.8	262	--	215	48	33
JAN 19...	0830	700	84	26	--	3.1	313	--	257	55	49
FEB 17...	0815	700	62	17	--	2.7	213	--	175	43	34
MAR 22...	0845	4360	57	15	--	4.2	183	--	150	38	20
APR 28...	0810	10900	74	19	8.4	3.1	190	--	156	40	23
MAY 24...	0855	4150	73	22	13	2.5	230	0	189	44	30
JUN 14...	0900	3910	54	19	12	3.9	159	--	130	36	22
JUL 27...	0845	848	35	19	3.0	3.4	160	--	131	47	47
AUG 24...	1310	775	34	17	22	3.3	157	0	129	42	41
SEP 21...	0915	680	42	20	29	6.0	178	0	146	53	56

DATE	TOTAL NITRITE PLUS NITRATE (N) (MG/L) (00630)	TOTAL AMMONIA NITRO- GEN (N) (MG/L) (00610)	TOTAL ORGANIC NITRO- GEN (N) (MG/L) (00605)	TOTAL KJEL- DAHL NITRO- GEN (N) (MG/L) (00625)	TOTAL NITRO- GEN (N) (MG/L) (00600)	TOTAL NITRO- GEN (NO3) (MG/L) (71887)	TOTAL PHOS- PHORUS (P) (MG/L) (00665)	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)
OCT 20...	.44	.98	3.2	4.2	4.6	21	.47	320	.44	683
NOV 17...	1.7	.85	2.3	3.1	4.8	21	.43	366	.50	1110
DEC 15...	3.6	1.7	.70	2.4	6.0	27	.32	368	.50	1530
JAN 19...	3.8	1.8	1.1	2.9	6.7	30	.58	424	.58	801
FEB 17...	2.2	2.5	1.4	3.9	6.1	27	.47	316	.43	597
MAR 22...	3.5	1.0	1.6	2.6	6.1	27	.39	284	.39	3340
APR 28...	8.8	.22	1.6	1.8	11	47	.31	296	.40	8710
MAY 24...	7.4	.01	2.4	2.4	9.8	43	.01	348	.47	3900
JUN 14...	3.8	.84	2.8	3.6	7.4	33	.48	286	.39	3020
JUL 27...	.13	3.0	1.6	4.6	4.7	21	.42	278	.38	637
AUG 24...	.32	2.3	2.7	5.0	5.3	24	.44	220	.30	460
SEP 21...	.12	5.9	5.1	11	11	49	.45	310	.42	569

IOWA RIVER BASIN

05464700 CEDAR RIVER NEAR BERTRAM, IA--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976

DATE	TOTAL RESI- DUE (MG/L) (00500)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS) (00095)	PH (UNITS) (00400)	TEMPER- ATURE (DEG C) (00010)	TUR- BID- ITY (NTU) (00076)	DIS- SOLVED OXYGEN (MG/L) (00300)	PER- CENT SATUR- ATION (00301)	CHEM- ICAL OXYGEN DEMAND (HIGH LEVEL) (MG/L) (00340)	CARBON DIOXIDE (CO2) (MG/L) (00405)	FECAL COLI- FORM (COL. PER 100 ML) (31616)
OCT 20...	368	530	7.9	11.0	10	10.8	97	18	3.7	5800
NOV 17...	401	460	8.1	11.0	10	9.6	86	12	3.3	3130
DEC 15...	388	610	8.1	4.0	5	12.4	95	10	3.3	59000
JAN 19...	492	800	8.3	.0	2	14.0	97	9	2.5	61200
FEB 17...	348	520	8.0	1.0	2	13.6	96	10	3.4	67200
MAR 22...	382	460	8.1	7.0	35	--	--	24	2.3	10800
APR 28...	474	490	8.1	13.0	45	10.5	99	20	2.4	27000
MAY 24...	454	520	8.3	16.0	15	9.8	98	17	1.8	13200
JUN 14...	702	410	8.2	23.0	100	6.6	76	21	1.6	26000
JUL 27...	336	390	8.1	26.0	4	8.0	97	13	2.0	41000
AUG 24...	268	460	8.4	28.0	9	8.0	101	42	1.0	40000
SEP 21...	415	460	7.8	19.0	10	8.6	91	20	4.5	39000

05465000 CEDAR RIVER NEAR CONESVILLE, IA

LOCATION.--Lat 41°24'36", long 91°17'06", in SW1/4 SW1/4 sec.2, T.76 N., R.4 W., Muscatine County, Hydrologic Unit 07080206, on right bank 10 ft (3 m) downstream from bridge on county highway G28, 3.4 mi (5.5 km) northeast of Conesville, 5.2 mi (8.4 km) downstream from Wapsinonoc Creek, 10.7 mi (17.2 km) upstream from mouth, and at mile 39.8 (64.0 km) upstream from mouth of Iowa River.

DRAINAGE AREA.--7,785 mi² (20,163 km²).

PERIOD OF RECORD.--September 1939 to current year.

REVISED RECORDS.--WSP 1438: Drainage area. WSP 1708: 1956.

GAGE.--Water-stage recorder. Datum of gage is 581.95 ft (177.378 m) above mean sea level. Prior to Feb. 2, 1940, and Apr. 11, 1952, to July 1, 1954, nonrecording gage, Feb. 2, 1940, to Apr. 10, 1952, and July 2, 1954, to Sept. 16, 1953, water-stage recorder, at site 150 ft (46 m) downstream on left bank at same datum.

REMARKS.--Records good except those for winter period, which are poor. Several observations of water temperature were made during the year. Corps of Engineers gage height telemeter at station.

COOPERATION.--Ten discharge measurements furnished by Corps of Engineers.

AVERAGE DISCHARGE.--37 years, 4,412 ft³/s (124.9 m³/s), 7.70 in/yr (196 mm/yr), 3,196,000 acre-ft/yr (3,940 hm³/yr); median of yearly mean discharges, 3,990 ft³/s (113 m³/s), 7.0 in/yr (178 mm/yr), 2,891,000 acre-ft/yr (3,560 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 70,800 ft³/s (2,010 m³/s) Apr. 2, 1961, gage height, 16.62 ft (5.066 m); maximum gage height, 16.85 ft (5.136 m) Apr. 12, 1955; minimum daily discharge, 250 ft³/s (7.08 m³/s) Nov. 28, 1955, result of freezeup.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in March 1929 reached a stage of 15.8 ft (4.82 m), from information by local residents to Corps of Engineers.

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

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage Height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage Height (ft) (m)
Mar. 19	1100	14,900 422	11.66 3.554	Apr. 26	1845	*20,700 586	*12.63 3.850

Minimum daily discharge, 654 ft³/s (18.8 m³/s) Sept. 17, 30.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP		
1	1230	993	2810	1500	860	3100	4030	10700	5590	2490	1660	885		
2	1170	1030	2600	1470	860	3280	4210	9150	6120	2370	1650	838		
3	1310	1060	2070	1550	740	3050	4890	8040	5830	2270	1560	818		
4	1140	1080	1490	1340	720	3330	6480	7260	5450	2150	1460	816		
5	1120	1040	1610	1130	770	6940	7200	6730	4840	2080	1380	800		
6	1160	1050	1950	1200	780	7140	7070	6480	4490	2020	1340	781		
7	1100	1070	2500	1180	750	4490	6310	6530	4190	1940	1320	763		
8	1090	1090	2250	1090	780	3290	5520	5870	3970	1850	1230	754		
9	1040	1100	2220	1080	820	2940	5080	5270	3840	1790	1190	745		
10	1010	1190	2080	1040	820	2780	4760	4990	3660	1730	1170	736		
11	1030	1260	2060	960	850	2740	4420	4750	3620	1660	1170	718		
12	1030	1290	2160	870	890	2720	4170	4480	3560	1580	1320	709		
13	1020	1230	2170	850	1030	3050	3910	4420	3460	1510	1340	700		
14	1020	1260	2260	850	1240	3660	3750	4370	3530	1450	1280	700		
15	1030	1310	2300	850	1380	6550	3680	4280	4040	1570	1210	700		
16	999	1370	2210	860	1500	7730	3590	4220	4170	1630	1110	691		
17	986	1580	1860	880	1480	10200	3610	4190	4170	1490	1080	664		
18	1020	1580	1060	870	1570	13300	3650	4610	4250	1280	1070	673		
19	1030	1490	671	900	1700	14600	3940	4560	4070	1220	1110	682		
20	985	1470	678	950	1770	10300	4730	4620	3720	1200	1090	691		
21	967	1490	1050	980	1760	6940	7450	5200	3430	2470	1080	727		
22	960	1480	1050	960	2130	5770	11600	5380	3190	2010	1090	745		
23	955	1400	1660	990	1890	5250	15400	5130	3010	1680	1200	745		
24	940	1390	2260	990	1680	4940	18700	4870	2880	1560	1150	736		
25	967	1360	1980	920	1700	4700	20200	4660	3160	1500	1060	745		
26	1010	1370	1850	830	1880	4410	20500	4500	2840	1420	990	772		
27	990	1470	1900	820	2270	4300	19800	4460	2650	1390	951	736		
28	981	1510	1850	750	2960	4160	16800	4430	2640	1350	942	709		
29	987	1360	1680	760	3280	3900	14100	4340	2650	1340	942	700		
30	974	1670	1500	870	---	3710	12300	5590	2630	1330	942	664		
31	962	---	1520	870	---	3860	---	5580	---	1430	904	---		
TOTAL	32213	39043	57309	31160	40860	167130	251850	169660	115700	52760	36991	22145		
MEAN	1039	1301	1849	1005	1409	5391	8395	5473	3857	1702	1193	738		
MAX	1310	1670	2810	1550	3280	14600	20500	10700	6120	2490	1660	885		
MIN	940	993	671	750	720	2720	3590	4190	2630	1200	904	664		
CFSM	.13	.17	.24	.13	.18	.69	1.08	.70	.50	.22	.15	.09		
IN	.15	.19	.27	.15	.20	.80	1.20	.81	.55	.25	.18	.11		
AC-FT	63890	77440	113700	61810	81050	331500	499500	336500	229500	104600	73370	43920		
CAL YR 1975	TOTAL	1714235	MEAN	4697	MAX	30800	MIN	671	CFSM	.60	IN	8.19	AC-FT	3400000
WTR YR 1976	TOTAL	1016821	MEAN	2778	MAX	20500	MIN	664	CFSM	.36	IN	4.86	AC-FT	2017000

05465500 IOWA RIVER AT WAPELLO, IA

LOCATION.--Lat 41°10'49", long 91°10'57", in NW1/4 SE1/4 sec.27, T.74 N., R.3 W., Louisa County, Hydrologic Unit 07080209, on right bank 30 ft (9 m) downstream from bridge on State Highway 99 at east edge of Wapello, 13.0 mi (20.9 km) downstream from Cedar River, and at mile 16.0 (25.7 km).

DRAINAGE AREA.--12,499 mi² (32,372 km²).

PERIOD OF RECORD.--October 1914 to current year. Monthly discharge only for some periods, published in WSP 1308.

REVISED RECORDS.--WSP 1308: 1917, 1923-30, 1932. WSP 1438: Drainage area. WSP 1558: 1918, 1923-25 (M), 1929. WSP 1708: 1956.

GAGE.--Water-stage recorder. Datum of gage is 538.98 ft (164.281 m) above mean sea level, adjustment of 1912; Oct. 1, 1914 to Apr. 15, 1934, non recording gage and Apr. 16, 1934 to Sept. 30, 1972, water-stage recorder at datum 10 ft (3.05 m) higher.

REMARKS.--Records good except those for winter period, which are poor. Flow regulated by Coralville Lake (station 05453510) 67.3 mi (108.3 km) upstream, since Sept. 17, 1958. Several observations of water temperature were made during the year.

COOPERATION.--Nine discharge measurements furnished by Corps of Engineers.

AVERAGE DISCHARGE.--62 years, 6,670 ft³/s (188.9 m³/s), 7.25 in/yr (184 mm/yr), 4,832,000 acre-ft/yr (5,960 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 94,000 ft³/s (2,660 m³/s) June 18, 1947, gage height, 16.14 ft (4.919 m), datum then in use; maximum gage height, 28.63 ft (8.726 m) Apr. 22, 1973; minimum daily discharge, 300 ft³/s (8.50 m³/s) Nov. 28, 1955, result of freezeup.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 36,600 ft³/s (1,037 m³/s) Apr. 27, gage height, 21.41 ft (6.526 m); minimum daily, 872 ft³/s (24.7 m³/s) Sept. 18, 19.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1640	1340	5210	1800	1480	6640	6500	19900	10300	5130	2310	1230
2	1620	1370	6310	1700	1850	6930	6560	18300	10200	4770	2270	1200
3	1620	1400	5110	1550	2100	6630	6830	16800	10300	4480	2090	1150
4	1670	1410	3840	1300	2050	6450	8590	15700	9540	4140	1990	1110
5	1490	1410	3110	1200	2100	16300	10000	14900	8770	3880	1920	1090
6	1560	1550	3030	1400	2200	16700	10300	14700	7960	3680	1950	1060
7	1510	1590	3450	1550	2100	12900	9800	14800	7480	3560	1910	1040
8	1490	1580	3520	1580	2000	9120	8860	14100	7050	3340	1750	1020
9	1460	1650	3550	1520	2000	7580	8060	13200	6620	3230	1670	989
10	1430	1700	3390	1600	2000	6580	7340	12700	6360	3060	1640	980
11	1430	1730	3250	1580	1980	6130	6810	12400	6180	2880	1610	953
12	1430	1710	3190	1600	1900	5900	6330	12000	6030	2780	1750	944
13	1400	1670	3280	1500	1920	6120	5990	11600	5850	2620	2460	935
14	1370	1760	3250	1500	2000	7270	5650	11000	5870	2520	2570	935
15	1360	1810	3300	1450	2450	9580	5550	10700	6250	2520	2130	917
16	1380	1850	3100	1400	2790	13400	5380	10800	8010	2900	1770	899
17	1370	1870	3200	1400	2750	15700	5460	11100	8800	2780	1660	899
18	1370	1910	3000	1400	2800	17300	5530	11700	9020	2560	1600	872
19	1400	1910	2800	1350	3070	18800	6150	11500	8690	2280	1620	872
20	1400	1870	3250	1400	3570	17700	6830	10800	8300	2090	1580	881
21	1370	1770	2950	1360	3460	12400	10000	10600	8040	2840	1510	917
22	1370	1810	2700	1300	3430	10100	15300	10800	7590	3880	1480	944
23	1370	1910	2600	1300	3400	8820	21300	10800	6670	3030	1590	962
24	1350	1860	2400	1300	2960	8310	28500	10400	5870	2500	1560	962
25	1320	1770	2550	1300	3200	7920	32600	9530	6110	2280	1480	971
26	1370	1750	2300	1350	4040	7580	34900	8770	5710	2120	1410	1140
27	1390	2040	2200	1350	4470	7120	36200	8080	5190	2180	1350	1100
28	1360	2230	2050	1320	5050	6870	30400	8360	5140	2280	1320	1010
29	1350	1980	2000	1200	6420	6500	22800	8520	5650	2260	1300	980
30	1360	2170	1950	1250	---	6130	21400	9670	5920	2210	1290	970
31	1360	---	1850	1400	---	6230	---	11000	---	2220	1260	---
TOTAL	44370	52380	97690	44210	81540	301710	395920	375230	219470	93000	53800	29932
MEAN	1431	1746	3151	1426	2812	9733	13200	12100	7316	3000	1735	998
MAX	1670	2230	6310	1800	6420	18800	36200	19900	10300	5130	2570	1230
MIN	1320	1340	1850	1200	1480	5900	5380	8080	5140	2090	1260	872
AC-FT	88010	103900	193800	87690	161700	598400	785300	744300	435300	184500	106700	59370
CAL YR 1975 TOTAL	2777000	MEAN	7608	MAX	38600	MIN	1320	AC-FT	5508000			
WTR YR 1976 TOTAL	1789252	MEAN	4889	MAX	36200	MIN	872	AC-FT	3549000			

05470000 SOUTH SKUNK RIVER NEAR AMES, IA

LOCATION.--Lat 42°04'05", long 93°37'02", in NW1/4 SW1/4 sec.23, T.84 N., R.24 W., Story County, Hydrologic Unit 07080105, on left bank 2.5 mi (4.0 km) north of Ames, 3.5 mi (5.6 km) downstream from Keigley Branch, 5.2 mi (8.4 km) upstream from Squaw Creek, and at mile 228.1 (367.0 km) upstream from mouth of Skunk River.

DRAINAGE AREA.--315 mi² (816 km²).

PERIOD OF RECORD.--July 1920 to September 1927, October 1932 to current year. Monthly discharge only for some periods, published in WSP 1308. Prior to October 1966, published as Skunk River near Ames.

REVISED RECORDS.--WSP 1438: Drainage area. WSP 1308: 1921, 1925-26, 1934-35 (M), 1937 (M), 1939 (M), 1947-50 (M), WRD Iowa. 1967: 1965, 1974: 1973 (P).

GAGE.--Water-stage recorder. Concrete control since July 21, 1934. Datum of gage is 893.61 ft (272.37 m) above mean sea level (Iowa Highway Commission benchmark). Prior to Aug. 25, 1921, nonrecording gage at same site and datum.

REMARKS.--Records good except those for winter period, which are poor. Several diversions for irrigation above station. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--51 years, 150 ft³/s (4.25 m³/s), 6.47 in/yr (164 mm/yr), 108,700 acre-ft/yr (134 hm³/yr); median of yearly mean discharges, 120 ft³/s (3.40 m³/s) 5.2 in/yr (132 mm/yr), 86,900 acre-ft/yr (107 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 8,630 ft³/s (244 m³/s) June 10, 1954, gage height, 13.66 ft (4.164 m); maximum gage height, 13.90 ft (4.237 m) May 20, 1944; no flow at times in 1934, 1937, 1953-57.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 3,580 ft³/s (101 m³/s) June 14, gage height, 7.54 ft (2.298 m); no other peak above base of 1,500 ft³/s (42.5 m³/s); minimum daily, 0.03 ft³/s (0.001 m³/s) Sept. 28-30.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	9.6	11	32	7.4	.92	78	413	288	321	148	13	.16
2	8.9	13	32	6.2	.80	72	315	258	294	128	8.9	.15
3	10	16	36	5.0	1.1	78	261	238	276	126	6.9	.15
4	9.6	12	41	3.0	.80	94	213	248	258	113	8.2	.13
5	3.3	11	40	3.5	.64	102	189	268	238	94	6.9	.12
6	12	9.6	31	2.5	.49	82	187	237	199	84	6.2	.12
7	11	11	32	2.8	.40	60	162	210	200	74	6.0	.11
8	14	13	34	2.4	.50	46	144	199	202	63	4.3	.11
9	13	17	36	2.2	.66	57	129	192	170	59	3.0	.10
10	18	26	30	1.9	.90	68	120	182	222	72	1.9	.10
11	18	35	27	1.4	1.2	82	111	162	232	59	2.7	.10
12	8.9	27	27	1.1	1.6	560	93	148	240	48	2.1	.11
13	3.1	25	26	.97	3.1	530	99	166	1000	37	1.5	.12
14	2.9	22	24	.85	4.3	490	101	163	3180	66	1.0	.10
15	3.1	16	24	.91	5.3	340	155	152	2060	66	.74	.08
16	3.1	16	25	1.1	6.0	270	146	175	1460	57	.84	.07
17	3.6	18	26	1.1	22	315	253	225	1030	48	.69	.06
18	3.6	18	20	1.0	14	293	1340	271	733	32	.57	.06
19	3.8	18	15	1.0	15	318	1090	257	547	34	.51	.05
20	3.9	23	20	.91	12	327	758	243	436	36	.51	.05
21	5.6	24	17	.80	10	266	1080	218	353	37	.51	.05
22	5.6	20	17	.90	7.4	202	864	254	298	50	.46	.04
23	4.1	18	16	1.0	11	173	776	788	255	28	.44	.04
24	7.8	18	15	1.3	12	157	881	1180	233	27	.42	.04
25	8.9	17	15	1.6	13	129	854	830	221	21	.20	.04
26	7.3	13	15	1.5	13	121	719	605	190	20	.10	.04
27	6.2	14	14	1.4	9.0	103	543	486	200	21	.15	.04
28	6.1	14	13	1.5	20	89	436	385	182	32	.20	.03
29	6.2	14	12	1.5	53	110	368	348	166	25	.20	.03
30	6.2	30	11	1.4	---	415	326	321	175	16	.20	.03
31	6.2	---	9.8	1.1	---	651	---	349	---	12	.18	---
TOTAL	233.6	539.6	732.8	61.24	240.11	6678	13126	10046	15571	1733	79.52	2.43
MEAN	7.54	18.0	23.6	1.98	8.28	215	438	324	519	55.9	2.57	.081
MAX	18	35	41	7.4	53	651	1340	1180	3180	148	13	.16
MIN	2.9	9.6	9.8	.80	.40	46	93	148	166	12	.10	.03
CFSM	.02	.06	.07	.006	.03	.68	1.39	1.03	1.65	.18	.008	0
IN.	.03	.06	.09	.007	.03	.79	1.55	1.19	1.84	.20	.009	.0003
AC-FT	463	1070	1450	121	476	13250	26040	19930	30890	3440	158	4.8
CAL YR 1975	TOTAL	92892.40	MEAN 254	MAX 4340	MIN 2.9	CFSM .81	IN 10.97	AC-FT 184300				
WTR YR 1976	TOTAL	49043.30	MEAN 134	MAX 3180	MIN .03	CFSM .43	IN 5.79	AC-FT 97280				

05470500 SQUAW CREEK AT AMES, IA

LOCATION.--Lat 42°01'21", long 93°37'45", in NE1/4 NW1/4 sec.10, T.83 N., R.24 W., Story County, Hydrological Unit 07080105, on left bank 65 ft (20 m) downstream from Lincoln Way Bridge in Ames, 0.1 mi (0.2 km) downstream from College Creek, and 1.8 mi (2.9 km) upstream from mouth.

DRAINAGE AREA.--204 mi² (528 km²).

PERIOD OF RECORD.--May 1919 to April 1927, May 1965 to current year. Monthly discharge only for some periods, published in WSP 1308.

REVISED RECORDS.--WSP 1308: Drainage area, 1920-22 (M), 1923, 1924-25 (M), 1926, 1927 (M), WRD Iowa. 1966: 1965, WRD Iowa. 1971: 1970 (M).

GAGE.--Water-stage recorder and concrete control. Datum of gage is 881.00 ft (268.53 m) above mean sea level (levels by Iowa State University). Prior to Mar. 11, 1925, nonrecording gage at site 0.6 mi (1.0 km) upstream at different datum. Mar. 11, 1925, to Apr. 30, 1927, nonrecording gage at site 65 ft (20 m) upstream at datum about 4 ft (1 m) higher.

REMARKS.--Records good except those for winter period, which are poor. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--19 years, 120 ft³/s (3.40 m³/s), 7.99 in/yr (203 mm/yr), 86,940 acre-ft/yr (107 hm³/yr); median of yearly mean discharges, 95 ft³/s (2.69 m³/s), 6.3 in/yr (160 mm/yr), 68,800 acre-ft/yr (84.8 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 11,300 ft³/s (320 m³/s) June 27, 1975, gage height, 14.00 ft (4.267 m); no flow at times most years.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of June 4, 1918, reached a stage of 14.5 ft (4.42 m), from flood marks, site and datum used 1919-25, discharge, 6,900 ft³/s (195 m³/s). Flood of Mar. 1, 1965, reached a stage of 10.7 ft (3.26 m), from graph based on gage readings, at present site and datum, discharge, 4,200 ft³/s (119 m³/s).

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 1,000 ft³/s (28.3 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage Height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage Height (ft) (m)
Mar. 12	0915	1,300 36.8	4.75 1.448	May 23	2100	1,010 28.6	4.02 1.225
Apr. 18	0330	1,110 31.4	4.36 1.329	June 14	----	*2,680 75.9	*8.55 2.606
Apr. 23	1400	1,110 31.4	4.40 1.341				

Minimum daily discharge, no flow for many days.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.7	4.2	11	6.6	1.3	46	229	192	194	103	3.5	0
2	1.1	7.3	14	5.8	1.4	44	175	181	176	89	3.2	0
3	1.2	7.3	16	3.9	1.5	22	152	155	162	78	2.4	0
4	.83	8.8	14	2.6	1.6	13	128	153	149	70	2.2	0
5	.71	7.5	16	1.8	1.4	19	115	154	150	65	2.4	0
6	.81	11	12	1.8	1.1	22	105	135	150	58	1.8	0
7	1.4	8.0	11	.70	.83	23	96	127	152	53	1.5	0
8	1.6	7.5	18	.30	.96	24	85	127	152	47	1.6	0
9	.61	16	13	.12	1.2	30	80	124	127	42	1.1	.03
10	.98	20	9.9	.09	1.7	47	79	121	144	36	1.7	.54
11	.98	13	9.5	.07	2.4	79	75	115	151	32	11	.13
12	1.0	10	8.0	.06	3.2	942	66	113	155	29	2.1	.37
13	2.0	5.9	7.8	.13	4.5	307	65	124	443	27	1.4	.07
14	2.5	5.2	9.6	.25	6.2	221	102	114	2310	23	1.6	.05
15	2.0	6.9	10	.29	19	161	152	112	1230	20	.94	.14
16	2.7	8.4	7.4	.16	29	129	79	132	626	15	4.4	.65
17	3.1	6.6	5.7	.28	17	113	189	149	334	14	1.9	1.1
18	2.2	7.1	4.0	.45	15	108	854	163	262	12	1.7	1.3
19	2.4	4.8	3.2	.45	13	114	499	161	224	11	1.3	2.1
20	4.4	9.0	4.6	.49	8.6	111	422	149	190	14	1.3	.01
21	5.0	8.3	4.0	.50	4.5	91	767	136	167	13	.76	.04
22	3.6	7.7	4.0	.50	5.7	78	490	203	149	10	.46	0
23	2.2	6.6	4.5	.50	8.7	72	778	816	135	11	.11	.01
24	4.5	5.0	4.8	.33	12	68	746	775	137	8.8	.14	0
25	3.1	3.6	5.0	.24	13	60	698	489	116	6.8	.03	0
26	2.9	3.6	5.5	.40	15	61	551	420	104	6.9	.59	0
27	2.0	2.9	6.0	.63	21	56	364	355	104	7.1	.11	.27
28	2.1	3.2	6.3	.70	30	52	281	291	98	23	.74	0
29	2.0	7.6	6.6	.79	43	58	227	254	215	7.5	0	0
30	2.6	10	7.0	.94	---	292	205	232	148	5.6	0	.05
31	3.3	---	6.2	1.2	---	363	---	214	---	4.2	0	---
TOTAL	67.52	233.0	264.6	33.07	283.79	3836	8854	6986	8854	941.9	51.98	6.86
MEAN	2.18	7.77	8.54	1.07	9.79	124	295	225	295	30.4	1.68	.23
MAX	5.0	20	18	6.6	43	942	854	816	2310	103	11	2.1
MIN	.61	2.9	3.2	.06	.83	13	65	112	98	4.2	0	0
CFSM	.01	.04	.05	.005	.05	.61	1.45	1.10	1.45	.15	.008	.001
IN.	.01	.04	.05	.006	.05	.70	1.61	1.27	1.61	.17	.009	.001
AC-FT	134	462	525	66	563	7610	17560	13860	17560	1870	103	14
CAL YR 1975	TOTAL	72975.62	MEAN 200	MAX 7110	MIN .61	CFSM .98	IN 13.31	AC-FT 144700				
WTR YR 1976	TOTAL	30412.72	MEAN 83.1	MAX 2310	MIN 0	CFSM .41	IN 5.55	AC-FT 60320				

05471000 SOUTH SKUNK RIVER BELOW SQUAW CREEK NEAR AMES, IA

LOCATION.--Lat 42°00'31", long 93°35'37", in NE1/4 NW1/4 sec.13, T.83 N., R.24 W., Story County, Hydrological Unit 07080105, on right bank 15 ft (5 m) downstream from bridge on county highway, 0.2 mi (0.3 km) downstream from Squaw Creek, 0.2 mi (0.3 km) upstream from bridge on U.S. Highway 30, 2 mi (3.2 km) southeast of Ames, and at mile 222.6 (358.2 km) upstream from mouth of Skunk River.

DRAINAGE AREA.--556 mi² (1,440 km²).

PERIOD OF RECORD.--October 1952 to current year. Prior to October 1966, published as Skunk River below Squaw Creek near Ames.

REVISED RECORDS.--WSP 1438: Drainage area.

GAGE.--Water-stage recorder and concrete control. Datum of gage is 857.10 ft (261.24 m) above mean sea level. Prior to Oct. 1, 1973, at datum 10.00 ft higher.

REMARKS.--Records good except those for winter period, which are poor. Low flows are affected by pumpage by City of Ames from surficial aquifer and do not represent the natural flow of the stream. Several observations of water temperature were made during the year. National Weather Service gage height telemeter at station.

AVERAGE DISCHARGE.--24 years, 295 ft³/s (8.35 m³/s), 7.21 in/yr (183 mm/yr), 213,700 acre-ft/yr (263 hm³/yr); median of yearly mean discharges, 240 ft³/s (6.80 m³/s), 5.9 in/yr (150 mm/yr), 174,000 acre-ft/yr (215 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 14,700 ft³/s (416 m³/s) June 27, 1975, gage height, 25.57 ft (7.794 m); no flow at times most years.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of May 19, 1944, reached a stage of 13 ft (4 m), from floodmarks, discharge, 10,000 ft³/s (283 m³/s), datum then in use.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 2,500 ft³/s (70.8 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage Height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage Height (ft) (m)
Apr. 18	0615	3,170 89.8	17.75 5.41	May 24	0615	2,600 78.6	16.80 5.12
Apr. 21	0215	2,520 71.4	16.66 5.08	June 14	1700	*6,410 182.	*22.14 6.75

Minimum daily discharge, 0.04 ft³/s (0.001 m³/s) Sept. 25, 26, 28-30.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	11	7.5	43	14	2.2	124	658	534	439	270	22	1.1
2	10	7.4	46	12	2.2	118	486	486	407	234	20	.70
3	11	9.0	52	10	2.6	100	399	437	377	206	18	.52
4	10	11	55	7.8	2.4	108	331	407	352	184	18	.36
5	4.0	9.9	56	5.3	2.1	122	297	396	331	168	16	.26
6	6.8	9.0	43	4.3	1.5	104	274	352	311	161	15	.19
7	7.3	9.0	43	3.5	1.2	84	247	316	299	136	14	.13
8	8.0	9.0	52	2.7	1.3	70	221	304	284	126	12	.09
9	6.7	23	49	2.3	1.5	86	208	297	270	116	12	.08
10	7.6	30	40	2.0	1.7	114	202	286	293	140	12	.08
11	7.6	43	37	1.5	2.2	110	191	276	295	132	17	.08
12	7.0	38	35	1.2	4.5	900	172	268	302	121	13	.09
13	5.1	31	34	1.1	5.5	840	170	284	564	106	10	.08
14	5.4	27	34	1.1	6.0	720	236	272	5530	84	6.5	.08
15	5.6	23	34	1.2	20	500	412	270	3710	78	4.7	.08
16	5.8	20	33	1.3	30	400	244	316	2160	69	5.4	.07
17	5.8	19	32	1.4	29	331	495	355	1180	64	4.3	.06
18	5.8	19	30	1.5	28	302	2800	399	820	53	3.2	.06
19	6.0	19	29	1.5	20	326	1920	380	660	51	3.2	.06
20	7.0	24	28	1.4	15	340	1370	357	570	53	3.2	.05
21	9.1	23	27	1.3	13	282	2230	328	510	51	3.2	.05
22	9.2	22	26	1.4	18	228	1580	415	440	55	2.7	.05
23	8.4	20	25	1.5	23	202	1760	1650	385	47	2.7	.05
24	8.6	18	23	1.6	28	190	1750	2340	345	41	2.7	.05
25	12	16	22	1.8	29	168	1640	1520	315	36	2.4	.04
26	11	17	21	1.9	33	172	1350	1010	290	34	1.9	.04
27	9.3	17	20	2.0	40	148	1040	782	310	33	1.5	.05
28	8.3	17	20	2.2	50	135	880	682	270	57	1.2	.04
29	8.1	21	19	2.3	96	165	671	608	423	36	1.0	.04
30	7.1	40	18	2.3	---	619	598	537	330	29	.90	.04
31	7.5	---	16	2.3	---	1070	---	486	---	24	1.0	---
TOTAL	242.1	598.8	1042	97.7	508.9	9179	24832	17350	22772	2995	250.70	4.67
MEAN	7.81	20.0	33.6	3.15	17.5	296	828	560	759	96.6	8.09	.16
MAX	12	43	56	14	96	1070	2800	2340	5530	270	22	1.1
MIN	4.0	7.4	16	1.1	1.2	70	170	268	270	24	.90	.04
CFSM	.01	.04	.06	.005	.03	.53	1.49	1.01	1.37	.17	.01	.0
IN.	.02	.04	.07	.007	.03	.61	1.66	1.16	1.52	.20	.02	.0003
AC-FT	480	1190	2070	194	1010	18210	49250	34410	45170	5940	497	9.3
CAL YR 1975	TOTAL	166253.90	MEAN 415	MAX 11200	MIN 4.0	CFSM .82	IN 11.12	AC-FT 329800				
WTR YR 1976	TOTAL	79872.87	MEAN 218	MAX 5530	MIN .04	CFSM .39	IN 5.34	AC-FT 158400				

SKUNK RIVER BASIN

05471500 SOUTH SKUNK RIVER NEAR OSKALOOSA, IA

LOCATION.--Lat 41°21'19", long 92°39'31", in NW1/4 SW1/4 sec.25, T.76 N., R.16 W., Mahaska County, Hydrologic Unit 07080105, on right bank 400 ft (122 m) upstream from bridge on U.S. Highway 63, 0.3 mi (0.5 km) downstream from Painter Creek, 4.0 mi (6.4 km) north of Oskaloosa, 53.7 mi (86.4 km) upstream from confluence with North Skunk River, and at mile 147.3 (237.0 km) upstream from mouth of Skunk River.

DRAINAGE AREA.--1,635 mi² (4,234 km²).

PERIOD OF RECORD.--October 1945 to current year. Prior to October 1966, published as Skunk River near Oskaloosa. Prior to October 1948, monthly discharge only, published in WSP 1308.

REVISED RECORDS.--WSP 1438: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 685.50 ft (208.940 m) above mean sea level. Prior to Nov. 21, 1947, nonrecording gage at site 400 ft (122 m) downstream at same datum.

REMARKS.--Records good except those for winter period, which are poor. Several observations of water temperature were made during the year. National Weather Service gage height telemeter at station.

AVERAGE DISCHARGE.--31 years, 887 ft³/s (25.12 m³/s), 7.37 in/yr (187 mm/yr), 642,600 acre-ft/yr (792 hm³/yr); median of yearly mean discharges, 850 ft³/s (24.1 m³/s) 7.1 in/yr (180 mm/yr), 615,800 acre-ft/yr (759 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 20,000 ft³/s (566 m³/s) June 15, 1947, gage height, 21.26 ft (6.480 m), from floodmarks; maximum gage height, 22.52 ft (6.864 m) Feb. 3, 1973, backwater from ice; minimum daily discharge, 1.8 ft³/s (0.051 m³/s) Oct. 11-13, 1956.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in May 1944 reached a stage of 25.8 ft (7.86 m), from floodmarks, discharge, 37,000 ft³/s (1,050 m³/s), from rating curve extended above 18,000 ft³/s (510 m³/s) on basis of velocity-area study.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 5,000 ft³/s (142 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage Height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage Height (ft) (m)
Apr. 25	0830	*12,300 348	*21.04 6.413	June 16	1300	6,270 178	16.37 5.142

Minimum daily discharge, 47 ft³/s (1.33 m³/s) Dec. 17.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	151	112	496	76	99	776	1760	3050	1170	1720	277	75
2	143	127	304	77	100	745	1640	2610	1070	1250	224	74
3	140	120	357	54	103	647	1330	2310	1000	1060	216	72
4	137	125	413	58	104	779	1160	2060	955	936	199	71
5	135	118	420	72	105	1270	1030	1910	917	843	190	66
6	129	113	365	72	104	865	955	1800	885	786	185	63
7	124	112	305	71	103	820	900	1610	857	736	175	62
8	123	111	282	70	102	816	848	1470	833	674	165	60
9	121	113	278	69	101	785	803	1390	810	641	161	58
10	118	120	274	68	102	766	767	1330	793	588	157	57
11	116	133	266	70	120	804	741	1280	785	554	153	56
12	116	142	251	71	147	931	714	1220	776	520	152	55
13	114	137	241	73	165	1980	686	1230	750	492	151	52
14	113	132	297	75	155	2880	670	1250	3740	456	149	52
15	112	126	328	78	140	1950	678	1200	5640	442	148	53
16	109	127	110	81	170	1570	862	1420	6050	428	137	51
17	109	126	47	84	210	1330	954	1660	4330	373	128	51
18	108	120	70	84	240	1170	2940	1530	2920	343	125	52
19	109	118	79	84	241	1080	5950	1410	2320	319	121	52
20	108	125	78	84	216	1050	7000	1300	1900	301	117	49
21	108	137	76	85	280	1020	8040	1200	1600	411	106	49
22	109	129	75	86	214	955	7760	1110	1380	1040	99	49
23	109	118	74	88	196	878	7440	1140	1220	859	95	49
24	108	118	74	89	320	817	11200	1720	1110	607	97	50
25	109	112	74	90	548	778	12400	3110	1030	456	101	53
26	108	120	75	92	582	764	11400	2610	954	344	94	53
27	105	144	75	93	936	750	9420	2120	880	303	89	53
28	105	164	75	95	932	698	6990	1800	6060	295	86	52
29	106	718	75	96	839	677	5040	1550	4180	306	80	50
30	105	1440	75	97	---	859	3770	1380	2260	317	77	50
31	105	---	75	99	---	1080	---	1270	---	306	75	---
TOTAL	3612	5657	6084	2481	7674	32290	115848	52050	59175	18706	4329	1689
MEAN	117	189	196	80.0	265	1042	3862	1679	1973	603	140	56.3
MAX	151	1440	496	99	936	2880	12400	3110	6060	1720	277	75
MIN	105	111	47	54	99	647	670	1110	750	295	75	49
CFSM	.07	.12	.12	.05	.16	.64	2.36	1.03	1.21	.37	.09	.03
IN.	.08	.13	.14	.06	.17	.73	2.64	1.18	1.35	.43	.10	.04
AC-FT	7160	11220	12070	4920	15220	64050	229800	103200	117400	37100	8590	3350
CAL YR 1975	TOTAL	431059	MEAN	1181	MAX	9680	MIN 47	CFSM .72	IN 9.81	AC-FT	855000	
WTR YR 1976	TOTAL	309595	MEAN	846	MAX	12400	MIN 47	CFSM .52	IN 7.04	AC-FT	614100	

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LOCATION.--Lat 41°18'03", long 92°12'15", in NE1/4 SE1/4 sec.14, T.75 N., R.12 W., Keokuk County, Hydrologic Unit 07080106, on right bank 20 ft (6 m) downstream from bridge on State Highway 149, 1.2 mi (1.9 km) downstream from Cedar Creek, 2.2 mi (3.5 km) south of Sigourney, 4.0 mi (6.4 km) upstream from Bridge Creek, and 15.2 mi (26.1 km) upstream from confluence with South Skunk River.

REVISED RECORDS.--WSP 1438: Drainage area. WSP 1558: 1946-47 (M).

REMARKS.--Records good except those for winter period, which are poor. Several observations of water temperature were made during the year. National Weather Service gage height telemeter at station.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 27,500 ft³/s (779 m³/s) Mar. 31, 1960, gage height, 25.33 ft (7.721 m); minimum daily, 0.1 ft³/s (2.8 dm³/s) Oct. 7 to Nov. 15, 1956.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in May 1944 reached a stage of 22.8 ft (6.95 m), from floodmark, discharge, 14,500 ft³/s (411 m³/s).

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 16,800 ft³/s (476 m³/s) Apr. 25, gage height, 22.80 ft (6.949 m) at 0400 hours, no other peak above base of 3,800 ft³/s (108 m³/s); minimum daily, 9.0 ft³/s (0.25 m³/s) Sept. 24.

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	57	39	2190	90	63	670	465	1310	467	816	81	17
2	57	39	699	89	63	474	392	1150	397	496	70	16
3	55	40	359	78	63	360	333	1030	351	385	61	16
4	50	43	337	66	63	964	301	921	317	325	56	15
5	45	45	297	68	61	2790	268	838	289	282	52	14
5	43	45	257	67	57	1940	251	809	270	251	50	15
7	42	44	244	63	54	990	249	735	253	226	49	14
8	41	44	239	59	51	797	244	665	242	210	47	13
9	42	43	231	54	49	718	235	617	231	192	45	12
10	42	42	221	51	49	656	221	588	235	171	41	12
11	43	43	214	50	51	617	210	559	255	155	39	12
12	44	43	205	49	54	692	202	524	287	139	44	12
13	43	43	197	49	58	1020	192	507	272	126	185	11
14	41	44	185	49	62	1130	181	524	954	118	89	11
15	43	44	230	50	66	768	176	553	1900	158	63	11
16	42	43	212	52	71	636	171	612	1600	171	51	10
17	41	42	200	53	80	546	183	692	792	110	41	10
18	41	40	180	53	90	489	205	868	592	107	35	10
19	41	39	170	53	155	460	804	728	489	90	33	10
20	40	39	160	53	178	431	1600	620	422	87	31	11
21	41	39	148	52	170	393	1810	557	372	140	31	10
22	41	39	121	52	170	337	2870	502	331	190	28	9.6
23	42	40	112	53	176	299	2610	458	301	195	25	9.3
24	43	40	105	55	192	287	11300	452	624	239	25	9.0
25	43	40	102	56	345	278	14000	458	450	155	24	11
26	43	40	102	57	640	262	9480	433	309	114	23	17
27	42	38	100	57	749	268	6250	397	278	94	21	14
28	41	37	98	58	1440	307	4350	366	2750	90	23	11
29	41	154	94	59	1250	374	2100	399	2550	96	21	9.6
30	40	2650	92	60	---	268	1530	542	1830	103	19	9.6
31	39	---	91	61	---	366	---	718	---	124	19	---
TOTAL	1349	3961	8192	1816	6572	20507	63173	20132	20450	6148	1423	362.1
MEAN	43.6	132	264	58.6	227	662	2106	649	662	198	45.9	12.1
MAX	57	2650	2190	90	1440	2790	14000	1310	2750	816	185	17
MIN	39	37	91	49	49	262	171	366	231	87	19	9.0
CFSM	.06	.18	.36	.08	.31	.91	2.86	.89	.93	.27	.06	.02
IN.	.07	.20	.42	.09	.33	1.05	3.22	1.03	1.04	.31	.07	.02
AC-FT	2680	7860	16250	3600	13040	40680	125300	39930	40560	12190	2620	718
CAL YR 1975	TOTAL	134253.0	368	MEAN	358	MAX	4290	MIN	37	CFSM		

05473500 BIG CREEK NEAR MOUNT PLEASANT, IA

LOCATION.--Lat 41°00'52", Long 91°34'49", in NW1/4 NW1/4 sec.29, T.72 N. R.6 W., Henry County, Hydrologic Unit 07080107, on left bank 12 ft (4 m) downstream from bridge on county highway, 100 ft (30 m) downstream from Lynn Creek, 0.7 mi (1.1 km) downstream from Brandywine Creek, and 3.7 mi (6.0 km) northwest of Court House at Mount Pleasant.

DRAINAGE AREA.--106 mi² (275 km²).

PERIOD OF RECORD.--October 1955 to current year.

REVISED RECODPS.--WSP 162R: 1958 (M).

GAGE.--Water-stage recorder and concrete control. Datum of gage is 630.53 ft (192.186 m) above mean sea level.

REMARKS.--Records good except those for winter period, which are poor. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--21 years, 66.5 ft³/s (1.883 m³/s), 8.52 in/yr (216 mm/yr), 48,180 acre-ft/yr (59.4 hm³/yr); median of yearly mean discharges, 51.5 ft³/s (1.46 m³/s), 6.6 in/yr (168 mm/yr), 37,300 acre-ft/yr (46.0 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 10,500 ft³/s (297 m³/s) Apr. 22, 1973, gage height, 25.58 ft (7.79 m), on basis of contracted-opening measurement at gage at gage height 18.51 ft (5.642 m) and contracted-opening measurements of the 1973 peak flow at sites 2 mi (3 km) upstream [63 mi² (163 km²)] and 6 mi (10 km) downstream [115 mi² (298 km²)]; no flow at times most years.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Aug. 3, 1948, reached a stage of about 27 ft (8.2 m), from floodmarks established by local residents, discharge not determined.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 900 ft³/s (25.5 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage Height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage Height (ft) (m)
Mar. 5	0015	2,110 59.8	10.49 3.197	Apr. 24	1315	*4,780 135	*16.29 4.965

No flow Sept. 15-25, 27.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP		
1	3.0	5.2	109	14	9.6	90	33	122	33	32	3.5	10		
2	5.0	5.2	70	14	9.6	160	30	100	28	24	3.7	8.0		
3	5.4	5.4	50	13	9.4	120	29	73	23	19	3.5	6.1		
4	5.4	5.6	42	11	8.6	743	25	52	21	16	3.6	3.8		
5	5.6	5.8	39	10	7.3	979	22	62	19	13	8.9	1.4		
6	5.6	6.0	35	11	7.0	337	23	586	17	11	21	.62		
7	5.6	6.0	33	10	7.0	235	21	421	16	10	4.8	14		
8	5.6	6.0	32	9.4	8.0	189	18	235	15	9.4	2.6	21		
9	5.6	5.8	31	8.6	13	155	15	160	15	7.7	5.6	16		
10	5.6	5.8	30	8.2	55	118	17	116	17	6.2	7.8	10		
11	5.8	5.8	28	8.1	43	103	18	89	19	5.1	15	6.5		
12	5.8	5.8	27	8.0	23	174	14	70	16	4.0	43	2.5		
13	5.6	5.8	26	8.0	14	146	14	74	12	3.1	14	.45		
14	5.4	6.0	265	8.0	9.0	109	17	69	48	2.2	107	.04		
15	5.6	6.0	340	8.0	14	84	16	69	74	2.2	44	0		
16	5.6	5.8	125	8.1	23	72	15	84	42	1.8	19	0		
17	5.6	5.6	50	8.2	38	59	14	83	30	1.5	11	0		
18	5.4	5.4	57	8.2	34	56	13	67	24	.93	7.4	0		
19	5.4	5.4	44	8.1	37	52	12	59	21	.58	5.2	0		
20	5.4	5.4	34	8.0	24	47	21	53	17	279	3.8	0		
21	5.4	5.4	28	7.8	25	37	39	47	15	478	7.8	0		
22	5.6	5.4	22	7.8	28	28	27	42	13	120	15	0		
23	5.6	5.4	22	8.0	26	28	195	39	12	29	18	0		
24	5.8	5.6	18	8.0	33	32	3800	37	12	11	17	0		
25	5.8	5.6	18	8.2	34	29	1410	34	13	5.8	18	0		
26	5.6	5.4	18	8.5	28	31	563	31	9.9	3.7	20	.03		
27	5.6	5.2	15	8.8	20	52	344	28	8.4	19	21	0		
28	5.4	5.2	15	9.0	18	38	257	27	224	13	20	.01		
29	5.4	36	15	9.0	18	37	195	34	120	8.4	18	.21		
30	5.2	224	14	9.2	---	43	154	35	51	4.8	15	.18		
31	5.2	---	14	9.4	---	37	---	37	---	2.8	13	---		
TOTAL	168.6	417.0	1666	283.6	623.5	4420	7372	3045	985.3	1144.21	517.2	100.84		
MEAN	5.44	13.9	53.7	9.15	21.5	143	246	98.2	32.8	36.9	16.7	3.36		
MAX	5.8	224	340	14	55	979	3800	586	224	478	107	21		
MIN	3.0	5.2	14	7.8	7.0	28	12	27	8.4	.58	2.6	0		
CFSM	.05	.13	.51	.09	.20	1.35	2.32	.93	.31	.35	.16	.03		
IN.	.06	.15	.58	.10	.22	1.55	2.69	1.07	.35	.40	.18	.04		
AC-FT	334	827	3300	563	1240	8770	14620	6040	1950	2270	1030	200		
CAL YR 1975	TOTAL	19822.55	MEAN	54.3	MAX	1090	MIN	0	CFSM	.51	IN	6.96	AC-FT	39320
WTR YR 1976	TOTAL	20743.25	MEAN	56.7	MAX	3800	MIN	0	CFSM	.53	IN	7.28	AC-FT	41140

05474000 SKUNK RIVER AT AUGUSTA, IA

LOCATION.--Lat 40°45'13", long 91°16'40", in NE1/4 NE1/4 sec.26, T.69 N., R.4 W., Des Moines County, Hydrologic Unit 07080107, on left bank 300 ft (91 m) upstream from bridge on State Highway 394 at Augusta, 2.0 mi (3.2 km) upstream from Long Creek, and at mile 12.5 (20.1 km).

DRAINAGE AREA.--4,303 mi² (11,144 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--September to November 1913, October 1914 to current year. Monthly discharge only for some periods, published in WSP 1308.

REVISED RECORDS.--WSP 1308: 1915 (M), 1919-27 (M), 1932-34 (M), 1936, 1937-38 (M), 1942 (M). WSP 1438: Drainage area, WRD Iowa 1971: 1966 (M).

GAGE.--Water-stage recorder. Datum of gage is 521.24 ft (158.874 m) above mean sea level. Prior to Nov. 15, 1913, nonrecording gage at site 400 ft (122 m) upstream at datum about 0.7 ft (0.2 m) higher. May 27, 1915, to Jan. 14, 1935, nonrecording gage at site 400 ft (122 m) upstream at present datum.

REMARKS.--Records good except those for Aug. 1-15 which are fair and the winter period, which are poor. Several observations of water temperature were made during the year. National Weather Service gage height telemeter at station.

COOPERATION.--Six discharge measurements furnished by Corps of Engineers.

AVERAGE DISCHARGE.--62 years (1914-76), 2,350 ft³/s (66.54 m³/s), 7.41 in/yr (188 mm/yr), 1,703,000 acre-ft/yr (2,100 hm³/yr); median of yearly mean discharges, 2,176 ft³/s (61.6 m³/s), 6.9 in/yr (175 mm/yr), 1,577,000 acre-ft/yr (1,940 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 56,800 ft³/s (1,892 m³/s) Apr. 23, 1973, gage height, 27.05 ft (8.245 m); minimum daily, 7 ft³/s (198 dm³/s) Aug. 27 to Sept. 1, 1934.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of June 1, 1903, reached a stage of about 21 ft (6 m), discharge, about 45,000 ft³/s (1,270 m³/s). Stage and discharge for flood of April 1973 are believed to be the greatest since 1851.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 15,000 ft³/s (425 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage Height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage Height (ft) (m)
Mar. 6	0630	17,400 493	14.75 4.496	Apr. 27	1300	*40,900 1,160	*22.34 6.609

Minimum daily discharge, 105 ft³/s (2.97 m³/s) Sept. 24.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP		
1	290	210	2810	300	295	2860	1880	16300	3300	6820	802	229		
2	289	202	5500	320	320	3000	2050	12900	3010	6130	737	207		
3	334	203	3350	260	330	2630	2570	10000	2600	5170	945	196		
4	326	230	1750	335	325	3640	2820	7730	2250	3440	656	191		
5	296	231	1270	260	310	14700	2510	6350	2160	2460	560	191		
6	275	240	1390	250	285	17100	2220	7630	2000	2060	674	173		
7	266	273	1410	215	260	14800	2030	9830	1880	1820	870	191		
8	248	273	1170	210	245	9070	1870	6420	1780	1640	945	182		
9	242	270	1040	190	245	4680	1760	5050	1680	1500	656	191		
10	232	310	930	190	385	3940	1670	4330	1620	1390	540	155		
11	222	403	863	190	510	3550	1600	3890	1600	1310	548	155		
12	215	335	817	185	515	3500	1550	3550	1800	1210	1250	150		
13	210	309	785	190	505	3720	1560	3380	1990	1120	910	139		
14	209	278	1650	197	535	3750	1540	3290	2300	1050	810	142		
15	217	265	3200	192	590	4220	1450	3130	3520	990	746	142		
16	200	262	1700	200	1000	4910	1430	3860	5420	950	800	135		
17	199	272	930	210	1220	4270	1380	4180	5590	960	674	126		
18	196	269	475	215	1120	3620	1380	3970	5110	1000	596	124		
19	200	257	320	225	1040	3200	1930	4010	4860	890	524	124		
20	197	257	440	232	1210	2920	2360	3890	5160	1110	436	124		
21	191	277	420	240	1220	2650	4940	3560	5040	4590	385	113		
22	190	263	405	245	1010	2410	5820	3260	3920	5590	363	112		
23	187	262	410	240	889	2240	8070	2990	2870	2800	340	110		
24	200	267	340	235	954	2210	20400	2770	2460	1700	318	105		
25	201	276	340	250	996	2030	27100	2620	2420	1660	304	118		
26	198	250	320	255	1030	1800	28500	2760	2700	1420	284	194		
27	200	240	270	260	1260	2060	40000	3410	2170	1170	264	284		
28	208	220	270	260	1570	1960	37000	3640	3230	1070	258	245		
29	205	260	290	268	1850	1910	27700	3400	7210	948	271	196		
30	196	998	310	275	---	2020	21200	3440	7790	873	240	164		
31	190	---	320	285	---	1910	---	3680	---	820	229	---		
TOTAL	7029	8704	35495	7399	22024	137290	258290	159220	99540	65661	17704	4908		
MEAN	227	290	1145	239	759	4429	8610	5136	3318	2118	571	164		
MAX	334	998	5500	335	1850	17100	40000	16300	7790	6820	1250	284		
MIN	187	202	270	185	245	1800	1380	1600	820	229	105	105		
CFSM	.05	.07	.27	.06	.15	1.03	2.00	1.19	.77	.49	.13	.04		
IN.	.06	.08	.31	.06	.19	1.19	2.23	1.38	.86	.57	.15	.04		
AC-FT	13940	17260	70400	14680	43680	272300	512300	315800	197400	130200	35120	9740		
CAL YR 1975	TOTAL	887473	MEAN	2431	MAX	13700	MIN	187	CFSM	.56	IN	7.67	AC-FT	1760000
WTR YR 1976	TOTAL	823264	MEAN	2249	MAX	40000	MIN	105	CFSM	.52	IN	7.12	AC-FT	1633000

SKUNK RIVER BASIN

0547400 SKUNK RIVER AT AUGUSTA, IOWA--Continued

WATER QUALITY RECORDS

LOCATION.--Samples collected at bridge on State Highway 394 300 ft (91 m) downstream from gage.

PERIOD OF RECORD.--October 1975 to September 1976.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: October 1975 to September 1976.

WATER TEMPERATURE: October 1975 to September 1976.

SUSPENDED-SEDIMENT: October 1975 to September 1976.

REMARKS.--Records of specific conductance are obtained from suspended-sediment samples at time of analysis. During periods of ice effect, sediment samples are collected in open water channel.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SEDIMENT CONCENTRATIONS: Maximum daily mean, 7,010 mg/L July 21, 1976; minimum daily mean, 18 mg/L Jan. 26, 1976.

SEDIMENT LOADS: Maximum daily, 276,000 tons (250,000 tonnes) Apr. 24, 1976; minimum daily, 12 tons (11 tonnes) Jan. 26, Sept. 18, 1976.

EXTREMES FOR CURRENT YEAR.--

SEDIMENT CONCENTRATIONS: Maximum daily mean, 7,010 mg/L July 21; minimum daily mean, 18 mg/L Jan. 26.

SEDIMENT LOADS: Maximum daily, 276,000 tons (250,000 tonnes) Apr. 24; minimum daily, 12 tons (11 tonnes), Jan. 26, Sept. 18.

WATER QUALITY DATA, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	520	530	---	---	---	---	550	420	530	220	---	---
2	---	545	---	---	---	---	550	450	560	260	---	---
3	---	555	---	520	560	460	540	470	560	340	---	---
4	---	570	---	530	---	390	540	520	560	350	---	---
5	---	570	---	---	---	---	540	520	570	420	---	---
6	---	540	---	---	---	370	560	490	570	480	---	---
7	490	550	---	530	560	270	570	420	570	510	---	---
8	500	550	---	---	---	395	570	460	520	500	---	---
9	510	595	---	---	---	480	540	500	500	420	---	---
10	500	570	---	510	---	460	530	530	520	460	---	---
11	460	500	---	---	---	470	520	540	500	480	---	---
12	460	515	---	---	---	500	510	520	520	480	---	---
13	460	505	---	---	---	495	510	540	540	500	---	---
14	---	500	---	500	280	500	510	550	480	500	---	---
15	500	530	---	---	---	500	500	550	480	460	---	---
16	500	540	---	---	440	460	500	530	390	460	---	---
17	500	520	---	500	440	350	520	490	280	420	---	---
18	500	500	---	---	---	500	500	500	330	400	---	---
19	530	590	---	530	440	500	530	520	400	400	---	---
20	570	595	480	---	455	500	530	520	420	400	---	540
21	535	500	---	---	455	510	500	520	480	300	---	500
22	530	520	---	570	---	520	380	540	520	280	---	---
23	510	505	---	---	455	530	370	560	530	300	---	570
24	500	595	500	590	460	540	290	560	540	360	---	540
25	500	590	---	---	490	550	235	560	540	440	---	540
26	500	580	520	540	500	560	240	540	540	480	---	510
27	505	505	---	540	490	550	220	550	540	340	---	600
28	510	---	520	---	490	550	---	570	480	---	---	600
29	540	---	---	---	485	560	---	590	460	380	---	540
30	550	---	---	540	---	550	---	590	250	380	---	540
31	510	---	---	---	---	550	---	520	---	---	---	---
MONTH	508	588	---	---	---	485	476	521	489	405	---	---

054740000 SKUNK RIVER AT AUGUSTA, IA--Continued

WATER-QUALITY RECORDS

WATER QUALITY DATA, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	14.0	11.0				---	11.0	14.0	19.0	23.0		---
2	---	14.0				---	11.0	12.0	21.0	23.0		---
3	---	15.0				---	12.0	12.0	22.0	23.0		---
4	---	15.0				---	12.0	13.0	22.0	24.0		---
5	---	16.0				---	14.0	14.0	22.0	24.0		---
6	---	15.0				---	15.0	12.0	22.0	23.0		---
7	19.0	13.0				---	15.0	12.0	24.0	27.0		---
8	20.0	14.0				---	15.0	15.0	25.0	27.0		---
9	20.0	17.0				4.5	14.0	15.0	25.0	27.0		---
10	17.0	12.5				5.0	15.0	17.0	25.0	29.0		---
11	17.0	10.0				5.0	15.0	18.0	26.0	30.0		---
12	17.0	5.0				5.0	14.0	18.0	26.0	30.0		---
13	22.0	9.0				3.5	16.0	18.0	26.0	31.0		---
14	---	5.0				5.0	16.0	18.0	26.0	31.0		---
15	15.0	7.0				5.0	19.0	18.0	26.0	30.0		---
16	15.0	9.0				4.0	19.0	18.0	25.0	30.0		---
17	15.0	12.0				4.0	20.0	18.0	23.0	30.0		---
18	13.0	12.0				7.0	19.0	18.0	21.0	28.0		---
19	13.0	12.0				9.0	17.0	18.0	21.0	28.0		---
20	15.0	6.0				10.0	16.0	20.0	21.0	30.0		20.0
21	18.0	12.0				9.0	14.0	21.0	22.0	25.0		19.0
22	18.0	9.0				9.0	15.0	20.0	22.0	25.0		19.0
23	19.0	3.0				11.0	13.0	17.0	22.0	25.0		19.0
24	18.0	3.0				12.0	13.0	19.0	22.0	28.0		17.0
25	12.0	3.0				14.0	11.0	19.0	24.0	29.0		15.0
26	11.0	0.0				9.0	11.0	20.0	25.0	27.0		15.0
27	14.0	0.0				10.0	13.0	20.0	25.0	27.0		17.0
28	14.0	---				10.0	---	20.0	24.0	---		17.0
29	12.0	---				11.0	---	19.0	22.0	28.0		18.0
30	11.0	---				10.0	---	19.0	22.0	27.0		18.0
31	11.0	---				10.0	---	19.0	---	---		---
MONTH	15.5	9.5				---	14.5	17.0	23.5	27.0		---

SUSPENDED-SEDIMENT DISCHARGE (TONS/DAY), WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976

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	290	32	25	210	69	39	2810	520	3950
2	289	35	27	202	95	52	5500	887	13200
3	334	54	49	203	78	43	3350	609	5510
4	326	66	58	230	70	43	1750	361	1710
5	296	53	42	231	75	47	1270	223	765
6	275	49	36	240	84	54	1390	176	661
7	266	47	34	273	89	66	1410	162	617
8	248	45	30	273	87	64	1170	123	389
9	242	42	27	270	72	52	1040	112	314
10	232	40	25	310	69	58	930	108	271
11	222	47	28	403	76	83	863	107	249
12	215	46	27	335	36	33	817	106	234
13	210	48	27	309	78	65	785	104	220
14	209	59	33	278	24	18	1650	225	1000
15	217	74	43	265	21	15	3200	397	3430
16	200	48	26	262	31	22	1700	248	1140
17	199	40	21	272	57	42	930	144	362
18	196	39	21	269	68	49	475	120	154
19	200	38	21	257	59	41	320	113	98
20	197	43	23	257	60	42	440	106	126
21	191	47	24	277	39	29	420	98	111
22	190	50	26	283	29	22	405	92	101
23	187	63	32	262	30	21	410	84	93
24	200	73	39	267	27	19	340	75	69
25	201	73	40	278	36	27	340	67	62
26	198	59	32	250	28	19	320	59	51
27	200	53	29	240	44	29	270	55	40
28	208	73	41	220	47	28	270	62	45
29	205	60	33	280	63	48	290	71	56
30	196	47	25	999	138	372	310	70	59
31	190	64	33	---	---	---	320	65	56
TOTAL	7029	---	977	8704	---	1542	35495	---	35143

SKUNK RIVER BASIN
054740000 SKUNK RIVER AT AUGUSTA, IA--Continued

WATER-QUALITY RECORDS

WATER QUALITY DATA, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976

SUSPENDED-SEDIMENT DISCHARGE (TONS/DAY), WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976

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	300	55	45	295	28	22	2860	1710	13200
2	320	46	40	320	28	24	3000	1690	13700
3	280	42	32	330	27	24	2630	1260	8950
4	335	41	37	325	28	25	3640	1740	19500
5	260	48	34	310	29	24	14700	2700	105000
6	250	65	44	285	30	23	17100	1680	77600
7	215	83	48	260	31	22	14800	1750	69900
8	210	89	50	245	31	21	9070	1780	43600
9	190	75	38	245	33	22	4680	1020	12900
10	190	53	27	385	84	87	3940	692	7360
11	190	48	25	510	135	186	3550	705	6760
12	185	75	37	515	118	164	3500	735	6950
13	190	110	56	505	112	153	3720	700	7030
14	197	142	76	535	114	165	3760	525	5330
15	192	142	74	590	115	183	4220	710	8090
16	200	120	65	1000	111	300	4910	1880	24900
17	210	89	50	1220	114	376	4270	1400	16100
18	215	60	35	1120	112	339	3620	930	9090
19	225	40	24	1040	87	244	3200	682	5890
20	232	34	21	1210	80	261	2920	558	4480
21	240	28	18	1220	79	260	2550	471	3370
22	245	23	15	1010	80	218	2410	377	2450
23	240	24	16	889	83	199	2240	350	2120
24	235	24	15	954	88	227	2210	373	2230
25	250	22	15	996	129	347	2030	348	1910
26	255	18	12	1030	81	225	1800	203	987
27	260	27	19	1260	47	150	2060	318	1770
28	260	35	25	1570	62	263	1960	240	1270
29	268	32	23	1850	560	2800	1910	197	1020
30	275	28	21	---	---	---	2020	383	2090
31	285	28	22	---	---	---	1910	240	1240
TOTAL	7399	---	1059	22024	---	7364	137290	---	486787

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	1880	137	695	16300	710	31200	3300	1270	11300
2	2050	255	1410	12900	572	19900	3010	545	4430
3	2570	463	3210	10000	545	14700	2600	557	3910
4	2820	506	3850	7730	505	10500	2350	617	3910
5	2510	451	3060	6350	595	10200	2160	428	2500
6	2220	337	2020	7630	990	20400	2000	296	1600
7	2030	250	1370	9830	1520	40300	1880	241	1220
8	1870	192	969	6420	850	14700	1780	224	1080
9	1760	179	851	5050	860	11700	1680	149	676
10	1670	170	767	4330	555	6490	1620	142	621
11	1600	148	639	3890	270	2840	1600	142	613
12	1550	129	540	3550	200	1920	1800	150	729
13	1560	108	455	3380	197	1800	1990	186	999
14	1540	88	366	3290	210	1870	2300	995	6180
15	1450	99	388	3130	182	1540	3520	1130	10700
16	1430	103	398	3860	529	5510	5420	4000	58500
17	1380	100	373	4180	781	8810	5590	6000	90600
18	1380	107	399	3970	581	6230	5110	3380	46600
19	1930	175	912	4010	461	4990	4860	1140	15000
20	2360	350	2230	3890	470	4940	5160	970	13500
21	4940	3380	47200	3560	367	3530	5040	685	9320
22	5820	5490	59400	3260	296	2610	3920	615	6510
23	8070	2470	55800	2990	269	2170	2870	435	3370
24	20400	4990	276000	2770	212	1590	2460	364	2420
25	27100	3270	239000	2620	195	1380	2420	426	2780
26	28500	2530	195000	2760	220	1640	2700	852	6210
27	40000	2200	238000	3410	467	4300	2170	729	4270
28	37000	1210	121000	3640	644	6330	3230	1970	20900
29	27700	900	67300	3400	507	4650	7210	5330	104000
30	21200	800	45800	3440	447	4150	7790	5300	111000
31	---	---	---	3680	2170	21600	---	---	---
TOTAL	258290	---	1369402	159220	---	274490	99540	---	545448

054740000 SKUNK RIVER AT AUGUSTA, IA--Continued

WATER-QUALITY RECORDS

WATER QUALITY DATA, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976

SUSPENDED-SEDIMENT DISCHARGE (TONS/DAY), WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976

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	6820	3240	59700	802	152	329	229	52	32
2	6130	1830	30300	737	111	221	207	52	29
3	5170	1340	18700	592	103	192	196	51	27
4	3440	1110	10300	656	98	174	191	50	26
5	2460	859	5710	580	95	149	191	50	26
6	2060	530	2950	674	126	229	173	59	28
7	1820	320	1570	870	173	406	191	86	44
8	1640	260	1150	945	208	531	182	105	52
9	1500	232	940	656	135	239	191	137	71
10	1390	192	721	540	110	160	155	90	38
11	1310	124	439	548	123	182	155	72	30
12	1210	106	346	1250	260	877	150	63	26
13	1120	103	311	910	195	479	139	53	20
14	1050	80	227	810	215	470	142	48	18
15	990	63	168	746	185	373	142	44	17
16	950	53	136	800	200	432	135	41	15
17	960	60	156	674	177	322	126	38	13
18	1000	77	208	596	157	253	124	35	12
19	890	57	137	524	129	183	124	40	13
20	1110	545	3500	438	103	122	124	105	35
21	4590	7010	88400	385	83	86	113	59	18
22	5590	4600	77500	363	76	74	112	107	32
23	2800	1020	7710	340	70	64	110	95	28
24	1700	560	2570	318	73	63	105	96	27
25	1660	270	1210	304	77	63	118	101	32
26	1420	210	805	284	64	49	194	145	76
27	1170	188	594	264	59	42	284	163	125
28	1070	222	641	258	69	48	245	85	56
29	948	178	456	271	89	65	196	70	37
30	873	193	455	240	78	51	164	73	32
31	820	231	511	229	60	37	---	---	---
TOTAL	65661	---	318521	17704	---	6965	4908	---	1035
YEAR	823264		3048733						

SKUNK RIVER BASIN

054740000 SKUNK RIVER AT AUGUSTA, IA--Continued

WATER-QUALITY RECORDS

WATER QUALITY DATA, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976

DATE	TIME	TEMPER- ATURE (DEG C) (00010)	NUMBER OF SAM- PLING POINTS (00063)	INSTAN- TANEOUS DIS- CHARGE (CFS) (00061)	SUS- PENDE SEDI- MENT (MG/L) (80154)	SUS- PENDE SEDI- MENT DIS- CHARGE (T/DAY) (80155)	SUS. SED. FALL DIAM.	SUS. SED. FALL DIAM.	SUS. SED. FALL DIAM.	SUS. SED. FALL DIAM.
							% FINE R THAN .002 MM (70337)	% FINE R THAN .004 MM (70338)	% FINE R THAN .008 MM (70339)	% FINE R THAN .016 MM (70340)
OCT.										
01...	1300	14.0	4	296	--	--	--	--	--	--
NOV.										
10...	1600	13.0	4	303	--	--	--	--	--	--
MAR.										
09...	1345	4.0	6	4650	931	10400	37	48	60	79
16...	1800	4.0	--	8520	2110	48500	40	50	58	69
APR.										
24...	1330	13.0	--	23500	3850	244000	34	42	54	68
27...	1530	13.0	--	42400	1680	192000	58	68	70	80
JUNE										
17...	1915	23.0	--	5600	5720	86500	44	58	72	88
21...	1400	22.0	3	5060	--	--	--	--	--	--
29...	1900	22.0	--	7700	6120	127000	37	47	60	79

	SUS. SED. FALL DIAM.	SUS. SED. FALL DIAM.	SUS. SED. FALL DIAM.	SUS. SED. FALL DIAM.	BED MAT. FALL DIAM.	BED MAT. FALL DIAM.	BED MAT. FALL DIAM.	BED MAT. FALL DIAM.	BED MAT. FALL DIAM.	BED MAT. FALL DIAM.
	% FINER THAN	% FINER THAN	% FINER THAN	% FINER THAN	% FINER THAN	% FINER THAN	% FINER THAN	% FINER THAN	% FINER THAN	% FINER THAN
DATE	.062 MM (70342)	.125 MM (70343)	.250 MM (70344)	.500 MM (70345)	.062 MM (80158)	.125 MM (80159)	.250 MM (80160)	.500 MM (80161)	1.00 MM (80162)	.062 MM (80164)

MONTHLY RAINFALL									
DATE	INCHES	INCHES	INCHES	INCHES	INCHES	INCHES	INCHES	INCHES	INCHES
OCT.									
01...	--	--	--	--	1	--	--	--	--
NOV.									
10...	--	--	--	--	3	3	14	64	96
MAR.									
09...	98	99	100	--	0	1	3	46	83
16...	95	96	98	100	--	--	--	--	--
APR.									
24...	87	90	96	100	--	--	--	--	--
27...	92	94	98	100	--	--	--	--	--
JUNE									
17...	99	100	--	--	--	--	--	--	--
21...	--	--	--	--	--	--	--	--	0
29...	99	99	100	--	--	--	--	--	--

	BED MAT.	BED MAT.	BED MAT.	BED MAT.	BED MAT.	BED MAT.	BED MAT.	BED MAT.
	SIEVE DIAM.	SIEVE DIAM.	SIEVE DIAM.	SIEVE DIAM.	SIEVE DIAM.	SIEVE DIAM.	SIEVE DIAM.	SIEVE DIAM.
	% FINER THAN	% FINER THAN	% FINER THAN	% FINER THAN	% FINER THAN	% FINER THAN	% FINER THAN	% FINER THAN
DATE	.125 MM (80165)	.250 MM (80166)	.500 MM (80167)	1.00 MM (80168)	2.00 MM (80169)	4.00 MM (80170)	8.00 MM (80171)	16.0 MM (80172)
	32.0 MM (80173)							

[illegible]

MISSISSIPPI RIVER MAIN STEM

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05474500 MISSISSIPPI RIVER AT KEOKUK, IA
(National stream-quality accounting network station)

LOCATION.--Lat 40°23'37", long 91°22'27", in SE1/4 SW1/4 sec.30, T.65 N., R.4 W., Lee County, Hydrologic Unit 07080104, near right bank in tailwater of dam and powerplant of Union Electric Co. at Keokuk, 0.2 mi (0.3 km) upstream from bridge on U.S. Highway 136, 2.7 mi (4.3 km) upstream from Des Moines River, and at mile 364.2 (585.0 km) upstream from Ohio River.

DRAINAGE AREA.--119,000 mi² (308,000 km²), approximately.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--January 1878 to current year.

GAGE.--Water-stage recorder. Datum of gage is 477.41 ft (145.515 m) above mean sea level (levels by Corps of Engineers); 477.83 ft (145.643 m) above mean sea level, adjustment of 1912; 477.34 ft (145.493 m) above mean gulf level; and 484.65 ft (147.721 m) above Memphis datum. Jan. 1, 1878, to May 1913, nonrecording gage at Galland (formerly Nashville), 8 mi (12.9 km) upstream; zero of gage was set to low-water mark of 1864, or 496.54 ft (151.467 m) above mean sea level, adjustment of 1912.

REMARKS.--Discharge computed from records of operation of turbines in powerplant and spillway gates in dam. Minor flow regulation caused by powerplant since 1913 and navigation dams. Records for May 1913 to September 1937 adjusted for change in contents in Keokuk Reservoir, those after September 1937 unadjusted.

COOPERATION.--Records furnished by Union Electric Co.

AVERAGE DISCHARGE.--98 years, 62,490 ft³/s (1,770 m³/s), 7.13 in/yr (181 mm/yr), 45,280,000 acre-ft/yr (55,800 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 344,000 ft³/s (9,740 m³/s) Apr. 24, 1973; maximum gage height, 22.35 ft (7.117 m) Apr. 24, 1973; minimum daily discharge, 5,000 ft³/s (142 m³/s) Dec. 27, 1933.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of June 6, 1851, reached a stage of 21.0 ft (6.40 m), present site and datum, estimated as 13.5 ft (4.11 m) at Galland, discharge, 350,000 ft³/s (10,200 m³/s).

EXTREMES FOR CURRENT YEAR.--Maximum daily discharge, 214,000 (6,060 m) Apr. 28; minimum daily, 11,500 ft³/s (326 m³/s) Sept. 15.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	
1	40300	32500	57500	47600	34700	89100	104000	187000	55700	34300	26100	16800	
2	38900	31500	72800	48100	34800	91000	111000	179000	52600	35000	28300	18700	
3	37200	31900	62400	41000	35700	87800	113000	168000	52900	34500	22100	15500	
4	32800	36900	52100	31000	35300	86000	117000	159000	56000	34000	17600	14100	
5	32100	35800	46700	35900	34000	116000	122000	147000	52300	32000	17800	13500	
6	33600	35200	47200	42300	34700	138000	129000	142000	45100	30900	20600	11600	
7	28700	34300	52600	40600	33700	143000	134000	130000	41200	28200	21100	11700	
8	27500	32900	59100	36800	33700	117000	141000	112000	41600	26700	20400	11800	
9	25800	33100	60700	35900	34000	100000	146000	95000	38700	25500	16700	12500	
10	25500	31500	58200	36200	35200	95800	151000	89800	43200	21500	14000	14000	
11	25900	34100	61300	34700	38400	92100	160000	88200	43400	17900	12100	15900	
12	25900	39900	60000	33400	40000	87900	162000	84900	34300	23100	21100	16900	
13	24800	44300	60700	33500	43300	92400	168000	78000	27300	21900	20900	16200	
14	26600	43400	67500	33100	43600	97700	169000	71200	26500	19700	26400	16000	
15	29700	47200	69400	32900	45300	109000	169000	68800	37300	20800	25900	14400	
16	33300	52300	65900	33500	48700	122000	164000	70100	48800	26300	22700	13400	
17	35000	55400	60200	33000	50400	126000	160000	70700	47100	21400	21300	14200	
18	31900	58700	39000	32900	53800	128000	152000	67500	50300	23700	20100	13000	
19	27500	60500	26100	33500	50400	130000	146000	74100	41800	26700	19500	11500	
20	24000	65400	32300	33200	54300	127000	139000	73700	36600	22200	17700	12600	
21	23900	64700	36600	33100	73800	112000	134000	73800	36400	31700	16700	16900	
22	25000	60700	35000	32500	65200	94000	135000	68800	38000	43200	17400	18000	
23	28900	56000	35900	33100	62300	85800	144000	63900	43600	25000	18600	18700	
24	27500	56700	35300	32900	56700	81300	194000	59800	41300	18900	19200	18600	
25	27000	54100	35400	32800	61900	79600	189000	57900	44300	21900	18200	17800	
26	22400	51900	40600	34800	63700	85800	195000	55200	45200	23300	16800	21200	
27	25100	52300	44400	34000	71000	92400	205000	58300	40900	23200	16400	22800	
28	32100	52600	44600	34700	84000	95900	214000	55300	38200	26100	15400	18300	
29	36300	52100	44700	34700	76500	100000	208000	48500	37000	28100	12600	15700	
30	40500	48900	45100	34700	---	98500	196000	46100	38200	37800	12700	13600	
31	34900	---	45900	34700	---	102000	---	54100	---	40100	15000	---	
TOTAL	930600	1386800	1555200	1101100	1429100	3203100	4672000	2797700	1275800	845600	591400	465900	
MEAN	30020	46230	50170	35520	49280	103300	155700	90250	42530	27280	19080	15330	
MAX	40500	65400	72800	48100	84000	143000	214000	187000	56000	43200	28300	22800	
MIN	22400	31500	26100	31000	33700	79500	104000	46100	26500	17900	12100	11500	
CFSM	.25	.39	.42	.30	.41	.87	1.31	.76	.26	.23	.16	.13	
IN.	.29	.43	.49	.34	.45	1.00	1.46	.87	.40	.26	.18	.15	
AC-FT	1846000	2751000	3085000	2184000	2835000	6353000	9267000	5549000	2531000	1677000	1173000	924100	
CAL YR 1975 TOTAL	27160100	MEAN	74410	MAX	252000	MIN	22400	CFSM	.63	IN	8.49	AC-FT	53870000
WTR YR 1976 TOTAL	20254300	MEAN	55340	MAX	214000	MIN	11500	CFSM	.47	IN	6.33	AC-FT	40170000

MISSISSIPPI RIVER MAIN STEM

05474500 MISSISSIPPI RIVER AT KEOKUK, IA--Continued
(National stream-quality accounting network station)

WATER-QUALITY RECORDS

LOCATION.--Samples collected at bridge on U.S. Highway 136, 0.2 mi (0.3 km) downstream from discharge station.

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

WATER QUALITY DATA, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	326	365	340	402	436	380	393	296	410	405	377	393
2	326	365	337	420	440	368	382	341	410	410	384	401
3	322	356	341	421	443	376	364	342	410	410	386	403
4	325	356	336	420	441	362	350	308	410	415	395	408
5	326	360	342	422	442	350	344	340	415	385	390	410
6	325	363	350	431	438	357	343	340	415	390	395	410
7	330	352	362	426	440	309	342	310	415	375	376	411
8	320	380	344	415	442	298	332	340	415	380	389	411
9	319	380	363	417	458	319	335	340	420	375	382	407
10	320	382	369	430	457	323	317	342	420	380	392	418
11	322	352	370	425	444	335	320	395	420	400	385	410
12	319	362	364	410	426	346	300	395	420	380	384	421
13	317	380	363	412	437	348	285	405	418	393	387	413
14	320	380	360	413	443	359	283	410	420	393	384	412
15	318	380	348	417	421	375	281	410	420	392	385	414
16	319	380	353	420	428	377	288	400	420	391	396	415
17	323	386	354	408	418	373	280	400	415	390	392	418
18	326	384	364	426	406	380	390	400	420	386	386	424
19	338	387	363	433	399	360	394	405	415	390	385	422
20	339	387	377	440	394	339	391	410	420	388	397	420
21	346	378	375	439	401	333	392	405	415	393	401	421
22	370	366	380	437	399	336	306	415	415	391	401	418
23	357	358	386	441	399	338	308	405	415	376	396	419
24	350	347	384	431	387	344	263	405	415	379	393	418
25	352	346	393	441	385	348	272	400	415	359	398	417
26	360	350	390	420	380	363	267	405	415	360	400	415
27	349	348	395	445	383	383	281	405	415	360	401	427
28	352	343	395	450	395	398	283	405	415	366	400	418
29	354	352	400	443	387	365	280	410	405	372	398	409
30	356	358	408	438	---	385	301	410	405	371	400	418
31	361	---	411	436	---	381	---	410	---	369	404	---
MONTH	335	366	368	427	420	355	322	381	415	385	392	414
YEAR	MAX	458	MIN	263	MEAN	381						

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	16.5	12.5	4.0	0.0	2.0	5.5	7.0	13.0	20.0	24.0	26.0	25.0
2	15.0	12.5	6.0	0.0	0.0	6.0	7.0	14.0	20.0	24.0	26.0	23.5
3	15.0	13.0	6.0	0.0	0.0	6.0	10.0	14.0	20.0	24.0	26.0	24.0
4	15.0	13.0	5.0	0.0	0.0	6.0	9.5	13.0	20.0	24.0	26.0	23.0
5	15.0	14.0	3.0	0.0	0.0	4.0	10.0	14.0	20.0	25.0	26.0	24.0
6	15.0	14.0	3.0	0.0	0.0	3.0	10.0	14.0	21.0	25.0	26.0	22.5
7	15.0	16.0	3.0	0.0	0.0	3.0	11.0	13.0	21.0	25.0	26.0	22.0
8	16.0	15.0	3.5	0.0	0.0	3.0	12.0	14.0	21.0	24.0	24.0	22.0
9	16.5	15.0	2.0	0.0	1.0	3.0	11.0	14.0	22.0	26.0	25.0	21.5
10	16.5	15.0	2.0	0.0	1.0	3.0	11.0	14.0	22.0	26.0	23.0	20.0
11	16.0	14.0	2.0	1.0	2.0	3.0	11.0	15.0	22.0	26.0	25.0	20.5
12	17.0	11.0	2.0	1.5	2.0	4.5	10.0	15.0	22.0	27.0	26.0	21.5
13	19.0	10.0	3.0	1.0	2.0	4.0	11.0	16.0	22.0	27.0	24.0	21.0
14	19.0	10.0	4.0	1.0	1.0	4.0	12.0	17.0	23.0	27.0	24.0	21.0
15	18.0	10.0	4.0	1.0	1.0	4.0	13.0	17.0	23.0	26.0	24.0	20.5
16	18.0	10.0	2.0	1.0	2.0	4.0	13.0	16.0	23.0	26.0	23.0	20.0
17	17.0	11.0	1.0	1.5	3.0	4.0	14.0	16.0	23.0	26.0	24.0	20.0
18	16.0	10.0	0.0	0.5	3.0	4.5	15.0	16.0	23.0	26.0	23.5	20.0
19	15.0	10.0	0.0	1.0	3.0	5.0	15.0	16.0	23.0	26.0	23.0	20.0
20	15.0	10.0	0.0	1.0	4.0	6.0	15.0	18.0	23.0	26.0	25.0	20.0
21	15.0	8.0	0.0	1.0	4.0	8.0	15.5	17.0	23.0	26.0	24.5	19.0
22	15.0	7.0	0.0	1.0	4.0	6.0	15.0	19.0	23.0	26.0	25.0	19.0
23	16.5	6.5	0.0	1.0	3.0	7.0	15.0	18.0	23.0	26.0	26.0	19.0
24	16.5	6.5	0.0	1.0	5.0	8.0	14.0	18.0	23.0	26.0	26.0	18.0
25	16.0	5.5	0.0	1.0	5.0	8.0	15.0	18.0	23.0	26.0	26.0	18.0
26	14.5	4.5	0.0	0.0	5.0	10.0	13.0	18.0	23.0	26.0	26.0	16.0
27	14.0	4.0	0.0	0.0	5.0	7.0	13.0	19.0	23.0	26.0	26.0	16.0
28	14.0	3.0	0.0	0.0	5.0	7.0	11.0	19.0	23.0	26.0	27.0	16.0
29	13.0	3.0	0.0	1.0	6.0	10.0	12.0	19.0	24.0	26.0	26.0	16.5
30	13.0	3.0	0.0	0.5	---	7.0	13.0	19.0	24.0	26.0	26.0	16.5
31	12.5	---	0.0	1.0	---	7.0	---	20.0	---	26.0	25.5	---
MONTH	15.5	10.0	2.0	0.5	2.5	5.5	12.0	16.0	22.0	25.5	25.0	20.0
YEAR	MAX	27.0	MIN	0.0	MEAN	13.0						

05474500 MISSISSIPPI RIVER AT KEOKUK, IA--Continued
(National stream-quality accounting network station)

WATER-QUALITY RECORDS

WATER QUALITY DATA, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976

DATE	TIME	INSTAN- TANEOUS DIS- CHARGE (CFS) (00061)	DIS- SOLVED SILICA (SI02) (MG/L) (00955)	TOTAL IRON (FE) (UG/L) (01045)	DIS- SOLVED IRON (FE) (UG/L) (01046)	TOTAL MAN- GANESE (MN) (UG/L) (01055)	SUS- PENDED MAN- GANESE (MN) (UG/L) (01054)	DIS- SOLVED MAN- GANESE (MN) (UG/L) (01056)	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)
OCT												
21...	1230	23900	1.2	--	--	--	--	--	37	18	9.8	2.3
NOV												
17...	1135	56000	.0	--	--	--	--	--	44	19	11	2.5
DEC												
17...	1330	60500	7.8	3800	80	150	130	20	45	16	9.4	2.9
JAN												
21...	1230	62300	10	--	--	--	--	--	51	19	12	2.4
FEB												
23...	1140	62300	9.5	1000	100	90	50	40	44	17	12	2.1
MAR												
23...	1300	85800	9.2	4100	170	200	180	20	40	15	8.0	2.6
APR												
14...	1140	170000	8.6	--	--	--	--	--	31	11	7.1	2.6
MAY												
18...	1140	69300	2.2	--	--	--	--	--	52	18	8.3	2.7
JUN												
29...	1130	48000	1.8	570	180	110	30	80	44	19	8.2	2.4
JUL												
20...	1200	37000	1.7	--	--	--	--	--	44	15	10	2.4
AUG												
24...	1230	29900	1.5	--	--	--	--	--	39	18	8.2	2.1
SEP												
20...	1200	18500	1.5	460	150	120	110	10	44	21	14	2.7

DATE	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)	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 NITRO- GEN (NO3) (MG/L) (71887)	TOTAL PHOS- PHORUS (P) (MG/L) (00665)	DIS- SOLVED SOLIDS (RESI- DUE AT 180 C) (MG/L) (70300)
OCT												
21...	173	0	142	23	12	.4	.12	.93	1.1	4.6	.16	208
NOV												
17...	196	0	161	25	14	.3	.34	1.0	1.3	5.9	.19	249
DEC												
17...	166	0	136	27	13	.2	1.1	1.3	2.4	11	.29	214
JAN												
21...	205	--	168	28	17	.3	.43	1.1	1.5	6.8	.21	274
FEB												
23...	175	0	144	27	17	.6	1.2	1.0	2.2	9.7	.18	232
MAR												
23...	140	0	115	23	13	.3	2.0	1.9	3.9	17	.32	192
APR												
14...	110	0	90	22	9.8	.4	.56	1.6	2.2	9.6	.35	176
MAY												
18...	172	0	141	32	14	.3	2.5	1.2	3.7	16	.18	226
JUN												
29...	178	0	146	27	13	.3	1.6	.89	2.5	11	.15	234
JUL												
20...	180	0	148	32	17	.3	.50	1.0	1.5	6.6	.21	224
AUG												
24...	177	0	145	17	10	.2	.03	.70	.73	3.2	.17	226
SEP												
20...	193	0	158	32	18	.2	.22	.88	1.1	4.9	.19	232

DATE	TOTAL FILT- RABLE RESIDUE (MG/L) (00515)	DIS- SOLVED SOLIDS (SUM OF CONSTITU- ENTS) (MG/L) (70301)	DIS- SOLVED SOLIDS (TONS PER AC-FT) (70303)	DIS- SOLVED SOLIDS (TONS PER DAY) (70302)	TOTAL NON- FILT- RABLE RESIDUE (MG/L) (00530)	HARD- NESS (CA,MG) (MG/L) (00900)	NON- CAR- BONATE HARD- NESS (MG/L) (00902)	PERCENT SODIUM RATIO (00932)	SODIUM AD- SORP- TION RATIO (00931)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS) (00095)	PH (UNITS) (00400)
OCT											
21...	--	189	.28	13400	--	170	25	11	.3	950	8.5
NOV											
17...	--	212	.34	37600	--	190	27	11	.4	380	8.9
DEC											
17...	--	203	.29	35000	--	180	42	10	.3	380	8.2
JAN											
21...	--	241	.37	46100	--	210	37	11	.4	350	8.7
FEB											
23...	--	216	.32	39000	--	180	36	13	.4	340	8.6
MAR											
23...	--	180	.26	44500	--	160	47	10	.3	320	8.0
APR											
14...	--	147	.24	80800	--	120	32	11	.3	260	8.5
MAY											
18...	--	214	.31	42300	--	200	63	8	.3	380	9.3
JUN											
29...	--	204	.32	30300	--	190	42	9	.3	320	9.0
JUL											
20...	--	211	.30	22400	--	170	24	11	.3	380	8.0
AUG											
24...	--	183	.31	18200	--	170	26	9	.3	300	8.0
SEP											
20...	--	229	.32	11600	--	200	38	13	.4	250	7.8

MISSISSIPPI RIVER MAIN STEM

05474500 MISSISSIPPI RIVER AT KEOKUK, IA--Continued
(National stream-quality accounting network station)

WATER-QUALITY RECORDS

WATER QUALITY DATA, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976

DATE	TEMPER- ATURE (DEG C) (00010)	TUR- BID- ITY (JTU) (00070)	CARBON DIOXIDE (CO2) (MG/L) (00405)	TOTAL PHYTO- PLANK- TON (CELLS PER ML) (60050)	PERI- PHYTON BIOMASS TOTAL DRY WEIGHT G/SQ M (00573)	PERI- PHYTON BIOMASS ASH WEIGHT G/SQ M (00572)	UNCOR- RECTED PERI- PHYTON CHLORO- PHYLL A MG/SQ M (32228)	UNCOR- RECTED PERI- PHYTON CHLORO- PHYLL B MG/SQ M (32226)	FECAL COLI- FORM (COL. PER 100 ML) (31616)	STREP- TOCOCCI (COL- ONIES PER 100 ML) (31679)	TOTAL ORGANIC CARBON (C) (MG/L) (00680)
OCT 21...	14.0	4	.9	510	9.70	2.40	92.0	19.0	330	10	--
NOV 17...	9.0	10	.4	8400	--	--	--	--	120	80	--
DEC 17...	1.0	55	1.7	2200	--	--	--	--	250	800	--
JAN 21...	2.0	3	.7	12000	--	--	--	--	330	80	--
FEB 23...	3.0	15	.7	7000	--	--	--	--	75	360	6.8
MAR 23...	7.0	30	2.2	5400	--	--	--	--	360	140	12
APR 14...	14.0	60	.6	18000	--	--	--	--	200	110	--
MAY 18...	17.5	20	.1	29000	--	--	--	--	80	67	--
JUN 29...	25.0	10	.3	7100	6.90	3.97	17.4	.854	110	62	3.7
JUL 20...	26.0	9	2.9	--	--	--	--	--	--	--	--
AUG 24...	25.5	8	2.6	2900	--	--	--	--	40	57	--
SEP 20...	20.5	10	4.9	27000	--	--	--	--	97	45	3.7

DATE	TOTAL ARSENIC (AS) (UG/L) (01002)	SUS- PENDE D ARSENIC (AS) (UG/L) (01001)	DIS- SOLVED ARSENIC (AS) (UG/L) (01000)	TOTAL CAD- MIUM (CD) (UG/L) (01027)	SUS- PENDE D CAD- MIUM (CD) (UG/L) (01026)	DIS- SOLVED CAD- MIUM (CD) (UG/L) (01025)	TOTAL CHRO- MIUM (CR) (UG/L) (01034)	SUS- PENDE D CHRO- MIUM (CR) (UG/L) (01031)	DIS- SOLVED CHRO- MIUM (CR) (UG/L) (01030)	TOTAL COBALT (CO) (UG/L) (01037)	SUS- PENDE D COBALT (CO) (UG/L) (01036)	DIS- SOLVED COBALT (CO) (UG/L) (01035)
DEC 17...	3	2	1	0	0	0	<10	<10	0	0	0	0
FEB 23...	2	1	1	1	0	1	10	5	5	3	3	0
MAR 23...	2	1	1	0	0	0	20	18	2	0	0	0
JUN 29...	3	1	2	0	0	0	<10	<10	0	0	0	0
SEP 20...	4	0	4	0	0	4	20	19	1	2	0	2

DATE	TOTAL COPPER (CU) (UG/L) (01042)	SUS- PENDE D COPPER (CU) (UG/L) (01041)	DIS- SOLVED COPPER (CU) (UG/L) (01040)	TOTAL LEAD (PB) (UG/L) (01051)	SUS- PENDE D LEAD (PB) (UG/L) (01050)	DIS- SOLVED LEAD (PB) (UG/L) (01049)	TOTAL MERCURY (HG) (UG/L) (71900)	SUS- PENDE D MERCURY (HG) (UG/L) (71895)	DIS- SOLVED MERCURY (HG) (UG/L) (71890)	TOTAL SELE- NIUM (SE) (UG/L) (01147)	SUS- PENDE D SELE- NIUM (SE) (UG/L) (01146)
DEC 17...	7	0	9	10	7	3	.0	.0	.0	0	0
FEB 23...	4	0	10	8	4	4	.1	.1	.0	0	0
MAR 23...	6	0	18	8	0	8	1.5	1.4	.1	0	0
JUN 29...	4	0	4	0	0	0	.4	.1	.3	0	0
SEP 20...	5	0	71	5	0	410	.2	.0	.2	0	0

DATE	DIS- SOLVED SELE- NIUM (SE) (UG/L) (01145)	TOTAL ZINC (ZN) (UG/L) (01092)	SUS- PENDE D ZINC (ZN) (UG/L) (01091)	DIS- SOLVED ZINC (ZN) (UG/L) (01090)	DIS- SOLVED GROSS ALPHA AS (UG/L) (80030)	SUS- PENDE D GROSS ALPHA AS (UG/L) (80040)	DIS- SOLVED GROSS BETA AS (PC/L) (03515)	SUS- PENDE D GROSS BETA AS (PC/L) (03516)	DIS- SOLVED GROSS BETA AS SR90 (PC/L) (80050)	SUS- PENDE D GROSS BETA AS SR90 (PC/L) (80060)	DIS- SOLVED RA-226 (RADON METHOD) (PC/L) (09511)
DEC 17...	0	30	0	30	--	--	--	--	--	--	--
FEB 23...	0	20	0	20	--	--	--	--	--	--	--
MAR 23...	0	10	0	10	--	--	--	--	--	--	--
JUN 29...	0	20	10	10	--	--	--	--	--	--	--
SEP 20...	0	30	0	200	--	--	--	--	--	--	--

MISSISSIPPI RIVER MAIN STEM

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05474500 MISSISSIPPI RIVER AT KEOKUK, IA--Continued
(National stream-quality accounting network station)

WATER-QUALITY RECORDS

WATER QUALITY DATA, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976

DATE	TIME	TEMPER- ATURE (DEG C) (00010)	INSTAN- TANEOUS DIS- CHARGE (CFS) (00061)	SUS- PENDE SEDI- MENT (MG/L) (80154)	SUS- PENDE SEDI- MENT (T/DAY) (80155)	SUS. SED. SIEVE DIAM. % FINER THAN .062 MM (70331)
OCT.						
21...	1230	14.0	23900	8	516	--
NOV.						
17...	1135	9.0	56000	18	2720	--
DEC.						
17...	1330	1.0	60500	98	16000	--
FEB.						
23...	1140	3.0	62300	115	19300	97
MAR.						
23...	1300	7.0	85800	146	33800	--
APR.						
14...	1140	14.0	170000	363	167000	--
MAY						
18...	1140	17.5	69300	63	11800	--
JUNE						
29...	1130	25.0	48000	15	1940	--
JULY						
20...	1200	26.0	37000	13	1300	--
AUG.						
24...	1230	25.5	29900	37	2990	--
SEP.						
20...	1200	20.5	18500	13	649	--

IDENTIFICATION OF PHYTOPLANKTON

OCT. 21, 1975
1230 HOURS

520 CELLS/ML

ORGANISM NAME	COMMON NAME	CELLS/ML	PER CENT	
CHLOROPHYTA	GREEN ALGAE			
.CHLOROPHYCEAE				
..CHLOROCOCCALES				
...OOCYSTACEAE				
L ....TETRAEDRON			0	
...SCENEDESMACEAE				
D ....SCENEDESMUS		300	58	
L ....TETRASTRUM			0	
	TOTALS	300	58	0.000=DIVERSITY
CHRYSOPHYTA				
.BACILLARIOPHYCEAE	DIATOMS			
..CENTRALES	CENTRIC			
...COSCINODISCEAE				
D ....CYCLOTELLA		110	21	
...MELOSIRA		22	4	
...STEPHANODISCUS		65	13	
..PENNALES	PENNATE			
...NITZSCHIAEAE				
....NITZSCHIA		22	4	
	TOTALS	220	42	1.685=DIVERSITY
CYANOPHYTA	BLUE-GREEN ALGAE			
.MYXOPHYCEAE				
..OSCILLATORIALES	FILAMENTOUS			
...NOSTOCACEAE				
L ....APHANIZOMENON			0	

NOTE: D - DOMINANT ORGANISM; GREATER OR EQUAL TO 15%
L - LESS THEN 1%; MAY NOT HAVE BEEN ACTUALLY COUNTED
ANALYSIS METHOD: SEDGWICK-RAFTER CHAMBER, 200-X MICROSCOPE
DIVERSITY INDICES, BASED ON ACTUAL COUNTS:
PHYL/DIV 0.980
CLASS 0.980
ORDER 1.175
FAMILY 1.175
GENERA 1.682

MISSISSIPPI RIVER MAIN STEM

05474500 MISSISSIPPI RIVER AT KEOKUK, IA--Continued
(National stream-quality accounting network station)

WATER-QUALITY RECORDS

WATER QUALITY DATA, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976

IDENTIFICATION OF PHYTOPLANKTON

NOV. 17, 1975
1135 HOURS

8,500 CELLS/ML

ORGANISM NAME	COMMON NAME	CELLS/ML	PER CENT	
CHLOROPHYTA	GREEN ALGAE			
..CHLOROPHYCEAE				
..CHLOROCOCCALES				
...OCCYSTACEAE				
L ...TETRAEDRON			0	
...SCENEDESMACEAE				
...SCENEDESMUS		720	9	
	TOTALS	720	9	0.000=DIVERSITY
CHRYSOPHYTA				
..BACILLARIOPHYCEAE	DIATOMS			
..CENTRALES	CENTRIC			
...COSCINODISACEAE				
D ...CYCLOTELLA		6,800	81	
...MELOSIRA		360	4	
...STEPHANODISCUS		360	4	
..PENNALES	PENNATE			
...NITZSCHIAEAE				
...NITZSCHIA		180	2	
...SURIRELLACEAE				
L ...SURIRELLA			0	
	TOTALS	7,700	91	0.696=DIVERSITY
EUGLENOPHYTA	EUGLENIDS			
..EUGLENOPHYCEAE				
..EUGLENALES				
...EUGLENACEAE				
L ...TRACHELOMONAS			0	

NOTE: D - DOMINANT ORGANISM; GREATER OR EQUAL TO 15%
L - LESS THEN 1%; MAY NOT HAVE BEEN ACTUALLY COUNTED
ANALYSIS METHOD: SEDGWICK-RAFTER CHAMBER, 200-X MICROSCOPE
DIVERSITY INDICES, BASED ON ACTUAL COUNTS:
PHYL/DIV 0.420
CLASS 0.420
ORDER 0.566
FAMILY 0.566
GENERA 1.056

IDENTIFICATION OF PHYTOPLANKTON

MAR. 23, 1976
1300 HOURS

5,400 CELLS/ML

ORGANISM NAME	COMMON NAME	CELLS/ML	PER CENT	
CHLOROPHYTA	GREEN ALGAE			
..CHLOROPHYCEAE				
..CHLOROCOCCALES				
...OCCYSTACEAE				
L ...ANKISTRODESMUS			0	
CHRYSOPHYTA				
..BACILLARIOPHYCEAE	DIATOMS			
..CENTRALES	CENTRIC			
...COSCINODISACEAE				
D ...CYCLOTELLA		3,700	68	
...MELOSIRA		220	4	
..PENNALES	PENNATE			
...FRAGILARIACEAE				
...ASTERIONELLA		220	4	
...GOMPHONEMACEAE				
...GOMPHONEMA		220	4	
...NITZSCHIAEAE				
...NITZSCHIA		650	12	
	TOTALS	5,000	92	1.296=DIVERSITY
CYANOPHYTA	BLUE-GREEN ALGAE			
..MYXOPHYCEAE				
..OSCILLATORIALES	FILAMENTOUS			
...RIVULARIACEAE				
...RAPHIDIOPSIS		430	8	
	TOTALS	430	8	0.000=DIVERSITY

NOTE: D - DOMINANT ORGANISM; GREATER OR EQUAL TO 15%
L - LESS THEN 1%; MAY NOT HAVE BEEN ACTUALLY COUNTED
ANALYSIS METHOD: SEDGWICK-RAFTER CHAMBER, 200-X MICROSCOPE
DIVERSITY INDICES, BASED ON ACTUAL COUNTS:
PHYL/DIV 0.402
CLASS 0.402
ORDER 0.402
FAMILY 0.402
GENERA 0.402

05474500 MISSISSIPPI RIVER AT KEOKUK, IA--Continued
(National stream-quality accounting network station)

WATER-QUALITY RECORDS

WATER QUALITY DATA, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976

IDENTIFICATION OF PHYTOPLANKTON

APR. 14, 1976
1140 HOURS

ORGANISM NAME	10,000 CELLS/ML	COMMON NAME	CELLS/ML	PER CENT	
CHLOROPHYTA		GREEN ALGAE			
...MICROACTINIUM			160	1	
...COCCYSTACEAE					
...ANISTOCESMUS			400	3	
L ...SELTERIUM				0	
...VESTELL			300	2	
...SCENEDESMACEAE					
...SCENEDESMUS			160	1	
TOTALS			1,100	7	1.842=DIVERSITY
CHRYCOPHYTA					
...BACILLARIOPHYCEAE		DIATOMS			
...CENTRALES		CENTRIC			
...COCCINODISCACEAE					
D ...CYCLOTELLA			9,400	53	
D ...PELOCELLA			3,600	20	
...CENTRANGULUS			2,100	12	
...PENNACEAE		PENNATE			
...FRAGILARIACEAE					
L ...ASTROIDEA				0	
...NAVICULACEAE		NAVICULOID			
L ...CYPRIDIA				0	
...NITZSCHIA			1,100	6	
...NITZSCHIA					
...NITZSCHIA			160	1	
TOTALS			16,000	92	1.652=DIVERSITY
EUGLENOPHYTA		EUGLENOIDS			
...EUGLENOPHYCEAE					
...EUGLENALES					
...EUGLENA			160	1	
TOTALS			160	1	0.000=DIVERSITY
PHYL/DIV 0.416					
CLASS 0.416					
ORDER 0.760					
FAMILY 0.900					
GENERA 2.067					

IDENTIFICATION OF PHYTOPLANKTON

MAY 19, 1976
1140 HOURS

ORGANISM NAME	29,000 CELLS/ML	COMMON NAME	CELLS/ML	PER CENT	
CHLOROPHYTA		GREEN ALGAE			
D ...MICROACTINIUM			4,600	16	
...COCCYSTACEAE					
...ANISTOCESMUS			550	2	
...SELTERIUM			730	2	
...SCENEDESMACEAE			180	1	
...SELTERIUM			1,300	4	
D ...SCENEDESMUS			4,700	16	
...SCENEDESMACEAE					
...SCENEDESMUS			180	1	
TOTALS			12,000	42	2.026=DIVERSITY
CHRYCOPHYTA					
...BACILLARIOPHYCEAE		DIATOMS			
...CENTRALES		CENTRIC			
...COCCINODISCACEAE					
D ...CYCLOTELLA			5,300	18	
D ...PELOCELLA			7,600	27	
...CENTRANGULUS			750	2	
...PENNACEAE		PENNATE			
...FRAGILARIACEAE					
...ASTROIDEA			1,500	5	
...NAVICULACEAE			160	1	
...CYPRIDIA					
...NITZSCHIA			1,500	5	
...NITZSCHIA					
TOTALS			17,000	56	1.913=DIVERSITY
EUGLENOPHYTA		EUGLENOIDS			
...EUGLENOPHYCEAE					
...EUGLENALES					
...EUGLENA			180	1	
TOTALS			180	1	0.000=DIVERSITY
DIVERSITY INDICES, BASED ON ACTUAL COUNTS:					
PHYL/DIV 1.026					
CLASS 1.026					
ORDER 1.472					
FAMILY 2.101					
GENERA 2.977					

MISSISSIPPI RIVER MAIN STEM

05474500 MISSISSIPPI RIVER AT KEOKUK, IA--Continued
(National stream-quality accounting network station)

WATER-QUALITY RECORDS

WATER QUALITY DATA, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976

IDENTIFICATION OF PHYTOPLANKTON

JUNE 29, 1976
1130 HOURS

7,100 CELLS/ML

ORGANISM NAME	COMMON NAME	CELLS/ML	PER CENT	
CHLOROPHYTA	GREEN ALGAE			
..CHLOROPHYCEAE				
..CHLOROCOCCALES				
...COELASTRACEAE				
...COELASTRUM		190	3	
...OOCYSTACEAE				
...KIPCHNERIELLA		300	4	
...COCYSTIS		130	2	
...SCENEDESMACEAE				
...ACTINASTRUM		130	2	
...CRUCIGERIA		290	4	
...SCENEDESMUS		350	5	
	TOTALS	1,400	20	2.479=DIVERSITY
CHRYSTOPHYTA				
..BACILLARIOPHYCEAE	DIATOMS			
..CENTRALES	CENTRIC			
...COSCINODISACEAE				
...CYCLOTELLA		800	11	
...HELOSIRA		350	5	
...STEPHANODISCUS		180	2	
..PENNALES	PENNALE			
..FRAGILARIACEAE				
L ...SYNEDRA			0	
..NAVICULACEAE	NAVICULOID			
L ...NAVICULA			0	
..NITZSCHACEAE				
L ...NITZSCHIA			0	
	TOTALS	1,400	18	1.562=DIVERSITY
CYANOPHYTA	BLUE-GREEN ALGAE			
..MYXOPHYCEAE				
..CHROOCOCCALES	COCCOID			
...CHROOCOCCACEAE				
D ...AGMENELLUM		1,000	14	
...ANACYSTIS		3,300	46	
..OSCILLATORIALES	FILAMENTOUS			
...OSCILLATORIACEAE		64	1	
...OSCILLATORIA				
	TOTALS	4,300	61	0.892=DIVERSITY
PYRRHOPHYTA	FIRE ALGAE			
..DINOPHYCEAE	DINOFLAGELLATES			
..PERIDINIALES				
...GLENODINIACEAE				
L ...GLENODINIUM			0	
	TOTALS	16	0	0.000=DIVERSITY

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

L - LESS THAN 1%; MAY NOT HAVE BEEN ACTUALLY COUNTED

ANALYSIS METHOD: SEDGWICK-RAFTER CHAMBER, 200-X MICROSCOPE

DIVERSITY INDICES, BASED ON ACTUAL COUNTS:

PHYL/DIV 1.373

CLASS 1.373

ORDER 1.482

FAMILY 1.764

GENERA 2.701

05474500 MISSISSIPPI RIVER AT KEOKUK, IA--Continued
(National stream-quality accounting network station)

WATER-QUALITY RECORDS

WATER QUALITY DATA, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976

IDENTIFICATION OF PHYTOPLANKTON

AUG. 24, 1976
1230 HOURS

2,900 CELLS/ML

ORGANISM NAME	COMMON NAME	CELLS/ML	PER CENT	
CHLOROPHYTA	GREEN ALGAE			
..CHLOROPHYCEAE				
..CHLOCOCCALES				
..COCCOSTACEAE				
..ANKISTRODESMUS		110	4	
..SCENEDESMACEAE				
..CRUCIGENIA		110	4	
TOTALS		220	8	1.000=DIVERSITY
CHRYSOPHYTA				
..BACILLARIOPHYCEAE	DIATOMS			
..CENTRALES	CENTRIC			
..COSCINODISCACEAE				
..CYCLOTELLA		190	7	
D ..MELOSIRA		1,200	42	
..STEPHANODISCUS		28	1	
..PENNATES	PENNATE			
..FRAGILARIACEAE				
..SYNEDRA		28	1	
TOTALS		1,500	51	0.825=DIVERSITY
CYANOPHYTA	BLUE-GREEN ALGAE			
..MYXOPHYCEAE				
..CHROCOCCALES	COCCOID			
..CHROCOCCACEAE				
D ..AGMENELLUM		890	31	
..OSCILLATORIALES	FILAMENTOUS			
..OSCILLATORIACEAE				
..OSCILLATORIA		310	11	
TOTALS		1,200	42	0.820=DIVERSITY

DIVERSITY INDICES, BASED ON ACTUAL COUNTS:

PHYL/DIV 1.207
CLASS 1.307
ORDER 1.715
FAMILY 1.792
GENERA 2.144

SEP. 2, 1976
1200 HOURS

IDENTIFICATION OF PHYTOPLANKTON

27,000 CELLS/ML

ORGANISM NAME	COMMON NAME	CELLS/ML	PER CENT	
CHLOROPHYTA	GREEN ALGAE			
..CHLOROPHYCEAE				
..CHLOCOCCALES				
..COCCOSTACEAE				
..COCCOSTOMM		520	2	
..SCENEDESMACEAE		260	1	
..CRUCIGENIA				
TOTALS		770	3	0.918=DIVERSITY
CHRYSOPHYTA				
..BACILLARIOPHYCEAE	DIATOMS			
..CENTRALES	CENTRIC			
..COSCINODISCACEAE				
L ..STEPHANODISCUS			0	
TOTALS		23	0	0.000=DIVERSITY
CYANOPHYTA	BLUE-GREEN ALGAE			
..MYXOPHYCEAE				
..CHROCOCCALES	COCCOID			
..CHROCOCCACEAE				
D ..ANACYSTIS		26,000	97	
L ..COLEPUS			0	
TOTALS		26,000	97	0.010=DIVERSITY

NOTE: D - DOMINANT ORGANISM: GREATER OR EQUAL TO 15%
L - LESS THAN 1%; MAY NOT HAVE BEEN ACTUALLY COUNTED
ANALYSIS METHOD: SEDGWICK-RATNER CHAMBER, 200-X MICROSCOPE
DIVERSITY INDICES, BASED ON ACTUAL COUNTS:
PHYL/DIV 0.196
CLASS 0.196
ORDER 0.196
FAMILY 0.223
GENERA 0.232

05476500 DES MOINES RIVER AT ESTHERVILLE, IA

LOCATION.--Lat 43°23'51", long 94°50'38", in SW1/4 SE1/4 sec.10, T.99 N., R.34 W., Emmet County, Hydrologic Unit 07100002, on right bank in city park, 1,200 ft (366 m) downstream from bridge on State Highway 9 at Estherville, 0.1 mi (0.2 km) upstream from School Creek, 2.3 mi (3.7 km) upstream from Brown Creek, and at mile 404.2 (650.4 km).

DRAINAGE AREA.--1,372 mi² (3,553 km²).

PERIOD OF RECORD.--October 1951 to current year. Prior to November 1951, monthly discharge only, published in WSP 1728.

REVISED RECORDS.--WSP 1438: Drainage area.

GAGE.--Water-stage recorder and concrete control. Datum of gage is 1,247.55 ft (380.25 m) above mean sea level.

REMARKS.--Records good except those for winter period, which are fair. Diurnal fluctuation at low flow caused by powerplant 0.3 mi (0.5 km) above station which discharges an average daily flow of about 0.5 ft³/s (0.014 m³/s) into river from subterranean wells. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--25 years, 288 ft³/s (8.16 m³/s), 2.85 in/yr (72 mm/yr), 208,700 acre-ft/yr (257 hm³/yr); median of yearly mean discharges, 210 ft³/s (5.95 m³/s), 2.1 in/yr (53 mm/yr), 152,000 acre-ft/yr (187 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 16,000 ft³/s (453 m³/s) Apr. 12, 1969, gage height, 17.68 ft (5.389 m), from floodmark; minimum daily, 0.2 ft³/s (0.006 m³/s) Sept. 21, 22, 28, Oct. 19, 1958.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, about 1,060 ft³/s (30.0 m³/s) Mar. 13, gage height, 5.43 ft (1.655 m) backwater from ice, no peak above base of 1,500 ft³/s (42.5 m³/s); minimum daily, 0.3 ft³/s (0.008 m³/s) Sept. 12.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	9.6	20	40	19	11	130	606	152	75	18	20	1.1
2	10	17	41	18	11	62	571	149	60	14	6.2	1.3
3	11	14	41	17	11	116	553	139	48	11	3.1	.64
4	10	12	41	16	10	170	509	125	38	9.8	3.2	.72
5	11	12	45	14	9.9	220	469	125	32	8.3	2.7	.80
6	9.9	12	49	13	9.8	244	442	114	28	7.2	3.2	.77
7	9.6	13	52	11	9.8	246	425	98	25	7.1	1.7	.66
8	10	14	50	9.6	9.9	248	411	85	21	5.9	1.0	.92
9	8.7	24	46	8.3	10	300	383	77	19	3.9	.85	.39
10	7.6	51	44	7.6	11	310	358	77	24	2.7	.74	.57
11	6.9	45	43	8.5	11	290	340	77	21	2.7	.78	.66
12	9.9	40	43	9.0	12	900	305	73	19	3.1	.69	.30
13	15	26	42	9.6	15	700	280	69	18	2.5	1.0	2.7
14	15	27	34	9.8	18	740	277	66	16	2.4	7.7	1.2
15	17	29	28	10	60	573	284	63	17	3.2	1.3	1.3
16	17	24	25	10	82	564	262	61	15	1.9	1.3	1.4
17	17	23	24	10	112	585	280	58	14	1.7	1.3	.77
18	24	24	23	9.8	152	606	264	55	21	1.6	3.4	.65
19	18	27	16	9.6	140	766	239	51	16	1.6	3.1	6.5
20	18	35	17	8.9	136	853	217	47	11	1.7	1.8	1.8
21	18	21	17	8.8	76	868	208	43	9.8	1.8	1.0	1.3
22	16	38	17	8.9	78	788	197	45	8.9	2.2	.79	1.0
23	15	42	17	9.4	104	766	183	47	7.1	2.1	.68	1.9
24	15	33	17	9.6	144	821	186	42	10	2.0	.69	3.3
25	13	30	17	9.6	225	805	188	39	11	1.7	.70	3.0
26	11	31	17	9.6	252	797	183	37	19	2.5	.63	1.9
27	22	33	18	9.6	276	739	174	34	29	1.6	.62	3.5
28	29	30	18	9.8	230	667	170	36	18	2.2	.63	3.6
29	27	36	19	10	200	644	166	113	12	1.0	.69	2.0
30	23	38	19	11	---	669	161	152	14	.82	.90	1.3
31	22	---	19	11	---	657	---	97	---	.80	.81	---
TOTAL	466.2	821	939	336.0	2426.4	16924	9261	2446	676.8	129.02	73.20	48.15
MEAN	15.0	27.4	30.3	10.8	83.7	546	309	78.9	22.6	4.16	2.36	1.61
MAX	29	51	52	19	276	900	606	152	75	18	20	6.5
MIN	6.9	12	16	7.6	9.8	62	161	34	7.1	.80	.62	.30
CFSM	.01	.02	.02	.007	.06	.40	.23	.06	.02	.003	.001	.001
IN.	.01	.02	.03	.009	.07	.46	.25	.07	.02	.003	.002	.001
AC-FT	925	1636	1860	666	4810	33570	18370	4850	1340	256	145	96
CAL YR 1975 TOTAL	78929.00			MEAN 216								
WTR YR 1976 TOTAL	34546.77			MEAN 94.4								
				MAX 2100								
				MAX 900								
				MIN 1.5								
				MIN .30								
				CFSM .16								
				CFSM .07								
				IN 2.14								
				IN .94								
				AC-FT 156600								
				AC-FT 68520								

05476750 DES MOINES RIVER AT HUMBOLDT, IA

LOCATION.--Lat 42°43'12", long 94°13'06", in SE1/4 SW1/4 sec.1, T.91 N., R.29 W., Humboldt County, Hydrologic Unit 07100002, on left bank 5 ft (2 m) downstream from First Avenue bridge in city of Humboldt, about 700 ft (213 m) below dam, 3.2 mi (5.1 km) upstream from Indian Creek, 3.9 mi (6.3 km) upstream from East Fork Des Moines River, and at mile 334.3 (537.9 km).

