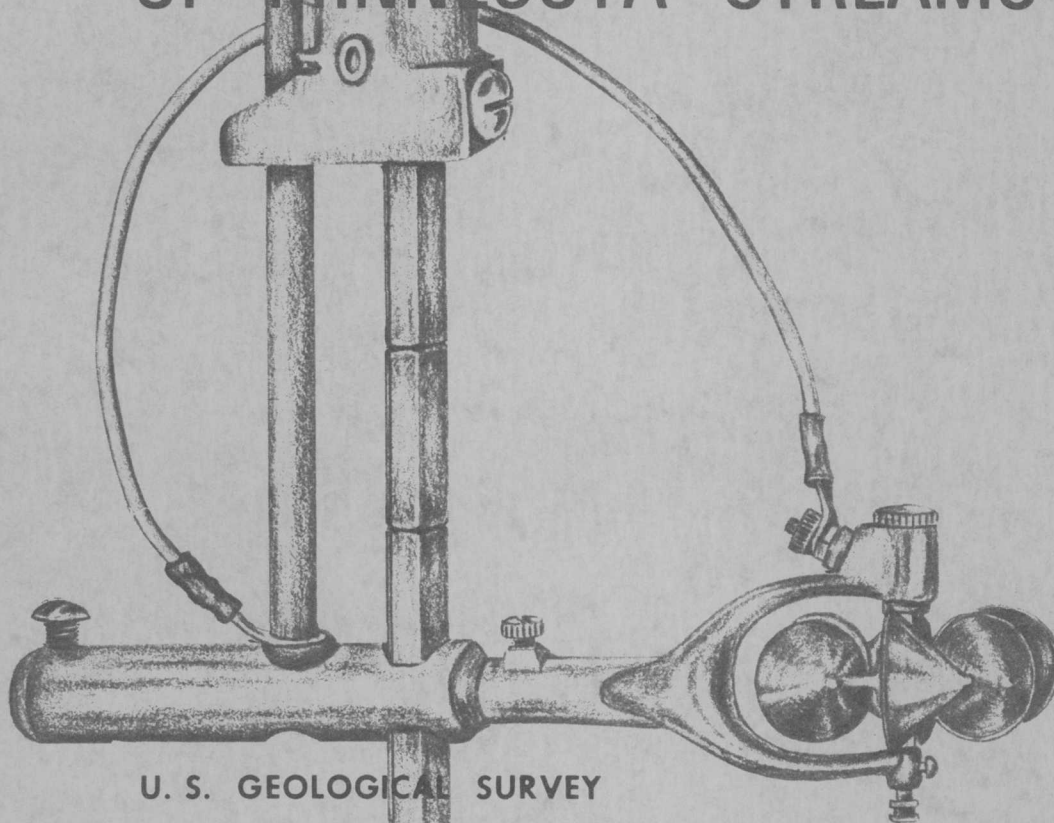


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# LOW FLOW CHARACTERISTICS OF MINNESOTA STREAMS



U. S. GEOLOGICAL SURVEY

Water-Resources Investigations 77-48

Open-File Report

Prepared in cooperation with  
Minnesota Department of Natural Resources  
Division of Waters





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By K. L. Lindskov

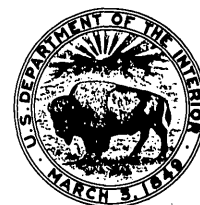
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March 1977

UNITED STATES DEPARTMENT OF THE INTERIOR

CECIL D. ANDRUS, Secretary

GEOLOGICAL SURVEY

V. E. McKelvey, Director

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# LOW-FLOW CHARACTERISTICS OF MINNESOTA STREAMS

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By K. L. Lindskov

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## ABSTRACT

Low-flow frequency data for 161 continuous-record gaging stations having eight or more complete years of record are presented for 1-, 7-, 14-, 30-, 60-, 90-, 120-, 183-, and 365-day low flows for frequencies ranging from once in 2 years to once in 100 years. In addition, 8,146 low-flow measurements at 1,515 sites are given. Included are measurements at 623 partial-record stations where correlations with nearby continuous-record gaging stations eventually will be completed, and at 892 miscellaneous-measurement sites where only a few measurements were made.