DRAINAGE AREA.--2,256 mi² (5,843 km²).

PERIOD OF RECORD.--October 1964 to current year. Prior to October 1970, published as West Fork Des Moines River at Humboldt.

GAGE.--Water-stage recorder. Datum of gage is 1,053.54 ft (321.12 m) above mean sea level. Prior to Oct. 3, 1966, nonrecording gage at same site and datum.

REMARKS.--Records fair except those for winter period, which are poor. Daily nonrecording gage readings available in district office for period Mar. 7, 1940, to Sept. 30, 1964. Discharge not published for this period because of extreme regulation at dam 700 ft (213 m) upstream from gage. Power generation and streamflow regulation discontinued August 1964. Low flow discharges occasionally affected by minor regulation. Several observations of water temperature were made during the year.

COOPERATION.--Six discharge measurements furnished by Corps of Engineers.

AVERAGE DISCHARGE.--12 years, 758 ft³/s (21.5 m³/s), 4.56 in/yr (116 mm/yr), 549,200 acre-ft/yr (677 hm³/yr); median of yearly mean discharges, 630 ft³/s (17.8 m³/s) 3.8 in/yr (97 mm/yr), 456,000 acre-ft/yr (562 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 18,000 ft³/s (510 m³/s) Apr. 14, 1969, gage height, 15.40 ft (4.694 m); minimum daily, 20 ft³/s (0.57 m³/s) Jan. 10-12, 1968.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of June 23, 1947, reached a stage of 12.2 ft (3.72 m), discharge, 11,000 ft³/s (312 m³/s) at present site and datum.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 2,070 ft³/s (58.6 m³/s) Mar. 15, gage height, 5.92 ft (1.804 m), no peak above base of 2,800 ft³/s (79.3 m³/s); minimum daily, 26 ft³/s (0.74 m³/s) Sept. 14, 18.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	66	58	102	57	40	280	1320	382	309	195	52	31
2	64	77	96	67	40	220	1180	377	270	162	52	29
3	59	79	108	67	42	160	1060	349	226	144	51	32
4	81	68	126	67	43	108	992	329	208	133	52	33
5	83	81	124	65	44	72	922	297	185	123	51	33
6	86	84	120	63	45	100	851	285	175	112	49	32
7	88	86	130	58	46	224	780	282	163	105	48	27
8	87	81	153	53	47	355	748	277	154	96	46	27
9	88	120	156	50	51	260	709	260	145	90	45	28
10	86	112	153	47	53	340	670	234	159	86	35	27
11	86	128	146	45	52	370	640	223	157	86	33	27
12	90	138	138	43	54	510	601	219	157	86	37	27
13	81	125	126	41	68	986	565	223	152	79	42	27
14	88	128	112	40	62	1240	546	223	143	81	40	26
15	70	130	96	37	72	2000	528	219	162	62	44	27
16	47	122	80	35	88	1340	519	221	131	52	42	27
17	84	128	80	38	99	961	534	213	127	56	41	27
18	81	125	84	40	113	930	505	202	122	54	41	26
19	75	112	89	41	128	970	456	200	154	52	86	35
20	86	144	90	41	190	1070	449	195	282	55	42	39
21	86	110	89	40	162	1260	431	193	248	57	37	42
22	79	80	65	40	150	1250	396	210	199	58	34	39
23	90	85	80	40	150	1170	335	244	168	56	36	34
24	68	90	76	39	180	1050	300	262	168	53	33	29
25	68	70	75	39	210	1050	392	290	139	52	34	28
26	75	82	74	39	256	1090	405	277	138	53	35	26
27	86	112	71	39	320	1270	401	253	145	51	36	26
28	64	128	70	40	348	1190	374	242	181	54	36	26
29	73	128	69	40	341	1090	378	235	268	57	35	26
30	66	116	68	39	---	1170	370	233	225	56	34	30
31	62	---	68	40	---	1320	---	252	---	53	32	---
TOTAL	2395	3127	3114	1440	3495	25506	18274	7901	5460	2511	1315	902
MEAN	77.3	104	100	46.5	121	823	612	255	182	81.0	42.4	30.1
MAX	90	144	136	67	348	2000	1320	382	309	195	86	42
MIN	47	58	65	35	40	72	300	193	122	51	32	26
CFSM	.03	.05	.04	.02	.05	.36	.27	.11	.08	.04	.02	.01
IN.	.04	.05	.05	.02	.06	.42	.30	.13	.09	.04	.02	.01
AC-FT	4750	6200	6180	2860	6930	50550	36440	15670	10930	4980	2610	1790
CAL YR 1975 TOTAL	250082			685	5920		.30	4.12	496000			
WTR YR 1976 TOTAL	75540			206	2000		.09	1.25	149800			

DES MOINES RIVER BASIN

05479000 EAST FORK DES MOINES RIVER AT DAKOTA CITY, IA

LOCATION.--Lat 42°43'26", long 94°11'30", in NW1/4 SE1/4 sec.6, T.91 N., R.28 W., Humboldt County, Hydrologic Unit 07100003, on right bank 50 ft (15 m) upstream from old mill dam, in city park at east edge of Dakota City, 500 ft (152 m) upstream from bridge on county highway P56, 0.6 mi (1.0 km) downstream from bridge on State Highway 3, 3.4 mi (5.5 km) upstream from confluence with Des Moines River, and at mile 333.8 (537.1 km) upstream from mouth of Des Moines River.

DRAINAGE AREA.--1,308 mi² (3,387 km²).

PERIOD OF RECORD.--March 1940 to current year. Prior to October 1954, published as "near Hardy".

REVISED RECORDS.--WSP 1438: Drainage area. WSP 1508: 1944, 1945-47 (M).

GAGE.--Water-stage recorder. Datum of gage is 1,038.71 ft (316.60 m) above mean sea level. Prior to Oct. 1, 1954, nonrecording gage at site 8 mi (12.9 km) upstream at different datum.

REMARKS.--Records good except those for winter period, which are poor. Several observations of water temperature were made during the year. National Weather service gage height telemeter at station.

COOPERATION.--Five discharge measurements furnished by Corps of Engineers.

AVERAGE DISCHARGE.--36 years, 487 ft³/s (13.8 m³/s), 5.06 in/yr (129 mm/yr), 352,800 acre-ft/yr (435 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 18,800 ft³/s (532 m³/s) June 21, 1954, gage height, 16.95 ft (5.166 m), from floodmark, site and datum then in use; minimum daily, 5.0 ft³/s (0.14 m³/s) Sept. 23, 1948.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of June 21, 1954, reached a stage of 24.02 ft (7.321 m), discharge, 17,400 ft³/s (493 m³/s) at present site. Flood of September 1938 reached a stage of 17.4 ft (5.30 m), discharge, about 22,000 ft³/s (623 m³/s) site and datum in use during the period 1940-54.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, about 900 ft³/s (25.5 m³/s) Mar. 13, gage height, 10.02 ft (3.054 m) backwater from ice, no peak above base of 1,500 ft³/s (42.5 m³/s); minimum daily, 5.1 ft³/s (0.14 m³/s) Sept. 13.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP		
1	27	33	37	43	26	51	696	291	190	114	25	9.9		
2	24	33	57	43	26	48	717	278	177	96	24	10		
3	24	31	60	42	27	39	636	252	162	81	21	9.2		
4	23	32	62	42	27	35	526	227	150	70	17	8.5		
5	23	32	55	42	28	39	440	212	139	62	16	9.1		
6	24	32	52	41	29	44	378	198	134	55	16	8.1		
7	23	32	63	39	29	45	336	186	131	51	15	6.7		
8	22	36	65	38	30	46	303	174	119	46	14	6.5		
9	28	40	62	36	31	45	268	166	109	41	14	8.2		
10	27	52	64	34	31	41	240	156	112	38	13	7.3		
11	25	55	57	33	32	40	222	148	109	35	12	6.6		
12	25	51	52	32	33	300	200	142	104	32	12	6.0		
13	26	41	62	30	35	600	184	146	132	29	14	5.1		
14	26	37	70	28	36	630	170	143	120	28	24	6.3		
15	27	38	58	26	44	582	162	139	242	28	19	7.8		
16	30	37	100	24	50	540	157	158	185	27	21	8.1		
17	29	36	90	25	54	553	178	174	139	26	22	7.0		
18	29	34	81	25	58	523	229	175	119	23	20	5.9		
19	29	33	79	25	61	461	238	170	102	24	19	8.6		
20	28	44	71	26	65	454	250	167	158	25	17	8.9		
21	28	48	64	26	60	482	274	161	344	25	14	8.1		
22	30	41	59	26	53	493	261	170	287	24	13	6.9		
23	32	34	55	26	50	426	255	261	200	22	12	6.5		
24	31	26	53	26	55	340	262	345	160	20	12	6.2		
25	32	31	51	27	52	277	300	321	130	19	12	6.2		
26	31	44	50	27	50	245	347	289	113	19	12	6.4		
27	32	38	49	27	52	351	359	259	112	20	11	6.6		
28	31	36	47	27	52	391	358	238	103	23	11	6.8		
29	32	37	45	27	51	338	339	224	99	25	9.8	7.1		
30	31	37	44	26	---	408	318	215	107	36	9.4	7.4		
31	32	---	43	26	---	603	---	204	---	33	10	---		
TOTAL	861	1131	1857	965	1227	9470	9603	6389	4488	1198	481.2	222.0		
MEAN	27.8	37.7	59.9	31.1	42.3	305	320	206	150	38.6	15.5	7.40		
MAX	32	55	100	43	65	630	717	345	344	114	25	10		
MIN	22	26	37	24	26	35	157	139	99	19	9.4	5.1		
CFSM	.02	.03	.05	.02	.03	.23	.24	.16	.11	.03	.01	.005		
IN.	.02	.03	.05	.03	.03	.27	.27	.18	.13	.03	.01	.006		
AC-FT	1710	2240	3680	1910	2430	18780	19050	12670	8900	2380	954	440		
CAL YR 1975	TOTAL	181581.0	MEAN	497	MAX	3790	MIN	14	CFSM	.38	IN	5.16	AC-FT	360200
WTR YR 1976	TOTAL	37892.2	MEAN	104	MAX	717	MIN	5.1	CFSM	.08	IN	1.08	AC-FT	75160

05480000 LIZARD CREEK NEAR CLARE, IA

LOCATION.--Lat 42°32'35", long 94°20'45", in NE1/4 NE1/4 sec.11, T.89 N., R.30 W., Webster County, Hydrologic Unit 07100004, on right bank 20 ft (6 m) downstream from bridge on county highway, 2.3 mi (3.7 km) downstream from Drainage ditch 3, 3.0 mi (4.8 km) south of Clare, and 8.2 mi (13.2 km) upstream from South Lizard Creek.

DRAINAGE AREA.--257 mi² (666 km²).

PERIOD OF RECORD.--March 1940 to current year. Prior to April 1940, monthly discharge only, published in WSP 1308. Prior to October 1954, published as North Lizard Creek near Clare.

REVISED RECORDS.--WSP 1508: 1940, 1942, 1944-46 (M), 1947-48.

GAGE.--Water-stage recorder and concrete control. Datum of gage is 1,079.30 ft (328.97 m) above mean sea level. Prior to May 6, 1953, nonrecording gage at same site and datum.

REMARKS.--Records good except those for winter period, which are poor. Several observations of water temperature were made during the year.

COOPERATION.--Six discharge measurements furnished by Corps of Engineers.

AVERAGE DISCHARGE.--36 years, 96.3 ft³/s (2.73 m³/s), 5.09 in/yr (129 mm/yr) 69,770 acre-ft/yr (86.0 hm³/yr); median of yearly mean discharges, 82 ft³/s (2.32 m³/s); 4.3 in/yr (109 mm/yr), 59,400 acre-ft/yr (73.2 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 10,000 ft³/s (283 m³/s) June 23, 1947, gage height, 16.0 ft (4.88 m), from floodmark, from rating curve extended above 5,300 ft³/s (150 m³/s); no flow Sept. 30, 1943, Aug. 27-29, 1956, Jan. 15, 16, 1968.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 208 ft³/s (5.89 m³/s) June 30, gage height, 4.15 ft (1.265 m), no peak above base of 800 ft³/s (22.6 m³/s); minimum daily, 0.05 ft³/s (0.001 m³/s) Sept. 7.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.2	2.7	8.3	4.8	1.6	14	92	40	56	82	2.2	.23
2	3.1	2.8	8.4	4.5	1.7	13	79	39	50	56	2.4	.20
3	2.1	2.2	8.1	4.2	1.8	13	70	37	46	43	2.1	.18
4	1.5	2.2	7.9	3.8	2.0	12	61	33	43	40	1.8	.13
5	1.4	2.2	7.6	3.3	1.2	10	56	32	41	37	1.9	.11
6	1.2	2.3	7.4	2.8	.52	8.2	51	31	39	32	1.7	.09
7	1.1	3.1	7.4	2.0	.42	7.2	49	28	36	30	1.4	.05
8	.98	6.6	7.4	1.4	.35	6.2	41	25	34	27	1.6	.10
9	.98	11	7.2	1.2	.32	7.5	38	24	32	23	1.3	.19
10	1.0	12	7.1	1.0	.31	8.8	35	23	31	20	1.1	.17
11	1.3	21	7.0	1.0	.40	10	34	22	35	17	.76	.13
12	.70	17	6.9	1.1	.49	60	32	23	34	15	.63	.08
13	.67	13	6.7	1.1	.60	100	29	25	32	13	.65	.09
14	.72	11	6.6	1.2	.76	104	29	24	35	12	.52	.19
15	.84	9.2	6.6	1.2	1.1	87	30	37	70	9.9	1.3	.12
16	.72	9.3	6.6	1.2	1.5	88	28	49	53	9.1	2.5	.14
17	.71	12	6.6	1.1	2.2	80	29	52	41	8.4	3.4	.18
18	.73	12	6.6	1.1	3.0	83	44	50	37	7.0	1.8	.22
19	.84	12	6.7	1.1	3.9	82	39	44	32	5.8	1.8	13
20	.89	12	6.7	1.1	4.9	78	32	38	30	4.0	1.3	8.5
21	1.1	9.6	6.6	1.1	6.0	69	36	36	28	3.5	.64	5.8
22	1.1	6.8	6.5	1.2	7.4	60	34	47	27	3.7	.99	2.2
23	1.1	5.3	6.3	1.3	9.0	50	40	134	22	3.2	.70	.54
24	1.5	4.3	6.2	1.4	11	47	51	177	22	2.3	.47	.60
25	1.7	3.8	6.1	1.5	13	46	55	148	20	1.7	.39	.36
26	1.4	3.4	6.0	1.5	15	41	53	121	23	2.2	.35	.28
27	1.9	2.9	5.8	1.5	19	38	49	102	30	3.0	.31	.27
28	2.2	3.8	5.6	1.3	20	35	47	90	32	4.0	.29	.29
29	1.9	5.8	5.4	1.4	21	40	44	79	102	5.1	.23	.28
30	1.8	6.0	5.2	1.5	---	73	41	68	162	4.0	.18	.26
31	1.8	---	5.0	1.5	---	104	---	61	---	3.6	.15	---
TOTAL	43.18	229.3	208.5	55.4	150.47	1474.9	1348	1739	1276	527.5	36.86	34.98
MEAN	1.39	7.64	6.73	1.79	5.19	47.6	44.9	56.1	42.5	17.0	1.15	1.17
MAX	4.2	21	8.4	4.8	.21	104	92	177	162	82	3.4	13
MIN	.67	2.2	5.0	1.0	.31	6.2	28	22	20	1.7	.15	.05
CFSM	.005	.03	.03	.006	.02	.19	.17	.22	.17	.07	.004	.004
IN.	.006	.03	.03	.008	.02	.21	.20	.25	.18	.08	.005	.005
AC-FT	86	455	414	110	298	2930	2670	3450	2530	1050	73	69
CAL YR 1975 TOTAL	35525.58			MEAN 97.3	MAX 1940	MIN .67	CFSM .38	IN 5.14	AC-FT 70460			
WTR YR 1976 TOTAL	7124.09			MEAN 19.5	MAX 177	MIN .05	CFSM .08	IN 1.03	AC-FT 14130			

05480500 DES MOINES RIVER AT FORT DODGE, IA

LOCATION.--Lat 42°30'22", long 94°12'04", in NW1/4 SW1/4 sec.19, T.89 N., R.28 W., Webster County, Hydrologic Unit 07100004, on right bank 400 ft (122 m) upstream from Soldier Creek, 1,800 ft (549 m) downstream from Illinois Central Railroad bridge in Fort Dodge, 2,000 ft (610 m) downstream from Lizard Creek, and at mile 314.6 (506.2 km).

DRAINAGE AREA.--4,190 mi² (10,852 km²).

PERIOD OF RECORD.--April 1905 to July 1906 (no winter records), October 1913 to September 1927 (published as "at Kalo"), October 1946 to current year. Monthly discharge only for some periods, published in WSP 1308.

REVISED RECORDS.--WSP 1438: Drainage area. WSP 1308: 1924, 1925 (M).

GAGE.--Water-stage recorder. Datum of gage is 969.38 ft (295.47 m) above mean sea level. See WSP 1728 for history of changes prior to Dec. 8, 1949.

REMARKS.--Records good except those for winter period, which are poor. Occasional minor regulation caused by dam 0.8 mi (1.3 km) upstream from gage. Several observations of water temperature were made during the year. Corps of Engineers rain gage and gage height telemeters at station.

COOPERATION.--Six discharge measurements furnished by Corps of Engineers.

AVERAGE DISCHARGE.--44 years (1913-27, 1946-75), 1,365 ft³/s (38.7 m³/s) 4.42 in/yr (112 mm/yr), 988,900 acre-ft/yr (1,220 hm³/yr); median of yearly mean discharges, 1,170 ft³/s (33.1 m³/s), 3.8 in/yr (96 mm/yr), 848,000 acre-ft/yr (1,050 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 35,600 ft³/s (1,010 m³/s) Apr. 8, 1965, gage height, 17.79 ft (5.422 m); maximum gage height, 19.62 ft (5.980 m), from floodmark, June 23, 1947, present site and datum; minimum daily discharge, 14 ft³/s (0.40 m³/s) Nov. 3, 1955.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 2,640 ft³/s (74.8 m³/s) Mar. 15, gage height, 4.97 ft (1.515 m), no peak above base of 6,000 ft³/s (170 m³/s); minimum daily, 41 ft³/s (1.16 m³/s) Sept. 12.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	166	105	200	130	112	380	2160	823	694	615	101	47
2	107	109	218	128	118	310	2110	808	646	484	95	45
3	108	131	225	128	122	250	1900	751	593	403	92	46
4	115	129	234	126	124	218	1670	696	551	346	85	46
5	123	219	238	124	112	216	1470	672	516	311	85	47
6	127	128	238	122	96	220	1280	629	493	278	79	47
7	122	135	248	120	90	260	1170	599	476	256	77	48
8	122	135	260	118	98	350	1080	567	454	233	76	47
9	121	200	276	116	99	430	1010	543	431	211	74	46
10	125	238	268	114	106	456	947	521	449	192	75	43
11	121	228	273	110	114	457	894	497	454	181	72	42
12	121	248	257	106	127	760	840	491	429	170	63	41
13	127	216	230	104	145	1060	790	504	439	161	63	42
14	126	204	176	100	162	1610	756	491	492	154	77	44
15	122	203	140	97	182	2380	722	492	638	151	77	42
16	119	204	244	93	198	1950	639	638	629	123	69	43
17	115	199	250	90	210	1630	747	713	488	111	74	44
18	118	195	248	96	233	1510	918	666	439	111	72	44
19	121	190	200	104	250	1480	872	615	393	110	70	91
20	124	194	192	108	286	1550	844	581	466	111	106	77
21	125	200	178	110	355	1700	875	539	625	112	63	62
22	123	164	172	100	365	1750	814	697	613	114	56	64
23	129	150	164	90	380	1620	848	1460	495	109	55	57
24	136	134	160	104	300	1400	857	1600	458	102	54	54
25	135	120	154	106	276	1290	969	1300	405	95	51	49
26	104	120	152	104	330	1300	1020	1090	419	110	51	48
27	120	146	150	99	385	1450	994	939	475	102	49	50
28	124	180	148	100	390	1550	962	848	448	101	46	48
29	111	230	144	107	400	1430	912	774	602	100	44	47
30	111	218	136	113	---	1670	871	720	700	103	44	46
31	114	---	132	106	---	2020	---	668	---	112	44	---
TOTAL	3782	5276	6308	3373	6165	34657	31941	22932	15410	5872	2139	1497
MEAN	122	176	203	109	213	1118	1065	740	514	189	69.0	49.9
MAX	166	248	276	130	400	2380	2160	1600	700	615	106	91
MIN	104	105	132	90	90	216	639	491	393	95	44	41
CFSM	.03	.04	.05	.03	.05	.27	.25	.18	.12	.05	.02	.01
IN.	.03	.05	.06	.03	.05	.31	.28	.20	.14	.05	.02	.01
AC-FT	7500	10460	12510	6690	12230	68740	63350	45490	30570	11650	4240	2970
CAL YR 1975	TOTAL	496842	MEAN	1361	MAX	11800	MIN 69	CFSM .32	IN 4.41	AC-FT	985500	
WTR YR 1976	TOTAL	139352	MEAN	381	MAX	2380	MIN 41	CFSM .09	IN 1.24	AC-FT	276400	

05481000 BOONE RIVER NEAR WEBSTER CITY, IA

LOCATION.--Lat 42°26'01", long 93°48'12", in NW1/4 SE1/4 sec.18, T.88 N., R.25 W., Hamilton County, Hydrologic Unit 07100005, on right bank 100 ft (30 m) upstream from bridge on State Highway 17, 1.0 mi (1.6 km) southeast of junction of U.S. Highway 20 and State Highway 17 south of Webster City, and 3.2 mi (5.1 km) downstream from Brewers Creek.

DRAINAGE AREA.--844 mi² (2,185 km²).

PERIOD OF RECORD.--March 1940 to current year.

REVISED RECORDS.--WSP 1438: Drainage area. WSP 1308: 1940 (M), WSP 1708: 1956.

GAGE.--Water-stage recorder and concrete control. Datum of gage is 989.57 ft (301.62 m) above mean sea level. Prior to June 26, 1940, nonrecording gage at same site and datum.

REMARKS.--Records good except those for winter period, which are poor. Several observations of water temperature were made during the year. Corps of Engineers rain gage and gage height telemeters at station.

COOPERATION.--Seven discharge measurements furnished by Corps of Engineers.

AVERAGE DISCHARGE.--36 years, 380 ft³/s (10.8 m³/s), 6.11 in/yr (155 mm/yr), 275,300 acre-ft/yr (339 hm³/yr); median of yearly mean discharges, 300 ft³/s (8.50 m³/s), 4.8 in/yr (122 mm/yr), 217,000 acre-ft/yr (268 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 20,300 ft³/s (575 m³/s) June 22, 1954, gage height, 18.55 ft (5.654 m); minimum daily, 1.6 ft³/s (45 dm³/s) Sept. 30, Oct. 1, 1956.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since 1896, 19.1 ft (5.82 m) about June 10, 1918, from floodmarks. from information by local resident, discharge, 21,500 ft³/s (609 m³/s). Flood of June 18, 1932, reached a stage of 16.0 ft (4.88 m), discharge, 15,000 ft³/s (425 m³/s).

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,730 ft³/s (49.0 m³/s) May 23, gage height, 5.19 ft (1.582 m), from floodmark, no peak above base of 2,200 ft³/s (62.3 m³/s); minimum daily, 4.3 ft³/s (0.12 m³/s) Sept. 6, 7.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP		
1	22	82	86	33	15	50	1310	640	592	151	41	5.5		
2	16	85	74	32	15	46	1000	610	526	140	32	5.7		
3	17	93	69	30	15	43	712	540	474	122	31	5.3		
4	15	90	67	29	15	40	560	486	439	110	25	5.2		
5	15	89	66	28	16	37	458	463	407	100	21	4.9		
6	13	62	67	26	17	36	400	432	376	91	18	4.3		
7	11	25	70	25	18	35	322	360	350	80	17	4.3		
8	11	23	72	24	20	35	278	349	330	73	15	4.7		
9	9.7	52	72	23	23	36	253	334	306	68	13	4.9		
10	8.7	85	73	22	24	46	236	322	321	59	12	4.5		
11	9.9	77	71	21	25	70	220	309	339	52	19	4.4		
12	8.8	65	60	21	25	400	198	296	326	44	29	4.7		
13	10	55	59	20	26	560	185	301	336	40	25	6.1		
14	6.6	45	59	19	27	784	179	293	413	38	23	5.1		
15	6.9	41	58	18	30	605	349	263	567	36	19	4.5		
16	6.4	39	57	17	34	396	262	217	598	33	26	4.6		
17	7.7	35	55	17	38	270	291	557	676	31	22	4.8		
18	7.8	33	54	16	43	256	696	766	576	33	17	4.4		
19	12	33	52	16	48	270	776	729	441	30	17	23		
20	11	41	51	15	54	303	812	653	343	31	15	12		
21	8.7	41	50	15	60	307	812	630	298	30	13	14		
22	8.7	37	48	15	65	264	762	870	271	32	11	10		
23	9.0	40	46	15	66	204	772	1730	244	33	9.8	7.2		
24	13	45	45	15	60	176	660	1670	231	28	9.5	6.1		
25	11	48	43	15	60	159	1050	1370	216	25	9.3	5.0		
26	13	50	42	15	60	151	1220	1100	249	29	9.8	4.7		
27	11	44	40	15	64	140	1150	949	203	26	8.8	5.3		
28	12	39	38	15	67	151	938	826	189	26	7.9	5.8		
29	12	54	37	15	69	174	794	740	202	23	7.0	7.0		
30	40	66	36	15	---	391	701	670	170	24	6.6	6.4		
31	69	---	34	15	---	1060	---	641	---	28	6.2	---		
TOTAL	432.9	1614	1751	617	1099	7495	18559	20259	11009	1673	535.9	194.4		
MEAN	14.0	53.8	56.5	19.9	37.9	242	619	654	367	54.0	17.3	6.48		
MAX	69	93	86	33	69	1060	1310	1730	676	151	41	23		
MIN	6.4	23	34	15	15	35	179	283	170	23	6.2	4.3		
CFSM	.02	.06	.07	.02	.04	.29	.73	.77	.43	.06	.02	.007		
IN.	.02	.07	.08	.03	.05	.33	.82	.89	.49	.07	.02	.009		
AC-FT	859	3200	3470	1220	2180	14870	36610	40180	21840	3320	1060	386		
CAL YR 1975	TOTAL	149154.9	MEAN	409	MAX	5460	MIN	6.4	CFSM	.48	IN	6.57	AC-FT	295800
WTR YR 1976	TOTAL	65239.2	MEAN	178	MAX	1730	MIN	4.3	CFSM	.21	IN	2.88	AC-FT	129400

05481300 DES MOINES RIVER NEAR STRATFORD, IA

LOCATION.--Lat 42°15'04", long 93°59'52", in NW1/4 NE1/4 sec.21, T.86 N., R.27 W., Webster County, Hydrologic Unit 07100004, on right bank 6 ft (2 m) downstream from bridge on State Highway 175, 0.1 mi (0.2 km) downstream from Skillet Creek, 4.0 mi (6.4 km) southwest of Stratford, 7.3 mi (11.7 km) downstream from Boone River and at mile 276.7 (445.2 km).

DRAINAGE AREA.--5,452 mi² (14,120 km²).

PERIOD OF RECORD.--April 1920 to current year in reports of Geological Survey. Published as "near Boone" 1920-67. Monthly discharge only for some periods, published in WSP 1308. December 1904 to April 1920 (fragmentary gage heights during high-water periods only) in reports of U.S. Weather Bureau.

REVISED RECORDS.--WSP 1438: Drainage area. WSP 1508: 1925-27, 1934. WSP 1708: 1955.

GAGE.--Water-stage recorder. Datum of gage is 894.00 ft (272.49 m) above mean sea level. Prior to May 1, 1920, nonrecording gage 16.6 mi (26.7 km) downstream at datum 23.49 ft (7.16 m) lower. Oct. 9, 1924, to Jan. 10, 1933, nonrecording gage 17.6 mi (28.3 km) downstream at datum 28.53 ft (8.70 m) lower. Jan. 11, 1933, to Sept. 30, 1934, nonrecording gage 17.9 mi (28.8 km) downstream at datum 22.25 ft (6.78 m) lower. Oct. 1, 1934, to Feb. 6, 1935, nonrecording gage and Feb. 7, 1935 to Sept. 30, 1967, water-stage recorder 17.9 mi (28.8 km) downstream at datum 21.84 ft (6.66 m) lower.

REMARKS.--Records good except those for winter period, which are poor. Occasional minor regulation caused by dam at Fort Dodge. Several observations of water temperature were made during the year. Corps of Engineers rain gage and gage height telemeters at station.

COOPERATION.--Seven discharge measurements furnished by Corps of Engineers.

AVERAGE DISCHARGE.--56 years, 1,760 ft³/s (49.8 m³/s), 4.38 in/yr (111 mm/yr), 1,275,000 acre-ft/yr (1,570 hm³/yr); median of yearly mean discharges, 1,540 ft³/s (43.6 m³/s), 3.8 in/yr (97 mm/yr), 1,116,000 acre-ft/yr (1,380 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 57,400 ft³/s (1,630 m³/s) June 22, 1954, gage height, 25.35 ft (7.727 m), from graph based on hourly gage readings, site and datum then in use; no flow for a short time on Jan. 9, 25, 1938, caused by manipulation of gates in control dam, site then in use; minimum daily discharge, 17 ft³/s (0.48 m³/s) Jan. 28, 1940, unaffected by gate operation, site then in use.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of May 30, 1903, reached a stage of 25.4 ft (7.74 m), from high-water mark, site and datum then in use, discharge, 43,600 ft³/s (1,230 m³/s). Flood of June 22, 1954, reached a stage of 29.7 ft (9.05 m), from floodmark, present site and datum, discharge, 54,200 ft³/s (1,530 m³/s).

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 5,810 ft³/s (165 m³/s) May 24, gage height, 10.22 ft (3.115 m); no peak above base of 7,000 ft³/s (198 m³/s); minimum daily, 47 ft³/s (1.33 m³/s) Sept. 15.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP		
1	199	135	260	158	132	450	3790	2010	1800	1040	159	65		
2	195	147	254	152	136	400	3650	1900	1730	889	176	65		
3	167	163	250	150	140	300	3190	1760	1590	715	166	68		
4	139	175	252	148	140	260	2760	1600	1450	602	162	63		
5	139	191	254	146	140	254	2450	1510	1360	518	148	65		
6	141	460	256	144	128	286	2220	1430	1270	475	139	59		
7	149	135	260	142	120	340	2030	1330	1230	427	133	57		
8	151	167	270	142	120	400	1850	1250	1150	387	124	57		
9	145	175	330	142	124	450	1710	1190	1100	349	130	61		
10	141	260	340	140	130	475	1590	1150	1100	316	127	61		
11	147	385	330	140	134	510	1500	1100	1130	274	127	57		
12	147	332	316	138	152	1080	1410	1050	1130	260	162	53		
13	147	314	286	134	170	1600	1330	1080	1440	241	162	53		
14	143	300	254	126	192	2200	1280	1050	2230	225	127	49		
15	151	264	240	124	204	2700	1320	1010	1750	213	118	47		
16	147	238	284	124	222	2890	1360	1120	1710	206	130	51		
17	139	233	320	122	240	2350	1180	1510	1620	192	127	51		
18	135	224	320	120	270	2070	2110	1910	1450	175	139	49		
19	139	243	318	120	302	2060	2420	1900	1190	162	127	98		
20	135	287	306	118	320	2100	2240	1720	1010	167	118	142		
21	127	350	296	120	240	2150	2260	1560	971	195	133	136		
22	131	260	280	124	420	2280	2210	1660	1090	160	121	96		
23	135	222	264	130	390	2210	2130	3600	1020	155	102	84		
24	183	206	246	134	400	2010	2250	5590	875	156	95	84		
25	183	200	224	136	365	1790	2310	4560	801	143	92	78		
26	175	206	206	132	375	1720	2500	3620	762	135	90	72		
27	171	224	194	128	430	1700	2460	2960	820	155	82	72		
28	175	250	182	124	440	1910	2400	2560	779	155	78	70		
29	167	284	176	120	450	1970	2340	2320	769	147	65	68		
30	147	274	170	122	---	2410	2160	2090	1100	163	65	63		
31	143	---	164	128	---	3150	---	1920	---	170	63	---		
TOTAL	4753	7304	8102	4128	7026	46475	64410	61020	37437	9567	3787	2084		
MEAN	153	243	261	133	242	1499	2147	1968	1248	309	122	69.5		
MAX	199	460	340	158	450	3150	3790	5590	2230	1040	176	142		
MIN	127	135	164	118	120	254	1180	1010	762	135	63	47		
CFSM	.03	.04	.05	.02	.04	.27	.39	.36	.23	.06	.02	.01		
IN.	.03	.05	.06	.03	.05	.32	.44	.42	.26	.07	.03	.01		
AC-FT	9430	14490	16070	8190	13940	92160	127800	121000	74260	18980	7510	4130		
CAL YR 1975	TOTAL	784292	MEAN	2149	MAX	19000	MIN	127	CFSM	.39	IN	5.35	AC-FT	1556000
WTR YR 1976	TOTAL	256093	MEAN	700	MAX	5590	MIN	47	CFSM	.13	IN	1.75	AC-FT	508000

DES MOINES RIVER BASIN

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05481650 DES MOINES RIVER NEAR SAYLORVILLE, IA

LOCATION.--Lat 41°40'50", long 93°40'07", near center of sec.5, T.79 N., R.24 W., Polk County, Hydrologic Unit 07100004, near center of span on downstream side of bridge on county highway F42, 2.0 mi (3.2 km) west of Saylorville, 2.1 mi (3.4 km) downstream from Rock Creek, 2.4 mi (3.9 km) upstream from Beaver Creek, and at mile 211.6 (340.5 km).

DRAINAGE AREA.--5,841 mi² (15,128 km²).

PERIOD OF RECORD.--October 1961 to current year.

GAGE.--Water-stage recorder. Datum of gage is 787.42 ft (240.01 m) above mean sea level (levels by Corps of Engineers). Prior to Aug. 6, 1970, nonrecording gage at same site and datum.

REMARKS.--Records good except those for winter period, which are fair. Several observations of water temperature were made during the year. Corps of Engineers gage height telemeter at station.

COOPERATION.--Fourteen discharge measurements furnished by Corps of Engineers.

AVERAGE DISCHARGE.--15 years, 2,546 ft³/s (72.10 m³/s), 5.93 in/yr (151 mm/yr), 1,845,000 acre-ft/yr (2,280 hm³/yr); median of yearly mean discharges, 2,410 ft³/s (68.3 m³/s) 5.6 in/yr (142 mm/yr), 1,746,000 acre-ft/yr (2,150 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 47,400 ft³/s (1,340 m³/s) Apr. 10, 1965, gage height, 24.02 ft (7.321 m); minimum daily, 44 ft³/s (1.25 m³/s) Jan. 10, 1968.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since at least 1893, 24.5 ft (7.47 m), present gage datum, June 24, 1954, from floodmarks, discharge, 60,000 ft³/s (1,700 m³/s).

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 4,820 ft³/s (137 m³/s) May 26, gage height, 10.53 ft (3.21 m), no peak above base of 8,000 ft³/s (226 m³/s); minimum daily, 59 ft³/s (1.67 m³/s) Sept. 12-14.

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

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	227	140	232	190	135	614	3040	2570	2180	1210	203	94
2	208	135	267	175	160	609	3450	2320	1980	1190	203	80
3	202	137	390	160	170	580	3630	2110	1850	1070	191	79
4	204	143	383	155	150	444	3590	1980	1690	909	180	76
5	191	143	457	150	140	354	3300	1830	1550	784	187	70
6	164	146	414	150	140	345	2920	1700	1410	698	176	65
7	155	159	371	150	150	374	2550	1580	1310	624	165	65
8	155	232	314	145	140	405	2240	1470	1230	569	150	64
9	156	184	327	150	130	415	2020	1370	1140	519	150	64
10	151	340	382	150	135	461	1850	1330	1300	487	184	64
11	144	262	368	160	140	575	1720	1270	1560	452	184	62
12	143	350	354	160	150	896	1590	1230	1300	415	195	53
13	144	352	340	150	180	1540	1500	1230	1680	385	199	59
14	141	329	354	145	190	2040	1420	1210	2690	363	215	59
15	120	326	290	145	235	2190	1630	1180	3670	343	211	60
16	133	312	220	145	290	2570	1550	1220	3410	318	150	61
17	136	292	185	145	306	2880	1740	1260	2810	301	135	60
18	135	282	275	150	312	2700	3470	1450	2330	288	139	59
19	132	275	370	150	335	2370	3600	1810	1980	271	139	65
20	132	279	420	155	352	2190	3480	1970	1660	256	148	72
21	132	287	445	150	284	2130	3590	1680	1390	330	136	91
22	136	294	390	145	250	2110	3540	1830	1240	391	131	102
23	141	313	335	145	371	2200	3300	2420	1250	326	129	129
24	150	290	305	140	584	2230	4060	3340	1270	256	153	117
25	155	248	275	140	557	2090	4150	4420	1150	235	127	101
26	147	170	265	160	506	1890	3920	4780	1020	223	120	96
27	145	160	250	155	489	1730	3700	4550	975	219	117	96
28	147	187	235	145	560	1660	3540	4050	1200	286	110	95
29	145	291	230	140	620	1760	3210	3430	1000	308	104	89
30	130	312	210	130	---	2230	2860	2890	1330	281	96	84
31	133	---	205	125	---	2680	---	2470	---	211	96	---
TOTAL	4753	7370	9858	4655	8161	47262	86160	68160	50555	14518	4823	2337
MEAN	153	246	318	150	281	1525	2872	2199	1685	468	156	77.9
MAX	227	352	457	190	620	2680	4150	4780	3670	1210	215	129
MIN	130	135	185	125	130	345	1420	1180	975	211	96	59
CFSM	.03	.04	.05	.03	.05	.26	.49	.38	.29	.08	.03	.01
IN.	.03	.05	.06	.03	.05	.30	.65	.43	.32	.09	.03	.01
AC-FT	9420	14620	19550	9230	16190	93740	170900	135200	100300	28800	9570	4640
CAL YR 1975 TOTAL	874573			2396	MAX	18900	MIN	130	CFSM .41	IN 5.57	AC-FT	1735000
WTR YR 1976 TOTAL	308612			843	MAX	4780	MIN	59	CFSM .14	IN 1.97	AC-FT	612100

DES MOINES RIVER BASIN

05481650 DES MOINES RIVER NEAR SAYLORVILLE, IA--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD: Water years 1962 to current year.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: December 1967 to September 1971, October 1971 to current year.

WATER TEMPERATURES: October 1961 to September 1971, October 1971 to current year.

SUSPENDED-SEDIMENT DISCHARGE: October 1961 to current year.

REMARKS.--Records of specific conductance are obtained from suspended-sediment samples at time of analysis. During periods of ice effect, sediment samples are collected in open water channel.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE (1967-71): Maximum daily, 1,350 micromhos Jan. 19-21, 1968; minimum daily, 90 micromhos Feb. 19, 1971.

WATER TEMPERATURES (1967-71): Maximum daily, 36.0°C June 29, 1971; minimum daily, 0.0°C on many days during winter periods each year.

SEDIMENT CONCENTRATIONS: Maximum daily mean, 5,400 mg/L May 14, 1970; minimum daily mean, 1 mg/L Jan. 8, 1965.

SEDIMENT LOADS: Maximum daily, 148,000 tons (134,000 tonnes) June 12, 1966; minimum daily, 1 ton (0.91 tonne) Jan. 8, 1965, Feb. 8-12, 23, 1967.

EXTREMES FOR CURRENT YEAR:

SEDIMENT CONCENTRATIONS: Maximum daily mean, 1,200 mg/L June 15; minimum daily mean, 11 mg/L Feb. 6-8.

SEDIMENT LOADS: Maximum daily, 11,900 tons (10,800 tonnes) June 15; minimum daily, 3.7 tons (3.4 tonnes) Sept. 11.

WATER QUALITY DATA, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	730	---	---	---	---	620	575	---	---	---	---
2	700	---	---	790	800	---	630	580	675	---	---	600
3	700	---	---	810	---	---	630	600	---	---	600	---
4	---	---	---	830	---	---	630	600	560	---	---	---
5	---	730	---	---	850	---	630	630	---	---	---	---
6	---	---	---	860	---	700	610	630	550	---	580	---
7	---	---	---	---	850	---	600	630	550	---	---	600
8	---	---	---	920	---	700	---	---	550	---	---	600
9	750	---	---	---	850	---	600	600	560	---	580	---
10	---	740	680	900	---	715	620	600	520	---	---	650
11	750	750	800	---	---	700	640	580	---	---	550	---
12	---	---	825	---	---	---	650	600	---	520	---	---
13	750	---	810	900	840	---	650	580	---	---	580	620
14	---	---	735	---	---	---	660	---	---	540	---	---
15	750	---	750	900	700	750	650	---	440	---	---	---
16	---	---	750	---	---	560	600	490	---	610	560	760
17	---	---	715	900	700	370	---	---	540	---	---	---
18	750	---	---	---	700	445	580	620	---	---	560	---
19	---	---	---	900	---	460	---	620	560	610	---	---
20	750	---	---	890	700	490	570	600	---	620	580	---
21	---	---	---	---	---	---	---	600	560	600	---	600
22	750	---	790	860	700	510	590	600	610	---	620	---
23	740	---	---	870	---	580	590	---	600	580	---	---
24	---	---	---	870	---	580	570	600	---	---	---	595
25	740	---	---	---	---	580	570	590	560	---	620	---
26	---	---	750	850	---	590	570	580	560	620	---	600
27	---	---	---	---	700	600	580	560	---	---	---	580
28	---	---	790	840	---	---	560	---	560	---	620	675
29	730	---	800	---	700	600	570	---	540	600	---	---
30	---	---	---	800	---	600	600	---	---	---	600	---
31	---	---	800	780	---	---	---	620	---	600	---	---
MONTH	---	---	---	---	---	---	607	---	---	---	---	---

05481650 DES MOINES RIVER NEAR SAYLORVILLE, IA--Continued

WATER-QUALITY RECORDS

WATER QUALITY DATA, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	18.5	---	---	---	---	10.0	14.5	---	---	---	---
2	14.0	---	---	0.0	0.0	---	10.0	10.0	21.5	---	---	25.0
3	11.0	---	---	0.0	---	---	10.0	11.0	23.0	---	25.0	---
4	---	---	---	0.0	---	---	10.0	14.0	24.0	---	---	---
5	---	17.0	---	---	---	---	11.0	15.5	---	---	---	---
6	---	---	---	0.0	---	2.0	12.0	15.0	25.0	---	26.0	---
7	---	---	---	---	0.0	---	12.0	15.0	25.5	---	---	26.0
8	---	---	---	0.0	---	2.0	---	---	25.5	---	---	24.5
9	19.0	---	---	---	1.0	---	13.0	16.0	26.0	---	23.0	---
10	---	9.0	1.0	0.0	---	3.5	13.0	18.0	24.0	---	---	24.0
11	20.0	8.0	0.0	---	---	3.5	13.0	19.0	---	---	23.5	---
12	---	---	0.0	---	---	---	12.0	17.0	---	30.0	---	---
13	22.0	---	0.0	0.0	1.0	---	14.0	16.0	---	---	23.0	23.0
14	---	---	0.0	---	---	---	17.0	---	---	29.0	---	---
15	16.0	---	0.0	0.0	1.5	1.5	18.0	---	20.5	---	---	---
16	---	---	0.0	---	---	1.5	19.0	---	20.0	27.0	23.0	20.5
17	---	---	0.0	0.0	1.5	3.0	15.0	---	23.0	---	---	---
18	16.0	---	---	---	2.0	4.5	15.0	18.0	---	---	24.0	---
19	---	---	---	0.0	---	4.0	15.0	20.0	24.0	25.5	---	---
20	15.0	---	---	0.0	2.0	9.0	14.0	21.5	---	27.0	25.0	---
21	---	---	---	---	---	---	---	22.0	24.5	25.5	---	16.0
22	17.0	---	0.0	0.0	3.0	9.0	14.0	19.0	24.5	---	26.5	---
23	18.0	---	---	0.0	---	9.0	14.0	---	24.0	27.0	---	---
24	---	---	---	0.0	---	10.0	13.0	16.5	---	---	---	15.0
25	18.0	---	---	---	---	10.0	12.0	11.0	25.0	---	27.0	---
26	---	---	0.0	0.0	---	10.0	12.0	18.0	26.0	26.5	---	16.0
27	---	---	---	---	5.0	10.0	12.0	20.0	---	---	---	14.0
28	---	---	0.0	0.0	---	---	13.0	---	26.0	---	26.0	15.0
29	19.0	---	0.0	---	4.5	10.0	14.0	---	24.0	27.0	---	---
30	---	---	---	0.0	---	9.0	14.0	---	---	---	25.0	---
31	---	---	0.0	0.0	---	8.0	---	20.0	---	28.5	---	---
MONTH	---	---	---	---	---	---	13.5	---	---	---	---	---

DATE	TIME	INSTANTANEOUS DIS- CHARGE (CFS) (00061)	TOTAL CAL- CIUM (CA) (MG/L) (00916)	TOTAL MAG- NE- SIUM (MG) (MG/L) (00927)	TOTAL SODIUM (NA) (MG/L) (00929)	TOTAL PO- TAS- SIUM (K) (MG/L) (00937)	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)
OCT											
14...	1100	150	71	39	--	3.9	235	--	193	150	47
NOV											
10...	1335	230	74	35	--	3.9	245	--	201	120	45
DEC											
10...	1100	360	94	30	--	3.6	299	--	245	120	48
JAN											
14...	0730	160	120	48	--	3.9	455	--	373	160	62
FEB											
18...	1030	220	73	28	--	3.2	265	--	217	98	39
MAR											
30...	0820	2090	93	79	--	4.0	206	--	169	100	24
MAY											
03...	1110	2100	90	31	14	2.7	248	--	203	81	30
JUN											
02...	1020	1910	99	32	12	2.0	208	--	171	65	30
30...	1015	1400	88	31	14	4.5	179	--	147	61	26
AUG											
04...	1230	200	71	36	31	4.2	264	--	217	100	40
31...	0945	70	64	30	38	4.2	280	0	230	110	57
SEP											
27...	1135	100	57	33	50	4.8	214	0	176	130	68

DES MOINES RIVER BASIN
05481650 DES MOINES RIVER NEAR SAYLORVILLE, IA--Continued

WATER-QUALITY RECORDS

WATER QUALITY DATA, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976

DATE	TOTAL RESI- DUE (MG/L) (00500)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS) (00095)	PH (UNITS) (00400)	TEMPER- ATURE (DEG C) (00010)	TUR- BID- ITY (NTU) (00076)	DIS- SOLVED OXYGEN (MG/L) (00300)	PER- CENT SATUR- ATION (00301)	CHEM- ICAL OXYGEN DEMAND (HIGH LEVEL) (MG/L) (00340)	CARBON DIOXIDE (CO2) (MG/L) (00405)	FECAL COLI- FORM (COL. PER 100 ML) (31616)
OCT 14...	574	580	8.6	19.0	20	8.3	89	34	.9	100
NOV 10...	532	500	8.2	10.0	25	12.0	106	22	2.5	3500
DEC 10...	561	800	9.0	1.0	10	18.6	131	14	.5	75
JAN 14...	774	800	8.1	.0	4	20.0	135	21	5.8	150
FEB 18...	464	500	8.8	2.0	4	14.5	105	10	.7	30
MAR 30...	546	580	8.1	8.0	40	11.6	97	16	2.6	480
MAY 03...	544	680	8.6	8.0	20	12.4	110	30	1.0	80
JUN 02...	576	500	8.6	21.5	45	11.6	130	23	.8	430
30...	1030	460	7.9	22.0	90	10.0	114	31	3.6	2400
AUG 04...	534	540	8.4	24.5	25	--	--	22	1.7	50
31...	614	800	8.4	23.0	20	7.1	82	17	1.8	45
SEP 27...	569	720	8.2	15.0	20	7.8	76	21	2.2	30

DATE	TOTAL NITRITE PLUS NITRATE (N) (MG/L) (00630)	TOTAL AMMONIA NITRO- GEN (N) (MG/L) (00610)	TOTAL ORGANIC NITRO- GEN (N) (MG/L) (00605)	TOTAL KJEL- DAHL- NITRO- GEN (N) (MG/L) (00625)	TOTAL NITRO- GEN (N) (MG/L) (00600)	TOTAL NITRO- GEN (NO3) (N) (MG/L) (71887)	TOTAL PHOS- PHORUS (P) (MG/L) (00665)	DIS- SOLVED SOLIDS (RESI- DUE AT 180 C) (MG/L) (70300)	DIS- SOLVED SOLIDS (TONS AC-FT) (70303)	DIS- SOLVED SOLIDS (TONS PER DAY) (70302)
OCT 14...	.01	.00	1.5	1.5	1.5	6.7	.26	478	.65	194
NOV 10...	.00	.00	1.8	1.8	1.8	8.0	.31	464	.63	288
DEC 10...	1.2	.02	3.6	3.6	4.8	21	.34	539	.73	524
JAN 14...	2.9	.10	1.2	1.3	4.2	19	.33	746	1.01	322
FEB 18...	.98	.03	.59	.62	1.6	7.1	.23	446	.61	265
MAR 30...	3.6	.16	1.5	1.7	5.3	23	.26	420	.57	2370
MAY 03...	8.2	.04	1.7	1.7	9.9	44	.17	438	.60	2480
JUN 02...	12	.08	2.1	2.2	14	63	.20	430	.58	2220
30...	6.3	.16	3.8	4.0	10	46	.69	338	.46	1280
AUG 04...	.01	.02	1.5	1.5	1.5	6.7	.20	436	.59	235
31...	.00	.01	1.2	1.2	1.2	5.3	.18	526	.72	99.4
SEP 27...	.00	.00	1.3	1.3	1.3	5.8	.21	484	.66	131

WATER QUALITY DATA, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976

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 (30153)	BED MAT. FALL DIAM. % FINER THAN .125 MM (80159)	BED MAT. FALL DIAM. % FINER THAN .250 MM (80160)	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 (80165)	BED MAT. SIEVE DIAM. % FINER THAN 4.00 MM (80170)	BED MAT. SIEVE DIAM. % FINER THAN 8.00 MM (80171)
NOV. 11...	1420	8.0	4	241	0	1	13	59	68	93	99	100
MAR. 18...	1035	4.0	5	2630	1	3	10	45	75	83	93	100

05481650 DES MOINES RIVER NEAR SAYLORVILLE, IA--Continued

WATER-QUALITY RECORDS

WATER QUALITY DATA, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976

SUSPENDED-SEDIMENT DISCHARGE (TONS/DAY), WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976

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	227	40	25	140	46	17	232	77	48
2	208	36	20	135	52	19	267	66	48
3	202	47	26	137	49	18	390	72	76
4	204	52	29	143	48	19	383	60	62
5	191	53	27	143	51	20	457	64	79
6	164	51	23	146	50	20	414	56	63
7	155	50	21	159	52	22	371	58	58
8	155	50	21	232	95	60	314	50	42
9	156	48	20	184	64	32	327	43	38
10	151	55	22	340	56	51	382	46	47
11	144	63	24	262	55	39	368	64	64
12	143	65	25	350	78	74	351	84	80
13	144	65	25	352	68	65	340	163	150
14	141	65	25	329	57	51	354	118	113
15	139	63	24	326	43	38	290	81	63
16	133	57	20	312	40	34	220	61	36
17	136	50	18	292	38	30	185	69	34
18	135	36	13	282	37	28	275	82	61
19	132	30	11	275	39	29	370	96	96
20	132	41	15	279	39	29	420	98	111
21	132	53	19	287	49	38	445	88	106
22	136	53	19	294	53	42	390	69	73
23	141	60	23	313	69	58	335	64	58
24	150	66	27	290	73	57	305	67	55
25	155	55	23	248	65	44	275	80	59
26	147	48	19	170	43	20	265	80	57
27	145	52	20	160	38	16	250	70	47
28	147	48	19	187	56	28	235	73	46
29	145	48	19	291	88	69	230	72	45
30	130	42	15	312	94	79	210	67	38
31	133	37	13	---	---	---	205	69	38
TOTAL	4753	---	650	7370	---	1146	9858	---	1991

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	190	69	35	135	33	12	614	17	28
2	175	98	46	160	29	13	609	19	31
3	160	99	43	170	25	11	580	20	31
4	155	118	49	150	18	7.3	444	18	22
5	150	130	53	140	12	4.5	354	16	15
6	150	122	49	140	11	4.2	345	21	20
7	150	133	54	150	11	4.5	374	22	22
8	145	160	63	140	11	4.2	405	25	27
9	150	168	68	130	22	7.7	415	31	35
10	150	173	70	135	23	8.4	461	48	60
11	160	160	69	140	16	6.0	575	24	37
12	160	144	62	150	23	9.3	896	81	196
13	150	130	53	180	56	27	1540	135	561
14	145	130	51	190	68	35	2040	129	711
15	145	135	53	235	70	44	2190	120	710
16	145	138	54	290	59	46	2570	875	6070
17	145	138	54	306	46	38	2880	752	5850
18	150	134	54	312	16	13	2700	425	3100
19	150	117	47	335	20	18	2370	535	3420
20	155	108	45	352	57	54	2190	342	2020
21	150	107	43	284	83	64	2130	320	1840
22	145	109	42	250	78	53	2110	418	2380
23	145	103	40	371	65	85	2200	244	1450
24	140	97	37	584	95	150	2230	210	1260
25	140	77	29	557	92	138	2090	350	1980
26	160	88	38	506	72	98	1890	168	857
27	155	77	32	489	43	57	1730	202	944
28	145	78	31	560	25	38	1660	183	820
29	140	71	27	620	14	23	1760	148	703
30	130	55	19	---	---	---	2230	415	2500
31	125	39	13	---	---	---	2680	508	3680
TOTAL	4655	---	1423	8161	---	1073.1	47262	---	41380

DES MOINES RIVER BASIN
05481650 DES MOINES RIVER NEAR SAYLORVILLE, IA--Continued
WATER-QUALITY RECORDS

WATER QUALITY DATA, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976

SUSPENDED-SEDIMENT DISCHARGE (TONS/DAY), WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976

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	3040	338	2770	2570	214	1480	2180	179	1050
2	3450	440	4100	2320	165	1030	1980	173	925
3	3630	360	3530	2110	192	1090	1850	139	694
4	3590	340	3300	1980	241	1290	1690	71	324
5	3300	373	3320	1830	220	1090	1550	110	460
6	2920	259	2040	1700	170	780	1410	149	567
7	2550	190	1310	1580	138	589	1310	178	630
8	2240	159	962	1470	99	393	1230	190	631
9	2020	137	747	1370	65	240	1140	198	609
10	1850	127	634	1330	190	682	1300	300	1050
11	1720	124	576	1270	210	720	1560	388	1630
12	1590	111	477	1230	156	518	1300	217	762
13	1500	95	385	1230	188	624	1680	384	1740
14	1420	163	625	1210	187	611	2690	755	5480
15	1630	528	2320	1180	150	478	3670	1200	11900
16	1550	390	1630	1220	168	553	3410	620	5710
17	1740	535	2510	1260	222	755	2810	582	4420
18	3470	1080	10100	1450	99	388	2330	575	3620
19	3600	468	4550	1810	158	772	1980	510	2730
20	3480	279	2620	1970	170	904	1660	583	2610
21	3590	258	2500	1880	89	452	1390	717	2690
22	3540	282	2700	1830	242	1200	1240	562	1880
23	3300	497	4430	2420	509	3330	1250	543	1830
24	4060	540	5920	3340	439	3960	1270	540	1850
25	4150	391	4380	4430	320	3830	1150	216	671
26	3920	320	3390	4780	255	3290	1020	374	1030
27	3700	262	2620	4550	198	2430	975	460	1210
28	3540	214	2050	4050	190	2080	1200	483	1560
29	3210	200	1730	3430	190	1760	1000	552	1490
30	2860	148	1140	2890	187	1460	1330	692	2480
31	---	---	---	2470	182	1210	---	---	---
TOTAL	86160	---	79366	68160	---	39989	50555	---	64233

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	1210	660	2160	236	140	89	94	65	16
2	1190	594	1910	235	114	72	80	65	14
3	1070	490	1420	218	88	52	79	52	11
4	909	405	994	204	118	65	76	46	9.4
5	784	352	745	207	148	83	70	41	7.7
6	698	300	565	196	124	66	65	68	12
7	624	257	433	182	122	60	65	89	16
8	569	210	323	169	137	63	64	77	13
9	519	176	247	168	140	64	64	54	9.3
10	487	145	191	204	144	79	64	28	4.8
11	452	128	156	205	53	29	62	22	3.7
12	415	112	125	214	68	39	59	37	5.9
13	385	100	104	221	80	48	59	52	8.3
14	363	88	86	235	101	64	59	64	10
15	343	78	72	230	106	66	60	70	11
16	318	72	62	164	87	39	61	75	12
17	301	70	57	135	75	27	60	70	11
18	288	70	54	139	60	23	59	63	10
19	271	102	75	139	80	30	65	54	9.5
20	256	104	72	148	86	34	72	40	7.8
21	376	216	219	136	79	29	91	41	10
22	442	228	272	131	76	27	102	48	13
23	371	168	168	129	73	25	129	48	17
24	299	151	122	153	95	39	117	45	14
25	277	132	99	127	96	33	101	44	12
26	265	116	83	120	87	28	96	50	13
27	262	102	72	117	81	26	96	44	11
28	329	128	114	110	72	21	95	43	11
29	354	92	88	104	63	18	89	47	11
30	324	59	52	96	56	15	84	47	11
31	248	102	68	96	58	15	---	---	---
TOTAL	14999	---	11208	5168	---	1368	2337	---	325.4
YEAR	309438.0		244152.5						

05481950 BEAVER CREEK NEAR GRIMES, IA

LOCATION.--Lat 41°41'18", long 93°44'08", in SW1/4 SW1/4 sec.35, T.80 N., R.25 W., Polk County, Hydrologic Unit 07100004, on right bank 6 ft (2 m) upstream from bridge on Northwest 70th Avenue, 0.5 mi (0.8 km) downstream from Little Beaver Creek, 2.5 mi (4.0 km) east of Grimes and 6 mi (9.7 km) upstream from mouth.

DRAINAGE AREA.--358 mi² (927 km²).

PERIOD OF RECORD.--April 1960 to current year.

GAGE.--Water-stage recorder and concrete and steel sheeting broad-crested control. Datum of gage is 806.98 ft (245.968 m) above mean sea level. Prior to Aug. 31, 1966, nonrecording gage at same site and datum.

REMARKS.--Records good except those for winter period, which are poor. Several observations of water temperature were made during the year. Corps of Engineers gage height telemeter at station.

COOPERATION.--Thirteen discharge measurements furnished by Corps of Engineers.

AVERAGE DISCHARGE.--16 years, 203 ft³/s (5.748 m³/s), 7.70 in/yr (196 mm/yr), 147,100 acre-ft/yr (181 hm³/yr); median of yearly mean discharges, 180 ft³/s (5.10 m³/s) 6.8 in/yr (173 mm/yr), 130,000 acre-ft/yr (160 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 7,340 ft³/s (208 m³/s) May 19, 1974, gage height, 14.69 ft (4.478 m); no flow Sept. 8, 11-13, 1970, Sept. 17, 18, Oct. 7-17, 1971.

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

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage Height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage Height (ft) (m)
Apr. 18	0530	*1,960 55.5	*9.62 2.932	Apr. 24	0845	1,760 49.8	9.21 2.807
June 16	0700	1,520 43.0	8.78 2.676				

Minimum daily discharge, 0.53 ft³/s (0.015 m³/s) Sept. 15-18, 23-30.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6.0	2.0	75	7.9	5.7	242	490	401	287	371	3	1.7
2	4.3	2.2	57	14	5.6	202	389	365	250	281	15	1.9
3	4.3	2.2	57	24	5.4	175	338	332	230	235	11	2.0
4	4.3	2.2	54	25	2.5	125	290	314	228	205	9	1.4
5	4.0	3.2	59	6.2	2.2	129	255	299	220	175	5	1.1
6	2.7	3.2	58	4.3	2.8	165	235	281	215	147	0	1.1
7	2.4	2.9	47	2.7	4.5	182	212	252	208	121	8	1.0
8	2.2	1.9	57	3.3	3.4	165	187	240	197	101	6	.98
9	1.9	5.7	61	3.5	5.6	165	177	232	190	88	5	.90
10	1.7	13	50	3.3	5.2	187	175	230	410	77	5	.82
11	1.7	14	43	3.1	5.0	215	170	220	494	68	7	.74
12	1.7	15	38	6.6	7.4	368	157	210	389	62	9	.68
13	2.0	12	37	6.2	5.2	693	152	210	925	54	28	.62
14	2.2	10	47	4.8	11	525	155	210	1240	49	25	.59
15	1.7	8.1	65	5.6	18	532	287	207	1500	47	14	.53
16	1.6	7.3	66	5.4	41	529	278	210	1430	41	7.7	.53
17	1.4	5.3	117	8.0	54	362	341	225	785	41	6.5	.53
18	1.6	4.0	53	10	54	230	1630	247	508	39	6.8	.53
19	1.7	4.0	48	8.5	47	227	1300	257	395	37	6.0	10
20	2.0	11	34	8.5	42	225	833	255	350	36	5.7	2.7
21	2.0	5.3	15	7.2	66	198	1090	240	320	91	4.9	1.0
22	2.4	8.1	13	8.0	41	177	949	256	284	207	4.3	.73
23	2.4	7.3	16	10	35	160	781	593	245	212	4.0	.53
24	3.2	8.1	18	11	54	145	1490	1150	235	115	4.0	.53
25	2.2	10	16	7.7	54	145	1520	809	225	69	4.0	.53
26	2.2	6.4	12	5.7	62	150	1090	705	200	53	4.0	.53
27	2.0	6.0	10	3.9	101	140	709	522	186	45	3.2	.53
28	2.0	6.8	8.1	4.7	210	125	613	424	766	135	1.9	.53
29	2.0	47	8.0	6.1	260	123	518	374	380	103	1.7	.53
30	2.0	95	9.7	6.0	---	257	452	341	374	68	1.9	.53
31	2.4	---	12	6.8	---	585	---	311	---	55	1.9	---
TOTAL	76.2	329.2	1260.8	238.0	1210.5	7848	17343	10932	13666	3428	418.5	36.32
MEAN	2.46	11.0	40.7	7.68	41.7	253	578	353	456	111	13.5	1.21
MAX	6.0	95	117	25	260	693	1630	1150	1500	371	43	10
MIN	1.4	1.9	8.0	2.7	2.2	123	152	207	186	36	1.7	.53
CFSM	.006	.03	.11	.02	.12	.71	1.61	.99	1.27	.31	.04	.003
IN.	.008	.03	.13	.02	.13	.82	1.80	1.14	1.42	.36	.04	.004
AC-FT	151	653	2500	472	2400	15570	34400	21690	27110	6800	830	72

CAL YR 1975	TOTAL	70936.60	MEAN 194	MAX 2300	MIN 1.4	CFSM .54	IN 7.37	AC-FT 140700
WTR YR 1976	TOTAL	56786.52	MEAN 155	MAX 1630	MIN .53	CFSM .43	IN 5.90	AC-FT 112600

DES MOINES RIVER BASIN

05482170 BIG CEDAR CREEK NEAR VARINA, IA

LOCATION.--Lat. 42°41'16", long 94°47'52", in NE1/4 NE1/4 sec.24, T.91 N., R.34 W., Pocahontas County, Hydrologic Unit 07100006, on left bank 5 ft (2 m) downstream from bridge on county highway N33, 2.0 mi (3.2 km) downstream from Drainage ditch 21, 3.5 mi (5.6 km) upstream from Drainage ditch 74, and 5.5 mi (8.8 km) northeast of Varina.

DRAINAGE AREA.--80.0 mi² (207 km²).

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

GAGE.--Water-stage recorder. Datum of gage is 1,225.12 ft (373.42 m) above mean sea level.

REMARKS.--Records good except those for winter period, which are poor. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--17 years, 34.6 ft³/s (0.980 m³/s), 5.87 in/yr (149 mm/yr), 25,070 acre-ft/yr (30.9 hm³/yr); median of yearly mean discharges, 27 ft³/s (0.765 m³/s), 4.6 in/yr (117 mm/yr), 19,600 acre-ft/yr (24.2 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,080 ft³/s (58.9 m³/s) Aug. 31, 1962, gage height, 13.68 ft (4.170 m); maximum gage height, 15.05 ft (4.587 m) Apr. 6, 1965, backwater from ice; no flow at times in 1964, 1967, 1968, 1972, 1975, 1976.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 157 ft³/s (4.45 m³/s) June 29, gage height, 4.71 ft (1.436 m), no peak above base of 400 ft³/s (11.3 m³/s); no flow for many days during ice period.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.62	.58	7.6	.03	0	5.0	25	10	16	19	.59	.37
2	.59	.55	7.4	.02	0	5.7	21	11	15	12	.55	.39
3	.62	.59	7.8	.02	0	6.2	17	8.9	13	9.2	.50	.39
4	.51	.54	8.5	.01	0	6.7	14	7.9	13	7.5	.46	.42
5	.47	.52	9.5	0	0	6.9	13	8.9	11	6.1	.47	.40
6	.47	.54	9.7	0	0	6.3	12	7.5	11	5.4	.47	.39
7	.43	.56	8.6	0	0	5.9	11	7.0	10	4.8	.44	.28
8	.51	.57	7.4	0	0	5.3	9.3	7.7	10	4.0	.43	.33
9	.61	3.7	6.5	0	.01	5.0	8.5	8.1	9.1	3.5	.43	.60
10	.67	8.4	5.8	0	.02	7.0	8.6	8.0	12	2.9	.38	.79
11	.54	2.8	5.1	0	.02	14	8.2	7.2	11	2.5	.46	.38
12	.51	1.7	4.6	0	.03	43	6.9	7.3	10	2.3	.46	.34
13	.47	1.2	4.8	0	.05	50	7.2	9.2	8.7	2.0	.43	.40
14	.45	1.0	5.9	0	.06	40	7.4	7.4	7.9	2.1	.69	.41
15	.49	.93	7.5	0	.09	27	7.6	6.7	8.2	2.4	.89	.48
16	.45	.80	7.1	0	.13	23	6.4	8.9	7.2	1.8	.52	.39
17	.48	.75	6.0	0	.18	19	7.4	9.3	6.6	1.7	.69	.33
18	.50	.71	4.5	0	.25	15	7.3	8.9	9.6	1.5	.47	.31
19	.52	.90	3.5	0	.35	13	5.7	8.8	10	1.4	.36	1.0
20	.52	1.0	2.5	0	.50	10	6.0	8.5	7.4	1.8	.31	2.3
21	.52	1.1	1.8	0	.70	8.5	6.1	7.6	6.3	2.1	.30	.43
22	.52	1.3	1.2	0	1.0	7.2	5.5	10	5.8	1.3	.29	.28
23	.55	2.2	.88	0	1.4	6.8	6.9	30	4.8	1.3	.32	.24
24	.95	2.6	.60	0	2.0	6.7	7.9	50	5.3	1.0	.33	.24
25	.88	3.3	.44	0	2.6	5.8	11	40	5.3	.88	.36	.26
26	.48	3.6	.30	0	3.1	5.8	12	32	8.1	1.4	.34	.27
27	.50	3.9	.20	0	3.7	5.9	12	27	16	1.9	.31	.32
28	.50	4.3	.15	0	4.0	6.0	11	25	11	1.2	.32	.31
29	.53	4.8	.10	0	4.4	8.7	11	22	88	1.2	.26	.30
30	.51	5.8	.07	0	---	27	11	20	39	.99	.32	.28
31	.49	---	.05	0	---	35	---	18	---	.72	.38	---
TOTAL	16.86	61.44	136.09	.08	24.59	437.4	303.9	448.8	396.3	107.89	13.53	13.63
MEAN	.54	2.05	4.39	.003	.85	14.1	10.1	14.5	13.2	3.48	.44	.45
MAX	.95	8.4	9.7	.03	4.4	50	25	50	88	19	.89	2.3
MIN	.43	.52	.05	0	0	5.0	5.5	6.7	4.8	.72	.26	.24
CFSM	.006	.03	.05	0	.01	.18	.13	.18	.17	.04	.005	.005
IN.	.008	.03	.06	.00003	.01	.20	.14	.21	.18	.05	.006	.006
AC-FT	33	122	270	.2	49	868	603	890	786	214	27	27
CAL YR 1975 TOTAL	18589.49			MEAN 50.9	MAX 960	MIN 0	CFSM .64	IN 8.64	AC-FT 36870			
WIR YR 1976 TOTAL	1960.51			MEAN 5.36	MAX 88	MIN 0	CFSM .07	IN .91	AC-FT 3890			

05482300 NORTH RACCOON RIVER NEAR SAC CITY, IA

LOCATION.--Lat 42°20'28", long 94°59'05", in NE1/4 NW1/4 sec.24, T.87 N., R.36 W., Sac County, Hydrologic Unit 07100006, on right bank 15 ft (5 m) downstream from bridge on county highway, 0.2 mi (0.3 km) upstream from Indian Creek, 0.9 mi (1.4 km) downstream from Drainage ditch 73, and 5.6 mi (9.0 km) south of Sac City.

DRAINAGE AREA.--713 mi² (1,846 km²).

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

GAGE.--Water-stage recorder. Datum of gage is 1,144.60 ft (348.87 m) above mean sea level (levels by Iowa Natural Resources Council).

REMARKS.--Records good except those for winter period, which are poor. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--18 years, 288 ft³/s (8.16 m³/s), 5.49 in/yr (139 mm/yr), 208,700 acre-ft/yr (257 hm³/yr); median of yearly mean discharges, 250 ft³/s (7.08 m³/s), 4.8 in/yr (122 mm/yr), 181,000 acre-ft/yr (223 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.-- Maximum discharge, 10,800 ft³/s (306 m³/s) Sept. 1, 1962, gage height, 18.12 ft (5.523 m); minimum daily, 1.0 ft³/s (0.028 m³/s) Jan. 25 to Feb. 5, 1959.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of June 21, 1954, reached a stage of 15.61 ft (4.758 m), from floodmark, discharge, 7,000 ft³/s (198 m³/s).

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 557 ft³/s (15.8 m³/s) May 25, gage height, 5.73 ft (1.747 m), no peak above base of 2,000 ft³/s (56.6 m³/s); minimum discharge, 3.8 ft³/s (0.11 m³/s) Sept. 7.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP		
1	25	27	54	28	18	40	375	148	193	326	14	4.4		
2	22	25	54	27	18	36	291	139	178	196	12	4.1		
3	21	23	55	26	18	33	239	132	161	139	12	5.1		
4	21	22	56	25	18	41	203	121	150	106	11	4.5		
5	21	22	60	24	18	64	184	114	141	87	11	4.0		
6	20	22	71	23	19	57	171	116	131	73	12	3.9		
7	19	22	87	22	20	56	161	104	123	64	11	3.6		
8	19	22	78	22	21	59	151	97	118	58	9.3	3.9		
9	24	38	72	21	24	60	138	95	112	49	11	4.9		
10	29	62	68	20	26	54	129	95	104	42	11	5.0		
11	28	65	65	20	27	52	127	94	109	37	11	4.6		
12	28	54	61	20	26	94	119	91	102	33	11	4.4		
13	26	42	57	19	30	140	110	95	91	29	9.3	4.3		
14	25	33	55	19	36	250	109	99	87	26	8.6	4.5		
15	24	34	76	18	48	190	116	95	82	26	8.2	4.9		
16	23	36	120	18	53	168	107	101	77	26	8.6	6.4		
17	23	38	100	18	52	160	103	103	68	25	10	5.0		
18	23	36	86	19	52	153	107	100	66	22	11	5.2		
19	23	34	74	19	52	174	100	97	66	20	0.6	9.6		
20	23	34	67	19	51	191	93	94	65	20	8.2	25		
21	22	33	60	19	57	171	92	96	59	19	10	23		
22	23	33	55	20	60	141	91	149	54	18	11	20		
23	22	34	50	20	61	124	91	307	50	18	7.5	14		
24	24	100	47	20	64	117	96	461	49	16	6.0	9.5		
25	27	65	44	20	66	115	112	528	52	14	5.7	8.4		
26	27	71	41	19	60	109	159	418	214	31	7.2	8.3		
27	25	60	39	19	52	106	185	330	349	24	8.6	8.1		
28	25	55	36	19	40	101	176	293	400	20	6.9	8.4		
29	25	55	34	19	45	102	162	266	240	20	6.0	6.4		
30	26	55	32	19	---	148	154	235	425	18	5.5	8.1		
31	25	---	30	19	---	360	---	211	---	16	4.7	---		
TOTAL	740	1272	1884	640	1140	3666	4451	5424	4124	1618	287.9	233.9		
MEAN	23.9	42.4	60.8	20.6	39.3	118	148	175	137	52.2	9.29	7.60		
MAX	29	100	120	28	60	360	375	528	425	326	14	25		
MIN	19	22	30	18	18	33	91	91	49	14	4.7	3.8		
CFSM	.03	.06	.09	.03	.06	.17	.21	.25	.19	.07	.01	.01		
IN.	.04	.07	.10	.03	.06	.19	.23	.20	.22	.08	.02	.01		
AC-FT	1470	2520	3740	1270	2260	7270	8830	10760	8100	3210	571	464		
CAL YR 1975	TOTAL	119946.2	MEAN	329	MAX	4350	MIN	7.4	CFSM	.46	IN	6.26	AC-FT	237900
WTR YR 1976	TOTAL	25480.8	MEAN	69.6	MAX	528	MIN	3.8	CFSM	.10	IN	1.33	AC-FT	50540

05482500 NORTH RACCOON RIVER NEAR JEFFERSON, IA

LOCATION.--Lat 41°59'17", long 94°22'36", in SW1/4 NW1/4 sec.20, T.83 N., R.30 W., Greene County, Hydrologic Unit 07100006, on right bank 5 ft (2 m) downstream from bridge on State Highway 4, 0.1 mi (0.2 km) downstream from Drainage ditch 33, and 40, 1.9 mi (3.1 km) south of Jefferson, and 4.2 mi (6.8 km) upstream from Hardin Creek.

DRAINAGE AREA.--1,619 mi² (4,193 km²).

PERIOD OF RECORD.--March 1940 to current year. Prior to April 1940, monthly discharge only, published in WSP 1308. Prior to October 1955, published as Raccoon River near Jefferson.

REVISED RECORDS.--WSP 1438: Drainage area. WSP 1508: 1940 (M), 1950-51.

GAGE.--Water-stage recorder. Datum of gage is 967.09 ft (294.77 m) above mean sea level. Prior to Apr. 22, 1946, nonrecording gage at site 4 mi (6.4 km) upstream at different datum. Apr. 22 to June 25, 1946, nonrecording gage, June 26, 1946 to Sept. 30, 1955, water-stage recorder, Oct. 1, 1955 to Apr. 30, 1958, nonrecording gage, at present site and datum.

REMARKS.--Records good except those for winter period, which are poor. Several observations of water temperature were made during the year. National Weather Service gage height telemeter at station.

COOPERATION.--Seven discharge measurements furnished by Corps of Engineers.

AVERAGE DISCHARGE.--36 years, 671 ft³/s (19.0 m³/s), 5.63 in/yr (143 mm/yr), 486,100 acre-ft/yr (599 hm³/yr); median of yearly mean discharges, 580 ft³/s (16.4 m³/s), 4.9 in/yr (124 mm/yr), 420,000 acre-ft/yr (518 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 29,100 ft³/s (824 m³/s) June 23, 1947, gage height, 22.3 ft (6.80 m); minimum daily, 0.6 ft³/s (0.017 m³/s) Oct. 5, 1956.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 3,330 ft³/s (94.3 m³/s) May 24, gage height, 10.31 ft (3.142 m), no peak above base of 4,000 ft³/s (113 m³/s); minimum daily, 20 ft³/s (0.57 m³/s) Sept. 15-17.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	57	49	202	63	64	142	621	548	740	389	61	30
2	56	52	184	60	64	135	752	505	672	443	61	30
3	55	52	172	56	64	123	657	460	608	383	58	30
4	54	50	160	52	64	139	562	426	556	308	57	28
5	52	48	143	49	66	140	496	404	509	254	52	27
6	50	46	127	46	62	144	450	371	492	218	47	28
7	51	43	110	44	56	138	411	341	452	196	51	24
8	52	43	153	42	70	132	375	324	428	180	49	23
9	51	58	162	41	78	130	347	305	395	162	47	24
10	49	72	150	41	88	127	325	286	359	148	45	25
11	50	74	134	41	98	132	301	269	359	134	49	23
12	51	83	118	41	100	260	276	263	353	122	52	23
13	54	89	110	40	96	335	269	262	528	114	51	22
14	54	87	126	40	102	385	260	257	616	106	49	22
15	54	78	184	41	114	518	254	259	600	98	45	20
16	51	74	152	42	128	532	246	290	488	91	42	20
17	50	70	132	43	137	437	275	334	452	91	42	20
18	48	70	158	43	137	393	417	395	425	84	41	21
19	48	70	180	44	129	364	497	410	383	81	42	23
20	49	78	152	45	126	351	479	383	350	78	42	23
21	48	85	140	46	118	350	481	356	326	74	42	23
22	48	76	130	47	114	341	472	612	305	90	41	23
23	48	72	120	48	112	308	625	2130	281	146	40	25
24	51	97	112	49	116	273	649	3220	260	129	38	33
25	49	112	104	48	138	238	772	2770	245	94	37	36
26	49	122	95	48	144	231	777	2080	230	78	37	35
27	49	132	89	50	153	211	711	1590	220	73	36	32
28	50	144	83	51	152	203	679	1250	284	71	35	27
29	52	154	78	52	148	206	636	1070	428	80	33	26
30	51	176	73	56	---	320	594	930	455	75	32	25
31	48	---	68	61	---	512	---	823	---	64	32	---
TOTAL	1579	2456	4101	1470	3048	8255	14666	23923	12799	4654	1386	771
MEAN	50.9	81.9	132	47.4	105	266	489	772	427	150	44.7	25.7
MAX	57	176	202	63	153	532	777	3220	740	443	61	36
MIN	48	43	68	40	62	127	246	257	220	64	32	20
CFSM	.03	.05	.08	.03	.06	.16	.30	.48	.26	.09	.03	.02
IN.	.04	.06	.09	.03	.07	.19	.34	.55	.29	.11	.03	.02
AC-FT	3130	4870	8130	2920	6050	16380	29090	47450	25390	9230	2750	1530
CAL YR 1975	TOTAL	269943	MEAN 740	MAX 7090	MIN 29	CFSM .46	IN 6.20	AC-FT 535400				
WTR YR 1976	TOTAL	79109	MEAN 216	MAX 3220	MIN 20	CFSM .13	IN 1.82	AC-FT 156900				

05483000 EAST FORK HARDIN CREEK NEAR CHURDAN, IA

LOCATION.--Lat 42°06'27", long 94°22'12", in SE1/4 SW1/4 sec.5, T.84 N., R.30 W., Greene County, Hydrologic Unit 07100006, on left bank 35 ft (11 m) upstream from bridge on county highway E25, 1.6 mi (2.6 km) upstream from small left-bank tributary, 4.4 mi (7.1 km) upstream from mouth, and 6.5 mi (10.5 km) southeast of Churdan.

DRAINAGE AREA.--24.0 mi² (62.2 km²).

PERIOD OF RECORD.--July 1952 to current year.

REVISED RECORDS.--WSP 1438: Drainage area. WSP 1708: 1954-55, 1957 (M).

GAGE.--Water-stage recorder. Datum of gage is 1,050.90 ft (320.31 m) above mean sea level.

REMARKS.--Records good except those for winter period or those below 2.0 ft³/s (0.057 m³/s), which are poor. Small diversion for irrigation above station. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--24 years, 9.63 ft³/s (0.273 m³/s), 5.45 in/yr (138 mm/yr), 6,980 acre-ft/yr (8.61 hm³/yr); median of yearly mean discharges, 7.4 ft³/s (0.210 m³/s), 4.2 in/yr (107 mm/yr), 5,400 acre-ft/yr (6.66 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 413 ft³/s (11.7 m³/s) May 5, 1960, gage height, 8.92 ft (2.719 m), from rating curve extended above 270 ft³/s (7.65 m³/s); no flow at times most years.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 148 ft³/s (4.19 m³/s) May 23, gage height, 5.11 ft (1.558 m), no peak above base of 150 ft³/s (4.25 m³/s); no flow on many days.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1		0	.16		0	.06	5.8	11	17	3.3	.12	
2		0	.16		0	.04	4.6	9.3	16	2.9	.10	
3		0	.16		0	.02	3.5	8.2	15	2.5	.06	
4		0	.20		0	.01	2.8	8.6	14	2.2	.05	
5		0	.40		0	0	2.7	8.4	13	1.9	.04	
6		0	.30		0	0	2.4	5.8	13	1.7	.03	
7		0	.23		0	0	2.1	5.5	12	1.7	.01	
8		0	.17		0	0	1.7	6.1	11	1.5	0	
9		.07	.13		0	0	1.6	6.1	10	1.4	0	
10		.22	.09		.10	.09	1.7	5.8	10	1.1	0	
11		.10	.07		.15	.39	1.4	5.6	9.1	.93	0	
12		.02	.05		.24	.50	1.1	6.0	8.5	.79	0	
13		0	.04		.35	.62	1.3	6.0	9.1	.71	0	
14		0	.03		.40	.74	1.4	5.5	28	.67	0	
15		.02	.02		.49	.86	1.3	6.0	18	.66	0	
16		0	.02		.41	.97	1.1	7.8	12	.65	0	
17		0	.01		.35	1.1	2.5	14	10	.59	0	
18		0	0		.28	1.2	18	15	8.5	.54	0	
19		.02	0		.25	1.3	14	14	7.6	.48	0	
20		.25	0		.21	1.2	11	13	7.3	.44	0	
21		.13	0		.40	.75	13	13	6.7	.43	0	
22		.05	0		1.1	.64	12	60	5.8	.45	0	
23		.01	0		.82	.62	13	124	5.5	.40	0	
24		0	0		.60	.60	18	85	5.5	.32	0	
25		0	0		.37	.56	24	52	4.9	.25	0	
26		0	0		.18	.59	20	38	4.7	.28	0	
27		0	0		.13	.52	16	30	4.2	.28	0	
28		.01	0		.11	.47	14	26	4.2	.25	0	
29		.04	0		.09	.65	13	23	3.9	.22	0	
30		.17	0		---	8.9	12	20	3.8	.21	0	
31		---	0		---	8.8	---	18	---	.17	0	---
TOTAL	0	1.11	2.24	0	7.03	32.20	237.0	656.7	298.3	29.92	.41	0
MEAN	0	.037	.072	0	.24	1.04	7.90	21.2	9.94	.97	.013	0
MAX	0	.25	.40	0	1.1	8.9	24	124	28	3.3	.12	0
MIN	0	0	0	0	0	0	1.1	5.5	3.8	.17	0	0
CFSM	0	.001	.003	0	.01	.04	.33	.88	.41	.04	0	0
IN.	0	.002	.003	0	.01	.05	.37	1.02	.46	.05	.0006	0
AC-FT	0	2.2	4.4	0	14	64	470	1300	592	59	.8	0
CAL YR 1975	TOTAL	3399.32	MEAN 9.31	MAX 161	MIN 0	CFSM .39	IN 5.27	AC-FT 6740				
WTR YR 1976	TOTAL	1264.91	MEAN 3.46	MAX 124	MIN 0	CFSM .14	IN 1.96	AC-FT 2510				

DES MOINES RIVER BASIN

05483600 MIDDLE RACCOON RIVER AT PANORA, IA

LOCATION.--Lat 41°41'14", long 94°22'15", in NE1/4 NW1/4 sec.5, T.79 N., R.30 W., Guthrie County, Hydrologic Unit 07100007, on left bank 15 ft (5 m) downstream from bridge on county highway, 0.2 mi (0.3 km) southwest of Panora, 1.5 mi (2.4 km) upstream from Andy's Branch, and 1.7 mi (2.7 km) downstream from Lake Panorama.

DRAINAGE AREA.--440 mi² (1,139 km²).

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

REVISED RECORDS.--WRD IOWA 1974: 1973 (P).

GAGE.--Water-stage recorder and concrete control. Datum of gage is 991.20 ft (302.12 m) above mean sea level.

REMARKS.--Records good except those for winter period, which are poor. City of Panora diverts approximately 100 acre-ft/yr (0.123 hm³/yr) above station. Flow regulated by dam on Lake Panorama since August 1970. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--18 years, 221 ft³/s (6.26 m³/s), 6.82 in/yr (173 mm/yr), 160,100 acre-ft/yr (197 hm³/yr); median of yearly mean discharges, 170 ft³/s (4.81 m³/s), 5.2 in/yr (132 mm/yr), 123,000 acre-ft/yr (152 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 14,000 ft³/s (396 m³/s) May 19, 1974, gage height, 14.80 ft (4.51 m), from rating curve extended above 5,200 ft³/s (147 m³/s) by step-backwater analysis; minimum daily, 1.0 ft³/s (0.028 m³/s) June 19, 1969, result of construction of dam at Lake Panorama; minimum daily discharge excluding construction period and operation of Lake Panorama, 10 ft³/s (0.28 m³/s) Jan. 7-13, 1968.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of June 10, 1953, reached a stage of 14.3 ft (4.36 m), from floodmark, discharge, about 14,000 ft³/s (396 m³/s).

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 7,300 ft³/s (207 m³/s) May 23, gage height, 11.05 ft (3.368 m) at 1800 hours, no other peak above base of 2,500 ft³/s (70.8 m³/s); minimum daily, 28 ft³/s (0.79 m³/s) July 19.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	37	150	158	68	49	172	511	340	379	36	30	31
2	37	394	149	68	49	151	422	433	342	30	30	32
3	35	336	156	60	49	133	352	496	317	30	30	79
4	36	347	148	55	50	110	288	349	293	30	29	33
5	34	483	134	54	49	92	255	299	277	30	29	33
6	33	218	120	53	49	95	233	265	264	32	79	32
7	34	47	108	53	49	98	215	235	252	32	32	32
8	35	47	105	51	49	98	200	217	240	31	32	33
9	33	50	102	50	49	106	186	208	231	30	31	33
10	33	49	98	49	48	125	176	204	135	30	31	33
11	33	52	94	49	48	150	168	191	79	29	31	32
12	34	56	87	49	50	640	154	193	166	30	32	32
13	35	52	86	49	52	766	148	196	652	30	32	32
14	36	50	81	49	52	509	149	191	1590	32	31	32
15	34	50	78	50	57	378	112	198	1210	31	30	32
16	34	49	77	49	66	309	46	248	667	30	30	32
17	33	49	77	49	81	257	61	263	416	29	32	32
18	33	46	77	48	83	239	93	274	335	29	32	31
19	33	46	76	48	82	231	60	201	302	28	31	31
20	33	55	76	48	80	230	222	180	253	29	31	31
21	33	58	74	47	78	203	335	197	219	34	31	31
22	33	57	74	47	79	178	376	337	199	31	30	31
23	33	56	74	46	72	167	420	3860	184	30	31	32
24	34	55	74	46	77	159	814	2400	308	30	31	32
25	33	55	72	46	86	147	977	1210	544	30	31	32
26	33	55	72	46	136	154	953	1240	656	30	31	30
27	33	54	72	48	178	141	770	1330	562	31	31	30
28	33	55	70	48	184	133	287	1230	408	32	31	30
29	33	70	67	48	188	146	173	1010	134	29	31	30
30	33	140	67	47	---	366	273	615	43	33	30	30
31	33	---	67	49	---	489	---	443	---	30	30	---
TOTAL	1050	3281	2870	1568	2219	7172	9449	19053	11657	949	1003	996
MEAN	33.9	109	92.6	50.6	76.5	231	315	615	389	30.6	32.4	33.2
MAX	37	483	158	68	188	766	977	3860	1590	36	79	79
MIN	32	46	67	46	48	92	46	180	43	28	29	30
CFSM	.08	.25	.21	.12	.17	.53	.72	1.40	.88	.07	.07	.08
IN.	.09	.28	.24	.13	.19	.61	.80	1.61	.99	.08	.08	.08
AC-FT	2080	6510	5690	3110	4400	14230	18740	37790	23120	1880	1990	1980
CAL VR 1975	TOTAL	79725	MEAN 218	MAX 3000	MIN 33	CFSM .50	IN 6.74	AC-FT 158100				
WTR VR 1976	TOTAL	61267	MEAN 167	MAX 3860	MIN 28	CFSM .38	IN 5.18	AC-FT 121500				

05484000 SOUTH RACCOON RIVER AT REDFIELD, IA

LOCATION.--Lat 41°34'48", long 94°10'58", in SW1/4 SW1/4 sec.3, T.78 N., R.29 W., Dallas County, Hydrologic Unit 07100007, on left bank 15 ft (5 m) downstream from bridge on county highway at Redfield, 0.8 mi (1.3 km) downstream from bridge on U.S. Highway 6, 1.0 mi (1.6 km) downstream from Middle Raccoon River, and 15.6 mi (25.1 km) upstream from mouth.

DRAINAGE AREA.--988 mi² (2,558 km²).

PERIOD OF RECORD.--March 1940 to current year.

REVISED RECORDS.--WSP 1438: Drainage area. WSP 1508: 1940.

GAGE.--Water-stage recorder. Datum of gage is 896.43 ft (273.23 m) above mean sea level. Prior to June 12, 1946, nonrecording gage, and June 12, 1946, to Sept. 30, 1966, water-stage recorder at site 20 ft (6 m) upstream at same datum.

REMARKS.--Records good except those for winter period, which are poor. Several observations of water temperature were made during the year.

COOPERATION.--Seven discharge measurement furnished by Corps of Engineers.

AVERAGE DISCHARGE.--36 years, 450 ft³/s (12.7 m³/s), 6.18 in/yr (157 mm/yr), 326,000 acre-ft/yr (402 hm³/yr); median of yearly mean discharges, 390 ft³/s (11.0 m³/s), 5.4 in/yr (137 mm/yr), 283,000 acre-ft/yr (349 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 35,000 ft³/s (991 m³/s) July 2, 1958, gage height, 29.04 ft (8.851 m), from floodmark; minimum daily, 19 ft³/s (0.54 m³/s) July 27, 1940, Nov. 30, 1955.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 5,000 ft³/s (142 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage Height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Mar. 12	0715	5,130 145	10.41 3.173	May 23	2200	*7,490 212	*12.71 3.874

Minimum daily discharge, 68 ft³/s (1.93 m³/s) Sept. 24.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP		
1	127	107	370	138	138	656	1270	806	783	275	126	71		
2	121	431	360	136	130	551	1040	904	701	249	111	72		
3	121	530	365	132	128	477	879	924	625	223	101	85		
4	118	530	355	130	146	380	749	774	577	213	102	118		
5	113	605	335	128	160	365	670	683	540	196	99	70		
6	113	566	288	126	140	380	585	622	514	188	114	70		
7	113	171	258	122	142	395	535	552	489	181	126	70		
8	110	132	254	120	144	425	517	519	477	178	93	72		
9	110	159	250	118	152	500	487	501	454	171	90	72		
10	107	245	252	116	162	680	470	487	448	157	87	72		
11	107	187	248	116	174	681	460	458	266	145	122	73		
12	107	159	234	114	204	3730	444	454	350	141	103	75		
13	110	153	214	112	250	2060	358	478	1470	141	347	72		
14	110	132	260	110	272	1490	444	459	2730	148	161	74		
15	105	135	190	110	301	1170	755	469	2450	195	117	70		
16	99	138	162	110	312	983	408	792	1480	148	107	70		
17	99	138	200	110	338	849	550	929	935	129	99	70		
18	99	138	220	110	269	814	780	733	776	126	96	70		
19	99	135	200	112	244	590	985	618	710	126	92	69		
20	102	147	190	114	235	553	1080	484	605	123	84	95		
21	105	150	182	116	226	479	1980	505	540	129	81	81		
22	107	148	172	116	234	413	1300	728	487	181	81	72		
23	107	140	170	118	254	400	1130	4240	455	151	78	72		
24	107	140	165	120	279	384	1440	5370	511	135	78	68		
25	116	122	160	120	350	360	1800	2290	704	123	81	74		
26	107	104	158	122	580	366	2090	2130	975	117	81	78		
27	107	168	152	124	1200	370	1680	2000	935	123	78	78		
28	105	200	150	130	1340	345	1270	1820	1100	188	72	75		
29	105	270	148	132	930	368	740	1570	644	195	70	75		
30	105	334	144	136	---	1910	782	1190	314	157	71	75		
31	105	---	140	140	---	1520	---	907	---	213	72	---		
TOTAL	3366	6714	6947	3758	9434	24664	27678	35395	24045	5167	3230	2278		
MEAN	109	224	224	121	325	796	823	1142	802	167	104	75.9		
MAX	127	605	370	140	1340	3720	2090	5370	2730	275	347	118		
MIN	95	104	140	110	128	345	358	454	266	117	70	68		
CFSM	.11	.23	.23	.12	.32	.61	.93	1.16	.81	.17	.11	.06		
IN.	.13	.25	.26	.14	.36	.93	1.04	1.33	.91	.19	.12	.09		
AC-FT	6680	13320	13780	7450	18710	48920	54900	70210	47690	10250	6410	4520		
CAL YR 1975	TOTAL	188538	MEAN	517	MAX	7700	MIN	73	CFSM	.52	IN	7.10	AC-FT	374000
WTYR 1976	TOTAL	152677	MEAN	417	MAX	5370	MIN	68	CFSM	.42	IN	5.75	AC-FT	302800

DES MOINES RIVER BASIN

05484500 RACCOON RIVER AT VAN METER, IA

LOCATION.--Lat 41°32'02", long 93°56'59", in SW1/4 SW1/4 sec.22, T.78 N., R.27 W., Dallas County, Hydrologic Unit 07100007, on right bank 10 ft (3.0 m) downstream from bridge on county highway R16, 0.3 mi (0.5 km) northeast of Van Meter, 0.7 mi (1.1 km) upstream from small left bank tributary, 1.2 mi (1.9 km) downstream from confluence of North and South Raccoon River, and 30 mi (48.3 km) upstream from mouth.

DRAINAGE AREA.--3,441 mi² (8,912 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--April 1915 to current year. Prior to October 1934, monthly discharge only, published in WSP 1308.

REVISED RECORDS.--WSP 1308: 1927 (M). WSP 1438: Drainage area. WSP 1508: 1915 (M), 1916-17, 1918-23 (M), 1925 (M), 1926, 1933 (M), 1939 (M), 1947 (M), 1949 (M).

GAGE.--Water-stage recorder. Datum of gage is 841.16 ft (256.39 m) above mean sea level. See WSP 1308 for history of changes prior to Aug. 8, 1934.

REMARKS.--Records good except those for winter period, which are poor. Corps of Engineers rain gage and gage height telemeters at station.

COOPERATION.--Ten discharge measurements furnished by Corps of Engineers.

AVERAGE DISCHARGE.--61 years, 1,309 ft³/s (37.1 m³/s), 5.17 in/yr (131 mm/yr), 948,400 acre-ft/yr (1,170 hm³/yr); median of yearly mean discharges, 1,120 ft³/s (31.7 m³/s), 4.4 in/yr (112 mm/yr), 811,000 acre-ft/yr (1,000 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 41,200 ft³/s (1,170 m³/s) June 13, 1947, gage height, 21.37 ft (6.514 m), from floodmark; maximum gage height, 21.77 ft (6.635 m) July 3, 1958; minimum daily discharge, 10 ft³/s (0.28 m³/s) Jan. 22-31, 1940.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 8,500 ft³/s (241 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Apr. 24	0915	8,710 247	10.69 3.258	May 24	1015	*12,200 345	*12.84 3.914

Minimum daily discharge, 99 ft³/s (2.80 m³/s) Sept. 18.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	266	189	620	268	310	1200	2700	2390	2780	1190	290	133
2	244	457	650	266	315	1120	2440	2320	2510	1070	240	123
3	237	628	670	262	300	1000	2230	2250	2290	988	219	123
4	233	663	680	260	310	852	2010	2070	2100	972	204	179
5	229	663	660	258	320	635	1770	1900	1970	837	200	129
6	218	691	600	246	290	594	1630	1770	1850	733	196	115
7	215	283	520	236	320	660	1490	1640	1760	665	245	114
8	213	225	548	228	345	760	1360	1520	1670	607	193	105
9	210	235	554	224	370	900	1260	1460	1590	555	179	116
10	204	375	580	220	420	1080	1180	1420	1620	504	181	124
11	205	375	548	216	470	1280	1120	1350	1450	457	263	120
12	208	299	516	214	485	3990	1040	1350	1330	423	369	112
13	209	283	516	212	430	3650	989	1420	2600	387	341	114
14	205	272	590	210	440	2710	989	1380	4520	381	400	110
15	195	277	350	206	475	2200	1940	1350	5050	418	251	110
16	194	288	190	206	538	1970	1290	1720	3680	369	207	103
17	194	277	300	206	621	1820	1780	2170	2620	323	195	100
18	199	272	410	208	535	1690	5760	2010	2180	310	186	99
19	199	256	500	210	509	1590	3100	1940	1930	298	175	137
20	215	272	430	212	483	1490	2940	1800	1680	289	171	133
21	215	280	405	212	455	1350	4550	1640	1470	316	161	134
22	215	272	375	214	418	1210	3420	2160	1330	399	153	113
23	215	250	365	216	542	1160	3570	6240	1220	382	151	101
24	220	218	350	218	649	1100	6800	11300	1150	364	149	100
25	215	150	335	220	698	1020	5930	8090	1320	343	149	111
26	210	122	325	220	950	905	4910	7810	1550	310	148	118
27	220	158	315	230	1400	950	4180	6180	1540	287	151	129
28	220	300	300	240	1320	860	3540	5180	2320	350	133	127
29	215	430	296	260	1280	1020	2690	4430	1650	374	124	127
30	225	570	284	290	---	3060	2500	3780	1190	306	124	121
31	189	---	276	300	---	3030	---	3140	---	354	127	---
TOTAL	6651	10030	14058	7188	15998	46856	81108	95180	61920	15561	6275	3580
MEAN	215	334	453	232	552	1511	2704	3070	2064	502	202	119
MAX	266	691	680	300	1400	3990	6800	11300	5050	1190	400	179
MIN	189	122	190	206	290	594	989	1350	1150	287	124	99
CFSM	.06	.10	.13	.07	.16	.44	.79	.89	.60	.15	.06	.03
IN.	.07	.11	.15	.08	.17	.51	.88	1.03	.67	.17	.07	.04
AC-FT	13190	19890	27880	14260	31730	92940	160900	188800	122800	30870	12450	7100
CAL YR 1975 TOTAL	589964			1616	MAX	11200	MIN 122	CFSM .47	IN 6.38	AC-FT	1170000	
WTR YR 1976 TOTAL	364405			996	MAX	11300	MIN 99	CFSM .29	IN 3.94	AC-FT	722800	

DES MOINES RIVER BASIN

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05484500 RACCOON RIVER AT VAN METER, IA--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1969-73, 1974 to current year.

WATER QUALITY DATA, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976

DATE	TIME	INSTANTANEOUS DIS- CHARGE (CFS) (00061)	TOTAL CAL- CIUM (CA) (MG/L) (00916)	TOTAL MAG- NE- SIUM (MG) (MG/L) (00927)	TOTAL SODIUM (NA) (MG/L) (00929)	TOTAL FO- TAS- SIUM (K) (MG/L) (00937)	BICAR- BONATE (HCO3) (MG/L) (00440)	CAR- BONATE (CO3) (MG/L) (00445)	ALKA- LINITV AS CAC03 (MG/L) (00410)	DIS- SOLVED SULFATE (SO4) (MG/L) (00945)	DIS- SOLVED CHLO- RIDE (CL) (MG/L) (00940)
OCT											
14...	1210	204	59	27	--	2.8	259	--	212	51	19
NOV											
10...	1345	369	70	26	--	3.6	264	--	217	50	17
DEC											
10...	1225	360	83	27	--	2.9	309	--	253	51	22
JAN											
14...	0900	230	110	38	--	4.0	376	--	308	55	26
FEB											
18...	1150	560	60	21	--	3.1	227	--	186	42	15
MAR											
30...	0945	3020	66	60	--	6.0	170	--	139	32	12
MAY											
03...	1240	2320	90	27	10	2.4	287	--	235	42	18
JUN											
02...	1125	2630	99	31	10	2.3	296	--	243	46	21
30...	1125	2200	59	25	9.3	2.8	225	--	185	39	20
AUG											
04...	1100	204	56	26	14	3.5	231	--	189	51	18
31...	1055	102	50	24	15	2.9	233	0	191	50	19
SEP											
27...	1245	130	54	22	13	2.8	225	0	185	50	17

DATE	TOTAL NITRITE PLUS NITRATE (N) (MG/L) (00630)	TOTAL AMMONIA NITRO- GEN (N) (MG/L) (00610)	TOTAL ORGANIC NITRO- GEN (N) (MG/L) (00605)	TOTAL KJEL- DAHL NITRO- GEN (N) (MG/L) (00625)	TOTAL NITRO- GEN (N) (MG/L) (00600)	TOTAL NITRO- GEN (NO3) (MG/L) (71887)	TOTAL PHOS- PHORUS (P) (MG/L) (00665)	DIS- SOLVED SOLIDS (RESI- DUE AT 180 C) (MG/L) (70300)	DIS- SOLVED SOLIDS (PER AC-FT) (TONS) (70303)	DIS- SOLVED SOLIDS (PER DAY) (TONS) (70302)
OCT										
14...	.47	.00	1.1	1.1	1.6	7.0	.13	322	.44	177
NOV										
10...	1.2	.06	1.4	1.5	2.7	12	.33	304	.41	303
DEC										
10...	3.2	.32	.88	1.2	4.4	19	.20	411	.56	400
JAN										
14...	4.4	.74	.36	1.1	5.5	24	.19	456	.62	283
FEB										
19...	2.1	.21	1.1	1.3	3.4	15	.37	314	.43	475
MAR										
30...	3.1	.21	3.6	3.8	6.9	31	.90	250	.34	2040
MAY										
03...	9.4	.03	.93	.96	10	46	.18	406	.55	2540
JUN										
02...	14	.02	.97	.99	15	66	.26	434	.59	3080
30...	8.4	.06	2.2	2.3	11	47	.29	380	.52	2260
AUG										
04...	1.1	.09	1.5	1.6	2.7	12	.21	292	.40	161
31...	.68	.00	.94	.94	1.6	7.2	.13	336	.46	92.5
SEP										
27...	1.1	.04	1.2	1.2	2.3	10	.16	277	.38	97.2

DATE	TOTAL RESI- DUE (MG/L) (00500)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS) (00095)	PH (UNITS) (00400)	TEMPER- ATURE (DEG C) (00010)	TUR- BID- ITY (NTU) (00076)	DIS- SOLVED OXYGEN (MG/L) (00300)	PER- CENT SATUR- ATION (00301)	CHEM- ICAL OXYGEN DEMAND (HIGH LEVEL) (MG/L) (00340)	CARBON DIOXIDE (CO2) (MG/L) (00405)	FECAL COLI- FORM (COL. PER 100 ML) (31616)
OCT										
14...	364	500	8.7	18.0	6	11.4	120	28	.8	170
NOV										
10...	505	460	8.5	10.0	70	12.4	110	16	1.3	36400
DEC										
10...	440	570	9.0	2.5	10	15.8	114	12	.5	680
JAN										
14...	464	590	8.2	.0	5	11.8	80	10	3.8	2430
FEB										
18...	508	470	8.9	2.0	40	13.8	100	10	.5	1100
MAR										
30...	1430	320	7.9	7.0	200	10.4	87	18	3.4	25000
MAY										
03...	538	600	8.7	10.5	35	10.8	96	17	.9	260
JUN										
02...	642	430	8.6	20.5	50	8.6	95	21	1.2	60
30...	588	540	8.1	22.0	65	11.6	132	24	2.9	3900
AUG										
04...	408	360	8.4	22.5	25	--	--	22	1.5	150
31...	346	520	8.5	23.0	15	10.2	117	6	1.2	460
SEP										
27...	351	500	8.2	14.5	20	8.2	80	16	2.3	480

05484800 WALNUT CREEK AT DES MOINES, IA

LOCATION.--Lat 41°35'14", long 93°42'11", in SW1/4 SE1/4 sec.2, T.78 N., R.25 W., Polk County, Hydrologic Unit 07100006, on left bank, 25 ft (8 m) downstream from bridge on 53rd Street in Des Moines, and 2.2 mi (3.5 km) upstream from Raccoon River.

DRAINAGE AREA.--78.4 mi² (203.1 km²), revised.

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

REVISED RECORDS.--WRD Iowa 1973: 1972; WRD Iowa 1975: 1973-74.

GAGE.--Water-stage recorder. Datum of gage is 801.04 ft above mean sea level (levels by Iowa Natural Resources Council).

REMARKS.--Records good except those for winter period, which are poor. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--5 years, 82.7 ft³/s (2.342 m³/s), 13.88 in/yr (353 mm/yr), 59,920 acre-ft/yr (73.9 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 9,000 ft³/s (255 m³/s) July 1, 1973, gage height, 17.72 ft (5.401 m); minimum daily, 0.10 ft³/s (0.003 m³/s) Oct. 1, 3, 5, 12, 17, 1971.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 600 ft³/s (17.0 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage Height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage Height (ft) (m)
Apr. 18	1030	*2,470 69.9	*14.24 4.340	June 12	2215	875 24.8	9.82 2.993
Apr. 24	0845	1,530 43.3	12.20 3.718	June 13	0130	686 19.4	9.05 2.758
June 10	0745	928 26.3	10.13 3.088	June 28	0445	2,060 58.3	13.41 4.087

Minimum daily discharge, 0.02 ft³/s (0.001 m³/s) Sept. 22-24.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP		
1	13	18	72	7.0	8.6	124	127	159	70	109	14	1.0		
2	11	8.7	60	5.7	8.2	102	97	145	59	90	12	1.0		
3	10	8.6	41	4.8	7.7	89	77	127	51	74	10	.95		
4	9.8	7.1	38	4.7	7.0	116	66	119	47	61	9.1	.90		
5	9.2	5.3	37	6.3	6.7	93	60	116	40	52	7.7	.85		
6	8.8	5.0	30	7.3	8.4	102	58	100	37	44	6.9	.80		
7	8.1	6.0	32	8.1	11	105	53	93	35	38	6.0	.79		
8	8.4	5.8	30	9.0	14	108	48	90	32	34	5.3	.79		
9	7.7	54	25	9.4	17	102	46	88	32	30	4.8	.78		
10	7.3	27	24	10	21	115	43	83	437	26	4.5	.78		
11	7.2	11	22	11	20	125	42	78	191	23	5.4	.77		
12	7.5	8.6	23	12	19	198	36	89	199	23	6.2	.75		
13	7.6	7.9	23	13	18	154	38	93	321	21	7.4	.74		
14	7.5	6.4	34	14	17	130	53	75	255	20	6.6	.72		
15	7.0	6.8	29	15	24	107	215	82	167	20	5.5	.70		
16	6.8	7.0	25	16	50	93	134	111	106	16	3.6	.50		
17	6.8	6.9	21	15	24	80	465	68	88	16	2.2	.50		
18	7.1	6.3	18	13	20	80	1660	60	86	15	1.7	.50		
19	7.7	6.1	20	15	19	70	419	55	59	13	1.6	1.9		
20	7.9	16	20	16	19	62	405	47	50	12	1.5	.32		
21	8.2	12	16	17	32	51	558	42	47	38	1.4	.04		
22	8.5	8.6	14	16	43	45	324	58	43	59	1.4	.02		
23	8.1	7.1	13	15	55	46	368	114	43	30	1.3	.02		
24	12	7.6	12	14	57	46	997	400	45	19	1.3	.02		
25	14	8.3	11	11	54	40	494	275	45	15	1.2	.04		
26	13	7.3	10	9.0	68	41	321	220	43	16	1.2	.06		
27	9.4	14	9.6	7.0	119	37	266	180	118	14	1.2	.44		
28	8.2	15	8.9	8.0	186	35	230	150	1120	112	1.1	.16		
29	7.8	83	8.3	8.4	165	77	201	120	243	30	1.1	.14		
30	7.9	120	7.9	8.7	---	183	179	99	153	19	1.1	.23		
31	8.1	---	7.5	8.7	---	157	---	83	---	17	1.1	---		
TOTAL	271.6	511.4	742.2	335.1	1118.6	2912	8080	3619	4262	1106	135.4	17.21		
MEAN	8.76	17.0	23.9	10.8	38.6	93.9	269	117	142	35.7	4.37	.57		
MAX	14	120	72	17	186	198	1660	400	1120	112	14	1.9		
MIN	6.8	5.0	7.5	4.7	6.7	35	36	42	32	12	1.1	.02		
CFSM	.11	.21	.30	.13	.48	1.16	3.33	1.45	1.76	.44	.05	.007		
IN.	.12	.24	.34	.15	.51	1.34	3.72	1.66	1.96	.51	.06	.008		
AC-FT	539	1010	1470	665	2220	5780	16030	7180	8450	2190	269	34		
CAL YR 1975	TOTAL	22241.40	MEAN	60.9	MAX	2250	MIN	1.5	CFSM	.75	IN	10.23	AC-FT	44120
WTR YR 1976	TOTAL	23110.51	MEAN	63.1	MAX	1660	MIN	.02	CFSM	.78	IN	10.63	AC-FT	45840

05485500 DES MOINES RIVER BELOW RACCOON RIVER AT DES MOINES, IA

LOCATION.--Lat 41°34'30", long 93°35'48", in NE1/4 SE1/4 sec.10, T.78 N., R.24 W., Polk County, Hydrologic Unit 07100008, on right bank 10 ft (3 m) downstream from bridge on Southeast 14th Street at Des Moines, 0.8 mi (1.3 km) downstream from Raccoon River and Scott Street Dam, and at mile 200.7 (322.9 km).

DRAINAGE AREA.--9,879 mi² (25,586 km²).

PERIOD OF RECORD.--April 1940 to current year.

REVISED RECORDS.--WSP 1438: Drainage area. WSP 1508: 1943 (P).

GAGE.--Water-stage recorder. Datum of gage is 762.52 ft (232.42 m) above mean sea level. Prior to Oct. 1, 1951, and Oct. 1, 1953, to Sept. 30, 1959, water-stage recorder above Scott Street Dam, 0.8 mi (1.3 km) upstream at datum 11.16 ft (3.40 m) higher. Oct. 1, 1951, to Sept. 30, 1953, and Oct. 1, 1959 to Sept. 30, 1961, nonrecording gage at present site and datum.

REMARKS.--Records good except those for winter period, which are poor. Des Moines municipal water supply is taken from infiltration galleries on Raccoon River, 3.5 mi (5.6 km) above station. Average daily pumpage was about 50 ft³/s (1.42 m³/s). At times, water is pumped from Raccoon River into recharge basins, or into Waterworks Reservoir (capacity, 4,800 acre-ft). Effluent from sewage treatment plant enters the river 2.3 mi (3.7 km) below station. Net effect of diversions not known. Several observations of water temperature were made during the year. Corps of Engineers gage height telemeter at station.

COOPERATION.--Nineteen discharge measurements furnished by Corps of Engineers. Average monthly pumpage from galleries furnished by Des Moines Water Works.

AVERAGE DISCHARGE.--36 years, 4,079 ft³/s (115 m³/s), 5.61 in/yr (142 mm/yr), 2,955,000 acre-ft/yr (3,644 hm³/yr); median of yearly mean discharges, 3,450 ft³/s (97.7 m³/s) 4.7 in/yr (119 mm/yr), 2,500,000 acre-ft/yr (3,082 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 77,000 ft³/s (2,180 m³/s) June 26, 1947, gage height, 20.8 ft (6.34 m) in gage well, 21.6 ft (6.58 m) from outside floodmark, site and datum then in use; minimum daily, 55 ft³/s (1.56 m³/s) Oct. 19, 1956.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since at least 1893, that of June 26, 1947, site and datum then in use. Flood of May 31, 1903, reached a stage of 20.9 ft (6.37 m), from flood profile at Scott Street site and datum, by office of Des Moines City Engineer.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 15,000 ft³/s (425 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage Height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage Height (ft) (m)
Apr. 24	unknown	*18,700 530	*19.07 5.813	May 21	unknown	16,600 470	18.24 5.560

Minimum daily discharge, 110 ft³/s (3.115 m³/s) Sept. 6.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	548	383	904	420	490	2590	6670	6200	6550	3160	561	219
2	517	393	925	290	520	2540	6690	5620	6530	2990	481	205
3	475	432	937	255	520	2280	6510	5300	5740	2670	442	182
4	470	519	979	285	510	2070	6220	4970	4510	2410	431	130
5	458	553	1010	340	500	1720	5650	4260	4230	2130	401	133
6	420	584	1050	345	500	1450	5010	4000	3940	1850	405	110
7	405	625	1080	345	500	1520	4500	4000	3700	1650	399	153
8	385	570	1060	350	510	1760	4070	3950	3500	1500	420	171
9	395	505	1010	355	530	1690	3720	3720	3320	1360	370	176
10	400	550	981	375	550	1900	3450	3530	4180	1220	352	169
11	395	557	979	390	580	2310	3400	3340	4400	1100	511	186
12	400	584	977	385	610	2480	3030	3080	3700	1000	628	179
13	390	607	950	380	530	3580	2850	3190	5140	902	481	174
14	385	605	965	370	470	4540	2800	3190	7800	830	561	171
15	380	566	992	365	630	5610	3990	3290	10800	822	523	166
16	370	580	840	365	881	5170	3680	3240	9550	734	400	148
17	368	556	760	370	968	5050	4720	3190	7150	726	366	143
18	373	532	720	365	939	4900	12100	3240	5680	718	352	148
19	381	514	700	365	870	4700	9920	3710	4850	710	343	243
20	377	513	695	385	873	4400	7950	4500	4260	567	330	216
21	375	535	705	375	970	4100	7770	5540	3690	600	321	196
22	359	550	730	370	646	3890	7820	8230	3300	1390	313	212
23	357	569	740	380	785	3850	8790	13700	3140	1230	293	219
24	363	574	710	390	1320	3810	15700	16300	3080	902	297	216
25	401	465	670	405	1500	3610	11800	15200	2950	920	285	205
26	404	406	630	425	1470	3440	12000	14500	2920	1400	274	212
27	515	304	590	450	1550	3180	10100	11900	3160	1090	262	240
28	509	307	550	445	1920	3120	8920	10600	6600	1260	258	216
29	415	444	520	430	2400	4100	7730	9140	4240	806	247	189
30	379	734	480	430	---	4230	6830	7810	3470	670	233	192
31	353	---	445	460	---	6880	---	6900	---	555	226	---
TOTAL	12752	15658	25284	11660	25043	105880	204590	199340	146080	39872	11766	5519
MEAN	411	522	816	376	864	3415	6820	6430	4869	1286	380	184
MAX	548	734	1080	460	2400	6880	15700	16300	10800	3160	628	243
MIN	353	304	445	255	470	1450	2800	3080	2920	555	226	110
CFSM	.04	.05	.08	.04	.09	.35	.69	.65	.49	.13	.04	.02
IN.	.05	.06	.10	.04	.09	.40	.77	.75	.55	.15	.04	.02
AC-FT	25250	31060	50150	23130	49670	210000	405600	395400	289700	79090	23340	10950
CAL YR 1975	TOTAL	1695404	MEAN	4645	MAX	32800	MIN	300	CFSM	.47	IN	6.38
WTR YR 1976	TOTAL	803444	MEAN	2195	MAX	16300	MIN	110	CFSM	.22	IN	3.03
									AC-FT		AC-FT	1594000

DES MOINES RIVER BASIN

05485520 DES MOINES RIVER BELOW DES MOINES, IA

LOCATION.--Lat 41°33'03", Long 93°31'29", in NE1/4 NE1/4 sec.20, T.78 N., R.23 W., Polk County, Hydrologic Unit 07100008, at bridge on State Highway 5 near east edge of Des Moines, 0.2 mi (0.3 km) downstream from unnamed stream, 1.4 mi (2.3 km) upstream from Fourmile Creek, and at mile 195.9 (315.2 km).

DRAINAGE AREA.--9,901 mi² (25,644 km²).

PERIOD OF RECORD.--Water years 1971, 1975 to current year.

REMARKS.--Water discharge estimated on basis of records at gaging station 4.8 mi (7.7 km) upstream at SE 14th Street, Des Moines. No significant inflow between gaging station and sampling site.

WATER QUALITY DATA. WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976

DATE	TIME	INSTANTANEOUS DIS- CHARGE (CFS) (00061)	TOTAL CAL- CIUM (CA) (MG/L) (00916)	TOTAL MAG- NE- SIUM (MG) (MG/L) (00927)	TOTAL SODIUM (NA) (MG/L) (00929)	TOTAL PO- TAS- SIUM (K) (MG/L) (00937)	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)
OCT											
14...	1315	437	65	31	--	3.9	239	--	196	100	35
NOV											
10...	1140	690	65	26	--	3.8	219	--	180	79	29
DEC											
10...	1000	980	--	--	--	--	310	--	254	82	35
JAN											
14...	1010	400	--	--	--	--	406	--	333	110	45
FEB											
18...	0930	860	64	22	--	2.9	236	--	194	65	27
MAR											
30...	1040	3920	84	75	--	4.0	223	--	183	78	22
MAY											
03...	1540	5220	91	30	13	2.7	284	--	233	62	25
JUN											
02...	1225	5290	90	30	12	2.2	259	--	212	53	26
30...	1300	3610	62	25	11	4.0	206	--	169	49	20
AUG											
04...	1400	380	66	31	26	5.2	235	--	193	88	34
31...	1200	220	74	30	38	5.8	257	0	211	110	52
SEP											
27...	1355	220	61	28	40	5.8	231	0	189	120	52

DATE	TOTAL NITRITE PLUS NITRATE (N) (MG/L) (00630)	TOTAL AMMONIA NITRO- GEN (N) (MG/L) (00610)	TOTAL ORGANIC NITRO- GEN (N) (MG/L) (00605)	TOTAL KJEL- DAHL NITRO- GEN (N) (MG/L) (00625)	TOTAL NITRO- GEN (N) (MG/L) (00600)	TOTAL NITRO- GEN (NO3) (MG/L) (71887)	TOTAL PHOS- PHORUS (P) (MG/L) (00665)	DIS- SOLVED SOLIDS (RESI- DUE AT 180 C) (MG/L) (70300)	DIS- SOLVED SOLIDS (TONS AC-FT) PER (70303)	DIS- SOLVED SOLIDS (TONS PER DAY) (70302)
OCT										
14...	1.2	.44	2.1	2.5	3.7	16	.91	416	.57	491
NOV										
10...	.97	.45	2.0	2.4	3.4	15	.75	449	.61	837
DEC										
10...	2.8	.37	2.0	2.4	5.2	23	.49	476	.65	1260
JAN										
14...	3.8	1.6	1.3	2.9	6.7	30	.98	604	.82	652
FEB										
18...	1.8	.49	.81	1.3	3.1	14	.49	344	.47	799
MAR										
30...	4.0	.17	.93	1.1	5.1	23	.48	388	.53	4110
MAY										
03...	8.9	.07	1.4	1.5	10	46	.26	454	.62	6400
JUN										
02...	13	.02	1.5	1.5	15	64	.29	436	.59	6230
30...	7.6	.06	2.6	2.7	10	46	.45	350	.48	3410
AUG										
04...	.96	.60	2.2	2.8	3.8	17	.77	382	.52	392
31...	1.6	.89	1.5	2.4	4.0	18	1.4	516	.70	307
SEP										
27...	2.4	1.5	1.9	3.4	5.8	26	1.7	446	.61	265

05485520 DES MOINES RIVER BELOW DES MOINES, IA--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976

DATE	TOTAL RESI- DUE (MG/L) (00500)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS) (00095)	PH (UNITS) (00400)	TEMPER- ATURE (DEG C) (00010)	TUR- BID- ITY (NTU) (00076)	DIS- SOLVED OXYGEN (MG/L) (00300)	PER- CENT SATUR- ATION (00301)	CHEM- ICAL OXYGEN DEMAND (HIGH LEVEL) (MG/L) (00340)	CARBON DIOXIDE (CO2) (MG/L) (00405)	FECAL COLI- FORM (COL. PER 100 ML) (31616)
OCT 14...	483	700	8.5	19.0	15	9.7	103	30	1.2	32000
NOV 10...	513	570	8.2	11.0	65	10.5	95	72	2.2	9600
DEC 10...	501	620	8.6	2.0	10	16.1	116	14	1.2	1300
JAN 14...	608	750	8.1	.0	8	14.8	100	18	5.2	10000
FEB 18...	432	420	8.7	2.0	35	15.1	108	20	.8	2000
MAR 20...	722	580	8.2	9.0	120	11.4	98	18	2.3	4400
MAY 02...	570	680	8.6	11.0	30	11.3	98	23	1.1	5600
JUN 02...	560	620	8.6	24.5	40	9.5	106	23	1.0	680
JUN 20...	786	520	8.1	23.0	80	9.6	110	27	2.6	14400
AUG 04...	494	500	8.5	25.0	25	--	--	26	1.2	900
SEP 31...	606	780	8.0	29.0	35	6.6	85	14	4.1	2000
SEP 27...	518	680	7.9	16.5	20	5.7	58	25	4.7	580

DES MOINES RIVER BASIN

05485640 FOURMILE CREEK AT DES MOINES, IA

LOCATION.--Lat 41°36'50", Long 93°32'43", in NE1/4 NE1/4 sec.32, T.79 N., R.23 W., Polk County, Hydrologic Unit 07100008, on right bank 20 ft (6 m) downstream from bridge on Easton Blvd., 4.4 mi (7.1 km) downstream from Muchiknock Creek and 5.0 mi (8.0 km) upstream from Des Moines River.

DRAINAGE AREA.--92.7 mi² (240 km²).

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

REVISED RECORDS.--WRD Iowa 1975: 1974 (P).

GAGE.--Water-stage recorder. Datum of gage is 795.866 ft (242.580 m) above mean sea level.

REMARKS.--Records good except those for winter period, which are poor. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--5 years, 87.5 ft³/s (2.478 m³/s), 12.8 in/yr (325 mm/yr), 63,390 acre-ft/yr (78.2 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 5,340 ft³/s (151 m³/s) (revised) June 9, 1974, gage height, 14.84 ft (4.523 m); minimum daily, 0.06 ft³/s (0.017 m³/s) Oct. 6, 1971.

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

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage Height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage Height (ft) (m)
Apr. 18	unknown	*4,440 126	*14.20 4.328	May 22	2315	545 15.4	7.08 2.158
Apr. 21	unknown	2,570 72.8	12.29 3.746	June 28	0430	1,880 53.2	10.74 3.274
Apr. 24	unknown	1,950 55.2	11.20 3.414				

Minimum daily discharge, 0.45 ft³/s (0.013 m³/s) Sept. 16.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.9	11	20	2.4	2.6	36	104	135	65	55	5.0	1.2
2	1.7	10	16	2.7	1.8	31	78	116	62	47	4.4	1.1
3	2.0	8.8	18	3.3	2.0	23	68	95	60	46	3.5	1.0
4	2.1	7.7	19	2.8	2.6	23	58	85	53	41	2.8	.90
5	2.4	7.0	9.4	3.0	3.5	27	46	81	46	35	2.5	.90
6	2.4	6.6	8.3	3.2	3.2	34	47	63	43	35	1.9	.90
7	2.7	4.1	7.2	2.8	2.8	37	40	54	43	32	1.7	.90
8	3.6	3.9	7.6	2.6	2.6	40	36	50	40	27	1.5	.75
9	3.9	4.1	7.0	2.1	3.4	48	43	46	38	23	1.4	.75
10	4.4	4.8	7.0	2.5	4.3	57	57	43	64	19	1.5	.75
11	4.0	4.1	6.7	3.5	5.0	65	60	38	49	16	11	.75
12	4.9	3.6	7.7	4.6	5.8	117	60	39	64	14	5.2	.75
13	4.6	3.4	9.3	5.1	4.6	105	60	50	244	12	2.6	.75
14	5.7	3.2	13	6.0	4.2	81	60	38	320	9.7	7.6	.75
15	5.8	3.3	5.3	6.0	7.2	65	114	42	161	12	3.0	.75
16	5.6	2.9	3.8	6.2	12	54	70	118	116	8.0	2.2	.45
17	5.6	2.7	3.3	4.4	11	46	997	179	109	5.4	2.2	3.9
18	6.4	2.8	4.7	4.9	8.0	41	3150	128	77	5.1	2.2	4.2
19	6.2	2.8	4.9	7.0	6.7	38	366	103	65	5.3	2.0	10
20	5.6	4.3	5.8	4.9	5.6	36	154	86	63	4.9	2.0	6.0
21	4.2	3.9	4.2	6.4	10	28	1590	75	58	68	1.8	1.8
22	4.2	3.2	2.5	6.2	17	22	222	281	54	116	1.8	1.4
23	4.2	3.0	1.9	6.0	16	23	136	331	49	30	1.6	1.2
24	5.8	3.6	2.5	5.7	19	24	1200	251	48	17	1.5	1.3
25	6.5	4.3	2.6	5.4	23	20	462	190	40	11	1.4	1.5
26	5.0	4.8	2.3	3.2	27	21	398	141	35	9.9	1.4	2.0
27	5.2	4.2	2.3	2.1	45	19	299	111	37	9.1	1.4	2.5
28	5.6	3.7	2.4	4.1	76	16	235	97	534	61	1.4	2.1
29	5.6	32	2.9	3.6	54	33	192	91	121	22	1.3	2.0
30	5.6	48	2.6	3.6	---	154	161	82	81	12	1.3	1.6
31	6.2	---	2.6	4.0	---	140	---	72	---	7.6	1.2	---
TOTAL	139.6	211.8	212.8	130.3	385.9	1504	10563	3311	2839	816.0	82.3	54.85
MEAN	4.50	7.06	6.86	4.20	13.3	48.5	352	107	94.6	26.3	2.65	1.83
MAX	6.5	48	20	7.0	76	154	3150	331	534	116	11	10
MIN	1.7	2.7	1.9	2.1	1.8	16	36	38	35	4.9	1.2	.45
CFSM	.05	.08	.07	.05	.14	.52	3.80	1.15	1.02	.28	.03	.02
IN	.06	.06	.09	.05	.15	.60	4.24	1.33	1.14	.33	.03	.02
AC-FT	277	420	422	258	765	2980	20950	6570	5630	1620	163	109

CAL YR 1975	TOTAL	23328.50	MEAN 63.9	MAX 1070	MIN 1.7	CFSM .69	IN 9.36	AC-FT 46270
WTR YR 1976	TOTAL	20250.55	MEAN 55.3	MAX 3150	MIN .45	CFSM .60	IN 8.13	AC-FT 40170

05486000 NORTH RIVER NEAR NORWALK, IA

LOCATION.--Lat 41°27'25", long 93°39'10", in NW1/4 SW1/4 sec.20, T.77 N., R.24 W., Warren County, Hydrologic Unit 07100008, on left bank 10 ft (3 m) downstream from bridge on county highway R57, 1.7 mi (2.7 km) southeast of Norwalk, 5.2 mi (8.4 km) upstream from Middle Creek, and 6.2 mi (10.0 km) downstream from Badger Creek.

DRAINAGE AREA.--349 mi² (904 km²).

PERIOD OF RECORD.--February 1940 to current year.

REVISED RECORDS.--WSP 1438: Drainage area. WSP 1508: 1946.

GAGE.--Water-stage recorder. Datum of gage is 788.45 ft (240.320 m) above mean sea level (levels by Corps of Engineers). Prior to June 12, 1946, nonrecording gage at same site and datum. Jan. 7 to Oct. 11, 1960, nonrecording gage at site 2.1 mi (3.4 km) upstream at different datum.

REMARKS.--Records good except those for winter period, which are poor. Several observations of water temperature were made during the year.

COOPERATION.--Two discharge measurements furnished by Corps of Engineers.

AVERAGE DISCHARGE.--36 years, 180 ft³/s (5.097 m³/s), 7.00 in/yr (178 mm/yr), 130,400 acre-ft/yr (161 hm³/s/yr); median of yearly mean discharges, 160 ft³/s (4.53 m³/s), 6.2 in/yr (157 mm/yr), 116,000 acre-ft/yr (143 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 32,000 ft³/s (906 m³/s) June 13, 1947, gage height, 25.3 ft (7.71 m), from floodmark, from rating curve extended above 9,100 ft³/s (258 m³/s) on basis of velocity-area studies; no flow at times during period 1954-58.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 1,700 ft³/s (48.1 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage Height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage Height (ft) (m)
Apr. 19	1430	5,110 145	22.15 6.751	Apr. 25	1400	*10,500 297	*23.13 7.050

Minimum daily discharge, 0.57 ft³/s (0.016 m³/s) Sept. 6

REVISIONS.--The peak discharges for water year 1975 have been revised as shown in the following table. They supersede figures published in the report for 1975.

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage Height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage Height (ft) (m)
Mar. 20	0815	*4,100 116	*21.55 6.568	June 20	1730	1,910 54.1	19.78 6.029
Mar. 29	0300	1,810 51.3	19.52 5.950	June 27	1845	2,740 77.6	20.85 6.355
May 8	2245	1,710 48.4	19.27 5.873				

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	17	27	280	14	16	494	554	521	210	57	18	2.2
2	16	33	132	12	17	327	478	460	186	48	21	1.8
3	14	33	98	10	18	265	413	409	164	43	19	1.3
4	13	27	74	9.2	18	236	362	363	147	40	16	.98
5	12	25	60	8.3	17	285	211	341	134	39	13	.70
6	11	25	53	7.6	16	285	198	315	124	36	11	.57
7	10	24	46	7.0	15	285	180	274	116	33	8.3	.70
8	10	23	40	6.6	15	285	162	245	108	31	6.8	.98
9	11	25	39	6.2	16	292	146	234	100	28	5.7	1.1
10	11	32	38	6.0	18	295	139	224	107	25	4.7	1.1
11	12	61	38	5.8	21	295	140	214	110	22	4.3	.83
12	12	35	37	5.8	23	436	135	201	123	19	217	.83
13	12	31	36	6.3	25	713	118	228	377	18	221	.70
14	11	24	44	6.5	27	389	119	249	288	17	49	.70
15	13	20	60	6.9	32	348	138	222	335	17	29	.59
16	15	19	60	7.2	40	292	573	384	248	17	19	.59
17	16	18	56	7.5	59	261	491	582	150	17	18	.59
18	16	17	48	7.8	83	230	2200	463	117	16	15	.59
19	15	16	37	8.2	72	223	4360	321	104	13	13	.59
20	17	17	29	8.5	66	217	3240	263	92	12	12	.59
21	18	20	27	9.1	83	189	2350	232	82	11	11	.59
22	20	21	26	9.5	101	150	2320	284	75	11	11	.59
23	27	22	25	10	130	130	1550	436	67	12	9.3	.59
24	35	21	23	11	128	128	2400	1010	62	12	8.0	.59
25	34	21	22	11	165	123	8000	539	60	13	7.0	.59
26	26	20	20	12	305	115	4550	374	60	13	4.7	.59
27	23	19	19	13	605	116	2360	306	56	14	2.6	.59
28	24	19	18	13	935	111	994	267	119	15	2.5	.59
29	26	34	17	14	710	107	666	274	116	20	2.2	.59
30	26	288	15	15	---	397	573	311	75	24	2.2	.59
31	24	---	15	16	---	869	---	239	---	21	2.2	---
TOTAL	547	1017	1532	291.0	3776	8888	40130	10785	4112	714	783.5	23.93
MEAN	17.6	33.9	49.4	9.39	130	287	1338	348	137	23.0	25.3	.80
MAX	35	288	260	16	935	869	8000	1010	377	57	221	2.2
MIN	10	16	15	5.8	15	107	118	201	56	11	2.2	.57
CFSM	.05	.10	.14	.03	.37	.82	3.83	1.00	.39	.07	.07	.002
IN.	.06	.11	.16	.03	.40	.95	4.28	1.15	.44	.08	.08	.003
AC-FT	1080	2020	3040	577	7490	17630	79600	21390	8160	1420	1550	47
CAL YR 1975	TOTAL	75180.20	MEAN	206	MAX	3900	MIN	7.1	CFSM	.59	IN	8.01
WTR YR 1976	TOTAL	72599.43	MEAN	198	MAX	8000	MIN	.57	CFSM	.57	IN	7.74
									AC-FT	149100		
									AC-FT	144000		

DES MOINES RIVER BASIN

05486490 MIDDLE RIVER NEAR INDIANOLA, IA

LOCATION.--Lat 41°25'27", long 93°35'09", in SW1/4 SE1/4 sec.35, T.77 N., R.24 W., Warren County, Hydrologic Unit 07100008, on right bank 10 ft (3 m) downstream from bridge on county highway, 0.4 mi (0.6 km) upstream from Cavitt Creek, 1.5 mi (2.4 km) upstream from bridge on U.S. Highway 69, and 4.6 mi (7.4 km) northwest of Indianola.

DRAINAGE AREA.--503 mi² (1,302 km²).

PERIOD OF RECORD.--March 1940 to current year.

REVISED RECORDS.--WSP 1438: Drainage area. WSP 1508: 1940 (M), 1941, 1944, 1946, 1949 (M).

GAGE.--Water-stage recorder. Datum of gage is 776.15 ft (236.57 m) above mean sea level (Corps of Engineers bench mark). Prior to June 11, 1946, June 9, 1947, to Nov. 23, 1948, and Sept. 8, 1951, to Oct. 30, 1952, nonrecording gage and June 11, 1946, to June 8, 1947 (destroyed by flood), Nov. 24, 1948, to Sept. 7, 1951, Sept. 1, 1952, to Sept. 30, 1962, water-stage recorder at site 1.6 mi (2.6 km) downstream at datum 2.81 ft (0.86 m) lower.

REMARKS.--Records fair except those for winter period, which are poor. Several observations of water temperature were made during the year. Corps of Engineers gage height telemeter at station.

COOPERATION.--Six discharge measurements furnished by Corps of Engineers.

AVERAGE DISCHARGE.--36 years, 257 ft³/s (7.278 m³/s) 6.94 in/yr (176 mm/yr), 186,200 acre-ft/yr (230 hm³/yr); median of yearly mean discharges, 240 ft³/s (6.80 m³/s) 6.5 in/yr (165 mm/yr), 174,000 acre-ft/yr (215 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 34,000 ft³/s (963 m³/s) June 13, 1947, gage heights: 26.40 ft (8.047 m), from floodmark, former site and datum; 28.27 ft (8.617 m), from floodmark, present site and datum; minimum daily, 0.66 ft³/s (19 dm³/s) Oct. 4, 1968.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 4,500 ft³/s (127 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage Height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage Height (ft) (m)
Apr. 18	2000	9,140 259	21.74 6.626	Apr. 24	0100	*9,900 280	*22.46 6.846

Minimum daily discharge, 6.1 ft³/s (0.173 m³/s) Sept. 21, 22, 24.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	20	17	96	13	14	427	426	588	224	81	400	11
2	19	17	64	12	14	291	272	513	206	73	163	11
3	22	17	68	11	15	221	218	442	185	66	97	11
4	21	17	67	11	15	215	192	401	161	62	75	10
5	18	22	66	11	16	312	166	376	148	58	62	9.4
6	17	21	53	11	17	261	151	347	139	54	54	9.4
7	16	19	46	11	18	355	141	310	127	51	48	9.0
8	16	18	42	11	19	437	130	279	120	49	43	8.7
9	15	21	38	11	20	347	123	262	113	45	39	8.7
10	15	22	37	12	22	322	115	252	118	43	37	8.3
11	15	30	36	12	25	342	110	239	127	41	39	7.6
12	15	31	34	12	24	571	130	229	125	39	123	7.2
13	16	41	33	12	23	931	139	245	117	38	247	7.6
14	15	34	41	12	29	481	112	244	761	36	88	7.2
15	14	29	47	12	32	310	104	234	1700	35	66	7.2
16	14	25	50	13	50	250	366	612	776	35	49	6.9
17	13	25	54	13	78	214	461	677	373	35	41	6.5
18	13	19	43	13	123	195	7120	451	231	32	35	6.5
19	13	19	39	13	118	185	2970	346	190	32	30	6.5
20	13	19	36	13	95	180	1490	291	159	32	28	6.8
21	13	19	35	13	96	164	4000	262	145	44	26	6.1
22	13	19	32	13	102	144	1630	250	130	112	24	6.1
23	13	18	24	13	110	125	1030	303	117	62	22	6.5
24	15	19	20	13	127	114	7210	454	109	46	21	6.1
25	15	17	17	13	231	108	6470	396	102	56	20	6.5
26	15	23	16	13	338	104	2030	326	96	46	19	7.6
27	16	28	16	13	520	100	1200	270	96	104	16	8.7
28	21	31	15	13	689	94	914	228	148	616	16	8.0
29	18	44	15	14	661	92	764	326	153	395	14	7.6
30	17	147	14	14	---	350	664	403	107	154	13	6.9
31	16	---	13	14	---	510	---	262	---	307	12	---
TOTAL	492	828	1208	385	3641	8752	40848	10818	7303	2879	1967	236.6
MEAN	15.9	27.5	39.0	12.4	126	282	1362	349	243	92.9	63.5	7.89
MAX	22	147	96	14	689	931	7210	677	1700	616	400	11
MIN	13	17	13	11	14	92	104	228	96	32	12	6.1
CFSM	.03	.05	.08	.02	.25	.56	2.71	.69	.48	.18	.13	.02
IN.	.04	.06	.09	.03	.27	.65	3.02	.80	.54	.21	.15	.02
AC-FT	976	1640	2400	764	7220	17360	81020	21460	14490	5710	3900	469
CAL YR 1975	TOTAL	98466.0	MEAN	270	MAX	6300	MIN	13	CFSM	.54	IN	7.28
WTR YR 1976	TOTAL	79357.6	MEAN	217	MAX	7210	MIN	6.1	CFSM	.43	IN	5.87
									AC-FT	157400		

05487470 SOUTH RIVER NEAR ACKWORTH, IA

LOCATION.--Lat 41°20'14", long 93°29'10", in SE1/4 SE1/4 sec.34, T.76 N., R.23 W., Warren County, Hydrologic Unit 07100008, on right bank 15 ft (5 m) downstream from bridge on county highway, 0.5 mi (0.8 km) downstream from Otter Creek, and 2.2 mi (3.5 km) southwest of Ackworth.

DRAINAGE AREA.--460 mi² (1,191 km²).

PERIOD OF RECORD.--February 1940 to current year.

REVISED RECORDS.--WSP 1438: Drainage area. WSP 1508: 1941, 1945 (M), 1946.

GAGE.--Water-stage recorder. Datum of gage is 769.97 ft (234.69 m) above mean sea level (levels by Corps of Engineers). Prior to June 12, 1946, nonrecording gage, June 13, 1946, to Apr. 13, 1960, water-stage recorder, and Apr. 14, 1960, to Sept. 30, 1961, nonrecording gage, all at site 4.0 mi (6.4 km) downstream at datum 8.06 ft (2.46 m) lower.

REMARKS.--Records good except those for winter period, which are poor. Several observations of water temperature were made during the year. Corps of Engineers gage height telemeter at station.

COOPERATION.--Five discharge measurements furnished by Corps of Engineers.

AVERAGE DISCHARGE.--36 years, 244 ft³/s (6.910 m³/s), 7.20 in/yr (183 mm/yr), 176,800 acre-ft/yr (218 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 34,000 ft³/s (963 m³/s) June 5, 1947, gage height, 24.60 ft (7.498 m), site and datum then in use; maximum gage height, 29.07 ft (8.861 m) June 10, 1974; no flow Sept. 19 to Oct. 13, 1956.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in June 1930 reached a stage of 24.5 ft (7.47 m), from information by local residents, discharge, about 30,000 ft³/s (850 m³/s), at site 4.0 mi (6.4 km) downstream.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 5,000 ft³/s (142 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage Height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage Height (ft) (m)
Apr. 18	1130	10,600 300	23.31 7.105	Apr. 24	1230	*11,800 334	*24.34 7.419
Apr. 21	0215	8,120 230	20.69 6.306				

Minimum daily discharge, 1.7 ft³/s (0.048 m³/s) Sept. 17, 18.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5.8	6.4	198	7.8	8.5	131	215	217	52	25	10	3.2
2	5.4	6.9	77	6.4	8.0	119	152	175	50	21	9.1	3.0
3	5.5	8.6	53	5.6	7.7	119	127	140	44	20	8.2	3.0
4	5.4	9.1	41	5.4	7.6	196	108	123	36	19	8.2	2.9
5	5.5	8.7	38	5.0	8.3	660	96	115	34	16	8.2	2.8
6	5.2	8.3	34	4.8	9.6	431	91	104	27	12	7.6	2.6
7	5.1	8.4	28	4.5	11	526	83	88	24	12	6.7	2.4
8	5.6	8.5	24	4.2	13	682	75	79	22	12	5.9	2.3
9	6.0	9.2	23	4.4	17	382	56	75	20	12	5.7	2.3
10	7.0	15	22	4.4	19	312	53	72	46	12	5.7	2.2
11	5.5	11	23	4.7	23	248	62	56	67	12	5.7	2.0
12	5.9	6.7	22	4.7	24	795	62	50	50	12	6.7	1.9
13	5.6	7.0	21	4.7	25	517	59	84	35	12	7.9	2.3
14	5.9	5.9	69	4.3	28	54	58	75	1080	12	8.2	2.3
15	7.3	6.4	112	4.0	40	72	58	83	1680	12	8.5	2.4
16	7.0	7.2	72	4.0	65	68	57	820	408	12	8.2	2.2
17	6.2	9.1	47	3.8	109	119	235	975	151	12	6.7	1.7
18	6.0	7.6	31	4.1	104	110	7880	311	98	12	6.4	1.7
19	5.8	7.6	24	4.5	109	96	2740	171	82	12	5.9	3.4
20	5.5	10	20	4.2	72	84	1670	123	63	12	5.4	2.6
21	5.9	13	16	4.7	103	80	5670	100	50	33	4.7	2.2
22	5.8	10	13	5.0	148	54	1410	86	43	33	4.2	1.8
23	6.2	7.6	11	5.3	160	72	742	100	38	23	4.2	2.2
24	7.4	7.6	11	5.8	242	68	9200	117	35	16	4.2	3.0
25	9.6	8.3	11	6.0	505	66	5040	94	33	10	4.2	3.8
26	9.5	8.4	11	5.6	447	69	1210	67	30	10	4.2	4.2
27	8.0	11	10	7.0	387	67	549	60	30	14	4.0	3.8
28	6.7	10	9.8	7.8	283	64	461	56	44	118	3.8	2.9
29	6.0	125	9.0	8.0	178	68	324	64	38	59	3.8	2.6
30	6.0	687	8.8	8.6	---	718	262	65	31	26	3.4	2.3
31	5.8	---	8.4	8.6	---	434	---	63	---	14	3.2	---
TOTAL	194.1	1056.5	1098.0	168.9	3161.7	7481	38926	4828	4441	637	188.8	78.0
MEAN	6.26	35.2	35.4	5.45	109	241	1298	156	148	20.5	6.09	2.60
MAX	9.6	687	198	8.6	505	795	9200	975	1680	118	10	4.2
MIN	5.1	5.9	8.4	3.8	7.6	54	57	56	20	10	3.2	1.7
CFSM	.01	.08	.08	.01	.24	.52	2.62	.34	.32	.04	.01	.005
IN.	.02	.09	.09	.01	.26	.60	3.15	.39	.36	.05	.02	.006
AC-FT	385	2100	2180	335	6270	14840	77210	9580	8810	1260	374	155
CAL YR 1975	TOTAL	83950.1	MEAN 230	MAX 6070	MIN 5.1	CFSM .50	IN 6.79	AC-FT 166500				
WTR YR 1976	TOTAL	62259.0	MEAN 170	MAX 9200	MIN 1.7	CFSM .37	IN 5.03	AC-FT 123500				

05487980 WHITE BREAST CREEK NEAR DALLAS, IA

LOCATION.--Lat 41°14'41", Long 93°16'08", in NW1/4 NW1/4 sec.3, T.74 N., R.21 W., Marion County, Hydrologic Unit 07100008, on left bank 15 ft (5 m) downstream from bridge on county highway, 0.5 mi (0.8 km) downstream from Kirk Branch, and 1.7 mi (2.7 km) northwest of Dallas.

DRAINAGE AREA.--342 mi² (886 km²).

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

GAGE.--Water-stage recorder. Datum of gage is 759.12 ft (231.38 m) above mean sea level, datum of 1929 (Corps of Engineers bench mark).

REMARKS.--Records good except those for winter period, which are poor. Several observations of water temperature were made during the year. Corps of Engineers gage height telemeter at station.

COOPERATION.--Four discharge measurements furnished by Corps of Engineers.

AVERAGE DISCHARGE.--14 years, 189 ft³/s (5.352 m³/s), 7.50 in/yr (190 mm/yr), 136,900 acre-ft/yr (169 hm³/yr); median of yearly mean discharges, 160 ft³/s (4.53 m³/s), 6.4 in/yr (162 mm/yr), 116,000 acre-ft/yr (143 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 9,430 ft³/s (267 m³/s) Oct. 11, 1973, gage height, 26.04 ft (7.937 m); minimum daily, 0.07 ft³/s (0.002 m³/s) Sept. 29, 1968.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of June 11, 1962, reached a stage of 28.87 ft (8.800 m), from floodmark, discharge, about 12,000 ft³/s (340 m³/s). Flood of June 6, 1947, may have been slightly higher.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 3,000 ft³/s (85.0 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage Height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage Height (ft) (m)
Apr. 18	unknown	3,890 110	17.48 5.328	Apr. 24	0800	*7,980 226	*23.77 7.245
Apr. 21	0130	4,110 116	17.69 5.392				

Minimum daily discharge, 1.2 ft³/s (0.034 m³/s) Sept. 16, 17.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.5	2.4	706	12	8.3	77	187	256	55	23	25	4.2
2	1.7	2.4	186	9.4	8.5	74	127	225	42	19	12	4.1
3	2.2	2.4	148	8.2	8.7	64	100	190	35	17	8.1	4.2
4	3.4	2.4	129	7.4	8.7	208	81	169	30	18	6.9	4.0
5	3.4	1.7	120	7.0	8.0	1290	62	158	27	20	7.0	3.7
6	4.2	1.4	115	6.3	7.8	528	58	150	25	20	7.4	3.4
7	3.9	4.5	105	5.8	7.8	448	61	125	24	20	7.9	2.7
8	4.5	4.5	98	5.5	7.9	412	56	102	22	20	8.9	2.5
9	4.5	4.2	96	5.4	8.4	332	52	85	21	19	8.2	2.2
10	5.0	4.2	98	5.3	9.2	249	43	66	97	19	7.1	2.0
11	4.5	3.4	98	5.3	13	219	46	57	130	17	7.7	2.1
12	5.9	2.9	98	5.3	16	661	47	53	63	17	7.4	2.1
13	5.6	2.2	97	5.4	23	647	46	79	38	16	11	1.7
14	5.6	2.7	130	5.5	25	251	41	64	1160	17	10	1.4
15	5.3	2.2	210	5.7	38	182	41	78	1850	17	11	1.4
16	4.7	3.2	140	5.9	70	146	41	407	793	17	79	1.2
17	5.3	4.5	90	6.1	94	115	278	492	148	17	135	1.2
18	5.6	5.6	62	6.2	102	107	2920	221	98	17	21	1.3
19	5.3	8.1	45	6.3	89	98	2640	126	65	19	6.4	1.5
20	4.7	5.3	31	6.5	57	93	1720	82	53	20	5.3	1.5
21	6.2	5.3	23	6.6	67	83	2860	64	45	38	5.9	1.5
22	4.2	9.7	19	6.7	80	70	2010	168	38	345	5.2	1.5
23	5.3	8.9	17	6.8	90	65	1740	102	34	425	4.5	1.7
24	5.3	9.3	16	7.0	246	63	7580	90	30	78	4.2	1.7
25	5.3	7.5	15	7.1	330	63	5650	67	30	38	4.8	1.7
26	4.5	6.8	15	7.2	276	59	3260	57	28	28	4.4	2.1
27	4.7	6.8	14	7.3	169	77	735	46	26	93	4.0	1.5
28	4.2	6.8	14	7.4	120	70	462	41	50	654	4.0	1.4
29	2.7	230	14	7.6	91	67	346	56	34	98	4.1	1.7
30	2.7	2000	13	7.8	---	429	290	82	29	38	4.2	1.8
31	2.4	---	13	8.1	---	473	---	78	---	25	4.1	---
TOTAL	134.3	2361.3	2975	210.1	2080.3	7720	33580	4036	5121	2230	441.7	65.0
MEAN	4.33	78.7	96.0	6.78	71.7	249	1119	130	71.9	14.2	2.17	
MAX	6.2	2000	706	12	330	1290	7580	492	1850	654	135	4.2
MIN	1.5	1.4	13	5.3	7.8	59	41	41	21	16	4.0	1.2
CFSM	.01	.23	.28	.02	.21	.73	3.27	.38	.50	.21	.04	.006
IN.	.01	.26	.32	.02	.23	.84	3.65	.44	.56	.24	.05	.007
AC-FT	266	4680	5900	417	4130	15310	66610	8010	10160	4420	876	129
CAL YR 1975 TOTAL	58478.3		MEAN 160	MAX 2510	MIN 1.0	CFSM .47	IN 6.36	AC-FT 116000				
WTR YR 1976 TOTAL	60954.7		MEAN 167	MAX 7580	MIN 1.2	CFSM .49	IN 6.63	AC-FT 120900				

05488100 LAKE RED ROCK NEAR PELLA, IA

LOCATION.--Lat 41°22'11", Long 92°58'48", in NE1/4 NW1/4 sec.19, T.76 N., R.18 W., Marion County, Hydrologic Unit 07100008, at outlet works near right end of Red Rock Dam on Des Moines River, 1.4 mi (2.3 km) upstream from Lake Creek, 4.5 mi (7.2 km) southwest of Pella and at mile 142.3 (229.0 km).

DRAINAGE AREA.--12,323 mi² (31,917 km²).

PERIOD OF RECORD.--March 1969 to current year.

GAGE.--Water-stage recorder. Datum of gage is at mean sea level (levels by Corps of Engineers).

REMARKS.--Reservoir is formed by earthfill dam completed in 1969. Storage began in March 1969. Releases controlled through 14 concrete conduits extending through the concrete ogee spillway section into the stilling basin. Inlet invert elevation at 690 ft (210 m) above mean sea level. Maximum design discharge through the conduits is 37,500 ft³/s (1,060 m³/s) but normal flood control operation limits maximum outflow to 30,000 ft³/s (850 m³/s). Spillway section consists of 5 Tainter gates, 41 ft (12 m) wide and 46 ft (14 m) high, on concrete ogee crest at elevation 736 ft (224 m). The storage capacity of the reservoir at full flood-control pool level, 780 ft (238 m), is 1,830,000 acre-ft (2,260 hm³) and that of conservation pool level, 725 feet (221 m), is 90,000 acre-feet (111 hm³). Reservoir is used for flood control, low-flow augmentation, conservation and recreation. Normal operation will maintain an elevation of 725 ft (221 m) with minimum release of 300 ft³/s (8.50 m³/s) and maximum release of 30,000 ft³/s (850 m³/s) during the non-growing season, providing discharges at Ottumwa and Keosauqua do not exceed 30,000 ft³/s (850 m³/s) and 35,000 ft³/s (991 m³/s) respectively.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 1,700,000 acre-ft (2,100 hm³) May 14, 1973, elevation, 777.95 ft (237.119 m); minimum, 65,400 acre-ft (80.6 hm³) Jan. 1, 1974, elevation, 721.92 ft (220.041 m).

EXTREMES FOR CURRENT YEAR.--Maximum contents, 504,000 acre-ft (621 hm³) Apr. 28, elevation, 749.68 ft (228.502 m); minimum daily contents, 77,400 acre-ft (95.4 hm³) Mar. 18, 19, 21, minimum observed elevation, 724.76 ft (220.907 m) Dec. 18.

Capacity table (elevation, in feet, and contents, in acre-feet)

722	66,200	740	292,000	760	825,000
725	90,000	745	392,000	765	1,020,000
730	142,000	750	517,000	770	1,250,000
735	208,400	755	653,000		

CONTENTS, IN ACRE-FEET, AT 2400, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	89700	89900	95900	89300	89500	97600	101000	466000	112000	116000	91900	93100
2	89500	89900	93300	89400	89400	96100	101000	446000	106000	117000	92100	92400
3	89400	89900	93100	88700	89600	94700	99400	426000	104000	117000	92100	93000
4	89400	89900	93100	88000	89800	95600	98400	407000	103000	116000	92000	92800
5	89300	89800	92100	88200	89900	96100	97200	386000	102000	115000	91800	92700
6	89400	89700	90900	88400	90100	95100	95800	366000	101000	114000	91600	92500
7	89400	89700	90000	88400	90600	94400	96800	346000	101000	112000	91000	92400
8	89400	89600	89500	88400	90500	93700	96600	323000	101000	110000	90600	92200
9	89400	89600	89200	88500	90800	92500	96200	303000	101000	107000	90900	92000
10	89600	89400	89400	88600	91000	90600	94600	285000	101000	104000	91800	91800
11	89700	89400	89700	88700	91300	89900	93600	270000	104000	101000	93800	91600
12	89800	89500	89900	88800	91700	90100	93800	256000	105000	98500	95500	91500
13	89900	89200	90100	88900	92100	90400	93400	246000	107000	96300	96600	91300
14	89900	89300	89800	89100	93200	90600	93000	235000	111000	94400	96200	91100
15	89800	89500	88900	89200	94300	85400	93200	225000	114000	92600	95000	90900
16	89600	89700	87800	89200	95200	81800	95800	217000	110000	91300	94300	90800
17	89800	89900	86900	89200	95800	78600	100000	209000	105000	91000	93600	90700
18	90200	90000	86800	89300	95500	77400	152000	199000	100000	91600	93100	90600
19	90500	89900	88000	89500	94900	77400	173000	190000	98500	92200	92800	90500
20	90600	90100	87400	89600	94300	77600	176000	178000	98400	92500	92800	90400
21	90500	90100	88200	89700	93600	77400	207000	170000	98800	92900	92900	90300
22	90500	90200	88900	89800	92600	79000	227000	165000	100000	93800	92800	90300
23	90500	90100	89500	89900	92600	82300	237000	163000	102000	96900	92700	90200
24	90300	90400	89600	90000	94100	84200	328000	173000	104000	96100	92800	90100
25	89800	89700	89200	90200	95100	85400	419000	185000	105000	95300	92900	90100
26	89200	90000	88500	90100	94800	85700	474000	182000	110000	94900	92900	90000
27	89000	90000	87800	89800	94200	85100	498000	174000	116000	95000	92900	90000
28	89300	90000	87300	89700	94900	85300	504000	163000	124000	95800	92900	90000
29	89600	89400	87600	89500	97900	86600	497000	147000	123000	93800	93000	90000
30	89800	89700	88400	89500	---	89900	485000	134000	119000	92400	93100	90000
31	90000	---	89200	89700	---	98200	---	121000	---	91800	93200	---
MAX	90600	99700	95900	90200	97900	98200	504000	466000	124000	117000	96600	93100
MIN	89000	89200	86800	86000	89400	77400	93000	121000	98400	91000	90600	90000
+	725.25	726.13	725.17	725.10	725.99	726.05	748.88	727.42	728.20	725.08	725.24	724.97
*	+100	+9,700	-10,500	+500	+8,200	+300	+386,800	-364,000	-2,000	-27,200	+1,400	-3,200

CAL YR 1975.....MAX 578,000 MIN 70,800 *+12,700
WTR YR 1976.....MAX 504,000 MIN 77,400 * +100

+ Elevation, in feet, at end of month.

* Change in contents, in acre-feet.

05488500 DES MOINES RIVER NEAR TRACY, IA

LOCATION.--Lat 41°16'53", long 92°51'34", in NW1/4 SE1/4 sec.19, T.75 N., R.17 W., Mahaska County, Hydrologic Unit 07100009, on right bank 250 ft (76 m) upstream from abandoned Bellefontaine Bridge, 0.5 mi (0.8 km) downstream from bridge on State Highway 92, 0.8 mi (1.3 km) east of Tracy, 3.1 mi (5.0 km) upstream from Cedar Creek, 6.4 mi (10.3 km) downstream from English Creek, and at mile 130.4 (209.8 km).

DRAINAGE AREA.--12,479 mi² (32,321 km²).

PERIOD OF RECORD.--March 1920 to current year. Monthly discharge only for some periods, published in WSP 1308.

REVISED RECORDS.--WSP 1438: Drainage area. WSP 1508: 1920 (M), 1922 (M), 1933.

GAGE.--Water-stage recorder. Datum of gage is 670.91 ft (204.493 m) above mean sea level. Prior to June 26, 1940, and June 30, 1952, to Nov. 4, 1960, nonrecording gage, and June 27, 1940, to June 29, 1952, water-stage recorder, at site 250 ft (76 m) downstream at same datum.

REMARKS.--Records good except those for winter period, which are fair. Flow regulated by Lake Red Rock (station 05488100) 11.9 mi (19.1 km) upstream, since March 12, 1969. Several observations of water temperature were made during the year. Corps of Engineers gage height telemeter at station.

COOPERATION.--Twenty-three discharge measurements furnished by Corps of Engineers.

AVERAGE DISCHARGE.--56 years, 4,640 ft³/s (131.4 m³/s), 5.05 in/yr (128 mm/yr), 3,362,000 acre-ft/yr (4,150 hm³/yr); median of yearly mean discharges, 3,960 ft³/s (112 m³/s), 4.3 in/yr (109 mm/yr), 2,869,000 acre-ft/yr (3,540 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 155,000 ft³/s (4,390 m³/s), June 14, 1947, gage height, 26.5 ft (8.08 m); minimum daily, 40 ft³/s (1.13 m³/s) Jan. 29 to Feb. 1, 1940.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since 1851, that of June 14, 1947. Flood of May 31, 1903, reached a stage of about 25 ft (7 m), discharge, about 130,000 ft³/s (3,680 m³/s). Minimum daily discharge since at least 1910, that of Jan. 29 to Feb. 1, 1940.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 20,900 ft³/s (592 m³/s) Apr. 24, gage height, 12.69 ft (3.868 m); minimum daily, 339 ft³/s (9.60 m³/s) Sept. 9-24, 28-30.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	807	575	4040	690	580	4860	6930	16800	12800	6940	997	348
2	809	669	3500	740	625	5640	8490	16700	10100	3840	882	348
3	766	666	1940	880	540	4510	8500	16900	7100	3440	870	348
4	679	720	1370	1190	480	3890	8050	16500	6360	4010	870	348
5	677	874	1820	940	540	4650	7300	16600	5830	3560	870	348
6	675	960	2000	600	540	4860	6920	14900	5390	3010	859	339
7	675	966	1990	430	515	4150	6250	14100	4790	2980	859	348
8	677	960	1690	470	465	4110	5450	16600	4430	2970	801	348
9	667	965	1560	490	470	4110	4770	15800	4160	2950	600	339
10	553	954	1220	480	480	4470	4700	15000	4380	2920	386	339
11	549	922	1000	480	495	4300	4310	13200	4710	2910	377	339
12	548	850	1030	475	505	3930	3780	11500	4790	2780	492	339
13	545	943	1200	490	525	5280	3600	9940	5340	2550	962	339
14	542	791	1490	490	540	6390	3590	9820	7620	2500	1330	339
15	578	697	1600	510	620	7430	3520	9760	12700	2290	1550	339
16	635	693	1530	495	921	7780	3240	10300	14200	1840	1140	339
17	508	693	1500	505	1180	8070	3910	12300	13400	1260	1020	339
18	401	693	1380	545	1730	7310	6680	10800	10700	859	951	339
19	396	698	935	580	2180	6240	16100	12200	8380	847	790	339
20	435	715	660	560	2160	6120	19000	12000	6370	997	650	339
21	540	744	840	625	2210	5900	18500	11500	5640	1200	551	339
22	537	833	845	490	2180	5300	14900	10300	4620	1190	551	339
23	539	840	890	455	1840	3750	15400	9760	3800	1430	551	339
24	582	885	1210	470	1500	3800	17200	9300	3770	2140	541	339
25	710	962	1270	480	2200	4060	11400	12600	3760	2020	502	348
26	796	781	1130	600	2970	4150	6450	14900	3440	1550	482	358
27	722	586	1210	740	3510	4290	7700	16900	2940	1140	434	348
28	534	578	1080	585	3780	3920	11200	17800	6230	1340	434	339
29	531	975	815	580	3950	3610	14900	17900	8700	2420	424	339
30	533	2770	610	580	---	4310	16900	16200	9580	2220	377	339
31	541	---	610	580	---	5750	---	13900	---	1460	348	---
TOTAL	18687	25958	43865	18225	40231	156940	269640	422780	206030	73563	22451	10270
MEAN	603	865	1415	588	1387	5063	8988	13640	6868	2373	724	342
MAX	809	2770	4040	1190	3950	8070	19000	17900	14200	6940	1550	358
MIN	396	575	610	430	465	3610	3240	9300	2940	847	348	339
AC-FT	37070	51490	87010	36150	79800	311300	534800	838600	408700	145900	44530	20370
CAL YR 1975	TOTAL	2058155	MEAN	5639	MAX	25000	MIN	396	AC-FT	4082000		
WTR YR 1976	TOTAL	1308640	MEAN	3576	MAX	19000	MIN	339	AC-FT	2596000		

05489000 CEDAR CREEK NEAR BUSSEY, IA

LOCATION.--Lat 41°13'09", long 92°54'38", at SW corner sec.11, T.74 N., R.18 W., Marion County, Hydrologic Unit 07100009, on left bank 10 ft (3 m) downstream from bridge on State Highway 156, 0.8 mi (1.3 km) downstream from North Cedar Creek, 1.6 mi (2.6 km) northwest of Bussey, 3.0 mi (4.8 km) upstream from Honey Creek, and 8.9 mi (14.3 km) upstream from mouth.

DRAINAGE AREA.--374 mi² (969 km²).

PERIOD OF RECORD.--October 1947 to current year.

REVISED RECORDS.--WSP 1438: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 682.15 ft (207.919 m) above mean sea level (levels by Corps of Engineers). Prior to Feb. 21, 1949, nonrecording gage at same site and datum.

REMARKS.--Records good except those for winter period, which are poor. Several observations of water temperature were made during the year. Corps of Engineers gage height telemeter at station.

COOPERATION.--Five discharge measurements furnished by Corps of Engineers.

AVERAGE DISCHARGE.--29 years, 196 ft³/s (5.550 m³/s), 7.12 in/yr (181 mm/yr), 142,000 acre-ft/yr (175 hm³/yr); median of yearly mean discharges, 180 ft³/s (5.10 m³/s), 6.5 in/yr (165 mm/yr), 130,000 acre-ft/yr (160 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 29,300 ft³/s (830 m³/s) May 9, 1950, gage height, 27.50 ft (8.382 m); maximum gage height, 28.06 ft (8.553 m) July 2, 1958; no flow Sept. 6-20, 1955, Oct. 11, 12, 1955.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in June 1946 reached a stage of 28.45 ft (8.672 m) on upstream side and 28.05 ft (8.550 m) on downstream side of bridge, levels to floodmarks by Corps of Engineers, discharge, 31,500 ft³/s (892 m³/s).

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 4,000 ft³/s (113 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage Height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage Height (ft) (m)
Apr. 24	1800	*13,900 394	*25.27 7.702	May 16	2245	9,300 263	23.11 7.044
May 5	1200	4,780 135	18.90 5.761				

Minimum daily discharge, 1.3 ft³/s (0.037 m³/s) Sept. 13.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5.5	6.1	418	26	15	110	213	211	103	47	32	2.1
2	4.9	4.9	137	22	16	135	155	180	85	37	32	2.4
3	4.5	11	95	23	14	130	130	152	72	31	29	2.4
4	3.5	19	80	16	13	496	108	135	63	27	23	2.5
5	2.6	5.2	74	11	11	4090	98	131	55	24	20	2.0
6	2.3	3.2	64	10	10	1280	94	534	50	22	17	1.9
7	2.3	3.4	51	10	10	510	89	455	45	20	13	1.9
8	2.6	3.4	48	8.0	10	334	82	173	40	18	9.3	2.0
9	2.5	3.9	47	8.0	12	250	74	135	35	27	7.0	2.0
10	2.3	5.4	52	7.8	17	220	72	121	47	31	3.1	1.5
11	2.3	5.3	58	7.8	23	190	73	111	204	31	5.3	2.1
12	2.6	5.1	55	7.8	31	432	78	100	99	23	20	1.6
13	3.2	4.8	53	7.8	40	369	69	111	64	20	15	1.3
14	3.4	4.2	187	7.9	45	215	70	134	1120	91	12	1.7
15	2.8	4.3	273	7.9	55	174	72	129	1360	40	9.3	1.7
16	2.8	5.3	85	8.4	77	148	70	4090	253	18	8.0	1.7
17	3.4	6.4	49	7.8	116	125	92	6670	129	29	6.0	1.6
18	3.4	3.2	35	7.2	240	121	1050	962	95	25	5.1	1.8
19	3.2	1.4	28	7.2	348	118	969	367	77	24	4.4	2.0
20	3.6	3.0	31	7.2	142	112	350	244	65	25	3.7	1.6
21	3.6	3.8	30	7.2	135	95	2170	182	56	70	3.4	1.6
22	3.9	4.1	29	7.7	130	85	1810	176	48	45	3.3	1.5
23	4.1	4.1	28	8.4	150	84	588	149	41	43	3.3	1.6
24	4.6	3.4	28	9.0	378	85	6530	202	38	33	3.4	1.4
25	4.1	3.2	29	10	494	78	6830	137	36	34	33	1.6
26	4.4	2.7	32	11	266	82	1280	111	32	34	7.3	7.3
27	5.5	3.5	29	9.0	180	132	558	96	30	47	3.7	7.3
28	3.9	3.3	27	10	146	113	387	90	1670	76	3.0	5.8
29	3.9	394	25	11	125	96	292	119	128	35	2.2	3.3
30	3.9	3480	26	12	---	720	244	324	66	34	2.1	2.5
31	4.4	---	27	13	---	535	---	134	---	34	2.1	---
TOTAL	110.0	4010.6	2231	327.1	3249	11674	24707	16865	6207	1096	341.0	71.7
MEAN	3.55	134	72.0	10.6	112	377	824	544	207	35.4	11.0	2.39
MAX	5.5	3480	418	26	494	4090	6830	6670	1670	91	33	7.3
MIN	2.3	1.4	25	7.2	10	78	69	90	30	18	2.1	1.3
CFSM	.009	.36	.19	.03	.30	1.01	2.20	1.45	.55	.09	.03	.005
IN.	.01	.40	.22	.03	.32	1.16	2.45	1.68	.62	.11	.03	.007
AC-FT	218	7960	4430	649	6440	23160	49010	33450	12310	2170	676	142
CAL YR 1975	TOTAL	51393.8	MEAN 141	MAX 3480	MIN 1.4	CFSM .38	IN 5.11	AC-FT 101900				
WTR YR 1976	TOTAL	70889.4	MEAN 194	MAX 6830	MIN 1.3	CFSM .52	IN 7.05	AC-FT 140500				

DES MOINES RIVER BASIN

05489500 DES MOINES RIVER AT OTTUMWA, IA

LOCATION.--Lat 41°00'39", long 92°24'40", in SE1/4 NE1/4 sec.25, T.72 N., R.14 W., Wapello County, Hydrologic Unit 07100009, on right bank 15 ft (4 m) downstream from Wabash Railroad Bridge at Ottumwa, 0.4 mi (0.6 km) downstream from Ottumwa powerplant, 6.5 mi (10.5 km) upstream from Village Creek, 9.5 mi (15.3 km) downstream from South Avery Creek, and at mile 94.1 (151.4 km).

DRAINAGE AREA.--13,374 mi² (34,638 km²).

PERIOD OF RECORD.--March 1917 to current year (published as "at Eldon" October 1930 to March 1935). Monthly dis-charge only for some periods, published in WSP 1308.

REVISED RECORDS.--WSP 525: 1917-20. WSP 1308: 1917-23 (M), 1925-27 (M), 1931. WSP 1438: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 622.00 ft (189.586 m) above mean sea level. Prior to Sept. 30, 1930, nonrecording gages at Market Street Bridge 1,700 ft (518 m) upstream at datum 0.83 ft (0.25 m) higher. Oct. 1, 1930, to Mar. 31, 1935, nonrecording gage at Eldon 15 mi (24.1 km) downstream at different datum. Apr. 1, 1935, to Oct. 25, 1963, water-stage recorder at site 1,100 ft (335 m) downstream at Vine Street Bridge at datum 0.77 ft (0.23 m) higher.

REMARKS.--Records good except those for winter period, which are fair. Prior to Dec. 12, 1958 and since Nov. 30, 1960, diurnal fluctuation at low flow caused by powerplant above station. Flow regulated by Lake Red Rock (station 05488100) 48.2 mi (77.6 km) upstream, since March 12, 1969. Several observations of water temperature were made during the year. Corps of Engineers gage height telemeter at station.

AVERAGE DISCHARGE.--59 years, 5,065 ft³/s (143 m³/s), 5.14 in/yr (131 mm/yr), 3,670,000 acre-ft/yr (4,530 hm³/yr); median of yearly mean discharges, 4,170 ft³/s (118 m³/s), 4.2 in/yr (107 mm/yr), 3,020,000 acre-ft/yr (3,720 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 135,000 ft³/s (3,820 m³/s) June 7, 1947, gage height, 20.2 ft (6.16 m), site and datum then in use; minimum daily, 30 ft³/s (0.85 m³/s) Jan. 27-29, 31, Feb. 2, 3, 5-7, 1940.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since at least 1850, that of June 7, 1947. Flood of May 31, 1903, reached a stage of 19.4 ft (5.91 m), former site and datum at Vine Street Bridge or about 22 ft (6.71 m) at Market Street Bridge, from information by Corps of Engineers and U.S. Weather Bureau, discharge about 140,000 ft³/s (3,960 m³/s).

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 40,600 ft³/s (1,150 m³/s) Apr. 24, gage height, 13.26 ft (4.042 m); minimum daily, 249 ft³/s (7.05 m³/s) Sept. 16.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	904	521	7360	878	900	4780	6590	17200	15400	9030	1490	311
2	922	553	4890	1000	960	6250	8370	17000	15400	5850	1120	305
3	885	725	3680	1100	750	5530	8660	16900	15500	3770	908	315
4	880	725	2000	1200	735	9150	8640	17400	11500	4110	968	327
5	710	681	1970	1220	640	11300	7660	16700	6470	4260	919	287
6	658	902	2390	1230	700	9070	7480	17700	6050	3580	971	385
7	811	1040	2480	1240	748	5680	6640	14800	5250	3390	838	327
8	659	989	2270	1280	693	5110	6120	16200	4820	3290	926	303
9	745	1040	2090	907	717	5000	5080	16000	4570	3290	890	285
10	660	1020	1850	998	719	5070	4920	15300	5070	3220	581	276
11	434	972	1200	788	759	5250	4660	14000	5680	3250	338	374
12	558	1020	1170	768	686	4840	4030	12800	5320	3210	409	429
13	521	780	1280	741	820	5750	3860	11100	5370	3010	532	418
14	525	934	2000	745	572	6550	3670	10500	8810	2770	1330	492
15	504	804	2280	706	704	7850	3670	10500	13200	3640	1790	407
16	623	597	2300	705	694	8270	3530	14300	14900	2510	1530	249
17	676	710	2000	700	1070	8630	3680	18400	14700	1800	1280	321
18	420	556	1500	685	2180	8360	4660	15300	12400	1370	1120	531
19	395	698	935	641	2550	7220	12900	13000	10400	918	1010	385
20	338	721	1050	655	2660	6760	17200	12900	7570	1020	844	294
21	357	687	1080	659	2720	6400	22200	12600	6530	1310	583	363
22	497	599	704	674	2590	6280	17700	11500	5480	1910	536	363
23	506	767	851	660	2550	4700	15700	10900	4550	1450	555	440
24	552	869	909	680	2060	4030	35200	9840	4100	1870	521	453
25	556	890	1310	691	2590	4220	27300	11200	4080	2440	538	466
26	756	1000	1780	710	3180	4380	17800	14200	4000	2320	492	418
27	782	784	1760	800	3850	4590	12300	16100	3570	1860	452	352
28	761	517	2080	910	4190	4510	10800	17700	9050	1320	368	374
29	435	861	1740	870	4270	4040	14000	18100	10300	2080	353	395
30	486	7370	1240	851	---	4280	16600	17900	10400	2740	376	341
31	534	---	919	843	---	6370	---	15500	---	2350	337	---
TOTAL	19050	30432	61068	26535	48257	190220	321620	453540	250440	88948	24905	10987
MEAN	615	1014	1970	856	1664	6136	10720	14630	8348	2869	803	366
MAX	922	7370	7360	1280	4270	11300	35200	18400	15500	9030	1790	531
MIN	338	517	704	641	572	4030	3530	9840	3570	918	337	249
AC-FT	37790	60360	121100	52630	95720	377300	637900	899600	496700	176400	49400	21790
CAL YR 1975	TOTAL	2185013	MEAN	5986	MAX	24100	MIN	338		AC-FT	4334000	
WTR YR 1976	TOTAL	1526002	MEAN	4169	MAX	35200	MIN	348		AC-FT	3027000	

05490500 DES MOINES RIVER AT KEOSAUQUA, IA

LOCATION.--Lat 40°43'40", long 91°57'34", in SE1/4 SW1/4 sec.36, T.69 N., R.10 W., Van Buren County, Hydrologic Unit 07100009, on right bank 10 ft (3 m) upstream from bridge on State Highway 1 at Keosauqua, 4.0 mi (6.4 km) downstream from Chequest Creek, and at mile 51.3 (82.5 km).

DRAINAGE AREA.--14,038 mi² (36,358 km²).

PERIOD OF RECORD.--May 1903 to July 1906, April to December 1910, August 1911 to current year. Monthly discharge only for some periods, published in WSP 1308.

REVISED RECORDS.--WSP 525: 1913-20. WSP 1438: Drainage area. WSP 1508: 1903, 1905-6, 1915-18 (M), 1922 (M), 1924-26 (M), 1932-34 (M), 1937, 1942 (M).

GAGE.--Water-stage recorder. Datum of gage is 547.35 ft (166.835 m) above mean sea level. Prior to Dec. 24, 1933, nonrecording gage, and Dec. 25, 1933, to Sept. 30, 1972, water-stage recorder, same site at datum 10.00 ft (3.05 m) higher.

REMARKS.--Records good except those for winter period, which are poor. Prior to Dec. 21, 1958, and since Nov. 30, 1960, some diurnal fluctuation at medium and low stages caused by powerplant at Ottumwa. Flow regulated by Lake Red Rock (station 05488100) 91.0 mi (145 km) upstream, since March 12, 1969. Several observations of water temperature were made during the year. National Weather Service gage height telemeter at station.

COOPERATION.--Four discharge measurements furnished by Corps of Engineers.

AVERAGE DISCHARGE.--67 years (1903-5, 1911-76), 5,509 ft³/s (156.0 m³/s) 5.33 in/yr (135 mm/yr), 3,991,000 acre-ft/yr (4,920 hm³/yr); median of yearly mean discharges, 4,880 ft³/s (138 m³/s), 4.7 in/yr (119 mm/yr), 3,540,000 acre-ft/yr (4,400 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 146,000 ft³/s (4,130 m³/s) June 1, 1903, gage height, 27.85 ft (8.489 m), from floodmark, datum then in use; minimum daily, 40 ft³/s (1.13 m³/s) Jan. 30, 1940.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of June 1, 1851, reached a stage of 24 ft (7 m), discharge not determined.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 67,900 ft³/s (1,920 m³/s) Apr. 24, gage height, 27.23 ft (8.300 m); minimum daily, 251 ft³/s (7.11 m³/s) Sept. 19.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	981	549	7690	960	980	4540	6470	17600	13400	9470	2070	416
2	915	586	5860	830	980	5460	7050	17400	12300	7310	1350	372
3	894	584	4470	970	920	6250	8530	17000	9940	4740	1060	332
4	882	726	3170	980	720	9800	8510	17200	7120	3530	889	368
5	866	785	1910	870	740	26200	8180	16500	6300	4160	943	342
6	742	731	2030	950	720	13600	7370	22100	5780	4110	1200	336
7	756	913	2380	1160	670	7850	7100	18100	5430	3400	1280	355
8	708	1080	2440	1000	640	5760	5420	15400	4820	3290	880	366
9	680	1060	2190	775	790	5420	5800	16300	4480	3170	915	352
10	791	1120	2060	750	870	5260	5000	15300	4420	3150	887	347
11	656	1070	1790	855	860	5460	4960	14400	5500	3090	684	320
12	603	997	1290	870	940	5540	4700	12800	5320	3080	1100	354
13	559	1080	1210	880	1010	5120	4070	11400	4950	3020	969	321
14	564	857	2310	860	1040	6140	4000	9930	9510	2760	616	338
15	575	948	2670	830	1000	6950	3900	9900	12000	2650	1290	347
16	568	881	2450	810	970	7900	3890	11700	14200	3390	1760	337
17	580	666	1980	780	1020	8140	3880	19400	14200	2340	1440	312
18	634	761	883	740	1350	8430	4530	18500	13000	1770	1200	354
19	549	747	1500	610	2610	7730	7980	12400	10600	1310	1080	251
20	406	624	1400	600	2840	6710	16700	12500	8640	976	987	405
21	442	826	1270	590	2790	6510	22100	11900	6720	1380	848	333
22	416	778	1300	600	2880	6180	25300	11400	5980	6050	631	270
23	550	772	1120	680	2720	5780	18400	10200	5110	2280	584	329
24	550	825	1170	680	2680	4350	58000	9700	4350	1480	592	288
25	594	936	1170	735	2160	4090	54500	9270	4150	1900	569	357
26	534	1180	1320	725	2840	4400	21700	12100	4140	2230	569	533
27	684	1740	1590	780	3350	4550	10700	14300	4090	2140	550	550
28	814	1120	1890	770	3930	4780	9860	16200	4680	1720	558	504
29	868	705	2210	840	4270	4480	12800	17200	11100	1280	447	347
30	559	2840	1900	1010	---	4210	16100	17600	9190	2170	420	413
31	506	---	1370	1010	---	5140	---	15500	---	2450	429	---
TOTAL	20426	28487	67993	25500	49290	212730	378500	451200	231420	95796	28797	10849
MEAN	659	950	2193	823	1700	6862	12620	14550	7714	3090	929	362
MAX	981	2840	7690	1150	4270	26200	58000	22100	14200	9470	2070	550
MIN	406	549	883	590	540	4090	3880	9270	4090	976	420	251
AC-FT	40510	56500	134900	50580	97770	421900	750800	895000	459000	190000	57120	21520
CAL YR 1975	TOTAL	2261785	MEAN	6197	MAX	25300	MIN	406	AC-FT	4486000		
WTR YR 1976	TOTAL	1600988	MEAN	4374	MAX	58000	MIN	251	AC-FT	3176000		

MISSOURI RIVER BASIN

BIG SIOUX RIVER BASIN

06483500 ROCK RIVER NEAR ROCK VALLEY, IA

LOCATION (REVISED).--Lat 43°12'52", long 96°17'39", in SW1/4 SW1/4 sec.16, T.97 N., R.46 W., Sioux County, Hydrologic Unit 10170204, on right bank 3 ft (0.9 m) upstream from bridge on county highway K30, 0.3 mi (0.5 km) north of Rock Valley and at mile 19.1 (30.7 km). Prior to May 5, 1976, at site 3.2 mi (5.1 km) downstream.

DRAINAGE AREA.--1,592 mi² (4,123 km²), revised.

PERIOD OF RECORD.--June 1948 to current year.

REVISED RECORDS.--WSP 1439: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 1,222.54 ft (372.630 m) above mean sea level. Prior to Aug. 13, 1952, nonrecording gage (June 4, 1949, to Aug. 12, 1952, supplementary water-stage recorder operating above 6.2 ft (1.89 m) gage height) and Aug. 13, 1952, to May 4, 1976, water-stage recorder, at site 3.2 mi (5.1 km) downstream at datum 10.73 ft (3.271 m) lower.

REMARKS.--Records fair except those for winter period, which are poor. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--28 years, 295 ft³/s (8.354 m³/s), 2.50 in/yr (64 mm/yr), 213,700 acre-ft/yr (263 hm³/yr); median of yearly mean discharges, 240 ft³/s (6.80 m³/s), 2.0 in/yr (51 mm/yr), 174,000 acre-ft/yr (215 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 40,400 ft³/s (1,140 m³/s) Apr. 7, 1969, gage height, 17.32 ft (5.279 m); no flow Feb. 20-23, Feb. 27 to Mar. 8, 1959.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in 1897 reached a stage of 17.0 ft (5.18 m), former site and datum, discharge not determined, from information by State Highway Commission.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 2,250 ft³/s (63.7 m³/s) Mar. 15, gage height, 8.64 ft (2.633 m) former site and datum, no peak above base of 3,000 ft³/s (85.0 m³/s); maximum gage height, 9.74 ft (2.969 m) Feb. 15, former site and datum, backwater from ice; minimum daily discharge, 1.2 ft³/s (0.034 m³/s) Sept. 6.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	66	49	40	45	47	500	586	205	104	40	17	2.2
2	65	49	42	44	47	350	534	196	100	37	15	2.0
3	64	49	45	43	47	270	488	190	90	35	14	1.9
4	60	49	50	42	40	250	457	185	82	33	13	1.6
5	55	50	60	41	34	240	429	168	77	31	12	1.4
6	53	50	55	40	32	240	405	160	73	29	10	1.2
7	50	50	55	39	31	250	384	151	68	28	9.0	3.1
8	47	53	65	39	31	280	369	143	55	25	8.0	2.3
9	45	56	80	39	32	330	348	140	65	25	7.0	2.3
10	44	60	90	40	35	345	330	134	66	19	6.4	1.6
11	44	50	95	42	50	318	315	127	90	17	6.7	1.4
12	44	48	85	44	80	1240	298	124	80	16	6.9	1.4
13	45	45	80	45	150	2090	282	122	75	16	6.0	2.9
14	45	50	70	46	250	2010	272	120	70	16	5.4	2.4
15	46	50	55	47	1800	2020	270	117	65	21	5.4	2.3
16	46	50	50	45	1500	1950	272	108	60	22	6.7	2.3
17	47	58	45	44	1300	1670	270	102	58	20	9.1	2.1
18	49	58	43	45	1160	1510	262	98	56	19	8.1	3.0
19	51	61	43	46	938	1350	250	95	54	17	6.4	2.7
20	54	58	44	47	790	1320	245	94	52	16	5.0	3.1
21	54	50	45	46	520	1420	232	88	51	16	4.3	9.6
22	54	38	45	49	450	1230	220	101	50	16	3.4	12
23	54	35	45	50	447	889	212	149	49	16	3.4	9.4
24	53	33	45	52	482	730	218	160	52	16	3.3	8.4
25	53	32	45	47	502	662	238	164	54	15	3.4	8.1
26	52	32	45	45	618	618	248	151	52	15	3.1	8.1
27	51	33	45	43	804	565	240	138	50	15	3.0	8.4
28	50	34	45	43	826	534	230	127	48	21	2.6	9.4
29	50	36	45	44	840	524	222	122	45	25	2.4	9.4
30	49	38	45	46	---	576	210	112	43	22	2.3	9.4
31	49	---	45	47	---	638	---	108	---	19	2.3	---
TOTAL	1590	1424	1687	1377	13883	26920	9336	4200	1945	678	210.6	135.4
MEAN	51.3	47.5	54.4	44.4	479	868	311	135	64.8	21.9	6.79	4.51
MAX	65	61	95	52	1800	2090	586	205	104	40	17	12
MIN	44	32	40	39	31	240	210	88	43	15	2.3	1.2
CFSM	.03	.03	.03	.03	.30	.54	.19	.08	.04	.01	.004	.002
IN	.04	.03	.04	.03	.32	.63	.22	.10	.05	.02	.005	.003
AC-FT	3150	2820	3350	2730	27540	53400	18520	8330	3850	1340	418	269

CAL YR 1975 TOTAL 95352.5 MEAN 261 MAX 2120 MIN 6.2 CFSM .16 IN 2.22 AC-FT 189100
WTR YR 1976 TOTAL 63386.0 MEAN 173 MAX 2090 MIN 1.2 CFSM .11 IN 1.47 AC-FT 125700

06485500 BIG SIOUX RIVER AT AKRON, IA
(National stream-quality accounting network station)

LOCATION.--Lat 42°49'42", long 96°33'45", in NW1/4 SW1/4 sec.31, T.93 N., R.48 W., Plymouth County, Iowa, Hydrologic Unit 10170203, on left bank at west edge of Akron, 0.5 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.--October 1928 to current year.

REVISED RECORDS.--WSP 1309: 1929 (M), 1931-33 (M), 1936 (M), 1938 (M), 1940 (M). WSP 1389: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 1,118.90 ft (341.041 m) above mean sea level. Prior to Dec. 3, 1934, nonrecording gage at bridge 300 ft (91 m) upstream at same datum.

REMARKS.--Records good except those for the winter period, which are poor.

AVERAGE DISCHARGE.--48 years, 832 ft³/s (23.56 m³/s), 602,800 acre-ft/yr (743 hm³/yr); median of yearly mean discharges, 720 ft³/s (20.4 m³/s), 522,000 acre-ft/yr (644 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 80,800 ft³/s (2,290 m³/s) Apr. 9, 1969, gage height, 22.99 ft (7.007 m); minimum daily, 7 ft³/s (0.20 m³/s) Feb. 26-28, 1936.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 3,250 ft³/s (92.0 m³/s) Mar. 15, gage height, 10.31 ft (3.142 m); maximum gage height, 12.26 ft (3.737 m) Feb. 18, no peak above base of 3,500 ft³/s (99.1 m³/s); minimum daily 31 ft³/s (0.88 m³/s) Sept. 7, 12.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	135	112	115	110	74	1000	1750	604	244	98	59	34
2	133	112	118	110	75	800	1610	589	233	89	55	33
3	131	113	120	100	75	700	1440	546	221	85	52	33
4	130	112	125	95	70	650	1290	516	211	82	49	33
5	128	113	130	90	65	600	1190	503	208	78	50	32
6	121	112	125	80	63	650	1100	477	193	75	50	32
7	116	112	120	75	62	700	1040	458	183	75	47	31
8	113	113	115	70	60	800	991	441	175	71	45	34
9	110	124	120	65	63	950	938	423	163	67	45	34
10	108	135	125	65	65	1000	888	407	155	63	44	34
11	108	140	128	67	80	1100	846	386	149	63	45	33
12	111	151	130	67	100	1400	803	376	153	59	45	31
13	108	141	125	69	150	2000	763	368	153	57	45	37
14	108	141	120	69	150	3100	733	358	138	60	46	38
15	106	130	110	70	800	3230	712	351	132	62	44	37
16	105	116	100	70	1300	3220	707	336	125	65	54	36
17	103	155	95	72	1850	3050	710	316	120	64	57	35
18	105	139	90	72	2000	2640	707	300	120	61	53	34
19	110	130	92	73	1500	2440	686	285	113	61	50	35
20	110	120	93	73	1200	2310	656	279	107	62	47	38
21	110	110	95	75	1050	2350	635	265	101	63	45	38
22	113	105	95	76	900	2530	615	267	97	60	45	38
23	111	108	97	77	800	2360	606	285	93	57	44	37
24	112	110	100	78	750	2310	599	326	97	54	41	46
25	113	112	100	76	800	2190	607	341	98	53	38	43
26	117	115	102	72	900	2240	649	336	99	63	37	41
27	120	118	105	68	920	2300	683	309	100	59	36	41
28	122	120	105	70	940	2120	636	299	89	59	34	41
29	119	125	107	71	950	2020	607	279	92	57	33	41
30	112	120	107	72	---	1910	589	264	98	67	33	41
31	112	---	110	73	---	1800	---	254	---	70	33	---
TOTAL	3560	3664	3419	2370	17823	56480	25786	11544	4260	2059	1401	1091
MEAN	115	122	110	76.5	615	1822	860	372	142	66.4	45.2	36.4
MAX	135	155	130	110	2000	3230	1750	604	244	98	59	46
MIN	103	105	90	65	60	600	589	254	89	53	33	31
CFSM	.01	.01	.01	.008	.07	.20	.10	.04	.02	.007	.005	.004
IN.	.01	.02	.01	.010	.07	.23	.11	.05	.02	.008	.006	.004
AC-FT	7060	7270	6780	4700	35350	112000	51150	22900	8450	4080	2780	2150
CAL YR 1975	TOTAL	152402	MEAN 418	MAX	2660	MIN 26	CFSM .05	IN .63	AC-FT	302300		
WTR YR 1976	TOTAL	133457	MEAN 365	MAX	3230	MIN 31	CFSM .04	IN .55	AC-FT	264700		

MISSOURI RIVER MAIN STEM

06486000 MISSOURI RIVER AT SIOUX CITY, IA
(National stream-quality accounting network station)

LOCATION.--Lat 42°29'10", long 96°24'47". in NW1/4 SE1/4 sec.16, T.29 N., R.9 E., sixth principal meridian, Dakota County, Nebraska, Hydrologic Unit 10230001, on right bank on upstream side of bridge on U.S. Highway 77 at South Sioux City, Nebraska, 2.0 mi (3.2 km) downstream from Big Sioux River, and at mile 732.3 (1,178.3 km).

DRAINAGE AREA.--314,600 mi² (814,800 km²), approximately.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1897 to current year in reports of Geological Survey. Prior to October 1928 and October 1931 to September 1938, monthly discharges only published in WSP 1310. January 1879 to December 1890 (monthly discharges only) in House Document 238, 73rd Congress, 2d session, Missouri River. Gage-height records collected in this vicinity September 1878 to December 1899 are contained in reports of Missouri River Commission and since July 1889 are contained in reports of U.S. Weather Bureau.

REVISED RECORDS.--WSP 716: 1929-30. WSP 876: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 1,056.98 ft (322.168 m) above mean sea level. Sept. 2, 1878, to Dec. 31, 1905, nonrecording gages at various locations within 1.7 mi (2.7 km) of present site and at various datums. Jan. 1, 1906, to Feb. 14, 1935, nonrecording gage, and Feb. 15, 1935 to Sept. 30, 1969, water-stage recorder at present site at datum 19.98 ft (6.090 m) higher, and Oct. 1, 1969 to Sept. 30, 1970 at datum 20.00 ft (6.096 m) higher.

REMARKS.--Records good except those for winter period, which are poor. Flow regulated by upstream main-stem reservoirs. National Weather Service gage height telemeter at station.

AVERAGE DISCHARGE.--79 years, 32,000 ft³/s (906.2 m³/s), 23,190,000 acre-ft/yr (28,600 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 441,000 ft³/s (12,500 m³/s) Apr. 14, 1952, gage height, 24.28 ft (7.401 m), datum then in use; minimum, 2,500 ft³/s (70.8 m³/s) Dec. 29, 1941; minimum gage height, -6.60 ft (-2.012 m), datum then in use, Dec. 14, 1968, result of freezeup.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 67,400 ft³/s (1,910 m³/s) Nov. 20, gage height, 24.02 ft (7.321 m); maximum gage height, 25.59 ft (7.800 m) Oct. 8; minimum daily discharge, 12,000 ft³/s (340 m³/s) Jan. 8; minimum gage height, not determined, occurred during period of no gage-height record Jan. 8 or 9.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	62900	63200	58500	26200	26400	27800	39800	38100	38400	39800	39500	39500
2	62600	63200	55200	22800	25400	28600	40000	38100	38400	39800	39200	38900
3	62600	63600	52500	21000	24300	29000	40000	38100	40800	39800	38900	38900
4	62900	63900	49800	19000	23800	28000	39500	38400	40800	39500	39500	39200
5	63200	63900	45200	19300	21800	27100	39200	38600	40000	39200	39200	39200
6	62600	63900	39500	19900	22200	27100	39800	38600	39800	39800	39500	39500
7	62900	64200	35100	17000	22900	28300	39800	38400	39800	39500	39200	39800
8	63200	63200	32000	12000	24600	28300	39500	37800	39500	39500	38900	40000
9	63200	63600	29000	12500	25600	30800	39200	37500	40000	39800	39200	39800
10	62600	63200	27100	18000	26600	32300	39200	37600	40600	39500	40800	38900
11	62600	62900	27100	20500	26800	32000	39200	37800	40600	38900	39500	38900
12	62900	63600	26800	20700	26600	32800	38500	38400	40600	38900	39500	38900
13	63600	62300	26400	21100	27800	32800	38400	38400	40300	38600	39200	39500
14	64200	62600	26200	20800	27600	35400	38400	37600	39800	38900	39200	39200
15	63900	62300	24600	20300	29000	36400	38600	37800	39500	39200	39200	39500
16	63200	62300	24000	20800	29300	35100	38900	37800	39200	39200	38600	40000
17	63200	62000	22000	20700	29800	36700	39200	37500	38900	38600	40000	40300
18	63200	63200	26000	23500	30300	36700	38600	37300	38900	38900	38900	40300
19	63900	64900	23200	24400	30000	36200	38400	37600	38900	39200	39500	40300
20	63900	66200	25200	24100	29300	36700	38600	38100	38900	39200	39500	40300
21	63600	63900	26000	24400	28600	38100	38600	38600	39200	38900	39200	39800
22	63900	63200	26200	25600	28000	37600	38600	40000	39500	38600	38900	39200
23	64600	63200	25600	24800	27800	38400	38900	41100	39800	39200	38900	38900
24	64600	63200	26000	24800	28000	38900	39500	39800	40600	39500	38900	38900
25	63600	62300	26400	24800	28300	39500	38900	38600	40300	39500	39200	38900
26	62900	61300	26000	24400	28600	40300	37800	38600	40000	40800	39200	39500
27	63200	61300	26200	23600	28600	39800	38100	38100	40300	40800	39500	40000
28	63200	61000	26200	25200	28600	40600	38100	37600	40800	40500	38900	39800
29	62600	61000	26200	28300	28300	41100	38400	37000	40600	40000	38900	39500
30	62600	59400	26200	27600	---	40300	38400	37600	40300	39500	38900	39200
31	62900	---	26200	26800	---	39500	---	38100	---	39200	38900	---
TOTAL	1961000	1888000	962600	684900	784900	1072200	1168200	1184800	1195100	1222400	1216400	1184600
MEAN	63260	62930	31050	22090	27070	34590	38940	38220	39840	39430	39240	39490
MAX	64600	66200	58500	28300	30300	41100	40000	41100	40800	40800	40800	40300
MIN	62600	59400	22000	12000	21800	27100	37800	37000	38400	38600	38600	38900
AC-FT	3890000	3745000	1909000	1358000	1557000	2127000	2317000	2350000	2370000	2425000	2413000	2350000
CAL YR 1975 TOTAL	15133000	MEAN	41460	MAX	66200	MIN	8000	AC-FT	30020000			
WTR YR 1976 TOTAL	14525100	MEAN	39690	MAX	66200	MIN	12000	AC-FT	28810000			

WATER-QUALITY RECORDS

PERIOD DAILY OF RECORD.--

SPECIFIC CONDUCTANCE: October 1972 to current year.

WATER TEMPERATURES: October 1971 to current year.

SUSPENDED-SEDIMENT DISCHARGE: October 1971 to current year (discontinued).

EXTREMES FOR PERIOD OF DAILY RECORD.--

SEDIMENT CONCENTRATIONS: Maximum daily mean, 1,620 mg/L Nov. 20, 1972; minimum daily mean, 42 mg/L Dec. 29, 1975.

SEDIMENT LOADS: Maximum daily, 222,000 tons (201,000 tonnes) Nov. 20, 1972; minimum daily, 2,970 tons (2,700 tonnes) Dec. 29, 1975.

EXTREMES FOR CURRENT YEAR.--

SEDIMENT CONCENTRATIONS: Maximum daily mean, 1.340 mg/L Dec. 2; minimum daily mean, 42 mg/L Dec. 29.

SEDIMENT LOADS: Maximum daily, 200,000 tons (181,000 tonnes) Dec. 2; minimum daily, 2,970 tons (2,700 tonnes) Dec. 29.

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976
ONCE-DAILY

[illegible]

MISSOURI RIVER MAIN STEM

06486000 MISSOURI RIVER AT SIOUX CITY, IA--Continued
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WATER-QUALITY RECORDS

WATER QUALITY DATA, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976
ONCE-DAILY

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

DATE	TIME	INSTAN- TANEOUS DIS- CHARGE (CFS) (00061)	DIS- SOLVED SILICA (SIO2) (MG/L) (00955)	TOTAL IRON (FE) (UG/L) (01045)	DIS- SOLVED IRON (FE) (UG/L) (01045)	TOTAL MAN- GANESE (MN) (UG/L) (01055)	SUS- PENDE D MAN- GANESE (MN) (UG/L) (01054)	DIS- SOLVED MAN- GANESE (MN) (UG/L) (01056)	TOTAL CAL- CIUM (CA) (MG/L) (00916)	DIS- SOLVED CAL- CIUM (CA) (MG/L) (00915)	TOTAL MAG- NE- SIUM (MG) (00927)
OCT											
06...	1400	63000	7.4	--	--	--	--	--	55	59	21
NOV											
03...	1635	63700	7.0	--	--	--	--	--	61	56	21
DEC											
08...	1615	31000	7.0	1500	20	90	80	10	59	58	18
JAN											
05...	1140	21000	9.4	--	--	--	--	--	55	69	22
14...	1200	19700	--	--	--	--	--	--	--	--	--
FEB											
09...	1240	26500	8.9	--	--	--	--	--	60	59	21
MAR											
08...	1320	27800	9.9	800	40	40	40	0	--	62	--
APR											
12...	1415	38200	7.3	--	--	--	--	--	55	61	20
MAY											
10...	1530	36800	7.5	--	--	--	--	--	67	59	21
JUN											
07...	1415	39500	6.3	1900	10	80	80	0	61	60	21
JUL											
12...	1430	38900	6.6	--	--	--	--	--	54	53	20
AUG											
09...	1315	41500	6.9	--	--	--	--	--	52	53	22
SEP											
13...	1445	39000	7.8	940	70	70	70	0	49	54	19

06486000 MISSOURI RIVER AT SIOUX CITY, IA--Continued
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WATER-QUALITY RECORDS

WATER QUALITY DATA, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976

DATE	DIS- SOLVED MAG- NE- SIUM (MG) (00925)	TOTAL SODIUM (NA) (MG/L) (00929)	DIS- SOLVED SODIUM (NA) (MG/L) (00930)	TOTAL PO- TAS- SIUM (K) (MG/L) (00937)	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)
OCT											
06...	21	--	65	2.6	5.0	189	0	155	210	9.8	.6
NOV											
03...	21	--	64	4.3	4.5	184	0	151	200	8.9	.6
DEC											
08...	21	--	65	4.3	4.5	193	0	158	200	9.6	.7
JAN											
05...	23	--	67	4.7	4.8	208	0	171	200	11	.8
14...	--	--	--	--	--	--	--	--	--	--	--
FEB											
09...	21	--	62	4.6	4.5	189	0	155	190	11	.5
MAR											
08...	22	--	61	--	4.6	193	0	158	190	10	.6
APR											
12...	22	58	65	4.3	5.0	186	0	153	190	9.8	.6
MAY											
10...	21	62	60	5.4	4.7	186	0	153	200	9.9	.6
JUN											
07...	21	--	62	4.3	4.5	190	0	156	190	9.9	.6
JUL											
12...	21	60	64	4.8	5.8	190	0	156	200	10	.6
AUG											
09...	21	60	63	4.6	5.0	196	0	161	200	9.7	.6
SEP											
13...	21	57	64	4.3	4.6	185	0	152	190	9.5	.5

DATE	TOTAL NITRITE PLUS NITRATE (MG/L) (00630)	TOTAL AMMONIA NITRO- GEN (N) (MG/L) (00610)	TOTAL ORGANIC NITRO- GEN (N) (MG/L) (00605)	TOTAL KJEL- DAHL NITRO- GEN (N) (MG/L) (00625)	TOTAL NITRO- GEN (N) (MG/L) (00600)	TOTAL NITRO- GEN (NO3) (MG/L) (71887)	TOTAL PHOS- PHORUS (P) (MG/L) (00665)	DIS- SOLVED SOLIDS (RESI- DUE AT 180 C) (MG/L) (70300)	TOTAL FILT- RABLE RESIDUE (MG/L) (00515)	DIS- SOLVED SOLIDS (SUM OF CONSTI- TUENTS) (MG/L) (70301)
OCT										
06...	.07	.01	.29	.30	.37	1.6	.04	483	--	471
NOV										
03...	.11	.00	.38	.38	.49	2.2	.10	454	--	453
DEC										
08...	.20	.00	.46	.46	.66	2.9	.09	471	--	461
JAN										
05...	.18	.04	.19	.23	.41	1.8	.04	504	--	488
14...	--	--	--	--	--	--	--	--	500	--
FEB										
09...	.17	.03	.25	.28	.45	2.0	.04	496	--	450
MAR										
08...	--	--	--	--	--	--	.04	496	--	455
APR										
12...	.08	.01	.33	.34	.42	1.9	.04	450	--	452
MAY										
10...	.09	.01	.29	.30	.39	1.7	.03	470	--	454
JUN										
07...	.01	.00	.31	.31	.32	1.4	.02	466	--	448
JUL										
12...	.01	.00	.46	.46	.47	2.1	.05	480	--	455
AUG										
09...	.02	.01	.49	.50	.52	2.3	.09	466	--	456
SEP										
13...	.05	.01	.32	.33	.38	1.7	.03	461	--	443

MISSOURI RIVER MAIN STEM

06486000 MISSOURI RIVER AT SIOUX CITY, IA--Continued
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WATER-QUALITY RECORDS

WATER QUALITY DATA, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976

DATE	DIS- SOLVED SOLIDS (TONS PER AC-FT) (70303)	DIS- SOLVED SOLIDS (TONS PER DAY) (70302)	TOTAL NON- FILT- RABLE RESIDUE (MG/L) (00530)	TOTAL RESI- DUE (MG/L) (00500)	HARD- NESS (CA,MG) (MG/L) (00900)	NON- CAR- BONATE HARD- NESS (MG/L) (00902)	PERCENT SODIUM (00932)	SODIUM AD- SORP- TION RATIO (00931)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS) (00095)	PH (UNITS) (00400)
OCT 06...	.66	82200	--	545	230	79	37	1.9	750	7.9
NOV 03...	.62	78100	--	597	230	75	38	1.9	700	7.9
DEC 08...	.64	39400	--	552	230	73	37	1.9	730	8.0
JAN 05...	.69	28600	--	542	270	96	35	1.8	700	8.1
14...	--	--	33	--	--	--	--	--	--	--
FEB 09...	.67	35500	--	584	230	79	36	1.8	700	7.6
MAR 08...	.67	37200	--	--	250	87	35	1.7	650	7.8
APR 12...	.61	46400	--	492	240	90	36	1.8	750	8.7
MAY 10...	.64	46700	--	632	230	81	35	1.7	700	8.0
JUN 07...	.63	49700	--	534	240	80	36	1.8	700	7.9
JUL 12...	.65	50400	--	534	220	63	38	1.9	710	8.3
AUG 09...	.63	52200	--	508	220	58	38	1.9	710	7.8
SEP 13...	.63	48500	--	518	220	70	38	1.9	700	7.9

DATE	TEMPER- ATURE (DEG C) (00010)	TUR- BID- ITY (JTU) (00070)	DIS- SOLVED OXYGEN (MG/L) (00300)	PER- CENT SATUR- ATION (00301)	CHEM- ICAL OXYGEN DEMAND (HIGH LEVEL) (MG/L) (00340)	CARBON DIOXIDE (CO2) (MG/L) (00405)	TOTAL PHYTO- PLANK- TON (CELLS PER ML) (60050)	FECAL COLI- FORM (COL. PER 100 ML) (31616)	STREP- TOCOCCI (COL- ONIES PER 100 ML) (31679)	TOTAL ORGANIC CARBON (C) (MG/L) (00680)
OCT 06...	16.5	20	10.2	106	--	3.8	4000	250	72	30
NOV 03...	13.5	20	14.0	104	10	3.7	1100	16	140	--
DEC 08...	3.0	20	12.8	98	6	3.1	470	150	120	5.8
JAN 05...	.0	10	14.2	104	8	2.6	380	30	28	--
14...	1.5	--	--	--	--	--	--	--	--	--
FEB 09...	1.0	10	14.3	106	170	7.6	360	47	1800	--
MAR 08...	2.0	15	13.9	105	8	4.9	3600	23	55	2.8
APR 12...	10.0	15	12.2	103	14	.6	6400	33	33	--
MAY 10...	16.0	15	5.2	54	21	3.0	3100	14	50	--
JUN 07...	22.0	13	8.8	104	44	3.8	2200	100	39	6.3
JUL 12...	26.5	20	8.6	104	31	1.5	5200	10	45	--
AUG 09...	22.0	15	9.8	117	6	5.0	2600	5	60	--
SEP 13...	21.5	25	9.6	112	10	3.7	3600	250	830	2.2

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WATER-QUALITY RECORDS

WATER QUALITY DATA, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976

DATE	TOTAL ALDRIN (UG/L) (39330)	ALDRIN IN BOTTOM MA- TERIAL (UG/KG) (39333)	TOTAL ATRA- ZINE (UG/L) (39630)	TOTAL CHLOR- DANE (UG/L) (39350)	CHLOR- DANE IN BOTTOM MA- TERIAL (UG/KG) (39351)	TOTAL DDD (UG/L) (39360)	DDD IN BOTTOM MA- TERIAL (UG/KG) (39363)	TOTAL DDE (UG/L) (39365)	DDE IN BOTTOM MA- TERIAL (UG/KG) (39368)	TOTAL DDT (UG/L) (39370)	TOTAL DI- AZINON (UG/L) (39570)	DI- AZINON IN BOTTOM MA- TERIAL (UG/KG) (39571)
NOV 07...	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
JAN 29...	ND	--	ND	ND	--	ND	--	ND	--	ND	ND	--
MAY 25...	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
AUG 17...	ND	--	ND	ND	--	ND	--	ND	--	ND	ND	--

DATE	TOTAL DI- ELDRIN (UG/L) (39380)	DI- ELDRIN IN BOTTOM MA- TERIAL (UG/KG) (39383)	TOTAL ENDRIN (UG/L) (39390)	ENDRIN IN BOTTOM MA- TERIAL (UG/KG) (39393)	TOTAL ETHION (UG/L) (39398)	ETHION IN BOTTOM MA- TERIAL (UG/KG) (39399)	TOTAL HEPTA- CHLOR (UG/L) (39410)	HEPTA- CHLOR IN BOTTOM MA- TERIAL (UG/KG) (39413)	TOTAL HEPTA- EPOXIDE (UG/L) (39420)	HEPTA- CHLOR EPOXIDE IN BOT- TOM MA- TERIAL (UG/KG) (39423)	TOTAL LINDANE (UG/L) (39340)
NOV 07...	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
JAN 29...	ND	--	ND	--	ND	--	ND	--	ND	--	ND
MAY 25...	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
AUG 17...	ND	--	ND	--	ND	--	ND	--	ND	--	ND

DATE	LINDANE IN BOTTOM MA- TERIAL (UG/KG) (39343)	TOTAL MALA- THION (UG/L) (39530)	MALA- THION IN BOTTOM MA- TERIAL (UG/KG) (39531)	TOTAL METH- OXY- CHLOR (UG/L) (39480)	METHOX- YCHLOR IN BOT- TOM MA- TERIAL (UG/KG) (39481)	TOTAL METHYL PARA- THION (UG/L) (39600)	METHYL PARA- THION IN BOT- TOM MA- TERIAL (UG/KG) (39601)	TOTAL METHYL TRI- THION (UG/L) (39790)	METHYL TRI- THION IN BOT- TOM MA- TERIAL (UG/KG) (39791)	TOTAL PARA- THION (UG/L) (39540)	PARA- THION IN BOTTOM MA- TERIAL (UG/KG) (39541)
NOV 07...	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
JAN 29...	--	ND	--	ND	--	ND	--	ND	--	ND	--
MAY 25...	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
AUG 17...	--	ND	--	ND	--	ND	--	ND	--	ND	--

DATE	TOTAL P,P'- DDT (UG/L) (39300)	TOTAL TOX- APHENE (UG/L) (39400)	TOX- APHENE IN BOTTOM MA- TERIAL (UG/KG) (39403)	TOTAL TRI- THION (UG/L) (39786)	TRI- THION IN BOTTOM MA- TERIAL (UG/KG) (39787)	TOTAL 2,4-D (UG/L) (39730)	2,4-D IN BOTTOM MA- TERIAL (UG/KG) (39731)	TOTAL 2,4,5-T (UG/L) (39740)	2,4,5-T IN BOTTOM MA- TERIAL (UG/KG) (39741)	TOTAL SILVEX (UG/L) (39760)	SILVEX IN BOTTOM MA- TERIAL (UG/KG) (39761)
NOV 07...	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
JAN 29...	--	ND	--	ND	--	ND	--	ND	--	ND	--
MAY 25...	--	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
AUG 17...	--	ND	--	ND	--	ND	--	ND	--	ND	--

ND Not detected; detection limit is 0.10 UG/KG.