Examples are given for determining low-flow characteristics at partial-record stations and miscellaneous-measurement sites. Where the number of measurements are adequate to develop a relation line, they alone are related to concurrent daily flows at a continuous-record gaging station. Where the number of measurements are too few to define a relation with flows at nearby gaging stations, an equal-yield line can be helpful for estimating a relation line. The relation line may be used to transfer low-flow characteristics from a continuous-record gaging station to a site where only discharge measurements are available.

Specific conductance of streams, where available, is listed with the discharge measurements at partial-record stations and miscellaneous-measurement sites. Observed conductivity values range from less than 50 micromhos per centimeter at 25° Celsius in the northeast to greater than 1,000 for parts of west-central Minnesota.

## CONVERSION FACTORS

The following factors may be used to convert the English units published herein to the International System of Units (SI).

Multiply English units	By	To obtain SI units
<u>Length</u>		
inches (in)	25.4	millimeters (mm)
	.0254	meters (m)
feet (ft)	.3048	meters (m)
miles (mi)	1.609	kilometers (km)
<u>Area</u>		
square miles (mi <sup>2</sup> )	2.590	square kilometers (km <sup>2</sup> )
<u>Volume</u>		
cubic feet (ft <sup>3</sup> )	28.32	cubic decimeters (dm <sup>3</sup> )
	.02832	cubic meters (m <sup>3</sup> )
<u>Flow</u>		
cubic feet per second (ft <sup>3</sup> /s)	28.32	liters per second (l/s)
	28.32	cubic decimeters per second (dm <sup>3</sup> /s)
	.02832	cubic meters per second (m <sup>3</sup> /s)
cubic feet per second per square mile (ft <sup>3</sup> /s-mi <sup>2</sup> )	.01093	cubic meters per second per square kilometer (m <sup>3</sup> /s-km <sup>2</sup> )

## EXPLANATION OF TERMS

The more technical terms in this report, including units of measurement and terms related to hydrology and statistics, are explained in the following paragraphs. A more complete list of definitions is given by Langbein and Iseri (1960); some of the following are taken wholly or partially from that report.

Base flow is sustained or fair weather flow. In most streams, base flow is composed largely of ground-water effluent.

Climatic year is a continuous 12-month period during which a complete annual cycle occurs, arbitrarily selected for the

presentation of data relative to hydrologic or meteorologic phenomena. All low-flow frequency data in this report are based on the climatic year April 1 through March 31. This period is used to minimize the number of low-flow periods that continue from one year to the next. The climatic year is designated by the calendar year in which the 12 months end. Thus, the period April 1, 1975 through March 31, 1976 ends in 1976 and is the 1976 climatic year.

Correlation and regression is the process of establishing a relation between a variable and one or more related variables. Correlation is simple if there is only one independent variable; multiple, if there is more than one independent variable. For gaging-station records, the usual variables are the short-term station record and one or more long-term station records. Another common variable is measured discharge at a low-flow partial-record station.

Cubic foot per second (ft<sup>3</sup>/s) is a unit expressing the rate of discharge. One cubic foot per second is equivalent to the discharge of a stream whose channel is 1 square foot in cross-sectional area and whose average velocity is 1 foot per second.

$$\begin{aligned} 1 \text{ ft}^3/\text{s} &= 448.8 \text{ gallons per minute} \\ &= 0.646 \text{ million gallons per day} \end{aligned}$$

Cubic foot per second per square mile (ft<sup>3</sup>/s-mi<sup>2</sup>) is a unit expressing the average number of cubic feet of water per second flowing from each square mile of drainage area, assuming that the runoff is distributed uniformly in time and area.