MISSOURI RIVER MAIN STEM

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WATER-QUALITY RECORDS

WATER QUALITY DATA, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976

DATE	TOTAL ARSENIC (AS) (UG/L) (01002)	SUS- PENDED ARSENIC (AS) (UG/L) (01001)	DIS- SOLVED ARSENIC (AS) (UG/L) (01000)	TOTAL CAD- MIUM (CD) (UG/L) (01027)	SUS- PENDED CAD- MIUM (CD) (UG/L) (01026)	DIS- SOLVED CAD- MIUM (CD) (UG/L) (01025)	TOTAL CHRO- MIUM (CR) (UG/L) (01034)	SUS- PENDED CHRO- MIUM (CR) (UG/L) (01031)	DIS- SOLVED CHRO- MIUM (CR) (UG/L) (01030)	TOTAL COBALT (CO) (UG/L) (01037)	SUS- PENDED COBALT (CO) (UG/L) (01036)	DIS- SOLVED COBALT (CO) (UG/L) (01035)
DEC 08...	3	1	2	0	0	0	<10	0	10	0	0	0
JAN 14...	--	--	--	--	--	--	--	--	--	--	--	--
MAR 08...	3	1	2	1	1	0	<0	0	0	0	0	0
JUN 07...	3	2	1	1	0	1	<10	<7	3	0	0	0
SEP 13...	2	1	1	0	0	8	10	10	0	2	2	0

DATE	TOTAL COPPER (CU) (UG/L) (01042)	SUS- PENDED COPPER (CU) (UG/L) (01041)	DIS- SOLVED COPPER (CU) (UG/L) (01040)	TOTAL LEAD (PB) (UG/L) (01051)	SUS- PENDED LEAD (PB) (UG/L) (01050)	DIS- SOLVED LEAD (PB) (UG/L) (01049)	TOTAL MERCURY (HG) (UG/L) (71900)	SUS- PENDED MERCURY (HG) (UG/L) (71895)	DIS- SOLVED MERCURY (HG) (UG/L) (71890)	TOTAL SELE- NIUM (SE) (UG/L) (01147)	SUS- PENDED SELE- NIUM (SE) (UG/L) (01146)	DIS- SOLVED SELE- NIUM (SE) (UG/L) (01145)
DEC 08...	6	3	3	10	10	0	.7	.3	.4	2	0	2
JAN 14...	--	--	--	--	--	--	--	--	--	--	--	--
MAR 08...	4	2	2	10	7	3	.1	.0	.1	3	2	1
JUN 07...	8	0	10	4	4	0	.2	.1	.1	1	--	0
SEP 13...	9	9	0	42	1	41	.2	.1	.1	2	0	2

DATE	TOTAL ZINC (ZN) (UG/L) (01092)	SUS- PENDED ZINC (ZN) (UG/L) (01091)	DIS- SOLVED ZINC (ZN) (UG/L) (01090)	DIS- SOLVED GROSS ALPHA AS (UG/L) (80030)	SUS- PENDED GROSS ALPHA AS (UG/L) (80040)	DIS- SOLVED GROSS BETA AS (PC/L) (03515)	SUS- PENDED GROSS BETA AS (PC/L) (03516)	DIS- SOLVED GROSS BETA AS (PC/L) (80050)	SUS- PENDED GROSS BETA AS (PC/L) (80060)	DIS- SOLVED GROSS BETA AS (PC/L) (09511)	DIS- SOLVED URANIUM RA-226 (DIRECT METHOD) (PC/L) (80010)
DEC 08...	50	30	20	--	--	--	--	--	--	--	--
JAN 14...	--	--	--	18	1.8	12	3.7	9.6	3.1	.20	3.5
MAR 08...	20	0	20	--	--	--	--	--	--	--	--
JUN 07...	40	20	20	--	--	--	--	--	--	--	--
SEP 13...	60	40	20	--	--	--	--	--	--	--	--

06486000 MISSOURI RIVER AT SIOUX CITY, IA--Continued
(National stream-quality accounting network station)

WATER-QUALITY RECORDS

WATER QUALITY DATA, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976

SUSPENDED-SEDIMENT DISCHARGE (TONS/DAY), WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976

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	62900	267	45300	63200	293	50000	58500	1210	191000
2	62600	400	67600	63200	474	80900	55200	1340	200000
3	62600	494	83500	63600	740	127000	52500	1250	177000
4	62900	500	84900	63900	825	142000	49800	1160	156000
5	63200	477	81400	63900	716	124000	45200	1010	123000
6	62600	443	74900	63900	578	99700	39500	830	88500
7	62900	425	72200	64200	500	86700	35100	580	55000
8	63200	420	71700	63200	480	81900	32000	462	39900
9	63200	385	65700	63600	580	99600	29000	437	34200
10	62600	320	54100	63200	630	108000	27100	410	30000
11	62600	320	54100	62900	720	122000	27100	382	28000
12	62900	370	62800	63600	608	104000	26800	357	25800
13	63600	455	78100	62300	377	63400	26400	330	23500
14	64200	520	90100	62600	270	45600	26200	307	21700
15	63900	528	91100	62300	352	59200	24600	295	19600
16	63200	512	87400	62300	540	90800	24000	310	20100
17	63200	530	90400	62000	750	126000	22000	398	23600
18	63200	560	95600	63200	870	148000	26000	445	31200
19	63900	599	103000	64900	872	153000	23200	415	26000
20	63900	630	109000	66200	950	170000	25200	362	24600
21	63600	660	113000	63900	893	154000	26000	320	22500
22	63900	690	119000	63200	858	146000	26200	288	20400
23	64600	730	127000	63200	830	142000	25600	255	17600
24	64600	760	133000	63200	825	141000	26000	228	16000
25	63600	740	127000	62300	822	138000	26400	200	14300
26	62900	700	119000	61300	805	133000	26000	165	11600
27	63200	650	111000	61300	785	130000	26200	130	9200
28	63200	610	104000	61000	755	124000	26200	85	6010
29	62600	503	85000	61000	720	119000	26200	42	2970
30	62600	368	62200	59400	550	94600	26200	50	3540
31	62900	250	42500	---	---	---	26200	78	5520
TOTAL	1961000	---	2705600	1888000	---	3403400	962600	---	1468340
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	26200	82	5800	26400	770	54900	27800	422	31700
2	22800	60	3690	25400	709	48600	28600	432	33400
3	21000	62	3520	24300	720	47200	29000	463	36300
4	19000	72	3690	23800	730	46900	28000	453	34200
5	19300	90	4690	21800	599	35300	27100	450	32900
6	19900	342	18400	22200	493	29600	27100	470	34400
7	17000	300	13800	22900	505	31200	28300	538	41100
8	12000	228	7390	24600	565	37500	28300	632	48300
9	12500	271	9150	25600	626	43300	30800	700	58200
10	18000	708	34400	26600	638	45800	32300	692	60300
11	20500	840	46500	26800	619	44800	32000	664	57400
12	20700	816	45600	26600	568	40800	32800	630	55800
13	21100	770	43900	27800	570	42800	32800	592	52400
14	20800	730	41000	27600	568	42300	35400	608	58100
15	20300	700	38400	29000	588	46000	36400	650	63900
16	20800	692	38900	29300	597	47200	35100	650	61600
17	20700	732	40900	29800	607	48800	36700	642	63600
18	23500	825	52300	30300	589	43200	36700	642	63600
19	24400	890	58600	30000	498	40300	36200	630	61600
20	24100	880	57300	29300	439	34700	36700	629	62300
21	24400	780	51400	28600	415	32000	38100	670	68900
22	25600	732	50600	28000	392	29600	37600	653	66300
23	24600	748	50100	27800	378	28400	38400	605	62700
24	24800	817	54700	28000	381	28800	38900	579	60800
25	24800	690	59600	28300	395	30200	39500	578	61600
26	24400	950	62600	28600	400	30900	40300	590	64200
27	23600	975	62100	28600	407	31400	39800	590	63400
28	25200	955	65000	28600	412	31800	40600	618	67700
29	28300	900	68600	28300	417	31900	41100	680	75500
30	27600	860	64100	---	---	---	40300	752	81800
31	26800	820	59300	---	---	---	39500	666	71000
TOTAL	684900	---	1216230	784900	---	1131200	1072200	---	1755000

MISSOURI RIVER MAIN STEM

06486000 MISSOURI RIVER AT SIOUX CITY, IA--Continued
(National stream-quality accounting network station)

WATER-QUALITY RECORDS

WATER QUALITY DATA, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976

SUSPENDED-SEDIMENT DISCHARGE (TONS/DAY), WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976

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	39800	400	43000	38100	392	40300	38400	174	18000
2	40000	260	28100	38100	400	41100	38400	169	17500
3	40000	303	32700	38100	445	45800	40800	360	39700
4	39500	360	38400	38400	472	48900	40800	520	57300
5	39200	410	43400	38600	469	48900	40000	467	50400
6	39800	444	47700	38600	440	45900	39800	405	43500
7	39800	509	54700	38400	398	41300	39800	362	38900
8	39500	612	65300	37800	350	35700	39500	340	36300
9	39200	693	73300	37600	322	32700	40000	340	36700
10	39200	642	67900	37600	332	33700	40600	347	38000
11	39200	545	57700	37800	380	38800	40500	360	39500
12	38500	435	45300	38400	452	46900	40500	405	44400
13	38400	332	34400	38400	505	52400	40300	439	47800
14	38400	249	25800	37600	511	51900	39800	439	47200
15	38600	172	17900	37800	492	50200	39500	440	46900
16	38900	148	15500	37800	469	47900	39200	509	53900
17	39200	475	50300	37500	447	45400	38900	495	52000
18	38500	880	91700	37300	435	43800	38900	470	49400
19	38400	1120	116000	37500	513	52100	38900	440	46200
20	38500	1210	126000	38100	711	73100	38900	407	42700
21	38500	1060	110000	38500	882	91900	39200	410	43400
22	38600	800	83400	40000	875	94600	39500	420	44800
23	38900	572	60100	41100	717	79600	39800	307	33000
24	39500	545	58100	39800	540	58000	40500	252	27600
25	38900	578	60700	38600	408	42500	40300	220	23900
26	37800	548	55900	38500	420	43800	40000	280	30200
27	38100	490	50400	38100	510	52500	40300	388	42200
28	38100	460	47300	37500	588	59700	40800	470	51800
29	38400	431	44700	37000	630	62900	40500	421	46200
30	38400	402	41700	37500	582	59100	40300	390	42400
31	---	---	---	38100	388	39900	---	---	---
TOTAL	1168200	---	1667400	1184800	---	1601300	1195100	---	1231800
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	39800	372	40000	39500	245	26100	39500	401	42800
2	39800	356	38300	39200	234	24800	38900	403	42300
3	39800	350	37600	38900	220	23100	38900	416	43700
4	39500	347	37000	39500	280	29900	39200	318	33700
5	39200	353	37400	39200	322	34100	39200	374	39600
6	39800	388	41700	39500	437	46600	39500	290	30900
7	39500	369	39400	39200	420	44500	39800	235	25300
8	39500	349	37200	38900	372	39100	40000	269	29100
9	39800	339	36400	39200	371	39300	39800	281	30200
10	39500	359	38300	40800	423	46600	38900	250	26300
11	38900	402	42200	39500	421	44900	38900	237	24900
12	38900	358	37600	39500	416	44400	38900	235	24700
13	38600	501	52200	39200	344	36400	39500	298	31800
14	38900	472	49600	39200	292	30900	39200	335	35500
15	39200	409	43300	39200	295	31200	39500	335	35700
16	39200	350	37000	38600	282	29400	40000	341	36800
17	38600	318	33100	40000	350	37800	40300	342	37200
18	38900	298	31300	38900	320	33600	40300	342	37200
19	39200	282	29800	39500	316	33700	40300	340	37000
20	39200	272	28800	39500	328	35000	40300	349	38000
21	38900	329	34600	39200	325	34400	39800	334	35900
22	38600	333	34700	38900	318	33400	39200	340	36000
23	39200	386	40900	38900	310	32600	38900	338	35500
24	39500	331	35300	38900	310	32600	38900	326	34200
25	39500	267	28500	39200	317	33600	38900	320	33600
26	40800	300	33000	39200	315	33300	39500	320	34100
27	40800	277	30500	39500	317	33800	40000	310	33500
28	40600	262	28700	38900	312	32800	39800	282	30300
29	40000	255	27500	38900	310	32600	39500	274	29200
30	39500	259	27600	38900	305	32000	39200	284	30100
31	39200	232	24600	38900	318	33400	---	---	---
TOTAL	1222400	---	1114100	1216400	---	1075900	1184600	---	1015100
YEAR 14525100			19405370						

06486000 MISSOURI RIVER AT SIOUX CITY, IA--Continued
(National stream-quality accounting network station)

WATER-QUALITY RECORDS

WATER QUALITY DATA, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976

			NUMBER OF SAM- PLING POINTS	INSTAN- TANEOUS DIS- CHARGE (CFS)	SUS- PEN- DED SEDI- MENT (MG/L)	SUS- PEN- DED SEDI- MENT CHARGE (T/DAY)	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 .062 MM (70331)	BED MAT. FALL DIAM. % FINER THAN .062 MM (80158)	
DATE	TIME	TEMPER- ATURE (DEG C) (00010)											
OCT.													
06...	0750	14.5	--	63500	452	77500	27	46	98	100	--	--	
14...	1100	16.0	--	64500	--	--	--	--	--	--	--	--	
20...	1015	13.0	--	63700	627	108000	--	--	--	--	16	--	
31...	1045	11.0	2	64100	--	--	--	--	--	--	--	0	
NOV.													
03...	1550	13.5	--	63700	788	136000	13	25	84	100	--	--	
18...	1120	10.0	--	63200	879	150000	--	--	--	--	16	--	
DEC.													
04...	0915	5.0	3	52200	1180	166000	16	31	84	100	--	0	
09...	0850	1.0	--	29700	466	37400	--	--	--	--	29	--	
JAN.													
15...	1155	1.5	--	19700	695	37000	--	--	--	--	18	--	
29...	1150	2.0	3	29800	893	71900	19	21	81	100	--	0	
FEB.													
09...	1220	1.0	--	26500	624	44600	20	32	95	100	--	--	
19...	1805	2.5	--	29800	471	37900	--	--	--	--	44	--	
MAR.													
08...	1055	2.0	3	27800	636	47700	32	47	88	100	--	--	
25...	1030	9.0	--	39800	572	61500	--	--	--	--	28	--	
APR.													
02...	0700	7.5	3	41100	--	--	--	--	--	--	--	--	
06...	1045	10.0	--	39600	444	47500	28	44	89	100	--	--	
20...	0810	13.0	--	38700	1240	130000	--	--	--	--	11	--	
MAY													
04...	1120	13.0	3	38200	478	49300	28	44	91	100	--	--	
18...	0950	17.0	--	35400	423	40400	--	--	--	--	33	--	
JUNE													
01...	1115	19.5	3	38400	--	--	--	--	--	--	--	--	
04...	0730	18.5	--	41100	515	57100	28	38	83	100	--	--	
18...	0720	17.0	--	39100	479	50600	--	--	--	--	33	--	
JULY													
02...	0835	21.5	3	40000	--	--	--	--	--	--	--	--	
06...	1055	21.5	--	39300	389	41800	36	47	94	100	--	--	
20...	0850	24.5	--	33400	273	29000	--	--	--	--	56	--	
AUG.													
03...	0715	23.0	3	39700	--	--	--	--	--	--	--	--	
06...	0710	24.0	--	41100	433	48100	38	48	82	100	--	--	
17...	0915	23.0	--	41600	367	41200	--	--	--	--	40	--	
SEP.													
03...	0955	22.0	3	38900	418	43900	42	59	95	100	--	--	
17...	0730	18.5	--	42200	342	39000	--	--	--	--	35	--	
DATE		BED MAT. FALL DIAM. % FINER THAN .125 MM (80159)	BED MAT. FALL DIAM. % FINER THAN .250 MM (80160)	BED MAT. FALL DIAM. % FINER THAN .500 MM (80161)	BED MAT. FALL DIAM. % FINER THAN 1.00 MM (80162)	BED MAT. FALL DIAM. % FINER THAN .062 MM (80164)	BED MAT. FALL DIAM. % FINER THAN .125 MM (80165)	BED MAT. FALL DIAM. % FINER THAN .250 MM (80166)	BED MAT. FALL DIAM. % FINER THAN .500 MM (80167)	BED MAT. FALL DIAM. % FINER THAN 1.00 MM (80168)	BED MAT. FALL DIAM. % FINER THAN 2.00 MM (80169)	BED MAT. FALL DIAM. % FINER THAN 4.00 MM (80170)	BED MAT. FALL DIAM. % FINER THAN 8.00 MM (80171)
OCT.													
05...	--	--	--	--	--	--	--	--	--	--	--	--	--
14...	0	13	74	98	--	--	--	--	--	99	99	100	--
20...	--	--	--	--	--	--	--	--	--	--	--	--	--
31...	1	14	71	96	--	--	--	--	--	99	100	--	--
NOV.													
03...	--	--	--	--	--	--	--	--	--	--	--	--	--
18...	--	--	--	--	--	--	--	--	--	--	--	--	--
DEC.													
04...	1	40	98	100	--	--	--	--	--	--	--	--	--
09...	--	--	--	--	--	--	--	--	--	--	--	--	--
JAN.													
15...	--	--	--	--	--	--	--	--	--	--	--	--	--
29...	2	61	100	--	--	--	--	--	--	--	--	--	--
FEB.													
09...	--	--	--	--	--	--	--	--	--	--	--	--	--
19...	--	--	--	--	--	--	--	--	--	--	--	--	--
MAR.													
08...	--	--	--	--	--	0	10	83	98	99	100	--	--
25...	--	--	--	--	--	--	--	--	--	--	--	--	--
APR.													
02...	--	--	--	--	--	0	1	14	82	98	100	--	--
06...	--	--	--	--	--	--	--	--	--	--	--	--	--
20...	--	--	--	--	--	--	--	--	--	--	--	--	--
MAY													
04...	--	--	--	--	--	0	1	15	92	100	--	--	--
18...	--	--	--	--	--	--	--	--	--	--	--	--	--
JUNE													
01...	--	--	--	--	--	0	2	20	91	99	100	--	--
JULY													
02...	--	--	--	--	--	0	2	25	90	100	--	--	--
06...	--	--	--	--	--	--	--	--	--	--	--	--	--
20...	--	--	--	--	--	--	--	--	--	--	--	--	--
AUG.													
03...	--	--	--	--	--	0	1	18	90	99	100	--	--
SEP.													
02...	--	--	--	--	--	0	5	80	96	98	99	100	--

MISSOURI RIVER MAIN STEM

06486000 MISSOURI RIVER AT SIOUX CITY, IA--Continued
(National stream-quality accounting network station)

WATER-QUALITY RECORDS

WATER QUALITY DATA, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976

IDENTIFICATION OF PHYTOPLANKTON

OCT. 6, 1975
1400 HOURS

4,000 CELLS/ML

ORGANISM NAME	COMMON NAME	CELLS/ML	PER CENT	
CHLOROPHYTA	GREEN ALGAE			
.CHLOROPHYCEAE				
..CHLOROCOCCALES				
...HYDRODICTYACEAE				
L ...PEDIASTRUM			0	
...OOCYSTACEAE				
...ANKISTRODESMUS		61	2	
...OOCYSTIS		490	12	
...SCENEDESMACEAE				
L ...SCENEDESMUS			0	
..VOLVOCALES				
...PHACOTACEAE				
...PHACOTUS		120	3	
	TOTALS	670	17	1.096=DIVERSITY
CHRYSTOPHYTA	DIATOMS			
.BACILLARIOPHYCEAE	CENTRIC			
..CENTRALES				
...COSCINODISCACEAE				
D ...CYCLOTILLA		610	15	
D ...MELOSIRA		2,200	56	
..PENNALES	PENNATE			
...DIATOMACEAE				
L ...DIATOMA			0	
...NITZSCHIA				
...NITZSCHIA		240	6	
...SURIPELLACEAE				
L ...SURIPELLA			0	
	TOTALS	3,100	77	1.085=DIVERSITY
CYANOPHYTA	BLUE-GREEN ALGAE			
.MYXOPHYCEAE	COCCOID			
..CHROOCOCCALES				
...CHROOCOCCACEAE				
...ANACYSTIS		240	6	
	TOTALS	240	6	0.000=DIVERSITY

NOTE: D - DOMINANT ORGANISM; GREATER OR EQUAL TO 15%
L - LESS THEN 1%; MAY NOT HAVE BEEN ACTUALLY COUNTED
ANALYSIS METHOD: SEDGWICK-RAFTER CHAMBER, 200-X MICROSCOPE
DIVERSITY INDICES, BASED ON ACTUAL COUNTS:
PHYL/DIV 0.963
CLASS 0.963
ORDER 1.384
FAMILY 1.384
GENERA 1.984

IDENTIFICATION OF PHYTOPLANKTON

NOV. 3, 1975
1635 HOURS

1,100 CELLS/ML

ORGANISM NAME	COMMON NAME	CELLS/ML	PER CENT	
CHLOROPHYTA	GREEN ALGAE			
.CHLOROPHYCEAE				
..CHLOROCOCCALES				
...OOCYSTACEAE				
L ...ANKISTRODESMUS			0	
...SCENEDESMACEAE				
L ...SCENEDESMUS			0	
CHRYSTOPHYTA	DIATOMS			
.BACILLARIOPHYCEAE	CENTRIC			
..CENTRALES				
...COSCINODISCACEAE				
D ...CYCLOTILLA		970	86	
...MELOSIRA		54	5	
..PENNALES	PENNATE			
...NITZSCHIA				
...NITZSCHIA		110	10	
	TOTALS	1,100	101	0.723=DIVERSITY

NOTE: D - DOMINANT ORGANISM; GREATER OR EQUAL TO 15%
L - LESS THEN 1%; MAY NOT HAVE BEEN ACTUALLY COUNTED
ANALYSIS METHOD: SEDGWICK-RAFTER CHAMBER, 200-X MICROSCOPE
DIVERSITY INDICES, BASED ON ACTUAL COUNTS:
ORDER 0.454
FAMILY 0.454
GENERA 0.723

06486000 MISSOURI RIVER AT SIOUX CITY, IA--Continued
(National stream-quality accounting network station)

WATER-QUALITY RECORDS

WATER QUALITY DATA, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976

IDENTIFICATION OF PHYTOPLANKTON

APR. 12, 1976
1415 HOURS

6,400 CELLS/ML

ORGANISM NAME	COMMON NAME	CELLS/ML	PER CENT	
CHLOROPHYTA	GREEN ALGAE			
.CHLOROPHYCEAE				
.CHLOROCOCCALES				
...OOCYSTACEAE				
...ANKISTRODESMUS		240	4	
...SCENEDESMACEAE				
L ....SCENEDESMUS			0	
	TOTALS	240	4	0.000=DIVERSITY
CHRYSTOPHYTA				
.BACILLARIOPHYCEAE	DIATOMS			
.CENTRALES	CENTRIC			
...COSCINODISCACEAE				
D ....CYCLOTELLA		4,700	73	
L ....MELOSIRA			0	
.PENNALES	PENNATE			
...DIATOMACEAE				
...DIATOMA		120	2	
...FRAGILARIACEAE				
...ASTERIONELLA		240	4	
L ....FRAGILARIA			0	
L ....SYNEDRA			0	
...GOMPHONEMACEAE				
L ....GOMPHONEMA			0	
...NITZSCHIAEAE				
....NITZSCHIA		180	3	
	TOTALS	5,200	82	0.638=DIVERSITY
.CHRYSTOPHYCEAE	YELLOW-BROWN ALGAE			
.CHRYSONOMADALES				
...OCHROMONADACEAE				
L ....DINOBRYON			0	
....OCHROMONAS		900	14	
	TOTALS	900	14	0.000=DIVERSITY
EUGLENOPHYTA	EUGLENOIDS			
.EUGLENOPHYCEAE				
.EUGLENALES				
...EUGLENACEAE				
....EUGLENA		60	1	
	TOTALS	60	1	0.000=DIVERSITY

NOTE: D - DOMINANT ORGANISM; GREATER OR EQUAL TO 15%
L - LESS THEN 1%; MAY NOT HAVE BEEN ACTUALLY COUNTED
ANALYSIS METHOD: SEDGWICK-RAFTER CHAMBER, 200-X MICROSCOPE
DIVERSITY INDICES, BASED ON ACTUAL COUNTS:
PHYL/DIV 0.306
CLASS 0.880
ORDER 1.270
FAMILY 1.399
GENERA 1.399

MISSOURI RIVER MAIN STEM

06486000 MISSOURI RIVER AT SIOUX CITY, IA--Continued
(National stream-quality accounting network station)

WATER-QUALITY RECORDS

WATER QUALITY DATA, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976

IDENTIFICATION OF PHYTOPLANKTON

MAY 10, 1976
1530 HOURS

3,100 CELLS/ML

ORGANISM NAME	COMMON NAME	CELLS/ML	PER CENT	
CHLOROPHYTA	GREEN ALGAE			
.CHLOROPHYCEAE				
..CHLOROCOCCALES				
...MICRACTINIACEAE				
L ...MICRACTINIUM			0	
...OOCYSTACEAE				
...ANKISTRODESMUS		110	4	
...SELENASTRUM		45	1	
...SCENEDESHACEAE				
...SCENEDESMUS		270	9	
..VOLVOCALES				
...CHLAMYDOMONADACEAE				
...CHLAMYDOMONAS		23	1	
...PHACOTACEAE				
...PHACOTUS		23	1	
..CHLOROCOCCALES				
...OOCYSTACEAE				
D ...GLOEOACTINIUM		540	17	
	TOTALS	1,000	33	1.788=DIVERSITY
CHRYSTOPHYTA				
.BACILLARIOPHYCEAE	DIATOMS			
..CENTRALES	CENTRIC			
...GOSCIINODISCACEAE				
D ...CYCLOTELLA		470	15	
..PENNALES	PENNATE			
...CYMBELLACEAE				
L ...CYMBELLA			0	
...FRAGILARIACEAE				
...ASTERIONELLA		23	1	
...SYNEDRA		23	1	
...NITZSCHIA		160	5	
	TOTALS	680	22	1.177=DIVERSITY
CYANOPHYTA	BLUE-GREEN ALGAE			
.MYXOPHYCEAE				
..OSCILLATORIALES	FILAMENTOUS			
...OSCILLATORIA		900	29	
D ...OSCILLATORIA		900	29	0.000=DIVERSITY
	TOTALS	900	29	
EUGLENOPHYTA	EUGLENOIDS			
.CRYPTOPHYCEAE	CRYPTOMONADS			
..CRYPTOMONADALES				
...CRYPTOCHRYSIDACEAE				
D ...CHROOMONAS		540	17	
	TOTALS	540	17	0.000=DIVERSITY
.EUGLENOPHYCEAE				
..EUGLENALES				
...EUGLENACEAE				
L ....EUGLENA			0	

NOTE: D - DOMINANT ORGANISM; GREATER OR EQUAL TO 15%
L - LESS THAN 1%; MAY NOT HAVE BEEN ACTUALLY COUNTED
ANALYSIS METHOD: SEDGWICK-RAFTER CHAMBER, 200-X MICROSCOPE
DIVERSITY INDICES, BASED ON ACTUAL COUNTS:
PHYL/DIV 1.959
CLASS 1.959
ORDER 2.540
FAMILY 2.734
GENERA 2.792

06486000 MISSOURI RIVER AT SIOUX CITY, IA--Continued
(National stream-quality accounting network station)

WATER-QUALITY RECORDS

WATER QUALITY DATA, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976

IDENTIFICATION OF PHYTOPLANKTON

JUNE 7, 1976

1415 HOURS

2,200 CELLS/ML

ORGANISM NAME	COMMON NAME	CELLS/ML	PER CENT	
CHLOROPHYTA	GREEN ALGAE			
.CHLOROPHYCEAE				
..CHLOROCOCCALES				
...HYDRODICTYACEAE				
L ...PEDIASTRUM			0	
...MICRACTINIACEAE				
L ...GOLENKINIA			0	
...OOCYSTACEAE				
...ANKISTRODESMUS		130	6	
...KIRCHNERIELLA		140	6	
...WESTELLA		72	3	
...SCENEDESMACEAE				
...ACTINASTRUM		140	6	
...SCENEDESMUS		110	5	
...TETRASTRUM		72	3	
...VOLVOCALES				
...PHACOTACEAE				
...PHACOTUS		18	1	
...VOLVOCAEAE				
...PANDORINA		140	6	
TOTALS		820	36	2.846=DIVERSITY
CHRYSTOPHYTA				
.BACILLARIOPHYCEAE	DIATOMS			
..CENTRALES	CENTRIC			
...COSCINODISCACEAE				
...CYCLOTELLA		290	13	
...MELOSIRA		89	4	
..PENNALES	PENNATE			
...FRAGILARIACEAE				
D ...ASTERIONELLA		500	23	
...NITZSCHIACEAE				
D ...NITZSCHIA		500	23	
TOTALS		1,400	63	1.789=DIVERSITY
.CHRYSTOPHYCEAE	YELLOW-BROWN ALGAE			
..CHRYSSOMONADALES				
...OCHROMONADACEAE				
...OCHROMONAS		18	1	
TOTALS		18	1	0.000=DIVERSITY

NOTE: D - DOMINANT ORGANISM; GREATER OR EQUAL TO 15%
L - LESS THEN 1%; MAY NOT HAVE BEEN ACTUALLY COUNTED
ANALYSIS METHOD: SEDGWICK-RAFTER CHAMBER, 200-X MICROSCOPE
DIVERSITY INDICES, BASED ON ACTUAL COUNTS:
PHYL/DIV 0.951
CLASS 1.014
ORDER 1.803
FAMILY 2.590
GENERA 3.180

MISSOURI RIVER MAIN STEM

06486000 MISSOURI RIVER AT SIOUX CITY, IA--Continued
(National stream-quality accounting network station)

WATER-QUALITY RECORDS

WATER QUALITY DATA, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976

IDENTIFICATION OF PHYTOPLANKTON

JULY 12, 1976

1430 HOURS

5,200 CELLS/ML

ORGANISM NAME	COMMON NAME	CELLS/ML	PER CENT	
CHLOROPHYTA	GREEN ALGAE			
.CHLOROPHYCEAE				
..CHLOROCOCCALES				
...OOCYSTACEAE				
...ANKISTRODESMUS		640	12	
...KIRCHNERIELLA		110	2	
...SCENEDESMACEAE				
...SCENEDESMUS		640	12	
..ZYGNEMATALES				
..DESMIDIACEAE	PLACODERM DESMIDS			
...STAURASTRUM		53	1	
	TOTALS	1,400	27	1.494=DIVERSITY
CHRYCOPHYTA				
.BACILLARIOPHYCEAE	DIATOMS			
..CENTRALES	CENTRIC			
...COSCINODISCACEAE				
...CYCLOTELLA		210	4	
...MELOSIRA		430	8	
...STEPHANODISCUS		53	1	
..PENNALES	PENNATE			
...FRAGILARIACEAE				
...ASTERIONELLA		480	9	
...NITZSCHACEAE				
...NITZSCHIA		210	4	
...SURIARELLACEAE				
...SURIARELLA		53	1	
	TOTALS	1,400	27	2.217=DIVERSITY
CYANOPHYTA	BLUE-GREEN ALGAE			
.MYXOPHYCEAE				
..CHROOCOCCALES	COCCOID			
...CHROOCOCCACEAE				
D ....ANACYSTIS		2,300	45	
	TOTALS	2,300	45	0.000=DIVERSITY

NOTE: D - DOMINANT ORGANISM; GREATER OR EQUAL TO 15%
ANALYSIS METHOD: SEDGWICK-RAFTER CHAMBER, 200-X MICROSCOPE
DIVERSITY INDICES, BASED ON ACTUAL COUNTS:

PHYL/DIV 1.543
CLASS 1.543
ORDER 1.882
FAMILY 2.317
GENERA 2.566

06486000 MISSOURI RIVER AT SIOUX CITY, IA--Continued
(National stream-quality accounting network station)

WATER-QUALITY RECORDS

WATER QUALITY DATA, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976

IDENTIFICATION OF PHYTOPLANKTON

AUG. 9, 1976
1315 HOURS

2,600 CELLS/ML

ORGANISM NAME	COMMON NAME	CELLS/ML	PER CENT	
CHLOROPHYTA	GREEN ALGAE			
.CHLOROPHYCEAE				
..CHLOROCOCCALES				
...MICRACTINIACEAE				
....MICRACTINIUM		53	2	
...OOCYSTACEAE				
....ANKISTRODESMUS		130	5	
D ....DICTYOSPHAERIUM		430	17	
....FRANCEIA		27	1	
....SELENASTRUM		13	1	
...SCENEDESMACEAE				
D ....ACTINASTRUM		370	15	
....CRUCIGENIA		93	4	
...SCENEDESMUS		160	6	
..VOLVOCALES				
...CHLAMYDOMONADACEAE				
....CHLAMYDOMONAS		13	1	
...PHACOTACEAE				
....PHACOTUS		150	6	
TOTALS		1,400	58	2.694=DIVERSITY
CHRYSOPHYTA				
.BACILLARIOPHYCEAE	DIATOMS			
..CENTRALES	CENTRIC			
...COSCINODISCEAE				
....CYCLOTELLA		160	6	
....NELOSIRA		160	6	
..PENNALES	PENNATE			
...ACHNANTHACEAE				
....COCCONEIS		13	1	
...NITZSCHIA				
....NITZSCHIA		190	7	
TOTALS		520	20	1.713=DIVERSITY
CYANOPHYTA	BLUE-GREEN ALGAE			
.MYXOPHYCEAE				
..CHROOCOCCALES	COCCOID			
...CHROOCOCCACEAE				
D ....ANACYSTIS		470	18	
...OSCILLATORIALES	FILAMENTOUS			
...OSCILLATORIACEAE				
....OSCILLATORIA		27	1	
TOTALS		490	19	0.303=DIVERSITY
EUGLENOPHYTA	EUGLENIDS			
.CRYPTOPHYCEAE	CRYPTOMONADS			
..CRYPTOMONIDALES				
...CRYPTOMONODACEAE				
....CRYPTOMONAS		40	2	
TOTALS		40	2	0.000=DIVERSITY
.EUGLENOPHYCEAE				
..EUGLENALES				
...EUGLENACEAE				
....EUGLENA		13	1	
....TRACHELONAS		53	2	
TOTALS		66	3	0.722=DIVERSITY

NOTE: D - DOMINANT ORGANISM; GREATER OR EQUAL TO 15%
ANALYSIS METHOD: SEDGWICK-RAFTER CHAMBER, 200-X MICROSCOPE
DIVERSITY INDICES, BASED ON ACTUAL COUNTS:

PHYL/DIV 1.583
CLASS 1.623
ORDER 2.159
FAMILY 2.817
GENERA 3.563

MISSOURI RIVER MAIN STEM

06486000 MISSOURI RIVER AT SIOUX CITY, IA--Continued
(National stream-quality accounting network station)

WATER-QUALITY RECORDS

WATER QUALITY DATA, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976

IDENTIFICATION OF PHYTOPLANKTON

SEP. 13, 1976
1445 HOURS

3,600 CELLS/ML

ORGANISM NAME	COMMON NAME	CELLS/ML	PER CENT	
CHLOROPHYTA	GREEN ALGAE			
..CHLOROPHYCEAE				
..CHLOROCOCCALES				
...MICRACTINIACEAE				
...MICRACTINIUM		290	8	
...OOCYSTACEAE				
...ANKISTRODESMUS		140	4	
...OOCYSTIS		290	8	
...SCENEDESMACEAE				
...ACTINASTRUM		290	8	
D ...SCENEDESMUS		570	16	
..VOLVOCALES				
...PHACOTACEAE				
...PHACOTUS		140	4	
	TOTALS	1,700	48	2.418=DIVERSITY
CHRYSTOPHYTA				
..BACILLARIOPHYCEAE	DIATOMS			
..CENTRALES	CENTRIC			
...COSCINODISCACEAE				
D ...CYCLOTELLA		1,000	27	
...MELOSIRA		430	12	
..PENNALES	PENNATE			
...NAVICULACEAE	NAVICULOID			
...NAVICULA		71	2	
...NITZSCHIA				
...NITZSCHIA		430	12	
	TOTALS	1,900	53	1.632=DIVERSITY

NOTE: D - DOMINANT ORGANISM; GREATER OR EQUAL TO 15%
ANALYSIS METHOD: SEDGWICK-RAFTER CHAMBER, 200-X MICROSCOPE
DIVERSITY INDICES, BASED ON ACTUAL COUNTS:
PHYL/DIV 0.998
CLASS 0.998
ORDER 1.629
FAMILY 2.330
GENERA 2.999

06500100 FLOYD RIVER AT ALTON, IA

LOCATION.--Lat 42°58'55", long 96°00'03", in NE1/4 NE1/4 sec.11, T.94 N., R.44 W., Sioux County, Hydrologic Unit 10230002, on left bank at downstream side of Chicago and Northwestern Railway Company bridge at east edge of Alton, 34.3 mi (55.2 km) upstream from West Branch Floyd River at mile 58.1 (93.5 km).

DRAINAGE AREA.--265 mi² (686 km²).

PERIOD OF RECORD.--October 1955 to current year. Prior to December 1955, monthly discharge only, published in WSP 1730.

GAGE.--Water-stage recorder. Datum of gage is 1,269.55 ft (386.959 m) above mean sea level.

REMARKS.--Records good except those for winter period, which are poor. Several observations of water temperature were made during the year. National Weather Service gage height telemeter at station.

AVERAGE DISCHARGE.--21 years, 46.3 ft³/s (1.311 m³/s), 2.37 in/yr (60 mm/yr), 33,540 acre-ft/yr (41.4 hm³/yr); median of yearly mean discharges, 37 ft³/s (1.05 m³/s), 1.9 in/yr (48 mm/yr), 26,800 acre-ft/yr (33.0 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 12,200 ft³/s (346 m³/s) Mar. 28, 1952, gage height, 18.35 ft (5.593 m); no flow at times in 1956, 1958-59, 1955, 1968.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in June 1953 reached a discharge of about 45,500 ft³/s (1,290 m³/s). from information by Corps of Engineers.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 427 ft³/s (12.1 m³/s) Mar. 16, gage height, 9.16 ft (2.792 m), no peak above base of 800 ft³/s (22.7 m³/s); minimum daily 0.56 ft³/s (0.016 m³/s) Sept. 11, 12.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	16	16	20	7.0	10	20	138	52	51	31	5.8	.72
2	16	16	20	6.5	10	14	120	51	46	25	5.3	.64
3	16	16	20	6.0	9.5	13	108	48	43	23	4.4	.72
4	15	16	20	5.5	9.5	12	98	46	40	20	3.2	.64
5	14	16	25	5.0	9.0	12	90	45	38	18	2.9	.64
6	14	16	30	4.8	8.0	12	85	42	36	16	3.2	.64
7	14	17	50	4.5	8.0	12	80	39	34	13	3.2	.64
8	14	18	59	4.5	9.0	12	73	37	33	12	2.9	.64
9	14	19	53	4.5	11	12	67	36	31	12	2.6	.64
10	13	20	50	4.5	20	13	65	36	31	11	2.6	.64
11	14	19	50	5.0	25	35	62	35	43	9.1	2.5	.56
12	14	18	59	5.0	30	258	59	34	38	8.5	2.4	.56
13	14	17	43	5.5	33	309	58	34	34	8.0	2.6	.64
14	15	27	40	5.5	63	179	56	34	29	7.4	2.6	.82
15	15	30	30	6.0	65	220	55	33	25	7.4	2.2	.86
16	14	27	20	6.0	89	370	55	30	24	7.4	2.4	.92
17	14	26	15	6.0	77	330	58	28	23	8.0	2.6	.92
18	14	25	13	6.0	53	338	56	28	23	7.4	2.9	1.0
19	14	28	11	6.5	51	177	54	27	21	7.4	3.2	1.1
20	14	43	10	6.5	39	116	53	27	20	6.3	2.6	1.4
21	14	54	10	7.0	25	89	51	27	19	6.3	2.2	4.5
22	14	20	9.5	7.5	20	74	49	36	18	6.3	2.0	4.5
23	14	18	9.5	8.0	20	65	47	57	17	6.3	1.6	3.3
24	14	17	9.0	8.5	20	60	48	89	18	5.8	1.5	2.6
25	16	16	9.0	8.5	22	57	63	94	21	5.3	1.4	2.4
26	16	16	8.5	8.0	25	60	64	80	21	5.3	1.2	2.3
27	16	17	8.5	7.5	28	64	59	70	53	5.3	1.1	2.1
28	16	18	8.0	7.5	28	68	55	62	68	8.0	.99	2.2
29	16	20	8.0	8.5	25	71	54	60	52	11	.92	2.3
30	16	20	7.5	9.0	---	142	53	57	38	9.1	.86	2.4
31	16	---	7.5	9.5	---	190	---	55	---	6.9	.76	---
TOTAL	456	646	733.0	200.3	842.0	3404	2033	1429	988	334.5	76.73	43.94
MEAN	14.7	21.5	23.6	6.46	29.0	110	67.8	46.1	32.9	10.8	2.48	1.45
MAX	16	54	59	9.5	89	370	138	94	68	31	5.8	4.5
MIN	13	16	7.5	4.5	8.0	12	47	27	17	5.3	.76	.56
CFSM	.06	.08	.09	.02	.11	.42	.26	.17	.12	.04	.009	.005
IN.	.06	.09	.10	.03	.12	.48	.29	.20	.14	.05	.01	.006
AC-FT	904	1280	1450	397	1670	6750	4030	2830	1960	663	152	87
CAL YR 1975	TOTAL	41074.70	MEAN	113	MAX	2380	MIN	1.2	CFSM	.43	IN	5.77
WTR YR 1976	TOTAL	11185.47	MEAN	30.6	MAX	370	MIN	.55	CFSM	.12	IN	1.57
									AC-FT	81470	AC-FT	22190

06600300 WEST BRANCH FLOYD RIVER NEAR STRUBLE, IA

LOCATION.--Lat 42°55'15", long 96°10'30", in NE1/4 NE1/4 sec.32, T.94 N., R.45 W., Sioux County, Hydrologic Unit 10230002, on right bank at downstream side of bridge on county highway 862, 0.2 mi (0.3 km) west of U.S. Highway 75, 0.8 mi (1.3 km) downstream from Orange City slough, 2.2 mi (3.5 km) northeast of Struble, 14 mi (23 km) upstream from Floyd River, and at mile 39.3 (63.2 km).

DRAINAGE AREA.--181 mi² (469 km²).

PERIOD OF RECORD.--October 1955 to current year. Prior to December 1955, monthly discharge only, published in WSP 1730.

GAGE.--Water-stage recorder. Datum of gage is 1,239.40 ft (377.769 m) above mean sea level (State Highway Commission benchmark).

REMARKS.--Records fair except those for winter period, which are poor. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--21 years, 29.7 ft³/s (0.841 m³/s), 2.23 in/yr (57 mm/yr), 21,520 acre-ft/yr (26.5 hm³/yr); median of yearly mean discharges, 24 ft³/s (0.68 m³/s), 1.8 in/yr (46 mm/yr), 17,400 acre-ft/yr (21.5 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 8,060 ft³/s (228 m³/s) Mar. 28, 1962, gage height, 15.63 ft (4.764 m); no flow at times most years.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 3,180 ft³/s (90.1 m³/s) May 21, gage height, 14.38 ft (4.383 m) at 2130 hours, no other peak above base of 400 ft³/s (11.3 m³/s); minimum daily, 0.47 ft³/s (0.013 m³/s) Aug. 30.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.2	3.4	4.0	1.4	.90	9.0	30	15	25	5.3	1.9	.61
2	2.6	2.8	4.0	1.3	.88	8.5	27	14	23	4.4	1.4	.69
3	2.4	2.8	4.2	1.1	.86	8.0	24	14	21	4.4	1.1	.61
4	2.6	2.2	4.6	1.0	.86	7.5	22	12	18	3.9	1.1	.61
5	2.6	2.1	5.5	.95	.80	7.0	20	11	16	3.7	1.9	.96
6	2.8	2.1	5.0	.90	.75	7.0	19	11	14	3.4	3.0	.69
7	2.4	2.2	4.8	.85	.75	7.0	18	10	13	3.0	2.8	.69
8	2.6	2.2	4.8	.82	.76	7.0	17	8.7	13	2.6	1.6	1.1
9	2.4	3.9	5.0	.82	.78	7.0	16	8.1	12	2.2	1.3	1.1
10	2.4	7.0	5.5	.83	.85	7.2	14	7.6	11	1.9	1.4	1.1
11	2.4	5.0	6.0	.84	1.0	40	14	7.8	11	1.6	1.4	.96
12	2.8	2.9	6.0	.85	1.3	200	14	7.9	12	1.6	1.6	.86
13	2.6	2.7	5.5	.86	2.0	100	13	8.4	10	1.9	1.8	1.9
14	2.6	3.1	4.8	.88	10	45	14	8.2	9.4	3.4	1.6	1.6
15	2.4	3.2	4.4	.90	100	120	14	7.5	9.4	3.0	1.5	1.4
16	2.6	3.0	4.0	.90	80	220	17	7.1	9.0	2.1	2.2	1.6
17	3.9	2.6	3.5	.88	70	163	18	5.4	9.0	1.8	1.6	1.4
18	4.4	2.2	3.0	.86	60	150	16	5.3	11	1.6	1.8	1.5
19	4.4	3.9	2.8	.85	50	60	15	5.0	9.5	1.5	1.8	1.8
20	3.4	5.5	2.8	.85	45	38	14	5.3	7.4	1.6	1.9	2.1
21	4.4	9.0	2.7	.88	35	27	13	588	6.6	1.5	1.5	1.4
22	4.7	5.0	2.6	.88	30	24	12	458	5.9	1.6	.86	1.2
23	4.7	4.5	2.5	.90	25	21	15	137	5.9	1.3	.86	1.2
24	5.3	4.0	2.3	.90	20	20	19	81	6.2	1.3	.96	1.3
25	6.9	3.5	2.1	.90	15	18	26	60	8.6	1.4	1.2	1.3
26	5.6	3.5	1.9	.88	13	18	24	50	6.6	2.1	1.2	1.5
27	4.7	3.6	1.8	.85	11	17	20	48	11	2.1	1.5	1.3
28	4.4	3.7	1.7	.84	10	16	18	40	9.7	2.8	.86	1.9
29	4.4	3.8	1.6	.84	9.5	25	17	32	8.6	2.4	.96	1.6
30	4.4	4.0	1.6	.86	---	47	15	29	6.9	2.2	.47	1.8
31	4.2	---	1.5	.90	---	38	---	26	---	3.0	.61	---
TOTAL	110.2	109.4	112.5	28.27	595.99	1492.2	535	1741.3	339.7	76.6	45.68	37.78
MEAN	3.55	3.65	3.63	.91	20.6	48.1	17.8	56.2	11.3	2.47	1.47	1.26
MAX	6.9	9.0	6.0	1.4	100	220	30	588	25	5.3	3.0	2.1
MIN	2.2	2.1	1.5	.82	.75	7.0	12	5.3	5.9	1.3	.47	.61
CFSM	.02	.02	.02	.005	.11	.27	.10	.31	.06	.01	.008	.006
IN.	.02	.02	.02	.005	.12	.31	.11	.36	.07	.02	.009	.008
AC-FT	219	217	223	56	1180	2960	1060	3450	674	152	91	75
CAL YR 1975 TOTAL	15081.50			MEAN 41.3	MAX 1480	MIN .40	CFSM .23	IN 3.10	AC-FT 29910			
WTR YR 1976 TOTAL	5224.62			MEAN 14.3	MAX 588	MIN .47	CFSM .08	IN 1.07	AC-FT 10360			

LOCATION.--Lat 42°34'36", long 96°18'43", in SE1/4 SE1/4 sec.30, T.90 N., R.46 W., Plymouth County, Hydrologic Unit 10230002, on right bank at downstream side of bridge on county highway C70, 0.2 mi (0.3 km) east of James, 14.3 mi (23.0 km) downstream from West Branch Floyd River, and at mile 9.5 (15.3 km).

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,610 ft³/s (45.6 m³/s) May 22, gage height, 14.95 ft (4.557 m), no peak above base of 2,500 ft³/s (70.8 m³/s); minimum daily, 8.6 ft³/s (0.24 m³/s) Sept. 4.

[illegible]

MISSOURI RIVER MAIN STEM

06601200 MISSOURI RIVER AT DECATUR, NB

LOCATION.--Lat 42°00'26", long 96°14'29", NE1/4 SW1/4 sec. 36, T.24 N., R.10 E., Burt County, Hydrologic Unit 10230001, at bridge on State Highway 175 and 51 at Decatur, Nebraska, 6.0 mi (9.7 km) west of Onawa, Iowa and at mile 591.0 (1,111.8 km).

DRAINAGE AREA.--316,160 mi² (818,850 km²).

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

REMARKS.--Water discharge estimated on basis of records at gaging station 41.3 mi (66.4 km) upstream at Sioux City. No significant inflow between gaging station and sampling site. Records of daily gage heights available in subdistrict office, USGS, Council Bluffs, Iowa.

WATER QUALITY DATA, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976

DATE	TIME	INSTAN- TANEOUS DIS- CHARGE (CFS) (00061)	TOTAL CAL- CIUM (CA) (MG/L) (00916)	TOTAL MAG- NE- SIUM (MG) (MG/L) (00927)	TOTAL SODIUM (NA) (MG/L) (00929)	TOTAL PO- TAS- SIUM (K) (MG/L) (00937)	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)
OCT											
05...	1215	60300	55	21	--	4.0	192	0	157	230	9.8
NOV											
03...	1205	61800	55	22	--	4.0	183	0	150	190	9.4
DEC											
08...	1040	32500	68	22	--	--	197	0	162	200	10
JAN											
05...	1400	21000	61	23	--	4.5	222	0	182	200	12
FEB											
09...	1000	26500	56	21	--	4.4	195	0	160	190	11
MAR											
08...	1450	28000	57	21	--	4.2	189	0	155	180	10
APR											
12...	1230	36300	56	21	56	4.4	194	0	159	190	10
MAY											
10...	1230	36600	65	20	64	5.2	191	0	157	210	11
JUN											
07...	1200	38200	57	21	60	4.3	189	0	155	180	10
JUL											
12...	1305	37300	47	17	52	4.0	192	0	157	200	10
AUG											
09...	1200	38700	54	23	65	4.5	199	0	163	200	9.6
SEP											
13...	1215	37900	50	19	58	4.3	187	0	153	190	10

DATE	TOTAL NITRITE PLUS NITRATE (N) (MG/L) (00630)	TOTAL AMMONIA NITRO- GEN (N) (MG/L) (00610)	TOTAL ORGANIC NITRO- GEN (N) (MG/L) (00605)	TOTAL KJEL- DAHL NITRO- GEN (N) (MG/L) (00625)	TOTAL NITRO- GEN (N) (MG/L) (00600)	TOTAL NITRO- GEN (NO3) (MG/L) (71887)	TOTAL PHOS- PHORUS (P) (MG/L) (00665)	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)
OCT										
06...	.07	.02	.31	.33	.40	1.8	.07	480	.65	78100
NOV										
03...	.11	.00	.39	.39	.50	2.2	.07	481	.65	80300
DEC										
08...	.17	.06	.44	.50	.67	3.0	.07	495	.67	43400
JAN										
05...	.22	.13	.23	.36	.58	2.6	.07	524	.71	29700
FEB										
09...	.18	.06	.30	.36	.54	2.4	.06	496	.67	35500
MAR										
08...	.27	.10	.41	.51	.78	3.5	.06	475	.65	36000
APR										
12...	.15	.02	.38	.40	.55	2.4	.08	460	.63	45100
MAY										
10...	.11	.01	.29	.30	.41	1.8	.05	472	.64	46600
JUN										
07...	.02	.00	.34	.34	.36	1.6	.05	470	.64	48500
JUL										
12...	.01	.01	.35	.36	.37	1.6	.06	496	.67	50000
AUG										
09...	.04	.02	.33	.35	.39	1.7	.08	464	.63	48500
SEP										
13...	.07	.01	.36	.37	.44	1.9	.04	479	.65	49000

06601200 MISSOURI RIVER AT DECATUR, NB--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976

DATE	TOTAL RESI- DUE (MG/L) (00500)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS) (00095)	PH (UNITS) (00400)	TEMPER- ATURE (DEG C) (00010)	TUR- BID- ITY (NTU) (00076)	DIS- SOLVED OXYGEN (MG/L) (00300)	PER- CENT SATUR- ATION (00301)	CHEM- ICAL OXYGEN DEMAND (HIGH LEVEL) (MG/L) (00340)	CARBON DIOXIDE (CO2) (MG/L) (00405)	FECAL COLI- FORM (COL. PER 100 ML) (31616)
OCT 06...	548	740	8.0	16.0	20	9.4	97	16	3.1	360
NOV 03...	545	690	7.9	13.0	20	13.8	105	6	3.7	2300
DEC 08...	545	700	7.8	4.5	15	13.0	103	8	5.0	11000
JAN 05...	570	770	7.9	.0	8	13.1	104	8	4.5	2300
FEB 09...	506	750	8.1	1.0	4	14.2	105	160	2.5	4400
MAR 08...	514	680	7.7	3.0	15	13.7	105	6	6.0	1400
APR 12...	530	725	8.8	10.5	15	12.8	103	14	.5	1600
MAY 10...	548	700	7.9	15.5	15	6.6	68	21	3.8	1800
JUN 07...	534	720	8.1	22.0	15	9.0	106	17	2.4	2200
JUL 12...	534	700	7.8	26.0	20	8.7	104	31	4.9	11000
AUG 09...	542	720	8.1	22.0	20	9.5	113	10	2.5	2400
SEP 13...	542	710	8.0	21.0	15	9.6	110	10	3.0	3400

06602020 WEST FORK DITCH AT HORNICK, IA
(Formerly published as West Fork ditch at Holly Springs)

LOCATION.--Lat 42°13'37", Long 95°04'40", 1n SW1/4 sec.27, T.86 N., R.45 W., Woodbury County, Hydrologic Unit 10230004, on left bank at upstream side of State Highway 141 bridge, 1.0 mi (1.6 km) east of Hornick, 9.2 mi (14.8 km) upstream from Wolf Creek, and 13.5 mi (21.7 km) north of Onawa.

DRAINAGE AREA.--403 mi² (1,044 km²).

PERIOD OF RECORD.--April 1939 to September 1969 (published as "at Holly Springs"), July 1974 to current year.

REVISED RECORDS.--WSP 1240: 1943, 1945 (M). WSP 1310: 1941 (M) 1944-45 (M). WSP 1440: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 1,045.82 ft (318.766 m) above mean sea level. Prior to June 15, 1959, nonrecording gage at site 3.0 mi (4.8 km) upstream and June 15, 1959 to Sept. 30, 1959, recording gage at site 2.2 mi (3.5 km) upstream at datum 7.0 ft (2.134 m) higher.

REMARKS.--Records good except those for winter period, which are poor. West Fork ditch is a dredged channel which diverts flow of West Fork Little Sioux River at Holly Springs 5.5 mi (8.8 km) south, thence southeast 6.5 mi (10.5 km) to a point 1.2 mi (1.9 km) west of Kennebec, where Wolf Creek enters from left. From this point, ditch roughly parallels Little Sioux River and becomes known as Monona-Harrison ditch. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--32 years (1940-69, 1976), 94.3 ft³/s (2,670 m³/s), 3.18 in/yr (81 mm/yr), 68,320 acre-ft/yr, (84.2 hm³/yr); median of yearly mean discharges, 83 ft³/s (2,35 m³/s), 2.8 in/yr (71 mm/yr), 60,100 acre-ft/yr (75.1 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 12,400 ft³/s (351 m³/s) Mar. 28, 1962, gage height, 22.46 ft (6.846 m), site and datum then in use; maximum gage height, 25.2 ft (7.681 m) site and datum then in use, Mar. 30, 1960, from floodmark; minimum daily discharge, 0.2 ft³/s (0.005 m³/s) July 30, Aug. 17, 1956.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 778 ft³/s (22.0 m³/s) May 22, gage height, 10.05 ft (3.063 m), no peak above base of 1,800 ft³/s (51.0 m³/s); minimum daily, 11 ft³/s (0.31 m³/s) Sept. 8, 9.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	34	32	36	19	25	42	85	38	65	30	19	13
2	33	31	35	18	24	35	73	37	60	29	19	14
3	33	32	38	17	23	33	66	35	57	28	18	13
4	34	32	40	16	22	31	63	37	54	28	18	12
5	32	32	42	15	21	30	61	38	51	27	17	13
6	32	32	40	14	20	30	57	35	49	26	17	12
7	33	32	38	13	20	32	49	33	48	25	18	13
8	33	32	37	13	21	40	53	32	46	25	17	11
9	31	35	36	13	22	50	53	32	44	24	18	11
10	31	36	37	13	24	59	50	32	43	22	19	13
11	32	48	37	13	27	61	46	32	42	21	17	13
12	34	35	37	13	32	166	46	33	41	20	17	13
13	34	31	37	13	35	144	47	34	38	21	18	14
14	32	30	37	13	40	92	44	34	38	21	17	19
15	30	34	35	14	60	99	45	33	35	21	20	18
16	31	34	33	15	150	122	60	30	36	21	20	14
17	31	32	30	15	107	149	51	30	36	21	19	13
18	32	33	27	15	75	224	51	30	33	21	19	13
19	32	34	27	16	65	194	50	30	33	21	18	13
20	32	54	27	17	63	118	48	29	33	22	16	15
21	32	42	27	18	57	88	46	63	33	20	16	14
22	32	38	26	19	48	75	48	387	31	20	15	13
23	32	34	25	20	53	72	52	388	30	20	15	12
24	31	32	25	21	60	63	58	238	30	19	15	13
25	32	30	25	22	59	62	54	148	32	19	15	13
26	32	30	24	22	58	56	68	111	34	24	15	13
27	32	31	24	21	51	59	64	93	45	23	14	13
28	32	32	23	21	50	60	45	85	45	23	13	14
29	31	34	23	22	48	64	42	78	34	21	13	13
30	32	35	22	23	---	93	39	71	31	21	13	14
31	32	---	20	25	---	107	---	67	---	20	13	---
TOTAL	996	1047	970	529	1361	2550	1625	2394	1228	704	518	402
MEAN	32.1	34.9	31.3	17.1	46.9	82.3	54.2	77.2	40.9	22.7	16.7	13.4
MAX	34	54	42	25	150	224	85	388	65	30	20	19
MIN	30	30	20	13	20	30	39	29	30	19	13	11
CFSM	.08	.09	.08	.04	.12	.20	.13	.19	.10	.06	.04	.03
IN.	.09	.10	.09	.05	.13	.24	.15	.22	.11	.06	.05	.04
AC-FT ,	1980	2080	1920	1050	2700	5060	3220	4750	2440	1400	1030	797
CAL YR 1975	TOTAL	34951	MEAN 95.8	MAX 1960	MIN 10	CFSM .24	IN 3.23	AC-FT 69330				
WTR YR 1976	TOTAL	14324	MEAN 39.1	MAX 388	MIN 11	CFSM .10	IN 1.32	AC-FT 28410				

06602400 MONONA-HARRISON DITCH NEAR TURIN, IA

LOCATION.--Lat 41°57'52", long 95°59'30", in NW1/4 NE1/4 sec.32, T.83 N., R.44 W., Monona County, Hydrologic Unit 10230004, on left pier at downstream side of bridge on county highway E54, 1.0 mi (1.6 km) west of gaging station, on Little Sioux River near Turin, 4 mi (6.4 km) southwest of Turin, 5.2 mi (8.4 km) northeast of Blencoe, and 12.5 mi (20.1 km) upstream from mouth.

DRAINAGE AREA.--900 mi² (2,331 km²).

PERIOD OF RECORD.--April 1939 to current year. Records for April 1939 to January 1958 not equivalent owing to diversion from Little Sioux River through equalizer ditch 1.5 mi (2.4 km) upstream. Prior to May 1942, published as "near Blencoe".

GAGE.--Water-stage recorder. Datum of gage is 1,015.00 ft (309.372 m) above mean sea level (Corps of Engineers bench mark). Prior to May 7, 1942, non-recording gage at site 4.8 mi (7.7 km) downstream at datum 5.40 ft (1.646 m) lower. May 7, 1942, to Oct. 13, 1953, nonrecording gage and Oct. 14, 1953 to Sept. 30, 1975, recording gage at same site at datum 5.00 ft (1.524 m) higher.

REMARKS.--Records good except those above 200 ft³/s (5.66 m³/s), which are fair, and those for winter period, which are poor. Monona-Harrison ditch is a dug channel and is a continuation of West Fork ditch, paralleling the Little Sioux River, and discharging into the Missouri River 1.5 mi (2.4 km) upstream from the mouth of the Little Sioux River. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--18 years, 213 ft³/s (6.032 m³/s), 3.38 in/yr (86 mm/yr), 154,300 acre-ft/yr (190 hm³/yr); median of yearly mean discharges, 200 ft³/s (5.66 m³/s), 3.2 in/yr (81 mm/yr), 145,000 acre-ft/yr (180 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 19,900 ft³/s (554 m³/s) Feb. 19, 1971, gage height, 23.03 ft (7.020 m); minimum daily, 8.5 ft³/s (0.24 m³/s) Jan. 3-11, 1959.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,280 ft³/s (36.2 m³/s) May 23, gage height, 5.85 ft (1.783 m), no peak above base of 2,500 ft³/s (70.8 m³/s); minimum daily, 25 ft³/s (0.71 m³/s) Aug. 28, 29, Sept. 1.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	71	79	80	65	65	81	140	78	129	61	35	25
2	71	77	85	50	50	63	118	75	128	59	35	27
3	69	77	95	58	56	60	101	73	122	57	35	27
4	68	74	103	56	52	57	92	77	118	56	34	27
5	68	72	112	55	50	55	91	80	112	57	32	28
6	65	72	108	54	50	54	87	72	110	54	31	27
7	66	73	124	53	52	54	85	71	107	54	30	27
8	69	72	124	52	54	60	85	72	105	52	30	27
9	71	81	110	51	58	70	84	72	101	49	31	26
10	71	110	110	51	63	80	81	72	104	46	31	27
11	65	124	110	51	66	97	77	71	104	44	30	29
12	66	90	110	51	67	120	75	73	103	43	29	30
13	66	75	107	51	74	150	75	83	90	42	29	31
14	65	78	105	51	75	175	79	80	87	43	31	34
15	65	84	102	51	251	159	78	77	83	45	31	40
16	65	86	100	50	470	162	81	73	80	42	38	36
17	65	86	95	50	181	197	93	69	81	38	38	35
18	67	86	90	50	124	249	77	68	75	36	36	35
19	66	90	86	49	104	274	75	69	71	35	35	36
20	71	124	84	49	98	204	73	69	71	37	31	35
21	75	100	82	52	85	146	69	67	69	36	29	36
22	78	75	80	58	80	124	72	539	67	37	27	36
23	74	72	78	60	71	114	78	931	63	37	27	36
24	71	68	76	59	84	108	89	626	62	37	28	37
25	71	66	75	56	97	97	110	277	61	36	28	37
26	69	64	74	52	92	96	117	202	66	45	29	37
27	73	62	73	55	100	93	96	167	90	74	27	36
28	72	66	72	60	83	93	86	170	98	48	25	36
29	74	70	69	67	86	96	81	148	72	44	25	37
30	78	75	65	67	---	165	79	135	63	42	26	40
31	84	---	65	66	---	188	---	132	---	41	26	---
TOTAL	2169	2428	2849	1710	2848	3741	2625	4868	2692	1428	950	977
MEAN	70.0	80.9	91.9	55.2	98.2	121	87.5	157	89.7	46.1	30.6	32.6
MAX	84	124	124	67	470	274	140	931	129	74	38	40
MIN	65	62	65	49	50	54	69	67	61	36	25	25
CFSM	.08	.09	.10	.06	.11	.13	.10	.17	.10	.05	.03	.04
IN.	.09	.10	.12	.07	.12	.15	.11	.20	.11	.05	.04	.04
AC-FT	4300	4820	5650	3390	5650	7420	5210	9660	5340	2830	1880	1940
CAL YR 1975	TOTAL	76652	MEAN 210	MAX 5120	MIN 40	CFSM .23	IN 3.17	AC-FT 152000				
WTR YR 1976	TOTAL	29285	MEAN 80.0	MAX 931	MIN 25	CFSM .09	IN 1.21	AC-FT 58090				

LITTLE SIOUX RIVER BASIN

06605850 LITTLE SIOUX RIVER AT LINN GROVE, IA

LOCATION.--Lat 42°53'24". Long 95°14'30", in SW1/4 SW1/4 sec.5, T.93 N., R.37 W., Buena Vista County, Hydrologic Unit 10230003, on right bank at downstream side of bridge on State Highway 264, in Linn Grove, Iowa, and at mile 123.7 (199.0 km).

DRAINAGE AREA.--1,548 mi² (4,009 km²).

PERIOD OF RECORD.--October 1972 to current year.

GAGE.--Water-stage recorder. Datum of gage is 1,223.60 ft (372.95 m) above mean sea level.

REMARKS.--Records good except those for winter period, which are poor. Several observations of water temperature were made during the year. Corps of Engineers gage height telemeter at station.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 8,620 ft³/s (244 m³/s) Apr. 29, 1975; gage height, 17.85 ft (5.441 m); minimum daily, 7.9 ft³/s (0.22 m³/s) Jan. 15, 1975.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 2,010 ft³/s (56.9 m³/s) Mar. 15, gage height, 10.86 ft (3.310 m), no other peak above base of 1,500 ft³/s (42.5 m³/s), revised; minimum daily, 11 ft³/s (0.31 m³/s) Aug. 31, Sept. 4, 6, 7.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	155	115	208	98	89	130	1450	355	261	213	35	12
2	150	117	190	97	88	104	1290	340	243	178	34	12
3	146	115	208	95	88	116	1080	333	225	153	32	12
4	144	112	222	93	87	130	961	316	211	133	31	11
5	139	110	238	91	86	154	875	301	197	115	30	12
6	133	110	254	90	86	172	818	282	186	104	28	11
7	128	112	250	88	85	190	780	261	177	96	28	11
8	126	112	258	88	85	180	750	251	169	90	26	13
9	124	133	248	87	89	197	800	241	158	85	24	12
10	126	180	234	86	93	190	841	227	160	75	23	12
11	128	286	224	85	102	207	770	219	162	72	24	12
12	128	318	212	85	110	947	540	211	156	66	27	14
13	128	276	202	85	122	1280	501	213	147	60	27	17
14	128	230	195	84	132	1240	475	217	133	59	27	23
15	124	229	188	84	150	1540	453	215	128	56	28	24
16	123	226	178	85	166	1130	427	209	132	59	31	24
17	121	215	174	85	196	974	411	201	125	59	30	23
18	121	201	170	85	250	910	391	194	125	59	37	21
19	119	195	162	85	242	947	377	192	125	55	39	39
20	117	219	152	86	234	964	368	182	121	53	35	55
21	117	216	140	86	280	972	355	175	114	55	30	49
22	117	190	134	87	150	891	344	184	104	55	27	47
23	128	194	126	87	130	743	335	229	98	53	25	42
24	126	180	120	88	140	650	345	370	101	52	23	30
25	126	170	114	88	150	587	402	475	108	49	21	26
26	122	188	112	88	172	621	451	448	125	46	20	24
27	119	220	108	88	200	857	465	393	173	45	18	23
28	115	240	104	88	170	789	427	353	261	46	16	23
29	112	242	102	88	160	736	393	324	373	43	15	24
30	110	222	100	88	---	1000	370	299	280	40	16	23
31	110	---	99	88	---	1360	---	280	---	38	11	---
TOTAL	3910	5674	5437	2727	4134	20908	18255	8490	5078	2364	818	581
MEAN	126	189	175	88.0	143	674	609	274	159	76.3	26.4	22.7
MAX	155	318	260	98	280	1540	1460	475	373	213	39	55
MIN	110	110	99	84	86	104	335	175	98	38	11	11
CFSM	.08	.12	.11	.06	.09	.44	.39	.18	.11	.05	.02	.01
IN.	.09	.14	.13	.07	.10	.50	.44	.20	.12	.06	.02	.02
AC-FT	7760	11250	10780	5410	8200	41470	36210	16840	10070	4690	1620	1350
CAL YR 1975	TOTAL	273085.2	MEAN	748	MAX	8560	MIN	7.9	CFSM	.48	IN	6.56
WTR YR 1976	TOTAL	78477.0	MEAN	214	MAX	1540	MIN	11	AC-FT	155700	541700	

06606600 LITTLE SIOUX RIVER AT CORRECTIONVILLE, IA

LOCATION.--Lat 42°28'20", long 95°47'49", in NE1/4 NW1/4 sec.1, T.88 N., R.43 W., Woodbury County, Hydrologic Unit 10230003, on right bank 10 ft (3 m) upstream from bridge on State Highway 31, 0.3 mi (0.5 km) upstream from Bacon Creek, 0.5 mi (0.8 km) west of Correctionville, 0.8 mi (1.3 km) downstream from Pierson Creek, and at mile 56.0 (90.1 km).

DRAINAGE AREA.--2,500 mi² (6,475 km²).

PERIOD OF RECORD.--May 1918 to July 1925, October 1928 to July 1932, June 1936 to current year. Monthly discharge only for some periods, published in WSP 1310.

REVISED RECORDS.--WSP 856: 1919. WSP 1240: 1924-25, 1931, 1932 (M), 1937, 1945 (M), 1947 (M), 1949 (M). WSP 1440: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 1,096.49 ft (334.210 m) above mean sea level. May 28, 1918, to July 1, 1925 and Oct. 29, 1928 to July 15, 1929, nonrecording gage 0.2 mi (0.3 km) downstream at datum 1.25 ft (0.381 m) lower. July 16, 1929, to July 2, 1932, and June 15, 1936, to Nov. 7, 1938, nonrecording gage at present site and datum.

REMARKS.--Records good except those for winter period, which are poor. Several observations of water temperature were made during the year. National Weather Service gage height telemeter at station.

AVERAGE DISCHARGE.--49 years (1918-24, 1928-31, 1936-76), 696 ft³/s (19.71 m³/s), 3.78 in/yr (96 mm/yr), 504,300 acre-ft/yr (622 hm³/yr); median of yearly mean discharge, 550 ft³/s (15.6 m³/s), 3.0 in/yr (76 mm/yr), 398,000 acre-ft/yr (491 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 29,800 ft³/s (844 m³/s) Apr. 7, 1965, gage height, 25.86 ft (7.882 m); minimum daily, 2.6 ft³/s (0.074 m³/s) July 17, 25, 1936, caused by construction dam above gage.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of June 23 or 24, 1891, reached a stage of 29.34 ft (8.943 m), present datum, from levels to floodmark by Soil Conservation Service (discharge not determined).

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 2,100 ft³/s (59.5 m³/s) Mar. 13, gage height, 10.50 ft (3.200 m), no peak above base of 4,000 ft³/s (113 m³/s); minimum daily, 28 ft³/s (0.79 m³/s) Sept. 12.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	295	228	380	230	170	447	1710	645	648	538	102	34
2	284	224	370	230	170	345	1830	615	606	468	102	34
3	278	227	370	220	165	240	1780	589	563	390	97	32
4	271	229	390	210	160	200	1540	575	524	343	88	32
5	260	230	440	200	155	250	1380	552	487	318	83	31
6	255	229	500	190	150	280	1260	522	455	282	79	30
7	245	229	586	180	150	330	1190	500	427	257	76	29
8	242	225	596	170	150	360	1130	473	400	228	72	30
9	236	262	602	160	155	405	1060	450	379	206	69	31
10	231	361	609	150	160	410	992	432	357	184	66	32
11	231	411	615	145	165	397	940	414	348	171	63	31
12	232	429	577	140	175	724	898	400	340	159	62	28
13	235	463	558	140	185	1730	854	400	332	147	60	32
14	231	482	520	140	200	1550	816	392	316	137	60	32
15	223	471	500	140	240	1550	784	386	295	140	61	32
16	223	440	450	145	300	1770	752	377	286	137	62	33
17	222	422	420	150	350	1810	724	364	276	126	67	35
18	224	411	390	150	500	1640	699	351	273	122	62	34
19	224	409	350	155	470	1550	678	335	266	121	59	39
20	222	491	340	160	450	1400	651	322	269	121	55	53
21	224	450	320	165	430	1300	627	314	253	117	53	59
22	224	350	300	165	410	1230	609	761	237	112	54	66
23	226	300	290	165	405	1190	598	1100	225	110	52	66
24	231	260	280	170	422	1080	612	879	213	106	51	64
25	237	220	270	170	432	963	663	914	213	99	48	63
26	242	210	260	165	435	907	684	949	255	105	44	62
27	240	230	250	160	458	900	717	956	368	110	41	59
28	237	250	240	155	527	996	736	896	347	106	40	61
29	227	300	230	155	524	1150	720	812	508	101	38	57
30	225	400	230	160	---	1250	684	745	503	104	37	50
31	229	---	230	165	---	1440	---	687	---	110	35	---
TOTAL	7406	9843	12473	5200	8663	29794	28318	18107	10969	5775	1938	1271
MEAN	239	328	402	168	299	961	944	584	366	186	62.5	42.4
MAX	295	491	615	230	527	1810	1830	1100	648	538	102	66
MIN	222	210	230	140	150	200	598	314	213	99	35	28
CFSM	.10	.13	.16	.07	.12	.38	.38	.23	.15	.07	.03	.02
IN.	.11	.15	.19	.08	.13	.44	.42	.27	.16	.09	.03	.02
AC-FT	14690	19520	24740	10310	17180	59100	56170	35920	21760	11450	3840	2520
CAL YR 1975 TOTAL	453867			1243	MAX	10500	MIN 45	CFSM .50	IN 6.75	AC-FT	900200	
WTR YR 1976 TOTAL	139757			382	MAX	1830	MIN 28	CFSM .15	IN 2.08	AC-FT	277200	

06607200 MAPLE RIVER AT MAPLETON, IA

LOCATION.--Lat 42°09'28", long 95°48'27", in SE1/4 SE1/4 sec.23, T.85 N., R.43 W., Monona County, Hydrologic Unit 10230005, on right bank on downstream side of bridge on State Highway 175, 80 ft (24 m) downstream from Chicago & North Western Railway Co. bridge, 0.5 mi (0.8 km) southwest of Mapleton, 0.8 mi (1.3 km) downstream from Wilsey Creek, 2.0 mi (3.2 km) upstream from McClarey Creek, and 16.0 mi (25.7 km) upstream from mouth.

DRAINAGE AREA.--669 mi² (1,732 km²).

PERIOD OF RECORD.--October 1941 to current year.

REVISED RECORDS.--WSP 1310: 1942 (M), 1946 (M), 1948 (M). WSP 1440: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 1,085.86 ft (330.970 m) above mean sea level. See WSP 1730 for history of changes prior to Sept. 20, 1956.

REMARKS.--Records good except those for winter period, which are poor. Several observations of water temperature were made during the year. National Weather Service gage height telemeter at station.

AVERAGE DISCHARGE.--35 years, 229 ft³/s (6.485 m³/s), 4.65 in/yr (118 mm/yr), 165,900 acre-ft/yr (205 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 15,700 ft³/s (445 m³/s) Feb. 19, 1971, gage height, 15.17 ft (4.624 m); maximum gage height, 22.1 ft (6.74 m) June 12, 1950; no flow Sept. 21, 22, 1945 caused by temporary dam above gage.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,680 ft³/s (47.6 m³/s) May 22, gage height, 4.64 ft (1.414 m), no peak above base of 4,000 ft³/s (113 m³/s); minimum daily, 24 ft³/s (0.68 m³/s) Sept. 7, 8, 18.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	100	87	90	72	66	83	291	109	206	132	53	32
2	100	85	100	70	64	75	223	98	200	125	52	31
3	102	84	110	68	63	65	195	96	186	118	51	30
4	101	81	130	66	62	60	173	96	174	114	48	29
5	95	83	150	64	61	80	156	96	171	106	47	27
6	92	89	170	62	60	100	146	90	163	102	46	27
7	92	89	200	60	61	130	136	86	155	102	48	24
8	90	96	170	58	65	113	126	87	148	96	46	24
9	92	136	150	56	80	109	112	87	137	88	46	26
10	92	207	135	54	94	110	105	87	133	81	46	26
11	93	152	120	53	92	119	100	83	126	80	47	26
12	92	124	110	52	90	343	96	88	117	77	47	25
13	90	102	105	51	85	373	91	105	112	75	48	25
14	88	94	102	50	80	360	91	107	108	80	49	28
15	84	101	100	50	90	316	96	100	104	75	56	28
16	85	95	98	50	110	283	96	99	107	72	53	27
17	87	83	96	50	130	263	96	102	100	64	54	26
18	88	74	94	51	156	247	112	94	98	59	50	24
19	88	79	92	52	153	229	109	83	96	60	46	35
20	93	157	90	54	145	209	102	78	89	60	44	37
21	93	126	88	55	122	176	98	80	82	61	43	33
22	92	82	86	56	97	155	93	899	82	59	40	33
23	89	76	84	57	104	148	146	929	80	59	37	31
24	96	72	82	58	114	148	124	550	86	54	36	29
25	96	70	80	58	113	145	164	433	93	50	36	28
26	96	68	78	57	105	146	156	355	116	56	32	29
27	96	68	76	56	106	143	143	299	203	71	30	30
28	91	70	74	58	101	139	124	270	263	71	30	32
29	88	74	74	62	96	171	119	239	206	78	30	33
30	90	80	74	66	---	270	114	224	147	68	28	32
31	93	---	74	67	---	317	---	211	---	56	28	---
TOTAL	2864	2884	3282	1793	2765	5625	3933	6360	4088	2449	1347	867
MEAN	92.4	96.1	106	57.8	95.3	181	131	205	136	79.0	43.5	28.9
MAX	102	207	200	72	156	373	291	929	263	132	56	37
MIN	84	68	74	50	60	60	91	78	80	50	28	24
CFSM	.14	.14	.16	.09	.14	.27	.20	.31	.20	.12	.07	.04
IN.	.16	.16	.18	.10	.15	.31	.22	.35	.23	.14	.07	.05
AC-FT	5680	5720	6510	3560	5480	11160	7800	12620	8110	4860	2670	1720
CAL YR 1975 TOTAL	112019				5200	MIN 17	CFSM .46	IN 6.23	AC-FT	222200		
WTR YR 1976 TOTAL	38257			MEAN 105	MAX 929	MIN 24	CFSM .16	IN 2.13	AC-FT	75880		

06507500 LITTLE SIOUX RIVER NEAR TURIN, IA

LOCATION.--Lat. 41°57'52", long 95°58'21", in NW1/4 NE1/4 sec.33, T.83 N., R.44 W., Monona County, Hydrologic Unit 10230003, on left bank on downstream side of bridge on county highway E54, 1.0 mi (1.6 km) east of gaging station on Monona-Harrison ditch near Turin, 2.5 mi (4.0 km) downstream from Maple River, 3.8 mi (6.1 km) south of Turin, 6.2 mi (10.0 km) northeast of Blencoe, and at mile 13.5 (21.7 km).

DRAINAGE AREA.--3,526 mi² (9,132 km²). Prior to Jan. 15, 1958, 4,426 mi² (11,463 km²), combined area above this station and Monona-Harrison ditch station 1.0 mi (1.6 km) west.

PERIOD OF RECORD.--January 1958 to current year. April 1939 to May 1942 at site 4.7 mi (7.6 km) downstream published as "near Blencoe". June 1942 to January 1958 at site 1,200 ft (370 m) east on old river channel; records not equivalent owing to diversion into Monona-Harrison ditch through equalizer ditch 1.5 mi (2.4 km) upstream.

GAGE.--Water-stage recorder. Datum of gage is 1,019.850 ft (310.850 m) above mean sea level (Corps of Engineers bench mark). Prior to July 15, 1958, nonrecording gages near present site at different datums. July 15 to Sept. 3, 1958, nonrecording gage at present site and datum.

REMARKS.--Records good except those for winter period, which are poor. Several observations of water temperature were made during the year. National Weather Service gage height telemeter at station.

AVERAGE DISCHARGE.--18 years, 1,085 ft³/s (30.73 m³/s), 4.18 in/yr (106 mm/yr), 786,100 acre-ft/yr (969 hm³/yr); median of yearly mean discharges, 970 ft³/s (27.5 m³/s), 3.7 in/yr (94 mm/yr), 703,000 acre-ft/yr (870 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, about 30,000 ft³/s (850 m³/s) Feb. 19, 1971, gage height, 27.44 ft (8.364 m), backwater from ice; minimum daily, 22 ft³/s (0.62 m³/s) Feb. 10-22, 1959.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 2,790 ft³/s (79.0 m³/s) May 23, gage height, 11.96 ft (3.645 m), no peak above base of 4,500 ft³/s (127 m³/s); minimum daily, 75 ft³/s (2.12 m³/s) Sept. 11.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	430	358	550	350	280	676	1890	782	930	647	176	89
2	430	357	600	340	285	595	2020	734	875	672	176	94
3	443	364	650	330	285	350	2020	718	820	609	176	92
4	492	360	750	320	280	240	1900	736	759	534	163	85
5	451	359	850	310	275	350	1720	702	708	472	168	78
6	409	337	776	300	270	500	1580	619	666	422	161	77
7	384	340	835	290	265	605	1480	584	630	392	154	78
8	384	322	883	280	270	670	1400	561	595	352	147	85
9	375	396	829	270	275	775	1330	544	573	341	147	84
10	371	557	838	260	280	760	1240	514	542	312	145	76
11	352	630	800	250	290	680	1140	481	502	292	145	75
12	388	625	769	240	310	900	1110	479	506	247	152	77
13	430	610	771	240	350	1440	1070	491	466	214	149	85
14	388	615	750	240	400	2070	1000	474	465	202	141	84
15	356	650	700	245	500	2000	971	457	436	241	160	84
16	325	640	650	245	600	2040	1040	444	418	220	164	84
17	328	620	600	250	700	2220	907	441	421	208	160	78
18	326	610	560	250	669	2130	840	413	306	195	150	80
19	341	595	520	255	650	2030	821	411	381	202	139	89
20	342	775	500	255	621	1820	785	395	375	197	141	98
21	341	785	480	260	591	1730	753	356	380	197	139	100
22	382	639	460	260	543	1650	717	1070	354	198	128	105
23	374	545	440	265	554	1650	718	2460	333	190	118	100
24	372	474	420	270	604	1460	736	1600	327	182	114	107
25	388	430	400	275	615	1400	803	1320	316	180	118	105
26	434	410	390	280	598	1230	836	1300	348	183	109	105
27	426	400	380	275	597	1210	843	1290	621	214	111	100
28	366	400	370	270	623	1260	857	1240	582	213	105	104
29	351	450	360	255	691	1330	865	1150	569	198	98	104
30	396	500	350	270	---	1550	835	1070	653	213	94	104
31	375	---	350	275	---	1680	---	995	---	183	91	---
TOTAL	11950	15153	18581	8485	13271	39021	34227	24831	15937	9122	4339	2706
MEAN	385	505	599	274	458	1259	1141	801	531	294	140	90.2
MAX	492	785	883	350	700	2220	2020	2460	930	672	176	107
MIN	325	322	350	240	265	240	717	356	316	180	91	75
CFSM	.11	.14	.17	.08	.13	.36	.32	.23	.15	.08	.04	.03
IN.	.13	.16	.20	.09	.14	.41	.36	.26	.17	.10	.05	.03
AC-FT	23700	30060	36860	16830	26320	77400	67890	49250	31610	18090	8610	5370
CAL YR 1975	TOTAL	625089	MEAN	1713	MAX	14500	MIN 94	CFSM .49	IN 6.59	AC-FT	1240000	
WTR YR 1976	TOTAL	197623	MEAN	540	MAX	2460	MIN 75	CFSM .15	IN 2.09	AC-FT	392000	

SOLDIER RIVER BASIN

06608500 SOLDIER RIVER AT PISGAH, IA

LOCATION.--Lat 41°49'52", Long 95°55'50", in NW1/4 NE1/4 sec.14, T.81 N., R.44 W., Harrison County, Hydrologic Unit 10230001, on left bank on downstream side of bridge on county highway F20, at west edge of Pisgah, 0.4 mi (0.6 km) downstream from Cobb Creek, 0.5 mi (0.8 km) upstream from Mogger Ditch, and 13.1 mi (21.1 km) upstream from mouth.

DRAINAGE AREA.--407 mi² (1,054 km²).

PERIOD OF RECORD.--March 1940 to current year.

REVISED RECORDS.--WSP 956: 1940 (M). WSP 1240: 1940, 1941 (M), 1947. WSP 1440: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 1,036.53 ft (315.934 m) above mean sea level. Prior to Oct. 11, 1954, nonrecording gage at same site and datum with supplementary water-stage recorder operating above 8.2 ft (2.50 m) gage height Mar. 2, 1946, to Sept. 24, 1953.

REMARKS.--Records good except those for winter period, which are poor. Several observations of water temperature were made during the year. National Weather Service gage height telemeter at station.

AVERAGE DISCHARGE.--36 years, 124 ft³/s (3.512 m³/s), 4.14 in/yr (105 mm/yr), 89,840 acre-ft/yr (111 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 22,500 ft³/s (637 m³/s) June 12, 1950, gage height, 28.17 ft (8.586 m); minimum daily, 2 ft³/s (0.057 m³/s) Jan. 2-10, 1945.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,830 ft³/s (51.8 m³/s) May 23, gage height, 8.70 ft (2.652 m), no peak above base of 5,000 ft³/s (142 m³/s); minimum daily, 8.0 ft³/s (0.23 m³/s) Sept. 5-7.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	49	46	90	46	48	51	97	61	69	40	24	9.9
2	49	45	80	45	47	55	86	56	67	39	24	11
3	49	46	85	43	46	54	79	52	64	38	22	11
4	47	46	90	41	44	50	74	49	59	37	21	9.9
5	46	44	95	39	42	54	72	49	57	36	21	8.0
6	43	44	80	37	41	65	68	45	56	35	22	8.0
7	47	45	76	35	40	85	66	44	55	33	21	8.0
8	47	44	74	34	41	100	65	42	54	32	20	14
9	48	73	73	33	43	85	63	41	53	30	20	21
10	48	135	72	32	50	81	59	41	52	28	20	22
11	48	80	71	33	60	81	59	41	52	26	17	18
12	47	59	64	34	80	216	59	40	51	24	20	16
13	47	48	63	35	100	170	60	52	51	23	18	18
14	47	46	62	36	150	111	60	51	120	22	19	20
15	46	51	58	37	250	97	58	43	69	30	31	23
16	46	52	56	38	178	82	61	44	54	29	31	22
17	47	48	54	38	115	79	56	46	52	28	30	23
18	48	47	52	38	99	79	59	44	50	27	28	21
19	48	51	50	39	91	82	60	42	56	28	21	20
20	48	143	50	39	86	78	53	41	48	25	17	24
21	48	99	50	39	76	72	51	45	45	37	16	40
22	47	48	50	40	61	66	58	334	45	28	15	30
23	48	45	50	40	69	66	72	1030	44	28	14	21
24	50	42	48	41	72	64	88	276	50	25	14	19
25	50	40	47	41	67	63	101	151	47	22	15	28
26	49	38	46	41	63	64	110	111	80	23	14	23
27	48	37	46	41	60	64	95	93	61	26	12	24
28	47	40	46	42	60	63	82	83	50	36	11	20
29	48	50	46	43	56	72	71	78	45	30	11	20
30	48	110	46	45	---	207	66	73	42	30	11	18
31	50	---	46	48	---	145	---	70	---	26	9.9	---
TOTAL	1478	1742	1916	1213	2235	2701	2108	3268	1698	921	589.9	570.8
MEAN	47.7	58.1	61.8	39.1	77.1	87.1	70.3	105	56.6	29.7	19.0	19.0
MAX	50	143	95	48	250	216	110	1030	120	40	31	40
MIN	43	37	46	32	40	50	51	40	42	22	9.9	8.0
CFSM	.12	.14	.15	.10	.19	.21	.17	.26	.14	.07	.05	.05
IN.	.14	.16	.18	.11	.20	.25	.19	.30	.16	.08	.05	.05
AC-FT	2930	3460	3800	2410	4430	5360	4180	6480	3370	1830	1170	1130
CAL YR 1975	TOTAL	42844.0	MEAN	117	MAX	1800	MIN	37	CFSM	.29	IN	3.92
WTR YR 1976	TOTAL	20440.7	MEAN	55.8	MAX	1030	MIN	8.0	CFSM	.14	IN	1.87
										AC-FT	84980	
										AC-FT	40540	

06609500 BOYER RIVER AT LOGAN, IA

LOCATION.--Lat 41°38'33", long 95°46'57", in SE1/4 NW1/4 sec.19, T.79 N., R.42 W., Harrison County, Hydrologic Unit 10230007, on left bank 9 ft (3 m) downstream from Illinois Central Railroad bridge at Logan, 0.4 mi (0.6 km) downstream from Elk Grove Creek, 10.5 mi (16.9 km) upstream from Willow Creek, and 15.8 mi (25.4 km) upstream from mouth.

DRAINAGE AREA.--871 mi² (2,256 km²).

PERIOD OF RECORD.--May 1918 to July 1925, November 1937 to current year. Monthly discharge only for some periods, published in WSP 1310.

REVISED RECORDS.--WSP 956: 1938-39. WSP 1240: 1918-19, 1920 (M), 1921, 1922 (M), 1924-25, 1938 (M), 1945. WSP 1440: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 1,009.38 ft (307.659 m) above mean sea level (Chicago and Northwestern Railway Company bench mark). See WSP 1918 for history of changes prior to Oct. 18, 1960.

REMARKS.--Records good except those for winter period, which are poor. Several observations of water temperature were made during the year. National Weather Service gage height telemeter at station.

AVERAGE DISCHARGE.--44 years (water years 1919-24, 1939-76), 308 ft³/s (8.723 m³/s), 4.80 in/yr (122 mm/yr), 223,100 acre-ft/yr (275 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 25,000 ft³/s (708 m³/s) Feb. 19, 1971, gage height, 22.65 ft (6.904 m), from floodmark; maximum gage height, 25.22 ft (7.687 m) Mar. 1, 1965, backwater from ice; minimum daily discharge, 1.5 ft³/s (0.042 m³/s) July 16, 1938.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 2,260 ft³/s (64.0 m³/s) May 23, gage height, 7.25 ft (2.210 m), no peak above base of 6,000 ft³/s (170 m³/s); minimum daily, 20 ft³/s (0.57 m³/s) Sept. 7.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	88	80	120	75	85	101	254	122	231	90	45	22
2	85	74	120	72	80	95	213	113	214	92	45	25
3	84	75	120	66	75	95	185	105	196	86	41	25
4	84	78	125	62	72	80	168	103	178	85	40	22
5	81	76	130	56	70	90	157	101	167	81	41	26
6	78	78	135	52	66	100	147	95	160	79	41	21
7	78	80	135	50	68	120	142	90	153	79	40	20
8	78	79	150	48	75	125	139	85	148	76	39	22
9	80	95	160	46	85	128	133	85	139	71	36	26
10	78	160	144	45	100	138	124	64	133	64	36	26
11	80	152	147	45	120	144	123	82	127	58	35	28
12	80	115	136	46	150	245	116	90	129	61	33	27
13	80	101	125	46	180	411	111	105	131	50	37	35
14	78	91	120	48	200	213	112	103	148	49	37	37
15	76	93	110	50	250	218	342	95	139	52	36	33
16	75	101	100	50	311	185	155	101	139	47	41	31
17	78	100	90	52	261	157	142	116	133	47	45	31
18	78	93	85	52	189	157	139	113	127	41	45	29
19	79	99	85	54	166	159	132	96	131	44	38	35
20	79	177	85	54	149	159	119	86	119	49	35	33
21	82	188	84	56	140	144	114	78	109	50	30	37
22	79	128	82	55	115	131	114	844	99	51	29	36
23	80	107	80	58	113	120	121	1740	103	50	28	28
24	79	100	78	58	127	121	220	1040	107	50	26	25
25	83	90	76	60	135	115	385	596	99	44	24	34
26	80	90	75	60	129	120	220	462	99	44	25	29
27	79	95	75	56	120	117	175	386	109	51	24	31
28	79	100	75	60	120	113	150	301	133	68	26	30
29	74	110	75	70	113	127	136	288	119	64	26	30
30	75	120	75	80	---	283	128	263	94	62	23	32
31	86	---	75	90	---	335	---	246	---	52	21	---
TOTAL	2473	3125	3272	1773	3864	4846	4918	8214	4113	1887	1058	866
MEAN	79.8	104	106	57.2	133	156	164	265	137	60.9	34.5	28.9
MAX	88	188	160	80	311	411	386	1740	231	92	45	37
MIN	74	74	75	45	66	80	111	78	94	41	21	20
CFSM	.09	.12	.12	.07	.15	.18	.19	.30	.16	.07	.04	.03
IN	.11	.13	.14	.08	.17	.21	.21	.35	.18	.08	.05	.04
AC-FT	4910	6200	6490	3520	7660	9610	9750	16290	8160	3740	2120	1720
CAL YR 1975	TOTAL	113652	MEAN 311	MAX 5330	MIN 74	CFSM .36	IN 4.85	AC-FT 225400				
WTR YR 1976	TOTAL	40419	MEAN 110	MAX 1740	MIN 20	CFSM .13	IN 1.73	AC-FT 80170				

06610000 MISSOURI RIVER AT OMAHA, NB

LOCATION.--Lat 41°15'32", long 95°55'20", in SE1/4 NW1/4 sec.23, T.15 N., R.13 E., Douglas County, Hydrologic Unit 10230006, on right bank on left side of concrete floodwall, at foot of Douglas Street, 275 ft (84 m) downstream from Interstate 480 Highway bridge in Omaha, and at mile 615.9 (991.0 km).

DRAINAGE AREA.--322,800 mi² (836,100 km²), approximately.

PERIOD OF RECORD.--September 1928 to current year. April 1872 to December 1899 (gage heights only) in reports of the Missouri River Commission and since January 1875, (gage heights only) in reports of the U.S. Weather Bureau.

REVISED RECORDS.--WSP 761: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 958.24 ft (292.072 m) above mean sea level. See WSP 1730 for history of changes prior to Sept. 30, 1936.

REMARKS.--Records good. Flow regulated by upstream main-stem reservoirs. National Weather Service gage height telemeter at station.

AVERAGE DISCHARGE.--48 years, 29,320 ft³/s (830.3 m³/s), 21,240,000 acre-ft/yr (26,200 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 396,000 ft³/s (11,200 m³/s) Apr. 18, 1952, gage height, 30.20 ft (9.205 m); minimum, about 2,200 ft³/s (62 m³/s) Jan. 6, 1937; minimum gage height observed, -2.77 ft (-0.844 m) Jan. 10, 1957, result of freezeup.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 75,000 ft³/s (2,120 m³/s) Nov. 21, gage height, 10.98 ft (3.347 m); maximum gage height, 11.83 ft (3.606 m) Oct. 2; minimum daily discharge, 13,200 ft³/s (374 m³/s) Jan. 9; minimum gage height observed, 0.12 ft (0.037 m) Jan. 9.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	64700	62700	65300	25400	26300	29000	42200	40500	39100	42600	40200	39500
2	64300	62700	64500	25900	26000	28600	42600	39800	38400	42100	40000	39800
3	64100	64500	59700	24000	25000	28700	43200	39100	38600	42000	39900	39500
4	63700	65400	54600	21600	24500	28800	43200	38800	40600	42000	39700	39400
5	63000	65100	49100	21900	24200	28000	42400	38400	42000	41500	39800	39700
6	63900	64700	44300	22400	21300	27100	40600	38600	41300	40700	40100	39400
7	63600	65100	40400	22600	22500	27200	40300	38800	40800	40900	39500	39400
8	64000	65900	36600	21400	23600	28000	40500	38300	40900	41000	39700	39700
9	64700	69000	33400	13200	26200	28400	40600	38000	40800	41000	39700	40200
10	65700	69500	31100	15700	28000	31100	40600	37700	40900	40800	39600	40400
11	65200	68200	29600	20000	28400	32800	40800	37700	40900	40400	39700	39600
12	64000	67600	29500	20600	28000	34300	40500	38400	40800	39400	39500	39100
13	63800	67500	29900	19600	27700	35300	39800	38700	41100	39000	39800	39400
14	65200	64500	31000	22000	28400	36600	39900	38600	42100	39400	40200	40000
15	65800	64700	30500	21300	28800	39000	40000	38300	40400	39900	39500	40200
16	65600	64800	28200	26400	31000	40100	40100	38000	39800	40200	39500	39600
17	64900	65500	27300	17500	31400	37100	39900	38000	39400	39900	39900	39800
18	64200	64800	25000	18600	31500	39900	40200	38500	39400	39800	40100	40000
19	63700	65600	24500	22100	31800	40100	39400	38300	39100	39800	39700	40500
20	64200	71700	24600	24200	31100	40400	39200	38000	38700	39800	39300	40600
21	64000	73900	26000	24000	30500	40800	39400	38400	38900	39800	39600	40700
22	63200	67300	27200	24100	29200	41400	40100	42600	39200	39100	39600	40600
23	64000	65300	27400	25400	28800	39900	40800	46300	39700	39100	39200	40000
24	66000	66800	26800	25200	28000	40500	42400	47000	40400	39500	38900	39400
25	65800	66100	26500	25300	27900	40000	43000	43400	41000	40300	39200	40000
26	64500	64900	26900	25300	28400	40900	42300	41100	41900	40500	39300	39500
27	63700	62800	26600	24100	28800	40600	40300	40700	42900	41400	39600	39600
28	64700	63600	26700	23300	29200	41000	39400	41400	42100	41400	39400	39800
29	64600	65600	26700	24900	29200	42300	39500	41200	42500	40700	39000	40100
30	64300	67000	25900	27500	---	43600	39900	40100	42700	40700	38800	40100
31	63700	---	25000	27100	---	42600	---	39600	---	40900	39100	---
TOTAL	1996800	1983800	1050800	702600	805700	1114300	1223100	1232300	1216400	1255600	1227100	1195700
MEAN	64410	66130	33900	22660	27780	35950	40770	39750	40550	40500	39580	39860
MAX	66000	73900	65300	27500	31800	43600	43200	47000	42900	42600	40200	40700
MIN	63000	62700	24500	13200	21300	27100	39200	37700	38400	39000	38800	39100
AC-FT	3961000	3935000	2084000	1394000	1598000	2210000	2426000	2444000	2413000	2490000	2434000	2372000
CAL YR 1975 TOTAL	16296350			MEAN 44650	MAX 73900	MIN 8700	AC-FT 32320000					
WTR YR 1976 TOTAL	15004200			MEAN 41000	MAX 73900	MIN 13200	AC-FT 29760000					

WATER-QUALITY RECORDS

SEDIMENT RECORDS: October 1971 to September 1976.

SEDIMENT LOADS: Maximum daily, 1,060,000 tons (962,000 tonnes) May 19, 1974; minimum daily, 3,990 tons (3,620 tonnes) Jan. 14, 1975.

SEDIMENT LOADS: Maximum daily, 340,000 tons (308,000 tonnes) May 23; minimum daily, 7,840 tons (3,620 tonnes) Jan. 9.

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976
ONCE-DAILY

[illegible]

WATER-QUALITY RECORDS

WATER QUALITY DATA, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976
ONCE-DAILY

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

SUSPENDED-SEDIMENT DISCHARGE (TONS/DAY), WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976

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	64700	506	88400	62700	430	72800	65300	721	127000
2	64300	521	90500	62700	482	81600	64500	760	132000
3	64100	512	88600	64500	582	101000	59700	730	118000
4	63700	455	78300	65400	653	115000	54600	699	103000
5	63000	396	67400	65100	721	127000	49100	668	88600
6	63900	415	71600	64700	722	126000	44300	623	74500
7	62600	413	70900	65100	720	127000	40400	579	63200
8	64000	367	63400	66900	770	139000	36600	540	53400
9	64700	358	62500	69000	798	145000	33400	502	45300
10	65700	390	69200	69500	748	140000	31100	480	40300
11	65200	390	68700	68200	660	122000	29600	457	36500
12	64000	360	62200	67600	630	115000	29500	428	34100
13	63800	335	57700	67500	657	120000	29900	395	31900
14	65200	375	66000	64500	630	110000	31000	422	35300
15	65800	400	71100	64700	625	109000	30500	452	37200
16	65600	397	70300	64800	589	103000	28200	412	31400
17	64900	400	70100	65500	588	104000	27300	400	29500
18	64200	448	77700	64800	520	91000	25000	372	25100
19	63700	517	88900	65600	435	77000	24500	418	27700
20	64200	580	101000	71700	454	87900	24600	484	32100
21	64000	591	102000	73900	522	104000	26000	490	34400
22	63200	605	103000	67300	451	82000	27200	490	36000
23	64000	670	116000	65300	413	72800	27400	480	35500
24	66000	710	127000	66800	435	78500	26800	442	32000
25	65800	675	120000	66100	427	76200	26500	421	30100
26	64500	614	107000	64900	400	70100	26900	434	31500
27	63700	570	98000	62800	380	64400	26600	453	32500
28	64700	526	91900	63600	382	65600	26700	471	34000
29	64600	485	84600	65600	401	85200	26700	469	33800
30	64300	460	79800	67000	617	112000	29900	460	32200
31	63700	460	79100	---	---	---	25000	462	31200
TOTAL	1996800	---	2593000	1983800	---	3028100	1050800	---	1529300

06610000 MISSOURI RIVER AT OMAHA, NB--Continued

WATER-QUALITY RECORDS

WATER QUALITY DATA, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976

SUSPENDED-SEDIMENT DISCHARGE (TONS/DAY), WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976

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	25400	452	31000	26300	600	42600	29000	531	41600
2	25900	400	28000	26000	593	41600	28500	498	38500
3	24000	320	20700	25000	561	37900	28700	482	37400
4	21600	260	15200	24500	501	35100	28800	480	37300
5	21900	270	16000	24200	510	32300	28000	445	33600
6	22400	288	17400	21300	420	24200	27100	378	27700
7	22600	315	19200	22500	445	27000	27200	316	23200
8	21400	281	16200	23600	490	31200	28000	317	24000
9	13200	220	7840	26200	582	41200	28400	404	31000
10	15700	220	9330	28000	652	49200	31100	588	49400
11	20900	323	17400	28400	685	52300	32800	800	70800
12	20600	376	21000	28000	672	50800	34300	1030	95400
13	19600	370	19600	27700	656	49100	35300	1190	113000
14	22000	432	25700	28400	684	52400	36600	1330	131000
15	21300	410	23600	28800	705	54800	39000	1400	147000
16	25400	481	34300	31000	821	66700	40100	1390	150000
17	17500	480	22700	31400	926	70700	37100	1300	130000
18	16300	459	23100	31500	968	82300	39900	1160	125000
19	22100	498	29700	31800	953	81800	40100	1000	108000
20	24200	530	34600	31100	882	74100	40400	845	92200
21	24900	511	33100	30500	777	64000	40800	743	81800
22	24100	517	33600	29200	650	51200	41400	613	68500
23	25400	562	38500	26800	548	42600	39900	510	54900
24	24000	562	38200	28000	493	37300	40500	480	52500
25	25300	563	38500	27900	452	37100	40000	480	51800
26	25300	548	37400	28400	509	39000	40900	488	52900
27	24100	512	33700	28800	530	41200	40600	501	54900
28	20000	481	30300	29200	555	40800	41000	522	57800
29	24900	547	36500	29200	557	42900	42300	560	64000
30	27000	630	46300	---	---	---	43600	661	77800
31	27100	623	45600	---	---	---	42800	751	60800
TOTAL	702600	---	844370	805700	---	1408700	1114300	---	2210800
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	42200	716	81600	40500	398	43500	39100	422	44600
2	42600	685	78800	39800	395	42400	36400	418	43300
3	43200	740	86300	39100	365	38500	38600	412	42900
4	43200	778	90700	38800	351	36800	40600	452	49500
5	42400	758	86800	38400	355	36800	42000	528	59900
6	40600	690	75600	36600	369	38500	41300	478	53300
7	40300	643	70000	38800	387	40500	40800	397	43700
8	40500	652	71300	38300	399	41300	40900	434	47900
9	40600	657	72000	38000	398	40800	40800	567	62500
10	40600	632	69300	37700	389	39600	40900	695	76700
11	40800	596	65700	37700	376	38300	40900	702	77500
12	40500	550	60100	38400	419	42400	40800	635	70000
13	39500	480	51600	38700	380	35700	41100	607	67400
14	39900	392	42200	38600	362	37700	42100	725	82400
15	40000	420	45400	38300	378	35100	40400	678	74000
16	40100	540	58500	38000	408	41900	39800	595	63900
17	39900	492	53000	38000	452	46400	39400	514	54700
18	40200	440	47800	38500	490	50900	39400	466	49600
19	39700	466	49800	38300	490	50700	39100	430	45400
20	39200	580	61400	38000	462	47400	38700	398	41600
21	39400	589	62700	38400	447	46300	38900	373	39200
22	40100	570	61700	42600	1360	156000	39200	360	38100
23	40800	602	66300	46300	2720	340000	39700	352	37700
24	42400	689	78900	47000	2640	335000	40400	349	38100
25	42000	708	82200	43400	1560	183000	41000	351	38900
26	42300	686	78300	41100	690	76600	41900	408	46200
27	40300	622	67700	40700	475	52200	42900	620	71800
28	39400	523	55600	41400	458	52300	42100	546	62100
29	39500	417	44500	41200	460	51200	42500	481	55200
30	39900	378	40700	40100	430	46600	42700	438	50500
31	---	---	---	39600	428	45800	---	---	---
TOTAL	1223100	---	1956500	1232300	---	2219200	1216400	---	1626500

WATER-QUALITY RECORDS

WATER QUALITY DATA, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976

SUSPENDED-SEDIMENT DISCHARGE (TONS/DAY), WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976

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	42600	404	46500	40200	338	36700	39500	409	43600
2	42100	389	44200	40000	345	37300	39800	365	39200
3	42000	407	46200	39900	236	36200	39500	325	34700
4	42000	450	51000	39700	312	33400	39400	309	32900
5	41500	502	56200	39800	300	32200	39700	301	32300
6	40700	562	61800	40100	337	36500	39400	297	31600
7	40900	625	69000	39500	332	35400	39400	297	31600
8	41000	641	71000	39700	347	37200	39700	305	32700
9	41000	613	67900	39700	377	40400	40200	390	42300
10	40800	550	60600	39600	399	42700	40400	383	41800
11	40400	468	51000	39700	430	46100	39600	283	30300
12	39400	380	40400	39500	443	47200	39100	198	20900
13	39000	338	35600	39800	452	46600	39400	165	17600
14	39400	339	36100	40200	469	50900	40000	233	25200
15	39900	361	38900	39500	479	51100	40200	358	38900
16	40200	400	43400	39500	475	50700	39600	398	42600
17	39900	440	47400	39900	480	51700	39800	372	40000
18	39800	487	52300	40100	469	50800	40000	341	36800
19	39800	530	57000	39700	430	46100	40500	322	35200
20	39800	509	54700	39300	475	50400	40600	310	34000
21	39800	418	44900	39600	618	66100	40700	353	38800
22	39100	332	35700	39600	738	78900	40600	462	50600
23	39100	380	40100	39200	785	82100	40000	540	58300
24	39500	440	46900	38900	703	73800	39400	522	55500
25	40300	528	57500	39200	590	62400	40000	464	50100
26	40500	592	64700	39300	501	53200	39600	374	40000
27	41400	560	62600	39600	490	52400	39600	318	34000
28	41400	441	49300	39400	487	51800	39800	360	38700
29	40700	340	37400	39000	480	50500	40100	362	39200
30	40700	330	36300	38800	477	50000	40100	346	37500
31	40900	335	37000	39100	449	47400	---	---	---
TOTAL	1255600	---	1543600	1227100	---	1531200	1195700	---	1126900
YEAR	15004200		21620270						

DATE	TIME	TEMPER- ATURE (DEG C) (00010)	NUMBER OF SAM- PLING POINTS (00063)	INSTAN- TANEOUS DIS- CHARGE (CFS) (80061)	SUS- PENDED SEDI- MENT (MG/L) (80154)	SUS- PENDED SEDI- MENT CHARGE (TONS/DAY) (80155)	SUS- PENDED SED. FILL DIAM. % FINER THAN .002 MM (70327)	SUS- PENDED SED. FILL DIAM. % FINER THAN .004 MM (70333)
OCT.								
06...	1025	16.0	3	64000	418	72200	--	--
20...	1020	13.0	--	64000	579	101000	--	--
NOV.								
01...	1015	12.0	2	67600	584	107000	--	--
17...	1020	7.5	--	65000	592	105000	--	--
DEC.								
03...	1000	8.0	3	59000	721	110500	--	--
29...	1120	1.5	--	56000	540	52700	--	--
FEB.								
10...	1120	2.0	2	20200	652	40300	--	--
17...	10...	2.0	--	31200	925	77900	26	28
MAR.								
02...	1000	2.0	3	20500	495	30200	--	--
16...	1000	1.0	--	42000	1400	160000	--	--
APR.								
01...	1200	6.0	3	42100	--	--	--	--
01...	1005	10.5	--	40700	556	61100	--	--
05...	1100	12.0	--	42100	620	79000	--	--
MAY								
12...	0950	15.0	2	30500	382	39700	--	--
24...	1110	16.0	--	46900	2710	345000	--	--
JUNE								
03...	1010	20.0	3	38400	413	42800	--	--
17...	1001	20.0	--	39300	517	50000	--	--
JULY								
01...	0950	20.0	3	42600	408	46900	--	--
10...	1015	20.0	--	39000	539	58100	--	--
AUG.								
01...	1000	23.5	3	39300	295	21600	--	--
10...	1000	21.0	--	40700	424	46500	--	--
SEP.								
08...	1045	22.0	3	41500	391	44200	--	--
10...	1045	19.5	--	39000	550	59100	--	--

06610000 MISSOURI RIVER AT OMAHA, NB--Continued

WATER-QUALITY RECORDS

WATER QUALITY DATA, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976

DATE	SUS. SED. FALL DIAM. % FINER THAN (70339)	SUS. SED. FALL DIAM. % FINER THAN (70340)	SUS. SED. FALL DIAM. % FINER THAN (70342)	SUS. SED. FALL DIAM. % FINER THAN (70343)	SUS. SED. FALL DIAM. % FINER THAN (70344)	SUS. SED. FALL DIAM. % FINER THAN (70345)	SUS. SED. FALL DIAM. % FINER THAN (70331)	BED MAT. FALL DIAM. % FINER THAN (80158)	BED MAT. FALL DIAM. % FINER THAN (80159)
OCT.									
06...	--	--	30	43	99	100	--	0	1
20...	--	--	--	--	--	--	19	--	--
NOV.									
03...	--	--	22	39	99	100	--	0	1
17...	--	--	--	--	--	--	28	--	--
DEC.									
03...	--	--	37	52	100	--	--	0	2
08...	--	--	--	--	--	--	37	--	--
FEB.									
10...	--	--	--	--	--	--	21	0	2
17...	31	43	60	70	99	100	--	--	--
MAR.									
02...	--	--	36	57	100	--	--	--	--
16...	--	--	--	--	--	--	34	--	--
APR.									
01...	--	--	--	--	--	--	--	--	--
12...	--	--	36	50	94	100	--	--	--
26...	--	--	--	--	--	--	19	--	--
MAY									
13...	--	--	--	--	--	--	30	--	--
24...	--	--	29	41	96	100	--	--	--
JUNE									
03...	--	--	42	56	100	--	--	--	--
17...	--	--	--	--	--	--	34	--	--
JULY									
01...	--	--	39	52	100	--	--	--	--
19...	--	--	--	--	--	--	26	--	--
AUG.									
05...	--	--	44	57	99	100	--	--	--
19...	--	--	--	--	--	--	34	--	--
SEP.									
09...	--	--	28	54	100	--	--	--	--
23...	--	--	--	--	--	--	27	--	--

DATE	BED MAT. FALL DIAM. % FINER THAN (80160)	BED MAT. FALL DIAM. % FINER THAN (80161)	BED MAT. FALL DIAM. % FINER THAN (80162)	BED MAT. FALL DIAM. % FINER THAN (80164)	BED MAT. FALL DIAM. % FINER THAN (80165)	BED MAT. FALL DIAM. % FINER THAN (80166)	BED MAT. FALL DIAM. % FINER THAN (80167)	BED MAT. FALL DIAM. % FINER THAN (80168)
OCT.								
06...	75	100	--	--	--	--	--	--
20...	--	--	--	--	--	--	--	--
NOV.								
03...	69	99	100	--	--	--	--	--
17...	--	--	--	--	--	--	--	--
DEC.								
03...	73	100	--	--	--	--	--	--
08...	--	--	--	--	--	--	--	--
FEB.								
10...	73	99	100	--	--	--	--	--
17...	--	--	--	--	--	--	--	--
MAR.								
02...	--	--	--	--	0	7	100	--
16...	--	--	--	--	--	--	--	--
APR.								
01...	--	--	--	0	2	65	100	--
12...	--	--	--	--	--	--	--	--
26...	--	--	--	--	--	--	--	--
MAY								
13...	--	--	--	0	2	34	100	--
24...	--	--	--	--	--	--	--	--
JUNE								
03...	--	--	--	0	1	11	99	100
17...	--	--	--	--	--	--	--	--
JULY								
01...	--	--	--	0	2	35	100	--
19...	--	--	--	--	--	--	--	--
AUG.								
05...	--	--	--	0	1	34	97	100
19...	--	--	--	--	--	--	--	--
SEP.								
09...	--	--	--	0	1	33	98	100
23...	--	--	--	--	--	--	--	--

INDIAN CREEK BASIN

06610500 INDIAN CREEK AT COUNCIL BLUFFS, IA

LOCATION.--Lat 41°17'32", Long 95°49'59", in SE1/4 SW1/4 sec.18, T.75 N., R.43 W., Pottawattamie County, Hydrologic Unit 10230006, on left bank at downstream side of first bridge off State Highway 183, on Mud Hollow Road at north edge of Council Bluffs, 8.8 mi (14.2 km) upstream from mouth.

DRAINAGE AREA.--7.99 mi² (20.69 km²).

PERIOD OF RECORD.--July 1954 to September 30, 1976 (discontinued).

GAGE.--Water-stage recorder. Datum of gage is 1,038.86 ft (316.645 m) above mean sea level (City of Council Bluffs bench mark). Prior to Apr. 12, 1955, nonrecording gage at site 0.2 mi (0.3 km) downstream at different datum.

REMARKS.--Records good except those for winter period, which are poor. Several observations of water temperature were made during the year. Flow from 1.7 mi² (4.4 km²) partly regulated by several small dams completed by Soil Conservation Service during June and July 1975. Regulation is limited to pool storage behind dams, with the greatest being the lower dam about 2 mi (3 km) upstream with maximum pool capacity below crest when dry, of 460 acre-ft (567,000 m³).

AVERAGE DISCHARGE.--22 years, 1.54 ft³/s (0.044 m³/s), 2.62 in/yr (67 mm/yr), 1,120 acre-ft/yr (1.38 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,980 ft³/s (84.4 m³/s) Sept. 7, 1965, gage height, 15.36 ft (4.682 m); no flow at times most years.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of June 20, 1942, reached a discharge of 9,200 ft³/s (260 m³/s), from information by Corps of Engineers.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 140 ft³/s (3.96 m³/s) Nov. 2, gage height, 4.38 ft (1.335 m), caused by removal of construction dam, no peak above base of 700 ft³/s (19.8 m³/s); no flow for many days, caused partially by closure of Soil Conservation dams in June and July 1975 and construction of temporary dams immediately above station during August of 1976.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0	.02	1.1	.39	.33	.54	.74	.27	.46	.18	.06	
2	0	6.5	.86	.33	.36	.64	.54	.33	.22	.14	.05	
3	0	.54	.64	.30	.39	.50	.39	.22	.18	.14	.04	
4	0	.14	.74	.30	.27	.70	.33	.27	.18	.12	.04	
5	0	.12	.74	.30	.27	.80	.33	.22	.18	.09	.04	
6	0	.14	.50	.29	.27	.86	.27	.27	.14	.08	.04	
7	0	.06	.50	.28	.27	.86	.54	.27	.14	.08	.04	
8	0	.02	.74	.28	.30	.86	.64	.22	.14	.08	.02	
9	0	.03	.54	.28	.40	1.3	.46	.22	.12	.08	.02	
10	0	.02	.54	.28	.46	.98	.18	.27	.09	.05	.01	
11	0	.02	.54	.28	.46	.98	.22	.33	.08	.04	0	
12	0	.02	.54	.29	.46	1.0	.22	.64	.07	.04	0	
13	0	.06	.54	.30	.39	.80	.22	.86	.06	.04	0	
14	0	.18	.50	.32	.39	.60	.33	.54	.33	.02	0	
15	0	.18	.50	.36	.86	.64	1.3	.46	.39	.04	.06	
16	0	.18	.40	.34	3.1	.64	.98	.98	.27	.04	.06	
17	0	.22	.40	.38	.64	.64	.86	.64	.18	.02	.04	
18	0	.22	.30	.48	.64	.74	.46	.27	.86	.02	.02	
19	0	.64	.50	.46	.54	.64	.18	.22	.27	.02	0	
20	0	1.8	.80	.33	.54	.64	.06	.22	.14	0	0	
21	0	.86	1.0	.39	1.2	.54	.27	.18	.12	.03	.01	
22	0	.46	.50	.39	.50	.39	.18	2.8	.08	.09	0	
23	0	.39	.50	.39	.60	.39	.64	3.1	.07	.07	0	
24	0	.39	.50	.33	.64	.33	2.3	1.4	.46	.06	0	
25	0	.39	.50	.27	.74	.39	1.6	.64	.18	.04	0	
26	0	.54	.50	.22	.54	.46	.74	.46	.12	.09	0	
27	0	.64	.50	.27	.64	.27	.39	.39	.86	.46	0	
28	.01	.74	.50	.39	.74	.33	.46	.27	.54	.22	0	
29	0	3.0	.46	.46	.74	.98	.33	.22	.33	.09	0	
30	.02	1.0	.54	.33	---	3.4	.33	.18	.14	.09	0	
31	.02	---	.46	.33	---	1.3	---	.14	---	.08	0	---
TOTAL	.05	19.52	17.88	10.34	17.68	24.14	16.49	17.50	7.40	2.63	.55	0
MEAN	.002	.65	.58	.33	.61	.78	.55	.56	.25	.085	.018	0
MAX	.02	6.5	1.1	.48	3.1	3.4	2.3	3.1	.86	.46	.06	0
MIN	0	.02	.30	.22	.27	.27	.06	.14	.06	0	0	0
CFSM	0	.08	.07	.04	.08	.10	.07	.07	.03	.01	.002	0
IN.	.0002	.09	.08	.05	.08	.11	.06	.08	.03	.01	.003	0
AC-FT	.10	39	35	21	35	48	33	35	15	5.2	1.1	0

CAL YR 1975 TOTAL 395.47 MEAN 1.08 MAX 27 MIN 0 CFSM .14 IN 1.84 AC-FT 784
WTR YR 1975 TOTAL 134.18 MEAN .37 MAX 6.5 MIN 0 CFSM .05 IN .62 AC-FT 266

MOSQUITO CREEK BASIN

211

06610520 MOSQUITO CREEK NEAR EARLING, IA

LOCATION.--Lat 41°45'10", long 95°27'50", in N1/2 SE1/4 sec.11, T.80 N., R.40 W., Shelby County, Hydrologic Unit 10230006, on right bank at stream-stabilization structure 1,300 ft (396 m) downstream from bridge on State Highway 191, 0.5 mi (0.8 km) downstream from small left-bank tributary and 2.3 mi (3.7 km) southwest of Earling.

DRAINAGE AREA.--32.0 mi² (82.9 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--August 1965 to current year.

GAGE.--Duplex water-stage recorder. Datum of gage is 1,222.56 ft (372.636 m) above mean sea level. Gage heights obtained of headwater (base gage) and tailwater (supplementary gage) elevations at stream-stabilization structure.

REMARKS.--Records fair except those for winter period, which are poor. The stabilization structure is a dam approximately 16 ft (5 m) high constructed of sheet piling and derrick stone. The crest of the cut-off piling is rectangular in shape at low stages and trapezoidal at high stages. Daily discharges computed from headwater gage readings. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--11 years, 15.9 ft³/s (0.450 m³/s), 6.75 in/yr (171 mm/yr), 11,520 acre-ft/yr (14.2 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 12,000 ft³/s (340 m³/s) Sept. 11, 1972, gage height, 31.18 ft (9.504 m), from floodmarks; no flow for several days in 1970-72.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 192 ft³/s (5.44 m³/s) May 23, gage height, 19.53 ft (5.953 m), no peak above base of 500 ft³/s (14.2 m³/s); minimum daily, 0.36 ft³/s (0.010 m³/s) Sept. 23.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP		
1	2.9	2.7	4.9	1.5	3.0	5.2	9.0	5.4	6.6	5.2	2.3	.92		
2	2.9	3.3	4.9	1.7	3.2	6.3	8.0	5.3	6.6	5.2	2.2	.64		
3	2.9	3.1	4.7	1.5	3.2	4.9	7.2	5.2	6.3	5.2	2.2	.71		
4	3.1	2.9	4.5	2.2	2.6	4.2	6.6	5.4	6.3	5.0	2.2	.50		
5	2.9	2.9	4.7	2.0	2.2	6.0	6.2	5.2	5.4	4.8	2.2	.50		
6	2.9	3.1	4.5	2.2	2.0	6.0	5.8	5.2	4.9	4.5	2.7	.50		
7	2.7	3.3	4.2	2.2	2.2	6.0	5.6	5.4	5.2	4.2	2.5	.50		
8	2.7	3.5	4.5	2.2	2.5	5.7	5.4	5.7	5.2	4.0	2.5	.43		
9	2.7	4.9	4.2	2.2	3.0	6.8	5.3	6.0	5.2	3.8	2.2	.57		
10	2.5	4.5	4.0	2.4	4.0	8.0	5.2	6.3	5.4	3.6	1.8	.43		
11	2.5	3.5	3.5	2.5	4.5	8.3	5.2	6.3	5.2	3.4	2.0	.43		
12	2.5	2.9	3.3	2.7	5.2	6.8	5.1	7.7	4.2	3.2	1.8	.43		
13	2.7	2.7	3.5	2.7	4.9	5.4	5.0	6.0	4.7	3.0	2.0	.64		
14	2.7	2.9	6.3	2.7	4.2	4.7	5.0	5.7	5.4	3.0	2.4	.71		
15	2.5	2.9	3.0	2.9	7.1	4.5	8.0	5.7	4.9	3.2	2.4	.43		
16	2.5	3.1	2.8	2.9	9.3	4.7	6.0	8.0	4.9	3.0	1.8	.71		
17	2.7	3.1	2.5	2.7	6.8	4.9	5.4	6.3	15	2.8	2.0	.57		
18	2.9	2.9	1.5	2.0	5.7	5.2	5.2	4.9	11	2.6	1.7	.71		
19	2.9	3.3	2.0	2.2	5.4	6.3	5.0	4.0	6.6	2.5	1.2	2.0		
20	2.9	5.4	2.5	2.0	4.7	5.7	5.0	4.2	6.6	2.7	1.1	1.0		
21	3.1	2.7	2.2	2.0	3.5	5.4	5.5	4.0	5.7	3.0	.85	.57		
22	3.3	2.7	2.4	2.0	4.2	5.4	6.5	14	6.0	2.7	.92	.85		
23	2.9	3.3	2.4	2.2	4.9	5.4	8.5	53	6.0	3.3	1.0	.36		
24	3.1	3.1	1.8	2.2	4.9	5.7	12	15	6.6	2.3	1.1	.50		
25	3.1	3.5	1.7	2.0	5.4	6.0	18	12	6.3	2.3	1.2	.64		
26	2.9	3.8	1.5	2.0	5.2	5.4	10	10	6.6	2.5	.92	.71		
27	2.9	3.8	1.5	2.0	6.0	5.4	8.3	8.7	7.1	3.0	.85	.57		
28	2.9	3.8	1.5	2.0	6.0	4.9	7.3	7.7	6.0	2.8	1.0	.50		
29	2.9	7.1	1.4	2.5	6.0	6.8	6.5	7.4	5.2	2.6	.78	.43		
30	2.9	4.9	1.5	2.5	---	13	6.0	6.8	5.2	2.4	.92	.43		
31	2.9	---	1.5	2.8	---	9.7	---	6.6	---	2.3	.64	---		
TOTAL	87.9	105.6	95.4	69.6	131.8	188.7	207.8	259.1	186.3	104.1	51.38	18.89		
MEAN	2.84	3.52	3.08	2.25	4.54	6.09	6.93	8.36	6.21	3.36	1.66	.63		
MAX	3.3	7.1	6.3	2.9	9.3	13	18	53	15	5.2	2.7	2.0		
MIN	2.5	2.7	1.4	1.5	2.0	4.2	5.0	4.0	4.2	2.3	.64	.36		
CFSM	.09	.11	.10	.07	.14	.19	.22	.26	.19	.11	.05	.02		
IN.	.10	.12	.11	.08	.15	.22	.24	.30	.22	.12	.06	.02		
AC-FT	174	209	189	138	261	374	412	514	370	206	102	37		
CAL YR 1975	TOTAL	4902.60	MEAN	13.4	MAX	514	MIN	1.0	CFSM	.42	IN	5.70	AC-FT	9720
WTR YR 1976	TOTAL	1506.57	MEAN	4.12	MAX	53	MIN	.36	CFSM	.13	IN	1.75	AC-FT	2990

MOSQUITO CREEK BASIN

06610520 MOSQUITO CREEK NEAR EARLING, IA--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD. October 1970 to current year.

WATER QUALITY DATA, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976

DATE	TIME	DIS- CHARGE (CFS) (00060)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS) (00095)	PH (UNITS) (00400)	TEMPER- ATURE (DEG C) (00010)
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06610520 - MOSQUITO CREEK NEAR EARLING, IOWA (LAT 41 45 10 LONG 095 27 50)

OCT , 1975					
08...	1335	2.7	590	8.0	16.0
NOV					
05...	1015	2.8	660	7.7	9.5
DEC					
04...	1110	4.3	600	8.1	.5
JAN , 1976					
16...	1050	2.8	625	7.7	.5
FEB					
03...	1415	3.2	675	7.9	.5
MAR					
09...	1355	7.6	600	7.6	1.5
31...	1100	9.7	640	8.3	6.0
MAY					
03...	1405	5.2	560	8.6	11.5
JUN					
01...	1350	7.2	560	8.1	24.0
JUL					
02...	1015	5.1	560	8.0	18.0
AUG					
04...	1240	2.2	560	7.8	24.0
24...	1240	1.3	590	8.0	24.5

MISSOURI RIVER MAIN STEM

213

06807000 MISSOURI RIVER AT NEBRASKA CITY, NB
(National stream-quality accounting network station)

LOCATION.--Lat 40°40'55", long 95°50'48", in NW1/4 NE1/4 sec.9, T.8 N., R.14 E., Otoe County, Hydrologic Unit 10240001, on right bank 0.7 mi (1.1 km) upstream from Waubesa Highway Bridge at Nebraska City, and at mile 562.6 (905.2 km).

DRAINAGE AREA (REVISED).--410,000 mi² (1,062,000 km²), approximately. The 3,959 mi² (10,254 km²) in Great Divide basin are not included.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--August 1929 to current year. Gage-height records collected in this vicinity from August 1878 to December 1899 are contained in reports of Missouri River Commission.

REVISED RECORDS.--WSP 761: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 905.36 ft (275.954 m) above mean sea level, datum of 1929, supplementary adjustment of 1954. See WSP 1918 or 1919 for history of changes prior to Apr. 1, 1963.

REMARKS.--Records good. Flow regulated by upstream main-stem reservoirs. Corps of Engineers gage height telemeter at station.

AVERAGE DISCHARGE.--47 years, 35,160 ft³/s (995.7 m³/s), 25,470,000 acre-ft/yr (31,400 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 414,000 ft³/s (11,700 m³/s) Apr. 19, 1952; maximum gage height, 27.66 ft (8.431 m) Apr. 18, 1952; minimum discharge, 1,600 ft³/s (45.3 m³/s) Dec. 31, 1946 (discharge measurement); minimum gage height observed, -0.28 ft (-0.085 m) Dec. 24, 1960, result of freezeup.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 77,300 ft³/s (2,190 m³/s) Nov. 21, gage height, 15.36 ft (4.682 m); minimum daily, 14,300 ft³/s (405 m³/s) Jan. 10; minimum gage height, 2.81 ft (0.856 m) Jan. 10.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	65500	65500	68000	30000	31800	35700	50000	46800	46000	43600	40400	39500
2	66600	64200	66200	30300	31600	35900	49600	46600	44800	43600	40000	39700
3	66600	66200	63900	29600	30700	35700	49000	45800	43800	42300	40400	40000
4	66600	67600	60000	26200	30500	35700	48300	45600	44000	42300	40200	39700
5	65500	66600	57600	24800	31000	34300	47800	44300	45300	41600	40000	39700
6	65800	66600	53600	25000	28000	32100	46600	43300	44600	40800	40200	39500
7	65200	66200	48800	24800	28000	32300	45300	42800	43600	41100	40000	39500
8	64800	67600	43300	24800	28900	33600	44600	43300	42300	41600	40000	39700
9	64800	66300	39000	19400	30300	33900	44000	42800	42600	42000	40000	40000
10	65500	69900	37000	14300	32300	36600	43600	42800	42600	41300	40200	40400
11	66600	69100	35000	15500	33400	41800	43800	41800	43000	41100	40400	40200
12	65500	68000	35000	26000	33900	41800	43300	41600	41800	40400	40600	39700
13	65200	69900	35200	24000	33400	42800	43000	42600	42600	39700	40400	39700
14	65200	68700	35700	26000	34300	42600	43800	42800	45300	39500	40800	40200
15	66200	67200	36100	26700	37500	44000	43800	42800	44600	40000	40400	40800
16	68000	68000	32500	30200	42800	44800	43300	43000	42800	40000	40400	40800
17	67600	68700	29800	29200	44300	43800	44600	43300	42300	40000	40400	40400
18	66600	68300	26000	25600	41800	43000	45600	43800	42800	40200	40400	40600
19	65800	66900	24200	26900	40400	45300	45800	42800	41800	40000	40600	40800
20	65800	70700	25400	28700	39700	44000	45800	41800	41600	40000	39700	41100
21	65800	76700	26400	29400	39300	44800	45300	40600	41600	40200	39700	40800
22	65200	75900	29200	28900	37900	46300	45600	43800	41300	40400	39700	41300
23	64800	71900	30000	30300	36600	46300	44800	51600	41800	40000	39700	40800
24	65800	71100	30000	30700	36400	45800	46800	58300	42300	40200	39700	40400
25	67600	69900	30000	31000	35200	46600	48800	61600	43000	40200	39500	41300
26	68000	68700	30500	31000	35400	46000	48800	53000	43800	40800	39700	41600
27	66600	66600	30500	30700	35700	46600	47800	48300	47300	41800	39700	41300
28	66600	64800	30500	28900	35900	45600	47300	46800	45600	42300	39700	41300
29	67600	66200	30500	28900	35400	47000	46600	47300	44600	41300	39500	41800
30	67600	68300	30300	31200	---	49800	46300	46300	44300	40800	39500	41800
31	66600	---	29600	32300	---	50600	---	46000	---	41100	39500	---
TOTAL	2051600	2054300	1180000	841300	1012400	1295300	1379700	1414000	1303800	1270200	1241400	1214400
MEAN	66180	66480	38060	27140	34910	41780	45990	45610	43460	40970	40050	40480
MAX	68000	76700	68000	32300	44300	50600	50000	61600	47300	43600	40800	41800
MIN	64800	64200	24200	14300	28000	32100	43000	40600	41300	39500	39500	39500
AC-FT	4069000	4075000	2341000	1669000	2008000	2569000	2737000	2805000	2586000	2519000	2462000	2409000
CAL YR 1975	TOTAL	17613800	MEAN	48260	MAX	76700	MIN	11200	AC-FT	34940000		
WTR YR 1976	TOTAL	16258400	MEAN	44420	MAX	76700	MIN	14300	AC-FT	32250000		

MISSOURI RIVER MAIN STEM

06807000 MISSOURI RIVER AT NEBRASKA CITY, NB--Continued.
(National Stream Quality Accounting Network Station)

WATER-QUALITY RECORDS

PERIOD OF RECORD.--May 1951 to current year. Daily sediment loads August 1957 to September 1971 in reports of Corps of Engineers.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: May 1951 to current year.