Drought is a period of deficient precipitation or runoff extending over an indefinite number of days. No standard determines the amount of deficiency needed to constitute a drought. Thus, there is no universally accepted quantitative definition of drought; generally, each investigator establishes his own definition.

Duration is the percentage of time daily discharge at a point on a stream exceeds a certain indicated magnitude. In tabulating data for a period of record, all days that exceed the indicated magnitude are counted whether they occur singly or in groups. The word "duration" is also used to designate tables or curves that depict the percentages for various magnitudes of discharge. Duration in this sense should not be confused with the use of the word to indicate a continuous period of time, as "a drought of 30 days' duration."

Frequency and recurrence interval are terms often used interchangeably in referring to extremes of streamflow.

Frequency of flow is a count of the average number of flows, over many years, that will at least equal in severity a given extreme for a certain time period. Similarly, recurrence interval is the average time, in years, between such extreme flows. The year a drought or flood of a given magnitude will occur cannot be predicted, but the probable number of such events during a reasonably long period of time may be estimated.

For example, a low-flow discharge of 3 ft<sup>3</sup>/s having a recurrence interval of 5 years indicates that a discharge at least as low as 3 ft<sup>3</sup>/s will occur as an annual minimum about 20 times in 100 years. A flood peak of 6,000 ft<sup>3</sup>/s having a recurrence interval of 50 years would indicate about two flood peaks of at least 6,000 ft<sup>3</sup>/s in 100 years. Phrases such as "10-year discharge" are commonly used in discussing extremes having the indicated recurrence interval, in years. Similar terminology is used in this report. For example, "7-day, 10-year minimum discharge" refers to the lowest discharge for 7 consecutive days having a recurrence interval of 10 years.

Low-flow frequency curve is a graph showing the magnitude and frequency of minimum flows for a given period. Frequency is usually expressed as the average interval, in years, between recurrences of an annual minimum flow equal to or less than that shown by the magnitude scale.

Regulation is the artificial manipulation of the flow of a stream.

Specific conductance is a measure of the ability of water to transmit electrical current and is expressed in micromhos per centimeter at 25° Celsius. Because conductance is related to the number and specific chemical types of ions in solution, it can be used for approximating the dissolved-solids concentration in the water. Commonly, the amount of dissolved solids (in milligrams per liter) is about 65 percent of the conductance (in micromhos).

Water year is the 12-month period, October 1 through September 30, used in U.S. Geological Survey reports dealing with surface-water supply. The water year is designated by the calendar year in which it ends. Thus, the year ending September 30, 1976 is called the 1976 water year.

## INTRODUCTION

The accelerated public concern for environmental effects of water and land development during the 1960's and 1970's, combined with increased agricultural demands for supplemental

irrigation have greatly increased the need for additional stream-flow data in Minnesota. State agencies especially need data on low-flow characteristics for issuing permits for municipal, industrial, and agricultural uses of water. These data are also necessary to evaluate long-range effects of increased demands for cooling water at power plants and to maintain suitable conditions of fish and wildlife habitat.

In the past 50 years, Minnesota has experienced two statewide droughts of catastrophic proportions. The 1976 drought caused flows of some streams to drop as low or lower than expected once in every 50 years. Flows at about one-fifth of the stations gaged by the U.S. Geological Survey in Minnesota during 1976 were equal to or less than record lows. Although flows generally remained above the critically low conditions of the dust-dry 1930's, the 1976 drought did cause extensive problems. The State suffered millions of dollars in agricultural losses. In northern Minnesota, thousands of acres of timber were destroyed by forest fires.

Although little can be done to prevent recurrence of droughts, much can be done to alleviate their effects, provided facts on their intensity, duration, and frequency are known. The Minnesota Department of Natural Resources realized that additional data on low-flow characteristics of streams were needed at many locations to evaluate, coordinate, and manage water-resource programs. Therefore, in addition to the continuous-record gaging stations, a network of approximately 400, low-flow partial-record stations was established, beginning in 1969. About 8-15 measurements were planned at each station to define a flow relationship between the partial-record station and a nearby continuous-record station, making it possible to compute low-flow characteristics at the partial-record station.