WATER TEMPERATURES: May 1951 to current year.

SEDIMENT DISCHARGE: October 1971 to current year (discontinued).

EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Maximum daily, 994 micromhos Dec. 17, 1962; minimum daily, 273 micromhos June 17, 1964.

WATER TEMPERATURES: Maximum daily, 29.0°C July 25, 1952; minimum, 0.0°C on many days during winter periods.

SEDIMENT CONCENTRATIONS: Maximum daily mean, 8,220 mg/L May 19, 1974; minimum daily mean, 137 mg/L Jan. 14, 1975.

SEDIMENT LOADS: Maximum daily, 1,590,000 tons (1,440,000 tonnes) May 19, 1974; minimum daily, 4,050 tons (3,670 tonnes) Jan. 17, 1972.

EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum daily, 800 micromhos Jan. 12, 13; minimum daily, 480 micromhos May 25.

WATER TEMPERATURES: Maximum daily, 26.5°C July 13, 15, 25-27, 29, 30; minimum daily, 0.0°C on many days during winter period.

SEDIMENT CONCENTRATIONS: Maximum daily mean, 2,640 mg/L May 25; minimum daily mean, 137 mg/L Jan. 10.

SEDIMENT LOADS: Maximum daily, 439,000 tons (398,000 tonnes) May 25; minimum daily, 7,030 tons (6,380 tonnes) Jan. 10.

WATER QUALITY DATA, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	720	710	740	630	740	620	690	650	680	700	740	720
2	720	700	690	730	710	600	700	650	690	700	740	720
3	720	690	700	720	720	600	680	650	700	680	740	720
4	700	700	620	600	700	650	700	660	700	700	740	730
5	700	700	680	700	720	650	700	660	690	700	750	700
6	710	670	680	660	680	640	700	660	700	700	750	720
7	700	650	700	660	740	660	700	660	700	730	750	720
8	700	720	700	620	740	660	710	660	700	700	760	700
9	710	720	700	760	740	750	700	660	700	700	760	700
10	710	690	680	760	740	720	700	690	700	730	750	690
11	710	700	710	760	720	700	700	660	700	710	700	700
12	710	700	690	800	720	700	700	660	700	740	740	700
13	700	700	680	800	710	710	700	660	700	750	720	700
14	710	710	670	740	690	740	700	740	675	740	740	700
15	700	710	700	730	660	720	700	680	710	750	740	700
16	710	680	660	750	630	700	700	670	700	730	740	690
17	700	700	580	750	670	660	700	660	700	750	750	690
18	700	700	740	720	600	660	690	570	675	750	740	700
19	700	700	640	720	600	700	690	520	700	760	750	670
20	700	700	750	730	580	680	690	600	700	760	740	670
21	700	690	760	750	580	670	690	700	700	720	750	690
22	700	720	650	760	590	660	690	700	690	730	730	690
23	700	700	650	760	640	660	680	610	700	750	750	680
24	690	700	740	750	630	690	660	510	710	750	750	690
25	700	670	760	720	620	700	640	480	710	750	720	680
26	620	660	750	700	610	700	650	620	720	740	740	660
27	700	680	650	720	610	700	630	625	640	750	740	700
28	700	700	710	700	640	670	620	660	630	700	750	690
29	700	700	710	680	620	680	680	650	660	730	720	680
30	710	720	720	720	---	650	660	560	690	710	740	680
31	700	---	750	720	---	700	---	675	---	730	750	---
MONTH	702	696	695	720	667	677	685	639	692	727	741	696
YEAR	MAX	800	MIN	480	MEAN	695						

WATER-QUALITY RECORDS

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	16.0	10.5	0.0	1.0	1.5	4.5	9.0	14.0	20.0	23.5	26.0	23.5
2	16.0	11.5	0.0	0.0	0.0	3.5	10.5	13.5	20.0	23.0	25.5	25.0
3	15.0	12.0	1.0	0.0	0.0	2.5	10.0	13.0	21.0	23.0	24.5	24.0
4	15.5	11.5	1.0	0.0	0.0	1.5	10.0	13.0	21.0	23.0	24.5	23.0
5	16.0	11.5	2.5	0.0	0.0	0.0	10.0	14.0	21.0	22.0	25.0	23.0
6	15.5	13.0	2.0	0.0	0.0	0.0	10.0	13.5	21.0	23.0	24.5	23.5
7	16.0	13.0	2.0	0.0	0.0	0.5	11.0	10.5	21.0	23.5	24.5	23.0
8	16.0	12.0	1.5	0.0	0.0	1.5	10.5	14.0	23.5	23.5	24.0	23.0
9	16.0	12.0	2.5	0.0	0.5	1.5	11.0	14.5	23.5	24.5	24.0	22.0
10	16.0	10.5	3.5	0.0	2.0	3.5	10.5	15.0	22.0	25.5	24.5	21.5
11	15.5	10.5	4.0	0.5	1.5	3.5	11.0	17.0	23.5	25.5	24.5	21.0
12	16.0	9.0	2.5	0.5	2.0	3.5	11.0	17.0	24.5	26.0	25.5	21.0
13	16.0	7.0	3.5	0.5	2.0	2.0	13.5	16.5	24.5	26.5	25.5	21.0
14	16.5	6.0	4.0	0.0	1.5	2.5	14.0	16.5	24.5	26.0	24.5	21.5
15	15.5	6.0	1.0	---	2.5	2.0	15.5	16.5	23.0	26.5	24.0	22.0
16	15.0	6.0	0.5	0.5	2.0	2.0	16.0	16.0	22.0	24.5	24.0	21.0
17	14.5	7.0	0.0	0.5	1.5	2.5	16.0	16.0	22.0	25.0	24.0	21.0
18	13.5	8.5	0.0	0.0	2.5	4.5	15.0	20.0	20.0	25.5	24.0	21.0
19	13.5	9.0	0.0	0.0	3.5	6.0	15.0	19.0	20.0	25.5	25.0	20.5
20	13.5	8.0	0.0	0.5	3.5	4.5	15.0	18.5	20.0	25.5	25.0	20.0
21	13.5	5.5	0.0	0.0	2.0	4.0	13.5	19.5	20.5	26.0	25.5	20.5
22	14.0	0.5	0.0	0.5	2.0	5.5	15.0	20.5	21.0	25.5	25.5	20.0
23	14.5	1.0	0.0	1.0	2.0	1.0	16.0	19.0	21.0	26.0	25.0	19.5
24	14.0	2.5	0.5	1.0	2.5	7.0	15.5	16.5	21.0	26.0	25.5	19.5
25	11.5	4.0	0.5	1.0	4.0	7.0	13.5	16.5	21.0	26.5	25.5	19.0
26	10.5	3.5	0.5	0.0	4.5	7.0	13.5	18.0	21.5	26.5	25.5	18.5
27	10.5	0.0	0.5	0.0	5.5	6.0	12.0	18.0	21.0	26.5	25.5	18.0
28	10.0	0.0	1.0	0.5	6.0	9.5	12.0	20.0	22.0	26.0	26.0	18.0
29	10.0	2.0	1.0	0.5	5.0	9.0	13.5	20.0	24.0	26.5	24.5	18.0
30	10.0	1.0	1.0	1.5	---	8.5	10.5	20.0	22.0	26.5	23.5	18.0
31	10.0	---	1.0	0.0	---	8.5	---	20.0	---	26.0	23.5	---
MONTH	14.0	7.0	1.0	0.5	2.0	4.0	12.5	16.5	22.0	25.0	25.0	21.0
YEAR	MAX	26.5	MIN	0.0	MEAN	12.5						

[illegible]

MISSOURI RIVER MAIN STEM

06807000 MISSOURI RIVER AT NEBRASKA CITY, NB--Continued
(National stream-quality accounting network station)

WATER-QUALITY RECORDS

WATER QUALITY DATA, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976

DATE	BICARBONATE (HCO ₃) (MG/L) {00440}	CARBONATE (CO ₃) (MG/L) {00445}	ALKALINITY AS CACO ₃ (MG/L) {00410}	DISSOLVED SULFATE (SO ₄) (MG/L) {00945}	DISSOLVED CHLORIDE (CL) (MG/L) {00940}	DISSOLVED FLUORIDE (F) (MG/L) {00950}	TOTAL NITRITE PLUS NITRATE (N) (MG/L) {00630}	TOTAL KJEL- DAHL NITROGEN (N) (MG/L) {00625}	TOTAL NITROGEN (N) (MG/L) {00600}	TOTAL NITROGEN (NO ₃) (MG/L) {71887}	TOTAL PHOSPHORUS (P) (MG/L) {00665}	DISSOLVED SOLIDS (RESIDUE AT 180°) (MG/L) {70300}
OCT 14...	189	0	155	200	13	.5	.14	.46	.60	2.7	.10	482
NOV 11...	197	0	162	190	13	.4	.17	.49	.66	2.9	.12	457
DEC 15...	201	0	165	170	17	.4	.52	1.1	1.6	7.2	.38	460
JAN 13... 19...	238 --	0 --	195 --	200 --	18 --	.5 --	.39 --	.58 --	.97 --	4.3 --	.13 --	516 --
FEB 03...	204	0	167	170	18	.6	.29	.60	.89	3.9	.14	496
MAR 01...	189	0	155	150	15	.5	.59	.70	1.3	5.7	.20	444
APR 06...	204	0	167	170	15	.6	.71	3.5	4.2	19	.17	476
MAY 04...	194	0	159	180	15	.6	--	.70	--	--	.15	462
JUN 01... 15...	198 --	0 --	162 --	170 --	14 --	.5 --	.43 --	.93 --	1.4 --	6.0 --	.24 --	454 --
JUL 06...	194	0	159	190	14	.6	.11	.50	.69	3.1	.11	454
AUG 03...	197	0	162	190	14	.6	.06	.49	.55	2.4	.12	506
SEP 07... 14...	189 --	0 --	155 --	190 --	13 --	.5 --	.12 --	.50 --	.62 --	2.7 --	.15 --	478 --

[illegible]

06807000 MISSOURI RIVER AT NEBRASKA CITY, NB--Continued
(National stream-quality accounting network station)

WATER-QUALITY RECORDS

WATER QUALITY DATA, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976

DATE	TEMPER- ATURE (DEG C) (00010)	TUR- BID- ITY (JTU) (00070)	CARBON DIOXIDE (CO2) (MG/L) (00405)	TOTAL PHYTO- PLANK- TON (CELLS PER ML) (60050)	PERI- PHYTON BIOMASS TOTAL DRY WEIGHT G/SQ M (00573)	PERI- PHYTON BIOMASS ASH WEIGHT G/SQ M (00572)	UNCOR- RECTED PERI- PHYTON CHLORO- PHYLL A MG/SQ M (32228)	UNCOR- RECTED PERI- PHYTON CHLORO- PHYLL B MG/SQ M (32226)	FECAL COLI- FORM (COL. PER 100 ML) (31616)	STREP- TOCOC (COL- ONIES PER 100 ML) (31679)	TOTAL ORGANIC CARBON (C) (MG/L) (00680)
OCT 14...	18.0	25	7.6	4300	--	--	--	--	12000	1600	--
NOV 11...	10.0	30	3.2	4700	--	--	--	--	24000	4000	--
DEC 15...	.5	60	13	3000	--	--	--	--	21000	10000	9.6
JAN 13...	1.0	12	7.6	850	--	--	--	--	7000	2300	--
FEB 19...	2.0	--	--	--	--	--	--	--	--	--	--
MAR 03...	1.0	20	8.2	510	--	--	--	--	5000	2900	--
APR 01...	4.5	40	2.4	3400	--	--	--	--	9500	3100	5.2
MAY 06...	10.5	35	4.1	8900	--	--	--	--	6500	2900	--
JUN 04...	12.0	15	.6	20000	--	--	--	--	8000	4500	--
JUL 01...	20.0	70	.6	810	--	--	--	--	12000	1800	5.6
AUG 15...	22.5	--	--	--	37.6	35.8	22.5	.000	--	--	--
SEP 06...	23.0	20	3.1	25000	--	--	--	--	7500	840	--
OCT 03...	24.5	20	4.0	8400	--	--	--	--	42000	670	--
NOV 07...	24.0	15	6.0	5700	--	--	--	--	29000	810	1.6
DEC 14...	20.5	--	--	--	82.2	75.5	63.0	.033	--	--	--

DATE	TOTAL ARSENIC (AS) (UG/L) (01002)	SUS- PENDE D ARSENIC (AS) (UG/L) (01001)	DIS- SOLVED ARSENIC (AS) (UG/L) (01000)	TOTAL CAD- MIUM (CD) (UG/L) (01027)	SUS- PENDE D CAD- MIUM (CD) (UG/L) (01026)	DIS- SOLVED CAD- MIUM (CD) (UG/L) (01025)	TOTAL CHRO- MIUM (CR) (UG/L) (01034)	SUS- PENDE D CHRO- MIUM (CR) (UG/L) (01031)	DIS- SOLVED CHRO- MIUM (CR) (UG/L) (01030)	TOTAL COBALT (CO) (UG/L) (01037)	SUS- PENDE D COBALT (CO) (UG/L) (01036)	DIS- SOLVED COBALT (CO) (UG/L) (01035)
DEC 15...	6	4	2	0	0	0	<10	<10	0	0	0	0
JAN 19...	--	--	--	--	--	--	--	--	--	--	--	--
MAR 01...	4	1	3	1	1	0	<10	<10	0	0	0	0
JUN 01...	5	3	2	0	0	0	20	17	3	0	0	0
SEP 07...	3	1	2	0	0	0	10	9	1	0	0	0

DATE	TOTAL COPPER (CU) (UG/L) (01042)	SUS- PENDE D COPPER (CU) (UG/L) (01041)	DIS- SOLVED COPPER (CU) (UG/L) (01040)	TOTAL LEAD (PB) (UG/L) (01051)	SUS- PENDE D LEAD (PB) (UG/L) (01050)	DIS- SOLVED LEAD (PB) (UG/L) (01049)	TOTAL MERCURY (HG) (UG/L) (71900)	SUS- PENDE D MERCURY (HG) (UG/L) (71895)	DIS- SOLVED MERCURY (HG) (UG/L) (71890)	TOTAL SELE- NIUM (SE) (UG/L) (01147)	SUS- PENDE D SELE- NIUM (SE) (UG/L) (01146)
DEC 15...	15	6	9	17	17	0	.0	.0	.0	3	1
JAN 19...	--	--	--	--	--	--	--	--	--	--	--
MAR 01...	6	6	0	7	4	3	.3	.1	.2	2	1
JUN 01...	14	4	10	19	13	6	.1	.0	.1	0	--
SEP 07...	4	2	2	2	0	3	.1	.0	.1	2	0

DATE	DIS- SOLVED SELE- NIUM (SE) (UG/L) (01145)	TOTAL ZINC (ZN) (UG/L) (01092)	SUS- PENDE D ZINC (ZN) (UG/L) (01091)	DIS- SOLVED ZINC (ZN) (UG/L) (01090)	DIS- SOLVED GROSS ALPHA AS U-NAT. (UG/L) (80030)	SUS- PENDE D GROSS ALPHA AS U-NAT. (UG/L) (80040)	DIS- SOLVED GROSS BETA AS CS-137 (PC/L) (03515)	SUS- PENDE D GROSS BETA AS CS-137 (PC/L) (03516)	DIS- SOLVED GROSS BETA AS /Y90 (PC/L) (80050)	SUS- PENDE D GROSS BETA AS /Y90 (PC/L) (80060)	DIS- SOLVED RA-226 (RADON METHOD) (PC/L) (09511)
DEC 15...	2	50	30	20	--	--	--	--	--	--	--
JAN 19...	--	--	--	--	22	3.6	11	5.8	8.8	4.8	.04
MAR 01...	1	10	10	0	--	--	--	--	--	--	--
JUN 01...	2	40	10	30	--	--	--	--	--	--	--
SEP 07...	2	30	20	10	--	--	--	--	--	--	--

MISSOURI RIVER MAIN STEM

06807000 MISSOURI RIVER AT NEBRASKA CITY, NB--Continued
(National stream-quality accounting network station)

WATER-QUALITY RECORDS

WATER QUALITY DATA, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976

SUSPENDED-SEDIMENT DISCHARGE (TONS/DAY), WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976

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	65500	545	96900	65500	383	67700	63000	835	153000
2	66500	428	77000	64200	450	78000	66200	870	156000
3	66600	390	70100	66200	387	69200	63900	833	144000
4	66600	383	68900	67600	406	74100	60000	745	121000
5	65500	360	67200	66600	416	74800	57600	660	103000
6	66300	400	71100	66600	450	80900	53600	590	85400
7	66200	420	73900	66200	502	82700	48800	555	72100
8	64000	323	63600	67600	532	87100	43300	522	61000
9	64800	405	70200	68300	535	98700	39000	597	62900
10	65500	453	80100	69900	527	99500	37000	493	43300
11	66600	478	86000	69100	378	70500	35000	480	45400
12	65500	440	70700	68000	328	60200	35000	459	43400
13	65200	420	73900	69500	460	86800	35200	433	41200
14	65200	391	68800	68700	620	115000	35700	455	43900
15	65200	410	73500	67200	600	109000	36100	507	49400
16	68000	430	78900	68000	540	99100	32500	558	49000
17	67600	400	73000	68700	500	92700	29800	395	31800
18	66600	373	67100	68300	395	72800	26000	300	21100
19	65000	365	64300	66900	342	61800	24200	220	14400
20	65200	400	71100	70700	440	84000	25400	237	16300
21	68000	481	85500	76700	620	123000	26400	290	20700
22	65200	442	77800	75900	639	131000	29200	392	30900
23	64800	450	78700	71900	597	116000	30000	445	36000
24	65800	675	120600	71100	563	108000	30000	492	39900
25	67600	670	122000	69900	551	104000	30000	528	42800
26	60000	568	104000	68700	519	96300	30500	590	48600
27	66500	474	85200	66600	485	87200	30500	670	55200
28	66600	450	80900	64800	447	78200	30500	758	62400
29	67600	530	98400	66200	447	79900	30500	807	66500
30	67600	502	91800	68300	580	107000	30300	793	64200
31	61600	422	75500	---	---	---	29800	746	60000
TOTAL	2051500	---	2502000	2054300	---	2717200	1180000	---	1892500
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	30000	743	50600	31800	587	55000	35700	450	43400
2	30300	732	59900	31600	650	55500	35900	488	47300
3	20500	582	54500	30700	627	52000	35700	585	56400
4	26200	550	38500	30500	588	48400	35700	627	60400
5	24600	487	32600	31000	525	43900	34300	520	57400
6	25000	480	32400	28000	383	29000	32100	589	51000
7	24600	442	29600	28000	367	27700	32300	541	47200
8	24800	370	24800	28900	397	31000	33600	502	45500
9	19400	253	13200	30300	460	37600	33900	540	43400
10	14300	182	7030	32300	555	49300	36600	1170	116000
11	15500	384	16100	33400	632	57000	41800	2400	271000
12	26000	717	50300	33900	610	55800	41800	2330	263000
13	24000	632	41000	33400	630	56800	42800	2320	268000
14	26000	640	44900	34300	720	67600	42600	1730	199000
15	26700	590	42500	37500	575	98700	44000	1360	164000
16	30200	570	46500	42800	1410	163000	44800	1280	155000
17	29200	528	41600	44300	1540	184000	43800	1180	140000
18	26600	362	25000	41800	1310	148000	43000	1090	127000
19	26900	440	32600	40400	1090	119000	45300	1000	122000
20	20700	490	38600	39700	870	93300	44000	922	110000
21	29400	511	40600	39300	695	73700	44800	850	103000
22	20900	502	39200	37900	533	54500	46300	768	96000
23	30300	531	43400	36600	418	41300	46300	678	84800
24	30700	530	43900	36400	370	36400	45800	594	73500
25	31000	528	44200	35200	362	34400	46600	590	74200
26	31000	550	46000	35400	367	35100	46000	609	75600
27	30700	548	45400	35700	378	36400	46600	600	75500
28	28900	508	39600	35900	396	38400	45800	649	80300
29	28000	488	38100	35400	420	40100	47000	703	89200
30	31200	600	50500	---	---	---	49800	670	90100
31	32700	688	60600	---	---	---	50600	650	88800
TOTAL	841200	---	1223030	1012400	---	1866900	1295300	---	3324000

WATER-QUALITY RECORDS

SUSPENDED-SEDIMENT DISCHARGE (TONS/DAY), WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976

APRIL				MAY				JUNE			
DAY	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)		
1	50000	660	89100	46800	419	52900	46000	622	77300		
2	49500	663	38800	46600	438	55100	44800	589	71200		
3	49000	641	84800	45800	490	60600	43800	572	67600		
4	48300	589	76800	45600	529	65100	44000	618	73400		
5	47800	522	67400	44300	492	58800	45300	655	86100		
6	46600	446	56100	43300	451	52700	44600	618	74400		
7	45300	388	47500	42800	412	47600	43600	529	62300		
8	44500	357	43000	43300	440	51400	42300	449	51300		
9	44000	334	39700	42800	520	60100	42600	422	48500		
10	43600	330	38800	42800	573	66200	42600	412	47400		
11	43800	332	39300	41800	567	64000	43000	400	46400		
12	43300	240	39700	41600	529	59400	41800	380	42900		
13	43000	355	41200	42600	478	55000	42600	578	66500		
14	43500	279	44800	42800	432	49900	45300	1480	181000		
15	43600	502	66500	42800	427	49300	44600	1380	166000		
16	43300	1030	120000	43000	432	50200	42800	980	113000		
17	44500	921	111000	43300	440	51400	42300	680	77700		
18	45600	715	88000	43800	428	51800	42800	715	82600		
19	45800	616	76400	42800	429	49600	41800	708	79900		
20	45600	592	73200	41800	398	44900	41600	687	77200		
21	45200	528	64600	40600	365	40000	41600	676	75900		
22	45600	402	49500	43000	480	56800	41300	670	74700		
23	44800	317	38300	51600	1390	194000	41800	641	72300		
24	46800	278	35100	58300	2400	378000	42300	580	66200		
25	48000	280	36900	61600	2640	439000	43000	544	63200		
26	48800	345	45500	53000	1850	265000	43800	610	72100		
27	47800	490	63200	48300	1200	156000	47300	1080	138000		
28	47300	529	67600	46800	755	95400	45600	958	118000		
29	46600	467	58600	47300	728	93100	44600	895	108000		
30	46300	422	52800	46300	698	87300	44300	830	99300		
31	---	---	---	46000	654	81200	---	---	---		
TOTAL	1379700	---	1844400	1414000	---	2981800	1303800	---	2474400		
JULY				AUGUST				SEPTEMBER			
DAY	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)		
1	43600	595	70000	40400	450	45100	39500	457	48700		
2	43600	513	60400	40000	431	46500	39700	488	52300		
3	42300	498	56900	40400	400	43600	40000	508	54900		
4	42300	482	55700	40200	363	41600	39700	513	55000		
5	41600	460	51700	40000	362	39100	39700	500	53600		
6	40800	418	46000	40200	338	36700	39500	457	48700		
7	41100	435	48300	40000	326	35200	39500	428	45600		
8	41600	544	61100	40000	314	33900	39700	430	46100		
9	42000	560	63500	40000	340	36700	40000	466	50300		
10	41300	537	59900	40200	368	39900	40400	490	53400		
11	41100	510	56600	40400	388	42300	40200	472	51200		
12	40400	452	49300	40600	370	40600	39700	445	47700		
13	39700	390	41800	40400	343	37400	39700	469	50300		
14	39500	387	41300	40800	425	46800	40200	534	58000		
15	40000	500	54000	40400	477	52000	40800	607	65900		
16	40000	600	64800	40400	458	50000	40800	620	68300		
17	40000	593	64000	40400	430	46900	40400	599	65300		
18	40200	542	58800	40400	427	46600	40600	619	67900		
19	40000	478	51600	40500	400	43800	40800	645	71100		
20	40000	438	47300	39700	335	35900	41100	731	81100		
21	40200	552	60700	39700	335	35900	40800	659	72600		
22	40400	688	75000	39700	381	40800	41300	653	72800		
23	40000	630	68000	39700	429	46000	40800	539	59400		
24	40200	565	61300	39700	449	48100	40400	463	50500		
25	40200	499	54200	39500	430	45900	41300	502	56000		
26	40800	469	51700	39700	360	38600	41600	518	58200		
27	41800	577	58300	39700	277	29700	41300	499	55600		
28	42300	541	61800	39700	257	27500	41300	482	53700		
29	41300	505	56300	39500	262	27900	41800	499	56300		
30	40800	441	48600	39500	321	34200	41800	487	55000		
31	41100	465	51600	39500	390	41600	---	---	---		
TOTAL	1270200	---	1750500	1241400	---	1260800	1214400	---	1726500		
YEAR	16258400		25564030								

MISSOURI RIVER MAIN STEM

06807000 MISSOURI RIVER AT NEBRASKA CITY, NB--Continued
(National stream-quality accounting network station)

WATER-QUALITY RECORDS

WATER QUALITY DATA, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976

		TEMPER- ATURE (DEG C) (00010)	NUMBER OF SAM- PLING POINTS (00063)	INSTAN- TANEOUS DIS- CHARGE (CFS) (00061)	SUS- PENDE SEDIM- MENT (MG/L) (80154)	SUS- PENDE SEDIM- MENT 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 .008 MM (70339)	SUS. SED. FALL DIAM. % FINER THAN .016 MM (70340)	
DATE	TIME										
OCT.											
03...	1035	14.5	3	64900	--	--	--	--	--	--	
07...	0810	16.0	--	64700	415	72500	--	--	--	--	
21...	1010	13.5	--	64900	495	86700	--	--	--	--	
NOV.											
04...	1040	11.0	3	66400	410	73500	--	--	--	--	
14...	1030	6.0	--	71200	631	121000	--	--	--	--	
DEC.											
01...	1225	.5	3	67900	872	160000	--	--	--	--	
09...	1040	2.5	--	39100	500	52800	--	--	--	--	
29...	1040	1.0	3	30400	804	66000	--	--	--	--	
JAN.											
13...	1200	2.0	--	23600	623	39700	--	--	--	--	
FEB.											
03...	1130	1.0	3	30800	629	52300	--	--	--	--	
17...	1215	2.0	--	46300	1550	194000	29	34	42	51	
MAR.											
08...	1035	2.0	3	33400	1960	177000	--	--	--	--	
24...	1045	9.0	--	45600	591	72800	--	--	--	--	
APR.											
02...	1110	11.0	3	49500	665	88900	--	--	--	--	
16...	1045	15.5	--	43300	1150	134000	--	--	--	--	
MAY											
04...	1030	12.0	3	46000	532	66100	--	--	--	--	
25...	0950	16.5	--	62500	2760	466000	--	--	--	--	
JUNE											
01...	1030	20.0	3	46400	--	--	--	--	--	--	
04...	1045	21.0	--	43700	618	72900	--	--	--	--	
18...	1110	18.5	--	43100	735	85500	--	--	--	--	
JULY											
02...	1030	22.0	3	42600	511	58800	--	--	--	--	
16...	1000	25.0	--	39000	603	63500	--	--	--	--	
AUG.											
03...	1100	24.5	--	40400	396	43200	--	--	--	--	
17...	1040	24.5	--	40400	428	46700	--	--	--	--	
SEP.											
03...	1050	24.0	3	39100	509	53700	--	--	--	--	
17...	1005	20.0	--	40400	597	65100	--	--	--	--	
DATE		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)	SUS. SED. SIEVE DIAM. % FINER THAN .062 MM (70331)	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)	BED MAT. FALL DIAM. % FINER THAN .500 MM (80161)
OCT.											
03...	--	--	--	--	--	--	--	0	1	24	52
07...	36	49	94	99	100	--	--	--	--	--	--
21...	--	--	--	--	--	25	--	--	--	--	--
NOV.											
04...	34	49	91	97	100	--	--	0	19	44	--
14...	--	--	--	--	--	35	--	--	--	--	--
DEC.											
01...	29	40	77	94	100	--	--	0	8	20	--
09...	--	--	--	--	--	37	--	--	--	--	--
29...	20	30	77	98	100	--	0	1	17	39	--
JAN.											
13...	--	--	--	--	--	25	--	--	--	--	--
FEB.											
03...	--	--	--	--	--	24	--	0	16	33	--
17...	74	83	99	100	--	--	--	--	--	--	--
MAR.											
08...	11	20	59	75	100	--	--	--	--	--	--
24...	--	--	--	--	--	48	--	--	--	--	--
APR.											
02...	--	--	--	--	--	45	--	--	--	--	--
16...	25	44	100	--	--	--	--	--	--	--	--
MAY											
04...	--	--	--	--	--	29	--	--	--	--	--
25...	82	86	100	--	--	--	--	--	--	--	--
JUNE											
01...	--	--	--	--	--	--	--	--	--	--	--
04...	31	40	98	100	--	--	--	--	--	--	--
18...	--	--	--	--	--	44	--	--	--	--	--
JULY											
02...	41	50	98	100	--	--	--	--	--	--	--
16...	--	--	--	--	--	29	--	--	--	--	--
AUG.											
03...	33	48	93	99	100	--	--	--	--	--	--
17...	--	--	--	--	--	30	--	--	--	--	--
SEP.											
03...	29	47	98	100	--	--	--	--	--	--	--
17...	--	--	--	--	--	24	--	--	--	--	--

WATER-QUALITY RECORDS

[illegible]

MISSOURI RIVER MAIN STEM

06807000 MISSOURI RIVER AT NEBRASKA CITY, NB--Continued
(National stream-quality accounting network station)

WATER-QUALITY RECORDS

WATER QUALITY DATA, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976

IDENTIFICATION OF PHYTOPLANKTON

OCT. 14, 1975

1020 HOURS

4,400 CELLS/ML

ORGANISM NAME	COMMON NAME	CELLS/ML	PER CENT	
CHLOROPHYTA	GREEN ALGAE			
..CHLOROPHYCEAE				
..CHLOROCOCCALES				
..HYDRODICTYACEAE				
L ....FEDIASTUM			0	
..OOCYSTACEAE				
L ....ANKISTROPSMUS			0	
L ....DICTYOSPHAERIUM			0	
L ....COCYSTIS			0	
..SCENEDESMACEAE				
L ....ACTINASTRUM			0	
D ....SCENEDESMUS		1,600	36	
..VOLVOCALES				
..CHLAMYDOMONADACEAE				
..CHLAMYDOMONAS		180	4	
TOTALS		1,800	40	0.469=DIVERSITY
CHRYSOPHYTA				
..BACILLARIOPHYCEAE	DIATOMS			
..CENTRALES	CENTRIC			
..COSCIRODISACEAE				
D ....CYCLOTELLA		1,800	42	
..NELOSIRA		260	6	
..PENNALES	PENNATE			
..CYWELLACEAE				
L ....CYMBELLA			0	
..DIATOMACEAE				
L ....DIATOMA			0	
..FRAGILARIACEAE				
L ....FRAGILARIA			0	
..GOMPHONEMATACEAE				
L ....GOMPHONEMA			0	
..NAVICULACEAE	NAVICULOID			
..DIPLONEIS		88	2	
..NAVICULA		180	4	
..NITZSCHACEAE				
..NITZSCHIA		180	4	
TOTALS		2,500	58	1.375=DIVERSITY
CYANOPHYTA	BLUE-GREEN ALGAE			
..RYXOPHYCEAE				
..OSCILLATORIALES	FILAMENTOUS			
..OSCILLATORIACEAE				
L ....OSCILLATORIA			0	
EUGLENOPHYTA	EUGLENOIDS			
..EUGLENOPHYCEAE				
..EUGLENALES				
..EUGLENACEAE				
..TRACHELYMONAS		88	2	
TOTALS		88	2	0.000=DIVERSITY

NOTE: D - DOMINANT ORGANISM; GREATER OR EQUAL TO 15%
L - LESS THEN 1%; MAY NOT HAVE BEEN ACTUALLY COUNTED
ANALYSIS METHOD: SEDGWICK-RAFTER CHAMBER, 200-X MICROSCOPE
DIVERSITY INDICES, BASED ON ACTUAL COUNTS:
PHYL/DIV .097
CLASS 1.097
ORDER 1.670
FAMILY 1.767
GENERA 2.083

06807000 MISSOURI RIVER AT NEBRASKA CITY, NB--Continued
(National stream-quality accounting network station)

WATER-QUALITY RECORDS

WATER QUALITY DATA, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976

IDENTIFICATION OF PHYTOPLANKTON

NOV. 11, 1975

1120 HOURS

4,800 CELLS/ML

ORGANISM NAME	COMMON NAME	CELLS/ML	PER CENT	
CHLOROPHYTA	GREEN ALGAE			
.CHLOROPHYCEAE				
..CHLOROCOCCALES				
...HYDRODICTYACEAE				
...PEDIASTRUM		190	4	
...OOCYSTACEAE				
...ANKISTRODESMUS		190	4	
...SCENEDESMACEAE				
L ...ACTINASTRUM			0	
D ...SCENEDESMUS		1,100	22	
	TOTALS	1,400	30	1.103=DIVERSITY
CHRYSTOPHYTA				
.BACILLARIOPHYCEAE	DIATOMS			
..CENTRALES	CENTRIC			
...COSCINODISCAEAE				
D ...CYCLOTELLA		1,200	26	
...MELOSIRA		380	8	
..PENNALES	PENNATE			
...FRAGILARIACEAE				
D ...ASTERIONELLA		910	19	
...GOMPHONEMATAEAE				
...GOMPHONEMA		48	1	
...NAVICULACEAE	NAVICULOID			
L ...DIPLOEIS			0	
...NAVICULA		380	8	
L ...PINNULARIA			0	
...NITZSCHIAEAE				
...NITZSCHIA		340	7	
	TOTALS	3,300	69	2.187=DIVERSITY
CYANOPHYTA	BLUE-GREEN ALGAE			
.MYXOPHYCEAE				
..CHROOCOCCALES	COCCOID			
...CHROOCOCCACEAE				
L ...ANACYSTIS			0	

NOTE: D - DOMINANT ORGANISM; GREATER OR EQUAL TO 15%
L - LESS THAN 1%; MAY NOT HAVE BEEN ACTUALLY COUNTED
ANALYSIS METHOD: SEDGWICK-RAFTER CHAMBER, 200-X MICROSCOPE
DIVERSITY INDICES, BASED ON ACTUAL COUNTS:
PHYL/DIV 0.885
CLASS 0.885
ORDER 1.582
FAMILY 2.473
GENERA 2.744

MISSOURI RIVER MAIN STEM

06807000 MISSOURI RIVER AT NEBRASKA CITY, NB--Continued
(National stream-quality accounting network station)

WATER-QUALITY RECORDS

WATER QUALITY DATA, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976

IDENTIFICATION OF PHYTOPLANKTON

APR. 6, 1976
1130 HOURS

8,900 CELLS/ML

ORGANISM NAME	COMMON NAME	CELLS/ML	PER CENT	
CHLOROPHYTA	GREEN ALGAE			
.CHLOROPHYCEAE				
..CHLOROCOCCALES				
...OOCYSTACEAE				
....ANKISTRODESMUS		120	1	
....SELENASTRUM		59	1	
....SCENEDESMACEAE				
....CRUCIGENIA		240	3	
....SCENEDESMUS		59	1	
	TOTALS	470	6	1.750=DIVERSITY
CHRYSTOPHYTA				
.BACILLARIOPHYCEAE	DIATOMS			
..CENTRALES	CENTRIC			
...COSCINODISCEACEAE				
D ....CYCLOTELLA		5,600	63	
....MELOSIRA		420	5	
..PENNALES	PENNATE			
....ACHNANTHACEAE				
....ACHNANTHES		59	1	
....DIATOMACEAE				
....DIATOMA		120	1	
....FRAGILARIACEAE				
....ASTERIONELLA		530	6	
....FRAGILARIA		770	9	
....NAVICULACEAE	NAVICULOID			
....NAVICULA		59	1	
....NITZSCHIA				
....NITZSCHIA		420	5	
....SURIPELLACEAE				
....SURIPELLA		120	1	
	TOTALS	8,100	92	1.667=DIVERSITY
CYANOPHYTA	BLUE-GREEN ALGAE			
.MYXOPHYCEAE				
..CHROCOCCALES	COCCOID			
...CHROCOCCACEAE				
....GONPHOSPHAERIA		240	3	
	TOTALS	240	3	0.000=DIVERSITY
EUGLENOPHYTA	EUGLENOIDS			
.EUGLENOPHYCEAE				
..EUGLENALES				
...EUGLENACEAE				
....EUGLENA		59	1	
	TOTALS	59	1	0.000=DIVERSITY

NOTE: D - DOMINANT ORGANISM; GREATER OR EQUAL TO 15%
ANALYSIS METHOD: SEDGWICK-RAFTER CHAMBER, 200-X MICROSCOPE
DIVERSITY INDICES, BASED ON ACTUAL COUNTS:
PHYL/DIV 0.533
CLASS 0.533
ORDER 1.281
FAMILY 1.717
GENERA 2.148

06807000 MISSOURI RIVER AT NEBRASKA CITY, NB--Continued
(National stream-quality accounting network station)

WATER-QUALITY RECORDS

WATER QUALITY DATA, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976

IDENTIFICATION OF PHYTOPLANKTON

MAY 4, 1976
1130 HOURS

20,000 CELLS/ML

ORGANISM NAME	COMMON NAME	CELLS/ML	PER CENT	
CHLOROPHYTA	GREEN ALGAE			
...ANKISTRODESMUS		360	2	
...SELENASTRUM		180	1	
...VESTELLA		2,200	11	
...SCENEDESMACEAE				
...ACTINASTRUM		180	1	
...CRUCIGENIA		1,500	7	
...SCENEDESMUS		1,100	6	
	TOTALS	5,400	28	2.089=DIVERSITY
CHRYSTOPHYTA				
...BACILLARIOPHYCEAE	DIATOMS			
...CENTRALES	CENTRIC			
...COSCINODISCEACEAE				
D ...CYCLOTELLA		6,900	35	
...PENNALES	PENNATE			
...DIATOMACEAE				
L ...DIATOMA			0	
...FRAGILARIACEAE				
...ASTERIONELLA		540	3	
...FRAGILARIA		180	1	
...NAVICULACEAE	NAVICULOID			
...NAVICULA		540	3	
...NITZSCHACEAE				
...NITZSCHIA		1,500	7	
...SURIRELLACEAE				
L ...SURIRELLA			0	
	TOTALS	9,600	49	1.333=DIVERSITY
CYANOPHYTA	BLUE-GREEN ALGAE			
...MYXOPHYCEAE				
...CHROOCOCCALES	COCCOID			
...CHROOCOCCACEAE				
D ...AGNELLUM		2,900	15	
...GOMPHOSPHERIA		1,600	8	
	TOTALS	4,500	23	0.943=DIVERSITY
DIVERSITY INDICES, BASED ON ACTUAL COUNTS:				
PHYL/DIV 1.506				
CLASS 1.506				
ORDER 1.928				
FAMILY 2.408				
GENERA 2.959				

IDENTIFICATION OF PHYTOPLANKTON

JUNE 1, 1976
1100 HOURS

810 CELLS/ML

ORGANISM NAME	COMMON NAME	CELLS/ML	PER CENT	
CHLOROPHYTA	GREEN ALGAE			
...ANKISTRODESMUS		29	4	
D ...KIRCHNERIELLA		190	23	
...OOCYSTIS		57	7	
...SCENEDESMACEAE				
...ACTINASTRUM		57	7	
...TETRASTRUM		110	14	
	TOTALS	440	55	2.048=DIVERSITY
CHRYSTOPHYTA				
...BACILLARIOPHYCEAE	DIATOMS			
...CENTRALES	CENTRIC			
...COSCINODISCEACEAE				
...HELOSIRA		110	14	
...PENNALES	PENNATE			
...FRAGILARIACEAE				
D ...FRAGILARIA		210	26	
...SYNEDRA		14	2	
...NITZSCHACEAE				
...NITZSCHIA		29	4	
	TOTALS	370	46	1.446=DIVERSITY

NOTE: D - DOMINANT ORGANISM; GREATER OR EQUAL TO 15%
ANALYSIS METHOD: SEDGWICK-RAFTER CHAMBER, 200-X MICROSCOPE
DIVERSITY INDICES, BASED ON ACTUAL COUNTS:
PHYL/DIV 0.994
CLASS 0.994
ORDER 1.401
FAMILY 2.083
GENERA 2.768

MISSOURI RIVER MAIN STEM

06807000 MISSOURI RIVER AT NEBRASKA CITY, NB--Continued
(National stream-quality accounting network station)

WATER-QUALITY RECORDS

WATER QUALITY DATA, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976

IDENTIFICATION OF PHYTOPLANKTON

JULY 6, 1976
1115 HOURS

25,000 CELLS/ML

ORGANISM NAME	COMMON NAME	CELLS/ML	PER CENT	
CHLOROPHYTA	GREEN ALGAE			
..CHLOROPHYCEAE				
...CHLOROCOCCALES				
...COELASTRACEAE				
....COELASTRUM		660	3	
...MICRACITINACEAE				
....MICRACITINIUM		330	1	
...OPCISTACEAE				
....ANKISTRODESMUS		2,100	8	
....DICTYOSPHAERIUM		1,300	5	
L ....KIRCHNERIELLA			0	
...SCENEDESMACEAE				
....ACTINASTRUM		1,800	7	
....SCENEDESMUS		3,500	14	
....TETRASTRUM		330	1	
..VOLVOCALES				
...CHLAMYDOMONADACEAE				
L ....CARTERIA			0	
L ....CHLAMYDOMONAS			0	
	TOTALS	10,000	39	2.562=DIVERSITY
CHRYSOPHYTA				
..DICILLARIOPHYCEAE	DIATOMS			
...CENTRALES	CENTRIC			
...COSCINODISCACEAE				
....CYCLOTELLA		2,800	11	
....HELOSIRA		2,000	8	
..PENNIALES	PENNATE			
...FRAGILIARIACEAE				
....ASTERIONELLA		410	2	
...NAVICULACEAE	NAVICULOID			
L ....NAVICULA			0	
...NITZSCHIA				
....NITZSCHIA		2,000	8	
	TOTALS	7,300	29	1.861=DIVERSITY
CYANOPHYTA	BLUE-GREEN ALGAE			
..CYANOPHYCEAE				
...CHROCOCCOCCALES	COCCOID			
...CHROCOCCOCCACEAE				
D ...AGNENELLUM		4,000	16	
...ANACYSTIS		1,200	5	
...OSCILLATORIALES	FILAMENTOUS			
...OSCILLATORIA				
....OSCILLATORIA		2,100	8	
	TOTALS	7,200	29	1.414=DIVERSITY
EUGLENOPHYTA	EUGLENOIDS			
..EUGLENOPHYCEAE				
...EUGLENALES				
...EUGLENACEAE				
L ....EUGLENA			0	
	TOTALS	83	0	0.000=DIVERSITY

NOTE: D - DOMINANT ORGANISM; GREATER OR EQUAL TO 15%
L - LESS THEN 1%; MAY NOT HAVE BEEN ACTUALLY COUNTED
ANALYSIS METHOD: SEDGWICK-RAFTER CHAMBER, 200-X MICROSCOPE
DIVERSITY INDICES, BASED ON ACTUAL COUNTS:
PHYL/DIV 1.591
CLASS 1.591
ORDER 2.163
FAMILY 2.825
GENERA 3.606

06807000 MISSOURI RIVER AT NEBRASKA CITY, NB--Continued
(National stream-quality accounting network station)

WATER-QUALITY RECORDS

WATER QUALITY DATA, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976

IDENTIFICATION OF PHYTOPLANKTON

AUG. 3, 1976

1115 HOURS

8,400 CELLS/ML

ORGANISM NAME	COMMON NAME	CELLS/ML	PER CENT	
CHLOROPHYTA	GREEN ALGAE			
..CHLOROPHYCEAE				
..CHLOCOCCALES				
..COELASTRACEAE				
D ....COELASTRUM		1,500	17	
....DODONACEAE				
....ANKISTRORHIZUM		300	4	
....DICTYOSPHAERIUM		850	10	
....COCCYSTIS		970	12	
....SCENEDESMACEAE				
....SCENEDESMUS		1,100	13	
..VOLVOCALES				
..PHACOTACEAE				
..PHACOTUS		61	1	
TOTALS		4,790	57	2.260=DIVERSITY
CHRYSTOPHYTA				
..BACILLARIOPHYCEAE	DIATOMS			
..CENTRALES	CENTRIC			
..COSCINODISACEAE				
....CYCLOTELLA		790	9	
....HELOSIRA		1,029	12	
....STEPHANODISCUS		61	1	
..PENNALES	PENNAE			
..FRANILARIACEAE				
..SYNEDRA		61	1	
..NAVICULACEAE	NAVICULOID			
..NAVICULA		61	1	
..NITZSCHACEAE				
..NITZSCHIA		910	11	
TOTALS		2,900	35	1.914=DIVERSITY
CYANOPHYTA	BLUE-GREEN ALGAE			
..MYXOPHYCEAE				
..CHROCOCCALES	COCCOID			
..CHROCOCCACEAE				
....ANKYSTIS		240	3	
..OSCILLATORIALES	FILAMENTOUS			
..OSCILLATORIACEAE				
..OSCILLATORIA		240	3	
TOTALS		490	6	1.000=DIVERSITY
EUGLENOPHYTA	EUGLENOIDS			
..EUGLENOPHYCEAE				
..EUGLENALES				
....EUGLENAEAE				
..TRACHELEODONAS		240	3	
TOTALS		240	3	0.000=DIVERSITY

NOTE: D - DOMINANT ORGANISM; GREATER OR EQUAL TO 15%
 ANALYSIS METHOD: SEDGWICK-RAFTER CHAMBER, 200-X MICROSCOPE
 DIVERSITY INDICES, BASED ON ACTUAL COUNTS:
 PHYL/DIV 1.381
 CLASS 1.331
 ORDER 1.801
 FAMILY 2.758
 GENERA 0.382

MISSOURI RIVER MAIN STEM

06807000 MISSOURI RIVER AT NEBRASKA CITY, NB--Continued
(National stream-quality accounting network station)

WATER-QUALITY RECORDS

WATER QUALITY DATA, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976

IDENTIFICATION OF PHYTOPLANKTON

SEP. 7, 1976
1145 HOURS

5.700 CELLS/ML

ORGANISM NAME	COMMON NAME	CELLS/ML	PER CENT	
CHLOROPHYTA	GREEN ALGAE			
..CHLOROPHYCEAE				
..CHLOROCOCCALES				
...HYDRODICTYACEAE				
....PEDIASTRUM		210	4	
...OOCYSTACEAE				
....ANKISTRGLESUMUS		110	2	
....DICTYOSPHAERIUM		710	13	
....KIRCHNERIELLA		71	1	
....OOCYSTIS		180	3	
....TREUBARIA		71	1	
....WESTELLA		140	3	
...SCENEDESMACEAE				
....ACTINASTRUM		140	3	
L ....CRUCIGENIA			0	
D ....SCENEDESMUS		1,800	31	
..TETRASPORALES				
...PALMELLACEAE				
...GLUEOCYSTIS		71	1	
...VOLVOCALLES				
...CHLAMYDOMONADACEAE				
...CHLAMYDOMONAS		35	1	
TOTALS		3,500	63	2.362=DIVERSITY
CHRYSOPHYTA				
..BACILLARIOPHYCEAE	DIATOMS			
..CENTRALES	CENTRIC			
...COSCIHODISCACEAE				
...CYCLOTELLA		420	8	
...PENNALES	PENNATE			
...ACHNANTHACEAE				
...RHOTICOSPHEA		35	1	
...NAVICULACEAE	NAVICULOID			
...NAVICULA		110	2	
...NITZSCHIA				
...NITZSCHIA		500	9	
TOTALS		1,100	20	1.538=DIVERSITY
CYANOPHYTA	BLUE-GREEN ALGAE			
..MYXOPHYCEAE				
..CHROCOCCALES	COCCOID			
...CHROCOCCACEAE				
...ANACYSTIS		570	10	
...OSCILLATORIALES	FILAMENTOUS			
...NOSTOCACEAE				
...ANABAENOPSIS		420	8	
TOTALS		990	18	0.985=DIVERSITY
EUGLENOPHYTA	EUGLENOIDS			
..CRYPTOPHYCEAE	CRYPTOMONADS			
...CRYPTOMONIDAE				
...CRYPTOMONODACEAE				
...CRYPTOMONAS		110	2	
TOTALS		110	2	0.000=DIVERSITY

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

L - LESS THAN 1%; MAY NOT HAVE BEEN ACTUALLY COUNTED

ANALYSIS METHOD: SEDGWICK-RAFTER CHAMBER, 200-X MICROSCOPE

DIVERSITY INDICES, BASED ON ACTUAL COUNTS:

PHYL/DIV 1.429

CLASS 1.429

ORDER 1.922

FAMILY 2.777

GENERA 3.351

NISHNABOTNA RIVER BASIN

229

06807410 WEST NISHNABOTNA RIVER AT HANCOCK, IA

LOCATION.--Lat 41°23'24", long 95°22'17", in NE1/4 sec.18, T.76 N., R.39 W., Pottawattamie County, Hydrologic Unit 10240002, on downstream end of right pier of bridge on county highway G30, 0.6 mi (1.0 km) west of Hancock school, and 3.0 mi (4.8 km) downstream from Jim Creek.

DRAINAGE AREA.--609 mi² (1,577 km²).

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

GAGE.--Water-stage recorder. Datum of gage is 1,085.94 ft (330.995 m) above mean sea level.

REMARKS.--Records good except those for winter period, which are poor. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--17 years, 274 ft³/s (7.760 m³/s), 6.11 in/yr (155 mm/yr), 198,500 acre-ft/yr (245 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 26,400 ft³/s (748 m³/s) Sept. 13, 1972, gage height, 22.12 ft (6.742 m); minimum daily, 2.2 ft³/s (0.062 m³/s) Feb. 8, 9, 1971.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 8,810 ft³/s (249 m³/s) June 13, gage height, 12.70 ft (3.871 m) at 2100 hours, no other peak above base of 4,000 ft³/s (113 m³/s); minimum daily, 44 ft³/s (1.25 m³/s) Sept. 7, 17.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	112	95	150	60	86	143	272	260	319	186	114	53
2	106	95	185	60	88	126	226	245	303	180	104	53
3	106	102	190	58	89	130	195	226	287	177	95	52
4	106	99	197	56	80	110	171	226	272	173	91	50
5	101	97	205	54	75	120	161	223	260	167	89	48
6	99	97	160	52	70	130	153	208	254	161	88	46
7	99	99	141	51	74	130	145	195	248	160	86	44
8	97	95	130	50	80	126	145	192	243	154	83	45
9	97	155	122	49	85	145	136	192	237	146	82	49
10	95	266	116	48	90	208	130	190	221	139	82	49
11	95	158	114	48	95	216	143	184	218	133	79	48
12	95	124	110	49	100	1100	118	184	208	131	77	45
13	93	106	114	50	110	440	120	203	1470	126	82	61
14	93	108	110	51	120	250	132	190	3330	119	106	60
15	90	112	100	52	140	180	161	190	542	124	88	49
16	90	112	90	54	195	170	174	218	329	119	82	46
17	92	110	80	56	213	165	171	221	305	114	83	44
18	92	106	75	58	151	161	232	195	842	111	79	45
19	93	106	70	60	130	158	197	174	353	109	76	56
20	95	164	70	62	112	158	174	164	289	107	70	57
21	95	158	70	64	102	153	208	158	264	112	68	50
22	95	124	70	66	92	139	208	313	242	129	67	49
23	95	115	70	68	106	134	335	925	222	114	67	46
24	93	105	66	70	108	130	361	910	220	106	64	52
25	92	90	62	72	166	124	473	540	217	104	66	60
26	93	80	60	74	335	122	396	462	242	150	63	61
27	95	75	60	76	263	120	345	396	300	392	63	56
28	95	80	60	78	218	116	316	386	230	178	56	53
29	93	100	60	80	179	112	290	361	205	117	56	54
30	93	120	60	82	---	237	281	345	190	412	54	53
31	97	---	60	84	---	370	---	335	---	175	54	---
TOTAL	2982	3453	3227	1892	3752	6123	6569	9211	12862	4825	2414	1534
MEAN	96.2	115	104	61.0	129	198	219	297	429	156	77.9	51.1
MAX	112	266	205	84	335	1100	473	925	3330	412	114	61
MIN	90	75	60	48	70	110	118	158	190	104	54	44
CFSM	.16	.19	.17	.10	.21	.33	.36	.49	.70	.26	.13	.08
IN.	.18	.21	.20	.12	.23	.37	.40	.56	.79	.29	.15	.09
AC-FT	5910	6850	6400	3750	7440	12140	13030	18270	25510	9570	4790	3040
CAL YR 1975	TOTAL	117214	MEAN 321	MAX 5840	MIN 38	CFSM .53	IN 7.16	AC-FT 232500				
WTR YR 1976	TOTAL	58844	MEAN 161	MAX 3330	MIN 44	CFSM .26	IN 3.59	AC-FT 116700				

NISHNABOTNA RIVER BASIN

06808500 WEST NISHNABOTNA RIVER AT RANDOLPH, IA

LOCATION.--Lat 40°52'23", long 95°34'48", in NE1/4 NE1/4 sec.17, T.70 N., R.41 W., Fremont County, Hydrologic Unit 10240002, on right bank 30 ft (9 m) upstream from bridge on State Highway 184, 0.3 mi (0.5 km) downstream from Deer Creek, 0.5 mi (0.8 km) west of Randolph, and 16.2 mi (26.1 km) upstream from confluence with East Nishnabotna River.

DRAINAGE AREA.--1,326 mi² (3,434 km²).

PERIOD OF RECORD.--June 1948 to current year.

REVISED RECORDS.--WSP 1440: Drainage area. WRD Iowa 1974: 1973 (M).

GAGE.--Water-stage recorder. Datum of gage is 932.99 ft (284.375 m) above mean sea level, unadjusted. Prior to Aug. 26, 1955, nonrecording gage and June 30, 1949, to Aug. 25, 1955, supplementary water-stage recorder, operating above gage height 8.4 ft (2.56 m) at same site and datum.

REMARKS.--Records good except those for winter period, which are poor. Several observations of water temperature were made during the year. National Weather Service gage height telemeter at station.

AVERAGE DISCHARGE.--28 years, 545 ft³/s (15.43 m³/s), 5.58 in/yr (142 mm/yr), 394,900 acre-ft/yr (487 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 35,500 ft³/s (1,010 m³/s) June 21, 1967, gage height, 22.60 ft (6.88 m); maximum gage height, 24.8 ft (7.56 m) Mar. 5, 1949, from graph based on gage readings (backwater from ice); minimum daily discharge, 10 ft³/s (0.283 m³/s) Dec. 17-21, 1955.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in June 1947 reached a stage of about 24 ft (7.3 m), discharge not determined, from information by local residents.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 13,700 ft³/s (388 m³/s) June 14, gage height, 19.90 ft (6.066 m) at 1645 hours, no other peak above base of 6,500 ft³/s (184 m³/s); minimum daily, 124 ft³/s (3.51 m³/s) Sept. 7, 8.

REVISIONS.--Revised gage heights for the peak discharges and annual maximum (*) for water year 1975 are given below. They supersede figures published in the report for 1975.

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage Height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage Height (ft) (m)
Apr. 28	1200	*12,000 340	*17.78 5.419	June 25	1430	8,180 232	15.88 4.840
June 18	1800	8,790 249	16.22 4.944	Aug. 29	1545	7,780 220	16.41 5.002

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	251	219	520	230	250	379	558	779	788	420	471	141
2	242	206	392	230	250	334	468	736	767	411	373	139
3	237	203	310	230	240	307	413	683	738	402	338	137
4	236	206	332	220	230	303	383	651	705	391	319	139
5	234	203	332	210	220	232	364	632	685	386	308	134
6	225	197	306	200	210	255	358	605	679	371	303	128
7	225	197	280	190	210	360	353	579	660	364	294	124
8	225	195	260	180	220	370	350	567	643	353	285	124
9	222	221	265	180	250	342	344	565	624	340	277	134
10	222	422	259	180	275	466	328	569	612	325	273	132
11	219	360	249	190	280	486	319	547	610	309	273	134
12	219	257	247	190	300	632	326	565	586	301	276	129
13	219	223	246	190	330	1290	315	633	580	295	264	179
14	219	213	290	190	350	705	313	600	7800	290	435	207
15	214	214	240	190	336	545	343	590	2790	319	414	173
16	206	213	190	190	366	485	413	700	1080	310	290	138
17	203	210	200	190	379	453	595	712	804	275	249	128
18	208	206	210	190	393	434	913	635	1420	249	234	128
19	208	209	230	190	319	433	618	574	1200	237	219	142
20	206	217	250	190	275	416	525	538	660	248	208	193
21	206	245	240	190	302	390	649	525	572	334	193	160
22	206	241	240	195	251	366	637	856	515	304	190	136
23	206	216	240	200	270	357	587	1770	480	303	184	132
24	206	190	230	200	310	348	1830	1570	526	279	180	130
25	203	140	220	210	340	344	2020	1260	509	253	179	181
26	201	180	220	210	513	342	1230	1000	532	268	181	212
27	201	250	220	200	599	333	1080	909	2460	844	168	178
28	202	350	220	200	522	318	928	933	812	1780	154	152
29	203	500	220	210	455	322	860	1140	540	667	150	144
30	203	586	220	220	---	369	815	848	444	429	150	140
31	200	---	230	240	---	478	---	810	---	1100	143	---
TOTAL	6677	7489	8108	6225	9245	13194	19235	24081	31821	13157	7975	4448
MEAN	215	250	262	201	319	426	641	777	1061	424	257	148
MAX	251	586	520	240	599	1290	2020	1770	7800	1780	471	212
MIN	200	140	190	180	210	232	313	525	444	237	143	124
CFSM	.16	.19	.20	.15	.24	.32	.48	.59	.80	.32	.19	.11
IN.	.19	.21	.23	.17	.26	.37	.54	.68	.89	.37	.22	.12
AC-FT	13240	14850	16080	12350	18340	26170	38150	47760	63120	26100	15820	8820
CAL YR 1975	TOTAL	229994	MEAN 630	MAX 7970	MIN 140	CFSM .48	IN 6.45	AC-FT	456200			
WTR YR 1976	TOTAL	151655	MEAN 414	MAX 7800	MIN 124	CFSM .31	IN 4.25	AC-FT	300800			

06809210 EAST NISHNABOTNA RIVER NEAR ATLANTIC, IA

LOCATION.--Lat 41°20'47", long 95°04'31", in NW1/4 NW1/4 sec.35, T.76 N., R.37 W., Cass County, Hydrologic Unit 10240003, on left bank at downstream side of bridge on county highway, 1.9 mi (3.1 km) upstream from Turkey Creek, and 5.4 mi (8.7 km) southwest of junction of U.S. Highway 6 and State Highway 83 in Atlantic.

DRAINAGE AREA.--436 mi² (1,129 km²).

PERIOD OF RECORD.--October 1960 to current year.

GAGE.--Water-stage recorder. Datum of gage is 1,105.83 ft (337.057 m) above mean sea level. Prior to Oct. 1, 1970, at site 2.0 mi (3.2 km) upstream at datum 5.00 ft (1.524 m) higher.

REMARKS.--Records good except those for winter period, which are poor. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--16 years, 218 ft³/s (6.174 m³/s), 6.79 in/yr (172 mm/yr), 157,900 acre-ft/yr (195 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 26,700 ft³/s (756 m³/s) Sept. 12, 1972, gage height, 22.81 ft (6.952 m); minimum daily, 7.0 ft³/s (0.20 m³/s) Dec. 17-23, 1963, Jan. 5-11, 1971.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 2,000 ft³/s (56.0 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage Height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage Height (ft) (m)
Mar. 12	0400	3,050 86.4	5.06 2.761	June 14	0700	*6,680 189	*12.34 3.761

Minimum daily discharge, 38 ft³/s (1.08 m³/s) Sept. 17.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	71	48	85	54	41	179	330	403	316	173	122	51
2	65	48	90	54	41	154	303	369	296	173	105	51
3	60	51	110	53	41	130	269	337	286	166	91	50
4	58	51	135	53	40	80	241	326	262	162	83	46
5	55	50	112	52	39	50	228	326	252	159	78	46
6	55	50	94	52	39	140	222	296	241	154	76	44
7	53	50	83	51	39	130	212	262	228	151	72	43
8	51	51	87	51	39	110	206	262	216	148	72	43
9	51	56	83	50	42	115	197	262	216	143	71	41
10	51	125	76	50	45	191	191	262	212	135	71	41
11	50	80	72	49	48	285	216	248	222	125	70	40
12	50	62	69	49	52	2000	188	241	197	120	69	39
13	50	56	65	48	56	493	182	255	827	127	68	48
14	48	55	62	48	75	403	179	241	2970	138	125	46
15	46	58	60	47	96	309	216	238	1330	140	85	42
16	46	56	56	47	120	262	197	326	422	138	72	40
17	46	56	52	46	120	238	269	351	347	125	71	38
18	46	53	50	46	105	238	1040	275	344	117	67	42
19	44	51	50	45	87	269	515	235	313	115	64	50
20	44	60	51	45	78	289	395	225	299	120	63	52
21	44	65	52	44	105	216	645	235	255	138	62	46
22	46	55	56	44	89	185	502	557	206	159	61	42
23	50	55	56	43	58	173	490	981	191	140	60	40
24	48	52	55	43	71	162	875	920	200	130	58	48
25	48	50	54	42	78	151	820	557	194	117	58	55
26	46	45	54	42	173	154	607	478	185	125	57	55
27	44	42	54	41	490	148	515	426	216	212	56	52
28	43	45	54	41	507	143	470	403	209	377	54	50
29	43	70	54	41	289	156	438	384	194	173	52	50
30	44	100	54	41	---	498	430	354	179	517	51	48
31	48	---	54	41	---	502	---	333	---	225	51	---
TOTAL	1544	1746	2139	1453	3103	8553	11588	11368	11825	5144	2215	1379
MEAN	49.8	58.2	69.0	46.9	107	276	386	357	394	166	71.5	46.0
MAX	71	125	135	54	507	2000	1040	981	2970	517	125	55
MIN	43	42	50	41	39	50	179	225	179	115	51	38
CFSM	.11	.13	.16	.11	.25	.63	.89	.84	.90	.38	.16	.11
IN.	.13	.15	.18	.12	.26	.73	.99	.97	1.01	.44	.19	.12
AC-FT	3060	3460	4240	2800	6150	16960	22980	22550	23450	10200	4390	2740
CAL YR 1975	TOTAL	91354	MEAN 250	MAX 3760	MIN 42	CFSM .57	IN 7.79	AC-FT 181200				
WTR YR 1976	TOTAL	62057	MEAN 170	MAX 2970	MIN 38	CFSM .39	IN 5.29	AC-FT 123100				

06809500 EAST NISHNABOTNA RIVER AT RED OAK, IA

LOCATION.--Lat 41°00'41", long 95°14'07", in NW1/4 SE1/4 sec.29, T.72 N., R.38 W., Montgomery County, Hydrologic Unit 10240003, on left bank on downstream side of Coolbaugh Street bridge in Red Oak, and 0.2 mi (0.3 km) upstream from Red Oak Creek.

DRAINAGE AREA.--894 mi² (2,315 km²).

PERIOD OF RECORD.--May 1918 to July 1925, May 1936 to current year. Monthly discharge only for some periods, published in WSP 1310.

REVISED RECORDS.--WSP 1240: 1921, 1922-23 (M), 1924, 1942 (M), 1944 (M), 1946. WSP 1440: Drainage area. WSP 1710: 1957.

GAGE.--Water-stage recorder. Datum of gage is 1,005.45 ft (306.461 m) above mean sea level, unadjusted. Prior to July 5, 1925, nonrecording gage at present site at datum 4.60 ft (1.402 m) higher. May 29, 1936, to Nov. 13, 1952, nonrecording gage with supplementary water-stage recorder in operation above 3.2 ft (0.975 m) gage height July 30, 1939, to Nov. 13, 1952, and Nov. 14, 1952, to June 13, 1966, water-stage recorder, all at site 0.5 mi (0.8 km) upstream at datum 5.00 ft (1.524 m) higher. June 14, 1966, to Sept. 30, 1969, at present site at datum 5.00 ft (1.524 m) higher.

REMARKS.--Records good except those for winter period, which are poor. Several observations of water temperature were made during the year. National Weather Service gage height telemeter at station.

AVERAGE DISCHARGE.--46 years (water years 1918-24, 1936-76), 373 ft³/s (10.56 m³/s), 5.67 in/yr (144 mm/yr), 270,200 acre-ft/yr (333 hm³/yr); median of yearly mean discharges, 350 ft³/s (9.91 m³/s), 5.3 in/yr (135 mm/yr), 254,000 acre-ft/yr (310 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 38,000 ft³/s (1,080 m³/s) Sept. 13, 1972, gage height, 27.43 ft (8.361 m); maximum gage height, 28.23 ft (8.605 m) June 13, 1947, present datum; minimum daily discharge, 6 ft³/s (0.17 m³/s) Aug. 18, 1936.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 12,800 ft³/s (362 m³/s) June 14, gage height, 18.78 ft (5.724 m) at 1200 hours, no other peak above base of 4,500 ft³/s (127 m³/s); minimum daily, 68 ft³/s (1.93 m³/s) Jan. 28.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	162	122	280	90	78	436	629	722	544	435	455	89
2	136	110	180	90	74	312	483	661	513	417	336	89
3	131	110	260	86	72	295	424	624	478	404	300	89
4	125	110	320	82	70	228	372	545	456	389	269	89
5	120	110	390	78	70	131	341	546	434	373	258	89
6	116	110	265	74	70	164	324	539	421	358	244	89
7	113	107	220	72	70	292	311	476	411	347	227	83
8	112	107	204	70	70	286	301	466	396	332	219	77
9	109	119	207	70	72	277	284	455	381	313	212	77
10	105	158	204	70	80	360	257	452	366	297	203	77
11	102	252	201	72	90	458	251	443	357	278	194	77
12	107	167	194	74	100	2630	258	436	348	264	188	72
13	107	132	188	76	110	1330	223	442	885	254	182	77
14	107	119	207	78	130	675	216	446	10000	242	297	80
15	101	119	150	78	154	568	229	423	5240	254	272	80
16	96	124	130	78	199	458	303	506	1560	267	200	77
17	102	125	115	78	216	397	300	635	984	248	179	77
18	105	121	110	78	209	379	1380	521	890	222	173	77
19	110	117	102	78	164	379	1320	454	750	211	164	89
20	113	123	98	78	138	351	769	422	620	203	154	107
21	113	133	96	78	252	313	997	390	553	487	140	113
22	112	143	95	78	220	277	1090	501	502	313	133	95
23	107	119	94	78	137	258	811	1280	459	266	126	83
24	107	110	93	78	128	254	1780	1980	465	234	119	74
25	107	70	92	78	154	245	2060	1080	439	219	116	98
26	107	90	91	74	233	236	1430	872	396	226	116	112
27	107	110	90	70	489	233	1060	755	1090	1090	113	101
28	110	130	90	68	814	215	929	697	623	960	106	85
29	107	140	90	70	708	208	831	720	527	650	99	83
30	104	260	90	74	---	294	772	629	466	1130	94	80
31	104	---	90	78	---	938	---	579	---	1140	92	---
TOTAL	3464	3867	5036	2374	5371	13877	20735	19697	31554	12823	5980	2585
MEAN	112	129	162	76.6	185	448	691	635	1052	414	193	86.2
MAX	162	260	390	90	814	2630	2060	1980	10000	1140	455	113
MIN	96	70	90	68	70	131	216	390	348	203	92	72
CFSM	.13	.14	.18	.09	.21	.50	.77	.71	1.18	.46	.22	.10
IN.	.14	.16	.21	.10	.22	.58	.86	.82	1.31	.53	.25	.11
AC-FT	6870	7670	9990	4710	10650	27530	41130	39070	62590	25430	11860	5130
CAL YR 1975	TOTAL	163944	MEAN 449	MAX 5420	MIN 70	CFSM .50	IN 6.82	AC-FT 325200				
WTR YR 1976	TOTAL	127363	MEAN 348	MAX 10000	MIN 68	CFSM .39	IN 5.30	AC-FT 252600				

LOCATION.--Lat 40°37'57", long 95°37'32", in SW1/4 SE1/4 sec.11, T.67 N., R.42 W., Fremont County, Hydrologic Unit 10240004, on left bank 1.6 mi (2.6 km) downstream from confluence of East Nishnabotna and West Nishnabotna Rivers and 2 mi (3.2 km) northeast of Hamburg, and at mile 13.2 (21.2 km).

PERIOD OF RECORD.--March 1922 to September 1923, October 1928 to current year. Monthly discharge only for some periods published in WSP 1310.

REVISED RECORDS.--WSP 1240: 1923, 1929-37, 1938-40 (M), 1943 (M). WSP 1440: Drainage area. WRD Iowa. 1974: 1973.

GAGE.--Water-stage recorder. Datum of gage is 894.17 ft (272.543 m) above mean sea level. See WSP 1730 for history of changes prior to Nov. 16, 1950.

REMARKS.--Records good except those for winter period, which are poor. Several observations of water temperature were made during the year. National Weather Service gage height telemeter at station.

AVERAGE DISCHARGE.--49 years, 1,019 ft³/s (28.86 m³/s), 4.93 in/yr (125 mm/yr), 738,300 acre-ft/yr (910 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 55,500 ft³/s (1,570 m³/s) June 24, 1947, gage height, 26.03 ft (7.934 m), present site and datum, from floodmark; maximum gage height, 27.42 ft (8.358 m) Sept. 15, 1972; minimum daily discharge, 4.5 ft³/s (0.13 m³/s) Aug. 30, 1934.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 21,400 ft³/s (606 m³/s) June 14, gage height, 25.70 ft (7.833 m) at 2200 hours, no other peak above base of 9,000 ft³/s (255 m³/s); minimum daily, 211 ft³/s (5.98 m³/s) Sept. 8, 9, 24.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	479	360	450	400	350	1070	1420	1830	1550	1050	1610	254
2	437	382	600	370	340	856	1150	1730	1490	1000	960	251
3	399	357	800	340	340	742	995	1600	1440	940	810	248
4	381	350	1000	300	330	701	920	1500	1370	920	730	234
5	363	339	752	310	320	450	861	1450	1320	900	690	234
6	358	338	718	320	310	450	828	1420	1290	860	634	224
7	350	332	609	320	320	600	815	1340	1260	840	610	216
8	342	322	521	320	350	796	798	1280	1240	820	600	211
9	329	345	512	320	370	771	776	1240	1220	800	590	211
10	321	572	533	320	400	791	754	1230	1190	740	580	219
11	325	651	508	320	500	916	722	1220	1160	700	560	219
12	320	597	475	330	560	1660	725	1210	1140	660	560	216
13	318	438	466	330	574	3350	723	1280	1100	640	560	295
14	312	381	512	330	583	1820	686	1250	12500	680	740	298
15	311	365	428	330	626	1260	691	1230	13100	690	730	274
16	327	369	400	340	618	1110	806	1340	5170	720	600	274
17	309	372	390	350	713	1020	1000	1430	2530	660	550	245
18	306	363	400	350	676	955	1660	1430	3780	600	520	227
19	311	386	400	340	619	935	2380	1280	2720	550	480	245
20	322	392	400	320	506	931	1840	1190	1800	550	440	268
21	323	399	390	320	657	903	1710	1140	1480	1070	380	301
22	330	410	380	320	483	857	1980	1290	1360	660	345	271
23	318	384	370	340	528	806	1830	2460	1290	560	335	237
24	307	344	360	340	575	764	3410	3210	1310	530	330	211
25	302	230	360	320	596	743	4600	3120	1310	500	315	271
26	291	250	370	310	723	743	3660	2180	1290	525	300	361
27	309	300	380	320	926	735	2760	1890	2910	647	285	324
28	334	330	390	330	1140	718	2440	1740	2420	2590	275	268
29	335	350	400	340	1290	706	2100	2760	1320	2110	265	240
30	339	380	400	350	---	743	1940	1820	1150	1260	265	232
31	339	---	400	340	---	916	---	1630	---	2120	264	---
TOTAL	10447	11388	15074	10290	16323	29816	46980	50720	74210	27892	16913	7579
MEAN	337	380	486	332	563	962	1566	1636	2474	900	546	253
MAX	479	651	1000	400	1290	3350	4600	3210	13100	2590	1610	361
MIN	291	230	360	300	310	450	686	1140	1100	500	264	211
CFSM	.12	.14	.17	.12	.20	.34	.56	.58	.88	.32	.19	.09
IN.	.14	.15	.20	.14	.22	.40	.62	.67	.98	.37	.22	.10
AC-FT	20720	22590	29900	20410	32380	59140	93180	100600	147200	55320	33550	15030
CAL YR 1975	TOTAL	437487	MEAN	1199	MAX	11000	MIN 230	CFSM .43	IN 5.80	AC-FT	867800	
WTR YR 1976	TOTAL	317634	MEAN	868	MAX	13100	MIN 211	CFSM .31	IN 4.21	AC-FT	630000	

06811840 TARKIO RIVER AT STANTON, IA

LOCATION.--Lat 40°58'52", long 95°06'32", in NW1/4 SW1/4 sec.4, T.71 N., R.37 W., Montgomery County, Hydrologic Unit 10240005, on right bank 10 ft (3 m) downstream from bridge on county highway H42, 0.1 mi (0.2 km) downstream from Little Tarkio Creek, and 0.5 mi (0.8 km) west of Stanton.

DRAINAGE AREA.--49.3 mi² (127.7 km²).

PERIOD OF RECORD.--October 1957 to current year. Annual maximum, water years 1952-57.

REVISED RECORDS.--WSP 1919: 1960 (M).

GAGE.--Water-stage recorder and concrete control. Datum of gage is 1,104.67 ft (336.703 m) above mean sea level.

REMARKS.--Records good except those below 2.0 ft³/s (0.057 m³/s), which are fair, and those for winter period, which are poor. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--19 years, 25.8 ft³/s (0.731 m³/s), 7.11 in/yr (181 mm/yr), 18,690 acre-ft/yr (23.0 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 22,500 ft³/s (637 m³/s) June 9, 1967, gage height, 28.56 ft (8.705 m), from rating curve extended above 1,600 ft³/s (45.3 m³/s) on basis of slope-area measurement of peak flow; no flow at times most years.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 8,650 ft³/s (245 m³/s) June 14, gage height, 20.19 ft (6.154 m) at 0330 hours, no other peak above base of 1,500 ft³/s (42.5 m³/s); minimum daily, 0.10 ft³/s (0.003 m³/s) Sept. 17-18.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.99	3.5	6.4	2.3	1.7	31	9.2	60	35	22	14	1.2
2	.73	1.9	5.7	2.0	1.4	28	8.6	52	31	22	11	1.5
3	.71	1.8	5.2	.80	1.4	21	7.1	47	29	22	9.4	1.4
4	.55	1.5	5.3	.20	1.1	30	6.2	46	26	22	8.0	1.1
5	.34	1.4	5.8	.25	.85	33	6.8	42	25	21	7.9	.71
6	.31	1.4	5.3	.28	.62	30	6.5	35	25	21	6.8	.39
7	.34	1.7	5.6	.30	.62	46	6.5	35	24	21	7.2	.50
8	.32	1.7	5.3	.35	1.1	45	6.4	35	24	20	6.8	.42
9	.40	4.5	3.3	.40	1.1	51	6.0	34	23	20	6.1	.48
10	.42	5.1	1.9	.40	2.7	55	5.9	33	23	17	4.9	.47
11	.50	2.3	3.1	.45	3.2	57	5.0	31	23	17	4.9	.50
12	.42	1.7	5.5	.50	3.7	70	4.6	34	21	18	6.0	.32
13	.29	1.4	3.7	.56	3.2	80	5.1	35	21	18	5.4	.42
14	.22	1.7	7.9	.62	3.2	41	4.7	32	2310	18	18	.42
15	.14	1.8	3.5	.70	6.1	35	4.1	35	88	20	14	.33
16	.15	1.8	3.6	.70	16	29	3.6	47	45	15	8.6	.22
17	.45	1.7	2.8	.65	8.3	27	18	36	38	10	6.3	.10
18	.55	1.5	1.2	.68	5.4	24	57	31	52	10	5.4	.10
19	.74	1.7	1.4	.80	4.2	22	20	28	31	9.2	4.2	.56
20	.81	3.3	1.5	.90	9.4	19	26	25	30	8.5	4.2	.69
21	.72	2.0	1.6	1.0	22	14	43	24	29	27	3.6	.49
22	.77	1.7	1.8	1.3	11	14	27	149	27	12	3.1	.42
23	.83	1.9	2.0	1.4	13	14	111	205	25	11	2.3	.26
24	1.8	1.7	2.7	1.5	18	13	619	57	37	9.1	2.3	.11
25	1.1	1.3	2.8	.95	30	13	225	50	27	8.3	2.3	1.8
26	.88	1.2	2.8	1.0	45	14	129	46	34	8.0	2.5	1.5
27	.85	2.0	2.7	1.1	70	10	103	41	143	98	2.2	.69
28	.88	2.3	2.5	1.1	76	9.7	86	71	34	29	2.0	.25
29	.97	19	2.7	1.7	45	15	76	146	27	16	1.7	.22
30	1.0	13	2.7	1.7	---	16	69	45	24	99	1.6	.22
31	1.1	---	2.5	1.7	---	10	---	39	---	32	1.4	---
TOTAL	20.28	89.5	110.8	28.29	405.29	916.7	1705.3	1626	3331	701.1	184.1	17.79
MEAN	.65	2.98	3.57	.91	14.0	29.6	56.8	52.5	111	22.6	5.94	.59
MAX	1.8	19	7.9	2.3	76	80	619	205	2310	99	18	1.8
MIN	.14	1.2	1.2	.20	.62	9.7	3.6	24	21	8.0	1.4	.10
CFSM	.01	.06	.07	.02	.28	.60	1.15	1.06	2.25	.46	.12	.01
IN.	.02	.07	.08	.02	.31	.69	1.29	1.23	2.51	.53	.14	.01
AC-FT	40	178	220	56	804	1820	3380	3230	6610	1390	365	35

CAL YR 1975 TOTAL 4415.39 MEAN 12.1 MAX 427 MIN .10 CFSM .25 IN 3.33 AC-FT 8760
WTR YR 1976 TOTAL 9136.15 MEAN 25.0 MAX 2310 MIN .10 CFSM .51 IN 6.89 AC-FT 18120

06813500 MISSOURI RIVER AT RULO, NB

LOCATION.--Lat 40°03'14", long 95°25'12", in NW1/4 NW1/4 sec.17, T.1 N., R.18 E., Richardson County, Hydrologic Unit 10240005, on downstream end of middle pier of bridge on U.S. Highway 159 at Rulo, 3.2 mi (5.1 km) upstream from Nemaha River, and at mile 498.0 (801.3 km).

DRAINAGE AREA (REVISED).--414,900 mi² (1,074,600 km²), approximately. The 3,959 mi² (10,254 km²) in Great Divide basin are not included.

PERIOD OF RECORD.--October 1949 to current year in reports of Geological Survey. Gage-height record collected at site 80 ft (24 m) upstream January 1886 to December 1899 published in reports of Missouri River Commission September 1929 to September 1950 in files of Kansas City office of Corps of Engineers.

GAGE.--Water-stage recorder. Datum of gage is 837.23 ft (255.188 m) above mean sea level. Prior to Sept. 13, 1950, nonrecording gage at site 80 ft (24 m) upstream at same datum.

REMARKS.--Records good except those for winter period, which are poor. Flow regulated by upstream main-stem reservoirs. Several observations of water temperature were made during the year. National Weather Service gage height telemeter at station.

AVERAGE DISCHARGE.--27 years, 39,120 ft³/s (1,108 m³/s), 28,340,000 acre-ft/yr (34,900 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 358,000 ft³/s (10,100 m³/s) Apr. 22, 1952, gage height, 25.60 ft (7.803 m); minimum daily, 4,420 ft³/s (125 m³/s) Jan. 13, 1957; minimum gage height, 0.65 ft (0.198 m) Jan. 7, 1971, result of freezeup.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in 1881 reached a stage of 22.9 ft (6.98 m), from floodmark, discharge not determined.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 79,400 ft³/s (2,250 m³/s) Nov. 22, gage height, 15.19 ft (4.630 m); minimum daily, 15,000 ft³/s (425 m³/s) Jan. 11; minimum gage height observed, 4.17 ft (1.271 m) Jan. 12.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	67500	65100	71200	31400	33200	38800	51800	48900	49400	44600	43100	40100
2	67100	63900	68600	31300	32900	38300	50700	48200	48400	44100	40700	40200
3	67800	65400	66400	30600	32500	38400	49300	47300	46200	45700	40800	40500
4	67300	67600	61100	29000	31700	38200	49000	46700	44700	44100	41100	40600
5	66100	67900	59500	25400	31000	37600	48800	46000	46000	43900	40800	40300
6	65600	68200	55900	25100	30400	34300	47400	45600	47000	43900	41100	40400
7	66000	68500	50700	25500	28500	33200	46000	45000	45600	43500	41200	40100
8	64900	68700	46200	25000	29100	34100	45700	44300	44700	43300	40600	40100
9	64900	69700	41300	21000	29600	34600	46200	44100	44300	43400	40700	40100
10	65700	72700	39200	17000	31500	35000	44500	43700	44100	42700	40600	40200
11	67100	73700	37200	15000	33300	40500	44500	43500	43700	42600	40600	40600
12	66900	71000	36200	19500	33900	43200	44000	43200	43300	42000	41200	39800
13	65300	71000	36200	26300	33900	45000	44000	44700	42400	41000	40900	39700
14	64800	71500	36600	24900	33700	44500	44200	45200	49500	40000	41100	40200
15	65300	68300	37400	27400	36000	43800	45300	45000	69100	40400	42400	40900
16	67200	67800	35200	27100	41700	45600	45300	45000	51000	41000	40800	41500
17	68300	68000	31900	32500	47700	46700	46000	44600	45700	41100	40900	41500
18	67500	68800	29900	26100	44900	43600	52000	44300	48400	40500	41000	41400
19	65800	68200	26900	25800	42200	45500	48000	43600	47800	40400	41200	42100
20	65800	70700	26900	28000	42400	45000	47500	43300	43700	40300	40400	42400
21	66700	71800	27300	30000	44300	44300	47000	42000	42700	41500	40000	41600
22	66400	78000	28900	29900	41400	46200	47900	42100	42200	43200	40600	41800
23	66500	72800	30300	29900	38400	48500	47300	56400	41900	41900	40800	42300
24	67400	70600	30600	31000	37600	46200	52000	67000	43200	40900	40600	41500
25	69100	70700	30400	31200	36100	47300	55000	67300	43100	40500	40100	41800
26	69800	69200	30500	31200	36400	47100	54500	57900	43200	40500	40100	42900
27	69600	67000	31000	31300	38800	48000	54400	53800	46600	41000	40300	42000
28	68900	65000	31100	30400	37900	47400	53200	52000	50100	43500	40600	41500
29	68600	67500	31200	29700	38500	47200	50400	54200	45800	44400	40400	41900
30	67800	73500	31700	30900	---	49400	48000	53400	45100	41800	40000	42400
31	66300	---	31700	33200	---	51800	---	51100	---	42200	40000	---
TOTAL	2074000	2082800	1229200	852600	1049500	1329300	1449900	1499400	1388900	1309900	1264700	1232400
MEAN	66900	69430	39650	27500	36190	42880	48330	48370	46300	42250	40800	41080
MAX	69800	78000	71200	33200	47700	51800	55000	67300	69100	45700	43100	42900
MIN	64800	63900	26900	15000	28500	33200	44000	42000	41900	40000	40000	39700
AC-FT	4114000	4131000	2438000	1691000	2082000	2637000	2876000	2974000	2755000	2598000	2509000	2444000
CAL YR 1975 TOTAL		18458500		MEAN 50570	MAX 81800	MIN 13000	AC-FT 36610000					
WTR YR 1976 TOTAL		15762600		MEAN 45800	MAX 78000	MIN 15000	AC-FT 33250000					

NODAWAY RIVER BASIN

06817000 NODAWAY RIVER AT CLARINDA, IA

LOCATION.--Lat 40°44'19", Long 95°00'47", in SW1/4 NE1/4 sec.32, T.69 N., R.36 W., Page County, Hydrologic Unit 10240009, near left abutment on downstream side of bridge on State Highway 2 (city route), 0.5 mi (0.8 km) downstream from North Branch, 1.2 mi (1.9 km) east of city square of Clarinda, and 7.5 mi (12.1 km) upstream from East Nodaway River.

DRAINAGE AREA.--762 mi² (1,973 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--May 1918 to July 1925, May 1936 to current year. Monthly discharge only for some periods, published in WSP 1310.

REVISED RECORDS.--WSP 1240: 1918-20 (M), 1921, 1922-25 (M), 1936-38, 1942, 1943-45 (M), 1948. WSP 1440: Drainage area. WSP 1710: 1958, 1959 (P).

GAGE.--Water-stage recorder. Datum of gage is 960.36 ft (292.718 m) above mean sea level. Prior to July 5, 1925, and May 28, 1936, to Mar. 26, 1957, nonrecording gage at same site and datum.

REMARKS.--Records good except those for winter period, which are poor. Clarinda municipal water supply is taken from Nodaway River, 500 ft (152 m) above station. Average daily pumpage was 0.66 ft³/s (0.019 m³/s).

COOPERATION.--Average pumpage furnished by Clarinda water works.

AVERAGE DISCHARGE.--46 years (1918-24, 1936-76), 322 ft³/s (9.119 m³/s), 5.74 in/yr (146 mm/yr), 233,300 acre-ft/yr (288 hm³/yr); median of yearly mean discharges, 260 ft³/s (7.36 m³/s), 4.6 in/yr (117 mm/yr), 188,000 acre-ft/yr (232 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 31,100 ft³/s (881 m³/s) June 13, 1947, gage height, 25.3 ft (7.71 m), from floodmark, from rating curve extended above 15,000 ft³/s (425 m³/s) on basis of an overflow profile and extended channel rating; minimum daily, 1 ft³/s (0.028 m³/s) Sept. 5, 9, 12, 14, 1918, Dec. 9, 27-31, 1923.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in August 1903 reached a stage of 25.4 ft (7.74 m), from floodmarks, discharge not determined.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 5,000 ft³/s (142 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage Height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage Height (ft) (m)
Apr. 24	1015	6,360 180	9.44 2.877	July 30	1530	9,620 272	11.14 3.395
June 14	1400	*26,400 748	*18.88 5.755				

Minimum daily discharge, 29 ft³/s (0.82 m³/s) Oct. 15, 16.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	56	49	100	50	55	631	307	815	287	305	656	63
2	41	57	130	50	52	376	238	735	256	278	348	58
3	38	62	130	49	50	319	208	602	232	260	264	58
4	35	50	120	48	48	280	181	588	213	246	216	58
5	35	42	111	48	46	300	165	602	198	233	187	54
6	32	40	89	48	45	320	157	534	190	221	170	53
7	31	38	79	46	46	465	151	458	180	214	156	52
8	31	38	72	45	47	525	147	396	172	208	149	49
9	31	61	72	45	50	480	139	400	162	181	136	49
10	31	99	74	45	54	582	131	400	157	179	133	47
11	31	108	73	45	60	674	124	342	152	170	128	49
12	31	79	80	45	65	1130	121	327	144	168	141	49
13	32	53	78	45	75	1320	120	351	134	158	117	48
14	31	51	177	45	90	583	117	344	19500	153	226	47
15	29	45	76	46	107	481	133	327	6830	148	187	47
16	29	47	78	46	127	410	431	394	1440	160	141	44
17	31	48	70	47	311	353	231	464	869	154	114	42
18	30	48	60	47	161	324	1120	386	733	146	106	41
19	30	48	60	47	120	326	1210	311	576	146	99	48
20	33	53	60	45	94	313	651	281	493	143	94	52
21	32	50	60	47	929	271	1170	252	439	599	92	56
22	36	40	58	48	242	221	1050	830	381	404	81	50
23	33	45	58	49	249	207	671	1590	363	354	77	41
24	40	40	56	48	281	199	3840	681	394	204	74	38
25	37	40	54	46	409	188	2630	430	369	165	74	57
26	36	40	53	45	543	181	2170	305	328	163	76	62
27	35	40	52	45	495	179	1600	273	1740	1390	72	57
28	38	40	52	45	747	169	1340	435	1990	2200	69	48
29	33	80	51	46	932	169	1130	826	621	590	67	46
30	34	150	51	48	---	205	952	476	369	3490	66	42
31	35	---	50	50	---	406	---	327	---	4020	63	---
TOTAL	1057	1681	2384	1449	6530	12587	22635	15482	39912	17450	4579	1505
MEAN	34.1	56.0	76.9	46.7	225	406	755	499	1330	563	148	50.2
MAX	56	150	177	50	932	1320	3840	1590	19500	4020	656	63
MIN	29	38	50	45	45	169	117	252	134	143	63	38
CFSM	.04	.07	.10	.06	.30	.53	.99	.65	1.75	.74	.19	.07
IN.	.05	.08	.12	.07	.32	.61	1.11	.76	1.95	.85	.22	.07
AC-FT	2100	3330	4730	2870	12950	24970	44900	30710	79170	34610	9080	2990
CAL YR 1975 TOTAL		91320		MEAN 250	7250	MIN 29	CFSM .33	IN 4.46	AC-FT	181100		
WTR YR 1976 TOTAL		127251		MEAN 348	19500	MIN 29	CFSM .46	IN 6.21	AC-FT	252400		

06817000 NODAWAY RIVER AT CLARINDA, IA--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--October 1975 to September 1976.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: October 1975 to September 1976.

WATER TEMPERATURE: October 1975 to September 1976.

SEDIMENT RECORDS: October 1975 to September 1976.

REMARKS.--Records of specific conductance are obtained from suspended-sediment samples at time of analysis. Suspended-sediment samples at normal flows and winter period are collected below dam 300 ft (91 m) upstream from gage. Samples at higher stages are collected from bridge at gage. No temperature record July 27-Aug. 15. No specific conductance record Nov. 19-Jan. 15.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Maximum observed, 470 micromhos Jan. 16, 1976; minimum, 130 micromhos June 15, 1976.

TEMPERATURE: Maximum observed, 26.5°C July 26, 1976; minimum, 0.0°C Dec. 25, 1975.

SEDIMENT CONCENTRATIONS: Maximum daily mean, 11,100 mg/L June 15, 1976; minimum daily mean, 6 mg/L Jan. 28, 29, 31, 1976.

SEDIMENT LOADS: Maximum daily, 497,000 tons (451,000 tonnes) June 14, 1976; minimum daily, 0.73 ton (0.66 tonne) Jan. 28, 1976.

EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum observed, 470 micromhos Jan. 16; minimum, 130 micromhos June 15.

TEMPERATURE: Maximum observed, 26.5°C July 26; minimum, 0.0°C Dec. 25.

SEDIMENT CONCENTRATIONS: Maximum daily mean, 11,100 mg/L June 15; minimum daily mean, 6 mg/L Jan. 28, 29, 31.

SEDIMENT LOADS: Maximum daily, 497,000 tons (451,000 tonnes) June 14; minimum daily, 0.73 ton (0.66 tonne) Jan. 28.

WATER QUALITY DATA, OCTOBER 1975 TO SEPTEMBER 1976

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	405	390		---	370	300	360	340	380	350	200	400
2	405	375		---	400	330	360	360	390	380	280	400
3	415	385		---	440	320	370	360	400	395	320	400
4	405	400		---	430	340	370	360	420	400	345	400
5	405	405		---	440	340	370	360	420	400	360	400
6	400	410		---	440	320	380	360	410	405	370	440
7	395	415		---	440	340	380	370	410	405	375	420
8	395	415		---	440	340	380	370	415	405	380	440
9	395	415		---	440	340	380	370	410	405	380	430
10	390	375		---	440	340	380	370	410	410	390	420
11	400	380		---	440	330	380	370	410	405	385	430
12	400	395		---	410	330	380	420	420	405	340	420
13	400	400		---	360	290	380	380	420	400	375	420
14	400	400		---	400	280	380	380	140	380	355	420
15	410	405		---	320	310	370	400	130	375	260	420
16	415	405		470	330	340	370	380	235	395	340	400
17	415	400		460	320	360	360	370	310	395	370	400
18	410	410		440	320	360	360	380	315	400	380	390
19	405	---		460	315	360	350	390	360	390	380	390
20	400	---		440	330	360	350	400	370	390	380	390
21	395	---		450	330	360	340	400	370	360	390	400
22	395	---		460	330	360	340	400	385	190	390	410
23	390	---		420	330	360	330	310	390	200	390	380
24	390	---		420	320	380	320	310	395	260	390	360
25	398	---		440	320	380	300	360	380	335	390	360
26	405	---		415	330	380	280	390	400	375	390	360
27	405	---		410	330	380	260	395	390	385	380	360
28	405	---		450	310	380	330	395	150	360	380	380
29	405	---		450	310	380	340	250	280	340	390	380
30	400	---		440	---	370	340	300	345	300	400	370
31	400	---		420	---	370	---	380	---	230	390	---
MONTH	402	---		---	370	346	353	367	355	362	363	400
YEAR	MAX	470	MIN	130	MEAN	374						

NODAWAY RIVER BASIN
06817000 NODAWAY RIVER AT CLARINDA, IA--Continued

WATER-QUALITY RECORDS

WATER QUALITY DATA, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	16.5	13.5	9.0	3.5	1.5	4.5	7.0	13.5	20.0	21.0	---	24.5
2	14.5	10.5	1.5	3.5	1.0	6.5	10.5	15.5	21.0	21.5	---	24.5
3	15.0	13.0	4.5	1.0	1.0	2.0	12.0	14.5	21.0	21.5	---	24.0
4	14.5	14.5	1.5	0.5	1.0	3.5	7.0	13.5	19.5	21.0	---	23.5
5	14.5	13.0	5.5	3.5	0.5	1.0	7.0	14.5	20.5	21.0	---	23.5
6	15.5	14.5	2.5	2.5	0.5	3.5	13.0	14.5	21.5	21.0	---	22.5
7	15.5	14.5	3.5	3.0	1.0	3.5	7.0	13.5	20.0	22.0	---	22.0
8	15.5	14.5	4.5	3.5	2.0	3.5	12.0	11.0	20.0	23.5	---	21.0
9	16.0	14.5	4.5	2.0	2.5	3.5	9.0	13.0	22.0	22.0	---	20.5
10	14.5	13.5	3.5	3.5	2.0	3.5	12.0	15.5	23.5	21.0	---	20.0
11	15.5	14.5	4.5	3.5	2.5	3.5	11.5	15.5	23.5	24.5	---	19.5
12	17.0	12.0	3.0	3.5	3.0	4.5	11.0	14.5	23.5	25.0	---	19.0
13	15.5	8.0	5.5	2.5	2.0	1.5	16.0	13.5	21.5	25.5	---	18.5
14	15.5	8.0	4.5	3.5	3.5	2.0	13.5	14.5	18.0	25.5	---	18.0
15	16.5	8.0	4.0	3.5	4.0	3.0	18.5	15.5	19.5	25.5	---	19.0
16	13.5	9.0	4.0	3.5	3.5	3.5	18.0	16.5	21.0	24.5	23.5	20.0
17	15.5	9.0	3.5	1.0	3.5	3.5	16.5	16.5	21.0	25.5	23.5	20.0
18	14.5	11.5	3.0	1.5	4.5	6.0	16.5	16.5	21.0	25.5	23.5	20.0
19	14.5	10.0	4.5	1.0	3.5	11.0	15.0	16.5	21.0	25.5	23.5	21.0
20	14.5	9.0	2.5	3.5	4.5	7.0	13.5	17.5	21.0	25.5	24.5	20.0
21	15.5	10.0	1.5	1.5	4.0	7.0	15.0	16.5	21.0	24.5	25.5	18.5
22	14.5	8.0	2.0	2.0	3.5	9.0	13.0	17.0	21.0	25.5	24.0	17.0
23	16.0	11.5	2.0	1.5	3.0	8.0	15.5	17.0	21.0	25.5	25.5	20.0
24	14.5	5.5	2.0	3.5	4.5	7.0	15.0	16.5	21.0	25.5	24.5	20.0
25	15.5	4.5	0.0	1.0	3.5	11.0	15.5	16.5	21.0	25.5	26.0	18.0
26	14.0	9.5	2.5	0.5	4.0	10.5	14.5	21.0	21.0	26.5	25.0	16.0
27	14.5	7.5	9.0	1.0	4.5	10.5	13.5	19.0	21.0	---	24.5	14.0
28	13.0	7.5	9.0	1.0	7.0	10.0	13.5	19.5	21.0	---	24.5	13.5
29	13.5	7.0	2.5	3.0	6.0	11.0	13.5	20.0	21.0	---	24.5	14.5
30	13.0	5.5	9.0	0.5	---	8.5	14.5	19.0	21.0	---	24.5	15.5
31	14.0	---	4.5	3.0	---	8.5	---	20.0	---	---	24.5	---
MONTH	15.0	10.5	4.0	2.5	3.0	6.0	13.0	16.0	21.0	24.0	---	19.5
YEAR	MAX	26.5	MIN	0.0	MEAN	12.5						

SUSPENDED-SEDIMENT DISCHARGE (TONS/DAY), WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976

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	56	16	2.4	49	56	7.4	100	45	12
2	41	17	1.9	57	47	7.2	130	80	28
3	38	24	2.5	62	48	8.0	130	74	26
4	35	24	2.3	50	55	7.4	120	197	64
5	35	29	2.7	42	58	6.6	111	129	39
6	32	42	3.6	40	58	6.3	89	79	19
7	31	41	3.4	38	60	6.2	79	44	9.4
8	31	44	3.7	38	47	4.8	72	32	6.2
9	31	51	4.3	61	66	11	72	28	5.4
10	31	39	3.3	99	250	67	74	24	4.8
11	31	37	3.1	108	106	31	73	35	6.9
12	31	45	3.8	79	74	16	80	22	4.8
13	32	48	4.1	53	63	9.0	78	22	4.6
14	31	65	5.4	51	26	3.6	177	154	74
15	29	62	4.9	45	25	3.0	76	198	41
16	29	30	2.3	47	40	5.1	78	182	38
17	31	38	3.2	48	55	7.1	70	57	11
18	30	29	2.3	48	64	8.3	60	101	16
19	30	37	3.0	48	52	6.7	60	52	8.4
20	33	43	3.8	53	50	7.2	60	93	15
21	32	49	4.2	50	21	2.8	60	73	12
22	36	49	4.8	40	12	1.3	58	46	7.2
23	33	61	5.4	45	17	2.1	58	39	6.1
24	40	58	6.3	40	19	2.1	55	37	5.6
25	37	15	1.5	40	16	1.7	54	35	5.1
26	36	15	1.5	40	24	2.6	53	35	5.0
27	35	25	2.4	40	18	1.9	52	30	4.2
28	38	35	3.6	40	18	1.9	52	25	3.5
29	33	17	1.5	80	52	11	51	23	3.2
30	34	28	2.6	150	27	11	51	25	3.4
31	35	42	4.0	---	---	---	50	26	3.5
TOTAL	1057	---	103.8	1681	---	267.3	2384	---	492.3

NODAWAY RIVER BASIN

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06817000 NODAWAY RIVER AT CLARINDA, IA--Continued

WATER-QUALITY RECORDS

WATER QUALITY DATA, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976

SUSPENDED-SEDIMENT DISCHARGE (TONS/DAY), WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976

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	50	38	5.1	55	12	1.8	631	1870	3190
2	50	32	4.3	52	10	1.4	376	770	782
3	49	36	4.8	50	9	1.2	319	457	394
4	48	36	4.7	48	8	1.0	280	362	274
5	48	33	4.3	46	11	1.4	300	485	393
6	48	25	3.2	45	8	.97	320	342	295
7	46	45	5.6	46	14	1.7	465	674	846
8	45	59	7.2	47	13	1.6	525	669	948
9	45	56	6.8	50	17	2.3	480	561	727
10	45	18	2.2	54	12	1.7	582	1400	2200
11	45	18	2.2	60	10	1.6	674	2600	4730
12	45	19	2.3	65	15	2.6	1130	4350	17500
13	45	24	2.9	75	10	2.0	1320	5070	20600
14	45	22	2.7	90	30	7.3	583	1620	2550
15	46	20	2.5	107	68	20	481	995	1290
16	46	28	3.5	127	290	156	410	585	648
17	47	13	1.6	311	1610	1620	353	450	429
18	47	10	1.3	161	380	165	324	387	339
19	47	8	1.0	120	250	81	326	490	431
20	45	10	1.2	94	240	61	313	508	429
21	47	11	1.4	929	2270	7000	271	395	289
22	48	20	2.6	242	870	568	221	280	167
23	49	13	1.7	249	560	376	207	238	133
24	48	38	4.9	281	510	387	199	255	137
25	46	16	2.0	409	1150	1270	188	228	116
26	45	23	2.8	543	1510	2210	181	235	115
27	45	13	1.6	495	830	1110	179	200	97
28	45	5	.73	747	2050	4690	169	241	110
29	46	6	.75	932	2930	7370	169	174	79
30	48	7	.91	---	---	---	205	205	113
31	50	6	.81	---	---	---	406	985	1080
TOTAL	1449	---	89.60	6530	---	27112.57	12587	---	61431
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	307	865	717	815	475	1050	287	352	273
2	238	229	147	735	435	863	256	181	125
3	208	258	145	602	360	585	232	151	95
4	181	220	108	588	295	468	213	141	81
5	165	189	84	602	275	447	198	110	59
6	157	160	68	534	280	404	190	58	30
7	151	155	63	458	222	275	180	42	20
8	147	72	29	396	182	195	172	37	17
9	139	100	38	400	165	178	162	36	16
10	131	51	18	400	162	175	157	48	20
11	124	62	21	342	140	129	152	46	19
12	121	37	12	327	115	102	144	45	17
13	120	32	10	351	102	97	134	38	14
14	117	38	12	344	100	93	19500	7840	497000
15	133	250	90	327	98	87	6830	11100	211000
16	431	8230	10000	394	132	140	1440	3550	13800
17	231	3220	2010	464	212	266	869	1330	3120
18	1120	6760	29800	386	152	158	733	1750	3460
19	1210	4710	18200	311	108	91	576	529	823
20	651	2020	3550	281	82	62	493	360	479
21	1170	2600	8210	252	65	44	439	267	316
22	1050	2440	6920	830	1920	13300	381	246	253
23	671	850	1540	1590	4790	23800	363	206	202
24	3840	7600	98500	681	1000	1840	394	272	289
25	2630	640	4540	430	355	412	369	210	209
26	2170	760	4450	305	200	165	328	130	115
27	1600	1620	7000	273	132	97	1740	6220	52100
28	1340	985	3560	435	2190	4920	1990	9500	51000
29	1130	692	2110	826	5780	12900	621	4500	7550
30	952	578	1490	476	4390	5640	369	1250	1250
31	---	---	---	327	1100	971	---	---	---
TOTAL	22635	---	203442	15482	---	69954	39912	---	843752

06817000 NODAWAY RIVER AT CLARINDA, IA--Continued

WATER-QUALITY RECORDS

SUSPENDED-SEDIMENT DISCHARGE (TONS/DAY), WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976

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	305	490	404	656	1800	3190	63	59	10
2	278	332	249	348	588	552	58	64	10
3	260	267	187	264	351	250	58	47	7.4
4	246	222	147	216	252	147	58	62	9.7
5	233	169	106	187	202	102	54	65	9.5
6	221	94	56	170	151	69	53	47	6.7
7	214	55	32	156	120	51	52	39	5.5
8	208	45	25	149	58	23	49	32	4.2
9	181	28	14	136	54	20	49	27	3.6
10	179	43	21	133	45	16	47	30	3.8
11	170	53	24	128	65	29	49	28	3.7
12	168	83	38	141	300	114	49	29	3.8
13	158	80	34	117	92	29	48	26	3.4
14	153	107	44	226	540	330	47	38	4.8
15	148	105	42	187	655	331	47	28	3.6
16	160	227	98	141	164	62	44	29	3.4
17	154	70	29	114	84	26	42	23	2.6
18	146	53	21	106	62	18	41	27	3.0
19	146	49	19	99	47	13	48	38	4.9
20	143	45	17	94	33	8.4	52	36	5.1
21	599	2030	5070	92	28	7.0	56	43	6.5
22	404	2170	2370	81	29	6.3	50	26	3.5
23	354	1370	1310	77	34	7.1	41	25	2.8
24	204	404	223	74	34	6.8	38	18	1.8
25	165	202	90	74	40	8.0	57	19	2.9
26	163	133	59	76	41	8.4	62	25	4.2
27	1390	2000	7510	72	45	8.7	57	22	3.4
28	2200	1750	10400	69	38	7.1	48	18	2.3
29	590	450	717	67	32	5.8	46	15	1.9
30	3490	3150	29700	66	45	8.0	42	17	1.9
31	4020	6100	66200	63	61	10	---	---	---
TOTAL	17450	---	125256	4579	---	5463.6	1505	---	139.9
YEAR 127251.0			1337504						

DATE	TIME	TEMPER- ATURE (DEG C) (00010)	NUMBER OF SAM- PLING POINTS (00063)	INSTAN- TANEOUS DIS- CHARGE (CFS) (00061)	SUS- PENDED SEDIM- ENT CHARGE (MG/L) (80154)	SUS- PENDED SEDIM- ENT 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 .008 MM (70339)	SUS. SED. FALL DIAM. % FINER THAN .016 MM (70340)	
NOV.											
18...	1115	11.5	3	49	--	--	--	--	--	--	
FEB.											
17...	0740	3.5	--	409	2460	2720	57	64	65	88	
29...	0730	6.0	--	969	3530	9240	42	51	63	78	
MAR.											
13...	0800	1.5	--	1600	6150	26600	38	44	54	79	
19...	1515	13.5	3	331	--	--	--	--	--	--	
APR.											
16...	0730	18.0	--	507	11200	15300	53	62	76	93	
19...	0830	15.0	--	1340	5180	18700	37	43	46	69	
24...	0800	14.0	--	5670	11400	175000	27	33	41	53	
JUNE											
14...	1150	18.0	--	26300	12100	859000	41	52	63	74	
15...	0700	--	--	7260	14200	278000	31	37	45	58	
JULY											
31...	0700	--	--	6060	7870	129000	28	33	38	52	
DATE	TIME	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 .062 MM (70331)	SUS. SED. FALL DIAM. % FINER THAN .062 MM (80158)	SUS. SED. FALL DIAM. % FINER THAN .125 MM (80159)	SUS. SED. FALL DIAM. % FINER THAN .250 MM (80160)	SUS. SED. FALL DIAM. % FINER THAN .500 MM (80161)	SUS. SED. FALL DIAM. % FINER THAN 1.00 MM (80162)
NOV.											
18...	--	--	--	--	--	1	1	1	8	41	
FEB.											
17...	--	--	--	--	100	--	--	--	--	--	--
29...	--	--	--	--	99	--	--	--	--	--	--
MAR.											
13...	99	100	--	--	--	--	--	--	--	--	--
19...	--	--	--	--	--	--	--	--	--	--	--
APR.											
16...	--	--	--	--	100	--	--	--	--	--	--
19...	99	100	--	--	--	--	--	--	--	--	--
24...	91	96	99	100	--	--	--	--	--	--	--
JUNE											
14...	96	99	100	--	--	--	--	--	--	--	--
15...	96	99	100	--	--	--	--	--	--	--	--
JULY											
31...	94	98	100	--	--	--	--	--	--	--	--

06818750 PLATTE RIVER NEAR DIAGONAL, IA

LOCATION.--Lat 40°45'02", long 94°24'46", in NE1/4 NW1/4 sec.22, T.69 N., R.31 W., Ringgold County, Hydrologic Unit 10240012, on left bank at downstream side of bridge on county highway, 2.2 mi (3.5 km) upstream from Turkey Creek, 4.6 mi (7.4 km) southwest of Diagonal, and 4.9 mi (7.9 km) downstream from Gard Creek.

DRAINAGE AREA.--217 mi² (562 km²).

PERIOD OF RECORD.--April 1968 to current year.

REVISED RECORDS.--WSP 2119: 1969 (P).

GAGE.--Water -stage recorder. Datum of gage is 1,095.27 ft (333.838 m) above mean sea level.

REMARKS.--Records good except those for winter period, which are fair. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--8 years, 126 ft³/s (3,568 m³/s), 7.88 in/yr (200 mm/yr), 91,290 acre-ft/yr (113 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 6,420 ft³/s (182 m³/s) Oct. 12, 1973, gage height, 23.24 ft (7.084 m); minimum daily, 0.21 ft³/s (0.006 m³/s) Jan. 14, 15, 1969.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of June 1967 reached a stage of 23.16 ft (7.059 m), from flood ark by local resident, discharge, 6,360 ft³/s (180 m³/s).

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 1,200 ft³/s (34.0 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage Height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage Height (ft) (m)
Apr. 18	1645	*5,680 161	*22.05 6.721	Apr. 24	2200	4,380 124	19.67 5.995
Apr. 20	2245	3,850 109	18.43 5.617	June 15	0115	2,730 77.3	15.71 4.788

Minimum daily discharge, 0.3 ft³/s (0.008 m³/s) July 20.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	13	10	62	4.6	9.5	115	38	116	33	23	90	5.2
2	12	9.6	42	4.3	8.6	98	33	97	26	18	48	4.9
3	11	9.6	28	4.4	8.0	87	30	94	24	17	20	4.5
4	9.2	9.6	23	3.7	7.2	79	26	69	20	16	14	4.2
5	9.6	9.6	21	3.2	5.7	177	24	63	18	14	15	4.1
6	9.2	10	42	3.6	4.4	147	24	56	16	13	16	4.2
7	9.2	10	21	5.0	5.2	202	23	51	16	12	13	4.2
8	9.2	9.0	16	5.1	8.4	306	22	46	16	11	7.8	4.1
9	9.2	12	16	5.2	11	190	21	42	14	10	6.3	3.8
10	8.9	15	15	5.3	17	229	20	39	14	9.5	5.7	3.4
11	8.6	21	13	5.4	21	156	19	36	13	8.0	5.2	3.2
12	8.6	9.6	12	5.4	28	458	20	32	9.2	6.7	96	3.1
13	7.8	6.1	12	5.4	26	166	18	33	3.7	5.5	70	3.0
14	6.9	4.6	130	5.4	24	122	16	32	1820	4.5	324	3.0
15	7.5	4.2	49	5.4	23	94	19	29	1740	3.6	134	2.9
16	7.5	4.8	30	5.4	39	82	22	36	236	2.9	49	2.9
17	7.5	3.9	22	5.4	80	71	599	45	116	2.7	27	2.9
18	8.9	3.7	15	5.4	121	67	5140	28	79	2.6	20	3.2
19	9.2	4.0	9.2	5.4	61	62	958	21	70	2.4	14	3.2
20	7.8	5.6	11	5.4	35	57	1180	18	50	2.3	13	3.4
21	8.2	7.6	10	5.4	194	45	2510	15	41	7.0	12	3.2
22	8.2	6.6	8.1	5.4	96	38	434	15	37	56	11	3.4
23	8.2	6.7	7.0	5.5	101	37	342	20	33	300	9.9	3.3
24	8.2	6.8	7.0	5.6	202	36	3360	22	38	150	8.9	2.9
25	9.6	6.2	6.4	5.6	390	35	2610	16	39	64	8.1	5.0
26	10	5.8	6.4	5.9	442	35	555	16	30	25	7.5	6.6
27	9.6	6.0	6.2	6.2	438	35	308	15	27	11	6.8	7.0
28	8.9	7.6	5.6	6.6	398	29	217	12	31	60	6.4	5.7
29	9.2	69	5.4	7.0	221	32	162	276	29	1000	6.0	4.0
30	9.2	443	5.1	7.5	---	65	140	71	26	340	5.7	4.1
31	9.2	---	4.9	9.0	---	59	---	41	---	180	5.5	---
TOTAL	279.3	737.2	661.3	168.1	3025.0	3411	18890	1502	4664.9	2377.7	1075.8	118.6
MEAN	9.01	24.6	21.3	5.42	104	110	630	48.5	155	76.7	34.7	3.95
MAX	13	443	130	9.0	442	458	5140	276	1820	1000	324	7.0
MIN	6.9	3.7	4.9	3.2	4.4	29	16	12	3.7	2.3	5.2	2.9
CFSM	.04	.11	.10	.02	.48	.51	2.90	.22	.71	.35	.16	.02
IN.	.05	.13	.11	.03	.52	.58	3.24	.26	.80	.41	.18	.02
AC-FT	554	1460	1310	333	6000	6770	37470	2980	9250	4720	2130	235
CAL YR 1975	TOTAL	28954.30	MEAN	79.3	MAX	2350	MIN	.90	CFSM	.37	IN	4.96
WTR YR 1976	TOTAL	36910.90	MEAN	101	MAX	5140	MIN	2.3	CFSM	.47	IN	6.33
									AC-FT	57430	AC-FT	73210

PLATTE RIVER BASIN

06819190 EAST FORK ONE HUNDRED AND TWO RIVER NEAR BEDFORD, IA

LOCATION.--Lat 40°38'01", long 94°44'41", in NE1/4 NE1/4 sec.9, T.67 N., R.34 W., Taylor County, Hydrologic Unit 10240013, on left bank at downstream side of bridge of county highway J55, 0.4 mi (0.6 km) upstream from Daugherty Creek, and 2.8 mi (4.5 km) southwest of junction of U.S. Highways 2 and 148 in Bedford.

DRAINAGE AREA.--92.1 mi² (238.5 km²).

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

GAGE.--Water-stage recorder. Datum of gage is 1,057.51 ft (322.329 m) above mean sea level (levels by Corps of Engineers). Prior to Oct. 1, 1968, at datum 5.00 ft (1.524 m) higher.

REMARKS.--Records fair except those for winter period, which are poor. Slight regulation at low flow by low dam used for water supply in Bedford. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--17 years, 50.4 ft³/s (1.427 m³/s), 7.43 in/yr (189 mm/yr), 36,510 acre-ft/yr (45.0 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 9,980 ft³/s (283 m³/s) Oct. 11, 1973, gage height, 20.72 ft (6.315 m); maximum gage height, 20.95 ft (6.386 m) Jan. 12, 1960, present datum; no flow at times in 1956-68, 1972.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 2,000 ft³/s (56.6 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ / s) (m ³ / s)		Gage Height (ft) (m)		Date	Time	Discharge (ft ³ / s) (m ³ / s)		Gage Height (ft) (m)	
Apr. 17	2400	*6,500	184	*15.50	4.724	Apr. 24	0630	5,120	145	13.37	4.075
Apr. 20	2115	4,110	116	11.81	3.600						

Minimum daily discharge, 0.02 ft³/s (0.001 m³/s) Oct. 3-10.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.65	2.7	13	9.4	6.0	42	19	41	21	3.3	7.7	.43
2	.33	2.3	8.8	9.2	5.6	44	17	33	15	2.6	3.4	.28
3	.02	1.2	7.4	8.0	5.4	37	16	26	15	2.7	1.5	.26
4	.02	.99	7.3	6.5	5.4	86	13	24	11	2.0	1.2	.27
5	.02	.49	7.4	6.0	5.2	160	12	23	11	1.8	1.0	.25
6	.02	.20	7.9	5.0	5.0	90	13	20	11	1.4	1.1	.21
7	.02	1.5	8.4	4.0	5.0	140	12	14	7.4	1.1	1.0	.19
8	.02	.65	8.8	3.8	6.0	165	11	14	7.4	1.1	.95	.25
9	.02	2.1	9.0	3.8	10	91	9.2	14	7.1	1.0	6.0	.38
10	.02	19	9.0	3.8	15	107	9.0	14	7.2	.98	3.0	.17
11	.06	4.9	9.0	3.8	25	66	8.7	13	6.8	.96	1.3	.19
12	.06	2.1	9.0	3.9	19	281	7.8	13	6.7	.95	7.2	.19
13	.12	1.2	9.2	4.0	15	62	6.9	17	5.6	.94	6.1	.19
14	.06	.65	9.5	4.1	12	49	8.5	14	698	.93	30	.24
15	.06	.49	10	4.5	22	41	9.2	15	373	.92	34	.20
16	.06	.49	11	4.4	32	39	8.5	21	28	1.2	5.3	.23
17	.49	.33	11	4.0	41	36	1510	19	15	1.4	2.5	.11
18	3.3	.13	10	4.0	62	36	3070	12	11	1.3	1.4	.40
19	.82	.13	11	4.0	24	30	242	10	10	1.1	1.2	.68
20	.12	1.7	12	4.0	18	29	1120	8.4	7.7	1.0	1.1	.42
21	.06	.87	11	4.3	216	21	1120	7.3	7.6	1.2	.90	.28
22	.12	.99	10	4.5	57	19	199	13	6.3	6.3	.65	.29
23	.06	.85	9.6	4.8	93	19	261	28	5.3	3.2	.60	.28
24	.12	.29	9.4	4.5	267	19	2220	20	7.1	1.4	.55	.33
25	.12	.11	9.0	4.2	377	17	738	12	7.0	1.1	.67	7.7
26	.12	.10	9.0	3.9	285	20	161	8.4	7.1	1.0	.50	2.4
27	.12	.10	9.0	3.7	180	17	105	7.2	7.2	1.0	.42	1.5
28	.12	.11	9.0	3.8	123	15	78	35	6.3	1.4	.33	1.3
29	.06	60	9.0	4.0	71	23	58	317	5.5	1.1	.30	1.0
30	.06	183	9.2	4.5	---	45	51	64	4.1	175	.30	---
31	.06	---	9.4	4.0	---	25	---	28	---	97	.38	.83
TOTAL	7.31	289.67	292.3	147.4	2007.6	1871	11113.8	905.3	1336.4	318.38	122.55	21.55
MEAN	.24	9.66	9.43	4.75	69.2	60.4	370	29.2	44.5	10.3	3.95	.72
MAX	3.3	183	13	9.4	377	281	3070	317	698	175	34	7.7
MIN	.02	.10	7.3	3.7	5.0	15	6.9	7.2	4.1	.92	.30	.17
CFSM	.002	.10	.10	.05	.75	.66	4.02	.32	.48	.11	.04	.007
IN	.003	.12	.12	.06	.81	.76	4.49	.37	.54	.13	.05	.009
AC-FT	14	575	580	292	3980	3710	22040	1800	2650	632	243	43
CAL YR 1975	TOTAL	12737.84		MEAN 34.9	MAX 2360	MIN .01	CFSM .38	IN 5.14	AC-FT	25270		
WTR YR 1976	TOTAL	18433.26		MEAN 50.4	MAX 3070	MIN .02	CFSM .55	IN 7.45	AC-FT	36560		

GRAND RIVER BASIN

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06897950 ELK CREEK NEAR DECATUR CITY, IA
(Hydrologic bench-mark station)

LOCATION --Lat 40°43'18", long 93°56'12", near the southeast corner sec.34, T.69 N., R.27 W., Decatur County, Hydrologic Unit 10280102, at right downstream corner of bridge on county highway, 1,000 ft (305 m) downstream from West Elk Creek, 5.2 mi (8.4 km) upstream from mouth, and 5.7 mi (9.2 km) southwest of Decatur City.

DRAINAGE AREA.--52.5 mi² (136 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1967 to current year.

GAGE.--Water-stage recorder. Datum of gage is 924.70 ft (281.849 m) above mean sea level. Oct. 1, 1967, to Sept. 30, 1974, at datum 10.00 ft (3.05 m) higher.

REMARKS.--Records good except those for winter period, which are poor.

AVERAGE DISCHARGE.--9 years, 32.4 ft³/s (0.918 m³/s), 8.38 in/yr (213 mm/yr), 23,470 acre-ft/yr (28.9 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 11,400 ft³/s (323 m³/s) Apr. 24, 1976, gage height, 25.80 ft (7.864 m), from rating curve extended above 5,300 ft³/s (150 m³/s) on basis of step-backwater computation; no flow at times most years.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of June 14, 1967, reached a stage of 18.35 ft (5.593 m), datum in use prior to Oct. 1, 1974, discharge, 15,000 ft³/s (425 m³/s), estimated from rating curve extended above 5,300 ft³/s (150 m³/s) on basis of step-backward computation. Flood of Aug. 6, 1959, reached a stage between 20.5 and 22.5 ft (6.25 and 6.86 m), datum in use prior to Oct. 1, 1974, 300 ft (91 m) downstream, from information by assistant county engineer, discharge not determined.

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

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage Height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage Height (ft) (m)
Mar. 6	unknown	1,000 28.3	unknown --	Apr. 20	1845	3,340 94.6	19.51 5.947
Mar. 29	2245	1,400 39.6	16.68 5.084	Apr. 24	0300	*11,400 323	*25.80 7.864
Apr. 18	0330	5,450 154	21.70 6.614				

No flow many days in July, August, and September.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.0	1.1	23	4.2	3.1	4.8	23	21	3.3	.13	.47	
2	.71	3.4	12	3.9	2.9	4.8	17	17	2.4	.15	.11	
3	.56	4.0	9.5	3.5	2.8	3.6	14	14	1.7	.15	.06	
4	.46	2.9	6.3	3.2	2.7	145	11	13	1.6	.58	0	
5	.44	1.5	5.0	2.8	2.5	713	10	12	1.4	.04	0	
6	.37	.98	6.8	2.3	2.5	850	9.5	16	1.4	.02	0	
7	.36	.98	5.5	2.0	5.8	350	8.6	9.2	1.4	.02	0	
8	.33	.78	4.4	2.0	13	110	7.4	8.2	1.4	.02	0	
9	.31	.93	3.7	2.1	29	35	6.6	7.7	.79	.02	0	
10	.31	4.0	3.3	2.2	57	31	6.5	7.5	.96	.01	0	
11	.31	1.3	3.0	2.2	31	30	6.1	6.4	1.3	.01	.29	
12	.31	.83	2.8	2.2	29	194	5.1	6.2	.80	.01	14	
13	.32	.64	2.6	2.3	23	32	5.5	8.6	.49	.01	.19	
14	.47	.53	60	2.3	14	26	5.6	6.1	57	.01	.33	
15	.53	.53	32	2.3	16	21	5.6	8.7	4.7	.01	.25	
16	.47	.54	15	2.4	18	17	4.9	12	1.7	.01	.06	
17	.57	.65	11	2.4	11	15	158	11	.95	.01	.01	
18	.59	.63	7.0	2.4	7.5	14	1330	5.8	.70	.01	0	
19	.62	.59	7.8	2.4	5.3	12	84	4.9	.58	.01	0	
20	.73	2.4	8.2	2.5	3.8	10	852	4.4	.45	.01	0	
21	.83	2.7	8.1	2.6	22	7.8	227	3.9	.35	.01	0	
22	.92	1.1	7.8	2.7	19	7.7	77	3.7	.28	.78	0	
23	1.0	.68	7.6	2.7	45	7.8	102	4.3	.24	.34	0	
24	1.2	.85	7.2	2.7	49	7.3	3330	4.4	3.8	.05	0	
25	1.1	1.0	6.9	2.8	22	6.8	408	3.4	.92	.01	0	
26	1.2	1.1	6.6	3.0	11	8.0	73	3.0	.37	.01	0	
27	.94	.94	6.4	3.1	8.6	7.1	47	2.7	.72	0	0	
28	.82	1.5	6.1	3.2	6.3	6.0	36	2.7	.69	0	0	
29	.71	2.5	5.8	3.3	5.1	170	29	19	.38	0	0	
30	.59	63	5.4	3.2	---	202	25	8.0	.19	36	0	
31	.59	---	4.9	3.2	---	35	---	4.2	---	2.8	0	---
TOTAL	19.67	104.58	301.7	84.1	467.9	3083.7	6924.4	259.0	92.96	41.24	15.77	0
MEAN	.63	3.49	9.73	2.71	16.1	99.5	231	8.35	3.10	1.33	.51	0
MAX	1.2	63	60	4.2	57	850	3330	21	57	36	14	0
MIN	.31	.53	2.6	2.0	2.5	3.6	4.9	2.7	.19	0	0	0
CFSM	.01	.07	.19	.05	.31	1.90	4.40	.16	.06	.03	.009	0
IN.	.01	.07	.21	.06	.33	2.18	4.91	.18	.07	.03	.01	0
AC-FT	39	207	598	167	928	6120	13730	514	184	82	31	0
CAL YR 1975	TOTAL	7789.42	MEAN 21.3	MAX 313	MIN 0	CFSM .41	IN 5.52	AC-FT 15450				
WTR YR 1976	TOTAL	11395.02	MEAN 31.1	MAX 3330	MIN 0	CFSM .59	IN 8.07	AC-FT 22600				

GRAND RIVER BASIN

06897950 ELK CREEK NEAR DECATUR CITY, IA--Continued
(Hydrologic bench-mark station)

WATER-QUALITY RECORDS

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

REMARKS.--Miscellaneous biological data collected September 1970 to September 1972 are available in the District office.

WATER QUALITY DATA, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976

DATE	TIME	INSTANTANEOUS DIS- CHARGE (CFS) (00061)	DIS- SOLVED SILICA (SI02) (MG/L) (00955)	TOTAL IRON (FE) (UG/L) (01045)	TOTAL MAN- GANESE (MN) (UG/L) (01055)	DIS- SOLVED CAL- CIUM (CA) (MG/L) (00915)	DIS- SOLVED MAG- NE- SIUM (MG) (MG/L) (00925)	DIS- SOLVED SODIUM (NA) (MG/L) (00930)	PERCENT SODIUM (00932)	SODIUM AD- SORP- TION RATIO (00931)	DIS- SOLVED PO- TAS- SIUM (K) (MG/L) (00935)	BICAR- BONATE (HCO3) (MG/L) (00440)
NOV 05...	0915	1.7	11	--	--	83	17	12	8	.3	5.8	272
DEC 16...	1325	14	13	--	--	72	14	11	9	.3	4.7	222
JAN 29...	1400	3.3	12	--	--	86	18	12	8	.3	3.8	271
MAR 09...	1040	47	11	--	--	61	13	9.6	9	.3	3.2	167
APR 21...	0720	216	11	33000	830	54	11	5.1	6	.2	4.5	109
JUN 09...	0805	.83	8.9	--	--	76	18	12	9	.3	3.5	271
AUG 03...	1855	.05	9.2	--	--	59	13	8.5	8	.3	5.5	213

DATE	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)	TOTAL NITRITE PLUS NITRATE (N) (MG/L) (00630)	TOTAL PHOS- PHORUS (P) (MG/L) (00665)	DIS- SOLVED SOLIDS (RESI- DUE AT 180 C) (MG/L) (70300)	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)
NOV 05...	--	223	57	8.5	.3	.04	.06	340	329	.46	1.58
DEC 16...	--	182	63	7.9	.1	1.2	.13	300	295	.41	12.1
JAN 29...	--	222	68	9.6	.3	.37	.03	368	343	.50	3.28
MAR 09...	--	137	47	7.9	.4	1.9	.21	242	235	.33	31.4
APR 21...	--	89	26	4.9	.3	2.4	.57	222	171	.30	129
JUN 09...	--	222	50	9.0	.4	.21	.05	300	311	.41	.67
AUG 03...	0	175	26	7.9	.4	.01	.10	242	235	.33	.04

DATE	HARD- NESS (CA, MG) (MG/L) (00900)	NON- CAR- BONATE HARD- NESS (MG/L) (00902)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS) (00095)	PH (UNITS) (00400)	TEMPER- ATURE (DEG C) (00010)	DIS- SOLVED OXYGEN (MG/L) (00300)	PER- CENT SATUR- ATION (00301)	CARBON DIOXIDE (CO2) (MG/L) (00405)	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)
NOV 05...	280	54	500	8.1	15.0	--	--	3.5	280	120	64
DEC 16...	240	55	460	8.9	.0	--	--	.4	4500	1600	4600
JAN 29...	290	67	550	7.8	.0	--	--	6.9	13	87	320
MAR 09...	210	69	340	8.0	.5	12.3	88	2.7	740	310	840
APR 21...	180	91	--	--	9.5	--	--	--	--	--	--
JUN 09...	260	42	520	8.3	20.5	7.1	81	2.2	920	490	100
AUG 03...	200	26	370	8.5	30.0	--	--	1.1	1050	700	345

DATE	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)	TOTAL COPPER (CU) (UG/L) (01042)	TOTAL LEAD (PB) (UG/L) (01051)	TOTAL MERCURY (HG) (UG/L) (71900)	TOTAL SELE- NIUM (SE) (UG/L) (01147)	TOTAL SILVER (AG) (UG/L) (01077)	TOTAL ZINC (ZN) (UG/L) (01092)
APR 21...	.00	8	10	1	20	28	28	.2	1	0	110

GRAND RIVER BASIN

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06897950 ELK CREEK NEAR DECATUR CITY, IA--Continued
(Hydrologic bench-mark station)

WATER-QUALITY RECORDS

WATER QUALITY DATA, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976

DATE	TIME	TEMPER- ATURE (DEG C) (00010)	INSTAN- TANEOUS DIS- CHARGE (CFS) (00061)	SUS- PENDE SEDIM- ENT DIS- CHARGE (MG/L) (80154)	SUS- PENDE SEDIM- ENT DIS- CHARGE (T/DAY) (80155)
DEC.					
16...	1325	.0	14	56	2.2
MAR.					
09...	1040	.5	47	216	28
APR.					
20...	1900	11.0	2960	4030	32200
21...	0720	9.5	216	184	107
JUNE					
09...	0805	20.5	.83	27	.06
AUG.					
03...	1855	30.0	.05	25	.00

GRAND RIVER BASIN

06898000 THOMPSON RIVER AT DAVIS CITY, IA

LOCATION.--Lat 40°38'25", long 93°48'29", in SE1/4 SE1/4 sec.35, T.68 N., R.26 W., Decatur County, Hydrologic Unit 10280102, on right bank 15 ft (5 m) downstream from bridge on U.S. Highway 69 at Davis City, 2.6 mi (4.2 km) upstream from Dickersons Branch, and 5.2 mi (8.4 km) upstream from Iowa-Missouri State line.

DRAINAGE AREA.--701 mi² (1,816 km²).

PERIOD OF RECORD.--May 1918 to July 1925, July 1941 to current year. Monthly discharge only for some periods, published in WSP 1310. Prior to October 1918, published as "Grand River".

REVISED RECORDS.--WSP 1240: 1918, 1920-21 (M), 1922-24, 1925 (M), 1946-47 (M). WSP 1440: Drainage area. WSP 1710: 1957.

GAGE.--Water-stage recorder. Datum of gage is 874.04 ft (266.407 m) above mean sea level. May 14, 1918, to July 2, 1925, July 14, 1941, to Feb. 24, 1942, nonrecording gage, and Feb. 25, 1942, to Feb. 8, 1967, water-stage recorder at same site at datum 2.00 ft (0.61 m) higher.

REMARKS.--Records good except those for winter period, which are poor. Several observations of water temperature were made during the year. National Weather Service gage height telemeter at station.

AVERAGE DISCHARGE.--41 years (1918-24, 1941-76), 368 ft³/s (10,421 m³/s), 7.13 in/yr (181 mm/yr), 266,600 acre-ft/yr (329 hm³/yr); median of yearly mean discharges, 310 ft³/s (8.78 m³/s) 6.0 in/yr (152 mm/yr) 225,000 acre-ft/yr (277 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 24,300 ft³/s (688 m³/s) June 10, 1974, gage height, 19.43 ft (5.922 m), from rating curve extended above 17,000 ft³/s (481 m³/s) on basis of velocity-area study; minimum daily, 0.1 ft³/s (0.003 m³/s) June 25, 1956.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Aug. 8, 1885, reached a stage of 22.8 ft (6.95 m), datum in use prior to Feb. 9, 1967, from floodmark, discharge, 30,000 ft³/s (850 m³/s), from rating curve extended as explained above.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 4,500 ft³/s (127 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage Height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage Height (ft) (m)
Nov. 30	0030	5,270 149	8.09 2.466	Apr. 26	0530	*12,500 354	*13.26 4.042
Apr. 20	2345	7,520 213	9.93 3.027				

Minimum daily discharge, 4.6 ft³/s (0.13 m³/s) Sept. 23.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	36	20	549	21	20	530	386	513	136	136	1440	21
2	25	18	207	21	21	405	332	435	120	105	340	19
3	21	19	164	20	22	278	239	367	103	83	188	18
4	20	23	133	17	21	601	196	319	88	70	133	17
5	20	25	114	18	20	1630	169	286	78	63	103	16
6	20	24	92	15	19	814	152	290	71	58	83	17
7	19	24	73	14	19	944	140	241	65	52	70	16
8	16	26	66	14	19	1020	125	211	59	50	61	16
9	15	24	65	15	21	776	115	191	54	46	55	15
10	13	22	60	15	27	627	108	182	54	43	51	14
11	12	21	57	15	36	548	104	179	54	40	49	13
12	12	20	53	15	42	1300	107	173	52	38	86	13
13	12	18	50	16	48	1180	99	167	51	36	120	11
14	12	23	344	16	55	732	93	167	607	32	310	12
15	12	34	303	16	68	417	99	167	2750	30	136	12
16	12	30	139	16	115	334	96	176	2470	29	131	11
17	12	24	70	15	228	276	1960	197	562	27	92	11
18	16	22	54	15	233	242	5100	220	267	26	74	11
19	13	19	45	14	247	227	6180	194	194	24	59	11
20	11	20	34	15	187	217	6320	173	176	24	51	12
21	10	19	27	15	183	198	6050	151	151	24	46	10
22	11	18	23	15	419	171	4340	133	127	87	43	8.8
23	12	19	21	15	287	152	1550	122	109	279	39	4.6
24	12	20	20	15	663	136	8810	115	103	148	36	10
25	11	16	20	16	845	127	11300	117	99	83	32	26
26	11	15	21	16	634	125	11200	131	90	54	30	30
27	11	15	21	16	502	127	3910	133	85	43	28	22
28	11	17	20	17	531	124	1120	117	81	420	27	18
29	12	966	20	18	576	133	773	133	80	993	24	17
30	13	3440	20	19	--	1750	610	207	115	650	24	16
31	15	--	20	20	--	730	--	148	--	1250	22	--
TOTAL	458	5001	2905	505	6108	16871	71783	6355	9051	5043	3983	448.4
MEAN	14.8	167	93.7	16.3	211	544	2393	205	302	163	128	14.9
MAX	36	3440	549	21	845	1750	11300	513	2750	1250	1440	30
MIN	10	15	20	14	19	124	93	115	51	24	22	4.6
CFSM	.02	.24	.13	.02	.30	.78	3.41	.29	.43	.23	.18	.02
IN.	.02	.27	.15	.03	.32	.90	3.81	.34	.48	.27	.21	.02
AC-FT	908	9920	5760	1000	12120	33460	142400	12610	17950	10000	7900	889
CAL YR 1975	TOTAL	105434.0	MEAN 289	MAX 4210	MIN 10	CFSM .41	IN 5.60	AC-FT 209100				
WTR YR 1976	TOTAL	128511.4	MEAN 351	MAX 11300	MIN 4.6	CFSM .50	IN 6.82	AC-FT 254900				

06998400 WELDON RIVER NEAR LEON, IA

LOCATION.--Lat 40°41'45", long 93°38'07", in NE1/4 NE1/4 sec.17, T.68 N., R.24 W., Decatur County, Hydrologic Unit 10280102, on left bank 10 ft (3 m) downstream from bridge on county highway A, 200 ft (61 m) upstream from unnamed creek, 1.3 mi (2.1 km) downstream from Brush Creek, and 6.5 mi (10.5 km) southeast of post office at Leon.

DRAINAGE AREA.--104 mi² (269 km²).

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

GAGE.--Water-stage recorder. Datum of gage is 906.26 ft (276.228 m) above mean sea level.

REMARKS.--Records good except those for winter period, which are poor. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--18 years, 72.3 ft³/s (2.047 m³/s), 9.44 in/yr (240 mm/yr), 52,380 acre-ft/yr (64.6 hm³/yr); median of yearly mean discharges, 51 ft³/s (1.44 m³/s), 6.7 in/yr (170 mm/yr), 36,900 acre-ft/yr (45.5 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 48,600 ft³/s (1,376 m³/s) Aug. 6, 1959, gage height, 25.27 ft (7.702 m), from rating curve extended above 5,600 ft³/s (159 m³/s) on basis of contracted-opening and flow-over-embankment measurement at gage height 25.27 ft (7.702 m); no flow for several days in 1968 and 1975.

EXTREMES OUTSIDE PERIOD OF RECORD.--Stage and discharge of the flood of Aug. 6, 1959, are the greatest since at least 1919.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 4,500 ft³/s (127 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage Height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage Height (ft) (m)
Apr. 18	0600	4,720 134	15.60 4.755	Apr. 24	0700	*5,490 155	*16.70 5.090

No flow Nov. 25, 26.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.4	6.0	43	.66	1.0	26	41	15	27	1.1	4.3	1.7
2	1.7	8.1	22	.66	1.1	26	32	10	22	.72	3.6	2.0
3	1.7	6.2	15	.68	.92	26	26	6.8	16	.67	2.3	1.9
4	1.7	2.5	13	.70	.70	895	22	5.4	13	.62	.69	1.9
5	1.1	.57	7.8	.73	.52	423	20	5.4	9.4	.47	.66	1.9
6	.69	.37	7.5	.80	.56	93	19	47	5.0	.60	.55	1.9
7	.27	.30	7.5	.92	.80	122	17	13	3.3	.35	.54	1.7
8	.52	.30	7.4	1.1	1.2	94	15	9.0	3.3	.30	.42	.73
9	.30	2.7	7.2	1.2	2.5	62	14	2.9	43	.29	.42	1.4
10	.30	5.0	7.0	1.2	6.2	46	15	2.6	2.8	.29	.42	1.7
11	.20	5.9	7.0	1.3	8.6	51	14	2.2	1.1	.30	1.5	1.9
12	.55	6.3	7.3	1.2	9.5	386	14	2.2	.66	.23	14	1.9
13	1.5	4.8	10	1.0	10	75	14	1.2	5.0	.30	2.3	1.7
14	.21	1.4	90	1.2	11	48	13	2.9	2990	.40	3.4	2.6
15	.13	.69	25	1.4	19	42	13	13	414	.25	2.3	3.5
16	.78	.97	8.4	1.4	68	33	12	27	45	.28	1.1	2.5
17	.69	.85	7.0	1.2	49	28	908	15	22	.23	.78	2.5
18	.98	.60	3.5	1.0	45	26	3030	9.9	13	.24	.39	2.7
19	.94	.15	3.0	.90	36	24	241	5.8	9.4	.26	.28	1.6
20	2.4	1.2	3.9	.96	27	21	468	4.1	7.2	.26	.21	.85
21	3.9	.71	3.0	.80	36	19	926	2.6	6.5	10	.19	.23
22	4.0	.24	1.4	.90	40	16	131	2.2	4.8	27	.23	.22
23	4.5	.08	2.4	.88	42	16	101	1.6	4.2	16	.23	.14
24	4.8	.02	2.8	.82	67	16	3890	1.0	6.9	5.4	.43	.10
25	5.8	0	2.6	.92	70	13	1360	1.2	5.3	2.8	.42	5.9
26	5.8	0	2.2	1.0	46	17	142	1.2	2.8	2.3	.39	9.3
27	5.9	.38	1.7	1.1	36	19	56	1.9	6.3	1.9	.34	.84
28	6.3	1.3	1.1	.88	29	15	34	1.4	12	23	.27	.30
29	6.7	768	.80	.80	25	84	24	188	5.3	13	.26	.16
30	7.6	718	.57	.76	---	175	19	43	2.2	9.6	.37	.12
31	5.4	---	.65	.90	---	70	---	33	---	6.2	1.5	---
TOTAL	78.76	1543.63	321.72	29.97	689.62	2997	11651	477.5	3708.46	125.36	44.79	55.89
MEAN	2.54	51.5	10.4	.97	23.8	96.7	388	15.4	124	4.04	1.44	1.86
MAX	7.6	768	90	1.4	70	885	3890	188	2990	27	14	9.3
MIN	.13	0	.57	.66	.52	13	12	1.0	.66	.23	.19	.10
CFSM	.02	.50	.10	.009	.23	.93	3.73	.15	1.19	.04	.01	.02
IN.	.03	.55	.12	.01	.25	1.07	4.17	.17	1.33	.04	.02	.02
AC-FT	156	3060	638	59	1370	5940	23110	947	7360	249	89	111
CAL YR 1975 TOTAL	12961.51			MEAN 35.5	MAX 768	MIN 0	CFSM .34	IN 4.64	AC-FT 25710			
WTR YR 1976 TOTAL	21723.70			MEAN 59.4	MAX 3890	MIN 0	CFSM .57	IN 7.77	AC-FT 43090			

06903400 CHARITON RIVER NEAR CHARITON, IA

LOCATION.--Lat 40°57'12", long 93°15'37", in SW1/4 NE1/4 sec.15, T.71 N., R.21 W., Lucas County, Hydrologic Unit 10280201, on right bank 15 ft (5 m) downstream from bridge on county highway S43, 0.4 mi (0.6 km) downstream from Wolf Creek, and 5.0 mi (8.0 km) southeast of Chariton.

DRAINAGE AREA.--182 mi² (471 km²).

PERIOD OF RECORD.--October 1965 to current year. Occasional low-flow measurements, water years 1958-60, 1962, 1964.

GAGE.--Water-stage recorder. Datum of gage is 917.96 ft (279.794 m) above mean sea level (levels by U.S. Weather Bureau from a Corps of Engineers bench mark).

REMARKS.--Records good except those for winter period, which are poor. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--11 years, 102 ft³/s (2.889 m³/s), 7.61 in/yr (193 mm/yr), 73,900 acre-ft/yr (91.1 hm³/yr); median of yearly mean discharges, 83 ft³/s (2.35 m³/s), 6.2 in/yr (157 mm/yr), 60,100 acre-ft/yr (74.1 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 6,320 ft³/s (179 m³/s) Aug. 8, 1970, gage height, 20.15 ft (6.142 m); maximum gage height, 20.20 ft (6.157 m) Oct. 12, 1973; minimum daily discharge, 0.1 ft³/s (0.003 m³/s) Sept. 28, Oct. 2-6, Nov. 5-7, 1966.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in March 1960 reached a stage of about 23 ft (7.0 m), discharge, about 15,000 ft³/s (425 m³/s) and flood of June 5, 1947 reached a stage of 21.65 ft (6.599 m), from floodmark, discharge, 11,000 ft³/s (312 m³/s). A discharge of 0.08 ft³/s (0.002 m³/s) was measured on Oct. 30, 1963.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 1,200 ft³/s (34.0 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage Height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage Height (ft) (m)
Apr. 21	0845	1,430 40.5	17.17 5.233	June 14	1015	*5,460 155	*20.35 6.203
Apr. 25	1345	2,490 70.5	18.59 5.666				

Minimum daily discharge, 0.05 ft³/s (0.001 m³/s) Sept. 22, 23.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.2	.61	866	4.7	3.5	39	117	32	14	4.2	8.4	.67
2	1.7	1.7	609	4.8	4.6	42	53	24	10	4.1	5.7	.67
3	1.9	2.6	185	3.7	3.3	36	27	16	6.4	4.5	4.8	.67
4	1.7	2.2	54	3.4	2.8	272	18	12	5.2	3.9	4.4	.60
5	1.7	1.7	34	3.0	2.5	1030	15	14	4.5	3.4	3.9	.60
6	2.6	1.4	22	2.7	2.3	562	14	94	4.1	3.2	3.4	.53
7	2.1	1.2	11	2.7	2.7	494	13	53	3.5	3.1	3.2	.60
8	2.0	1.1	9.4	2.6	3.7	303	12	17	3.2	2.9	2.9	.40
9	1.8	1.2	11	2.6	5.8	226	11	20	3.0	2.7	2.3	.40
10	1.9	1.1	9.4	2.5	9.2	147	11	12	15	2.7	2.1	.35
11	1.8	1.2	8.5	2.2	12	105	10	7.5	61	2.6	2.2	.40
12	1.5	1.1	8.5	2.1	16	483	12	6.4	14	2.6	3.9	.35
13	2.0	1.1	8.0	2.2	18	439	10	7.5	72	2.5	4.5	.29
14	1.8	.98	154	2.2	20	324	10	7.4	3340	2.3	5.2	.29
15	1.6	1.1	184	2.2	28	84	11	18	1720	2.3	5.4	.29
16	1.2	1.0	148	2.2	29	46	10	745	1080	2.2	4.8	.24
17	.68	1.0	60	2.0	70	31	14	446	888	2.1	4.8	.24
18	.72	1.2	14	1.9	68	26	768	122	210	2.1	5.2	.29
19	.76	1.2	6.0	1.9	95	23	995	62	33	2.0	4.1	.19
20	.80	1.5	6.0	1.9	52	20	1150	27	19	14	3.2	.09
21	.70	2.4	7.0	2.0	58	17	1230	14	12	895	2.6	.09
22	.68	2.3	7.0	2.1	66	14	808	14	8.2	943	2.2	.05
23	.70	1.7	6.0	2.3	60	14	893	7.4	6.1	364	2.0	.05
24	.58	1.5	5.0	2.6	200	13	1520	7.0	5.7	102	1.7	.09
25	.51	1.3	4.6	3.0	207	12	2040	6.3	5.1	30	1.6	.19
26	.50	1.6	4.6	3.0	190	12	1300	5.5	4.8	11	1.5	.97
27	.46	1.8	4.6	3.2	138	42	932	5.2	4.8	34	1.3	.97
28	.47	1.9	4.6	3.3	75	31	377	4.8	5.0	85	1.2	.60
29	.41	171	4.6	3.0	52	19	74	54	5.0	80	1.1	.47
30	.41	1260	4.6	2.9	---	287	46	122	4.7	42	.97	.29
31	.44	---	4.6	3.0	---	195	---	34	---	18	.67	---
TOTAL	38.32	1471.69	2465.0	83.9	1494.4	5388	12501	2017.0	7567.3	2673.4	101.24	11.93
MEAN	1.24	49.1	79.5	2.71	51.5	174	417	65.1	252	86.2	3.27	.40
MAX	2.6	1260	866	4.8	207	1030	2040	745	3340	943	8.4	.97
MIN	.41	.61	4.6	1.9	2.3	12	10	4.8	3.0	2.0	.67	.05
CFSM	.006	.27	.44	.01	.28	.96	2.29	.36	1.38	.47	.02	.002
IN.	.008	.30	.50	.02	.31	1.10	2.56	.41	1.55	.55	.02	.002
AC-FT	76	2920	4890	166	2960	10690	24800	4000	15010	5300	201	24

CAL YR 1975 TOTAL 30951.20 MEAN 84.8 MAX 1330 MIN .35 CFSM .47 IN 6.33 AC-FT 61390
WTR YR 1976 TOTAL 35813.18 MEAN 97.9 MAX 3340 MIN .05 CFSM .54 IN 7.32 AC-FT 71040

LOCATION.--Lat 40°48'02", long 93°11'32", in SW1/4 SW1/4 sec.5, T.69 N., R.20 W., Wayne County, Hydrologic Unit 10280201, on right bank 20 ft (6 m) downstream from bridge on county highway S50, 1.3 mi (2.1 km) downstream from Jordan Creek and 4.3 mi (6.9 km) northwest of Promise City.

PERIOD OF RECORD.--October 1967 to current year. Occasional low-flow measurements, water years 1958-66, published as "near Bethlehem". Monthly discharge measurements for March 1965 to September 1967 available in files of Iowa City district office.

REMARKS.--Records good except those for winter period, which are poor. Several observations of water temperature made during the year.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 7,660 ft³/s (217 m³/s) Aug. 8, 1970, gage height, 21.32 ft (6.498 m); minimum daily, 0.09 ft³/s (0.003 m³/s) July 29, 30, 1970.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Sept. 21, 1965, reached a stage of 25.5 ft (7.77 m), from floodmarks, discharge not determined.

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage Height (ft) (m)
Mar. 5	0300	4,030 114	17.88 5.450
Apr. 24	1745	5,930 168	20.27 6.178

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage Height (ft) (m)
May 16	1300	2,590 73.3	14.25 4.343
June 14	2215	*5,960 169	*20.29 6.184

Minimum daily discharge, 0.21 ft³/s (0.006 m³/s) Aug. 5.

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.74	1.0	59	1.5	2.9	91	67	40	11	5.5	3.5	.52
2	.74	1.0	30	1.5	2.9	83	46	35	7.6	4.6	2.7	.55
3	.74	1.0	22	1.2	3.3	47	34	27	6.6	3.7	2.1	.59
4	.74	1.0	21	.95	2.3	1260	27	24	5.2	3.1	.79	.53
5	.74	1.0	20	.93	1.9	2520	22	22	6.2	2.7	.21	.23
6	.74	.98	17	1.0	1.8	210	21	151	5.6	2.6	212	.23
7	.74	1.0	15	1.1	2.0	147	20	101	4.5	2.4	12	.24
8	.74	1.1	14	.96	2.7	119	17	40	4.3	2.3	2.1	.68
9	.82	1.0	13	.88	3.7	93	15	28	4.1	2.2	.98	.74
10	.82	1.0	13	.83	7.0	77	14	23	8.2	1.9	.63	.74
11	.82	.96	14	.94	9.0	62	15	20	18	1.7	.55	.78
12	.82	.96	13	1.1	10	395	11	16	8.6	1.7	2.6	.73
13	.82	.98	13	1.2	8.3	149	12	21	25	1.7	17	.70
14	.82	.98	193	1.4	7.0	71	13	21	5340	1.6	13	.78
15	.82	1.0	103	1.4	11	56	13	29	2340	1.5	6.3	.85
16	.82	.98	17	1.4	26	45	13	1690	142	1.4	2.8	.86
17	.82	.98	5.8	1.2	47	37	17	741	56	1.3	1.6	.97
18	.82	.96	1.9	1.1	50	33	522	135	29	1.3	.89	1.1
19	.91	.96	1.8	1.2	45	31	171	67	17	1.2	1.2	1.5
20	.91	.96	1.9	1.2	30	27	304	44	17	1.4	1.3	1.6
21	.91	.96	1.6	1.3	48	19	1040	32	15	506	1.0	1.8
22	.91	.98	1.5	1.3	72	17	182	23	11	447	.89	.26
23	.91	.98	1.5	1.4	68	17	109	18	7.9	40	.82	.31
24	1.0	.94	1.5	1.5	123	17	5070	20	8.4	11	.75	.45
25	1.0	.86	1.5	1.6	91	16	4270	16	8.1	5.6	.74	1.5
26	1.0	.80	1.5	1.6	48	18	480	14	6.7	3.9	.74	3.0
27	1.0	.78	1.5	1.6	31	31	141	12	6.7	4.7	.67	1.8
28	1.0	.90	1.5	1.9	26	28	87	7.5	13	5.0	.54	1.3
29	1.0	297	1.5	2.2	21	111	63	52	7.5	3.7	.43	1.5
30	1.0	878	1.6	2.2	---	703	49	57	9.7	4.3	.46	2.1
31	1.0	---	1.6	2.3	---	132	---	21	---	4.8	.49	---
TOTAL	26.67	1202.00	605.2	41.89	801.8	6662	12865	3547.5	8149.9	1081.8	291.78	28.94
MEAN	.86	40.1	19.5	1.35	27.6	215	429	114	272	34.9	9.41	.96
MAX	1.0	878	193	2.3	123	2520	5070	1690	5340	506	212	3.0
MIN	.74	.78	1.83	1.8	1.6	11	7.5	4.1	1.2	.21	.23	.23
CFSM	.005	.24	.12	.008	.16	1.28	2.55	.68	1.62	.21	.06	.005
IN.	.006	.27	.13	.009	.18	1.48	2.85	.79	1.80	.24	.06	.006
AC-FT	53	2380	1200	83	1590	13210	25520	7040	16170	2150	579	57
CAL YR 1975	TOTAL	29388.81		MEAN	80.5	MAX	.30	CFSM	.48	IN	6.51	AC-FT
WTR YR 1976	TOTAL											

06903880 RATHBUN LAKE NEAR RATHBUN, IA

LOCATION.--Lat 40°49'30", long 92°53'33", in NW1/4 NE1/4 sec.35, T.70 N., R.18 W., Appanoose County, Hydrologic Unit 10280201, at control tower of Rathbun Dam, 1.8 mi (2.9 km) north of Rathbun and 3.9 mi (6.3 km) upstream from Walnut Creek and at mile 142.3 (229.0 km).

DRAINAGE AREA.--549 mi² (1,421 km²).

PERIOD OF RECORD.--October 1969 to current year.

GAGE.--Water-stage recorder. Datum of gage is at mean sea level.

REMARKS.--Reservoir is formed by earthfill dam completed in 1969. Storage began in November 1969. Release is controlled by two hydraulically controlled slide gates, 6 ft (2 m) wide and 12 ft (4 m) high, into forechamber of an 11-ft (3 m) diameter horseshoe conduit through the dam. No dead storage. Maximum design discharge through gates is 5,000 ft³/s (142 m³/s). Uncontrolled notch spillway is concrete overflow section 500 ft (152 m) in length, located about 3,000 ft (914 m) west of the right abutment of the dam and provides emergency discharge into the adjacent drainage area of Little Walnut Creek. Uncontrolled notch spillway is at elevation 925 ft (282 m) above mean sea level, contents 552,000 acre-ft (681 hm³). Conservation pool level is at elevation 904.0 ft (275.54 m), contents 205,000 acre-ft (253 hm³). Reservoir is used for flood control, low-flow augmentation, conservation and recreation.

COOPERATION.--Records furnished by Corps of Engineers.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily contents, 402,000 acre-ft (496 hm³) May 8-10, 1973; maximum elevation, 918.15 ft (279.852 m) May 9, 1973; minimum daily contents, 100 acre-ft (0.123 hm³) Oct. 1-15, Nov. 17-21, 1969; minimum elevation, 855.40 ft (260.726 m) Oct. 6-10, 1969.

EXTREMES FOR CURRENT YEAR.--Maximum daily contents, 277,000 acre-ft (342 hm³) Apr. 29; maximum elevation, 909.84 ft (277.319 m) Apr. 29; minimum daily contents, 183,000 acre-ft (226 hm³) Jan. 23; minimum elevation, 901.92 ft (274.905 m) Jan. 23.

Capacity table (elevation, in feet, and contents, in acre-feet)

860	400	890	33,800	900	164,300
862	850	895	55,730	905	216,600
865	2,390	890	84,530	910	278,500
870	7,950	895	120,000	915	351,000
875	18,100				

CONTENTS, IN ACRE-FEET, AT 0800, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	199000	194000	198000	185000	184000	193000	221000	274000	255000	238000	208000	203000
2	198000	194000	201000	185000	184000	195000	220000	273000	252000	235000	207000	203000
3	198000	194000	202000	184000	184000	195000	219000	272000	250000	232000	206000	202000
4	198000	194000	203000	184000	184000	195000	217000	270000	247000	230000	206000	202000
5	198000	194000	203000	184000	184000	208000	216000	268000	246000	227000	206000	202000
6	198000	194000	204000	184000	184000	215000	214000	269000	245000	225000	206000	202000
7	198000	194000	203000	184000	184000	218000	213000	270000	243000	222000	206000	202000
8	197000	194000	203000	184000	184000	220000	211000	269000	240000	220000	206000	201000
9	198000	193000	204000	184000	184000	221000	209000	267000	238000	217000	205000	201000
10	197000	194000	204000	184000	184000	222000	208000	266000	236000	214000	205000	201000
11	197000	193000	202000	184000	184000	223000	206000	264000	236000	212000	205000	200000
12	197000	194000	202000	184000	184000	224000	205000	262000	234000	209000	206000	200000
13	197000	193000	202000	184000	184000	226000	205000	261000	232000	208000	206000	200000
14	197000	193000	201000	184000	184000	227000	205000	260000	236000	207000	206000	200000
15	197000	193000	201000	184000	184000	228000	205000	259000	250000	207000	206000	200000
16	196000	192000	201000	184000	185000	229000	205000	263000	262000	207000	206000	199000
17	196000	192000	200000	184000	185000	228000	205000	272000	264000	206000	206000	199000
18	196000	192000	199000	184000	187000	229000	206000	274000	266000	208000	206000	199000
19	196000	192000	198000	184000	187000	229000	209000	274000	265000	206000	206000	199000
20	196000	192000	198000	184000	188000	230000	211000	273000	262000	206000	205000	199000
21	195000	193000	196000	184000	189000	231000	217000	271000	260000	206000	205000	199000
22	195000	192000	195000	184000	189000	229000	223000	270000	257000	209000	205000	198000
23	195000	192000	194000	183000	189000	229000	225000	268000	254000	212000	205000	198000
24	195000	193000	193000	184000	190000	228000	235000	267000	253000	213000	205000	198000
25	195000	192000	192000	184000	191000	226000	252000	266000	251000	213000	205000	198000
26	195000	192000	191000	184000	192000	225000	267000	264000	248000	212000	204000	199000
27	194000	192000	190000	184000	192000	224000	274000	261000	246000	212000	204000	199000
28	194000	192000	190000	184000	193000	222000	270000	259000	245000	211000	204000	199000
29	194000	192000	188000	184000	193000	221000	277000	257000	243000	210000	204000	199000
30	194000	196000	187000	184000	---	222000	276000	257000	240000	210000	203000	199000
31	193000	---	186000	184000	---	222000	---	256000	---	209000	203000	---
MAX	199000	196000	204000	185000	193000	231000	277000	274000	266000	238000	208000	203000
MIN	193000	192000	186000	183000	184000	193000	205000	256000	232000	206000	203000	198000
+	902.88	903.16	902.23	901.96	902.88	905.44	909.80	908.28	907.01	904.34	903.81	903.40
*	-6,000	+3,000	-10,000	-2,000	+9,000	+29,000	+54,000	-20,000	-16,000	-31,000	-6,000	-4,000
CAL YR 1975.....	MAX 231,000		MIN 184,000		*+2,000							
WTR YR 1976.....	MAX 277,000		MIN 183,000		* 0							

+ Elevation, in feet, at end of month

* Change in contents, in acre-feet

06903900 CHARITON RIVER NEAR RATHBUN, IA

LOCATION.--Lat 40°49'22", long 92°53'22", in SE1/4 NE1/4 sec.35, T.70 N., R.18 W., Appanoose County, Hydrologic Unit 10280201, on left bank 600 ft (183 m) downstream from outlet of Rathbun Dam, 1.8 mi (2.9 km) north of Rathbun and 3.7 mi (5.0 km) upstream from Walnut Creek and at mile 142.1 (228.6 km).

DRAINAGE AREA.--549 mi² (1,421 km²).

PERIOD OF RECORD.--October 1956 to current year. Monthly discharge only for some periods, published in WSP 1730.

REVISED RECORDS.--WSP 1560: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 847.92 ft (258.446 m) above mean sea level. Prior to Nov. 16, 1960, nonrecording gage and Nov. 17, 1960, to Sept. 30, 1969, recording gage, at site 3.1 mi (5.0 km) downstream at datum 4.65 ft (1.42 m) lower.

REMARKS.--Records good. Flow regulated by Rathbun Reservoir (station 06903880) since Nov. 21, 1959. Records of discharge include diversion of 12 ft³/s (0.34 m³/s) Oct. 1 to July 29 and 10 ft³/s (0.28 m³/s) July 30 to Sept. 30 from reservoir through fish ponds on left bank downstream from dam. Diverted flow returns to stream 0.1 mi (0.2 km) downstream from gage. Several observations of water temperature were made during the year. Corps of Engineers gage height telemeter at station.

AVERAGE DISCHARGE.--20 years, 308 ft³/s (8.722 m³/s) 7.62 in/yr (194 mm/yr), 223,100 acre-ft/yr (275 hm³/yr); median of yearly mean discharges, 230 ft³/s (6.51 m³/s) 5.7 in/yr (145 mm/yr), 167,000 acre-ft/yr (206 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 21,800 ft³/s (617 m³/s) Mar. 31, 1960, gage height, 25.3 ft (7.71 m), from floodmark, site and datum then in use; minimum daily, 0.1 ft³/s (0.003 m³/s) Oct. 12-14, 17-24, 1957, Oct. 11, 1966.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,210 ft³/s (34.3 m³/s) June 27, gage height, 12.18 ft (3.712 m); minimum daily, 12 ft³/s (0.340 m³/s) Jan. 5 to Mar. 22.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	21	24	22	502	12	12	733	718	981	1170	365	15
2	21	24	23	375	12	12	733	710	1170	1170	364	15
3	21	24	23	135	12	12	731	712	1160	1170	166	15
4	21	24	23	141	12	12	729	712	829	1170	16	14
5	21	23	23	12	12	12	727	712	449	1170	17	13
6	22	23	23	12	12	12	725	237	837	1170	17	14
7	22	23	23	12	12	12	720	409	1160	1170	16	15
8	22	23	24	12	12	12	711	697	1150	1180	16	134
9	23	23	24	12	12	12	713	698	1150	1190	29	14
10	23	23	300	12	12	12	718	702	554	1190	45	18
11	23	23	527	12	12	12	719	701	545	1190	28	26
12	23	23	527	12	12	12	318	702	1140	1010	14	21
13	24	24	527	12	12	12	22	704	872	256	14	13
14	25	24	529	12	12	12	22	705	283	26	14	13
15	25	23	515	12	12	12	22	496	501	25	14	13
16	25	23	511	12	12	12	22	308	799	24	14	13
17	24	23	508	12	12	12	22	380	792	24	14	14
18	25	23	508	12	12	12	23	751	932	23	14	14
19	25	23	508	12	12	12	22	751	1190	24	14	14
20	25	23	507	12	12	12	23	751	1190	20	14	14
21	25	23	507	12	12	12	28	751	1180	20	14	14
22	25	24	506	12	12	12	276	751	1170	23	14	15
23	25	23	505	12	12	549	256	751	1100	194	14	14
24	25	23	504	12	12	736	595	751	785	372	14	15
25	25	23	504	12	12	620	213	738	1040	371	14	16
26	25	23	503	12	12	735	183	978	1180	369	14	16
27	25	22	503	12	12	733	619	1120	1010	369	14	15
28	25	22	502	12	12	732	722	1120	781	369	14	15
29	24	24	502	12	12	731	721	722	1170	365	14	15
30	24	22	503	12	---	732	720	518	1170	360	14	15
31	24	---	502	12	---	732	---	737	---	359	14	---
TOTAL	733	695	11216	1477	348	6564	12788	21493	28270	17543	1359	572
MEAN	23.6	23.2	362	47.6	12.0	212	426	693	942	566	43.8	19.1
MAX	25	24	529	502	12	736	733	1120	1190	1190	365	134
MIN	21	22	22	12	12	12	22	237	283	20	14	13
CFSM	.04	.04	.66	.09	.02	.39	.78	1.26	1.72	1.03	.08	.03
IN.	.05	.05	.76	.10	.02	.44	.87	1.46	1.92	1.19	.09	.04
AC-FT	1450	1380	22250	2930	690	13020	25360	42630	56070	34800	2700	1130
CAL YR 1975 TOTAL	71479.7			MEAN 196	MAX 1190	MIN 7.0	CFSM .36	IN 4.84	AC-FT 141800			
WTR YR 1976 TOTAL	103058.0			MEAN 282	MAX 1190	MIN 12	CFSM .51	IN 6.98	AC-FT 204400			

As the number of streams on which streamflow information is likely to be desired far exceeds the number of stream-gaging stations feasible to operate at one time, the Geological Survey collects limited streamflow data at sites other than stream-gaging stations. When limited streamflow data are collected on a systematic basis over a period of years for use in hydrologic analyses, the site at which the data are collected is called a partial-record station. Data collected at these partial-record stations are usable in low-flow or floodflow analyses, depending on the type of data collected. In addition, discharge measurements are made at other sites not included in the partial-record program. These measurements are generally made in times of drought or flood to give better areal coverage to those events. Those measurements and others collected for some special reason are called measurements at miscellaneous sites.

Records collected at partial-record stations are presented in two tables. The first is a table of discharge measurements at low-flow partial-record stations, and the second is a table of annual maximum stage and discharge at crest-stage stations. Discharge measurements made at miscellaneous sites for both low flow and high flow are given in a third or fourth table.

Low-flow partial-record stations

Measurements of streamflow in the area covered by this report made at low-flow partial-record stations are given in the following table. These measurements were made during periods of base flow when streamflow is primarily from ground-water storage. These measurements, when correlated with the simultaneous discharge of a nearby stream where continuous records are available, will give a picture of the low-flow potentiality of a stream. The column headed "Period of record" shows the period in which measurements were made for most water years at the same, or practically the same, site.

DISCHARGE MEASUREMENTS MADE AT LOW-FLOW PARTIAL-RECORD STATIONS DURING WATER YEAR 1976

STATION NO.	STATION NAME	LOCATION	DRAINAGE AREA (SQ MI)	PERIOD OF RECORD	MEASUREMENTS DATE	DISCHARGE (CFS)
MINNESOTA RIVER BASIN						
05317650	BLUE EARTH R NR LAKOTA, IOWA.	LAT 4330XX, LONG 9409XX, NEAR SE CORNER OF SEC.31, T.100 N., R.27 W., KOSSUTH COUNTY, AT BRIDGE, 4 MILES NE OF LAKOTA.	64.6	1957-	11-04-75 08-10-76	.48 .41
05317700	UNION SLOUGH OUTLET NR LAKOTA, IOWA.	LAT 4324XX, LONG 9407XX, NEAR S 1/4 CORNER OF SEC.11, T.99 N., R.28 W., KOSSUTH COUNTY, AT BRIDGE, 2 MILES NW OF LAKOTA.	86.4	1957-	11-04-75 08-10-76	0 .23
05317810	WF BLUE EARTH R BL MINN.-IOWA STATE LINE.	LAT 4326XX, LONG 9404XX, NEAR W 1/4 CORNER OF SEC.36, T.101 N., R.28 W., FARIBAULT COUNTY, AT BRIDGE, 9 MILES NW OF LAKOTA.	154	1957-	11-04-75 08-10-76	1.7 1.0
UPPER IOWA RIVER BASIN						
05387300	UPPER IOWA R AT CHESTER, IOWA.	LAT 4330XX, LONG 9222XX, IN SE 1/4 SEC. 10, T.100 N., R.13 W., HOWARD COUNTY, AT BRIDGE AT NORTH CITY LIMITS OF CHESTER.	141	1957-	08-31-76	7.5
05387400	UPPER IOWA R NR KENDALVILLE, IOWA.	LAT 4328XX, LONG 9202XX, NEAR CENTER OF SEC.21, T.100 N., R.10 W., WINNEBIEK COUNTY, AT BRIDGE, 1 MILE NORTH OF KENDALVILLE.	273	1957-	08-31-76	31
05388100	CANOE CR NR DECORAH, IOWA	LAT 4321XX, LONG 9141XX, IN NE 1/4 SEC. 33, T.99 N., R.7 W., WINNEBIEK COUNTY, AT BRIDGE, 7 MILES NORTHEAST OF DECORAH.	58.9	1957-	08-31-76	14
05388300	DEAR CR NR HIGHLANDVILLE, IOWA.	LAT 4327XX, LONG 9137XX, IN SE 1/4 SEC. 25, T.100 N., R.7 W., WINNEBIEK COUNTY, AT BRIDGE, 3 MILES EAST OF HIGHLANDVILLE.	53.4	1957-	09-01-76	26
VILLAGE CREEK BASIN						
05388350	VILLAGE CR AT VILLAGE CREEK, IOWA.	LAT 4319XX, LONG 9114XX, IN NW 1/4 SEC. 18, T.98 N., R.3 W., ALLAMAKEE COUNTY, AT BRIDGE IN VILLAGE CREEK.	58.5	1957-	09-02-76	25
PAINT CREEK BASIN						
05388500	PAINT CR AT WATERVILLE, IOWA.	LAT 431237, LONG 911821, IN NW 1/4 SEC. 22, T.97 N., R.4 W., ALLAMAKEE COUNTY, AT BRIDGE 0.5 MILE NORTHWEST OF WATERVILLE.	42.8	*1952-73. 1974-	09-02-76	6.1
YELLOW RIVER BASIN						
05388800	YELLOW R AT MYRON, IOWA.	LAT 4310XX, LONG 9132XX, IN NE 1/4 SEC. 3, T.96 N., R.6 W., ALLAMAKEE COUNTY, AT BRIDGE, 0.5 MILE SOUTH OF MYRON.	59.5	1957-	09-01-76	5.8
05389000	YELLOW R AT ION, IOWA.	LAT 4307XX, LONG 9116XX, IN SW 1/4 SEC. 24, T.96 N., R.4 W., ALLAMAKEE COUNTY, AT BRIDGE, 7.5 MILES NORTHWEST OF MCGREGOR.	221	*1934-51. 1957-	09-02-76	44
TURKEY RIVER BASIN						
05411550	NB TURKEY R NR VERNON SPRINGS, IOWA.	LAT 4321XX, LONG 9211XX, IN SW 1/4 SEC. 31, T.99 N., R.11 W., HOWARD COUNTY, AT BRIDGE, 3 MILES WEST OF VERNON SPRINGS.	40.1	1957-	08-31-76	3.0
05411560	TURKEY R NR VERNON SPRINGS, IOWA	LAT 4320XX, LONG 9207XX, IN NW 1/4 SEC. 2, T.98 N., R.11 W., HOWARD COUNTY, AT BRIDGE, 2.5 MILES SOUTH OF VERNON SPRINGS.	87.0	1957-	08-31-76	11
05411600	TURKEY R AT SPILLVILLE, IOWA.	LAT 431228, LONG 915656, IN NE 1/4 SEC. 19, T.97 N., R.9 W., WINNEBIEK COUNTY, AT BRIDGE AT NORTH EDGE OF SPILLVILLE.	177	*1956-73. 1974-	08-31-76	29
05411620	L TURKEY R NR WAUCOMA, IOWA.	LAT 4301XX, LONG 9159XX, IN NW 1/4 SEC. 25, T.95 N., R.10 W., FAYETTE COUNTY, AT BRIDGE, 4 MILES SOUTHEAST OF WAUCOMA.	102.0	1957-	08-31-76	13

DISCHARGE MEASUREMENTS MADE AT LOW-FLOW PARTIAL-RECORD STATIONS DURING WATER YEAR 1976--CONTINUED

STATION NO.	STATION NAME	LOCATION	DRAINAGE AREA (SQ MI)	PERIOD OF RECORD	MEASUREMENTS DATE	DISCHARGE (CFS)
TURKEY RIVER BASIN--CONTINUED						
05411700*	CRANE CR NR LOURDES, IOWA.	LAT 4315XX, LONG 9219XX, IN NW 1/4 SEC. 6, T.97 N., R.12 W., HOWARD COUNTY, AT BRIDGE ON STATE HIGHWAY 272, 1 MILE SOUTHWEST OF LOURDES.	75.8	1957-	08-31-76	1.1
05411800	L TURKEY R NR ALPHA, IOWA.	LAT 4301XX, LONG 9157XX, IN SW 1/4 SEC. 30, T.95 N., R.9 W., FAYETTE COUNTY, AT BRIDGE, 3 MILES NORTHEAST OF ALPHA.	319	1957-	08-31-76	28
05412100	ROBERTS CR AT ST. OLAF, IOWA.	LAT 425549, LONG 912303, IN NW 1/4 SEC. 25, T.94 N., R.5 W., CLAYTON COUNTY, AT BRIDGE NEAR NORTH CITY LIMITS OF ST. OLAF.	70.7	1957-	08-31-76	.02
05412150	ROBERTS CR AT ST. OLAF, IOWA.	LAT 425542, LONG 912301, IN SW 1/4 SEC. 25, T.94 N., R.5 W., CLAYTON COUNTY, AT BRIDGE NEAR EAST CITY LIMITS OF ST. OLAF.	101	1957-	08-31-76	.85
05412200	VOLGA R NR FAYETTE, IOWA.	LAT 4249XX, LONG 9153XX, IN SW 1/4 SEC. 35, T.93 N., R.9 W., FAYETTE COUNTY, AT BRIDGE, 4.5 MILES SOUTHWEST OF FAYETTE.	53.0	1957-	08-30-76	3.1
05412300	L VOLGA R NR FAYETTE, IOWA.	LAT 4249XX, LONG 9153XX, NEAR S 1/4 CORNER OF SEC.35, T.93 N., R.9 W., FAYETTE COUNTY, AT BRIDGE, 4 MILES SOUTHWEST OF FAYETTE.	31.0	1957-	08-30-76	2.1
05412400	VOLGA R AT LITTLE-PORT, IOWA.	LAT 424514, LONG 912208, IN SE 1/4 SEC. 25, T.92 N., R.5 W., CLAYTON COUNTY, AT BRIDGE IN LITTLEPORT.	348	1957-	08-31-76	46
LITTLE MAQUOKETA RIVER BASIN						
05414450*	NF LITTLE MAQUOKETA NEAR RICKARDSVILLE, IOWA.	LAT 423509, LONG 905120, NEAR NW CORNER SEC. 29, T.90 N., R.1 E., DUBUQUE COUNTY, AT BRIDGE, 1 MILE NORTHEAST OF RICKARDSVILLE.	21.6	1957-	10-07-75 08-31-76	1.1 .45
MAQUOKETA RIVER BASIN						
05416300	MAQUOKETA R NR DUNDEE, IOWA.	LAT 423655, LONG 913344, IN SW 1/4 SEC. 9, T.90 N., R.6 W., DELAWARE COUNTY, AT BRIDGE, 2.5 MILES NORTH OF DUNDEE.	61.1	1957-	10-07-75 08-31-76	12 11
05416400	SF MAQUOKETA R NR DUNDEE, IOWA.	LAT 423608, LONG 913513, IN SW 1/4 SEC. 17, T.90 N., R.6 W., DELAWARE COUNTY, AT BRIDGE, 2.5 MILES NORTHWEST OF DUNDEE.	54.8	1957-	10-07-75 08-31-76	3.2 4.4
05417540	PLUM CR NR EARLVILLE, IOWA.	LAT 422604, LONG 911358, IN NE 1/4 SEC. 18, T.89 N., R.3 W., DELAWARE COUNTY, AT BRIDGE, 4 MILES SOUTHEAST OF EARLVILLE.	65.7	1957-	10-07-75 09-01-76	13 9.7
05417560	MAQUOKETA R NR HOPKINTON, IOWA.	LAT 4222XX, LONG 9116XX, IN NE 1/4 SEC. 11, T.87 N., R.4 W., DELAWARE COUNTY, AT BRIDGE, 2 MILES NORTHWEST OF HOPKINTON.	454	1957-	10-07-75 09-01-76	118 88
05417580	BUCK CR NR HOPKINTON, IOWA.	LAT 4221XX, LONG 9117XX, IN SE 1/4 SEC. 10, T.87 N., R.4 W., DELAWARE COUNTY, AT BRIDGE, 2.5 MILES NORTHWEST OF HOPKINTON.	50.7	1957-	10-07-75 09-01-76	7.1 5.7
05417600	MAQUOKETA R NR SCOTCH GROVE, IOWA.	LAT 4212XX, LONG 9101XX, NEAR CENTER OF SEC.6, T.85 N., R.1 W., JONES COUNTY, AT BRIDGE ON STATE HIGHWAY 136, 6 MILES NORTHEAST OF SCOTCH GROVE.	704	1957-	10-07-75 08-30-76	141 128
05418100	NF MAQUOKETA R AT DYERSVILLE, IOWA.	LAT 422905, LONG 910726, IN NW 1/4 SEC. 31, T.89 N., R.2 W., DUBUQUE COUNTY, AT BRIDGE, IN DYERSVILLE.	80.2	1957-	10-07-75 08-31-76	17 11
05418200	WHITEWATER CR AT FILLMORE, IOWA.	LAT 421907, LONG 905526, IN NE 1/4 SEC. 26, T.87 N., R.1 W., DUBUQUE COUNTY, AT BRIDGE ON U.S. HIGHWAY 151, 0.5 MILE WEST OF FILLMORE.	91.9	1957-	10-07-75 08-30-76	23 17
05418300	LYTLE CR NR BERNARD, IOWA.	LAT 421757, LONG 904656, IN SE 1/4 SEC. 36, T.87 N., R.1 E., DUBUQUE COUNTY, AT BRIDGE, 2.5 MILES SOUTHEAST OF BERNARD.	62.7	1957-	10-07-75 08-31-76	23 14
05418350	LYTLE CR NR FULTON, IOWA.	LAT 4212XX, LONG 9045XX, NEAR CENTER OF SEC.5, T.85 N., R.2 E., JACKSON COUNTY, AT BRIDGE, 5 MILES NORTHWEST OF FULTON.	114	1957-	10-07-75 08-31-76	47 28
05418400	NF MAQUOKETA R NR FULTON, IOWA.	LAT 4211XX, LONG 9044XX, IN SE 1/4 SEC. 9, T.85 N., R.2 E., JACKSON COUNTY, AT BRIDGE, 3 MILES NORTHWEST OF FULTON.	499	1957-	10-07-75 08-31-76	170 112
05418650	DEEP CR NR CHARLOTTE, IOWA.	LAT 4200XX, LONG 9024XX, NEAR CENTER OF SEC.17, T.83 N., R.5 E., CLINTON COUNTY, AT BRIDGE, 4 MILES NORTHEAST OF CHARLOTTE.	67.7	1957-	10-07-75 09-01-76	6.1 2.6

DISCHARGE MEASUREMENTS MADE AT LOW-FLOW PARTIAL-RECORD STATIONS DURING WATER YEAR 1976--CONTINUED

STATION NO.	STATION NAME	LOCATION	DRAINAGE AREA (SQ MI)	PERIOD OF RECORD	MEASUREMENTS DATE	DISCHARGE (CFS)
MAQUOKETA RIVER BASIN--CONTINUED						
05418700	DEEP CR NR PRESTON, IOWA.	LAT 4203XX, LONG 9026XX, NEAR N 1/4 CORNER OF SEC.31, T.84 N., R.5 E., JACKSON COUNTY, AT BRIDGE, 2 MILES WEST OF PRESTON.	91.9	1957-	10-07-75 09-01-76	11 5.0
ELK RIVER BASIN						
05420300	ELK R NR ALMONT, IOWA.	LAT 420039, LONG 901205, NEAR CENTER OF SEC.12, T.83 N., R.6 E., CLINTON COUNTY, AT BRIDGE, 2.5 MILES NORTH OF ALMONT.	55.9	1957-	10-07-75 09-01-76	11 6.6
WAPSIPINICON RIVER BASIN						
05420540	WAPSIPINICON R NR RICEVILLE, IOWA.	LAT 4320XX, LONG 9234XX, IN NE 1/4 SEC. 17, T.98 N., R.15 W., MITCHELL COUNTY, AT BRIDGE, 2.5 MILES SOUTH OF RICEVILLE.	72.3	1957-	08-31-76	4.8
05420580	WAPSIPINICON R NR IONIA, IOWA.	LAT 4301XX, LONG 9223XX, IN NW 1/4 SEC. 33, T.95 N., R.13 W., CHICKASAW COUNTY, AT BRIDGE, 4 MILES SOUTHEAST OF IONIA.	161	1957-	08-30-76	4.9
05420640*	LITTLE WAPSIPINICON R AT ELMA, IOWA.	LAT 4314XX, LONG 9227XX, IN NW 1/4 SEC. 12, T.97 N., R.14 W., HOWARD COUNTY, AT BRIDGE ON COUNTY ROAD A NEAR WEST CITY LIMITS OF ELMA.	37.3	1957-	08-31-75	1.6
05420660	WAPSIPINICON R NR NEW HAMPTON, IOWA	LAT 4259XX, LONG 9222XX, IN NW 1/4 SEC. 10, T.94 N., R.13 W., CHICKASAW COUNTY, AT BRIDGE, 5 MILES SOUTHWEST OF NEW HAMPTON.	291	1957-	08-30-76	8.6
05420680	WAPSIPINICON R NR TRIPOLI, IOWA.	LAT 4250XX, LONG 9215XX, IN SW 1/4 SEC. 27, T.93 N., R.12 W., BREMER COUNTY, AT BRIDGE ON STATE HIGHWAY 93, 2 MILES NORTH OF TRIPOLI.	343	1957-	08-30-76	3.0
05420700	EF WAPSIPINICON R NR FREDERICKSBURG, IOWA.	LAT 4301XX, LONG 9213XX, IN NW 1/4 SEC. 36, T.95 N., R.12 W., CHICKASAW COUNTY, AT BRIDGE, 3 MILES NORTH OF FREDERICKSBURG.	62.2	1957-	08-30-76	1.9
05420720	EF WAPSIPINICON R NR TRIPOLI, IOWA.	LAT 4251XX, LONG 9214XX, IN NW 1/4 SEC. 26, T.93 N., R.12 W., BREMER COUNTY, AT BRIDGE ON STATE HIGHWAY 93, 3 MILES NORTH OF TRIPOLI.	144	1957-	08-30-76	3.1
05420740	WAPSIPINICON R AT TRIPOLI, IOWA.	LAT 4248XX, LONG 9214XX, IN SW 1/4 SEC. 2, T.92 N., R.12 W., BREMER COUNTY, AT BRIDGE, 1.5 MILES EAST OF TRIPOLI.	498	1957-	08-30-76	3.9
05420800	CRANE CR NR DENVER, IOWA.	LAT 423832, LONG 921521, IN NW 1/4 SEC. 3, T.90 N., R.12 W., BLACK HAWK COUNTY, AT BRIDGE, 5 MILES SOUTHEAST OF DENVER.	63.6	1957-	08-30-76	0
05420820	CRANE CR AT DUNKERTON, IOWA.	LAT 4234XX, LONG 9210XX, IN SW 1/4 SEC. 29, T.90 N., R.11 W., BLACK HAWK COUNTY, AT BRIDGE, NEAR WEST CITY LIMITS OF DUNKERTON.	101	1957-	08-30-76	0
05420840	L WAPSIPINICON R NR WESTGATE, IOWA.	LAT 4247XX, LONG 9205XX, IN NE 1/4 SEC. 13, T.92 N., R.11 W., BREMER COUNTY, AT BRIDGE, 4.5 MILES NORTHWEST OF WESTGATE.	57.4	1957-	08-30-76	2.4
05420860	BUCK CR NR LITTLETON, IOWA.	LAT 4235XX, LONG 9203XX, NEAR CENTER OF SEC.29, T.90 N., R.10 W., BUCHANAN COUNTY, AT BRIDGE, 3 MILES NORTHWEST OF LITTLETON.	57.0	1957-	08-30-76	.04
05420900	L WAPSIPINICON R AT LITTLETON, IOWA.	LAT 4233XX, LONG 9202XX, IN NE CORNER SEC.9, T.89 N., R.10 W., BUCHANAN COUNTY, AT BRIDGE, 0.5 MILE NORTH OF LITTLETON.	205	1957-	08-30-76	8.5
05420940	OTTER CR NR OTTERVILLE, IOWA.	LAT 4233XX, LONG 9157XX, NEAR SW CORNER OF SEC.5, T.89 N., R.9 W., BUCHANAN COUNTY, AT BRIDGE, 2 MILES NORTH OF OTTERVILLE.	101	1957-	08-30-76	8.0
05421500	WAPSIPINICON R AT STONE CITY, IOWA.	LAT 4207XX, LONG 9121XX, IN NE 1/4 SEC. 6, T.84 N., R.4 W., JONES COUNTY, AT BRIDGE, IN STONE CITY.	1324	*1903-14. 1957-	10-07-75 08-30-76	91 83
05421550*	BUFFALO CR ABOVE WINTHROP, IOWA.	LAT 4230XX, LONG 9144XX, NEAR NE CORNER SEC. 25, T.89 N., R. 8 W., BUCHANAN COUNTY, AT BRIDGE, 1.5 MILES NORTH-EAST OF WINTHROP.	68.2	1957-	08-30-76	4.3
05421700	BUFFALO CR NR STONE CITY, IOWA.	LAT 4208XX, LONG 9121XX, NEAR E 1/4 CORNER SEC.30, T.85 N., R.4 W., JONES COUNTY, AT BRIDGE, 2 MILES NORTH OF STONE CITY.	217	1957-	10-07-75 08-30-76	22 28
05421800	YANKEE RUN AT WHEATLAND, IOWA.	LAT 414934, LONG 905025, IN NE 1/4 SEC. 16, T.81 N., R.1 E., CLINTON COUNTY, AT BRIDGE, NEAR SOUTH CITY LIMITS OF WHEATLAND.	52.2	1957-	10-07-75 09-01-76	2.8 1.7
05421850	MUD CR NR PLAINVIEW, IOWA.	LAT 414202, LONG 904526, IN SW 1/4 SEC. 29, T.80 N., R.2 E., SCOTT COUNTY, AT BRIDGE, 2.5 MILES NORTHEAST OF PLAINVIEW.	109	1957	10-07-75 09-01-76	6.9 4.7

DISCHARGE MEASUREMENTS MADE AT LOW-FLOW PARTIAL-RECORD STATIONS DURING WATER YEAR 1976--CONTINUED

STATION NO.	STATION NAME	LOCATION	DRAINAGE AREA (SQ MI)	PERIOD OF RECORD	MEASUREMENTS DATE	DISCHARGE (CFS)
WAPSIPINICON RIVER BASIN--CONTINUED						
05421900	SILVER CR NR DE WITT, IOWA.	LAT 414709, LONG 903313, IN SE 1/4 SEC. 25, T.81 N., R.3 E., CLINTON COUNTY, AT BRIDGE, 2.5 MILES SOUTH OF DE WITT.	60.8	1957-	10-07-75 09-01-76	7.4 5.0
05422100	BROPHYS CR NR LOW MOOR, IOWA.	LAT 414856, LONG 902414, NEAR N 1/4 CORNER SEC.20, T.81 N., R.5 E., CLINTON COUNTY, AT BRIDGE, ON U. S. HIGHWAY 30, 3 MILES NW OF LOW MOOR.	72.8	1957-	10-07-75 09-01-76	9.9 6.2
IOWA RIVER BASIN						
05448300	WF IOWA R NR BRITT, IOWA.	LAT 4306XX, LONG 9345XX, NEAR CENTER OF SEC.25, T.96 N., R.25 W., HANCOCK COUNTY, AT BRIDGE ON U. S. HIGHWAY 1R, 3 MILES EAST OF BRITT.	61.5	1957-	09-07-76	.21
05448400*	WESTMAIN DRAINAGE DITCH 1 & 2 NR BRITT, IOWA.	LAT 4306XX, LONG 9347XX, IN SW 1/4 SEC. 27, T.96 N., R.25 W., HANCOCK COUNTY, AT BRIDGE ON U. S. HIGHWAY 18 NEAR EAST CITY LIMITS OF BRITT.	21.2	1958-	09-07-76	.66
05451100	SF IOWA R NR ALDEN, IOWA.	LAT 4228XX, LONG 9327XX, NEAR NW CORNER OF SEC.5, T.88 N., R.22 W., HARDIN COUNTY, AT BRIDGE, 5 MILES SOUTHWEST OF ALDEN.	79.5	1957-	09-08-76	0
05451150	TIPTON CR NR NEW PROVIDENCE, IOWA.	LAT 4220XX, LONG 9312XX, IN SW 1/4 SEC. 21, T.87 N., R.20 W., HARDIN COUNTY, AT BRIDGE, 3 MILES NORTHWEST OF NEW PROVIDENCE.	81.4	1957-	09-08-76	0
05451200	SF IOWA R NR NEW PROVIDENCE, IOWA.	LAT 4219XX, LONG 9310XX, NEAR N 1/4 CORNER SEC.27, T.87 N., R.20 W., HARDIN COUNTY, AT BRIDGE, 3 MILES NORTH OF NEW PROVIDENCE.	223	1957-	09-08-76	.95
05451250	BEAVER CR NR ELDORA, IOWA.	LAT 4221XX, LONG 9308XX, NEAR CENTER OF SEC.13, T.87 N., R.20 W., HARDIN COUNTY, AT BRIDGE, 2 MILES SOUTHWEST OF ELDORA.	69.4	1957-	09-08-76	1.4
05451300	HONEY CR NR NEW PROVIDENCE, IOWA.	LAT 4216XX, LONG 9311XX, AT E 1/4 CORNER SEC.16, T.86 N., R.20 W., HARDIN COUNTY, AT BRIDGE, 1.5 MILES SOUTH OF NEW PROVIDENCE.	66.5	1957-	09-08-76	.18
05451350	HONEY CR AT BANGOR, IOWA.	LAT 4210XX, LONG 9305XX, NEAR W 1/4 CORNER SEC.16, T.85 N., R.19 W., MARSHALL COUNTY, AT BRIDGE, 1 MILE EAST OF BANGOR.	95.6	1950-	09-08-76	.78
05451400	MINERVA CR AT CLEMONS, IOWA.	LAT 4208XX, LONG 9309XX, NEAR CENTER OF SEC.35, T.85 N., R.20 W., MARSHALL COUNTY, AT BRIDGE, 1 MILE NORTHEAST OF CLEMONS.	69.6	1957-	09-08-76	.56
05451450	MINERVA CR NR CLEMONS, IOWA.	LAT 4207XX, LONG 9305XX, NEAR CENTER OF SEC.5, T.84 N., R.19 W., MARSHALL COUNTY, AT BRIDGE, 3.5 MILES EAST OF CLEMONS.	148	1950-	09-08-76	3.4
05451600	LINN CR AT MARSHALLTOWN, IOWA.	LAT 420222, LONG 925440, IN SW 1/4 SEC. 35, T.84 N., R.18 W., MARSHALL COUNTY, AT BRIDGE ON STATE HIGHWAY 14 IN MARSHALLTOWN.	60.5	1957-	09-09-76	1.3
05451650	S TIMBER CR NR LE GRAND, IOWA.	LAT 4159XX, LONG 9250XX, IN SW 1/4 SEC. 21, T.83 N., R.17 W., MARSHALL COUNTY, AT BRIDGE, 4 MILES SOUTHWEST OF LE GRAND.	62.0	1957-	09-09-76	2.1
05451800	DEER CR AT TOLEDO, IOWA.	LAT 4159XX, LONG 9235XX, NEAR W 1/4 CORNER SEC.15, T.83 N., R.15 W., TAMA COUNTY, AT BRIDGE NEAR NORTHWEST CITY LIMITS OF TOLEDO.	76.4	1957-	09-09-76	3.2
05451930	SALT CR NR CLUTIER, IOWA.	LAT 4203XX, LONG 9222XX, NEAR E 1/4 CORNER SEC.33, T.84 N., R.13 W., TAMA COUNTY, AT BRIDGE, 3.5 MILES SOUTHEAST OF CLUTIER.	85.2	1957-	09-10-76	2.5
05451960	EB SALT CR NR ELBERON, IOWA.	LAT 4204XX, LONG 9220XX, NEAR E 1/4 CORNER SEC.27, T.84 N., R.13 W., TAMA COUNTY, AT BRIDGE, 4 MILES NORTHWEST OF ELBERON.	71.3	1957-	09-10-76	1.7
05452700	BEAR CR AT BROOKLYN, IOWA.	LAT 4145XX, LONG 9226XX, NEAR NE CORNER OF SEC.14, T.80 N., R.14 W., POWESHIEK COUNTY, AT BRIDGE, 1 MILE NORTH OF BROOKLYN.	77.9	1957-	09-07-76	1.3
05454200	CLEAR CR NR OXFORD, IOWA.	LAT 4143XX, LONG 9147XX, IN NE 1/4 SEC. 28, T.80 N., R.8 W., JOHNSON COUNTY, AT BRIDGE, 1 MILE SOUTHEAST OF OXFORD.	55.0	1957-	09-09-76	.25
05455050	OLD MANS CR NR PARNELL, IOWA.	LAT 4136XX, LONG 9157XX, NEAR SW CORNER OF SEC.31, T.79 N., R.9 W., IOWA COUNTY, AT BRIDGE, 3 MILES NORTHEAST OF PARNELL.	81.2	1957-	09-10-76	.20
05455100*	OLD MANS CR NR IOWA CITY, IOWA.	LAT 413623, LONG 913656, IN NW 1/4 SEC. 36, T.79 N., R.7 W., JOHNSON COUNTY, AT BRIDGE, 3 MILES SOUTHWEST OF	201	1957-	09-07-76	2.7

DISCHARGE AT PARTIAL-RECORD STATIONS AND MISCELLANEOUS SITES

DISCHARGE MEASUREMENTS MADE AT LOW-FLOW PARTIAL-RECORD STATIONS DURING WATER YEAR 1976--CONTINUED

STATION NO.	STATION NAME	LOCATION	DRAINAGE AREA (SQ MI)	PERIOD OF RECORD	MEASUREMENTS DATE	DISCHARGE (CFS)
IOWA RIVER BASIN--CONTINUED						
05455200	N ENGLISH R NR GUERNSEY, IOWA.	LAT 4130XX, LONG 9224XX, NEAR SW CORNER SEC. 17, T.79 N., R.13 W., POWESHIEK COUNTY, AT BRIDGE, 2.5 MILES WEST OF GUERNSEY.	68.7	1957-	09-08-76	.70
05455250	N ENGLISH R NR NORTH ENGLISH, IOWA.	LAT 4133XX, LONG 9203XX, NEAR SW CORNER SEC. 17, T.78 N., R.10 W., IOWA COUNTY, AT BRIDGE, 3.2 MILES NORTH-EAST OF NORTH ENGLISH.	221	1957-	09-10-76	7.7
05455260	M ENGLISH R NR NORTH ENGLISH, IOWA.	LAT 4132XX, LONG 9204XX, NEAR NE CORNER SEC. 25, T.78 N., R.11 W., IOWA COUNTY, AT BRIDGE, 2 MILES NORTHEAST OF NORTH ENGLISH.	66.7	1957-	09-10-76	.09
05455400	S ENGLISH R NR KESWICK, IOWA.	LAT 412813, LONG 921531, IN SW 1/4 SEC. 16, T.77 N., R.12 W., KEOKUK COUNTY, AT BRIDGE, 1.5 MILES NORTHWEST OF KESWICK.	66.2	1957-	09-10-76	.03
05455450	S ENGLISH R NR KINROSS, IOWA.	LAT 4130XX, LONG 9157XX, IN NW 1/4 SEC. 7, T.77 N., R.9 W., WASHINGTON COUNTY, AT BRIDGE, 3 MILES NORTHEAST OF KINROSS.	125	1957-	09-10-76	.21
05457300	OTTER CR NR OTRANTO, IOWA.	LAT 4328XX, LONG 9258XX, IN NW 1/4 SEC. 22, T.100 N., R.18 W., MITCHELL COUNTY, AT BRIDGE, 1.5 MILES NORTH-EAST OF OTRANTO.	60.3	1957-	09-08-76	2.5
05457350	CEDAR R AT OTRANTO, IOWA.	LAT 4327XX, LONG 9259XX, IN NW 1/4 SEC. 28, T.100 N., R.18 W., MITCHELL COUNTY, AT BRIDGE NEAR EAST CITY LIMITS OF OTRANTO.	656	1957-	09-08-76	51
05457400	DEER CR NR MELTONVILLE, IOWA.	LAT 4326XX, LONG 9305XX, IN SW 1/4 SEC. 27, T.100 N., R.19 W., WORTH COUNTY, AT BRIDGE, 2.5 MILES WEST OF MELTONVILLE.	67.5	1957-	09-07-76	1.8
05457450	DEER CR AT ST. ANSGAR, IOWA.	LAT 4323XX, LONG 9258XX, IN SW 1/4 SEC. 15, T.99 N., R.18 W., MITCHELL COUNTY, AT BRIDGE, 2.5 MILES NORTH-WEST OF ST. ANSGAR.	97.5	1957-	09-08-76	2.1
05457600	ROCK CR NR FLOYD, IOWA.	LAT 4313XX, LONG 9249XX, IN NW 1/4 SEC. 24, T.97 N., R.17 W., FLOYD COUNTY, AT BRIDGE, 6 MILES NORTHWEST OF FLOYD.	69.7	1957-	09-08-76	4.4
05457800	L CEDAR R NR STACEYVILLE, IOWA.	LAT 4328XX, LONG 9247XX, IN NE 1/4 SEC. 19, T.100 N., R.16 W., MITCHELL COUNTY, AT BRIDGE, 2 MILES NORTH OF STACEYVILLE.	77.3	1957-	09-08-76	2.8
05458400	QUARTER SECTION RUN NR DENVER, IOWA.	LAT 423951, LONG 922346, IN NE 1/4 SEC. 29, T.91 N., R.13 W., BREMER COUNTY, AT BRIDGE, 3 MILES SOUTHWEST OF DENVER.	83.5	1957-	09-08-76	0
05458550	BEAVERDAM CR NR ROCKWELL, IOWA.	LAT 4258XX, LONG 9315XX, NEAR EAST 1/4 CORNER SEC. 18, T.94 N., R.20 W., CERRO GORDO COUNTY, AT BRIDGE, 3 MILES SOUTHWEST OF ROCKWELL.	72.4	1957-	09-07-76	2.4
05458600	BAILEY CR NR SHEFFIELD, IOWA.	LAT 4254XX, LONG 9316XX, IN NW 1/4 SEC. 1, T.93 N., R.21 W., FRANKLIN COUNTY, AT BRIDGE, 4 MILES NORTHWEST OF SHEFFIELD.	75.2	1957-	09-07-76	2.0
05458750	OTTER CR NR HANSELL, IOWA.	LAT 4246XX, LONG 9307XX, IN NW 1/4 SEC. 29, T.92 N., R.19 W., FRANKLIN COUNTY, AT BRIDGE, 1 MILE WEST OF HANSELL.	92.0	1957-	09-07-76	3.9
05458770	SQUAW CR NR HANSELL, IOWA.	LAT 4244XX, LONG 9307XX, NEAR CENTER OF SEC. 32, T.92 N., R.19 W., FRANKLIN COUNTY, AT BRIDGE, 1.5 MILES SOUTH-WEST OF HANSELL.	24.2	1957-	09-07-76	1.4
05458780	HARTGRAVE CR NR HANSELL, IOWA.	LAT 4244XX, LONG 9305XX, IN NW 1/4 SEC. 34, T.92 N., R.19 W., FRANKLIN COUNTY, AT BRIDGE, 1.5 MILES SOUTH-EAST OF HANSELL.	161	1957-	09-07-76	7.3
05458790	BOYLAN CR NR BRISTOW, IOWA.	LAT 4246XX, LONG 9256XX, IN NE 1/4 SEC. 23, T.92 N., R.18 W., BUTLER COUNTY, AT BRIDGE, 1 MILE WEST OF BRISTOW.	55.7	1957-	09-08-76	.05
05458800	MAYNES CR NR HAMPTON, IOWA.	LAT 4241XX, LONG 9312XX, IN NW 1/4 SEC. 22, T.91 N., R.20 W., FRANKLIN COUNTY, AT BRIDGE ON U. S. HIGHWAY 65, 4 MILES SOUTH OF HAMPTON.	71.0	1957-	09-08-76	1.6
05458850	MAYNES CR NR DUMONT, IOWA.	LAT 4242XX, LONG 9258XX, IN SW 1/4 SEC. 15, T.91 N., R.18 W., BUTLER COUNTY, AT BRIDGE, 4 MILES SOUTH OF DUMONT.	121	1957-	09-08-76	3.1
05459050	LIME CR NR SCARVILLE, IOWA.	LAT 4327XX, LONG 9335XX, IN SW 1/4 SEC. 28, T.100 N., R.23 W., WINNEBAGO COUNTY, AT BRIDGE, 3.5 MILES SOUTH-EAST OF SCARVILLE.	113	1957-	09-07-76	2.1

DISCHARGE MEASUREMENTS MADE AT LOW-FLOW PARTIAL-RECORD STATIONS DURING WATER YEAR 1976--CONTINUED

STATION NO.	STATION NAME	LOCATION	DRAINAGE AREA (SQ MI)	PERIOD OF RECORD	MEASUREMENTS DATE	DISCHARGE (CFS)
IOWA RIVER BASIN--CONTINUED						
05459200	WINNEBAGO R NR FOREST CITY, IOWA	LAT 4318XX, LONG 9339XX, IN NW 1/4 SEC. 23, T.98 N., R.24 W., WINNEBAGO COUNTY, AT BRIDGE, 2.5 MILES NORTH OF FOREST CITY.	205	1957-	09-07-76	.74
05459300	WINNEBAGO R NR FERTILE, IOWA.	LAT 4315XX, LONG 9326XX, NEAR WEST 1/4 CORNER SEC.3, T.97 N., R.22 W., CERRO GORDO COUNTY, AT BRIDGE, 1.5 MILES SOUTHWEST OF FERTILE.	303	1957-	09-07-76	3.9
05459400	BEAVER CR NR FERTILE, IOWA.	LAT 4316XX, LONG 9327XX, IN SW 1/4 SEC. 28, T.98 N., R.22 W., WORTH COUNTY, AT BRIDGE, 2 MILES NORTHWEST OF FERTILE.	54.9	1957-	09-07-76	1.2
05460200	WILLOW CR AT MASON CITY, IOWA.	LAT 430946, LONG 931420, NEAR WEST 1/4 CORNER SEC.5, T.96 N., R.20 W., CERRO GORDO COUNTY, AT BRIDGE NEAR WEST CITY LIMITS OF MASON CITY.	86.0	1957-	09-08-76	3.0
05461100	COLD WATER CR NR GREENE, IOWA.	LAT 4253XX, LONG 9251XX, IN SW 1/4 SEC. 10, T.93 N., R.17 W., BUTLER COUNTY, AT BRIDGE, 2.5 MILES SOUTHWEST OF GREENE.	56.8	1957-	09-08-76	0
05461300	FLOOD CR NR ROCKFORD, IOWA.	LAT 4203XX, LONG 9251XX, IN NW 1/4 SEC. 15, T.95 N., R.17 W., FLOYD COUNTY, AT BRIDGE, 5 MILES EAST OF ROCKFORD.	59.3	1957-	09-08-76	0
05461400	FLOOD CR NR PACKARD, IOWA.	LAT 4253XX, LONG 9242XX, IN NE 1/4 SEC. 23, T.93 N., R.16 W., BUTLER COUNTY, AT BRIDGE, 2 MILES NORTHEAST OF PACKARD.	145	1957-	09-08-76	0
05462700	BEAVER CR NR ACKLEY, IOWA.	LAT 4234XX, LONG 9302XX, IN SW 1/4 SEC. 36, T.90 N., R.19 W., FRANKLIN COUNTY, AT BRIDGE NEAR EAST CITY LIMITS OF ACKLEY.	55.5	1957-	09-10-76	1.0
05462800	S BEAVER CR NR PARKERSBURG, IOWA.	LAT 4234XX, LONG 9249XX, IN SE 1/4 SEC. 35, T.90 N., R.17 W., BUTLER COUNTY, AT CULVERT, 2 MILES SOUTHWEST OF PARKERSBURG.	114	1957-	09-10-76	6.1
05463100	BLACK HAWK CR NR GRUNDY CENTER, IOWA.	LAT 4222XX, LONG 9244XX, NEAR E 1/4 CORNER SEC.8, T.87 N., R.16 W., GRUNDY COUNTY, AT BRIDGE, 2 MILES EAST OF GRUNDY CENTER.	71.0	1957-	09-10-76	4.2
05463200	MOSQUITO CR AT REINBECK, IOWA.	LAT 4220XX, LONG 9237XX, IN SE 1/4 SEC. 20, T.87 N., R.15 W., GRUNDY COUNTY, AT BRIDGE, 1 MILE WEST OF REINBECK.	24.0	1957-	09-09-76	.66
05463300	BLACK HAWK CR AT REINBECK, IOWA.	LAT 4220XX, LONG 9236XX, NEAR E 1/4 CORNER SEC.21, T.87 N., R.15 W., GRUNDY COUNTY, AT BRIDGE, 1 MILE NORTH OF REINBECK.	135	1957-	09-09-76	8.7
05463400	N BLACK HAWK CR AT DIKE, IOWA.	LAT 4227XX, LONG 9237XX, NEAR N 1/4 CORNER SEC.8, T.88 N., R.15 W., GRUNDY COUNTY, AT BRIDGE NEAR SOUTH-EAST CITY LIMITS OF DIKE.	76.3	1957-	09-09-76	1.4
05464050	MILLERS CR NR LA PORTE CITY, IOWA.	LAT 4223XX, LONG 9215XX, IN SE 1/4 SEC. 33, T.88 N., R.12 W., BLACK HAWK COUNTY, AT BRIDGE ON U. S. HIGHWAY 218, 6 MILES NW OF LA PORTE CITY.	54.8	1957-	10-29-75 09-08-76	3.3 .67
05464100	WOLF CR NR BEAMAN, IOWA.	LAT 421247, LONG 924712, IN SW 1/4 SEC. 36, T.86 N., R.17 W., GRUNDY COUNTY, AT BRIDGE, 2 MILES SOUTHEAST OF BEAMAN.	63.2	1957-	09-10-76	1.7
05464150	TWELVE MILE CR NR BUCKINGHAM, IOWA.	LAT 4214XX, LONG 9226XX, IN SW 1/4 SEC. 24, T.86 N., R.14 W., TAMA COUNTY, AT BRIDGE, 1.5 MILES SOUTH OF BUCKINGHAM.	76.8	1957-	10-29-75 09-09-76	4.6 1.3
05464200	WOLF CR NR BUCKINGHAM, IOWA.	LAT 421533, LONG 922142, IN NE 1/4 SEC. 21, T.86 N., R.13 W., TAMA COUNTY, AT BRIDGE, 4.5 MILES SOUTHEAST OF BUCKINGHAM.	287	1957-	10-29-75 09-09-76	19 9.5
05464250	WOLF CR AT LA PORTE CITY, IOWA.	LAT 4219XX, LONG 9212XX, IN SW 1/4 SEC. 25, T.87 N., R.12 W., BLACK HAWK COUNTY, AT BRIDGE ON U.S. HIGHWAY 218 IN LA PORTE CITY.	327	1957-	10-29-75 09-08-76	31 17
05464300	SPRING CR NR LA PORTE CITY, IOWA.	LAT 4220XX, LONG 9206XX, IN NW 1/4 SEC. 23, T.87 N., R.11 W., BLACK HAWK COUNTY, AT BRIDGE, 5 MILES NORTHEAST OF LA PORTE CITY.	57.5	1957-	10-29-75 07-19-76 09-08-75	6.5 7.0 3.7
05464320	E BLUE CR NR CENTER POINT, IOWA.	LAT 421141, LONG 914828, IN NW 1/4 SEC. 8, T.85 N., R.8 W., LINN COUNTY, AT BRIDGE, 1 MILE WEST OF CENTER POINT.	27.1	1957-	10-29-75 09-07-76	1.7 .97
05464350	BEAR CR AT SHELLS-BURG, IOWA.	LAT 420539, LONG 915334, IN NW 1/4 SEC. 15, T.84 N., R.9 W., BENTON COUNTY, AT BRIDGE, 1 MILE WEST OF SHELLSBURG.	55.8	1957-	10-29-75 09-10-76	2.4 .82

DISCHARGE AT PARTIAL-RECORD STATIONS AND MISCELLANEOUS SITES

DISCHARGE MEASUREMENTS MADE AT LOW-FLOW PARTIAL-RECORD STATIONS DURING WATER YEAR 1976--CONTINUED

STATION NO.	STATION NAME	LOCATION	DRAINAGE AREA (SQ MI)	PERIOD OF RECORD	MEASUREMENTS DATE	DISCHARGE (CFS)
IOWA RIVER BASIN--CONTINUED						
05464400	BEAR CR NR PALO, IOWA.	LAT 420455, LONG 914740, IN SE 1/4 SEC. 17, T.84 N., R.8 W., LINN COUNTY, AT BRIDGE, 1 MILE NORTH OF PALO.	95.9	1957-	10-29-75 09-07-76	4.2 1.6
05464460	OTTER CR NR CEDAR RAPIDS, IOWA.	LAT 420357, LONG 914427, IN SE 1/4 SEC. 24, T.84 N., R.8 W., LINN COUNTY, AT BRIDGE, 7 MILES NORTHWEST OF CEDAR RAPIDS.	65.1	1957-	10-29-75 09-07-76	4.6 2.3
05464550	PRAIRIE CR NR BLAIRSTOWN, IOWA.	LAT 415606, LONG 920751, NEAR NORTH 1/4 CORNER SEC.9, T.82 N., R.11 W., BENTON COUNTY, AT BRIDGE, 3 MILES NORTHWEST OF BLAIRSTOWN.	64.2	1957-	09-10-76	.27
05464600	PRAIRIE CR AT NORWAY, IOWA.	LAT 415335, LONG 915543, NEAR SW CORNER SEC.19, T.82 N., R.9 W., BENTON COUNTY, AT BRIDGE, 1 MILE SOUTHWEST OF NORWAY.	126	1957-	09-10-76	2.0
05464650	PRAIRIE CR AT CEDAR RAPIDS, IOWA.	LAT 415549, LONG 914034, IN NW 1/4 SEC. 9, T.82 N., R.7 W., LINN COUNTY, AT BRIDGE, 3 MILES SOUTH OF CEDAR RAPIDS.	208	1957-	09-07-76	14
05464700	INDIAN CR AT CEDAR RAPIDS, IOWA.	LAT 415942, LONG 913703, IN SW 1/4 SEC. 13, T.83 N., R.7 W., LINN COUNTY, AT BRIDGE, NEAR NORTHEAST CITY LIMITS OF CEDAR RAPIDS.	72.0	1957-	09-07-76	1.4
05464750	BIG CR AT BERTRAM, IOWA.	LAT 415723, LONG 913135, NEAR EAST 1/4 CORNER SEC.34, T.83 N., R.6 W., LINN COUNTY, AT BRIDGE NEAR EAST CITY LIMITS OF BERTRAM.	81.2	1957-	09-07-76	7.7
05464800	ROCK CR AT ROCHESTER, IOWA.	LAT 414040, LONG 910952, IN NW 1/4 SEC. 2, T.79 N., R.3 W., CEDAR COUNTY, AT BRIDGE, 0.5 MILE NORTHWEST OF ROCHESTER.	63.4	1957-	09-09-76	2.0
05464850	SUGAR CR NR BENNETT, IOWA.	LAT 414156, LONG 910243, NEAR S 1/4 CORNER OF SEC.26, T.80 N., R.2 W., CEDAR COUNTY, AT BRIDGE, 4.5 MILES SOUTHWEST OF BENNETT.	80.7	1957-	09-09-76	.71
05464900	MUD CR NR WILTON, IOWA.	LAT 413445, LONG 910217, IN NW 1/4 SEC. 12, T.78 N., R.2 W., MUSCATINE COUNTY, AT BRIDGE, 1 MILE SOUTHWEST OF WILTON.	102	1957-	09-09-76	3.8
05464920	SUGAR CR NR MOSCOW, IOWA.	LAT 413400, LONG 910409, NEAR N 1/4 CORNER OF SEC.15, T.78 N., R.2 W., MUSCATINE COUNTY, AT BRIDGE, 1 MILE SOUTHEAST OF MOSCOW.	218	1957-	09-09-76	8.4
05464940	WAPSINONOC CR AT WEST LIBERTY, IOWA.	LAT 413326, LONG 911519, IN SE 1/4 SEC. 13, T.78 N., R.4 W., MUSCATINE COUNTY, AT BRIDGE ON STATE HIGHWAY 76, 0.5 MILE SE OF WEST LIBERTY.	51.7	1957-	09-08-76	2.2
05464950	WB WAPSINONOC CR AT WEST LIBERTY, IOWA.	LAT 413348, LONG 911613, NEAR E 1/4 CORNER OF SEC.14, T.78 N., R.4 W., MUSCATINE COUNTY, AT BRIDGE, 1 MILE SOUTH OF WEST LIBERTY.	52.5	1957-	09-08-76	.07
05465200	LONG CR NR AINSWORTH, IOWA.	LAT 4116XX, LONG 9130XX, IN SE 1/4 SEC. 26, T.75 N., R.6 W., WASHINGTON COUNTY, AT BRIDGE, 2.5 MILES SOUTH-EAST OF AINSWORTH.	68.4	1957-	09-08-76	.14
05465300	LONG CR NR WAPELLO, IOWA.	LAT 4112XX, LONG 9117XX, NEAR SOUTH 1/4 CORNER SEC.23, T.74 N., R.4 W., LOUISA COUNTY, AT BRIDGE, 5 MILES NORTHWEST OF WAPELLO.	146	1957-	09-08-76	.44
05465600	OTTER CR NR WAPELLO, IOWA.	LAT 410720, LONG 910900, NEAR CENTER OF SEC.13, T.73 N., R.3 W., LOUISA COUNTY, AT BRIDGE, 4 MILES SOUTHEAST OF WAPELLO.	64.7	1957-	09-08-76	5.9
FLINT RIVER BASIN						
05469700	FLINT R NR BURLINGTON, IOWA.	LAT 405200, LONG 911203, IN NE 1/4 SEC. 16, T.70 N., R.3 W., DES MOINES COUNTY, AT BRIDGE, 6 MILES NW OF BURLINGTON.	107	1958-	09-15-76	.23
SKUNK RIVER BASIN						
05469800	S SKUNK R NR ELLSWORTH, IOWA.	LAT 4219XX, LONG 9335XX, NEAR N 1/4 CORNER OF SEC.36, T.87 N., R.24 W., HAMILTON COUNTY, AT BRIDGE ON STATE HIGHWAY 175, NEAR WEST CITY LIMITS OF ELLSWORTH.	54.9	1957-	09-15-76	.02
05469850	MUD LAKE DRAINAGE DITCH 71 AT JEWELL, IOWA.	LAT 4219XX, LONG 9338XX, IN NW 1/4 SEC. 28, T.87 N., R.24 W., HAMILTON COUNTY, AT BRIDGE, 1 MILE NORTH OF JEWELL.	64.1	1957-	09-15-76	.11
05469950	S SKUNK R AT RANDALL, IOWA.	LAT 4214XX, LONG 9335XX, IN NE 1/4 SEC. 25, T.86 N., R.24 W., HAMILTON COUNTY, AT BRIDGE, 1 MILE EAST OF RANDALL.	160	1957-	09-15-76	.23

DISCHARGE MEASUREMENTS MADE AT LOW-FLOW PARTIAL-RECORD STATIONS DURING WATER YEAR 1976--CONTINUED

STATION NO.	STATION NAME	LOCATION	DRAINAGE AREA (SQ MI)	PERIOD OF RECORD	MEASUREMENTS DATE	DISCHARGE (CFS)
SKUNK RIVER BASIN--CONTINUED						
05470200	SQUAW CR NR STANHOPE, IOWA.	LAT 421234, LONG 934707, NEAR N 1/4 CORNER OF SEC.5, T.85 N., R.25 W., BOONE COUNTY, AT BRIDGE, 5 MILES SOUTH OF STANHOPE.	62.6	1957-	09-15-76	0
05471050	S SKUNK R AT COLFAX, IOWA.	LAT 414055, LONG 931447, IN NW 1/4 SEC. 1, T.79 N., R.21 W., JASPER COUNTY, AT BRIDGE ON STATE HIGHWAY 117, AT NORTH CITY LIMITS OF COLFAX.	803	1957-	09-14-76	17
05471100	EB INDIAN CR NR NEVADA, IOWA.	LAT 4102XX, LONG 9322XX, NEAR N 1/4 CORNER OF SEC.2, T.83 N., R.22 W., STORY COUNTY, AT BRIDGE, 4 MILES NE OF NEVADA.	65.7	1957-	09-14-76	0
05471150	WB INDIAN CR NR IOWA CENTER, IOWA.	LAT 4156XX, LONG 9326XX, IN NW 1/4 SEC. 8, T.82 N., R.22 W., STORY COUNTY, AT BRIDGE, 2 MILES NW OF IOWA CENTER.	65.9	1957-	09-14-76	.06
05471180	INDIAN CR NR IOWA CENTER, IOWA.	LAT 4155XX, LONG 9325XX, NEAR CENTER OF SEC.16, T.82 N., R.22 W., STORY COUNTY, AT BRIDGE, 1 MILE SW OF IOWA CENTER.	203	1957-	09-14-76	0
05471200	INDIAN CR NR MINGO, IOWA.	LAT 414817, LONG 931826, IN NW 1/4 SEC. 28, T.81 N., R.21 W., JASPER COUNTY, AT BRIDGE 2.9 MILES NORTHWEST OF MINGO.	276	*1958-74. 1975-	09-14-76	1.4
05471350	CLEAR CR NR MINGO, IOWA.	LAT 4147XX, LONG 9316XX, IN SW 1/4 SEC. 35, T.81 N., R.21 W., JASPER COUNTY, AT BRIDGE, 1 MILE NE OF MINGO.	84.1	1957-	09-14-76	.63
05471400	ELK CR NR TAINTOR, IOWA.	LAT 4129XX, LONG 9251XX, IN NE 1/4 SEC. 7, T.77 N., R.17 W., MAHASKA COUNTY, AT BRIDGE, 6 MILES SW OF TAINTOR.	59.9	1957-	09-13-76	.27
05472100	N SKUNK R NR NEWTON, IOWA.	LAT 4147XX, LONG 9302XX, IN NW 1/4 SEC. 35, T.81 N., R.19 W., JASPER COUNTY, AT BRIDGE, 6 MILES NORTH OF NEWTON.	101	1957-	09-14-76	.94
05472300	N SKUNK R NR SEARSBORO, IOWA.	LAT 4132XX, LONG 9242XX, NEAR CENTER OF SEC.27, T.78 N., R.16 W., POWESHIEK COUNTY, AT BRIDGE, 3.5 MILES SOUTH OF SEARSBORO.	358	1957-	09-13-76	6.4
05472400	MIDDLE CR NR ROSE HILL, IOWA.	LAT 412042, LONG 922825, IN NE 1/4 SEC. 33, T.76 N., R.14 W., MAHASKA COUNTY, AT BRIDGE, 2 MILES NW OF ROSE HILL.	58.5	1957-	09-13-76	.02
05472450	CEDAR CR NR SIGOURNEY, IOWA.	LAT 411842, LONG 921333, IN SE 1/4 SEC. 10, T.75 N., R.12 W., KEOKUK COUNTY, AT BRIDGE, 2 MILES SW OF SIGOURNEY.	92.5	1957-	09-13-76	.28
05473000	SKUNK R AT COPPOCK, IOWA.	LAT 4110XX, LONG 9143XX, IN NE 1/4 SEC. 1, T.73 N., R.8 W., JEFFERSON COUNTY, AT BRIDGE ON STATE HIGHWAY 78, 0.5 MILE WEST OF COPPOCK.	2916	*1913-44. 1957-	09-13-76	92
05473020	EF CROOKED CR NR WINFIELD, IOWA.	LAT 4109XX, LONG 9126XX, IN NE 1/4 SEC. 9, T.73 N., R.5 W., HENRY COUNTY, AT BRIDGE, 2 MILES NORTH OF WINFIELD.	65.3	1958-	09-16-76	.33
05473050	CROOKED CR NR COPPOCK, IOWA.	LAT 4112XX, LONG 9142XX, IN NE 1/4 SEC. 30, T.74 N., R.7 W., WASHINGTON COUNTY, AT BRIDGE, 2 MILES NE OF COPPOCK.	259	1957-	09-13-76	.16
05473100	WALNUT CR AT GERMANVILLE, IOWA.	LAT 4106XX, LONG 9146XX, IN SW 1/4 SEC. 27, T.73 N., R.8 W., WASHINGTON COUNTY, AT BRIDGE, 1 MILE WEST OF GERMANVILLE.	66.3	1957-	09-14-76	.02
05473200	CEDAR CR NR HIGHLAND CENTER, IOWA.	LAT 410630, LONG 922158, IN SW 1/4 SEC. 21, T.73 N., R.13 W., WAPELLO COUNTY, AT BRIDGE, 1 MILE SW OF HIGHLAND CENTER.	73.6	1957-	09-14-76	.06
05473250	COMPETINE CR BELOW FORKS NR BATAVIA IOWA.	LAT 4102XX, LONG 9207XX, IN NE 1/4 SEC. 21, T.72 N., R.11 W., JEFFERSON COUNTY, AT BRIDGE, 3 MILES NE OF BATAVIA.	68.8	1957-	09-14-76	.001
05473300*	CEDAR CR NR BATAVIA, IOWA.	LAT 4101XX, LONG 9207XX, IN NW 1/4 SEC. 27, T.72 N., R.11 W., JEFFERSON COUNTY, AT BRIDGE ON U.S. HIGHWAY 30, 2.5 MILES NE OF BATAVIA.	252	1957-	09-14-76	.14
05473350	L CEDAR CR NR SALEM, IOWA.	LAT 4051XX, LONG 9141XX, IN SW 1/4 SEC. 17, T.70 N., R.7 W., HENRY COUNTY, AT BRIDGE, 4 MILES WEST OF SALEM.	55.0	1958-	09-15-76	.10
05473400	CEDAR CR NR OAKLAND MILLS, IOWA.	LAT 4055XX, LONG 9140XX, IN NW 1/4 SEC. 28, T.71 N., R.7 W., HENRY COUNTY, AT BRIDGE, 3 MILES WEST OF OAKLAND MILLS.	522	1958-	09-15-76	2.6
05473450	BIG CR AT MT. PLEASANT, IOWA.	LAT 4100XX, LONG 9132XX, IN NW 1/4 SEC. 34, T.72 N., R.6 W., HENRY COUNTY, AT BRIDGE, 3 MILES NE OF MT. PLEASANT.	58.0	1958-	09-14-76	0

DISCHARGE MEASUREMENTS MADE AT LOW-FLOW PARTIAL-RECORD STATIONS DURING WATER YEAR 1976--CONTINUED

STATION NO.	STATION NAME	LOCATION	DRAINAGE AREA (SQ MI)	PERIOD OF RECORD	MEASUREMENTS DATE	DISCHARGE (CFS)
DEVILS CREEK BASIN						
05474190	DEVILS CR NR VIELE, IOWA.	LAT 403703, LONG 912534, IN SW 1/4 SEC. 10, T.67 N., R.5 W., LEE COUNTY, AT BRIDGE, 1 MILE NE OF VIELE.	20.0	1958-	09-15-76	0
05474200	SUGAR CR NR FRANKLIN, IOWA.	LAT 403954, LONG 912839, IN NE 1/4 SEC. 30, T.68 N., R.5 W., LEE COUNTY, AT BRIDGE, 2 MILES EAST OF FRANKLIN.	75.6	1958-	09-15-76	.01
05474300	SUGAR CR NR VIELE, IOWA.	LAT 403639, LONG 912624, IN SE 1/4 SEC. 9, T.67 N., R.5 W., LEE COUNTY, AT BRIDGE, 0.5 MILE WEST OF VIELE.	109	1958-	09-15-76	.08
DES MOINES RIVER BASIN						
05476550	JACK CR NR RINGSTED, IOWA.	LAT 4316XX, LONG 9438XX, NEAR S 1/4 CORNER OF SEC.28, T.98 N., R.32 W., EMMET COUNTY, AT BRIDGE, 6 MILES SW OF RINGSTED.	74.8	1957-	11-04-75 08-10-76	0 0
05476600	SILVER CR NR EMMETTSBURG, IOWA.	LAT 4306XX, LONG 9443XX, NEAR N 1/4 CORNER SEC.34, T.96 N., R.33 W., PALO ALTO COUNTY, AT BRIDGE, 3 MILES SW OF EMMETTSBURG.	61.8	1957-	11-04-75 08-10-76	.93 .34
05476650	CYLINDER CR NR RODMAN, IOWA.	LAT 4302XX, LONG 9434XX, NEAR S 1/4 CORNER SEC.13, T.95 N., R.32 W., PALO ALTO COUNTY, AT BRIDGE, 2.5 MILES NW OF RODMAN.	88.6	1957-	11-04-75 08-10-76	1.6 1.5
05476700	PRAIRIE CR NR WEST BEND, IOWA.	LAT 4255XX, LONG 9427XX, NEAR N 1/4 CORNER SEC.36, T.94 N., R.31 W., PALO ALTO COUNTY, AT BRIDGE, 2.5 MILES SW OF WEST BEND.	61.1	1957-	11-04-75 08-11-76	0 0
05476720	BEAVER CR NR ROLFE, IOWA.	LAT 4250XX, LONG 9428XX, NEAR CENTER OF SEC.35, T.93 N., R.31 W., POCAHONTAS COUNTY, AT BRIDGE, 3 MILES NE OF ROLFE.	62.2	1959-	11-04-75 08-11-76	.69 0
05476740	PILOT CR NR ROLFE, IOWA.	LAT 4249XX, LONG 9427XX, IN SE 1/4 SEC. 1, T.92 N., R.31 W., POCAHONTAS COUNTY, AT BRIDGE, 4 MILES EAST OF ROLFE.	97.0	1959-	11-06-75 08-11-76	1.9 .48
05477600	EF DES MOINES R NR DOLLIVER, IOWA.	LAT 4328XX, LONG 9435XX, IN SW 1/4 SEC. 13, T.100 N., R.32 W., EMMET COUNTY, AT BRIDGE, 2 MILES NE OF DOLLIVER.	196	1957-	11-04-75 08-10-76	0 0
05477700	EF DES MOINES R NR SWEA CITY, IOWA.	LAT 4319XX, LONG 9425XX, NEAR CENTER OF SEC.8, T.98 N., R.30 W., KOSSUTH COUNTY, AT BRIDGE, 7 MILES SW OF SWEA CITY.	314	1957-	08-10-76	0
05477800	MUD CR AT BANCROFT, IOWA.	LAT 4318XX, LONG 9412XX, NEAR CENTER OF SEC.19, T.98 N., R.28 W., KOSSUTH COUNTY, AT BRIDGE, 1 MILE EAST OF BANCROFT.	68.1	1957-	11-04-75 08-10-76	0 .05
05478000	EF DES MOINES R NR BURT, IOWA.	LAT 431238, LONG 941035, IN NE 1/4 SEC. 20, T.97 N., R.28 W., KOSSUTH COUNTY, AT BRIDGE 2.2 MILES NORTHEAST OF BURT.	462	*1951-74. 1975-	11-04-75 08-10-76	2.0 .23
05478050	BUFFALO CR NR TITONKA, IOWA.	LAT 4314XX, LONG 9359XX, IN NW 1/4 SEC. 12, T.97 N., R.27 W., KOSSUTH COUNTY, AT BRIDGE, 3 MILES EAST OF TITONKA.	47.9	1957-	11-04-75 08-10-76	0 0
05478100	N BUFFALO CR NR BUFFALO CENTER, IOWA.	LAT 4319XX, LONG 9358XX, IN NW 1/4 SEC. 18, T.98 N., R.26 W., WINNEBAGO COUNTY, AT BRIDGE, 5 MILES SOUTH BUFFALO CENTER.	62.5	1957-	11-04-75 08-10-76	.34 .16
05478150	BLACK CAT CR NR LONE ROCK, IOWA.	LAT 4312XX, LONG 9420XX, NEAR S 1/4 CORNER SEC.24, T.97 N., R.30 W., KOSSUTH COUNTY, AT BRIDGE, 2 MILES SW OF LONE ROCK.	58.2	1957-	08-10-76	0
05478200	BLACK CAT CR NR ALGONA, IOWA.	LAT 4308XX, LONG 9414XX, NEAR S 1/4 CORNER SEC.11, T.96 N., R.29 W., KOSSUTH COUNTY, AT BRIDGE ON U. S. HIGHWAY 169, 5 MILES NORTH OF ALGONA.	112	1957-	11-04-75 08-08-76	0 0
05478350	LOTTS CR NR WEST BEND, IOWA.	LAT 4358XX, LONG 9423XX, NEAR S 1/4 CORNER SEC.9, T.94 N., R.30 W., KOSSUTH COUNTY, AT BRIDGE, 3 MILES EAST OF WEST BEND.	66.2	1957-	08-11-76	1.1
05478400	LOTTS CR AT LIVERMORE, IOWA.	LAT 4252XX, LONG 9411XX, IN NE 1/4 SEC. 18, T.93 N., R.28 W., HUMBOLDT COUNTY, AT BRIDGE NEAR NW CITY LIMITS OF LIVERMORE.	165	1957-	08-11-76	.43
05479600	LIZARD CR NR PALMER, IOWA	LAT 4239XX, LONG 9430XX, IN NW 1/4 SEC. 3, T.90 N., R.31 W., POCAHONTAS COUNTY, AT BRIDGE, 5 MILES NE OF PALMER.	66.4	1957-	11-06-75 08-11-76	.57 0
05479800	NB LIZARD CR NR HAVELOCK, IOWA.	LAT 4248XX, LONG 9440XX, IN NE 1/4 SEC. 18, T.92 N., R.32 W., POCAHONTAS COUNTY, AT BRIDGE, 4 MILES SE OF HAVELOCK.	79.4	1957-	11-06-75 08-11-76	.48 .20