This report summarizes data currently available to obtain low-flow characteristics for Minnesota streams. The data include expected annual low-flows for specific recurrence intervals at 161 continuous-record gaging stations. In addition, tables are provided listing all low-flow measurements for 623 sites where low-flow characteristics will be determined and 892 miscellaneous-measurement sites where no plans exist for obtaining additional measurements. Also the report includes examples of graphical techniques and methods useful for determining low-flow characteristics at partial-record stations and miscellaneous-measurement sites.

Previously, no single report adequately defined low-flow characteristics for Minnesota. Many of the characteristics of continuous-record gaging stations have been published in 38 U.S. Geological Survey Hydrologic Investigations Atlases. Numerous

measurements were made for each atlas to supplement data at continuous-record gaging stations to study gains and losses of streamflow during base flow. These measurements, combined with all miscellaneous data collected for other programs, significantly contribute to a program for defining statewide variations in low-flow characteristics.

The U.S. Geological Survey publishes low-flow measurements in tables of "low-flow partial-record stations" and "miscellaneous sites" in annual basic data reports. For most sites, the measurements are found in several annual reports and, until now, no effort has been made to compile all measurements into a single report. This report informs the user of the available data, and provides methods for using these data to answer questions about low-flow variations for specific streams. Plans are to compile and publish more comprehensive reports in the near future.

Many people of the U.S. Geological Survey and other agencies have participated in collection and assimilation of the basic data presented in this report. All effort, from the early 1900's to present, in making measurements of streamflow, whether for a continuous-record gaging station, partial-record station, or miscellaneous-measurement site is greatly acknowledged. In particular, I acknowledge the dedication of M. F. Losinski, S. A. Warne, and G. A. Carlsyle for verifying, listing, and editing the data presented in this report.

## AVAILABLE DATA

### Continuous-Record Gaging Stations

Daily discharges for continuous-record gaging stations provide the best documentation for determining intensity, duration, and frequency of droughts or low flows. All continuous-record gaging stations, active or discontinued, with eight or more complete years of record were used to compute expected annual low flows for specific recurrence intervals. The published discharges at 161 continuous-record stations, 109 active and 52 discontinued, were used to compute the low-flow characteristics appearing in table 1. Stations in table 1 are listed in downstream order using an eight-digit numbering system. The first two digits (04, 05, or 06) refer to areas draining into Lake Superior, Hudson Bay and Upper Mississippi River, and Missouri River, respectively. The last six digits are used to identify locations shown on plate 1.

## Low-Flow Partial-Record Stations

Additional data for hydrologic analysis of low-flow characteristics are the 6,812 measurements made at the 623 partial-record stations listed in table 2. Station locations are shown on plate 1 using the same downstream order described previously. Although "partial-record station" generally refers to a station where limited data are collected on a systematic basis, its use in this report includes all sites where sufficient measurements have been made or planned to establish an adequate low-flow relation with a nearby continuous-record gaging station. In addition, table 2 includes all base-flow measurements made at continuous-record gaging stations before record began or after it was discontinued. About half the 400 active stations established beginning in 1969 now have an adequate number of measurements. Our goal is to obtain an adequate number of measurements at all stations listed in table 2 by 1980. All low-flow measurements made through the 1976 water year are included for each low-flow partial-record station.

## Miscellaneous-Measurement Sites

Miscellaneous measurements listed in table 3 can be used for estimating low-flow characteristics at an additional 892 sites. These sites are not included in the low-flow program, and generally, less than five low-flow measurements are available at each site. No effort is planned to make additional measurements for establishing an adequate relation with a nearby continuous-record gaging station. Although the sites are listed in downstream order in table 3, no eight-digit numbers are presently assigned, and site locations are not shown on plate 1. All miscellaneous low-flow measurements made through the 1975 water year are included in table 3.