DISCHARGE MEASUREMENTS MADE AT LOW-FLOW PARTIAL-RECORD STATIONS DURING WATER YEAR 1976--CONTINUED

STATION NO.	STATION NAME	LOCATION	DRAINAGE AREA (SQ MI)	PERIOD OF RECORD	MEASUREMENTS DATE	DISCHARGE (CFS)
DES MOINES RIVER BASIN--CONTINUED						
05479900	LIZARD CR NR GILMORE CITY, IOWA.	LAT 4238XX, LONG 9428XX, IN NW 1/4 SEC. 1, T.90 N., R.31 W., POCAHONTAS COUNTY, AT BRIDGE, 6 MILES SW OF GILMORE CITY.	219	1957-	11-06-75 08-11-76	1.5 0
05480100	SB LIZARD CR NR PALMER, IOWA.	LAT 4235XX, LONG 9432XX, IN SW 1/4 SEC. 29, T.90 N., R.31 W., POCAHONTAS COUNTY, AT BRIDGE, 4.5 MILES SE OF PALMER.	66.4	1957-	08-11-76	0
05480300	SB LIZARD CR NR FORT DODGE, IOWA.	LAT 422950, LONG 941359, IN NE 1/4 SEC. 26, T.89 N., R.29 W., WEBSTER COUNTY, AT BRIDGE, 3 MILES WEST OF FORT DODGE.	154	1957-	08-11-76	.34
05480620	BRUSHY CR NR HOMER, IOWA.	LAT 4223XX, LONG 9359XX, IN SE 1/4 SEC. 34, T.88 N., R.27 W., WEBSTER COUNTY, AT BRIDGE, 3 MILES NW OF HOMER.	88.5	1957-	11-06-75 08-10-76	0 0
05480660	BOONE R NR KANAWHA, IOWA.	LAT 4255XX, LONG 9353XX, NEAR NORTH 1/4 CORNER SEC.35, T.94 N., R.26 W., HANCOCK COUNTY, AT BRIDGE, 4 MILES SW OF KANAWHA.	71.4	1957-	11-05-75 08-11-76	.43 .79
05480700	BOONE R NR RENWICK, IOWA.	LAT 4253XX, LONG 9355XX, IN SW 1/4 SEC. 3, T.93 N., R.26 W., WRIGHT COUNTY, AT BRIDGE, 6 MILES NE OF RENWICK.	134	1957-	11-05-75 08-11-76	1.3 1.9
05480720	PRAIRIE CR NR LUVERNE, IOWA.	LAT 4257XX, LONG 9405XX, IN SW 1/4 SEC. 18, T.94 N., R.27 W., KOSSUTH COUNTY, AT BRIDGE, 3 MILES NORTH OF LUVERNE.	68.6	1957-	11-04-75 08-11-76	6.1 1.1
05480760	PRAIRIE CR NR RENWICK, IOWA.	LAT 4252XX, LONG 9359XX, IN NE 1/4 SEC. 23, T.93 N., R.27 W., HUMBOLDT COUNTY, AT BRIDGE, 3 MILES NW OF RENWICK.	118	1957-	11-05-75 08-11-76	0 .28
05480800	OTTER CR NR GOLDFIELD, IOWA.	LAT 4247XX, LONG 9353XX, IN NE 1/4 SEC. 15, T.92 N., R.26 W., WRIGHT COUNTY, AT BRIDGE, 4 MILES NE OF GOLDFIELD.	75.5	1957-	11-05-75 08-11-76	3.8 .30
05480820	BOONE R NR GOLDFIELD, IOWA.	LAT 4243XX, LONG 9357XX, NEAR CENTER OF SEC.5, T.91 N., R.26 W., WRIGHT COUNTY, AT BRIDGE, 1.5 MILES SW OF GOLDFIELD.	419	1957-	11-05-75 08-11-76	3.8 3.3
05480860	EAGLE CR NR EAGLE GROVE, IOWA.	LAT 4242XX, LONG 9349XX, IN SE 1/4 SEC. 8, T.91 N., R.25 W., WRIGHT COUNTY, AT BRIDGE, 5 MILES NE OF EAGLE GROVE.	62.8	1957-	11-05-75 08-11-76	0 1.2
05480900	EAGLE CR NR WOOLSTOCK, IOWA.	LAT 4234XX, LONG 9351XX, NEAR CENTER OF SEC.36, T.90 N., R.26 W., WRIGHT COUNTY, AT BRIDGE, 0.5 MILE WEST OF WOOLSTOCK.	105	1957-	11-06-75 08-10-76	2.7 .58
05480940	WHITE FOX CR NR WOOLSTOCK, IOWA.	LAT 4236XX, LONG 9345XX, IN SW 1/4 SEC. 13, T.90 N., R.25 W., WRIGHT COUNTY, AT BRIDGE, 5 MILES NE OF WOOLSTOCK.	62.0	1957-	11-06-75 08-10-76	2.1 1.4
05480980	WHITE FOX CR AT WEBSTER CITY, IOWA.	LAT 4230XX, LONG 9348XX, IN NW 1/4 SEC. 28, T.89 N., R.25 W., HAMILTON COUNTY, AT BRIDGE, 2 MILES NORTH OF WEBSTER CITY.	111	1957-	11-06-75 08-10-76	2.9 1.2
05481700	BEAVER CR NR BEAVER, IOWA.	LAT 4202XX, LONG 9409XX, NEAR S 1/4 CORNER SEC.6, T.83 N., R.28 W., BOONE COUNTY, AT BRIDGE, 1 MILE SW OF BEAVER.	84.5	1957-	08-10-76	.02
05481800	BEAVER CR NR BERKLEY, IOWA.	LAT 4155XX, LONG 9406XX, IN NW 1/4 SEC. 15, T.82 N., R.28 W., BOONE COUNTY, AT BRIDGE, 2 MILES SOUTH OF BERKLEY.	175	1957-	08-10-76	.08
05481900	BEAVER CR AT GRANGER, IOWA.	LAT 414539, LONG 935101, IN SW 1/4 SEC. 2, T.80 N., R.26 W., DALLAS COUNTY, AT BRIDGE, 1.5 MILES WEST OF GRANGER.	314	1957-	10-14-76	.26
05482100	N RACCOON R NR REMBRANDT, IOWA.	LAT 4247XX, LONG 9506XX, IN NE 1/4 SEC. 21, T.92 N., R.35 W., BUENA VISTA COUNTY, AT BRIDGE, 5 MILES SE OF REMBRANDT.	77.4	1957-	09-15-76	.12
05482120	N RACCOON R NR TRUESDALE, IOWA.	LAT 4242XX, LONG 9505XX, IN NE 1/4 SEC. 15, T.91 N., R.35 W., BUENA VISTA COUNTY, AT BRIDGE, 6 MILES SE OF TRUESDALE.	164	1957-	09-15-76	.45
05482180	L CEDAR CR NR FONDA, IOWA.	LAT 4237XX, LONG 9451XX, IN NW 1/4 SEC. 15, T.90 N., R.34 W., POCAHONTAS COUNTY, AT BRIDGE, 2 MILES NORTH OF FONDA.	83.5	1957-	09-15-76	0
05482200	B CEDAR CR AT FONDA, IOWA.	LAT 4235XX, LONG 9451XX, IN SW 1/4 SEC. 22, T.90 N., R.34 W., POCAHONTAS COUNTY, AT BRIDGE ON STATE HIGHWAY 5, AT NORTH CITY LIMITS OF FONDA.	196	1957-	09-15-76	.18
05482220	B CEDAR CR AT SAC CITY, IOWA.	LAT 4224XX, LONG 9459XX, IN SE 1/4 SEC. 25, T.88 N., R.35 W., SAC COUNTY, AT BRIDGE, 1 MILE SE OF SAC CITY.	342	1957-	09-15-76	4.3

DISCHARGE MEASUREMENTS MADE AT LOW-FLOW PARTIAL-RECORD STATIONS DURING WATER YEAR 1976--CONTINUED

STATION NO.	STATION NAME	LOCATION	DRAINAGE AREA (SQ MI)	PERIOD OF RECORD	MEASUREMENTS DATE	DISCHARGE (CFS)
DES MOINES RIVER BASIN--CONTINUED						
05482320	INDIAN CR NR LAKE VIEW, IOWA.	LAT 4220XX, LONG 9500XX, IN NW 1/4 SEC. 24, T.87 N., R.36 W., SAC COUNTY, AT BRIDGE, 4 MILES NE OF LAKE VIEW.	90.2	1957-	09-15-76	1.2
05482360	CAMP CR NR LYTTON, IOWA.	LAT 4223XX, LONG 9450XX, IN NW 1/4 SEC. 5, T.87 N., R.34 W., CALHOUN COUNTY, AT BRIDGE, 3 MILES SE OF LYTTON.	62.0	1957-	09-15-76	0
05482380	CAMP CR NR LAKE CITY, IOWA.	LAT 4217XX, LONG 9450XX, IN NW 1/4 SEC. 5, T.86 N., R.34 W., CALHOUN COUNTY, AT BRIDGE, 5 MILES NW OF LAKE CITY.	147	1957-	11-07-75 09-15-76	.49 .01
05482400	N RACCOON R NR LAKE CITY, IOWA.	LAT 4216XX, LONG 9450XX, NEAR E 1/4 CORNER SEC.17, T.86 N., R.34 W., CALHOUN COUNTY, AT BRIDGE ON STATE HIGHWAY 175, 4 MILES WEST OF LAKE CITY.	1003	1957-	11-07-75 09-15-76	28 6.8
05482410	LAKE CR NR ROCKWELL CITY, IOWA.	LAT 4224XX, LONG 9436XX, IN SW 1/4 SEC. 29, T.88 N., R.32 W., CALHOUN COUNTY, AT BRIDGE ON U.S. HIGHWAY 20, 1 MILE EAST OF ROCKWELL CITY.	71.5	1957-	09-15-76	0
05482420	LAKE CR NR LAKE CITY, IOWA.	LAT 4216XX, LONG 9447XX, IN SW 1/4 SEC. 14, T.86 N., R.34 W., CALHOUN COUNTY, AT BRIDGE, 3 MILES WEST OF LAKE CITY.	128	1957-	11-07-75 09-15-76	0 0
05482440	PURGATORY CR NR LANESBORO, IOWA.	LAT 4210XX, LONG 9438XX, IN NE 1/4 SEC. 24, T.85 N., R.33 W., CARROLL COUNTY, AT BRIDGE, 3 MILES SE OF LANESBORO.	65.0	1957-	11-07-75 09-15-76	.85 .06
05482460	E CEDAR CR NR SOMERS, IOWA.	LAT 422207, LONG 942703, IN NW 1/4 SEC. 10, T.87 N., R.31 W., CALHOUN COUNTY, AT BRIDGE, 1 MILE SW OF SOMERS.	62.4	1957-	09-15-76	0
05482480	CEDAR CR NR CHURDAN, IOWA.	LAT 4208XX, LONG 9435XX, NEAR S 1/4 CORNER SEC.28, T.85 N., R.32 W., GREENE COUNTY, AT BRIDGE, 5 MILES SW OF CHURDAN.	151	1957-	09-15-76	0
05482700	HARDIN CR NR CHURDAN, IOWA.	LAT 4210XX, LONG 9426XX, IN SW 1/4 SEC. 14, T.85 N., R.31 W., GREENE COUNTY, AT BRIDGE, 2 MILES EAST OF CHURDAN.	74.0	1957-	09-15-76	0
05483050	HARDIN CR NR JEFFERSON, IOWA.	LAT 4201XX, LONG 9420XX, IN NW 1/4 SEC. 10, T.83 N., R.30 W., GREENE COUNTY, AT BRIDGE, 2 MILES EAST OF JEFFERSON.	161	1957-	09-14-76	0
05483100	W BUTTRICK CR NR FARNHAMVILLE, IOWA.	LAT 4213XX, LONG 9422XX, IN NW 1/4 SEC. 4, T.85 N., R.30 W., GREENE COUNTY, AT BRIDGE, 5 MILES SE OF FARNHAMVILLE.	80.1	1957	11-04-75 09-15-76	0 .04
05483150	E BUTTRICK CR NR GRAND JUNCTION, IOWA.	LAT 4204XX, LONG 9416XX, IN NE 1/4 SEC. 30, T.84 N., R.29 W., GREENE COUNTY, AT BRIDGE, 2.5 MILES NW OF GRAND JUNCTION.	79.6	1957-	09-15-76	0
05483200	BUTTRICK CR NR GRAND JUNCTION, IOWA.	LAT 4202XX, LONG 9417XX, AT S 1/4 CORNER SEC.36, T.84 N., R.30 W., GREENE COUNTY, AT BRIDGE, 2.5 MILES WEST OF GRAND JUNCTION.	202	1957-	09-15-76	0
05483250	GREEN BRIER CR NR JAMAICA, IOWA.	LAT 4151XX, LONG 9417XX, NEAR CENTER OF SEC.11, T.81 N., R.30 W., GUTHRIE COUNTY, AT BRIDGE, 1.5 MILES NE OF JAMAICA.	65.8	1957-	09-15-76	0
05483300	N RACCOON R NR PERRY, IOWA.	LAT 4150XX, LONG 9408XX, NEAR CENTER OF SEC.8, T.81 N., R.28 W., DALLAS COUNTY, AT BRIDGE ON STATE HIGHWAY 141, 1 MILE WEST OF PERRY.	2169	1957-	09-14-76	22
05483310	S RACCOON R NR GUTHRIE CENTER, IOWA.	LAT 4141XX, LONG 9432XX, IN SW 1/4 SEC. 36, T.80 N., R.32 W., GUTHRIE COUNTY, AT BRIDGE, 2 MILES NW OF GUTHRIE CENTER.	77.2	1957-	09-14-76	13
05483320	BRUSHY FORK CR NR DEDHAM, IOWA.	LAT 4147XX, LONG 9454XX, IN SE 1/4 SEC. 22, T.82 N., R.34 W., CARROLL COUNTY, AT BRIDGE, 2 MILES SE OF DEDHAM.	68.1	1957-	11-07-75 09-14-76	6.7 3.1
05483330	BRUSHY FORK CR NR GUTHRIE CENTER, IOWA.	LAT 4139XX, LONG 9427XX, NEAR CENTER OF SEC.15, T.79 N., R.31 W., GUTHRIE COUNTY, AT BRIDGE, 3.5 MILES SE OF GUTHRIE CENTER.	142	1957-	09-14-76	19
05483340	S RACCOON R NR MONTEITH, IOWA.	LAT 4138XX, LONG 9425XX, IN SE 1/4 SEC. 23, T.79 N., R.31 W., GUTHRIE COUNTY, AT BRIDGE, 0.5 MILE EAST OF MONTEITH.	267	1957-	09-14-76	36
05483350	M RACCOON R NR CARROLL, IOWA.	LAT 4203XX, LONG 9449XX, IN SE 1/4 SEC. 29, T.84 N., R.34 W., CARROLL COUNTY, AT BRIDGE, 2 MILES SE OF CARROLL.	74.3	1957-	11-07-75 09-14-76	6.2 3.3
05483360	M RACCOON R NR GLIDDEN, IOWA.	LAT 4203XX, LONG 9446XX, NEAR CENTER OF SEC.35, T.84 N., R.34 W., GREENE COUNTY, AT BRIDGE, 2.5 MILES SW OF GLIDDEN.	138	1957-	11-07-75 09-14-76	6.1 3.5

DISCHARGE MEASUREMENTS MADE AT LOW-FLOW PARTIAL-RECORD STATIONS DURING WATER YEAR 1976--CONTINUED

STATION NO.	STATION NAME	LOCATION	DRAINAGE AREA (SQ MI)	PERIOD OF RECORD	MEASUREMENTS DATE	DISCHARGE (CFS)
DES MOINES RIVER BASIN--CONTINUED						
05483380	WILLOW CR NR SCRANTON, IOWA.	LAT 4154XX, LONG 9435XX, IN SW 1/4 SEC. 21, T.82 N., R.32 W., GREENE COUNTY, AT BRIDGE, 9 MILES SW OF SCRANTON.	51.8	1957-	09-14-76	.24
05483400	WILLOW CR NR BAYARD, IOWA.	LAT 4149XX, LONG 9433XX, IN SE 1/4 SEC. 15, T.81 N., R.32 W., GUTHRIE COUNTY, AT BRIDGE, 2 MILES SOUTH OF BAYARD.	112	1957-	09-14-76	3.0
05483450	M RACCOON R NR BAYARD, IOWA.	LAT 4147XX, LONG 9430XX, IN SE 1/4 SEC. 31, T.81 N., R.31 W., GUTHRIE COUNTY, AT BRIDGE ON STATE HIGHWAY 25, 6 MILES SE OF BAYARD.	375	1957-	09-14-76	21
05483620	MOSQUITO CR NR LINDEN, IOWA.	LAT 4143XX, LONG 9415XX, NEAR S 1/4 CORNER SEC.200, T.80 N., R.29 W., DALLAS COUNTY, AT BRIDGE, 5 MILES NE OF LINDEN.	67.4	1957-	11-07-75 09-14-76	2.2 0
05483640	MOSQUITO CR NR REDFIELD, IOWA.	LAT 4138XX, LONG 9413XX, IN NE 1/4 SEC. 27, T.79 N., R.29 W., DALLAS COUNTY, AT BRIDGE, 3 MILES NORTH OF REDFIELD.	110	1957-	11-07-75 09-14-76	5.6 0
05483660	M RACCOON R AT REDFIELD, IOWA.	LAT 4136XX, LONG 9413XX, NEAR W 1/4 CORNER SEC.4, T.78 N., R.29 W., DALLAS COUNTY, AT BRIDGE NEAR WEST CITY LIMITS OF REDFIELD.	609	1957-	11-07-75 09-14-76	68 32
05484200	PANTHER CR NR ADEL, IOWA.	LAT 4136XX, LONG 9406XX, NEAR N 1/4 CORNER SEC.5, T.78 N., R.28 W., DALLAS COUNTY, AT BRIDGE, 4 MILES SW OF ADEL.	56.0	1957-	11-07-75 09-14-76	4.8 .51
BIG SIOUX RIVER BASIN						
06483100	ROCK R NR ROCK RAPIDS, IOWA.	LAT 433001, LONG 961103, IN NE 1/4 SEC. 8, T.100 N., R.45 W., LYON COUNTY, AT BRIDGE, 5 MILES NORTH OF ROCK RAPIDS.	558	1958-	10-21-75 08-24-76	12 .93
06483260	KANARANZI CR NR ROCK RAPIDS, IOWA.	LAT 4328XX, LONG 9609XX, IN SW 1/4 SEC. 22, T.100 N., R.45 W., LYON COUNTY, AT BRIDGE, 2 MILES NORTH OF ROCK RAPIDS.	203	1958-	10-21-75 08-24-76	3.2 .40
06483280	TOM CR AT ROCK RAPIDS, IOWA.	LAT 4326XX, LONG 9609XX, IN SW 1/4 SEC. 34, T.100 N., R.45 W., LYON COUNTY, AT BRIDGE IN NORTHEAST CORNER OF ROCK RAPIDS.	61.9	1958-	10-21-75 08-24-76	.29 0
06483300	ROCK R BELOW ROCK RAPIDS, IOWA.	LAT 4324XX, LONG 9609XX, NEAR N 1/4 CORNER SEC.15, T.99 N., R.45 W., LYON COUNTY, AT BRIDGE, 2 MILES SOUTH OF ROCK RAPIDS.	859	1958-	10-21-75 08-24-76	14 .70
06483320	MUD CR AT LESTER, IOWA.	LAT 4327XX, LONG 9620XX, IN NW 1/4 SEC. 36, T.100 N., R.47 W., LYON COUNTY, AT BRIDGE NEAR NORTHWEST CITY LIMITS OF LESTER.	63.7	1958-	10-21-75 08-24-76	.08 .002
06483330	MUD CR NR DOON, IOWA.	LAT 4317XX, LONG 9615XX, IN NE 1/4 SEC. 27, T.98 N., R.46 W., LYON COUNTY, AT BRIDGE, 1.5 MILES NORTHWEST OF DOON.	138	1958-	10-20-75 08-24-76	1.2 .08
06483340	ROCK R NR DOON, IOWA.	LAT 4316XX, LONG 9615XX, IN NW 1/4 SEC. 35, T.98 N., R.46 W., LYON COUNTY, AT BRIDGE, 1 MILE SOUTHWEST OF DOON.	1050	1958-	10-20-75 08-24-76	20 2.1
06483360	L ROCK R NR LITTLE ROCK, IOWA.	LAT 433000, LONG 955057, IN N 1/2 SEC. 7, T.100 N., R.42 W., OSCEOLA COUNTY, AT BRIDGE, 4 MILES NORTHEAST OF LITTLE ROCK.	92.0	1958-	10-20-75 08-25-76	.13 0
06483380	L ROCK R AT LITTLE ROCK, IOWA.	LAT 4326XX, LONG 9554XX, IN NE 1/4 SEC. 3, T.99 N., R.43 W., LYON COUNTY, AT BRIDGE, 1 MILE SW OF LITTLE ROCK.	134	1958-	10-20-75 08-25-76	2.6 .02
06483400	L ROCK R NR GEORGE, IOWA.	LAT 4319XX, LONG 9602XX, IN NE 1/4 SEC. 15, T.98 N., R.44 W., LYON COUNTY, AT BRIDGE, 2 MILES SOUTHWEST OF GEORGE.	199	1958-	10-21-75 08-25-76	6.9 .13
06483460	*OTTER CR NR ASHTON, IOWA.	LAT 4320XX, LONG 9546XX, IN SE 1/4 SEC. 2, T.98 N., R.42 W., OSCEOLA COUNTY, AT BRIDGE, 2 MILES NORTHEAST OF ASHTON.	88.0	1958-	10-21-75 08-25-76	6.2 1.1
06483470	OTTER CR NR MATLOCK, IOWA.	LAT 4316XX, LONG 9555XX, NEAR W 1/4 CORNER SEC.34, T.98 N., R.43 W., LYON COUNTY, AT BRIDGE, 2 MILES NORTHEAST OF MATLOCK.	129	1958-	10-21-75 08-25-76	11 1.2
06483480	OTTER CR NR GEORGE, IOWA.	LAT 4317XX, LONG 9603XX, IN NW 1/4 SEC. 28, T.98 N., R.44 W., LYON COUNTY, AT BRIDGE, 5 MILES SOUTHWEST OF GEORGE.	208	1958-	10-21-75 08-25-76	16 1.6
06483490	L ROCK R NR DOON, IOWA.	LAT 4316XX, LONG 9614XX, NEAR W 1/4 CORNER SEC.36, T.98 N., R.46 W., LYON COUNTY, AT BRIDGE, 1 MILE SOUTH OF DOON.	474	1958-	10-20-75 08-24-76	27 3.0
06484100	SIXMILE CR NR HAWARDEN, IOWA.	LAT 4302XX, LONG 9624XX, IN NW 1/4 SEC. 28, T.95 N., R.47 W., SIOUX COUNTY, AT BRIDGE, 5 MILES NORTHEAST OF HAWARDEN.	68.8	1958-	10-20-75 08-24-76	2.1 .39

DISCHARGE MEASUREMENTS MADE AT LOW-FLOW PARTIAL-RECORD STATIONS DURING WATER YEAR 1976--CONTINUED

STATION NO.	STATION NAME	LOCATION	DRAINAGE AREA (SQ MI)	PERIOD OF RECORD	MEASUREMENTS DATE	DISCHARGE (CFS)
BIG SIOUX RIVER BASIN--CONTINUED						
06484150	SIXMILE CR NR CHATSWORTH, IOWA.	LAT 4256XX, LONG 9629XX, IN SW 1/4 SEC. 26, T.94 N., R.48 W., SIOUX COUNTY, AT BRIDGE, 1.5 MILES NORTHEAST OF CHATSWORTH.	104	1958-	10-20-75 08-24-76	4.3 1.1
06484200	INDIAN CR NR CHATSWORTH, IOWA.	LAT 4253YX, LONG 9630XX, IN NW 1/4 SEC. 10, T.93 N., R.48 W., PLYMOUTH COUNTY, AT BRIDGE, 1.5 MILES SOUTH OF CHATSWORTH.	62.2	1957-	10-20-75 08-24-76	1.4 .46
06485800	BROKEN KETTLE CR NR ADAVILLE, IOWA.	LAT 424320, LONG 962808, IN SE 1/4 SEC. 2, T.91 N., R.48 W., PLYMOUTH COUNTY, AT BRIDGE, 4 MILES SW OF ADAVILLE.	60.7	1957-	10-21-75 08-26-76	2.9 2.1
06485900	BROKEN KETTLE CR NR SIOUX CITY, IOWA.	LAT 423816, LONG 963028, IN SW 1/4 SEC. 3, T.90 N., R.48 W., PLYMOUTH COUNTY, AT BRIDGE, 9 MILES NORTHWEST OF SIOUX CITY.	97.4	1957-	10-21-75 08-26-76	3.6 1.1
FLOYD RIVER BASIN						
06600020	FLOYD R NR SHELTON, IOWA.	LAT 431219, LONG 954922, IN SW 1/4 SEC. 21, T.97 N., R.42 W., O BRIEN COUNTY, AT BRIDGE, 2 MILES NORTHEAST OF SHELTON.	64.0	1958-	10-21-75 08-25-76	4.8 .25
06600040	L FLOYD R NR SHELTON, IOWA.	LAT 430925, LONG 955202, IN SE 1/4 SEC. 1, T.96 N., R.43 W., SIOUX COUNTY, AT BRIDGE, 2 MILES SOUTHWEST OF SHELTON.	59.3	1958-	10-21-75 08-25-76	3.7 .04
06600060	FLOYD R BELOW SHELTON, IOWA.	LAT 430738, LONG 955327, IN N 1/2 SEC. 23, T.96 N., R.43 W., SIOUX COUNTY, AT BRIDGE, 4 MILES SOUTHWEST OF SHELTON.	165	1958-	10-01-75 10-21-75 05-05-76 07-06-76 07-27-76 08-25-76 09-27-76	13 9.4 31 11 5.9 1.6 3.0
06600120	DEEP CR NR OYENS, IOWA.	LAT 424926, LONG 960653, IN SW 1/4 SEC. 36, T.93 N., R.45 W., PLYMOUTH COUNTY, AT BRIDGE, 3 MILES NORTHWEST OF OYENS.	82.7	1957-	10-20-75 08-25-76	2.4 .66
06600140	WILLOW CR NR OYENS, IOWA.	LAT 424942, LONG 960654, NEAR W 1/4 CORNER SEC.36, T.93 N., R.45 W., PLYMOUTH COUNTY, AT BRIDGE, 3 MILES NORTHWEST OF OYENS.	65.2	1957-	10-20-75 08-25-76	.15 .01
06600160	DEEP CR AT LE MARS, IOWA.	LAT 424815, LONG 960928, IN NE 1/4 SEC. 9, T.92 N., R.45 W., PLYMOUTH COUNTY, AT BRIDGE NEAR NORTH CITY LIMITS OF LE MARS.	156	1957-	10-20-75 08-25-76	3.7 .21
06600180	FLOYD R AT LE MARS, IOWA.	LAT 424802, LONG 961026, IN NW 1/4 SEC. 9, T.92 N., R.45 W., PLYMOUTH COUNTY, AT BRIDGE NEAR NORTH CITY LIMITS OF LE MARS.	478	1958-	10-21-75 08-25-76	21 4.1
06600200	FLOYD R NR MERRILL, IOWA.	LAT 424459, LONG 961232, IN NW 1/4 SEC. 31, T.92 N., R.45 W., PLYMOUTH COUNTY, AT BRIDGE, 3 MILES NORTHEAST OF MERRILL.	489	1957-	10-21-75 08-25-76	27 6.7
06600250	WB FLOYD R NR MIDDLEBURG, IOWA.	LAT 430649, LONG 960452, IN NE 1/4 SEC. 30, T.96 N., R.44 W., SIOUX COUNTY, AT BRIDGE, 1 MILE WEST OF MIDDLEBURG.	59.7	1958-	10-20-75 08-25-76	.05 .04
06600400	WB FLOYD R NR MERRILL, IOWA.	LAT 424459, LONG 961426, IN NE 1/4 SEC. 35, T.92 N., R.46 W., PLYMOUTH COUNTY, AT BRIDGE, 2 MILES NORTH OF MERRILL.	232	1957-	10-21-75 08-25-76	7.7 3.5
MONONA-HARRISON DITCH BASIN						
06601500	BIG WHISKEY SLOUGH NR KINGSLEY, IOWA.	LAT 4240XX, LONG 9552XX, NEAR S 1/4 CORNER SEC.25, T.91 N., R.43 W., PLYMOUTH COUNTY, AT BRIDGE, 7 MILES NORTHEAST OF KINGSLEY.	55.3	1957-	10-08-75 08-13-76	2.7 .71
06601600	WF L SIOUX R NR FIELDING, IOWA.	LAT 4239XX, LONG 9552XX, IN NW 1/4 SEC. 1, T.90 N., R.43 W., PLYMOUTH COUNTY, AT BRIDGE, 4 MILES SOUTHWEST OF FIELDING.	135	1957-	10-08-75 08-13-76	6.8 2.8
06601700	WF L SIOUX R NR KINGSLEY, IOWA.	LAT 4235XX, LONG 9600XX, IN NW 1/4 SEC. 25, T.90 N., R.44 W., PLYMOUTH COUNTY, AT BRIDGE, 1 MILE WEST OF KINGSLEY.	219	1957-	10-08-75 08-12-76	14 4.6
06601800	MUD CR AT MOVILLE, IOWA.	LAT 422928, LONG 960524, IN SW 1/4 SEC. 30, T.89 N., R.44 W., WOODBURY COUNTY, AT BRIDGE, 1 MILE WEST OF MOVILLE.	68.7	1957-	10-07-75 08-12-76	.77 .06
06601900	WF L SIOUX R AT MOVILLE, IOWA.	LAT 422830, LONG 960439, IN SE 1/4 SEC. 31, T.89 N., R.44 W., WOODBURY COUNTY, AT BRIDGE ON U. S. HIGHWAY 20, 0.5 MILE SOUTHWEST OF MOVILLE.	344	1957-	10-07-75 08-13-76	22 8.1
06602200	ELLIOT CR NR BRONSON, IOWA.	LAT 422353, LONG 961405, IN NE 1/4 SEC. 31, T.88 N., R.46 W., WOODBURY COUNTY, AT BRIDGE, 1.5 MILES SOUTH-WEST OF BRONSON.	58.6	1957-	10-08-75 08-12-76	2.7 .81

DISCHARGE MEASUREMENTS MADE AT LOW-FLOW PARTIAL-RECORD STATIONS DURING WATER YEAR 1976--CONTINUED

STATION NO.	STATION NAME	LOCATION	DRAINAGE AREA (SQ MI)	PERIOD OF RECORD	MEASUREMENTS DATE	DISCHARGE (CFS)
MONONA-HARRISON DITCH BASIN--CONTINUED						
06602250	BIG WHISKEY CR NR BRONSON, IOWA.	LAT 422404, LONG 961429, IN NE 1/4 SEC. 31, T.88 N., R.46 W., WOODBURY COUNTY, AT BRIDGE, 1.5 MILES SOUTH-WEST OF BRONSON.	62.4	1957-	10-08-75 08-12-76	3.8 .90
06602300	WOLF CR NR HOLLY SPRINGS, IOWA.	LAT 421806, LONG 960110, IN SW 1/4 SEC. 31, T.87 N., R.44 W., WOODBURY COUNTY, AT BRIDGE, 4 MILES NORTHEAST OF HOLLY SPRINGS.	99.2	1957-	10-08-75 08-12-76	9.6 3.5
LITTLE SIOUX RIVER BASIN						
06603600	L SIOUX R NR MONTGOMERY, IOWA.	LAT 4326XX, LONG 9515XX, IN NE 1/4 SEC. 6, T.99 N., R.37 W., DICKINSON COUNTY, AT BRIDGE ON STATE HIGHWAY 9, 2.5 MILES SW OF MONTGOMERY.	118	1958-	10-08-75 08-12-76	.24 0
06603700	WF L SIOUX R NR LAKE PARK, IOWA.	LAT 4329XX, LONG 9517XX, NEAR N 1/4 CORNER SEC.13, T.100 N., R.38 W., DICKINSON COUNTY, AT BRIDGE, 3 MILES NE OF LAKE PARK.	116	1958-	10-08-75 08-12-76	0 0
06603800	WF L SIOUX R NR MONTGOMERY, IOWA.	LAT 4325XX, LONG 9516XX, IN SW 1/4 SEC. 6, T.99 N., R.37 W., DICKINSON COUNTY, AT BRIDGE, 4 MILES SW OF MONTGOMERY.	173	1958-	10-08-75 08-12-76	.85 0
06603900	L SIOUX R NR MILFORD, IOWA.	LAT 4319XX, LONG 9511XX, NEAR CENTER OF SEC.11, T.98 N., R.37 W., DICKINSON COUNTY, AT BRIDGE, 1.5 MILES SW OF MILFORD.	333	1958-	10-08-75 08-12-76	3.5 .005
06604100	SPIRIT LAKE OUTLET AT ORLEANS, IOWA.	LAT 432645, LONG 950545, IN SE 1/4 SEC. 28, T.100 N., R.35 W., DICKINSON COUNTY, AT CULVERT 200 FEET DOWNSTREAM FROM SPIRIT LAKE.	75.6	1958-70. *1971-74. 1975-	10-08-75 08-12-76	0 0
06604300	MILFORD CR AT ARNOLDS PARK, IOWA.	LAT 4322XX, LONG 9508XX, IN NE 1/4 SEC. 29, T.99 N., R.36 W., DICKINSON COUNTY, AT BRIDGE IN ARNOLDS PARK.	125	1958-	10-08-75 08-12-76	0 0
06604400	MILFORD CR AT MILFORD, IOWA	LAT 431914, LONG 950841, IN SW 1/4 SEC. 7, T.98 N., R.36 W., DICKINSON COUNTY, AT BRIDGE AT EAST EDGE OF MILFORD.	146	1958-1970. *1971-74. 1975-	08-12-76	2.5
06604500	OCHEYEDAN R NR BIGELOW, MINN.	LAT 4327XX, LONG 9537XX, IN SE 1/4 SEC. 24, T.100 N., R.41 W., OSCEOLA COUNTY, AT BRIDGE IN IOWA, 4.5 MILES SE OF BIGELOW.	68.7	1958-	10-08-75 08-12-76	0 0
06604600	L OCHEYEDAN R NR MAY CITY, IOWA.	LAT 4317XX, LONG 9528XX, IN NE 1/4 SEC. 29, T.98 N., R.39 W., OSCEOLA COUNTY, AT BRIDGE, 3 MILES SOUTH OF MAY CITY.	54.2	1958-	10-08-75 08-12-76	4.8 .14
06604700	OCHEYEDAN R NR MAY CITY, IOWA.	LAT 4316XX, LONG 9527XX, NEAR N 1/4 CORNER SEC.34, T.98 N., R.39 W., OSCEOLA COUNTY, AT BRIDGE, 4 MILES SE OF MAY CITY.	226	1958-	10-08-75 08-12-76	20 2.8
06604800	STONEV CR NR FOSTORIA, IOWA.	LAT 4314XX, LONG 9520XX, IN NW 1/4 SEC. 10, T.97 N., R.38 W., CLAY COUNTY, AT BRIDGE, 9 MILES WEST OF FOSTORIA.	65.4	1958-	10-07-75 08-12-76	6.6 1.2
06604900	STONEV CR NR EVERLY, IOWA.	LAT 430922, LONG 951458, IN NE 1/4 SEC. 7, T.96 N., R.37 W., CLAY COUNTY, AT BRIDGE, 4 MILES SE OF EVERLY.	81.6	1958-	10-07-75 08-12-76	11 1.9
06605000	OCHEYEDAN R NR SPENCER, IOWA.	LAT 430744, LONG 951237, IN SW 1/4 SEC. 15, T.96 N., R.37 W., CLAY COUNTY, AT BRIDGE, 3 MILES SW OF SPENCER.	426	1958-	10-07-75 08-12-76	45 8.3
06605100	L SIOUX R AT SPENCER, IOWA.	LAT 430813, LONG 950839, IN N 1/2 SEC. 18, T.96 N., R.36 W., CLAY COUNTY, AT BRIDGE ON U.S. HIGHWAY 18 AND 71, IN SPENCER.	990	*1936-42. 1957-	10-07-75	71
06605200	BIG MUDDY CR NR LANGDON, IOWA.	LAT 431149, LONG 950411, IN NW 1/4 SEC. 26, T.97 N., R.36 W., CLAY COUNTY, AT BRIDGE, 1.5 MILES SE OF LANGDON.	59.7	1957-	10-07-75 08-12-76	3.7 .54
06605300	BIG MUDDY CR NR SPENCER, IOWA.	LAT 430828, LONG 950514, IN NW 1/4 SEC. 15, T.96 N., R.36 W., CLAY COUNTY, AT BRIDGE, 3 MILES EAST OF SPENCER.	102	1957-	10-07-75 08-12-76	8.2 1.2
06605400	PICKEREL RUN NR SPENCER, IOWA.	LAT 4312XX, LONG 9458XX, IN NW 1/4 SEC. 27, T.97 N., R.35 W., CLAY COUNTY, AT BRIDGE, 9 MILES NE OF SPENCER.	75.7	1957-	10-07-75 08-12-76	.47 0
06605500	LOST ISLAND OUTLET NR DICKENS, IOWA.	LAT 430707, LONG 950158, AT W 1/4 CORNER SEC.19, T.96 N., R.35 W., CLAY COUNTY, AT BRIDGE, 1 MILE SOUTH OF DICKENS.	151	1957-	10-07-75 08-12-76	6.6 1.3
06605600	L SIOUX R AT GILLETTS GROVE, IOWA.	LAT 430106, LONG 950234, IN NE 1/4 SEC. 25, T.95 N., R.36 W., CLAY COUNTY, AT BRIDGE 0.4 MILE NORTHWEST OF GILLETTS GROVE.	1334	*1958-73. 1974-	08-12-76	20
06605700	WILLOW CR NR ROSSI, IOWA.	LAT 4259XX, LONG 9510XX, IN SE 1/4 SEC. 4, T.94 N., R.37 W., CLAY COUNTY, AT BRIDGE, 2 MILES SE OF ROSSI.	62.6	1957-	10-08-75 08-12-76	0 0
06605800	WILLOW CR NR GREENVILLE, IOWA.	LAT 4259XX, LONG 9509XX, NEAR CENTER OF SEC.7, T.94 N., R.36 W., CLAY COUNTY, AT BRIDGE, 3 MILES SOUTH OF GREENVILLE.	90.3	1957-	10-08-75 08-12-76	4.4 0

DISCHARGE AT PARTIAL-RECORD STATIONS AND MISCELLANEOUS SITES

DISCHARGE MEASUREMENTS MADE AT LOW-FLOW PARTIAL-RECORD STATIONS DURING WATER YEAR 1976---CONTINUED

STATION NO.	STATION NAME	LOCATION	DRAINAGE AREA (SQ MI)	PERIOD OF RECORD	MEASUREMENTS DATE	DISCHARGE (CFS)
LITTLE SIOUX RIVER BASIN---CONTINUED						
06605900	WATERMAN CR NR HARTLEY, IOWA.	LAT 4305XX, LONG 9527XX, IN NE 1/4 SEC. 4, T.95 N., R.39 W., O'BRIEN COUNTY, AT BRIDGE, 6.5 MILES SE OF HARTLEY.	58.4	1958-	10-08-75 08-12-76	2.7 0
06606000	WATERMAN CR NR SUTHERLAND, IOWA.	LAT 4257XX, LONG 9525XX, NEAR CENTER OF SEC.23, T.94 N., R.39 W., O'BRIEN COUNTY, 4.5 MILES SE OF SUTHERLAND.	139	1958-	10-07-75 08-13-76	15 1.3
06606100	L SIOUX R NR SUTHERLAND, IOWA.	LAT 4256XX, LONG 9525XX, IN NW 1/4 SEC. 26, T.94 N., R.39 W., O'BRIEN COUNTY, AT BRIDGE, 5 MILES SE OF SUTHERLAND.	1803	1958-	10-07-75 08-13-76	53 1 24
06606200	MILL CR NR PAULINA, IOWA.	LAT 430134, LONG 954237, NEAR N 1/4 CORNER SEC.29, T.95 N., R.41 W., O'BRIEN COUNTY, AT BRIDGE, 3 MILES NW OF PAULINA.	61.6	1958-	10-08-75 08-12-76	0 0
06606300	MILL CR NR CHEROKEE, IOWA.	LAT 4247XX, LONG 9533XX, NEAR CENTER OF SEC.15, T.92 N., R.40 W., CHEROKEE COUNTY, AT BRIDGE, ON U.S. HIGHWAY 59, 2 MILES NORTH OF CHEROKEE.	292	1958-	10-07-75 08-13-76	29 2.7
06606400	L SIOUX R AT CHEROKEE, IOWA.	LAT 4245XX, LONG 9532XX, IN E 1/2 SEC. 26, T.92 N., T.40 W., CHEROKEE EAST CITY LIMITS OF CHEROKEE.	2173	1958-	10-07-75 08-13-76	202 27
06606500	PIERSON CR NR CORRECTIONVILLE, IOWA.	LAT 4229XX, LONG 9548XX, IN NE 1/4 SEC. 33, T.89 N., R.42 W., WOODBURY COUNTY, AT BRIDGE, 1 MILE NW OF CORRECTIONVILLE.	55.1	1957-	10-07-75 08-12-76	4.6 1.4
06606800	MAPLE R NR AURELIA, IOWA.	LAT 4243XX, LONG 9529XX, IN NW 1/4 SEC. 8, T.91 N., R.39 W., CHEROKEE COUNTY, AT BRIDGE, 2 MILES NW OF AURELIA.	85.2	1958-	10-07-75 08-13-76	1.4 .26
06606900	MAPLE R NR IDA GROVE, IOWA.	LAT 422155, LONG 952727, IN NW 1/4 SEC. 12, T.87 N., R.40 W., IDA COUNTY, AT BRIDGE, 1 MILE NE OF IDA GROVE.	364	1957-	10-07-75 08-11-76	36 16
06607100	ODEBOLT CR AT IDA GROVE, IOWA.	LAT 422049, LONG 952803, NEAR CENTER OF SEC.14, T.87 N., R.40 W., IDA COUNTY, AT BRIDGE IN IDA GROVE.	61.1	1957-	10-07-75 08-11-76	8.0 3.3
06607400	MAPLE R NR TURIN, IOWA.	LAT 4201XX, LONG 9558XX, IN SW 1/4 SEC. 10, T.83 N., R.44 W., MONONA COUNTY, AT BRIDGE, 1 MILE SE OF TURIN.	741	1957-	10-08-75 08-12-76	91 46
SOLDIER RIVER BASIN						
06608300	SOLDIER R NR RICKETTS, IOWA.	LAT 4212XX, LONG 9535XX, IN SW 1/4 SEC. 1, T.85 N., R.41 W., CRAWFORD COUNTY, AT BRIDGE, 5 MILES NORTH OF RICKETTS.	90.5	1959-	10-07-75 08-11-76	15 6.7
06608350	SOLDIER R NR UTE, IOWA.	LAT 4203XX, LONG 9543XX, IN SE 1/4 SEC. 34, T.84 N., R.42 W., MONONA COUNTY, AT BRIDGE ON STATE HIGHWAY 183, 1 MILE SW OF UTE.	155	1957-	10-08-75 08-11-76	22 11
06608400	E SOLDIER R NR UTE IOWA.	LAT 4203XX, LONG 9542XX, IN SW 1/4 SEC. 35, T.84 N., R.42 W., MONROE COUNTY, AT BRIDGE NEAR SW CITY LIMITS OF UTE.	97.8	1957-	10-08-75 08-11-76	9.9 3.2
ALLEN CREEK BASIN						
06609220	ALLEN CREEK NR LOVELAND, IOWA (REVISED).	LAT 4129XX, LONG 9555XX, IN NE 1/4 SEC. 17, T.77 N., R.44 W., POTTAWATOMIE COUNTY, AT BRIDGE, 2 MILES SW OF LOVELAND.	92.1	1957-	10-07-75 08-12-76	7.1 .45
BOYER RIVER BASIN						
06609260	BOYER R NR EARLY, IOWA.	LAT 4228XX, LONG 9511XX, IN NE 1/4 SEC. 6, T.88 N., R.37 W., SAC COUNTY, AT BRIDGE ON U.S. HIGHWAY 20, 2 MILES NW OF EARLY.	67.5	1957-	10-07-75 08-11-76	3.1 .76
06609300	E BOYER R AT VAIL, IOWA.	LAT 4204XX, LONG 9512XX, IN E 1/2 SEC. 30, T.84 N., R.37 W., CRAWFORD COUNTY, AT BRIDGE NEAR EAST CITY LIMITS OF VAIL.	65.4	1957-	10-07-75 08-11-76	5.9 3.2
06609350	E BOYER R AT DENISON, IOWA.	LAT 4201XX, LONG 9522XX, IN SE 1/4 SEC. 10, T.83 N., R.39 W., CRAWFORD COUNTY, AT BRIDGE ON U.S. HIGHWAY 30, NEAR WEST CITY LIMITS OF DENISON.	130	1957-	10-07-75 08-11-76	13 6.7
06609400	BOYER R NR DENISON, IOWA.	LAT 4200XX, LONG 9523XX, IN NE 1/4 SEC. 16, T.83 N., R.39 W., CRAWFORD COUNTY, AT BRIDGE, 2 MILES SW OF DENISON.	517	1957-	10-09-75 08-11-76	36 17
06609550	BOYER R NR MISSOURI VALLEY, IOWA.	LAT 4131XX, LONG 9554XX, IN SE 1/4 SEC. 28, T.78 N., R.44 W., HARRISON COUNTY, AT BRIDGE, 2 MILES SOUTH OF MISSOURI VALLEY.	1081	1957-	10-07-75 08-12-76	80 36
06609580	WILLOW CR NR WOODBINE, IOWA.	LAT 4148XX, LONG 9545XX, IN NE 1/4 SEC. 29, T.81 N., R.42 W., HARRISON COUNTY, AT BRIDGE, 5.5 MILES NW OF WOODBINE.	67.0	1957-	10-07-75 08-11-76	5.1 2.1
06609600	WILLOW CR NR LOGAN, IOWA.	LAT 413754, LONG 952750, IN NE 1/4 SEC. 30, T.79 N., R.43 W., HARRISON COUNTY, AT BRIDGE 5.5 MILES WEST OF LOGAN.	129	+1972-74. 1975-	08-12-76	5.7

DISCHARGE AT PARTIAL-RECORD STATIONS AND MISCELLANEOUS SITES

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DISCHARGE MEASUREMENTS MADE AT LOW-FLOW PARTIAL-RECORD STATIONS DURING WATER YEAR 1976--CONTINUED

STATION NO.	STATION NAME	LOCATION	DRAINAGE AREA (SQ MI)	PERIOD OF RECORD	MEASUREMENTS DATE	DISCHARGE (CFS)
PIGEON CREEK BASIN						
06609900	PIGEON CR EAST OF LOVELAND, IOWA.	LAT 412838, LONG 954213, IN SW 1/4 SEC. 8, T.77 N., R.42 W., POTTAWATAMIE COUNTY, AT BRIDGE, 10 MILES SE OF LOVELAND.	66.6	1957-	10-09-75	4.9
06609950	PIGEON CR NR CRESCENT, IOWA.	LAT 411947, LONG 955319, IN NE 1/4 SEC. 3, T.75 N., R.44 W., POTTAWATAMIE COUNTY, AT BRIDGE, 3 MILES SW OF CRESCENT.	163	1957-	10-09-75	12
MOSQUITO CREEK BASIN						
06610550	MOSQUITO CR AT PORTSMOUTH, IOWA.	LAT 4139XX, LONG 9531XX, IN SW 1/4 SEC. 16, T.79 N., R.40 W., SHELBY COUNTY, AT BRIDGE ON STATE HIGHWAY 64, NEAR EAST CITY LIMITS OF PORTSMOUTH.	63.9	1957-	10-08-75	8.1
06610600	*MOSQUITO CR AT NEOLA, IOWA.	LAT 412709, LONG 953637, IN NE 1/4 SEC. 19, T.77 N., R.42 W., POTTAWATAMIE COUNTY, AT BRIDGE ON COUNTY ROAD S, 0.5 MILE SOUTH OF NEOLA.	131	1957-	10-09-75	15
06610650	MOSQUITO CR NR COUNCIL BLUFFS, IOWA.	LAT 411609, LONG 954822, IN E 1/2 SEC. 29, T.75 N., R.43 W., POTTAWATAMIE COUNTY, AT BRIDGE, 3 MILES EAST OF COUNCIL BLUFFS.	211	1957-	10-09-75	22
TARKIO RIVER BASIN						
06811860	TARKIO R NR COBURG, IOWA.	LAT 4054XX, LONG 9508XX, IN NW 1/4 SEC. 5, T.70 N., R.37 W., PAGE COUNTY, AT BRIDGE, 6 MILES SE OF COBURG.	66.6	1957-	09-21-76	.90
06811880	E TARKIO CR NR YORKTOWN, IOWA.	LAT 4043XX, LONG 9512XX, IN SW 1/4 SEC. 10, T.68 N., R.38 W., PAGE COUNTY, AT BRIDGE, 2.5 MILES SW OF YORKTOWN.	58.0	1957-	09-21-76	.70
06811900	TARKIO R NR YORKTOWN, IOWA.	LAT 4043XX, LONG 9513XX, IN N 1/2 SEC. 16, T.68 N., R.38 W., PAGE COUNTY, AT BRIDGE, 3 MILES SW OF YORKTOWN.	155	1957-	09-21-76	2.3
06812000	TARKIO R AT BLANCHARD, IOWA.	LAT 4036XX, LONG 9514XX, IN NE 1/4 SEC. 29, T.67 N., R.38 W., PAGE COUNTY, AT BRIDGE, 1 MILE NORTH OF BLANCHARD.	200	*1934-40. 1957-	09-21-76	3.9
06812300	W TARKIO CR NR COIN, IOWA.	LAT 4041XX, LONG 9518XX, NEAR S 1/2 CORNER SEC.22, T.68 N., R.39 W., PAGE COUNTY, AT BRIDGE, 4 MILES NW OF COIN.	66.9	1957-	09-21-76	.29
06812400	W TARKIO CR NR NORTHBORO, IOWA.	LAT 4035XX, LONG 9521XX, IN SW 1/4 SEC. 29, T.67 N., R.39 W., PAGE COUNTY, AT BRIDGE, 3.5 MILES SW OF NORTHBORO.	87.7	1957-	09-21-76	2.0
NODAWAY RIVER BASIN						
06816300	W NODAWAY R NR CUMBERLAND, IOWA.	LAT 4112XX, LONG 9452XX, IN SW 1/4 SEC. 15, T.74 N., R.35 W., CASS COUNTY, AT BRIDGE, 4 MILES SOUTH OF CUMBERLAND.	65.1	1957-	09-21-76	2.0
06816350	SEVENMILE CR NR LYMAN, IOWA.	LAT 4115XX, LONG 9459XX, IN SE 1/4 SEC. 33, T.75 N., R.36 W., CASS COUNTY, AT BRIDGE ON U.S. HIGHWAY 71, 1.5 MILES NORTH OF LYMAN.	60.8	1957-	09-22-76	2.5
06816400	SEVENMILE CR NR MORTON HILL, IOWA.	LAT 4106XX, LONG 9500XX, IN NW 1/4 SEC. 33, T.73 N., R.36 W., MONTGOMERY COUNTY, AT BRIDGE, 1 MILE NW OF MORTON HILL.	124	1957-	09-21-76	16
06816550	W NODAWAY R NR VILLISCA, IOWA.	LAT 4055XX, LONG 9500XX, NEAR CENTER OF SEC.28, T.71 N., R.36 W., MONTGOMERY COUNTY, AT BRIDGE NEAR WEST CITY LIMITS OF VILLISCA.	344	1957-	09-21-76	30
06816600	M NODAWAY R NR BRIDGEWATER, IOWA.	LAT 4110XX, LONG 9439XX, IN NE 1/4 SEC. 33, T.74 N., R.33 W., ADAIR COUNTY, AT BRIDGE, 5 MILES SE OF BRIDGEWATER.	89.3	1957-	09-22-76	1.1
06816700	WF M NODAWAY R NR FONTANELLE, IOWA.	LAT 4119XX, LONG 9439XX, NEAR CENTER OF SEC.4, T.75 N., R.33 W., ADAIR COUNTY, AT BRIDGE, 5 MILES NW OF FONTANELLE.	67.9	1957-	09-22-76	.53
06816800	WF M NODAWAY R NR BRIDGEWATER, IOWA.	LAT 4111XX, LONG 9439XX, NEAR CENTER OF SEC.28, T.74 N., R.33 W., ADAIR COUNTY, AT BRIDGE, 4.5 MILES SOUTH OF BRIDGEWATER.	128	1957-	09-22-76	3.3
06816900	M NODAWAY R NR VILLISCA, IOWA.	LAT 4055XX, LONG 9459XX, IN NW 1/4 SEC. 34, T.71 N., R.36 W., MONTGOMERY COUNTY, AT BRIDGE ON U.S. HIGHWAY 71, 1 MILE SOUTH OF VILLISCA.	341	1957-	09-21-76	22
06817050	E NODAWAY R NR WILLIAMSON, IOWA.	LAT 4106XX, LONG 9433XX, IN NW 1/4 SEC. 28, T.73 N., R.32 W., ADAMS COUNTY, AT BRIDGE, 3 MILES SE OF WILLIAMSON.	54.2	1957-	09-21-76	0
06817100	E NODAWAY R NR SHAMBAUGH, IOWA.	LAT 4038XX, LONG 9501XX, IN NE 1/4 SEC. 6, T.67 N., R.36 W., PAGE COUNTY, AT BRIDGE, 2 MILES SE OF SHAMBAUGH.	333	1957-	09-21-76	6.9
06817200	NODAWAY R NR BRADYVILLE, IOWA.	LAT 4037XX, LONG 9501XX, NEAR CENTER OF SEC.18, T.67 N., R.36 W., PAGE COUNTY, AT BRIDGE, 3 MILES NORTH OF BRADYVILLE.	1135	1957-	09-21-76	74

DISCHARGE MEASUREMENTS MADE AT LOW-FLOW PARTIAL-RECORD STATIONS DURING WATER YEAR 1976--CONTINUED

STATION NO.	STATION NAME	LOCATION	DRAINAGE AREA (SQ MI)	PERIOD OF RECORD	MEASUREMENTS DATE	DISCHARGE (CFS)
PLATTE RIVER BASIN						
06818600	PLATTE R NR KENT, IOWA.	LAT 4057XX, LONG 9429XX, IN SW 1/4 SEC. 13, T.71 N., R.32 W., AT BRIDGE, 2 MILES WEST OF KENT.	77.9	1957-	09-21-76	.88
06818650	E PLATTE R NR KNOWLTON, IOWA.	LAT 4054XX, LONG 9426XX, IN NW 1/4 SEC. 4, T.70 N., R.31 W., RINGGOLD COUNTY, AT BRIDGE, 7 MILES NW OF KNOWLTON.	66.8	1957-	09-21-76	0
06818700	PLATTE R NR KNOWLTON, IOWA.	LAT 4052XX, LONG 9426XX, IN NW 1/4 SEC. 16, T.70 N., R.31 W., RINGGOLD COUNTY, AT BRIDGE, 6 MILES NW OF KNOWLTON.	179	1959-	09-21-76	2.8
06819100	WB 102 R NR GRAVITY, IOWA.	LAT 4049XX, LONG 9449XX, IN SE 1/4 SEC. 31, T.70 N., R.34 W., TAYLOR COUNTY, AT BRIDGE, 5 MILES NW OF GRAVITY.	52.2	1957-	09-21-76	.004
06819120	WB 102 R BELOW MB NR GRAVITY, IOWA.	LAT 4048XX, LONG 9449XX, IN NW 1/4 SEC. 7, T.69 N., R.34 W., TAYLOR COUNTY, AT BRIDGE, 4.5 MILES NW OF GRAVITY.	106	1957-	09-21-76	.04
06819140	WB 102 R NR NEW MARKET, IOWA.	LAT 4044XX, LONG 9451XX, IN SW 1/4 SEC. 35, T.69 N., R.35 W., TAYLOR COUNTY, AT BRIDGE, 2.75 MILES EAST OF NEW MARKET.	123	1957-	09-21-76	.78
06819150	WF 102 R NR NEW MARKET, IOWA.	LAT 4043XX, LONG 9451XX, IN NW 1/4 SEC. 10, T.68 N., R.35 W., TAYLOR COUNTY, AT BRIDGE, 3 MILES SE OF NEW MARKET.	183	1957-	09-21-76	.46
06819180	EF 102 R NR BEDFORD, IOWA.	LAT 4044XX, LONG 9439XX, IN NE 1/4 SEC. 4, T.68 N., R.33 W., TAYLOR COUNTY, AT BRIDGE, 3 MILES NE OF BEDFORD.	60.4	1957-	09-21-76	0
06819195	MF 102 R NR BEDFORD, IOWA.	LAT 4035XX, LONG 9449XX, IN NE 1/4 SEC. 26, T.67 N., R.35 W., TAYLOR COUNTY, AT BRIDGE, 7 MILES SW OF BEDFORD.	59.8	1957-	09-21-76	.002
GRAND RIVER BASIN						
06896100	GRAND R AT KNOWLTON, IOWA.	LAT 4050XX, LONG 9420XX, IN SE 1/4 SEC. 29, T.70 N., R.30 W., RINGGOLD COUNTY, AT BRIDGE NEAR EAST CITY LIMITS OF KNOWLTON.	67.5	1957-	09-21-76	.19
06896150	GRAND R NR BLOCKTON, IOWA.	LAT 4037XX, LONG 9425XX, IN SW 1/4 SEC. 10, T.67 N., R.31 W., RINGGOLD COUNTY, AT BRIDGE, 3.5 MILES EAST OF BLOCKTON.	207	1957-	09-21-76	2.4
06896200	EF GRAND R NR MT. AYR, IOWA.	LAT 4043XX, LONG 9410XX, IN SE 1/4 SEC. 3, T.68 N., R.29 W., RINGGOLD COUNTY, AT BRIDGE ON STATE HIGHWAY 2, 3 MILES EAST OF MT. AYR.	64.7	1957-	09-21-76	.03
06896250	EF GRAND R SOUTH OF MT. AYR, IOWA.	LAT 4035XX, LONG 9414XX, IN SW 1/4 SEC. 19, T.67 N., R.29 W., RINGGOLD COUNTY, AT BRIDGE, 9 MILES SOUTH OF MT. AYR.	95.9	1957-	09-21-76	.01
06897770	THOMPSON R NR HEBRON, IOWA.	LAT 4114XX, LONG 9416XX, IN SW 1/4 SEC. 1, T.74 N., R.30 W., ADAIR COUNTY, AT BRIDGE, 2 MILES SE OF HEBRON.	80.0	1957-	09-20-76	4.2
06897800	THREEMILE CR NR AFTON, IOWA.	LAT 4102XX, LONG 9408XX, NEAR CENTER OF SEC.13, T.72 N., R.29 W., ADAIR COUNTY, AT BRIDGE 3 MILES EAST OF AFTON.	54.8	1957-	09-20-76	3.0
06897820	THOMPSON R NR AFTON, IOWA.	LAT 4102XX, LONG 9406XX, IN SW 1/4 SEC. 17, T.72 N., R.28 W., UNION COUNTY, AT BRIDGE ON U.S. HIGHWAY 34 AND 169, 5 MILES EAST OF AFTON.	231	1957-	09-22-76	8.4
06897880	TWELVEMILE CR NR ARISPE, IOWA.	LAT 4056XX, LONG 9406XX, IN SE 1/4 SEC. 17, T.71 N., R.28 W., UNION COUNTY, AT BRIDGE, 6 MILES EAST OF ARISPE.	68.0	1957-	09-21-76	.38
06897900	THOMPSON R NR GRAND RIVER, IOWA.	LAT 4052XX, LONG 9358XX, IN NE 1/4 SEC. 16, T.70 N., R.27 W., DECATUR COUNTY, AT BRIDGE, 3.5 MILES NORTH OF GRAND RIVER.	401	1957-	09-20-76	5.9
06897940	LONG CR NR VAN WERT, IOWA.	LAT 4049XX, LONG 9352XX, IN NE 1/4 SEC. 32, T.70 N., R.26 W., DECATUR COUNTY, AT BRIDGE, 5 MILES SE OF VAN WERT.	117	1957-	09-20-76	.02
06898300	WELDON R EAST OF LEON, IOWA.	LAT 404518, LONG 933805, IN SE 1/4 SEC. 20, T.69 N., R.24 W., DECATUR COUNTY, AT BRIDGE ON STATE HIGHWAY 2, 6 MILES EAST OF LEON.	72.4	1957-	09-21-76	.13
06898450	WELDON R NR PLEASANTON, IOWA.	LAT 403540, LONG 933620, IN NW 1/4 SEC. 22, T.67 N., R.24 W., DECATUR COUNTY, AT BRIDGE, 7 MILES EAST OF PLEASANTON.	228	1957-	09-21-76	.45
06898470	LITTLE R NR LEON, IOWA.	LAT 403936, LONG 934459, IN SE 1/4 SEC. 29, T.68 N., R.25 W., DECATUR COUNTY, AT BRIDGE, 6 MILES SOUTH OF LEON.	69.2	1957-	09-21-76	.02

DISCHARGE AT PARTIAL-RECORD STATIONS AND MISCELLANEOUS SITES

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DISCHARGE MEASUREMENTS MADE AT LOW-FLOW PARTIAL-RECORD STATIONS DURING WATER YEAR 1976--CONTINUED

STATION NO.	STATION NAME	LOCATION	DRAINAGE AREA (SQ MI)	PERIOD OF RECORD	MEASUREMENTS DATE	DISCHARGE (CFS)
CHARITON RIVER BASIN						
06903300	CHARITON R NR DERBY, IOWA.	LAT 4057XX, LONG 9328XX, IN NW 1/4 SEC. 13, T.71 N., R.23 W., LUCAS COUNTY, AT BRIDGE, 1.5 MILES NORTH OF DERBY.	71.0	1957-	09-21-76	0
06903350	WOLF CR NR CHARITON, IOWA.	LAT 4056XX, LONG 9316XX, IN SE 1/4 SEC. 16, T.71 N., R.21 W., LUCAS COUNTY, AT BRIDGE, 5 MILES SE OF CHARITON.	65.0	1957-	09-21-76	.04
06903600	SF CHARITON R NR CAMBRIA, IOWA.	LAT 4049XX, LONG 9323XX, IN NW 1/4 SEC. 3, T.69 N., R.22 W., WAYNE COUNTY, AT BRIDGE, 2 MILES SOUTH OF CAMBRIA.	58.0	1957-	09-21-76	.04
06903650	SF CHARITON R NR CORYDON, IOWA.	LAT 4049XX, LONG 9319XX, IN NW 1/4 SEC. 6, T.69 N., R.21 W., AT BRIDGE ON STATE HIGHWAY 14, 4 MILES NORTH OF CORYDON.	68.1	1957-	09-21-76	.10
06904150	SHOAL CR NR CINNINNATI, IOWA.	LAT 4037XX, LONG 9252XX, IN SW 1/4 SEC. 6, T.67 N., R.17 W., APPANOOSE COUNTY, AT BRIDGE, 3 MILES EAST OF CININNATI.	56.6	1958-	09-22-76	0

* Operated as a continuous-record gaging station

* Also a crest-stage partial-record station

DISCHARGE AT PARTIAL-RECORD STATIONS AND MISCELLANEOUS SITES

Crest-stage partial-record stations

The following table contains annual maximum discharge for crest-stage stations. A crest-stage is a device which will register the peak stage occurring between inspections of the gage. A stage-discharge relation for each gage is developed from discharge measurements made by indirect measurements of peak flow or by current meter. The date of the maximum discharge is not always certain but is usually determined by comparison with nearby continuous-record stations, weather records, or local inquiry. Only the maximum discharge for each water year is given. Information on some lower floods may have been obtained, but is not published herein. The years given in the period of record represent water years up to the current year for which the annual maximum has been determined.

ANNUAL MAXIMUM DISCHARGE AT CREST-STAGE PARTIAL-RECORD STATIONS DURING WATER YEAR 1976

STATION NO.	STATION NAME	LOCATION	DRAINAGE AREA (SQ MI)	PERIOD OF RECORD	DATE	ANNUAL MAXIMUM GAGE HEIGHT (FEET)	DISCHARGE (CFS)
UPPER IOWA RIVER BASIN							
05388310	WATERLOO CR NR DORCHESTER, IOWA.	LAT 4327XX, LONG 9130XX, IN NW 1/4 SEC. 25, T.100 N., R.6 W., ALLAMAKEE COUNTY, ON STATE HIGHWAY 76, 1.4 MILES SOUTH OF DORCHESTER.	43.6	1966-	04-18-76	699.34	(+)
WEXFORD CREEK BASIN							
05388400	WEXFORD CR NR HARPERS FERRY, IOWA.	LAT 4316XX, LONG 9108XX, IN SE 1/4 SEC. 25, T.98 N., R.3 W., ALLAMAKEE COUNTY, AT BRIDGE, 5 MILES NORTH OF HARPERS FERRY.	11.9	1953-	1976	A	(+)
PAINT CREEK BASIN							
05388600	PAINT CR NR WATERVILLE, IOWA.	LAT 4311XX, LONG 9116XX, NEAR CENTER SEC.36, T.97 N., R.4 W., ALLAMAKEE COUNTY, AT BRIDGE, 3 MILES SOUTH-EAST OF WATERVILLE.	56.0	1953-	04-18-76	11.22	2,700
05388700	LITTLE PAINT CR TR NR WATERVILLE, IOWA.	LAT 4314XX, LONG 9115XX, IN SE 1/4 SEC. 1, T.97 N., R.4 W., ALLAMAKEE COUNTY, AT CULVERT, 3.5 MILES NORTHEAST OF WATERVILLE.	1.09	1953-	04-18-76	4.02	300
TURKEY RIVER BASIN							
05411530	NB TURKEY R NR CRESCO, IOWA.	LAT 4322XX, LONG 9213XX, IN NW 1/4 SEC. 25, T.99 N., R.12 W., HOWARD COUNTY, AT BRIDGE ON STATE HIGHWAY 9, ABOUT 5 MILES WEST OF CRESCO.	19.5	1966-	1976	A	(+)
05411650	CRANE CR TR NR SARATOGA, IOWA.	LAT 4322XX, LONG 9223XX, NEAR SOUTHEAST CORNER OF SEC.21, T.99 N., R.13 W., HOWARD COUNTY, AT BRIDGE ON STATE HWY 9, 1 MILE EAST OF SARATOGA.	4.06	1953-	1976	A	(+)
05411700	CRANE CR NR LOURDES, IOWA.	LAT 4315XX, LONG 9219XX, IN NW 1/4 SEC. 6, T.97 N., R.12 W., HOWARD COUNTY, AT BRIDGE ON STATE HIGHWAY 272, 1 MILE SW OF LOURDES.	75.8	1951-	1976	A	(+)
LITTLE MAQUOKETA RIVER BASIN							
05414350	LITTLE MAQUOKETA R NEAR GRAF, IOWA.	LAT 423009, LONG 905150, IN SE 1/4 SEC. 20, T.89 N., R.1 E., DUBUQUE COUNTY, AT BRIDGE, 300 FEET DOWNSTREAM FROM ILLINOIS CENTRAL RR BRIDGE, 0.5 MILE NE OF GRAF.	39.6	1951-	03-04-76	9.31	2,000
05414400	MF LITTLE MAQUOKETA R NEAR RICKARDSVILLE, IOWA.	LAT 423338, LONG 905135, IN SE 1/4 SEC. 32, T.90 N., R.1 E., DUBUQUE COUNTY, AT BRIDGE, 2 MILES SOUTHEAST OF RICKARDSVILLE.	30.2	1951-	1976	A	(+)
05414450*NF	LITTLE MAQUOKETA NEAR RICKARDSVILLE, IOWA.	LAT 423509, LONG 905120, NEAR NW CORNER SEC. 28, T.90 N., R.1 E., DUBUQUE COUNTY, AT BRIDGE, 1 MILE NE OF RICKARDSVILLE.	21.6	1951-	03-04-76	6.72	820
05414600	LITTLE MAQUOKETA R TR AT DUBUQUE, IOWA.	LAT 423233, LONG 904138, NEAR NW CORNER SEC.11, T.89 N., R.2 E., DUBUQUE COUNTY, AT BRIDGE ON STATE HIGHWAY 386 NR NORTH CITY LIMITS OF DUBUQUE.	1.54	1951-	1976	A	(+)

ANNUAL MAXIMUM DISCHARGE AT CREST-STAGE PARTIAL-RECORD STATIONS DURING WATER YEAR 1976--CONTINUED

STATION NO.	STATION NAME	LOCATION	DRAINAGE AREA (SQ MI)	PERIOD OF RECORD	ANNUAL MAXIMUM		
					DATE	GAGE HEIGHT (FEET)	DIS-CHARGE (CFS)
MAQUOKETA RIVER BASIN							
05417530	PLUM CR AT EARL-VILLE, IOWA.	LAT 422813, LONG 911453, IN NE 1/4 SEC. 1, T.88 N., R.4 W., DELAWARE COUNTY, AT BRIDGE ON U.S. HIGHWAY 20, 1.5 MILES SOUTHEAST OF EARLVILLE.	41.1	1966-	1976	A	(+)
05417590	KITTY CR NR LANG-WORTHY, IOWA.	LAT 4212XX, LONG 9112XX, IN NW 1/4 SEC. 4, T.85 N., R.3 W., JONES COUNTY, AT BRIDGE ON U.S. HIGHWAY 151, ABOUT 1 MILE NE OF LANGWORTHY.	14.4	1966-	1976	A	(+)
WAPSIPINICON RIVER BASIN							
05420600	LITTLE WAPSIPINICON TR NR RICEVILLE, IOWA.	LAT 4321XX, LONG 9229XX, NEAR S 1/4 CORNER SEC.27, T.99 N., R.14 W., HOWARD COUNTY, AT CULVERT, 3.5 MILES EAST OF RICEVILLE.	0.90	1953-	1976	A	(+)
05420620	LITTLE WAPSIPINICON R NR ACME, IOWA.	LAT 4320XX, LONG 9229XX, AT N 1/4 CORNER SEC. 10, T.98 N., R.14 W., HOWARD COUNTY, AT BRIDGE ON CO. ROAD D, 1 MILE NORTH OF ACME.	7.76	1953-	1976	A	(+)
05420640*	LITTLE WAPSIPINICON R AT ELMA, IOWA.	LAT 4314XX, LONG 9227XX, IN NW 1/4 SEC. 12, T.97 N., R.14 W., HOWARD COUNTY, AT BRIDGE ON COUNTY ROAD A, NEAR WEST CITY LIMITS OF ELMA.	37.3	1953-	1976	A	(+)
05420650	LITTLE WAPSIPINICON R NR NEW HAMPTON, IOWA.	LAT 4304XX, LONG 9224XX, IN NW 1/4 SEC. 9, T.95 N., R.13 W., CHICKASAW COUNTY AT BRIDGE ON U.S. HIGHWAY 18, 4 MILES WEST OF NEW HAMPTON.	95.0	1966-	1976	A	(+)
05420690	EF WAPSIPINICON R NR NEW HAMPTON, IOWA.	LAT 4305XX, LONG 9218XX, IN SE 1/4 SEC. 31, T.96 N., R.12 W., CHICKASAW CO. AT BRIDGE ON U.S. HIGHWAY 63, 2 MILES NORTH OF NEW HAMPTON.	30.3	1966-	1976	A	(+)
05420850	LITTLE WAPSIPINICON R NR ORAN, IOWA.	LAT 4243XX, LONG 9202XX, IN NE 1/4 SEC. 8, T.91 N., R.10 W., FAYETTE COUNTY, AT BRIDGE ON STATE HIGHWAY 3, 2 MILES NE OF ORAN.	94.1	1966-	04-17-76	88.64	2,500
05420855	BUCK CR NR ORAN, IOWA.	LAT 424253, LONG 920733, IN NE 1/4 SEC. 10, T.91 N., R.11 W., BREMER COUNTY, AT BRIDGE ON STATE HIGHWAY 3, 2.5 MILES NW OF ORAN.	37.9	1966-	04-17-76	88.35	630
05421100	PINE CR TR NR WINTHROP, IOWA.	LAT 4229XX, LONG 9147XX, IN SW 1/4 SEC. 27, T.89 N., R.8 W., BUCHANAN COUNTY, AT CULVERT, 1.4 MILES NORTH OF U.S. HIGHWAY 20 AND 2.5 MILES NW OF WINTHROP.	0.334	1953-	1976	A	(+)
05421200	PINE CR NR WIN-THROP, IOWA.	LAT 4228XX, LONG 9147XX, IN SW 1/4 SEC. 34, T.89 N., R.8 W., BUCHANAN COUNTY, AT RR BRIDGE, 500 FT UPSTREAM FROM U.S. HIGHWAY 20 AND 2.5 MILES NW OF WINTHROP.	28.3	1950-	03-13-76	12.25	600
05421300	PINE CR TR NO. 2 AT WINTHROP, IOWA.	LAT 4228XX, LONG 9144XX, AT N 1/4 CORNER SEC. 2, T.88 N., R.8 W., BUCHANAN COUNTY, AT CULVERT ON U.S. HIGHWAY 20 NEAR WEST CITY LIMITS OF WINTHROP.	0.704	1953-	1976	A	(+)
05421550*	BUFFALO CR ABOVE WINTHROP, IOWA.	LAT 4230XX, LONG 9144XX, NEAR NE CORNER SEC. 25, T.89 N., R. 8 W., BUCHANAN COUNTY, AT BRIDGE, 1.5 MILES NE OF WINTHROP.	68.2	1957-	1976	A	(+)
05421600	BUFFALO CR NR WINTHROP, IOWA.	LAT 4228XX, LONG 9143XX, IN NE 1/4 SEC. 1, T.88 N., R.8 W., BUCHANAN COUNTY, AT BRIDGE ON U.S. HIGHWAY 20, 1 MILE EAST OF WINTHROP.	71.4	1953-	03-16-76	87.75	1,050
05421890	SILVER CR AT WELTON, IOWA.	LAT 4155XX, LONG 9036XX, IN NW 1/4 SEC. 15, T.82 N., R.3 E., CLINTON COUNTY, AT BRIDGE ON U.S. HIGHWAY 61 AT NORTH EDGE OF WELTON.	9.03	1966-	1976	A	(+)

DISCHARGE AT PARTIAL-RECORD STATIONS AND MISCELLANEOUS SITES

ANNUAL MAXIMUM DISCHARGE AT CREST-STAGE PARTIAL-RECORD STATIONS DURING WATER YEAR 1976--CONTINUED

STATION NO.	STATION NAME	LOCATION	DRAINAGE AREA (SQ MI)	PERIOD OF RECORD	ANNUAL MAXIMUM		DIS-CHARGE (CFS)
					DATE	GAGE HEIGHT (FEET)	
IOWA RIVER BASIN							
05448400*	WESTMAIN DRAINAGE DITCH 1 & 2 NR BRITT, IOWA.	LAT 4306XX, LONG 9347XX, IN SW 1/4 SEC. 27, T.96 N., R.25 W., HANCOCK COUNTY, AT BRIDGE ON U.S. HIGHWAY 18 NEAR EAST CITY LIMITS OF BRITT.	21.2	1966-	1976	A	(+)
05448600	EB IOWA R ABOVE HAYFIELD, IOWA.	LAT 4309XX, LONG 9341XX, NEAR S 1/4 CORNER SEC. 4, T.96 N., R.24 W., HANCOCK COUNTY, AT BRIDGE, 1.5 MILES SE OF HAYFIELD.	2.23	1953-	1976	A	(+)
05448700	EB IOWA R NR HAYFIELD, IOWA.	LAT 4311XX, LONG 9339XX, IN NW 1/4 SEC. 35, T.97 N., R.24 W., HANCOCK COUNTY, AT BRIDGE, 2 MILES EAST OF HAYFIELD.	7.94	1952-	1976	A	(+)
05448800	EB IOWA R NR GARNER, IOWA.	LAT 4306XX, LONG 9337XX, NEAR CENTER SEC. 25, T.96 N., R.24 W., HANCOCK COUNTY, AT BRIDGE ON U.S. HIGHWAY 18, 1.2 MILES WEST OF GARNER.	45.1	1952-	1976	A	(+)
05448900	EB IOWA R TR NR GARNER, IOWA.	LAT 4306XX, LONG 9340XX, NEAR CENTER SEC. 27, T.96 N., R.24 W., HANCOCK COUNTY, AT CULVERT ON U.S. HWY 18, 2.1 MILES WEST OF GARNER.	5.98	1952-	1976	A	(+)
05451955	STEIN CR NR CLUTIER, IOWA.	LAT 420446, LONG 921800, IN NE 1/4 SEC. 24, T.84 N., R.13 W., TAMA COUNTY, AT BRIDGE ON STATE HIGHWAY 318, 5 MILES EAST OF CLUTIER.	23.4	1971-	04-18-76	71.90	670
05453200	PRICE CR AT AMANA, IOWA.	LAT 4148XX, LONG 9153XX, IN SE 1/4 SEC. 22, T.81 N., R.9 W., IOWA COUNTY, AT BRIDGE ON STATE HIGHWAY 149, NEAR NORTH EDGE OF AMANA.	29.1	1966-	04-18-76	83.08	1,500
05453600	RAPID CR BELOW MORSE, IOWA.	LAT 414345, LONG 912538, NEAR NE CORNER SEC. 21, T.80 N., R.5 W., JOHNSON COUNTY, AT BRIDGE, 1.5 MILES SE OF MORSE.	8.12	1951-	03-04-76	18.12	390
05453700	RAPID CR TR NO. 4 NR OASIS, IOWA. (DISCONTINUED)	LAT 414253, LONG 912452, NEAR S 1/4 CORNER SEC. 22, T.80 N., R.5 W., JOHNSON COUNTY, AT CULVERT, 2 MILES NW OF OASIS.	1.95	1951-74.	--	--	--
05453750	RAPID CR SW OF MORSE, IOWA.	LAT 414323, LONG 912616, IN W 1/2 SEC. 21, T.80 N., R.5 W., JOHNSON COUNTY, AT BRIDGE, 2 MILES SOUTHWEST OF MORSE.	15.2	1951-	03-04-76	25.79	1,580
05453850	RAPID CR TR NO. 3 NR OASIS, IOWA.	LAT 414233, LONG 912714, NEAR CENTER OF SEC. 29, T.80 N., R.5 W., JOHNSON COUNTY, AT BRIDGE, 3.5 MILES WEST OF OASIS.	1.62	1951-	1976	A	(+)
05453900	RAPID CR TR NR OASIS, IOWA.	LAT 414114, LONG 912637, NEAR SW CORNER SEC. 33, T.80 N., R.5 W., JOHNSON COUNTY, AT BRIDGE, 3 MILES SW OF OASIS.	.97	1951-	1976	A	(+)
05453950	RAPID CR TR NR IOWA CITY, IOWA.	LAT 414156, LONG 912839, IN NW 1/4 SEC. 31, T.80 N., R.5 W., JOHNSON COUNTY, AT BRIDGE, 4 MILES NE OF IOWA CITY.	3.43	1951-	1976	A	(+)
05455100*	OLD MANS CR NR IOWA CITY, IOWA.	LAT 413623, LONG 913656, IN NW 1/4 SEC. 36, T.79 N., R.7 W., JOHNSON COUNTY, AT BRIDGE, 3 MILES SOUTHWEST OF IOWA CITY.	201	1950-64, 1965-	04-24-76	11.28	2,250
05455140	N ENGLISH R NR MONTEZUMA, IOWA.	LAT 413845, LONG 923420, IN SW 1/4 SEC. 14, T.79 N., R.15 W., POWESHIEK CO., AT BRIDGE, 5.0 MILES NORTHWEST OF MONTEZUMA.	31.0	1972-	04-24-76	21.66	740

ANNUAL MAXIMUM DISCHARGE AT CREST-STAGE PARTIAL-RECORD STATIONS DURING WATER YEAR 1976--CONTINUED

STATION NO.	STATION NAME	LOCATION	DRAINAGE AREA (SQ MI)	PERIOD OF RECORD	DATE	ANNUAL MAXIMUM GAGE HEIGHT (FEET)	DIS-CHARGE (CFS)
IOWA RIVER BASIN--CONTINUED							
05455200*	N ENGLISH R NR GUERNSEY, IOWA.	LAT 4138XX, LONG 9224XX, NEAR SW CORNER SEC. 17, T.79 N., R.13 W., POWESHIEK COUNTY, AT BRIDGE, 2.2 MILES WEST OF GUERNSEY.	68.7	1953-	04-24-76	9.68	2,500
05455210	N ENGLISH R AT GUERNSEY, IOWA.	LAT 4138XX, LONG 9221XX, IN NW 1/4 SEC. 22, T.79 N., R.13 W., POWESHIEK CO., AT BRIDGE ON STATE HIGHWAY 21, 1 MILE SW OF GUERNSEY.	81.5	1960, 1966-	04-24-76	85.03	4,200
05455230	DEEP R AT DEEP RIVER, IOWA.	LAT 4135XX, LONG 9221XX, IN SW 1/4 SEC. 3, T.78 N., R.13 W., POWESHIEK CO., AT BRIDGE ON STATE HIGHWAY 21, 1 MILE NE OF DEEP RIVER.	30.5	1960, 1966-	04-24-76	80.52	1,100
05455280	S ENGLISH R TR NR BARNES CITY, IOWA.	LAT 4133XX, LONG 9228XX, NEAR NE CORNER SEC. 21, T.78 N., R.14 W., POWESHIEK COUNTY, AT BRIDGE, 3 MILES NORTH OF BARNES CITY.	2.51	1953-	03-05-76	8.72	580
05455300	S ENGLISH R NR BARNES CITY, IOWA.	LAT 4131XX, LONG 9228XX, NEAR NW CORNER SEC. 34, T.78 N., R.14 W., POWESHIEK COUNTY, AT BRIDGE, 1 MILE NORTH OF BARNES CITY.	11.5	1953-	03-05-76	11.70	480
05455350	S ENGLISH R TR NO.2 NR MONTEZUMA, IOWA.	LAT 4134XX, LONG 9227XX, NEAR SW CORNER SEC. 11, T.78 N., R.14 W., POWESHIEK COUNTY, AT BOX CULVERT, 4 MILES SE OF MONTEZUMA.	0.523	1953-	04-24-76	9.19	50
05455550	BULGERS RUN NR RIVERSIDE, IOWA.	LAT 4129XX, LONG 9138XX, IN SE 1/4 SEC. 11, T.77 N., R.7 W., WASHINGTON CO., AT BRIDGE ON STATE HIGHWAY 22, 2.5 MILES WEST OF RIVERSIDE.	6.31	1965-	04-24-76	86.47	1,370
05457440	DEER CR NR CARPENTER, IOWA.	LAT 4325XX, LONG 9259XX, IN NE 1/4 SEC. 8, T.99 N., R.18 W., MITCHELL COUNTY, AT BRIDGE ON STATE HIGHWAY 105, 1.5 MILES EAST OF CARPENTER.	91.6	1966-	1976	A	(+)
05458560	BEAVERDAM CR NR SHEFFIELD, IOWA.	LAT 4256XX, LONG 9312XX, IN NW 1/4 SEC. 27, T.94 N., R.20 W., CERRO GORDO CO. AT BRIDGE ON U.S. HIGHWAY 65, 3 MILES NORTH OF SHEFFIELD.	123	1966-	1976	A	(+)
05459010	ELK CR AT KENSETT, IOWA.	LAT 4322XX, LONG 9313XX, IN NE 1/4 SEC. 28, T.99 N., R.20 W., WORTH COUNTY, AT BRIDGE ON U.S. HIGHWAY 65, 1 MILE NORTH OF KENSETT.	58.1	1966-	1976	A	(+)
05459490	SPRING CR NR MASON CITY, IOWA.	LAT 431248, LONG 931238, IN SE 1/4 SEC. 16, T.97 N., R.20 W., CERRO GORDO CO. AT BRIDGE ON U.S. HIGHWAY 65, 4 MILES NORTH OF MASON CITY.	29.3	1966-	1976	A	(+)
05460100	WILLOW CR NR MASON CITY, IOWA.	LAT 4309XX, LONG 9316XX, IN NE 1/4 SEC. 12, T.96 N., R.21 W., CERRO GORDO CO. AT BRIDGE ON U.S. HIGHWAY 18, 3.5 MILES WEST OF MASON CITY.	78.6	1966-	1976	A	(+)
05462750	BEAVER CR TR NR APLINGTON, IOWA.	LAT 4235XX, LONG 9251XX, IN NW 1/4 SEC. 27, T.90 N., R.17 W., BUTLER COUNTY, AT BRIDGE ON U.S. HIGHWAY 20, 2 MILES EAST OF APLINGTON.	11.6	1966-	03-13-76	92.88	500
05463090	BLACK HAWK CR AT GRUNDY CENTER, IOWA.	LAT 4222XX, LONG 9246XX, IN NW 1/4 SEC. 7, T.87 N., R.16 W., GRUNDY COUNTY, AT BRIDGE ON STATE HIGHWAY 14, AT NORTH EDGE OF GRUNDY CENTER.	56.9	1966-	03-13-76	87.59	2,200
05464145	TWELVE MILE CR NR TRAER, IOWA.	LAT 421350, LONG 922756, IN SE 1/4 SEC. 27, T.86 N., R.14 W., TAMA COUNTY, AT BRIDGE ON U.S. HIGHWAY 63, 2.5 MILES NORTH OF TRAER.	43.8	1966-	04-18-76	85.82	(+)
05464310	PRATT CR NR GARRISON, IOWA.	LAT 421053, LONG 921110, IN SE 1/4 SEC. 12, T.85 N., R.12 W., BENTON COUNTY, AT BRIDGE ON U.S. HIGHWAY 218, 3.5 MILES NW OF GARRISON.	23.4	1966-	1976	A	(+)

DISCHARGE AT PARTIAL-RECORD STATIONS AND MISCELLANEOUS SITES

ANNUAL MAXIMUM DISCHARGE AT CREST-STAGE PARTIAL-RECORD STATIONS DURING WATER YEAR 1976--CONTINUED

STATION NO.	STATION NAME	LOCATION	DRAINAGE AREA (SQ MI)	PERIOD OF RECORD	ANNUAL MAXIMUM GAGE DATE	HEIGHT (FEET)	DIS-CHARGE (CFS)
IOWA RIVER BASIN--CONTINUED							
05464318	E BLUE CR AT CENTER POINT, IOWA.	LAT 421244, LONG 914721, IN SW 1/4 SEC. 33, T.86 N., R.8 W., LINN COUNTY, AT BRIDGE ON STATE HIGHWAY 150, 1.5 MILES NORTH OF CENTER POINT.	17.6	1966-	1976	A	(+)
05464560	PRAIRIE CR AT BLAIRSTOWN, IOWA.	LAT 415442, LONG 920503, IN SW 1/4 SEC. 13, T.82 N., R.11 W., BENTON COUNTY, AT BRIDGE ON STATE HIGHWAY 82, AT NORTH EDGE OF BLAIRSTOWN.	87.0	1966-	04-18-76	80.98	1,300
05464880	OTTER CR AT WILTON, IOWA.	LAT 413617, LONG 910208, IN NE 1/4 SEC. 35, T.79 N., R.2 W., CEDAR COUNTY, AT BRIDGE ON STATE HIGHWAY 38, 1.5 MILES NW OF WILTON.	10.7	1966-	1976	A	(+)
05465150	NF LONG CR AT AINSWORTH, IOWA.	LAT 4117XX, LONG 9132XX, IN SW 1/4 SEC. 22, T.75 N., R.6 W., WASHINGTON CO., AT BRIDGE ON U.S. HIGHWAY 218, 1 MILE SE OF AINSWORTH.	30.2	1951, 1965-	03-04-76	87.42	530
SKUNK RIVER BASIN							
05469860	MUD LAKE DRAINAGE DITCH 71 IN JEWELL, IOWA.	LAT 4219XX, LONG 9338XX, IN SW 1/4 SEC. 27, T.87 N., R.24 W., HAMILTON CO., AT BRIDGE ON U.S. HIGHWAY 69 IN JEWELL.	65.4	1966-	1976	A	(+)
05469990	KEIGLEY BR NR STORY CITY, IOWA.	LAT 4209XX, LONG 9337XX, IN NW 1/4 SEC. 26, T.85 N., R.24 W., STORY COUNTY, AT BRIDGE ON U.S. HIGHWAY 69, 3 MILES SOUTH OF STORY CITY.	31.0	1966-	06-14-76	91.47	1,550
05472090	N SKUNK R NR BAXTER, IOWA.	LAT 4149XX, LONG 9304XX, IN NE 1/4 SEC. 21, T.81 N., R.19 W., JASPER COUNTY, AT BRIDGE ON STATE HIGHWAY 223, 4.5 MILES EAST OF BAXTER.	52.2	1966-	03-05-76	79.32	2,550
05472290	SUGAR CR NR SEARSBORO, IOWA.	LAT 4134XX, LONG 9244XX, IN SE 1/4 SEC. 7, T.78 N., R.15 W., POWESHIEK CO., AT BRIDGE ON STATE HIGHWAY 225, 1.8 MILES WEST OF SEARSBORO.	52.7	1966-	04-24-76	91.43	1,450
05472390	MIDDLE CR NR LACEY, IOWA.	LAT 4125XX, LONG 9239XX, IN NE 1/4 SEC. 1, T.76 N., R.16 W., MAHASKA COUNTY, AT BRIDGE ON U.S. HIGHWAY 63, 1.5 MILES NW OF LACEY.	23.0	1966-	04-24-76	90.06	9,650
05472445	ROCK CR AT SIGOURNEY, IOWA.	LAT 412012, LONG 921320, IN NE 1/4 SEC. 3, T.75 N., R.12 W., KEOKUK COUNTY, AT BRIDGE ON STATE HIGHWAY 92, NEAR WEST EDGE OF SIGOURNEY.	26.3	1966-	04-24-76	90.13	2,100
05473300*	CEDAR CR NR BATAVIA, IOWA.	LAT 4101XX, LONG 9207XX, IN SW 1/4 SEC. 27, T.72 N., R.11 W., JEFFERSON CO., AT BRIDGE ON U.S. HIGHWAY 34, 2.5 MILES NE OF BATAVIA.	252	1966-	09-21-65 05-17-66 06-10-67 06-08-69 04-24-76	92.80 78.69 79.86 78.06 85.96	26,000 3,600 B 4,200 B 3,200 B 15,200
DES MOINES RIVER BASIN							
05480930	WHITE FOX CR AT CLARION, IOWA.	LAT 4244XX, LONG 9342XX, IN NW 1/4 SEC. 5, T.91 N., R.24 W., WRIGHT COUNTY, AT BRIDGE ON STATE HIGHWAY 3, 1.5 MILES EAST OF CLARION.	13.3	1966-	1976	A	(+)
05481510	BLUFF CR AT PILOT MOUND, IOWA.	LAT 4210XX, LONG 9401XX, IN NW 1/4 SEC. 20, T.85 N., R.27 W., BOONE COUNTY, AT BRIDGE ON STATE HIGHWAY 329, AT NW EDGE OF PILOT MOUND.	23.5	1966-	1976	A	(+)
05481680	BEAVER CR AT BEAVER, IOWA.	LAT 4202XX, LONG 9409XX, IN NE 1/4 SEC. 6, T.83 N., R.28 W., BOONE COUNTY, AT BRIDGE ON U.S. HIGHWAY 30, AT SW EDGE OF BEAVER.	38.5	1966-	05-23-76	86.87	155
09481690	W BEAVER CR AT GRAND JUNCTION, IOWA.	LAT 4202XX, LONG 9413XX, IN NE 1/4 SEC. 3, T.83 N., R.29 W., GREENE COUNTY, AT BRIDGE ON U.S. HIGHWAY 30, NEAR EAST EDGE OF GRAND JUNCTION.	12.6	1966-	1976	A	(+)

ANNUAL MAXIMUM DISCHARGE AT CREST-STAGE PARTIAL-RECORD STATIONS DURING WATER YEAR 1976--CONTINUED

STATION NO.	STATION NAME	LOCATION	DRAINAGE AREA (SQ MI)	PERIOD OF RECORD	ANNUAL MAXIMUM		DISCHARGE (CFS)
					DATE	GAGE HEIGHT (FEET)	
DES MOINES RIVER BASIN--CONTINUED							
05482600	HARDIN CR AT FARNHAMVILLE, IOWA.	LAT 421601, LONG 942510, NEAR NE CORNER SEC. 14, T.86 N., R.31 W., CALHOUN CO., AT BRIDGE ON STATE HIGHWAY 175, NEAR WEST CITY LIMITS OF FARNHAMVILLE.	43.7	1952-	1976	A	(+)
05482800	HAPPY RUN AT CHURDAN, IOWA.	LAT 4210XX, LONG 9430XX, NEAR SW CORNER SEC. 17, T.85 N., R.31 W., GREENE CO. AT BRIDGE NEAR WEST CITY LIMITS OF CHURDAN.	7.58	1952-	1976	A	(+)
05482900	HARDIN CR NR FARLIN, IOWA.	LAT 4206XX, LONG 9426XX, NEAR N 1/4 CORNER SEC. 14, T.84 N., R.31 W., GREENE COUNTY, AT BRIDGE, 1.5 MILES NE OF FARLIN.	101	1951-	1976	A	(+)
05483318	BRUSHY FORK CR NR TEMPLETON, IOWA.	LAT 4157XX, LONG 9453XX, IN NW 1/4 SEC. 1, T.82 N., R.35 W., CARROLL COUNTY, AT BRIDGE ON U.S. HIGHWAY 71, 4 MILES NE OF TEMPLETON.	45.0	1966-	1976	A	(+)
05483349	M RACCOON R TR AT CARROLL, IOWA.	LAT 4203XX, LONG 9453XX, IN NW 1/4 SEC. 36, T.84 N., R.35 W., CARROLL COUNTY, AT BRIDGE ON U.S. HIGHWAY 71, 1.5 MILES SOUTH OF CARROLL.	6.58	1966-	05-23-76	91.06	680
05487300	S OTTER CR BELOW HIGHWAY 34 NR WOODBURN, IOWA. (DISCONTINUED)	LAT 4102XX, LONG 9339XX, NEAR SE CORNER SEC. 18, T.72 N., R.24 W., CLARKE CO. AT BRIDGE DOWNSTREAM FROM U.S. HWY 34, 3 MILES NW OF WOODBURN.	2.26	1953-75.	--	--	--
05487350	S OTTER CR TR NR WOODBURN, IOWA.	LAT 4103XX, LONG 9336XX, NEAR SW CORNER SEC. 11, T.72 N., R.24 W., CLARKE CO. AT BRIDGE, 2 MILES NORTH OF WOODBURN.	0.71	1955-	03-05-76	12.46	(+)
05487600	S WHITE BREAST CR NR OSCEOLA, IOWA.	LAT 405736, LONG 934128, NEAR SW CORNER SEC. 12, T.71 N., R.25 W., CLARKE COUNTY, AT BRIDGE, 6 MILES SE OF OSCEOLA.	28.0	1953-	04-24-76	13.33	3,300
05487800	*WHITE BREAST CR AT LUCAS, IOWA.	LAT 4101XX, LONG 9328XX, IN NE 1/4 SEC. 23, T.72 N., R.23 W., LUCAS COUNTY, AT BRIDGE ON U.S. HIGHWAY 65, NEAR SOUTH CITY LIMITS OF LUCAS.	128	1953-	04-25-76	16.68	9,800
05488620	COAL CR NR ALBIA, IOWA.	LAT 4101XX, LONG 9251XX, IN SW 1/4 SEC. 20, T.72 N., R.17 W., MONROE COUNTY, AT BRIDGE ON U.S. HIGHWAY 34, 2 MILES SW OF ALBIA.	13.5	1966-	03-05-76	82.07	(+)
05489150	L MUCHAKINOCK CR AT OSKALOOSA, IOWA.	LAT 4116XX, LONG 9238XX, IN SE 1/4 SEC. 25, T.75 N., R.16 W., MAHASKA COUNTY, AT BRIDGE ON STATE HIGHWAY 137, AT SOUTH EDGE OF OSKALOOSA.	9.12	1966-	04-24-76	88.80	3,070
05489350	S AVERY CR NR BLAKESBURG, IOWA.	LAT 4101XX, LONG 9237XX, IN SE 1/4 SEC. 19, T.72 N., R.15 W., WAPELLO COUNTY, AT BRIDGE ON U.S. HIGHWAY 34, 3.5 MILES NORTH OF BLAKESBURG.	33.1	1965-	04-24-76	86.31	7,600
05489490	BEAR CR AT OTTUMWA, IOWA.	LAT 410043, LONG 922754, IN NW 1/4 SEC. 27, T.72 N., R.14 W., WAPELLO COUNTY, AT BRIDGE ON U.S. HIGHWAY 34, NEAR WEST EDGE OF OTTUMWA.	22.9	1965-	04-24-76	91.50	3,900
FOX RIVER BASIN							
05494100	S FOX CR TR NR WEST GROVE, IOWA.	LAT 4044XX, LONG 9238XX, NEAR S 1/4 CORNER SEC. 31, T.69 N., R.15 W., DAVIS CO., AT CULVERT ON STATE HIGHWAY 2, 3.5 MILES WEST OF WEST GROVE.	0.55	1953-	04-24-76	6.04	(+)
05494110	S FOX CR NR WEST GROVE, IOWA.	LAT 4044XX, LONG 9236XX, IN SE 1/4 SEC. 32, T.69 N., R.15 W., DAVIS COUNTY, AT BRIDGE ON STATE HIGHWAY 2, 2.4 MILES WEST OF WEST GROVE.	12.2	1965-	03-04-76	88.77	(+)

ANNUAL MAXIMUM DISCHARGE AT CREST-STAGE PARTIAL-RECORD STATIONS DURING WATER YEAR 1976--CONTINUED

STATION NO.	STATION NAME	LOCATION	DRAINAGE AREA (SQ MI)	PERIOD OF RECORD	DATE	ANNUAL MAXIMUM		DIS-CHARGE (CFS)
						GAGE HEIGHT (FEET)		
WYACONDA RIVER BASIN								
05495600 S	WYACONDA R NR WEST GROVE, IOWA. (DISCONTINUED)	LAT 4043XX, LONG 9230XX, NEAR NW CORNER SEC. 5, T.68 N., R.14 W., DAVIS CO., AT BRIDGE, 2.5 MILES EAST OF WEST GROVE.	4.69	1953-75.	--	--		--
BIG SIOUX RIVER BASIN								
06483410	OTTER CR NORTH OF SIBLEY, IOWA.	LAT 4328XX, LONG 9544XX, AT NE CORNER SEC. 25, T.100 N., R.42 W., OSCEOLA CO., AT BRIDGE ON COUNTY ROAD H, 4 MILES NORTH OF SIBLEY.	11.9	1952-	08-22-75 05-22-76	6.33 5.69		175 B 86
06483420	SCHUTTE CR NR SIBLEY, IOWA.	LAT 4328XX, LONG 9547XX, NEAR NW CORNER SEC. 23, T.100 N., R.42 W., OSCEOLA COUNTY, AT CULVERT, 6 MILES NW OF SIBLEY.	1.43	1952-	05-22-76	8.93		(+)
06483430	OTTER CR AT SIBLEY, IOWA.	LAT 4324XX, LONG 9546XX, NEAR N 1/4 CORNER SEC. 14, T.99 N., R.42 W., OSCEOLA CO., AT BRIDGE, 1 MILE NW OF SIBLEY.	29.9	1952-	05-22-76	5.37		78
06483440	DAWSON CR NR SIBLEY, IOWA.	LAT 4323XX, LONG 9543XX, NEAR NW CORNER SEC. 20, T.99 N., R.41 W., OSCEOLA CO., AT CULVERT ON COUNTY ROAD D, 2 MILES SE OF SIBLEY.	4.35	1952-	05-22-76	5.32		480
06483450	WAGNER CR NR ASHTON, IOWA.	LAT 4321XX, LONG 9546XX, ON SOUTH LINE SEC. 35, T.99 N., R.42 W., OSCEOLA COUNTY, AT BRIDGE, 3 MILES NE OF ASHTON.	7.09	1952-	05-22-76	13.78		95
06483460*	OTTER CR NR ASHTON, IOWA.	LAT 4320XX, LONG 9546XX, IN SE 1/4 SEC. 2, T.98 N., R.42 W., OSCEOLA COUNTY, AT BRIDGE, 2 MILES NORTHEAST OF ASHTON.	88.0	1952-	1976	A		(+)
06483495	BURR OAK CR NR PERKINS, IOWA.	LAT 431443, LONG 961038, IN SE 1/4 SEC. 5, T.97 N., R.45 W., SIOUX CO., AT BRIDGE ON U.S. HIGHWAY 75, 4 MILES NORTH OF PERKINS.	30.9	1966-	05-22-76	85.02		240
PERRY CREEK BASIN								
06599800	PERRY CR NR MERRILL, IOWA.	LAT 424316, LONG 962033, IN NW 1/4 SEC. 12, T.91 N., R.47 W., PLYMOUTH CO., AT BRIDGE ON COUNTY ROAD M, 5 MILES WEST OF MERRILL.	8.17	1953-	1976	A		(+)
06599950	PERRY CR NR HINTON, IOWA.	LAT 423757, LONG 962213, IN NE 1/4 SEC. 15, T.90 N., R.47 W., PLYMOUTH CO., AT BRIDGE, 4 MILES WEST OF HINTON (REVISED).	30.8	1953-	02-17-76	28.67 C		(+)
FLOYD RIVER BASIN								
06600030 L	FLOYD R NR SANBORN, IOWA.	LAT 431110, LONG 954330, IN NE 1/4 SEC. 31, T.97 N., R.41 W., O BRIEN CO., AT BRIDGE ON U.S. HIGHWAY 18, 3.5 MILES WEST OF SANBORN.	8.44	1966-	1976	A		(+)
06600080	WILLOW CR AT HOSPERS, IOWA.	LAT 430438, LONG 955416, IN NE 1/4 SEC. 3, T.95 N., R.43 W., SIOUX CO., AT BRIDGE ON STATE HIGHWAY 60, AT NORTH EDGE OF HOSPERS.	37.9	1966-	05-22-76	83.31		(+)
MONONA-HARRISON DITCH BASIN								
06601480	BIG WHISKEY SLOUGH NR REMSEN, IOWA.	LAT 4248XX, LONG 9553XX, IN NW 1/4 SEC. 11, T.92 N., R.43 W., PLYMOUTH CO., AT BRIDGE ON STATE HIGHWAY 3, 4.2 MILES EAST OF REMSEN.	12.9	1966-	1976	A		(+)
06602190	ELLIOTT CR AT LAWTON, IOWA.	LAT 422830, LONG 961122, IN NW 1/4 SEC. 3, T.88 N., R.46 W., WOODBURY CO., AT BRIDGE ON U.S. HIGHWAY 20, AT WEST EDGE OF LAWTON.	34.8	1966-	05-22-76	81.10		1,780
06602240	BIG WHISKEY CR NR LAWTON, IOWA.	LAT 422830, LONG 961501, IN NW 1/4 SEC. 6, T.88 N., R.46 W., WOODBURY CO., AT BRIDGE ON U.S. HIGHWAY 20, 3.5 MILES WEST OF LAWTON.	51.3	1966-	1976	A		(+)

ANNUAL MAXIMUM DISCHARGE AT CREST-STAGE PARTIAL-RECORD STATIONS DURING WATER YEAR 1976--CONTINUED

STATION NO.	STATION NAME	LOCATION	DRAINAGE AREA (SQ MI)	PERIOD OF RECORD	ANNUAL MAXIMUM		
					DATE	GAGE HEIGHT (FEET)	DISCHARGE (CFS)
LITTLE SIOUX RIVER BASIN							
06604510	OCHEYEDAN R NR OCHEYEDAN, IOWA.	LAT 4326XX, LONG 9537XX, IN NE 1/4 SEC. 6, T.99 N., R.40 W., OSCEOLA CO., AT BRIDGE ON STATE HIGHWAY 9, 4 MILES NW OF OCHEYEDAN.	73.5	1966-	1976	A	(+)
06605340	PRAIRIE CR NR SPENCER, IOWA.	LAT 430516, LONG 950940, IN SE 1/4 SEC. 36, T.96 N., R.37 W., CLAY COUNTY, AT BRIDGE ON U.S. HIGHWAY 71, 4 MILES SOUTH OF SPENCER.	22.3	1966-	1976	A	(+)
06605750	WILLOW CR NR CORNELL, IOWA.	LAT 4243XX, LONG 9510XX, IN SE 1/4 SEC. 12, T.94 N., R.37 W., CLAY COUNTY, AT BRIDGE ON U.S. HIGHWAY 71, 2 MILES NW OF CORNELL.	78.6	1966-	1976	A	(+)
06605890	WATERMAN CR AT HARTLEY, IOWA.	LAT 431106, LONG 953043, IN NE 1/4 SEC. 36, T.97 N., R.40 W., O BRIEN CO., AT BRIDGE ON U.S. HIGHWAY 18, 1.8 MILES WEST OF HARTLEY.	28.7	1966-	1976	A	(+)
06606790	MAPLE CR NR ALTA, IOWA.	LAT 4245XX, LONG 9522XX, IN NE 1/4 SEC. 31, T.92 N., R.38 W., BUENA VISTA CO. AT BRIDGE ON STATE HIGHWAY 3, 6 MILES NW OF ALTA.	15.5	1966-	1976	A	(+)
06607197	WILSEY CR AT MAPLETON, IOWA.	LAT 4210XX, LONG 9545XX, IN SE 1/4 SEC. 14, T.85 N., R.43 W., MONONA CO., AT BRIDGE ON STATE HIGHWAY 141, 1.2 MILES NW OF MAPLETON.	18.4	1966-	1976	A	(+)
SOLDIER RIVER BASIN							
06608450	JORDAN CR AT MOORHEAD, IOWA.	LAT 4155XX, LONG 9552XX, IN NW 1/4 SEC. 16, T.82 N., R.43 W., MONONA CO., AT BRIDGE ON STATE HIGHWAY 183, AT SW CORNER OF MOORHEAD.	30.1	1966-	1976	A	(+)
BOYER RIVER BASIN							
06609560	WILLOW CR NR SOLDIER, IOWA.	LAT 4155XX, LONG 9542XX, IN NW 1/4 SEC. 14, T.82 N., R.42 W., MONONA CO., AT BRIDGE ON STATE HIGHWAY 37, 6 MILES SE OF SOLDIER.	29.1	1966-	1976	A	(+)
MOSQUITO CREEK BASIN							
06610510	MOSER CR NR EARLING, IOWA.	LAT 4147XX, LONG 9527XX, IN NE 1/4 SEC. 1, T.80 N., R.40 W., SHELBY CO., AT BRIDGE ON STATE HIGHWAY 37, 1.5 MILES WEST OF EARLING.	21.6	1966-	1976	A	(+)
06610600	*MOSQUITO CR AT NEOLA, IOWA.	LAT 412709, LONG 953637, IN NE 1/4 SEC. 19, T.77 N., R.42 W., POTTAWATTAMIE CO., AT BRIDGE ON COUNTY ROAD S, 0.5 MILE SOUTH OF NEOLA.	131	1966-	06-14-76	17.46	(+)
NISHNABOTNA RIVER BASIN							
06807418	GRAYBILL CR NR CARSON, IOWA.	LAT 4114XX, LONG 9523XX, IN NW 1/4 SEC. 7, T.74 N., R.39 W., POTTAWATTAMIE CO., AT BRIDGE ON STATE HIGHWAY 92, 2 MILES EAST OF CARSON.	45.9	1966-	1976	A	(+)
06807470	INDIAN CR NR EMERSON, IOWA.	LAT 4102XX, LONG 9523XX, IN NW 1/4 SEC. 19, T.72 N., R.39 W., MONTGOMERY CO., AT BRIDGE ON U.S. HIGHWAY 34, 1 MILE EAST OF EMERSON.	37.3	1966-	06-14-76	89.52	2,000
06807720	M SILVER CR NR AVOCA, IOWA.	LAT 412833, LONG 952806, NEAR N 1/4 CORNER SEC. 17, T.77 N., R.40 W., POTTAWATTAMIE CO., AT BRIDGE ON STATE HIGHWAY 83, 7 MILES SOUTH OF AVOCA.	3.21	1955-	06-14-76	11.21	1,200
06807760	M SILVER CR NR OAKLAND, IOWA.	LAT 411928, LONG 953319, NEAR E 1/4 CORNER SEC. 4, T.75 N., R.41 W., POTTAWATTAMIE CO., AT BRIDGE, 8.5 MILES NW OF OAKLAND.	25.7	1953-	06-14-76	14.68	2,100

ANNUAL MAXIMUM DISCHARGE AT CREST-STAGE PARTIAL-RECORD STATIONS DURING WATER YEAR 1976--CONTINUED

STATION NO.	STATION NAME	LOCATION	DRAINAGE AREA (SQ MI)	PERIOD OF RECORD	ANNUAL MAXIMUM GAGE HEIGHT (FEET)	DISCHARGE (CFS)
NISHNABOTNA RIVER BASIN--CONTINUED						
06807780	M SILVER CR AT TREYNOR, IOWA.	LAT 411437, LONG 953653, NEAR NE CORNER SEC. 1, T.74 N., R.42 W., POTTAWATTAMIE CO., AT BRIDGE ON COUNTY ROAD F, 1 MILE NORTH OF TREYNOR.	42.7	1953-	06-14-76 13.92	2,850
06808880	BLUEGRASS CR AT AUDUBON, IOWA.	LAT 4143XX, LONG 9456XX, IN NW 1/4 SEC. 28, T.80 N., R.35 W., AUDUBON CO., AT BRIDGE ON U.S. HIGHWAY 71, NEAR SOUTH EDGE OF AUDUBON.	15.4	1966-	1976 A	(+)
TARKIO RIVER BASIN						
06811760	TARKIO R NR ELLIOT, IOWA.	LAT 4106XX, LONG 9506XX, NEAR NE CORNER SEC. 28, T.73 N., R.37 W., MONTGOMERY COUNTY, AT BRIDGE, 4.5 MILES SE OF ELLIOT.	10.7	1952-	06-14-76 13.28	2,300
06811800	E TARKIO CR NR STANTON, IOWA.	LAT 4105XX, LONG 9506XX, IN W 1/2 SEC. 34, T.73 N., R.37 W., MONTGOMERY CO., AT BRIDGE, 7 MILES NORTH OF STANTON.	4.66	1952-	06-14-76 11.11	1,350
06811820	TARKIO R TR NR STANTON, IOWA.	LAT 4103XX, LONG 9506XX, NEAR NE CORNER SEC. 16, T.72 N., R.37 W., MONTGOMERY COUNTY, AT BOX CULVERT, 4 MILES NORTH OF STANTON.	0.67	1952-	1976 A	(+)
06811875	SNAKE CR NR YORK-TOWN, IOWA.	LAT 4045XX, LONG 9508XX, IN NW 1/4 SEC. 32, T.69 N., R.37 W., PAGE COUNTY, AT BRIDGE ON STATE HIGHWAY 2, 1.5 MILES NE OF YORKTOWN.	9.10	1966-	05-22-76 91.01	670
NODAWAY RIVER BASIN						
06816290	W NODAWAY R AT MASSENA, IOWA.	LAT 4115XX, LONG 9445XX, IN SE 1/4 SEC. 33, T.75 N., R.34 W., CASS COUNTY, AT BRIDGE ON STATE HIGHWAY 148, AT SE CORNER OF MASSENA.	23.4	1966-	1976 A	(+)
PLATTE RIVER BASIN						
06818598	PLATTE R NR STRING-TOWN, IOWA.	LAT 4059XX, LONG 9430XX, IN SE 1/4 SEC. 2, T.71 N., R.32 W., ADAMS COUNTY, AT BRIDGE ON U.S. HIGHWAY 34, 3.8 MILES EAST OF STRINGTOWN.	51.7	1966-	04-17-76 90.66	1,400
06819110	MB 102 R NR GRAVITY, IOWA.	LAT 4050XX, LONG 9444XX, IN SE 1/4 SEC. 27, T.70 N., R.34 W., TAYLOR COUNTY, AT BRIDGE ON STATE HIGHWAY 148, 4.8 MILES NORTH OF GRAVITY.	33.5	1966-	1976 A	(+)
CHARITON RIVER BASIN						
06903980	CHARITON R NR UDELL, IOWA.	LAT 404653, LONG 925012, IN NE 1/4 SEC. 17, T.69 N., R.17 W., APPANOOSE CO., AT BRIDGE, 5.0 MILES WEST OF UDELL.	631	1972-	03-05-76 856.72	4,300
06903990	COOPER CR AT CENTERVILLE, IOWA.	LAT 404502, LONG 925136, IN NW 1/4 SEC. 30, T.69 N., R.17 W., APPANOOSE CO., AT BRIDGE ON STATE HIGHWAY 5, AT NORTH EDGE OF CENTERVILLE.	47.8	1966-	03-05-76 76.05	3,300
06904040	CHARITON R AT COAL CITY, IOWA.	LAT 403535, LONG 924240, IN NE 1/4 SEC. 20, T.67 N., R.16 W., APPANOOSE CO., AT BRIDGE IN COAL CITY.	816	1972-	04-25-76 821.68	4,600

* Also a low-flow partial-record station.

+ Discharge not determined.

A Peak stage did not reach bottom of gage.

B Revised.

C Ice affected.

DISCHARGE MEASUREMENTS MADE AT MISCELLANEOUS SITES DURING WATER YEAR 1976

Stream	Tributary to	Location	Drainage area (mi²)	Measured previously (water years)	Measurements	
					Date	Discharge (ft³/s)
Upper Iowa River basin						
Bear Creek	Upper Iowa River	NE1/4 sec.2, T.99 N., R.6 W., Allamakee County, at bridge on State Highway 76, 3.0 mi (4.8 km) south of Dorchester, Iowa.	118	1941-75	10-03-75	64.9
					11-20-75	65.1
					03-31-76	91.6
					06-08-76	71.2
					07-20-76	73.8
					09-01-76	62.6
Turkey River Basin						
Crane Creek	Little Turkey River	NW1/4 sec.14, T.95 N., R.11 W., Chickasaw County, at bridge on county highway B44, 1.7 mi (2.7 km) southeast of Lawler.	137		08-11-76	7.53
Wapsipinicon River basin						
Walnut Creek	Wapsipinicon River	NE1/4 SW1/4 sec.13, T.83 N., R.3 W., Jones County, at bridge on State Highway 38 in Olin and 0.4 mi (0.6 km) upstream from Sibles Creek.	80.8		08-30-76	2.54
Des Moines River basin						
Des Moines River	Mississippi River	NE1/4 NE1/4 sec.20, T.78 N., R.23 W., Polk County, 1,000 ft (305 m) upstream from State Highway 46 near east edge of Des Moines.	9,901		10-16-75	437
Des Moines River	Mississippi River	SW1/4 sec.3, T.77 N., R.22 W., Polk County, 0.9 mi (1.4 km) downstream from Middle River and 1.5 mi (2.4 km) southwest of Runnells.	11,020		10-16-75	487
Floyd River basin						
Floyd River	Missouri River	NE1/4 SE1/4 sec.34, T.96 N., R.43 W., Sioux County, 200 ft (61 m) upstream from unnamed slough, near gravel pit, and 1.1 mi (1.8 km) north of Hospers, Iowa.	173	1975	10-01-75	15.9
					10-21-75	11.8
					05-05-76	33.3
					07-06-76	11.2
					07-27-76	6.82
					08-25-76	1.50
					09-27-76	2.58
Boyer River Basin						
*06609400 Boyer River	Missouri River	Lat 4200XX, long 9523XX, in NE1/4 sec.16, T.83 N., R.39 W., Crawford County, at bridge, 2 miles SW of Denison.	517	1957-73	11-27-74	65.2
					02-11-75	45.5
					03-11-75	64.0
					05-11-75	464
					05-28-75	652
					06-02-75	278
					12-04-75	77.6
					01-16-76	37.1
					02-04-76	35.7
					03-09-76	70.0
					03-31-76	173
					05-03-76	77.6
					06-01-76	146
Keg Creek Basin						
*06805900 Keg Creek	Missouri River	Lat 410056, long 954559, in NE1/4 sec.27, T.72 N., R.43 W., Mills County, at bridge, 2 miles SW of Glenwood.	190	1957-74	04-29-75	153
					05-13-75	96.9
					05-27-75	73.2
					06-17-75	71.8
					07-18-75	42.7
					08-05-75	32.1
					09-26-75	34.5
					10-28-75	29.7
					09-08-76	12.7

* Also a low-flow partial-record station.

DISCHARGE MEASUREMENTS MADE AT MISCELLANEOUS SITES DURING WATER YEAR 1976--Continued

SEEPAGE INVESTIGATIONS

Discharge measurements were made during the 1976 water year on streama in the area of Project IA 72-021C, Carbonate Terrane Hydrology. The reach on the Cedar River extends from Waterloo to Cedar Rapids. The measurements were made during periods of constant base flow of the stream and may be compared with streamflow data for the same date as published for regular gaging stations and low-flow partial-record stations in the same area.

Iowa River basin							
Elk Run	Cedar River	North line sec.34, T.89 N., R.12 W.	31.4	1975	10-29-75	.806	
Poyner Creek	Cedar River	W1/2 sec.10, T.88 N., R.12 W.	17	1975	10-29-75	0	
Cedar River	Iowa River	SW1/4 SW1/4 sec.23, T.88 N., R.12 W.	5,234	1975	10-29-75	824	
Indian Creek	Cedar River	North line sec.25, T.88 N., R.12 W.	23	1975	10-29-75	1.21	
Cedar River	Iowa River	S1/2 sec.19, T.87 N., R.11 W.	5,360	1975	10-29-75	855	
Rock Creek	Cedar River	North line sec.5, T.86 N., R.11 W.	32.2	1975	10-29-75	2.93	
Cedar River	Iowa River	NW1/4 sec.6, T.86 N., R.10 W.	5,820		10-29-75	774	
Lime Creek	Cedar River	East line sec.33, T.87 N., R.10 W.	41	1975	10-29-75	1.55	
Bear Creek	Cedar River	Center sec.21, T.86 N., R.10 W.	61	1975	10-29-75	4.22	
Pratt Creek	Cedar River	East line sec.36, T.86 N., R.11 W.	49	1975	10-29-75	3.47	
Hinkle Creek	Cedar River	SE1/4 sec.17, T.85 N., R.10 W.	30	1975	10-29-75	1.65	
Cedar River	Iowa River	SW1/4 sec.16, T.85 N., R.10 W.	6,040	1975	10-29-75	847	
Prairie Creek	Cedar River	SW1/4 sec.10, T.85 N., R.10 W.	20	1975	10-29-75	.407	
Mud Creek	Cedar River	SW1/4 SW1/4 sec.22, T.85 N., R.10 W.	45	1975	10-29-75	3.50	
Cedar River	Iowa River	SW1/4 sec.11, T.85 N., R.9 W.	6,135	1975	10-29-75	875	
Blue Creek	Cedar River	NE1/4 SE1/4 sec.7, T.85 N., R.8 W.	63	1975	10-29-75	4.14	
Cedar River	Iowa River	E1/2 sec.20, T.85 N., R.8 W.	6,210	1975	10-29-75	875	
Dry Creek	Cedar River	NW1/4 NE1/4 sec.21, T.84 N., R.8 W.	27	1975	10-29-75	.38	
Cedar River	Iowa River	NE1/4 NE1/4 sec.33, T.84 N., R.8 W.	6,380	1975	10-29-75	812	
Morgan Creek	Cedar River	Center sec.14, T.83 N., R.8 W.	27	1975	10-29-75	.98	

Water-quality partial-record stations are particular sites where chemical-quality, biological and or sediment data are collected systematically over a period of years for use in hydrologic analyses. The data are collected usually less than quarterly.

WATER QUALITY DATA, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976

DATE	TIME	INSTAN- TANEOUS DIS- CHARGE (CFS) (00061)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS) (00095)	PH (UNITS) (00400)	TEMPER- ATURE (DEG C) (00010)
MINNESOTA RIVER BASIN					
05317650 - BLUE EARTH R NR LAKOTA, IOWA (LAT 43 30 00 LONG 094 09 00)					
NOV , 1975					
04...	1255	.48	750	--	11.5
AUG , 1976					
10...	0940	.41	850	--	29.0
05317700 - UNION SLOUGH OUTLET NR LAKOTA, IOWA (LAT 43 24 00 LONG 094 07 00)					
AUG , 1976					
10...	1105	.23	925	--	28.5
05317810 - WF BLUE EARTH R BL MINN-IOWA STATE LINE (LAT 43 26 00 LONG 094 04 00)					
NOV , 1975					
04...	1125	1.7	1100	--	10.5
AUG , 1976					
10...	1029	1.0	900	--	25.0
UPPER IOWA RIVER BASIN					
05387300 - UPPER IOWA R AT CHESTER, IOWA (LAT 43 30 00 LONG 092 22 00)					
AUG , 1976					
31...	1130	7.5	380	8.5	--
05387400 - UPPER IOWA R NR KENDALVILLE, IOWA (LAT 43 28 00 LONG 092 02 00)					
AUG , 1976					
31...	1540	31	420	8.6	23.0
05388100 - CANOE CR NR DECORAH, IOWA (LAT 43 21 00 LONG 091 41 00)					
AUG , 1976					
31...	1925	14	385	8.5	21.5
05388300 - BEAR CR NR HIGHLANDVILLE, IOWA (LAT 43 27 00 LONG 091 37 00)					
SEP , 1976					
01...	1400	26	410	8.3	15.5
VILLAGE CREEK BASIN					
05388350 - VILLAGE CREEK AT VILLAGE CREEK, IOWA (LAT 43 18 40 LONG 091 14 12)					
SEP , 1976					
02...	1045	25	395	8.4	16.5
YELLOW CREEK BASIN					
05388800 - YELLOW R AT MYRON, IOWA (LAT 43 10 00 LONG 091 32 00)					
SEP , 1976					
01...	1635	5.8	500	8.2	15.0
05389000 - YELLOW RIVER AT ION, IOWA (LAT 43 07 00 LONG 091 16 00)					
SEP , 1976					
02...	1320	44	460	--	19.5

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

WATER QUALITY DATA, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976

DATE	TIME	INSTAN- TANEOUS DIS- CHARGE (CFS) (00061)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS) (00095)	PH (UNITS) (00400)	TEMPER- ATURE (DEG C) (00010)
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TURKEY RIVER BASIN

05411550 - NB TURKEY R NR VERNON SPRINGS, IOWA (LAT 43 21 00 LONG 092 11 00)

AUG , 1976					
31...	1320	3.0	360	8.5	23.0

05411560 - TURKEY R NR VERNON SPRINGS, IOWA (LAT 43 20 00 LONG 092 07 00)

AUG , 1976					
31...	1415	11	435	8.1	23.0

05411620 - L TURKEY R NR WAUCOMA, IOWA (LAT 43 01 00 LONG 091 59 00)

AUG , 1976					
31...	0920	13	420	7.7	17.5

05411700 - CRANE CREEK NEAR LOURDES, IOWA (LAT 43 15 00 LONG 092 19 00)

AUG , 1976					
31...	0910	1.1	310	8.0	19.0

05411800 - L TURKEY R NR ALPHA, IOWA (LAT 43 01 00 LONG 091 57 00)

AUG , 1976					
31...	0845	28	420	7.9	17.5

05412100 - ROBERTS C AB ST. OLAF, IOWA (LAT 42 55 49 LONG 091 23 03)

AUG , 1976					
31...	1100	.02	540	7.7	20.0

05412150 - ROBERTS C AT ST. OLAF, IOWA (LAT 42 55 42 LONG 091 23 01)

AUG , 1976					
31...	1040	.85	490	8.0	18.5

05412200 - VOLGA R NR FAYETTE, IOWA (LAT 42 49 00 LONG 091 53 00)

AUG , 1976					
30...	1805	3.1	400	8.2	26.0

05412300 - L VOLGA R NR FAYETTE, IOWA (LAT 41 49 02 LONG 091 53 02)

AUG , 1976					
30...	1730	2.1	490	8.2	26.0

05412400 - VOLGA R AT LITTLEPORT, IOWA (LAT 42 45 14 LONG 091 22 08)

AUG , 1976					
31...	1220	46	490	8.3	26.0

LITTLE MAQUOKETA RIVER BASIN

05414450 - N FK L MAQUOKETA R NR RICKARDSVILLE, IOWA (LAT 42 35 09 LONG 090 51 20)

OCT , 1975					
07...	0915	1.1	630	7.2	9.5
AUG , 1976					
31...	1610	.45	460	8.4	21.0

MAQUOKETA RIVER BASIN

05416300 - MAQUOKETA R NR DUNDEE, IOWA (LAT 42 36 55 LONG 091 33 44)

OCT , 1975					
07...	1355	12	450	8.5	14.0
AUG , 1976					
31...	1545	11	360	8.5	22.0

WATER QUALITY DATA, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976

DATE	TIME	INSTAN- TANEOUS DIS- CHARGE (CFS) (00061)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS) (00095)	PH (UNITS) (00400)	TEMPER- ATURE (DEG C) (00010)
MAQUOKETA RIVER BASIN--CONTINUED					
05416400 - SF MAQUOKETA R NR DUNDEE, IOWA (LAT 42 36 08 LONG 091 35 13)					
OCT , 1975					
07...	1320	3.2	460	8.2	14.0
AUG , 1976					
31...	1635	4.4	470	8.3	24.0
05417540 - PLUM C NR EARLVILLE, IOWA (LAT 42 26 04 LONG 091 13 58)					
OCT , 1975					
07...	1110	13	460	8.5	12.0
SEP , 1976					
01...	0925	9.7	480	7.9	18.5
05417560 - MAQUOKETA R NR HOPKINTON, IOWA (LAT 42 22 00 LONG 091 16 00)					
OCT , 1975					
07...	0910	118	530	8.4	12.0
SEP , 1976					
01...	1020	88	470	8.2	20.0
05417580 - BUCK CR NR HOPKINTON, IOWA (LAT 42 21 00 LONG 091 17 00)					
OCT , 1975					
07...	1025	7.1	480	8.4	10.0
SEP , 1976					
01...	1100	5.7	440	8.2	18.5
05417600 - MAQUOKETA R NR SCOTCH GROVE, IOWA (LAT 42 12 00 LONG 091 01 00)					
OCT , 1975					
07...	1300	141	460	8.3	14.0
AUG , 1976					
30...	1520	128	470	8.6	25.0
05417700 - BEAR CREEK NEAR MONMOUTH, IOWA (LAT 42 02 18 LONG 090 52 59)					
OCT , 1975					
07...	1120	7.3	460	8.4	13.0
NOV					
18...	1325	8.6	460	8.2	10.0
DEC					
16...	1415	12	500	8.3	1.0
05418100 - NF MAQUOKETA R AT DYERSVILLE, IOWA (LAT 42 29 05 LONG 091 08 26)					
OCT , 1975					
07...	1200	17	480	8.3	12.0
AUG , 1976					
31...	1100	11	500	8.3	19.5
05418200 - WHITEWATER CR AT FILLMORE, IOWA (LAT 42 19 07 LONG 090 55 26)					
OCT , 1975					
07...	1120	23	640	8.2	11.5
AUG , 1976					
30...	1630	17	510	8.6	25.0
05418300 - LYTLE C NR BERNARD, IOWA (LAT 42 17 57 LONG 090 46 56)					
OCT , 1975					
07...	1025	23	550	8.2	11.0
AUG , 1976					
31...	1225	14	390	8.2	23.0
05418350 - LYTLE CR NR FULTON, IOWA (LAT 42 12 00 LONG 090 45 00)					
OCT , 1975					
07...	1120	47	540	8.1	11.0
AUG , 1976					
31...	1350	28	510	8.5	23.0
05418400 - NF MAQUOKETA R NR FULTON, IOWA (LAT 42 11 00 LONG 090 44 00)					
OCT , 1975					
07...	1240	170	520	8.2	12.5
AUG , 1976					
31...	1515	112	400	8.5	25.0

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

WATER QUALITY DATA, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976

DATE	TIME	INSTAN- TANEOUS DIS- CHARGE (CFS) (00061)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS) (00095)	PH (UNITS) (00400)	TEMPER- ATURE (DEG C) (00010)
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05418650 - DEEP CR NR CHARLOTTE, IOWA (LAT 42 00 00 LONG 090 24 00)

05418650 - DEEP CR NR CHARLOTTE, IOWA (LAT 42 00 00 LONG 090 24 00)

OCT , 1975					
07...	1455	6.1	510	7.9	13.0
SEP , 1976					
01...	0830	2.6	580	8.1	19.0

05418700 - DEEP CR NR PRESTON, IOWA (LAT 42 03 00 LONG 090 26 00)

OCT , 1975					
07...	1405	11	610	8.0	15.0
SEP , 1976					
01...	0745	5.0	440	8.1	19.5

ELK RIVER BASIN

05420300 - ELK C NR ALMONT, IOWA (LAT 42 00 39 LONG 090 12 05)

OCT , 1975					
07...	1420	11	460	8.5	13.0
SEP , 1976					
01...	0930	6.6	600	8.4	21.0

WAPSIPINICON RIVER BASIN

05420540 - WAPSIPINICON R NR RICEVILLE, IOWA (LAT 43 20 00 LONG 092 34 00)

AUG , 1976					
31...	1045	4.8	355	8.3	20.5

05420580 - WAPSIPINICON R NR IONIA, IOWA (LAT 43 01 00 LONG 092 23 00)

AUG , 1976					
30...	1720	4.9	365	8.5	23.5

05420640 - LITTLE WAPSIPINICON RIVER AT ELMA, IOWA (LAT 43 14 00 LONG 092 27 00)

AUG , 1976					
31...	0820	1.6	370	8.7	16.0

05420660 - WAPSIPINICON R NR NEW HAMPTON, IOWA (LAT 42 59 00 LONG 092 22 00)

AUG , 1976					
30...	1640	8.6	380	8.2	23.5

05420680 - WAPSIPINICON R NR TRIPOLI, IOWA (LAT 42 05 00 LONG 092 15 00)

AUG , 1976					
30...	1410	3.0	375	8.4	22.5

05420700 - EF WAPSIPINICON R NR FREDERICKSBURG, IOWA (LAT 43 01 00 LONG 092 13 00)

AUG , 1976					
30...	1545	1.9	400	8.7	25.5

05420720 - EF WAPSIPINICON R NR TRIPOLI, IOWA (LAT 42 51 00 LONG 092 14 00)

AUG , 1976					
30...	1445	3.1	520	8.2	21.5

05420740 - WAPSIPINICON R AT TRIPOLI, IOWA (LAT 42 48 00 LONG 092 14 00)

AUG , 1976					
30...	1240	3.9	380	8.2	22.0

WATER QUALITY DATA, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976

DATE	TIME	INSTAN- TANEOUS DIS- CHARGE (CFS) (00061)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS) (00095)	PH (UNITS) (00400)	TEMPER- ATURE (DEG C) (00010)
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WAPSIPINICON RIVER BASIN--CONTINUED

05420840 - L WAPSIPINICON R NR WESTGATE, IOWA (LAT 42 47 00 LONG 092 05 00)

AUG , 1976					
30...	1650	2.4	200	8.2	25.0

05420860 - BUCK CR NR LITTLETON, IOWA (LAT 42 35 00 LONG 092 03 00)

AUG , 1976					
30...	1055	.04	340	8.2	23.0

05420900 - L WAPSIPINICON R AT LITTLETON, IOWA (LAT 42 33 00 LONG 092 02 00)

AUG , 1976					
30...	1205	8.5	400	8.1	26.0

05420940 - OTTER CR NR OTTERVILLE, IOWA (LAT 42 33 00 LONG 091 57 00)

AUG , 1976					
30...	1300	8.0	490	8.0	21.0

05421500 - WAPSIPINICON RIVER AT STONE CITY, IOWA (LAT 42 07 00 LONG 091 21 00)

OCT , 1975					
07...	1515	91	380	8.8	15.0
AUG , 1976					
30...	1020	83	370	8.3	20.5

05421550 - BUFFALO CREEK ABOVE WINTHROP, IOWA (LAT 42 30 00 LONG 091 44 00)

AUG , 1976					
30...	1525	4.3	390	8.2	26.0

05421700 - BUFFALO CR NR STONE CITY, IOWA (LAT 42 08 00 LONG 091 21 00)

OCT , 1975					
07...	1400	22	450	8.5	15.0
AUG , 1976					
30...	1150	28	360	8.8	20.5

05421800 - YANKEE RUN AT WHEATLAND, IOWA (LAT 41 49 34 LONG 090 50 25)

OCT , 1975					
07...	1040	2.8	600	8.2	12.0
SEP , 1976					
01...	1800	1.7	560	8.6	24.0

05421850 - MUD CR NR PLAINVIEW, IOWA (LAT 41 42 02 LONG 090 45 26)

OCT , 1975					
07...	0930	6.9	540	8.4	11.0
SEP , 1976					
01...	1645	4.7	480	8.6	24.0

05421900 - SILVER C NR DE WITT, IOWA (LAT 41 47 09 LONG 090 33 13)

OCT , 1975					
07...	1140	7.4	550	8.5	12.5
SEP , 1976					
01...	1210	5.0	490	8.4	22.5

05422100 - BROPHYS C NR LOW MOOR, IOWA (LAT 41 48 56 LONG 090 24 14)

OCT , 1975					
07...	1310	9.9	600	8.5	13.0
SEP , 1976					
01...	1105	6.2	500	8.2	20.0

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

WATER QUALITY DATA, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976

DATE	TIME	INSTAN- TANEOUS DIS- CHARGE (CFS) (00061)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS) (00095)	PH (UNITS) (00400)	TEMPER- ATURE (DEG C) (00010)
IOWA RIVER BASIN					
05448300 - WF IOWA R NR BRITT, IOWA (LAT 43 06 00 LONG 093 45 00)					
SEP , 1976					
07...	1020	.21	610	--	18.0
05448400 - WESTMAIN DRAINAGE DITCH 1 & 2 NR BRITT, IOWA (LAT 43 06 00 LONG 093 47 00)					
SEP , 1976					
07...	0950	.65	740	--	18.5
05451200 - SO FK IOWA RIVER NR NEW PROVIDENCE, IOWA (LAT 42 19 00 LONG 093 10 00)					
SEP , 1976					
08...	1500	.95	420	--	--
05451250 - BEAVER CREEK NEAR ELDORA, IOWA (LAT 42 21 00 LONG 093 08 00)					
SEP , 1976					
08...	1625	1.4	600	--	--
05451300 - HONEY CR NR NEW PROVIDENCE, IOWA (LAT 42 16 00 LONG 093 11 00)					
SEP , 1976					
08...	1440	.18	580	--	--
05451350 - HONEY CREEK AT BANGOR, IOWA (LAT 42 10 00 LONG 093 05 00)					
SEP , 1976					
08...	1300	.78	540	--	25.0
05451400 - MINERVA CR AT CLEMONS, IOWA (LAT 42 08 00 LONG 093 09 00)					
SEP , 1976					
08...	1400	.56	560	--	25.0
05451450 - MINERVA CREEK NEAR CLEMONS, IOWA (LAT 42 07 00 LONG 093 05 00)					
SEP , 1976					
08...	1330	3.4	500	--	25.0
05451600 - LINN C AT MARSHALLTOWN, IOWA (LAT 42 02 22 LONG 092 54 40)					
SEP , 1976					
09...	1110	1.3	890	7.7	16.0
05451650 - S TIMBER CR NR LE GRAND, IOWA (LAT 41 59 00 LONG 092 50 00)					
SEP , 1976					
09...	0915	2.1	470	8.1	16.0
05451800 - DEER CREEK AT TOLEDO, IOWA (LAT 41 59 00 LONG 092 35 00)					
SEP , 1976					
09...	0755	3.2	500	8.1	14.0
05451930 - SALT CR NR CLUTIER, IOWA (LAT 42 03 00 LONG 092 22 00)					
SEP , 1976					
10...	0800	2.5	500	7.8	9.5

WATER QUALITY DATA, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976

DATE	TIME	INSTAN- TANEOUS DIS- CHARGE (CFS) (00061)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS) (00095)	PH (UNITS) (00400)	TEMPER- ATURE (DEG C) (00010)
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IOWA RIVER BASIN--CONTINUED

05451960 - EB SALT CR NR ELBERON, IOWA (LAT 42 04 00 LONG 092 20 00)

SEP , 1976					
10...	0820	1.7	490	8.1	10.0

05452700 - BEAR CR AT BROOKLYN, IOWA (LAT 41 45 00 LONG 092 26 00)

SEP , 1976					
07...	1705	1.3	650	8.1	27.5

05454200 - CLEAR CR NR OXFORD, IOWA (LAT 41 43 00 LONG 091 47 00)

SEP , 1976					
09...	1330	.25	1750	8.4	22.5

05454500 - IOWA RIVER AT IOWA CITY, IOWA (LAT 41 39 24 LONG 091 32 27)

APR , 1976					
06...	1100	2250	--	--	12.0
JUN					
01...	1300	3020	--	--	21.5

05455000 - RALSTON CREEK AT IOWA CITY, IOWA (LAT 41 39 50 LONG 091 30 48)

JUL , 1976					
15...	1545	9.1	--	--	24.0

05455050 - OLD MANS CR NR PARNELL, IOWA (LAT 41 36 00 LONG 091 57 00)

SEP , 1976					
10...	1100	.20	760	7.7	15.0

05455100 - OLD MANS CR NR IOWA CITY, IOWA (LAT 41 36 25 LONG 091 36 40.01)

SEP , 1976					
07...	1300	2.7	460	8.3	21.5

05455200 - NORTH ENGLISH RIVER NR GUERNSEY, IOWA (LAT 41 38 00 LONG 092 24 00)

SEP , 1976					
08...	0750	.70	410	7.8	14.5

05455250 - N ENGLISH R NR NORTH ENGLISH, IOWA (LAT 41 33 00 LONG 092 03 00)

SEP , 1976					
10...	1215	7.7	510	7.2	17.5

05455260 - M ENGLISH R NR NORTH ENGLISH, IOWA (LAT 41 32 00 LONG 092 04 00)

SEP , 1976					
10...	1230	.09	460	7.9	21.0

05455400 - S ENGLISH R NR KESWICK, IOWA (LAT 41 28 13 LONG 092 15 31)

SEP , 1976					
10...	1345	.03	480	7.6	29.5

05455450 - S ENGLISH R NR KINROSS, IOWA (LAT 41 30 00 LONG 091 57 00)

SEP , 1976					
10...	1430	.21	480	8.1	23.0

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

WATER QUALITY DATA, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976

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IOWA RIVER BASIN--CONTINUED

05457300 - OTTER CR NR OTRANTO, IOWA (LAT 43 28 00 LONG 092 58 00)

SEP , 1976					
08...	1700	2.5	460	--	18.5

05457350 - CEDAR R AT OTRANTO, IOWA (LAT 43 27 00 LONG 092 59 00)

SEP , 1976					
08...	1530	51	590	--	18.5

05457400 - DEER CR NR MELTONVILLE, IOWA (LAT 43 26 00 LONG 093 05 00)

SEP , 1976					
07...	1510	1.8	480	--	18.0

05457450 - DEER CR AT ST ANSGAR, IOWA (LAT 43 23 00 LONG 092 58 00)

SEP , 1976					
08...	1815	2.1	490	--	18.0

05457600 - ROCK CR NR FLOYD, IOWA (LAT 43 13 00 LONG 092 49 00)

SEP , 1976					
08...	1045	4.4	380	--	19.0

05457800 - L CEDAR R NR STACEYVILLE, IOWA (LAT 43 28 00 LONG 092 47 00)

SEP , 1976					
08...	1625	2.8	400	--	18.0

05458550 - BEAVERDAM CR NR ROCKWELL, IOWA (LAT 42 58 00 LONG 093 15 00)

SEP , 1976					
07...	1415	2.4	720	--	27.0

05458600 - BAILEY CR NR SHEFFIELD, IOWA (LAT 42 54 00 LONG 093 16 00)

SEP , 1976					
07...	1500	2.0	675	--	--

05458750 - OTTER CR NR HANSELL, IOWA (LAT 42 46 00 LONG 093 07 00)

SEP , 1976					
07...	1755	3.9	530	--	--

05458770 - SQUAW CR NR HANSELL, IOWA (LAT 42 44 00 LONG 093 07 00)

SEP , 1976					
07...	1645	1.4	760	--	28.0

05458780 - HARTGRAVE CR NR HANSELL, IOWA (LAT 42 44 00 LONG 093 05 00)

SEP , 1976					
07...	1710	7.3	650	--	28.0

05458790 - BOVLAN CR NR BRISTOW, IOWA (LAT 42 46 00 LONG 092 56 00)

SEP , 1976					
08...	0955	.05	440	--	18.5

WATER QUALITY DATA, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976

DATE	TIME	INSTAN- TANEOUS DIS- CHARGE (CFS) (00061)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS) (00095)	PH (UNITS) (00400)	TEMPER- ATURE (DEG C) (00010)
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IOWA RIVER BASIN--CONTINUED

05458800 - MAYNES CR NR HAMPTON, IOWA (LAT 42 41 00 LONG 093 12 00)

SEP , 1976					
08...	0730	1.6	640	--	18.0

05458850 - MAYNES CR NR DUMONT, IOWA (LAT 42 42 00 LONG 092 58 00)

SEP , 1976					
08...	0815	3.1	580	--	18.5

05459050 - LIME CR NR SCARVILLE, IOWA (LAT 43 27 00 LONG 093 35 00)

SEP , 1976					
07...	1150	2.1	700	--	18.0

05459200 - WINNEBAGO R NR FOREST CITY, IOWA (LAT 43 18 00 LONG 093 39 00)

SEP , 1976					
07...	1100	.74	700	--	18.5

05459300 - WINNEBAGO R NR FERTILE, IOWA (LAT 43 15 00 LONG 093 26 00)

SEP , 1976					
07...	1310	3.9	600	--	18.5

05459400 - BEAVER CR NR FERTILE, IOWA (LAT 43 16 00 LONG 093 27 00)

SEP , 1976					
07...	1400	1.2	700	--	18.0

05460200 - WILLOW C AT MASON CITY, IOWA (LAT 43 09 46 LONG 093 14 20)

SEP , 1976					
08...	0815	3.0	620	--	18.5

05462700 - BEAVER CR NR ACKLEY, IOWA (LAT 42 34 00 LONG 093 02 00)

SEP , 1976					
10...	0855	1.0	790	8.2	11.5

05462800 - S BEAVER CR NR PARKERSBURG, IOWA (LAT 42 34 00 LONG 092 49 00)

SEP , 1976					
10...	1045	6.1	490	8.4	13.5

05463100 - BLACK HAWK CR NR GRUNDY CENTER, IOWA (LAT 42 22 00 LONG 092 44 00)

SEP , 1976					
10...	1325	4.2	580	8.3	20.5

05463200 - MOSQUITO CR AT REINBECK, IOWA (LAT 42 20 00 LONG 092 37 00)

SEP , 1976					
09...	0905	.66	540	8.3	14.0

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

WATER QUALITY DATA, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976

DATE	TIME	INSTAN- TANEOUS DIS- CHARGE (CFS) (00061)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS) (00095)	PH (UNITS) (00400)	TEMPER- ATURE (DEG C) (00010)
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DATA ARE IN ORDER - CONTINUED

05453300 - BLACK HAWK CR AT REINBECK, IOWA (LAT 42 20 00 LONG 092 36 00)

SEP , 1976					
09...	1205	8.7	470	8.3	18.5

05463400 - N BLACK HAWK CR AT DIKE, IOWA (LAT 42 27 00 LONG 092 37 00)

SEP , 1976					
09...	1400	1.4	490	8.7	24.0

05464050 - MILLERS CR NR LAPORTE CITY, IOWA (LAT 42 23 00 LONG 092 15 00)

OCT , 1975					
29...	1240	3.3	650	8.6	10.5
SEP , 1976					
08...	1115	.67	680	8.7	23.0

05464100 - WOLF C NR BEAMAN, IOWA (LAT 42 12 47 LONG 092 47 12)

SEP , 1976					
10...	1525	1.7	640	8.6	23.0

05464150 - TWELVE MILE CR NR BUCKINGHAM, IOWA (LAT 42 14 00 LONG 092 26 00)

OCT , 1975					
29...	1010	4.6	540	8.4	8.0
SEP , 1976					
09...	1455	1.3	460	8.7	21.5

05464200 - WOLF C NR BUCKINGHAM, IOWA (LAT 42 15 33 LONG 092 21 42)

OCT , 1975					
29...	1110	19	560	8.4	9.0
SEP , 1976					
09...	1545	9.5	500	8.9	22.0

05464250 - WOLF CR AT LAPORTE CITY, IOWA (LAT 42 19 00 LONG 092 12 00)

OCT , 1975					
29...	1200	31	560	8.3	6.5
SEP , 1976					
08...	0930	17	380	8.6	19.5

05464300 - SPRING CR NR LAPORTE CITY, IOWA (LAT 42 20 00 LONG 092 06 00)

OCT , 1975					
29...	1225	6.5	500	8.3	11.0
SEP , 1976					
08...	0950	3.7	370	8.8	19.5

05464320 - E BLUE C NR CENTER POINT, IOWA (LAT 42 11 41 LONG 091 48 28)

OCT , 1975					
29...	0930	1.7	450	8.2	5.0
SEP , 1976					
07...	1405	.97	425	8.7	26.5

05464350 - BEAR C AT SHELLSBURG, IOWA (LAT 42 05 39 LONG 091 53 34)

OCT , 1975					
29...	0950	2.4	470	8.2	6.5
SEP , 1976					
10...	1320	.82	440	8.6	25.0

05464400 - BEAR C NR PALO, IOWA (LAT 42 04 55 LONG 091 47 40)

OCT , 1975					
29...	1350	4.2	480	8.3	12.0
SEP , 1976					
07...	1315	1.6	--	9.0	25.0

WATER QUALITY DATA, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976

DATE	TIME	INSTAN- TANEOUS DIS- CHARGE (CFS) (00061)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS) (00095)	PH (UNITS) (00400)	TEMPER- ATURE (DEG C) (00010)
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MIA RIVER DATA - CONTINUED

05464460 - OTTER C NR CEDAR RAPIDS, IOWA (LAT 42 03 57 LONG 091 44 27)

OCT , 1975					
29...	0925	4.6	410	8.2	6.5
SEP , 1976					
07...	1215	2.3	410	8.8	21.5

05464550 - PRAIRIE C NR BLAIRSTOWN, IOWA (LAT 41 56 06 LONG 092 07 51)

SEP , 1976					
10...	1115	.27	410	8.4	18.5

05464600 - PRAIRIE C AT NORWAY, IOWA (LAT 41 53 35 LONG 091 55 43)

SEP , 1976					
10...	1155	2.0	380	8.6	21.0

05464640 - PRAIRIE CREEK AT FAIRFAX, IOWA (LAT 41 55 22 LONG 091 47 02)

OCT , 1975					
29...	1455	8.0	500	8.4	12.5

05464650 - PRAIRIE C AT CEDAR RAPIDS, IOWA (LAT 41 55 49 LONG 091 40 34)

SEP , 1976					
07...	1100	14	480	8.4	22.5

05464700 - INDIAN C AT CEDAR RAPIDS, IOWA (LAT 41 59 42 LONG 091 37 03)

SEP , 1976					
07...	1555	1.4	500	8.5	24.5

05464750 - BIG C AT BERTRAM, IOWA (LAT 41 57 23 LONG 091 31 35)

SEP , 1976					
07...	1640	7.7	430	8.8	22.0

05464800 - ROCK C AT ROCHESTER, IOWA (LAT 41 40 40 LONG 091 09 52)

SEP , 1976					
09...	1230	2.0	550	8.1	20.5

05464850 - SUGAR C NR BENNETT, IOWA (LAT 41 41 56 LONG 091 02 43)

SEP , 1976					
09...	1130	.71	510	8.6	19.0

05464900 - MUD C NR WILTON, IOWA (LAT 41 34 45 LONG 091 02 17)

SEP , 1976					
09...	0915	3.8	640	8.0	17.5

05464920 - SUGAR C NR MOSCOW, IOWA (LAT 41 34 00 LONG 091 04 09)

SEP , 1976					
09...	0830	8.4	630	8.1	16.5

05464940 - EB WAPSINONOC C AT WEST LIBERTY, IOWA (LAT 41 33 26 LONG 091 15 19)

SEP , 1976					
08...	1430	2.2	1200	8.0	23.0

05464950 - WB WAPSINONOC C AT WEST LIBERTY, IOWA (LAT 41 33 48 LONG 091 16 13)

SEP , 1976					
08...	1500	.07	480	--	25.5

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

WATER QUALITY DATA, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976

DATE	TIME	INSTAN- TANEOUS DIS- CHARGE (CFS) (00061)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS) (00095)	PH (UNITS) (00400)	TEMPER- ATURE (DEG C) (00010)
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IOWA RIVER BASIN -CONTINUED

05465200 - LONG CR NR AINSWORTH, IOWA (LAT 41 16 00 LONG 091 30 00)

SEP , 1976					
08...	0830	.14	3600	8.1	16.5

05465300 - LONG CR NR WAPELLO, IOWA (LAT 41 12 00 LONG 091 17 00)

SEP , 1976					
08...	0900	.44	790	8.3	17.5

05465600 - OTTER C NR WAPELLO, IOWA (LAT 41 07 20 LONG 091 09 00)

SEP , 1976					
08...	1030	5.9	440	8.4	21.0

FLINT RIVER BASIN

05469700 - FLINT CR NR BURLINGTON, IOWA (LAT 40 52 00 LONG 091 12 03)

SEP , 1976					
16...	0900	.23	600	7.9	16.5

SKUNK RIVER BASIN

05469800 - S SKUNK R NR ELLSWORTH, IOWA (LAT 42 19 00 LONG 093 35 00)

SEP , 1976					
15...	0830	.02	800	8.2	15.0

05469850 - MUD LAKE DRAINAGE DITCH 71 AT JEWELL, IOWA (LAT 42 19 05 LONG 093 38 05)

SEP , 1976					
15...	0845	.11	900	--	14.0

05469950 - S SKUNK R AT RANDALL, IOWA (LAT 42 14 00 LONG 093 35 00)

SEP , 1976					
15...	0805	.23	710	8.1	13.0

05471050 - S SKUNK R AT COLFAX, IOWA (LAT 41 40 55 LONG 093 14 47)

SEP , 1976					
14...	1200	17	630	8.2	24.5

05471150 - WB INDIAN CR NR IOWA CENTER, IOWA (LAT 41 56 00 LONG 093 26 00)

SEP , 1976					
14...	1410	.06	1500	8.6	31.0

05471350 - CLEAR CR NR MINGO, IOWA (LAT 41 47 00 LONG 093 16 00)

SEP , 1976					
14...	1250	.63	400	8.5	28.0

05471400 - ELK CR NR TAINTOR, IOWA (LAT 41 29 00 LONG 092 51 00)

SEP , 1976					
13...	1205	.27	420	8.6	23.0

WATER QUALITY DATA, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976

DATE	TIME	INSTAN- TANEOUS DIS- CHARGE (CFS) (00051)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS) (00095)	PH (UNITS) (00400)	TEMPER- ATURE (DEG C) (00010)
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SKUNK RIVER BASIN--CONTINUED

05472100 - N SKUNK R NR NEWTON, IOWA (LAT 41 47 00 LONG 093 02 00)

SEP , 1976					
14...	1110	.94	500	7.9	20.5

05472300 - N SKUNK R NR SEARSBORO, IOWA (LAT 41 32 00 LONG 092 42 00)

SEP , 1976					
13...	1120	6.4	650	8.3	19.0

05472400 - MIDDLE CR NR ROSE HILL, IOWA (LAT 41 20 42 LONG 092 28 25)

SEP , 1976					
13...	1440	.02	550	8.2	30.5

05472450 - CEDAR CR NR SIGOURNEY, IOWA (LAT 41 18 42 LONG 092 13 33)

SEP , 1976					
13...	1530	.28	900	8.4	9.5

05473000 - SKUNK RIVER AT COPPOCK, IOWA (LAT 41 10 00 LONG 091 43 00)

SEP , 1976					
13...	1730	92	560	8.5	23.5

05473020 - EF CROOKED CR NR WINFIELD, IOWA (LAT 41 09 00 LONG 091 26 00)

SEP , 1976					
16...	1755	.33	420	8.4	21.5

05473100 - WALNUT CR AT GERMANVILLE, IOWA (LAT 41 06 00 LONG 091 46 00)

SEP , 1976					
14...	1500	.02	420	7.9	25.0

05473200 - CEDAR CR NR HIGHLAND CENTER, IOWA (LAT 41 06 30 LONG 092 21 58)

SEP , 1976					
14...	0850	.06	540	8.3	20.0

05473250 - COMPETINE CR BELOW FORKS NR BATAVIA, IOWA (LAT 41 02 00 LONG 092 07 00)

SEP , 1976					
14...	1145	.00	1050	7.8	23.0

05473300 - CEDAR CREEK NR BATAVIA, IOWA (LAT 41 01 00 LONG 092 07 00)

SEP , 1976					
14...	1030	.14	540	8.1	22.5

05473350 - L CEDAR CR NR SALEM, IOWA (LAT 40 51 00 LONG 091 41 00)

SEP , 1976					
15...	1345	.10	480	7.9	23.0

05473400 - CEDAR CR NR OAKLAND MILLS, IOWA (LAT 40 55 00 LONG 091 40 00)

SEP , 1976					
15...	1230	2.6	300	8.1	22.5

DEVILS CREEK BASIN

05474200 - SUGAR CR NR FRANKLIN, IOWA (LAT 40 39 54 LONG 091 28 39)

SEP , 1976					
15...	1500	.01	590	8.0	21.5

05474300 - SUGAR CR NR VIELE, IOWA (LAT 40 36 39 LONG 091 26 24)

SEP , 1976					
15...	1730	.08	700	7.9	21.5

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

WATER QUALITY DATA, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976

DATE	TIME	INSTAN- TANEOUS DIS- CHARGE (CFS) (00061)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS) (00095)	PH (UNITS) (00400)	TEMPER- ATURE (DEG C) (00010)
DES MOINES RIVER BASIN					
05476600 - SILVER CR NR EMMETTSBURG, IOWA (LAT 43 06 00 LONG 094 43 00)					
NOV , 1975					
04...	1240		650	--	14.0
AUG , 1976					
10...	1530		480	--	32.0
05476650 - CYLINDER CR NR RODMAN, IOWA (LAT 43 02 00 LONG 094 34 00)					
NOV , 1975					
04...	1350	1.6	940	--	16.5
AUG , 1976					
10...	1630	1.5	800	--	35.0
05476720 - BEAVER CR NR ROLFE, IOWA (LAT 42 50 00 LONG 094 28 00)					
NOV , 1975					
04...	1505	.69	650	--	14.5
05476740 - PILOT CR NR ROLFE, IOWA (LAT 42 49 00 LONG 094 27 00)					
NOV , 1975					
06...	0955	1.9	740	--	13.5
AUG , 1976					
11...	1020	.48	775	--	26.0
05477800 - MUD CR AT BANCROFT, IOWA (LAT 43 18 00 LONG 094 12 00)					
AUG , 1976					
10...	1240	.05	1150	--	28.0
05478100 - N BUFFALO CR NR BUFFALO CENTER, IOWA (LAT 43 19 00 LONG 093 58 00)					
NOV , 1975					
04...	1420	.34	900	--	12.5
AUG , 1976					
10...	1140	.16	700	--	28.0
05478350 - LOTTS CR NR WEST BEND, IOWA (LAT 43 58 00 LONG 094 23 00)					
AUG , 1976					
11...	0910	1.1	1400	--	21.5
05478400 - LOTTS CR AT LIVERMORE, IOWA (LAT 42 52 00 LONG 094 11 00)					
AUG , 1976					
11...	0920	.43	1000	--	28.0
05479600 - LIZARD CR NR PALMER, IOWA (LAT 42 39 00 LONG 094 30 00)					
NOV , 1975					
06...	1300	.57	2200	--	16.5
05479800 - NB LIZARD CR NR HAVELOCK, IOWA (LAT 42 48 00 LONG 094 40 00)					
NOV , 1975					
06...	1045	.48	820	--	15.5
AUG , 1976					
11...	1130	.20	850	--	29.0
05479900 - LIZARD CR NR GILMORE CITY, IOWA (LAT 42 38 00 LONG 094 28 00)					
NOV , 1975					
06...	1325	1.5	1300	--	16.5
05480300 - SB LIZARD CR NR FORT DODGE, IOWA (LAT 42 29 50 LONG 094 13 59)					
AUG , 1976					
11...	0845	.34	580	--	23.0

WATER QUALITY DATA, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976

DATE	TIME	INSTAN- TANEOUS DIS- CHARGE (CFS) (00061)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS) (00095)	PH (UNITS) (00400)	TEMPER- ATURE (DEG C) (00010)
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DES MOINES RIVER BASIN--CONTINUED

05480660 - BOONE R NR KANAWHA, IOWA (LAT 42 55 00 LONG 093 53 00)

NOV , 1975					
05...	0955	.43	700	--	11.0
AUG , 1976					
11...	1055	.79	700	--	28.0

05480700 - BOONE R NR RENWICK, IOWA (LAT 42 53 00 LONG 093 55 00)

NOV , 1975					
05...	1150	1.3	680	--	11.0
AUG , 1976					
11...	1025	1.9	720	--	27.0

05480720 - PRAIRIE CR NR LUVERNE, IOWA (LAT 42 57 00 LONG 094 05 00)

NOV , 1975					
04...	1540	6.1	800	--	13.0
AUG , 1976					
11...	0830	1.1	750	--	28.0

05480760 - PRAIRIE CR NR RENWICK, IOWA (LAT 42 52 00 LONG 093 59 00)

AUG , 1976					
11...	0955	.28	620	--	28.0

05480800 - OTTER CR NR GOLDFIELD, IOWA (LAT 42 47 00 LONG 093 53 00)

NOV , 1975					
05...	1230	3.8	650	--	11.0
AUG , 1976					
11...	1520	.30	700	--	27.0

05480820 - BOONE R NR GOLDFIELD, IOWA (LAT 42 43 00 LONG 093 57 00)

NOV , 1975					
05...	1400	3.8	750	--	11.0
AUG , 1976					
11...	1555	3.3	720	--	23.0

05480860 - EAGLE CR NR EAGLE GROVE, IOWA (LAT 42 42 00 LONG 093 49 00)

AUG , 1976					
11...	1445	1.2	700	--	26.0

05480900 - EAGLE CR NR WOOLSTOCK, IOWA (LAT 42 34 00 LONG 093 51 00)

NOV , 1975					
06...	1000	2.7	950	--	12.0
AUG , 1976					
10...	1525	.58	800	--	32.0

05480940 - WHITE FOX CR NR WOOLSTOCK, IOWA (LAT 42 36 00 LONG 093 45 00)

NOV , 1975					
06...	1120	2.1	750	--	13.5
AUG , 1976					
10...	1355	1.4	720	--	29.0

05480980 - WHITE FOX CR AT WEBSTER CITY, IOWA (LAT 42 30 00 LONG 093 48 00)

NOV , 1975					
06...	1230	2.9	650	--	14.5
AUG , 1976					
10...	1440	1.2	580	--	30.0

05481700 - BEAVER CR NR BEAVER, IOWA (LAT 42 01 55 LONG 094 09 01)

AUG , 1976					
10...	0910	.02	630	--	24.5

05481800 - BEAVER CR NR BERKLEY, IOWA (LAT 41 55 00 LONG 094 06 00)

AUG , 1976					
10...	0830	.08	700	--	23.0

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

WATER QUALITY DATA, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976

DATE	TIME	INSTAN- TANEOUS DIS- CHARGE (CFS) (00061)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS) (00095)	PH (UNITS) (00400)	TEMPER- ATURE (DEG C) (00010)
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DES MOINES RIVER BASIN--CONTINUED

05482100 - N RACCOON R NR REMBRANDT, IOWA (LAT 42 47 00 LONG 095 06 00)

SEP , 1976					
15...	1110	.12	790	--	17.0

05482120 - N RACCOON R NR TRUESDALE, IOWA (LAT 42 42 00 LONG 095 05 00)

SEP , 1976					
15...	1020	.45	720	--	16.0

05482200 - B CEDAR CR AT FONDA, IOWA (LAT 42 35 00 LONG 094 51 00)

SEP , 1976					
15...	0830	.18	2300	--	13.5

05482220 - B CEDAR CR AT SAC CITY, IOWA (LAT 42 24 00 LONG 094 59 00)

SEP , 1976					
15...	1240	4.3	750	--	21.0

05482320 - INDIAN CR NR LAKE VIEW, IOWA (LAT 42 20 00 LONG 095 00 00)

SEP , 1976					
15...	1420	1.2	600	--	21.5

05482380 - CAMP CR NR LAKE CITY, IOWA (LAT 42 17 00 LONG 094 50 00)

NOV , 1975					
07...	1010	.49	960	--	12.5
SEP , 1976					
15...	1115	.01	580	--	18.0

05482400 - N RACCOON R NR LAKE CITY, IOWA (LAT 42 16 00 LONG 094 50 00)

NOV , 1975					
07...	0940	28	760	--	13.5
SEP , 1976					
15...	1140	6.8	640	--	18.0

05482440 - PURGATORY CR NR LANESBORO, IOWA (LAT 42 10 00 LONG 094 38 00)

NOV , 1975					
07...	1110	.85	580	--	14.5
SEP , 1976					
15...	1040	.06	610	--	18.0

05483100 - W BUTTRICK CR NR FARNHAMVILLE, IOWA (LAT 42 13 00 LONG 094 22 00)

SEP , 1976					
15...	1005	.04	2600	--	--

05483300 - N RACCOON R NR PERRY, IOWA (LAT 41 50 00 LONG 094 08 00)

SEP , 1976					
14...	1010	22	620	--	18.0

05483310 - S RACCOON R NR GUTHRIE CENTER, IOWA (LAT 41 41 00 LONG 094 32 00)

SEP , 1976					
14...	1410	13	400	--	25.0

WATER QUALITY DATA, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976

DATE	TIME	INSTAN- TANEOUS DIS- CHARGE (CFS) (00061)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS) (00095)	PH (UNITS) (00400)	TEMPER- ATURE (DEG C) (00010)
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DES MOINES RIVER BASIN--CONTINUED

05483320 - BRUSHY FORK CR NR DEDHAM, IOWA (LAT 41 47 00 LONG 094 54 00)

NOV , 1975					
07...	1455	6.7	580	--	14.5
SEP , 1976					
14...	1700	3.1	400	--	27.5

05483330 - BRUSHY FORK CR NR GUTHRIE CENTER, IOWA (LAT 41 39 00 LONG 094 27 00)

SEP , 1976					
14...	1140	19	400	--	23.0

05483340 - S RACCOON R NR MONTEITH, IOWA (LAT 41 38 00 LONG 094 25 00)

SEP , 1976					
14...	1250	36	310	--	25.0

05483350 - M RACCOON R NR CARROLL, IOWA (LAT 42 03 00 LONG 094 49 00)

NOV , 1975					
07...	1305	6.2	730	--	14.5
SEP , 1976					
14...	1740	3.3	1100	--	25.5

05483360 - M RACCOON R NR GLIDDEN, IOWA (LAT 42 03 00 LONG 094 46 00)

NOV , 1975					
07...	1345	6.1	580	--	14.5
SEP , 1976					
14...	1820	3.5	1300	--	25.5

05483380 - WILLOW CR NR SCRANTON, IOWA (LAT 41 54 00 LONG 094 35 00)

SEP , 1976					
14...	1605	.24	380	--	29.0

05483400 - WILLOW CR NR BAYARD, IOWA (LAT 41 49 00 LONG 094 33 00)

SEP , 1976					
14...	1530	3.0	450	--	27.0

05483450 - M RACCOON R NR BAYARD, IOWA (LAT 41 47 00 LONG 094 30 00)

SEP , 1976					
14...	1455	21	580	--	25.0

05483620 - MOSQUITO CR NR LINDEN, IOWA (LAT 41 43 00 LONG 094 15 00)

NOV , 1975					
07...	1600	2.2	590	--	16.0

05483640 - MOSQUITO CR NR REDFIELD, IOWA (LAT 41 38 00 LONG 094 13 00)

NOV , 1975					
07...	1520	5.6	620	--	14.5

05483660 - M RACCOON R AT REDFIELD, IOWA (LAT 41 36 00 LONG 094 13 00)

NOV , 1975					
07...	1355	68	580	--	14.0
SEP , 1976					
14...	1450	32	500	--	17.5

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

WATER QUALITY DATA, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976

DATE	TIME	INSTAN- TANEOUS DIS- CHARGE (CFS) (00061)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS) (00095)	PH (UNITS) (00400)	TEMPER- ATURE (DEG C) (00010)
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DES MOINES RIVER BASIN--CONTINUED

05484200 - PANTHER CR NR ADEL, IOWA (LAT 41 36 00 LONG 094 06 00)

NOV , 1975					
07...	1220	4.8	650	--	12.5
SEP , 1976					
14...	1300	.51	620	--	18.0

05489900 - SOAP CR NR ASH GROVE, IOWA (LAT 40 51 00 LONG 092 36 00)

OCT , 1975					
01...	1800	--	580	8.0	15.0

BIG SIOUX RIVER BASIN

06483100 - ROCK R NR ROCK RAPIDS, IOWA (LAT 43 30 01 LONG 096 11 03)

OCT , 1975					
21...	0910	12	660	7.7	7.5
AUG , 1976					
24...	1610	.93	600	8.2	30.0

06483260 - KANARANZI CR NR ROCK RAPIDS, IOWA (LAT 43 28 00 LONG 096 09 00)

OCT , 1975					
21...	0820	3.2	620	7.9	6.0
AUG , 1976					
24...	1640	.40	500	8.0	31.5

06483280 - TOM CR AT ROCK RAPIDS, IOWA (LAT 43 26 00 LONG 096 09 00)

OCT , 1975					
21...	0740	.29	820	7.8	7.5

06483300 - ROCK R BELOW ROCK RAPIDS, IOWA (LAT 43 24 00 LONG 096 09 00)

OCT , 1975					
21...	1050	14	700	7.8	8.0
AUG , 1976					
24...	1650	.70	720	8.1	27.5

06483320 - MUD CR AT LESTER, IOWA (LAT 43 27 00 LONG 096 20 00)

OCT , 1975					
21...	0945	.08	1200	7.8	7.0
AUG , 1976					
24...	1530	.00	1200	7.7	28.0

06483330 - MUD CR NR DOON, IOWA (LAT 43 17 00 LONG 096 15 00)

OCT , 1975					
20...	1740	1.2	760	7.9	14.0
AUG , 1976					
24...	1450	.08	1000	8.1	29.5

06483340 - ROCK R NR DOON, IOWA (LAT 43 16 00 LONG 096 15 00)

OCT , 1975					
20...	1715	20	600	7.9	12.5
AUG , 1976					
24...	1425	2.1	550	8.0	28.0

06483360 - L ROCK R NR LITTLE ROCK, IOWA (LAT 43 30 00 LONG 095 50 57)

OCT , 1975					
20...	1800	.13	700	8.1	13.0

06483380 - L ROCK R AT LITTLE ROCK, IOWA (LAT 43 26 00 LONG 095 54 00)

OCT , 1975					
20...	1715	2.6	1060	7.9	13.0
AUG , 1976					
25...	0750	.02	980	8.3	25.0

WATER QUALITY DATA, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976

DATE	TIME	INSTAN- TANEOUS DIS- CHARGE (CFS) (00061)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS) (00095)	PH (UNITS) (00400)	TEMPER- ATURE (DEG C) (00010)
BIG SIOUX RIVER BASIN--CONTINUED					
06483400 - L ROCK R NR GEORGE, IOWA (LAT 43 19 00 LONG 096 02 00)					
OCT , 1975					
21...	1140	6.9	740	8.0	9.5
AUG , 1976					
25...	0815	.13	620	8.1	20.0
06483460 - OTTER CREEK NEAR ASHTON, IOWA (LAT 43 20 00 LONG 095 46 00)					
OCT , 1975					
21...	1405	6.2	1050	7.9	11.5
AUG , 1976					
25...	0905	1.1	2000	7.7	22.0
06483470 - OTTER CR NR MATLOCK, IOWA (LAT 43 16 00 LONG 095 55 00)					
OCT , 1975					
21...	1255	11	940	8.0	11.5
AUG , 1976					
25...	1000	1.2	720	8.0	22.0
06483480 - OTTER CR NR GEORGE, IOWA (LAT 43 17 00 LONG 096 03 00)					
OCT , 1975					
21...	1220	16	860	8.0	11.0
AUG , 1976					
25...	0900	1.6	660	7.8	20.0
06483490 - L ROCK R NR DOON, IOWA (LAT 43 16 00 LONG 096 14 00)					
OCT , 1975					
20...	1635	27	740	7.9	12.5
AUG , 1976					
24...	1345	3.0	600	8.1	26.0
06484100 - SIXMILE CR NR HAWARDEN, IOWA (LAT 43 02 00 LONG 096 24 00)					
OCT , 1975					
20...	1435	2.1	800	8.0	12.0
AUG , 1976					
24...	1425	.39	760	7.8	27.5
06484150 - SIXMILE CR NR CHATSWORTH, IOWA (LAT 42 56 00 LONG 096 29 00)					
OCT , 1975					
20...	1340	4.3	800	7.9	11.0
AUG , 1976					
24...	1345	1.1	660	7.7	28.0
06484200 - INDIAN CR NR CHATSWORTH, IOWA (LAT 42 53 00 LONG 096 30 00)					
OCT , 1975					
20...	1300	1.4	950	7.9	10.5
AUG , 1976					
24...	1315	.46	800	7.6	27.0
06485800 - BROKEN KETTLE CR NR ADAVILLE, IOWA (LAT 42 43 20 LONG 096 28 08)					
OCT , 1975					
21...	1042	2.9	780	7.9	8.5
AUG , 1976					
26...	0850	2.1	680	8.1	19.0
06485900 - BROKEN KETTLE CR NR SIOUX CITY, IOWA (LAT 42 38 16 LONG 096 30 28)					
OCT , 1975					
21...	1125	3.6	760	8.0	9.0
AUG , 1976					
26...	0825	1.1	680	7.9	21.5

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

WATER QUALITY DATA, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976

DATE	TIME	INSTAN- TANEOUS DIS- CHARGE (CFS) (00061)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS) (00095)	PH (UNITS) (00400)	TEMPER- ATURE (DEG C) (00010)
FLOYD RIVER BASIN					
06600020 - FLOYD R NR SHELDON, IOWA (LAT 43 12 19 LONG 095 49 22)					
OCT , 1975					
21...	1610	4.8	840	7.8	13.0
AUG , 1976					
25...	1030	.25	740	8.1	22.5
06600040 - L FLOYD R NR SHELDON, IOWA (LAT 43 09 25 LONG 095 52 02)					
OCT , 1975					
21...	1425	3.7	940	7.9	13.0
AUG , 1976					
25...	1110	.04	800	8.0	23.0
06600060 - FLOYD R BELOW SHELDON, IOWA (LAT 43 07 38 LONG 095 53 27)					
OCT , 1975					
01...	1220	13	--	--	10.0
21...	1315	9.4	1100	7.8	11.5
AUG , 1976					
25...	1130	1.6	1400	7.8	23.5
06600120 - DEEP CR NR OYENS, IOWA (LAT 42 49 26 LONG 096 06 53)					
OCT , 1975					
20...	1725	2.4	910	8.3	15.0
AUG , 1976					
25...	1210	.66	700	7.8	27.5
06600140 - WILLOW CR NR OYENS, IOWA (LAT 42 49 42 LONG 096 06 54)					
OCT , 1975					
20...	1755	.15	760	8.0	14.5
AUG , 1976					
25...	1150	.01	600	8.0	24.0
06600160 - DEEP CR AT LE MARS, IOWA (LAT 42 48 15 LONG 096 09 28)					
OCT , 1975					
20...	1805	3.7	840	8.2	12.0
AUG , 1976					
25...	1245	.21	750	7.9	26.5
06600180 - FLOYD R AT LE MARS, IOWA (LAT 42 48 02 LONG 096 09 28)					
OCT , 1975					
21...	0820	21	860	7.9	9.0
AUG , 1976					
25...	1325	4.1	760	7.6	25.5
06600200 - FLOYD R NR MERRILL, IOWA (LAT 42 44 59 LONG 096 12 32)					
OCT , 1975					
21...	0912	27	960	8.1	8.5
AUG , 1976					
25...	1405	6.7	900	7.7	28.0
06600250 - WB FLOYD R NR MIDDLEBURG, IOWA (LAT 43 06 49 LONG 096 04 52)					
OCT , 1975					
20...	1410	.05	1108	7.8	15.0
AUG , 1976					
25...	0950	.04	870	7.8	23.0
06600400 - WB FLOYD R NR MERRILL, IOWA (LAT 42 44 59 LONG 096 14 26)					
OCT , 1975					
21...	0950	7.7	850	8.1	8.0
AUG , 1976					
25...	1450	3.5	580	8.1	28.0

WATER QUALITY DATA, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976

DATE	TIME	INSTAN- TANEOUS DIS- CHARGE (CFS) (00061)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS) (00095)	PH (UNITS) (00400)	TEMPER- ATURE (DEG C) (00010)
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MONONA-HARRISON DITCH BASIN

06601500 - BIG WHISKEY SLOUGH NR KINGSLEY, IOWA (LAT 42 40 00 LONG 095 52 00)

OCT , 1975					
08...	1600	2.7	660	7.7	13.5
AUG , 1976					
13...	1650	.71	800	7.2	30.0

06601600 - WF L SIOUX R NR FIELDING, IOWA (LAT 42 39 00 LONG 095 52 00)

OCT , 1975					
08...	0925	6.8	650	7.7	13.0
AUG , 1976					
13...	1735	2.8	750	7.4	29.0

06601700 - WF L SIOUX R NR KINGLEY, IOWA (LAT 42 35 00 LONG 096 00 00)

OCT , 1975					
09...	0840	14	580	7.7	13.0
AUG , 1976					
12...	1830	4.6	700	7.6	28.0

06601800 - MUD CR AT MOVILLE, IOWA (LAT 42 29 28 LONG 096 05 24)

OCT , 1975					
07...	1835	.77	640	7.7	16.0
AUG , 1976					
12...	1355	.06	650	8.0	30.5

06601900 - WF L SIOUX R AT MOVILLE, IOWA (LAT 42 28 30 LONG 096 04 39)

OCT , 1975					
07...	1805	22	600	7.8	17.0
AUG , 1976					
13...	1330	8.1	630	8.0	26.0

06602200 - ELLIOT CR NR BRONSON, IOWA (LAT 42 23 53 LONG 096 14 05)

OCT , 1975					
08...	1150	2.7	560	7.6	15.0
AUG , 1976					
12...	1230	.81	650	7.9	28.0

06602250 - BIG WHISKEY CR NR BRONSON, IOWA (LAT 42 24 04 LONG 096 14 29)

OCT , 1975					
08...	1120	3.8	650	7.7	14.0
AUG , 1976					
12...	1150	.90	550	7.8	20.0

06602300 - WOLF CR NR HOLLY SPRINGS, IOWA (LAT 42 18 06 LONG 096 01 10)

OCT , 1975					
08...	1235	9.6	640	7.6	18.0
AUG , 1976					
12...	1740	3.5	560	8.1	30.5

LITTLE SIOUX RIVER BASIN

06603600 - L SIOUX R NR MONTGOMERY, IOWA (LAT 43 26 00 LONG 095 15 00)

OCT , 1975					
08...	1110	.24	780	--	13.0

06603800 - WF L SIOUX R NR MONTGOMERY, IOWA (LAT 43 25 00 LONG 095 16 00)

OCT , 1975					
08...	1040	.85	1025	--	13.0

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

WATER QUALITY DATA, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976

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LITTLE SIOUX RIVER BASIN--CONTINUED					
06603900 - L SIOUX R NR MILFORD, IOWA (LAT 43 19 00 LONG 095 11 00)					
OCT , 1975					
08...	1155	3.5	650	--	13.5
AUG , 1976					
12...	1500	.00	470	--	--
06604600 - OCHEYEDAN R NR MAY CITY, IOWA (LAT 43 17 00 LONG 095 28 00)					
OCT , 1975					
08...	1020	4.8	800	--	14.0
AUG , 1976					
12...	1350	.14	800	--	30.0
06604700 - OCHEYEDAN R NR MAY CITY, IOWA (LAT 43 16 00 LONG 095 27 00)					
OCT , 1975					
08...	1100	20	750	--	14.5
AUG , 1976					
12...	1410	2.8	730	--	26.0
06604800 - STONEY CR NR FOSTORIA, IOWA (LAT 43 14 00 LONG 095 20 00)					
OCT , 1975					
07...	1420	6.6	750	--	14.0
AUG , 1976					
12...	1100	1.2	680	--	27.5
06604900 - STONEY CR NR EVERLY, IOWA (LAT 43 09 22 LONG 095 14 58)					
OCT , 1975					
07...	1440	11	700	--	14.0
AUG , 1976					
12...	1140	1.9	590	--	28.0
06605000 - OCHEYEDAN R NR SPENCER, IOWA (LAT 43 07 44 LONG 095 12 37)					
OCT , 1975					
07...	1305	45	720	--	15.0
AUG , 1976					
12...	1205	8.3	--	--	28.0
06605100 - L SIOUX R AT SPENCER IOWA (LAT 43 08 13 LONG 095 08 39)					
OCT , 1975					
07...	1230	71	650	--	14.0
06605200 - BIG MUDDY CR NR LANGDON, IOWA (LAT 43 11 49 LONG 095 04 11)					
OCT , 1975					
07...	1115	3.7	710	--	13.0
AUG , 1976					
12...	1415	.54	590	--	29.0
06605300 - BIG MUDDY CR NR SPENCER, IOWA (LAT 43 08 28 LONG 095 05 14)					
OCT , 1975					
07...	1505	8.2	1000	--	14.0
AUG , 1976					
12...	1350	1.2	710	--	28.5
06605400 - PICKEREL RUN NR SPENCER, IOWA (LAT 43 12 00 LONG 094 58 00)					
OCT , 1975					
07...	0955	.47	400	--	13.0
06605500 - LOST ISLAND OUTLET NR DICKENS, IOWA (LAT 43 07 07 LONG 095 01 58)					
OCT , 1975					
07...	1040	6.6	540	--	12.0
AUG , 1976					
12...	1450	1.3	550	--	28.0

WATER QUALITY DATA, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976

DATE	TIME	INSTAN- TANEOUS DIS- CHARGE (CFS) (00061)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS) (00095)	PH (UNITS) (00400)	TEMPER- ATURE (DEG C) (00010)
LITTLE SIOUX RIVER BASIN--CONTINUED					
06605800 - WILLOW CR NR GREENVILLE, IOWA (LAT 42 59 00 LONG 095 09 00)					
OCT , 1975					
08...	1425	4.4	500	--	18.0
06605900 - WATERMAN CR NR HARTLEY, IOWA (LAT 43 05 00 LONG 095 27 00)					
OCT , 1975					
08...	1155	2.7	740	--	18.0
06606000 - WATERMAN CR NR SUTHERLAND, IOWA (LAT 42 57 00 LONG 095 25 00)					
OCT , 1975					
07...	1410	15	700	--	18.5
AUG , 1976					
13...	1115	1.3	650	--	28.5
06606100 - L SIOUX R NR SUTHERLAND, IOWA (LAT 42 56 00 LONG 095 25 00)					
OCT , 1975					
07...	1325	153	700	--	17.0
AUG , 1976					
13...	1015	24	800	--	--
06606300 - MILL CR NR CHEROKEE, IOWA (LAT 42 47 00 LONG 095 33 00)					
OCT , 1975					
07...	1200	29	480	--	18.0
AUG , 1976					
13...	1300	2.7	700	--	--
06606400 - L SIOUX R AT CHEROKEE, IOWA (LAT 42 45 00 LONG 095 32 00)					
OCT , 1975					
07...	1110	202	650	--	14.5
AUG , 1976					
13...	1400	27	700	--	29.0
06606500 - PIERSON CR NR CORRECTIONVILLE, IOWA (LAT 42 29 00 LONG 095 48 00)					
OCT , 1975					
07...	1725	4.6	650	7.7	17.5
AUG , 1976					
12...	1600	1.4	700	7.4	29.0
06606800 - MAPLE R NR AURELIA, IOWA (LAT 42 43 00 LONG 095 29 00)					
OCT , 1975					
07...	0955	1.4	650	--	16.5
AUG , 1976					
13...	1420	.26	750	--	27.0
06606900 - MAPLE R NR IDA GROVE, IOWA (LAT 42 21 55 LONG 095 27 27)					
OCT , 1975					
07...	1445	36	630	7.9	19.5
AUG , 1976					
11...	1530	16	580	7.9	28.0
06607100 - ODEBOLT CR AT IDA GROVE, IOWA (LAT 42 20 49 LONG 095 28 03)					
OCT , 1975					
07...	1420	8.0	600	7.7	20.0
AUG , 1976					
11...	1430	3.3	600	7.8	26.0

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

WATER QUALITY DATA, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976

DATE	TIME	INSTAN- TANEOUS DIS- CHARGE (CFS) (00061)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS) (00095)	PH (UNITS) (00400)	TEMPER- ATURE (DEG C) (00010)
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LITTLE SIQUI RIVER BASIN--CONTINUED

06607400 - MAPLE R NR TURIN, IOWA (LAT 42 01 00 LONG 095 58 00)

OCT , 1975					
08...	1010	91	640	7.8	15.0
AUG , 1976					
12...	1325	46	560	8.1	26.5

SOLDIER RIVER BASIN

06608300 - SOLDIER R NR RICKETTS, IOWA (LAT 42 12 00 LONG 095 35 00)

OCT , 1975					
07...	1320	15	620	7.9	19.0
AUG , 1976					
11...	1320	6.7	590	8.1	27.0

06608350 - SOLDIER R NR UTE, IOWA (LAT 42 03 00 LONG 095 43 00)

OCT , 1975					
08...	1205	22	600	7.9	17.5
AUG , 1976					
11...	1130	11	430	8.0	25.0

06608400 - E SOLDIER R NR UTE, IOWA (LAT 42 03 00 LONG 095 42 00)

OCT , 1975					
08...	1115	9.9	580	7.8	15.0
AUG , 1976					
11...	1215	3.2	590	7.9	28.5

ALLEN DITCH BASIN

06609220 - ALLEN CREEK NR LOVELAND, IOWA (LAT 41 29 00 LONG 095 55 00)

OCT , 1975					
07...	1010	7.1	580	8.1	14.5
AUG , 1976					
12...	1500	.45	710	7.6	30.0

BOYER RIVER BASIN

06609260 - BOYER R NR EARLY, IOWA (LAT 42 28 00 LONG 095 11 00)

OCT , 1975					
07...	1620	3.1	560	8.0	20.0
AUG , 1976					
11...	1700	.76	500	8.0	27.5

06609300 - E BOYER R AT VAIL, IOWA (LAT 42 04 00 LONG 095 12 00)

OCT , 1975					
07...	1250	5.9	580	7.9	17.5
AUG , 1976					
11...	1215	3.2	520	7.9	30.0

06609350 - E BOYER R AT DENISON, IOWA (LAT 42 01 00 LONG 095 22 00)

OCT , 1975					
07...	1205	13	600	8.0	16.0
AUG , 1976					
11...	1335	6.7	560	7.3	29.5

06609400 - BOYER R NR DENISON, IOWA (LAT 42 00 00 LONG 095 23 00)

OCT , 1975					
09...	1120	36	1120	7.4	14.0
AUG , 1976					
11...	1425	17	1450	7.9	31.0

WATER QUALITY DATA, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976

DATE	TIME	INSTAN- TANEDUS DIS- CHARGE (CFS) (00061)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS) (00095)	PH (UNITS) (00400)	TEMPER- ATURE (DEG C) (00010)
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BOYER RIVER BASIN--CONTINUED

06609550 - BOYER R NR MISSOURI VALLEY, IOWA (LAT 41 31 00 LONG 095 54 00)

OCT , 1975					
07...	1130	80	825	8.1	16.0
AUG , 1976					
12...	1350	36	800	7.6	29.5

06609580 - WILLOW CR NR WOODBINE, IOWA (LAT 41 48 00 LONG 095 45 00)

OCT , 1975					
07...	1330	5.1	600	7.7	16.5
AUG , 1976					
11...	1600	2.1	590	7.4	28.0

PIGEON CREEK BASIN

06609900 - PIGEON CR EAST OF LOVELAND, IOWA (LAT 41 28 38 LONG 095 42 13)

OCT , 1975					
09...	1115	4.9	600	7.9	11.5

06609950 - PIGEON CR NR CRESCENT, IOWA (LAT 41 19 47 LONG 095 53 19)

OCT , 1975					
09...	1010	12	740	7.9	13.0

MOSQUITO CREEK BASIN

06610550 - MOSQUITO CR PORTSMOUTH, IOWA (LAT 41 39 00 LONG 095 31 00)

OCT , 1975					
08...	1425	8.1	580	8.1	20.5

06610600 - MOSQUITO CR AT NEOLA, IOWA (LAT 41 27 09 LONG 095 36 37)

OCT , 1975					
09...	1015	15	650	7.7	9.5

06610650 - MOSQUITO CR NR COUNCIL BLUFFS, IOWA (LAT 41 16 09 LONG 095 48 22)

OCT , 1975					
09...	1120	22	790	7.8	14.5

TARKIO RIVER BASIN

06811860 - TARKIO R NR COBURG, IOWA (LAT 40 54 00 LONG 095 08 00)

SEP , 1976					
21...	1030	.90	460	9.0	14.0

06811880 - E TARKIO CR NR YORKTOWN, IOWA (LAT 40 43 00 LONG 095 12 00)

SEP , 1976					
21...	1840	.70	400	7.4	21.5

06811900 - TARKIO R NR YORKTOWN, IOWA (LAT 40 43 00 LONG 095 13 00)

SEP , 1976					
21...	1810	2.3	460	8.2	21.0

06812000 - TARKIO R AT BLANCHARD IOWA (LAT 40 36 00 LONG 095 14 00)

SEP , 1976					
21...	1615	3.9	440	7.3	23.5

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

WATER QUALITY DATA, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976

DATE	TIME	INSTAN- TANEOUS DIS- CHARGE (CFS) (00061)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS) (00095)	PH (UNITS) (00400)	TEMPER- ATURE (DEG C) (00010)
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TARKIO RIVER BASIN---CONTINUED

06812300 - W TARKIO CR NR COIN, IOWA (LAT 40 41 00 LONG 095 18 00)

SEP , 1976					
21...	1730	.29	460	7.0	18.5

06812400 - W TARKIO CR NR NORTHBORO, IOWA (LAT 40 35 00 LONG 095 21 00)

SEP , 1976					
21...	1705	2.0	460	7.7	22.5

NODAWAY RIVER BASIN

06816300 - W NODAWAY R NR CUMBERLAND, IOWA (LAT 41 12 00 LONG 094 52 00)

SEP , 1976					
21...	1445	2.0	430	7.8	20.0

06816350 - SEVENMILE CR NR LYMAN, IOWA (LAT 41 15 00 LONG 094 59 00)

SEP , 1976					
22...	1155	2.5	330	7.2	19.0

06816400 - SEVENMILE CR NR MORTONS MILL, IOWA (LAT 41 06 00 LONG 095 00 00)

SEP , 1976					
21...	1330	16	350	8.4	20.0

06816550 - W NODAWAY R NR VILLISCA, IOWA (LAT 40 55 00 LONG 095 00 00)

SEP , 1976					
21...	1120	30	400	8.9	17.0

06816600 - M NODAWAY R NR BRIDGEWATER, IOWA (LAT 41 10 00 LONG 094 39 00)

SEP , 1976					
22...	1440	1.1	460	6.3	19.0

06816700 - WF M NODAWAY R NR FONTANELLE, IOWA (LAT 41 19 00 LONG 094 39 00)

SEP , 1976					
22...	1300	.53	380	7.1	21.5

06816800 - WF M NODAWAY R NR BRIDGEWATER, IOWA (LAT 41 11 00 LONG 094 39 00)

SEP , 1976					
22...	1355	3.3	370	7.0	20.0

06816900 - M NODAWAY R NR VILLISCA, IOWA (LAT 40 55 00 LONG 094 59 00)

SEP , 1976					
21...	1230	22	500	7.8	18.0

06817100 - E NODAWAY R NR SHAMBAUGH, IOWA (LAT 40 38 00 LONG 095 01 00)

SEP , 1976					
21...	1440	6.9	400	7.8	22.5

06817200 - NODAWAY R NR BRADYVILLE, IOWA (LAT 40 37 00 LONG 095 01 00)

SEP , 1976					
21...	1520	74	420	7.5	23.0

WATER QUALITY DATA, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976

DATE	TIME	INSTAN- TANEOUS DIS- CHARGE (CFS) (00061)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS) (00095)	PH (UNITS) (00400)	TEMPER- ATURE (DEG C) (00010)
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PLATTE RIVER BASIN

06818600 - PLATTE R NR KENT, IOWA (LAT 40 57 00 LONG 094 29 00)

SEP , 1976					
21...	1045	.88	750	7.1	17.0

06818700 - PLATTE R NR KNOWLTON, IOWA (LAT 40 52 00 LONG 094 26 00)

SEP , 1976					
21...	1145	2.8	420	7.1	14.5

06819100 - WB 102 R NR GRAVITY, IOWA (LAT 40 49 00 LONG 094 49 00)

SEP , 1976					
21...	1025	.00	400	7.1	16.5

06819120 - WB 102 R BLW MB NR GRAVITY, IOWA (LAT 40 48 00 LONG 094 49 00)

SEP , 1976					
21...	1040	.04	460	7.6	18.5

06819140 - WB 102 R NR NEW MARKET, IOWA (LAT 40 44 00 LONG 094 51 00)

SEP , 1976					
21...	1125	.78	410	7.6	14.5

06819150 - WF 102 R NR NEW MARKET, IOWA (LAT 40 43 00 LONG 094 51 00)

SEP , 1976					
21...	1155	.46	480	7.1	18.5

06819195 - MF 102 R NR BEDFORD, IOWA (LAT 40 35 00 LONG 094 49 00)

SEP , 1976					
21...	1350	.00	470	7.0	21.5

GRAND RIVER BASIN

06896100 - GRAND R AT KNOWLTON, IOWA (LAT 40 50 00 LONG 094 20 00)

SEP , 1976					
21...	1410	.19	490	8.5	24.5

06896150 - GRAND R NR BLOCKTON, IOWA (LAT 40 37 00 LONG 094 25 00)

SEP , 1976					
21...	1245	2.4	490	7.9	21.5

06896200 - EF GRAND R NR MT AYR, IOWA (LAT 40 43 00 LONG 094 10 00)

SEP , 1976					
21...	0915	.03	460	7.5	13.5

06896250 - EF GRAND R SOUTH OF MT AYR, IOWA (LAT 40 35 00 LONG 094 14 00)

SEP , 1976					
21...	1050	.01	360	7.6	22.5

06897770 - THOMPSON R NR HEBRON, IOWA (LAT 41 14 00 LONG 094 16 00)

SEP , 1976					
20...	1445	4.2	410	8.1	21.0

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

WATER QUALITY DATA, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976

DATE	TIME	INSTAN- TANEOUS DIS- CHARGE (CFS) (00051)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS) (00095)	PH (UNITS) (00400)	TEMPER- ATURE (DEG. C) (00010)
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GRAND RIVER BASIN -CONTINUED

06897800 - THREEMILE CR NR AFTON, IOWA (LAT 41 02 00 LONG 094 08 00)

SEP , 1976					
20...	1735	3.0	490	8.1	20.0

06897820 - THOMPSON R NR AFTON, IOWA (LAT 41 02 00 LONG 094 06 00)

SEP , 1976					
22...	1130	8.4	450	8.2	15.0

06897880 - TWELVEMILE CR NR ARISPE, IOWA (LAT 40 56 00 LONG 094 06 00)

SEP , 1976					
21...	1600	.38	530	7.9	20.0

06897900 - THOMPSON R NR GRAND RIVER, IOWA (LAT 40 52 00 LONG 093 58 00)

SEP , 1976					
20...	1300	5.9	440	8.3	20.0

06897940 - LONG CR NR VAN WERT, IOWA (LAT 40 49 00 LONG 093 52 00)

SEP , 1976					
20...	1230	.02	500	8.1	20.5

06898300 - WELDON R EAST OF LEON, IOWA (LAT 40 45 18 LONG 093 38 05)

SEP , 1976					
21...	1145	.13	480	8.1	19.0

06898450 - WELDON R NR PLEASANTON, IOWA (LAT 40 35 40 LONG 093 36 20)

SEP , 1976					
21...	1035	.45	450	8.0	--

06898470 - LITTLE R NR LEON, IOWA (LAT 40 39 36 LONG 093 44 59)

SEP , 1976					
21...	0850	.02	850	8.0	14.0

CHARITON RIVER BASIN

06903600 - SF CHARITON R NR CAMBRIE, IOWA (LAT 40 49 00 LONG 093 23 00)

SEP , 1976					
21...	1440	.04	520	7.9	15.5

06903650 - SF CHARITON R NR CORYDON, IOWA (LAT 40 49 00 LONG 093 19 00)

SEP , 1976					
21...	1505	.10	550	8.1	18.0

WATER QUALITY DATA, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976

IOWA RIVER BASIN

05465100 - IOWA RIVER AT COLUMBUS JUNCTION, IOWA (LAT 41 16 44 LONG 091 20 39)

DATE	TIME	CROSS SECTION LOC- ATION (FT) (00009)	INSTAN- TANEOUS DIS- CHARGE (CFS) (00061)	TEMPER- ATURE (DEG C) (00010)	SUS- PENDE SEDIM- ENT (MG/L) (80154)	SUS- PENDE SEDIM- ENT (T/DAY) (80155)	SUS. SED. SIEVE DIAM. % FINER THAN .062 MM (70331)
APR							
26...	1530	430	--	13.0	456	--	86
26...	1535	580	--	13.0	402	--	78
26...	1545	740	--	13.0	439	--	86
26...	1550	890	--	13.0	481	--	91
26...	1555	1040	--	13.0	1070	--	91
26...	1600	1190	--	13.0	1190	--	87
26...	1605	1360	--	13.0	1150	--	93
26...	1610	--	36000	13.0	730	71000	--

Note: Sample at time 1610 represents the mean discharge and mean sediment concentration for the cross-section. Sample collected to substantiate visual observation of sediment non-mixing below confluence of Iowa and Cedar Rivers at Columbus Junction.

05465500 - IOWA RIVER AT WAPELLO, IOWA (LAT 41 10 48 LONG 091 10 57)

DATE	TIME	CROSS SECTION LOC- ATION (FT) (00009)	INSTAN- TANEOUS DIS- CHARGE (CFS) (00061)	TEMPER- ATURE (DEG C) (00010)	SUS- PENDE SEDIM- ENT (MG/L) (80154)	SUS- PENDE SEDIM- ENT (T/DAY) (80155)	SUS. SED. SIEVE DIAM. % FINER THAN .062 MM (70331)
APR							
26...	1420	800	--	12.0	541	--	68
26...	1425	900	--	12.0	783	--	60
26...	1430	1000	--	12.0	948	--	60
26...	1435	1100	--	12.0	735	--	91
26...	1440	--	35200	12.0	765	72700	--

Sample at time 1440 represents mean discharge and mean sediment concentration for the cross-section. Sample collected to substantiate visual observation of sediment non-mixing below Columbus Junction.

Adair County

411749N0942018.1. Local number 75-30-17bcb1. F. E. Robert. Drilled unused water-table well in glacial drift, diam 12 in, depth 26 ft, lined with tile. Lsd 1,267 ft above ms1. MP top of board platform, 0.80 ft above lsd (since June 1, 1969). Highest water level 0.18 above lsd, Mar. 23, 1943; lowest 8.40 below lsd, July 28, 1953. Records available: 1942 to current year.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Nov. 4, 1975	2.60	June 21, 1976	1.44	1976	Discontinued		

Carroll County

420335N0945215.1. Local number 84-35-25bddd1. City of Carroll, test hole 1. Drilled observation artesian well in Dakota Sandstone of Early Cretaceous age, diam 8 in, depth 120 ft, cased to 100. Lsd 1,244 ft above ms1. MP top of casing, 4.0 ft above lsd (since July 1975). Highest water level 34.55 below lsd, Sept. 8, 1945; lowest 77.68 below lsd, June 14, 1968. Records available: 1939-49, 1952 to current year.

Apr. 1, 1976	62.55						
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Cerro Gordo County

430456N0932536.1. Local number 95-22-3abba1. Knut Olson. Drilled domestic and stock artesian well in limestone of Devonian age, diam 4 in, depth 134 ft, casing information not available. Lsd 1,259 ft above ms1. MP top of casing, 1.40 ft above lsd. Highest water level 14.34 below lsd, July 3, 1945; lowest 24.15 below lsd, Dec. 5, 1966. Records available: 1941 to current year.

May 17, 1976	21.90						
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430927N0931142.1. Local number 96-20-3cddb1. Minneapolis & St. Louis RR. Co. Drilled unused artesian well in St. Peter Sandstone of Middle Ordovician age, diam 12 to 10 in, depth 805 ft, cased 12-in 0-30, 10-in 614-730. Lsd 1,114 ft above ms1. MP top of wood cover, at lsd. Highest water level 32.71 below lsd, May 7, 1951; lowest 59.45 below lsd Feb. 28, 1959. Records available: 1941 to current year.

May 17, 1976	41.40						
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430806N0931645.1. Local number 96-21-13bccb1. Mason City & Clear Lake RR. Drilled unused artesian well in dolomite in Cedar Valley Limestone of Devonian age, diam 5 in, depth 198 ft, casing information not available. Lsd 1,165 ft above ms1. MP top of well curb, 2.00 ft above lsd. Highest water level 1.73 below lsd, June 28, 1951; lowest 17.26 below lsd, Nov. 18, 1955. Records available: 1940 to current year.

May 17, 1976	6.32						
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430658N0932810.1. Local number 96-22-20cadcl. W. Baine and H. Elder (formerly Boy Scouts of America). Drilled unused water-table well in glacial drift, diam 5 in, depth 126 ft, casing information not available. Lsd 1,249 ft above ms1. MP hole in side of casing, 1.30 ft above lsd. Highest water level 29.65 below lsd, Mar. 25, 1942; lowest 48.52 below lsd, Aug. 6, 1975. Records available: 1940 to current year.

May 17, 1976	42.13						
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Clayton County

424101N0913200.1. Local number 91-6-22acab1. Howard Bowman. Dug unused water-table well in glacial drift, diam 36 in, depth 18 ft, cribbed with brick. Lsd 1,221 ft above ms1. MP top of board platform, 0.08 ft above lsd. Highest water level 3.54 below lsd, May 6, 1960; lowest 10.03 below lsd, Jan. 24, 1965. Records available: 1957 to current year.

Water level at noon, from recorder graph, water year October 1 to September 30
1975-76

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
5	8.96	9.11	8.00	8.86	...	8.67	...	6.13	7.76	8.17	7.66	8.74
10	9.10	8.93	8.35	8.86	9.56	8.48	e6.68	...	...	8.35	7.95	8.90
15	9.18	8.99	8.33	...	9.48	...	6.74	...	7.60	8.52	8.22	9.00
20	9.26	9.11	8.38	...	8.92	...	6.13	6.94	7.94	8.64	8.14	8.92
25	9.31	9.01	8.57	...	8.39	...	5.13	7.34	8.15	8.73	8.46	9.10
Eom	9.31	7.47	8.73	...	7.68	...	5.65	7.50	7.92	6.90	8.60	9.18

e Estimated.

Clayton County.--Continued.

424057N0913200.1. Local number 91-6-22acac1. City of Strawberry Point, well 2. Drilled unused artesian well in dolomite of Silurian age, diam 16 to 10 in, depth 492 ft, cased 16-in 0-130, 12-in 130-161, lined 10-in 229-370. Lsd 1,219 ft above msl. MP top of recorder platform, 2.10 ft above lsd. Highest water level 114.38 below lsd, May 9, 1973; lowest 133.18 below lsd, Feb. 4, 1968. Records available: 1963 to current year.

Water level at noon, from recorder graph, water year October 1 to September 30
1975-76

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
5	127.85	128.09	128.06	128.87	129.54	129.15	127.92	126.27	128.37	129.34	129.55	.....
10	127.30	128.25	128.04	128.72	128.98	129.27	128.22	126.98	127.77	129.18	129.77	.....
15	127.57	127.93	128.15	128.42	129.44	128.75	128.36	127.28	128.19	129.40	129.98	.....
20	127.55	127.61	128.33	129.31	129.62	128.35	128.38	127.49	129.03	129.87	129.93	.....
25	.....	128.60	128.32	129.25	129.74	128.42	127.30	127.79	128.93	129.80	.....	.....
Eom	127.67	128.07	128.77	129.17	128.98	128.38	126.61	127.89	129.21	129.73	.....	.....

425940N0911947.1. Local number 95-4-32ddddd1. Milton and Willis Meier. Drilled stock artesian well in St. Peter Sandstone of Middle Ordovician age, diam 6 in, reported depth 380 ft, casing information not available. Lsd 1,090 ft above msl. MP plug in pumpbase, 1.00 ft above lsd. Highest water level 82.56 below lsd, Oct. 8, 1974; lowest 126.56 below lsd, Jan. 13, 1969. Records available: 1957 to current year.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
May 18, 1976	87.67						

Des Moines County

404844N0911427.1. Local number 69-3-6aaba1. Iowa Ordnance Plant, well 3. Drilled unused artesian well in St. Peter Sandstone of Middle Ordovician age, diam 16 in, depth 1,209 ft, cased 0-855. Lsd 717 ft above msl. MP top of recorder platform, 1.61 ft above lsd. Highest water level 162.70 below lsd, Mar. 27, 1950; lowest 198.77 below lsd, Sept. 16, 1976. Records available: 1950 to current year.

Water level at noon, from recorder graph, water year October 1 to September 30
1975-76

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
5	195.61	195.63	195.04	195.20	195.23	195.35	e197.10	197.08	.....	198.00	198.30	198.67
10	195.60	195.42	194.93	195.00	194.56	195.14	e197.09	197.19	197.34	.....	198.39	198.75
15	195.51	195.27	195.19	194.83	194.98	195.40	197.20	197.08	197.45	198.10	198.33	198.73
20	195.41	194.77	195.20	195.30	195.10	e197.32	197.25	.....	197.67	198.39	198.51	198.60
25	195.63	195.40	195.01	194.89	195.01	e197.02	197.25	.....	197.81	198.44	198.49	198.58
Eom	195.47	195.07	194.93	194.98	195.09	.....	197.32	.....	197.90	198.25	198.53	198.50

e Estimated.

404753N0911425.1. Local number 69-3-6ddcd1. Iowa Ordnance Plant, well 2. Drilled unused artesian well in limestone of Devonian and Mississippian age, diam 19 in, depth 675 ft, cased 0-75. Lsd 699 ft above msl. MP top of recorder platform, 1.91 ft above lsd. Highest water level 74.46 below lsd, Apr. 18, 1975; lowest 83.19 below lsd, Apr. 26, 1950. Records available: 1950 to current year.

Water level at noon, from recorder graph, water year October 1 to September 30
1975-76

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
5	76.45	76.64	76.64	76.89	76.85	76.77	76.98	76.76	76.92	77.57	77.34	77.44
10	76.42	76.38	76.55	76.74	.....	76.78	77.07	76.89	77.28	77.47	77.41	77.56
15	76.30	76.52	76.70	76.67	.....	76.95	76.87	76.70	77.25	77.46	77.36	77.52
20	76.35	76.19	76.56	76.86	.....	76.42	76.85	76.83	77.56	77.60	77.50	77.37
25	76.43	76.73	76.66	76.55	76.78	76.77	76.69	76.82	77.41	77.53	77.42	77.46
Eom	76.58	76.60	76.54	76.62	76.72	76.80	76.98	76.57	77.43	77.37	77.51	77.33

e Estimated.

Emmet County

432927N0943455.1. Local number 100-32-11ddddd1. Okamanpedan Lake Reserve State Park. Drilled public-supply artesian well in Dakota Sandstone of Early Cretaceous age, diam 6 in, depth 277 ft, casing information not available. Lsd 1,233 ft above msl. MP plug in pumpbase, 0.61 ft above lsd. Highest water level 59.60 below lsd, Dec. 19, 1946; lowest 70.39 below lsd, Mar. 30, 1976. Records available: 1939 to current year.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Mar. 30, 1976	70.39						

Greene County

420051N0942233.1. Local number 83-30-8cbb1. City of Jefferson. Drilled public-emergency-supply artesian well in Jordan Sandstone of Late Cambrian age, diam 12 to 6 in, depth 2,307 ft, cased 0-1,796. Lsd 1,065 ft above msl. MP edge of vent pipe, 1.00 ft above lsd. Highest water level 75.44 below lsd, May 20, 1963; lowest 182.94 below lsd, Apr. 1, 1976. Records available: 1960 to current year.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Apr. 1, 1976	p182.94						

p Well being pumped.

Grundy County

422605N0925600.1 Local number 88-18-15dbb1. Town of Wellisburg. Drilled public-emergency-supply artesian well in English River Siltstone, of Stainbrook (1950), of Early Mississippian age, diam 12 in, depth 280 ft, cased to 128. Lsd 1,060 ft above msl. MP edge of vent pipe, 1.25 ft above lsd. Highest water level 35.95 below lsd, Nov. 18, 1974; lowest 96.81 below lsd, Sept. 27, 1960. Records available: 1960 to current year.

Mar. 30, 1976	37.30	July 20, 1976	37.09				
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Hancock County

425457N0934731.1. Local number 94-25-34cbb1. Clarion-Webster Experimental Farm. Bored unused water-table well in glacial drift, diam 3 in, depth 18 ft, cased with downspout all the way. Lsd 1,187 ft above msl. MP top of casing, 0.30 ft above lsd. Highest water level 3.13 below lsd, June 3, 1965; lowest 11.60 below lsd, Mar. 5, 1968. Records available: 1960 to current year.

Mar. 30, 1976	3.90	1976	Discontinued				
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Henry County

405810N0913305.2. Local number 71-6-9aba2. City of Mount Pleasant, well 4. Drilled municipal artesian well in Jordan Sandstone of Late Cambrian age, diam 20 to 19 in, depth 1,860 ft, cased 20-in 0-623. Lsd 732 ft above msl. MP hole in pumpbase, 2.25 ft above lsd. Highest water level 132.00 below lsd, May 5, 1946; lowest non pumping 190.00 below lsd, June 6, 1968. Records available: 1946-50, 1953-57, 1959 to current year. Water levels affected by pumping.

Nov. 6, 1975	184.75	Mar. 16, 1976	p199.25	June 8, 1976	p201.70		
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p Well being pumped.

410848N0913948.1. Local number 73-7-9aabl. Town of Wayland. Dug unused water-table well in glacial drift, diam 4 ft, depth 52 ft, casing information not available. Lsd 745 ft above msl. MP top of cement cover, 0.21 ft above lsd. Highest water level 2.30 below lsd, Sept. 1, 1965; lowest 14.37 below lsd, Nov. 18, 1963. Records available: 1960 to current year.

Mar. 16, 1976	8.86	June 8, 1976	9.39				
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Jasper County

414205N0925920.1. Local number 80-18-31abbb1. P. W. Beukema. Dug stock water-table well in glacial drift, diam 36 in, depth 37 ft, cribbed with brick. Lsd 937 ft above msl. MP top of cement platform, 0.70 ft above lsd (since Apr. 1, 1970). Highest water level 2.67 below lsd, June 10, 1947; lowest 27.15 below lsd, Dec. 18, 1948. Records available: 1940 to current year.

Apr. 2, 1976	8.87	June 23, 1976	5.35				
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Johnson County

414107N0913229.1. Local number 79-6-4aaaa1. Forest View Trailer Court. Drilled unused artesian well in limestone of Silurian age, diam 6 in, depth 280 ft, cased to 96 ft. Lsd 735 ft above msl. MP top of casing, 1.00 ft above lsd. Highest water level 106.19 ft below lsd, Feb. 14, 1972; lowest 146.01 ft below lsd, July 17, 1971. Records available: 1971 to current year.

Water level at noon, from recorder graph, water year October 1 to September 30
1975-76

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
5	137.40	137.83	119.28	115.46	112.93	110.52	110.69	120.26	134.39	139.80	141.54	143.43
10	137.18	134.29	117.65	114.89	111.61	109.97	111.43	124.44	135.14	141.33	141.74	143.04
15	137.55	128.20	117.70	114.09	111.49	110.17	111.58	127.47	136.23	142.35	142.12	143.37
20	137.92	124.98	117.45	114.19	111.42	109.59	111.97	129.33	137.32	141.57	142.04	143.03
25	138.29	122.63	116.75	113.48	110.78	110.00	111.51	130.90	138.23	141.24	142.44	142.94
Eom	137.62	120.83	115.91	112.98	110.63	110.42	113.82	132.92	139.54	140.89	142.89	142.35

Johnson County.--Continued.

414315N0912520.1. Local number 80-5-22cbcb1. Chicago, Rock Island & Pacific RR. Co. Dug unused water-table well in glacial drift, diam 4 ft, depth 20 ft, cribbed with brick. Lsd 753 ft above msl. MP top of casing 4.20 ft above lsd (since July 1, 1975). Highest water level 5.88 below lsd, May 22, 1953; lowest dry, Dec. 2-31, 1955, Nov. 8 to Dec. 31, 1964. Records available: 1941-56, 1958 to current year.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Oct. 16, 1975	18.24	Dec. 10, 1975	Dry	July 16, 1976	16.90	Sept. 16, 1976	18.95
Dec. 1,	Dry	Mar. 22, 1976	14.33	Aug. 23	18.23		

414315N0912520.2. Local number 80-5-22cbcb2. Chicago, Rock Island & Pacific RR. Co. Drilled unused artesian well in limestone of Devonian age, diam 5 in, depth 82 ft cased. Lsd 753 ft above msl. MP top of casing 2.50 ft above lsd (since July 1, 1975). Highest water level 8.15 below lsd, Apr. 21, 1952; lowest 21.05 below lsd, Sept. 26, 1957. Records available: 1941 to current year.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Oct. 16, 1975	18.59	Dec. 10, 1975	18.34	July 16, 1976	18.85	Sept. 16, 1976	20.48
Dec. 1	17.88	Mar. 22, 1976	18.06	Aug. 23	19.73		

Linn County

415422N0914226.1. Local number 82-7-18cdcd1. Lester Petrak. Dug unused water-table well in glacial drift, diam 4 ft, depth 14 ft, cribbed with brick. Lsd 835 ft above msl. MP base of recorder shelter, 0.08 ft above lsd. Highest water level 1.09 below lsd, Aug. 4, 1968; lowest 11.18 below lsd, Mar. 7, 1964. Records available: 1959 to current year.

Water level at noon, from recorder graph, water year October 1 to September 30
1975-76

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
5	9.62	10.07	8.18	9.32	10.35	3.22	4.75	4.35	5.01	5.82	7.38	e8.55
10	9.75	9.94	8.31	9.59	10.47	3.79	4.94	4.61	5.18	6.12	7.66	e8.75
15	9.90	9.81	8.44	9.82	10.56	3.88	5.13	4.72	4.79	6.43	7.72	e8.95
20	-----	9.88	8.59	10.03	9.61	4.10	4.98	4.81	-----	6.74	-----	e9.17
25	10.02	9.83	8.53	10.17	7.73	4.47	3.40	4.97	5.33	6.93	e8.09	e9.38
Eom	10.07	9.12	9.11	10.29	6.46	4.67	4.14	4.71	5.52	7.14	e8.34	e9.58

e Estimated.

415816N0913934.1. Local number 83-7-28adda1. The Kacena Co., Inc. (formerly Collins Radio). Drilled unused artesian well in limestone of Silurian age, diam 10 in, depth 420 ft, cased to 75. Lsd 735 ft above msl. MP top of well cover, 6.15 ft below lsd. Highest water level 51.10 below lsd, Feb. 25, 1963; lowest 93.80 below lsd, Aug. 1, 1975. Records available: 1962 to current year.

Water level at noon, from recorder graph, water year October 1 to September 30
1975-76

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
5	86.60	86.56	82.28	81.18	81.35	.....	.....	.....	83.17	85.86	.....	.....
10	87.50	85.88	81.55	79.86	79.70	.....	.....	.....	.....	84.98	.....	.....
15	86.90	85.00	82.60	79.85	79.87	.....	.....	.....	.....	.....	88.75	.....
20	86.46	e83.40	80.45	80.30	81.74	.....	.....	.....	.....	85.84	88.02	.....
25	86.06	83.42	81.14	79.59	.....	.....	.....	.....	85.36	86.81	88.28	.....
Eom	86.46	83.08	80.79	80.22	.....	.....	.....	.....	84.97	.....	.....	.....

e Estimated.

415725N0914104.1. Local number 83-7-32acdcl. Floyd Felter. 22nd Ave. SW. and 11th St. SW., Cedar Rapids. Drilled unused artesian well in limestone of Silurian age, diam 5 in, depth 282 ft, cased. Lsd 805 ft above msl. MP plug in well cover, at lsd. Highest water level 75.88 below lsd, Jan. 26, 1942; lowest 107.00 below lsd, Sept. 16, 1976. Records available: 1940 to current year.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Oct. 22, 1975	99.66	Jan. 21, 1976	103.86	Apr. 22, 1976	102.79	July 19, 1976	102.11
Nov. 20	101.41	Feb. 24	103.94	May 19	101.91	Aug. 23	105.65
Dec. 22	103.83	Mar. 23	103.35	June 24	101.36	Sept. 16	107.00

Linn County.--Continued.

420526N0913707.1. Local number 84-7-13bcbb1. U.S. Geol. Survey. Drilled observation water-table well in glacial drift, diam 1 1/4 in, depth 17 ft, screened 15-17. Lsd 882 ft above msl. MP top of casing, 0.75 ft above lsd. Highest water level 1.11 below lsd, Mar. 29, 1960; lowest 12.90 below lsd, Dec. 3, 1956. Records available: 1940 to current year.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Oct. 22, 1975	10.34	Jan. 21, 1976	9.65	Apr. 22, 1976	1.91	July 19, 1976	6.79
Nov. 20	10.70	Feb. 24	7.32	May 19	2.48	Aug. 23	8.97
Dec. 22	8.41	Mar. 23	4.41	June 24	4.92	Sept. 21	12.02

Lyon County

432140N0955953.1. Local number 99-44-26ddd1. State of Iowa. Drilled unused water-table well in glacial drift, diam 20 in, depth 38 ft, lined with tile. Lsd 1,400 ft above msl. MP plug in well cover, 2.01 ft above lsd. Highest water level 0.09 below lsd, Mar. 2, 1973; lowest 9.74 below lsd, Oct. 24, 1940. Records available: 1940-43, 1947 to current year.

Mar. 31, 1976 0.70

432553N0961055.1. Local number 99-45-5abac1. City of Rock Rapids. Drilled unused artesian well in Dakota Sandstone of Early Cretaceous age, diam 10 in, depth 375 ft, cased to 296. Lsd 1,375 ft above msl. MP plug in cover over casing, 1.00 ft above lsd. Highest water level 100.08 below lsd, July 27, 1964; lowest 113.90 below lsd, Nov. 30, 1974. Records available: 1960 to current year.

Mar. 31, 1976 113.35

Madison County

411727N0934830.1. Local number 75-26-23aaac1. Town of St. Charles, No. 1. Drilled unused artesian well in limestone of Mississippian age, diam 10 in, depth 1,058 ft, cased 0-657. Lsd 1,067 ft above msl. MP plug in well cover, 1.20 ft above lsd (since Jan. 1, 1971). Highest water level 261.62 below lsd, Nov. 20, 1962; lowest 267.44 below lsd, Sept. 13, 1974. Records available: 1962 to current year. Records prior to April 1970 are from recording gage; subsequent records are periodic tape measurements.

Nov. 4, 1975 265.90

Mar. 17, 1976 267.25

June 21, 1976 267.42

411948N0940220.1. Local number 75-28-2abb1. Glen Newton. Drilled unused water-table well in glacial drift, diam 24 in, depth 32 ft, cribbed with rock. Lsd 1,093 ft above msl. MP hole in board platform, 0.50 ft above lsd. Highest water level 9.30 below lsd, May 16, 1973; lowest 20.59 below lsd, Oct. 1, 1943. Records available: 1940 to current year.

June 21, 1976 14.99

1976 Discontinued

Marion County

411323N0931426.1. Local number 74-21-11dbcc2. Town of Melcher. Drilled unused water-table well in glacial drift, diam 18 in, depth 25 ft, lined with tile. Lsd 948 ft above msl. MP top of well cover, 0.75 ft above lsd (since June 21, 1976). Highest water level 0.12 below lsd, Apr. 24, 1976; lowest 16.27 below lsd, Oct. 22, 1953. Records available: 1950 to current year.

Oct. 13, 1975 4.99
24, 5.15
Nov. 12, 5.20
24, 5.24
Dec. 13, 3.90
29, 4.08

Jan. 14, 1976 4.50
Jan. 24, 4.59
Feb. 9, 4.60
Feb. 23, 2.63
Mar. 10, 1.86
Mar. 17, 2.37

Mar. 24, 1976 3.37
Apr. 14, 4.07
May 12, 3.85
May 24, 4.05
June 12, 5.00
June 21, 4.90

June 25, 1976 5.18
July 14, 5.72
July 27, 5.30
Aug. 23, 6.28
Sept. 11, 6.75
Sept. 24, 7.03

411541N0931234.1. Local number 75-20-31bbad1. Miss Amanda Elliot. Drilled unused water-table well in glacial drift, diam 15 in, depth 29 ft, lined with tile. Lsd 920 ft above msl. MP hole in top of plank platform, 1.31 ft above lsd. Highest water level 2.31 below lsd, June 11, 1947; lowest 27.42 below lsd, Oct. 28, 1953. Records available: 1940 to current year.

Mar. 17, 1976 10.39

June 21, 1976 10.04

Marshall County

420355N0925347.1. Local number 84-18-24dbad1. City of Marshalltown. Drilled unused artesian well in glacial sand and gravel of Pleistocene age, diam 8 in, depth 200 ft, cased to 190, screened 190-200. Lsd 871 ft above msl. MP top of casing, at lsd (since Mar. 30, 1976). Highest water level 4.92 below lsd, July 13, 1951; lowest 44.36 below lsd, Aug. 26, 1971. Records available: 1949 to current year.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Mar. 30, 1976	36.83	July 20, 1976	41.87				

Montgomery County

405835N0950129.1. Local number 71-36-6dad1. State of Iowa. Drilled observation water-table well in glacial drift, diam 1 1/4 in, depth 38 ft, screened 36-38. Lsd 1,081 ft above msl. MP top of casing, 3.02 ft above lsd. Highest water level 2.52 below lsd, May 31, 1951; lowest 30.99 below lsd, Apr. 26, 1950. Records available: 1950 to current year.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Oct. 14, 1975	13.69	Jan. 14, 1976	14.26	Apr. 15, 1976	13.38	July 15, 1976	12.58
Nov. 15	13.90	Feb. 14	12.47	May 14	12.88	Aug. 14	13.16
Dec. 16	13.85	Mar. 16	13.38	June 17	12.16	Sept. 15	13.83

Muscatine County

412120N0910804.4. Local number 76-2-30cbaal. U.S. Geol. Survey. Drilled observation water-table well in alluvial sand and gravel, diam 6 in, depth 27 ft, screened 24-27. Lsd 546 ft above msl. MP base of recorder shelter, 3.70 ft above lsd. Highest water level 8.51 below lsd, May 16, 1973; lowest 14.21 below lsd, Sept. 30, 1976. Records available: 1966 to current year.

Water level at noon, from recorder graph, water year October 1 to September 30
1975-76

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
5	12.64	13.00	13.43	.....	.....	13.73	12.88	12.43	12.71	13.31	13.62	.....
10	12.70	13.04	.....	.....	.....	12.89	12.93	12.39	12.78	13.45	13.68	.....
15	12.77	13.15	.....	.....	.....	12.75	13.00	12.41	12.85	13.63	13.75	.....
20	12.81	13.21	.....	.....	13.66	12.72	13.08	12.51	12.99	13.50	13.80	.....
25	12.87	13.27	.....	.....	13.74	12.72	.....	12.56	13.14	13.52	13.89	14.13
Eom	12.95	13.31	.....	13.39	13.78	12.82	12.62	12.65	13.21	13.53	.....	14.21

Page County

404257N0951512.1. Local number 68-38-7ccal. William Brayman. Drilled unused water-table well in glacial drift, diam 12 in, depth 44 ft, lined with tile. Lsd 1,087 ft above msl. MP top of 3/4-in pipe inserted through board cover, 1.50 ft above lsd. Highest water level 1.44 below lsd, June 23, 1947; lowest 20.96 below lsd, Nov. 24, 1958. Records available: 1934 to current year.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Nov. 17, 1975	13.99	Feb. 12, 1976	15.22	May 14, 1976	9.87	Aug. 14, 1976	13.24
Dec. 15	13.80	Mar. 18	8.43	June 16	10.98	Sept. 15	13.88
Jan. 16, 1976	13.88	Apr. 19	10.82	July 16	12.45		

Polk County

413839N0932320.1. Local number 79-22-22aab1. J. G. Reed. Dug unused water-table well in glacial drift, diam 36 in, depth 39 ft, cribbed with drain tile. Lsd 930 ft above msl. MP top of pipe in concrete cover, 0.45 ft above lsd. Highest water level 1.75 below lsd, May 16, 1973; lowest 11.22 below lsd, Dec. 6, 1956. Records available: 1940 to current year.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Mar. 18, 1976	4.13	1976	Discontinued				

Sac County

421700N0950257.1. Local number 86-36-4ccd1. State Conservation Commission. Dug unused water-table well in glacial drift, diam 36 in, depth 9 ft, cribbed with concrete. Lsd 1,223 ft above msl. MP top of concrete cover, 2.70 ft above lsd. Highest water level 2.48 below lsd, June 28, 1945; lowest dry, Aug. 29, 1956, Feb. 19, 1957. Records available: 1940 to current year.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Nov. 3, 1975	7.12	Apr. 1, 1976	5.65	1976	Discontinued		

Sac County.--Continued.

423013N0951753.1. Local number 89-38-26abaal. City of Schaller. Drilled public-emergency-supply artesian well in Dakota Sandstone of Early Cretaceous age, diam 10 to 8 in, depth 352 ft, cased to 352, perforated 304-352. Lsd 1,376 ft above msl. MP edge of pump breather pipe, 1.80 ft above lsd. Highest water level 210.04 below lsd, Mar. 25, 1948; lowest 229.93 below lsd, Aug. 13, 1975. Records available: 1940 to current year.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Nov. 4, 1975	229.77	Mar. 31, 1976	229.34				

Story County

415901N0963927.1. Local number 83-24-20dad1. Agricultural Engineering Experiment Station. Dug unused water-table well in glacial drift, diam 36 in, depth 38 ft, cribbed with brick. Lsd 1,022 ft above msl. MP top west side of cement platform, 0.25 ft above lsd. Highest water level 5.90 below lsd, May 31, 1944; lowest 26.09 below lsd, July 14, 1939. Records available: 1939 to current year.

Nov. 3, 1975	15.00	Apr. 2, 1976	10.86	July 21, 1976	10.94	1976	Discontinued
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Warren County

412343N0934512.1. Local number 76-25-17aaba1. John F. Johnson, Jr. Formerly Mrs. Gertrude Kelley. Dug stock water-table well in glacial drift, diam 30 in, depth 40 ft, cribbed with cement tile. Lsd 984 ft above msl. MP top of board cover, 0.71 ft above lsd. Highest water level 3.15 below lsd, Mar. 28, 1961; lowest 37.16 below lsd, Aug. 14, 1968. Records available: 1958 to current year.

Nov. 4, 1975	13.07	Mar. 17, 1976	4.80	June 21, 1976	8.11	1976	Discontinued
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Webster County

421837N0940836.1. Local number 87-28-29cccd1. Ransom Helms. Drilled unused water-table well in glacial drift, diam 12 in, depth 42 ft, lined with tile. Lsd 1,165 ft above msl. MP top of platform, 4.10 ft above lsd. Highest water level 0.05 below lsd, Aug. 1, 1972; lowest 13.62 below lsd, Mar. 12, 1956. Records available: 1942 to current year.

Oct. 4, 1975	5.80	Dec. 16, 1975	4.00	Mar. 16, 1976	3.00	July 3, 1976	3.65
Oct. 18	7.55	Dec. 29	4.30	Apr. 4	2.70	July 20	4.40
Nov. 5	8.18	Jan. 16, 1976	5.22	Apr. 19	2.00	Aug. 4	4.30
Nov. 16	6.35	Feb. 19	5.29	May 5	2.90	Sept. 12	e4.50
Dec. 2	4.10	Mar. 6	4.77	June 7	3.05		

e Estimated.

423013N0942147.1. Local number 89-30-22ddaa1. Johnson Township Consolidated School, Barnum. Drilled unused artesian well in sandstone of Cretaceous age, diam 4 in, reported depth 208 ft, cased to bottom, perforated 203-208, measured depth 203 ft. Lsd 1,174 ft above msl. MP top of casing, 6.40 ft below lsd. Highest water level 30.86 below lsd, July 2, 1945; lowest 41.96 below lsd, Apr. 1, 1976. Records available: 1942-45, 1947 to current year.

Apr. 1, 1976	41.96						
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423341N0940516.1. Local number 90-27-31ccbl. C. S. Knudson. Drilled unused water-table well in glacial drift, diam 15 in, depth 53 ft, lined with tile. Lsd 1,117 ft above msl. MP 0.50 ft above lsd (since July 20, 1976). Highest water level 2.96 below lsd, June 4, 1965; lowest 13.90 below lsd, Dec. 17, 1948. Records available: 1942-43, 1948-54, 1956 to current year.

Apr. 1, 1976	6.23	July 20, 1976	7.24	1976	Discontinued		
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Note.--Measurements were discontinued in 1976 for the following wells:

Adair County	411749N0942018.1	Local number	75-30-17bcb1.
Hancock County	425457N0934731.1	Local number	94-25-34cbbb1.
Madison County	411948N0940220.1	Local number	75-28-2abb1.
Polk County	413839N0932320.1	Local number	79-22-22aab1.
Sac County	421700N0950257.1	Local number	86-36-4ccd1.
Story County	415901N0963927.1	Local number	83-24-20dad1.
Warren County	412343N0934512.1	Local number	76-25-17aaba1.
Webster County	423341N0940516.1	Local number	90-27-31ccbl.

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FACTORS FOR CONVERTING ENGLISH UNITS TO INTERNATIONAL SYSTEM UNITS (SI)

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
<i>Length</i>		
inches (in)	2.54×10^1 2.54×10^{-2}	millimeters (mm) meters (m)
feet (ft)	3.048×10^{-1}	meters (m)
miles (mi)	1.609×10^0	kilometers (km)
<i>Area</i>		
acres	4.047×10^3 4.047×10^{-1} 4.047×10^{-1} 4.047×10^{-3}	square meters (m ²) *hectares (ha) square hectometers (hm ²) square kilometers (km ²)
square miles (mi ²)	2.590×10^0	square kilometers (km ²)
<i>Volume</i>		
gallons (gal)	3.785×10^0 3.785×10^0 3.785×10^{-3}	**liters (l) cubic decimeters (dm ³) cubic meters (m ³)
million gallons (10 ⁶ gal)	3.785×10^3 3.785×10^{-3}	cubic meters (m ³) cubic hectometers (hm ³)
cubic feet (ft ³)	2.832×10^1 2.832×10^{-2}	cubic decimeters (dm ³) cubic meters (m ³)
cfs-days [(ft ³ /s) · d]	2.447×10^3 2.447×10^{-3}	cubic meters (m ³) cubic hectometers (hm ³)
acre-feet (acre-ft)	1.233×10^3 1.233×10^{-3} 1.233×10^{-6}	cubic meters (m ³) cubic hectometers (hm ³) cubic kilometers (km ³)
<i>Flow</i>		
cubic feet per second (ft ³ /s)	2.832×10^1 2.832×10^1 2.832×10^{-2}	liters per second (l/s) cubic decimeters per second (dm ³ /s) cubic meters per second (m ³ /s)
gallons per minute (gal/min)	6.309×10^{-2} 6.309×10^{-2} 6.309×10^{-5}	liters per second (l/s) cubic decimeters per second (dm ³ /s) cubic meters per second (m ³ /s)
million gallons per day (mgal/d)	4.381×10^1 4.381×10^{-2}	cubic decimeters per second (dm ³ /s) cubic meters per second (m ³ /s)
<i>Mass</i>		
tons (short)	9.072×10^{-1}	tonnes (t)

*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.

**The unit liter is accepted for use with the International System (SI). See NBS Special Bulletin 330, p. 13, 1972 edition.

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