Many times the investigator will need data for sites not included in this report. When the site of interest is on the same stream and not too far away from a station having data, the investigator may utilize the data as follows: If the two sites have a small but significant difference in drainage area, divide the low-flow characteristic for the station having data by its drainage area which converts to flow per square mile. Then multiply the flow per square mile by the drainage area at the site of interest to determine its low-flow characteristic. For example, if a low-flow value is  $2 \text{ ft}^3/\text{s}$  at a station with a drainage area of  $100 \text{ mi}^2$ , the flow per square mile would be 2 divided by 100 ( $0.02 \text{ ft}^3/\text{s-mi}^2$ ). The corresponding low flow at a site downstream where the drainage area is  $120 \text{ mi}^2$  would be  $120 \times 0.02 = 2.4 \text{ ft}^3/\text{s}$ . Extrapolations by this method are not recommended when drainage areas differ more than 20 percent.

## DATA ANALYSIS

### Low-Flow Characteristics at Continuous-Record Gaging Stations

#### Use of low-flow frequency curves

Low-flow characteristics describe streamflow derived mostly from ground-water storage during prolonged dry periods. Generally, demand for water is greatest when the natural supply is least, increasing the need for understanding the low-flow regime. Although low-flow characteristics can be described by daily-duration curves and by base-flow recession curves, low-flow frequency curves are the most useful for predicting how often, on the average, certain minimum flows are expected to return.

Low-flow frequency data are useful to municipal governments in the following ways: (1) In search for water supply, the data indicate the potential capability of various streams. The 1-day curve represents "run-of-the-stream" flow. The 7- and 14-day curves represent flow available with a small amount of storage, such as provided by a dam in the main channel of the stream. Curves for 30 days and longer represent the flow that would be available if larger storage facilities were provided. The supply from such storage would be the inflow less seepage and evaporative losses from the reservoir. (2) In programs for attracting potential economic growth, the low-flow frequency data show planners how much water is available for use or for dilution of wastes.

Low-flow frequency data are necessary for planning and regulatory agencies in evaluating, coordinating, and managing water-resource programs. A major use at the State level is to determine how much water is available in a deficient area when issuing or denying permits for municipal, industrial, and agricultural uses. The data are also needed to evaluate long-range effects of increasing demands on water resources; additional cooling water required for power plants is an example. Because the 7-day, 10-year low flow is nationally the most commonly used legal index for pollution control and abatement and its use in Minnesota is expected to increase, this data will be needed at many locations.

In hydrologic studies of a drainage basin, the shape of low-flow frequency curves reflects the geologic and hydrologic character of the drainage area. Slope and magnitude of 1- and 7-day curves are determined almost entirely by flow from aquifers and generally indicate the amount of ground-water available to sustain streamflow. A flat slope indicates a relatively

large amount of ground-water storage; a steep slope, a lesser amount. If the curves show that a stream flows only part of the time, the available ground water either is small or exists in highly permeable formations that drain quickly during dry periods. Streams with controlled surface storage and those not hydraulically connected to the ground water system are exceptions.

### Computing low-flow frequency curves

Although most records of streamflow contain some information on drought experience, the information is not in a form useful for future planning. This section describes how low-flow data are abstracted from each year of record, arrayed in order of magnitude, and fit to a probability distribution to depict the low flows that might recur on the average as annual minimums, at frequencies ranging from once in 2 years to once in 100 years.

Daily discharges of all complete years of record for gaging stations having 8 or more years of record were analyzed by a digital computer. The computer is programmed to compute and tabulate for each complete year of record the lowest average discharge for 1, 7, 14, 30, 60, 90, 120, 183, and 365 consecutive days. From the tabulation of discharges, minimums for each set of consecutive days are arrayed in order of magnitude with the lowest designated as 1. The climatic year, April 1 to March 31, was used for analysis because it does not usually separate the low-flow season as does the calendar year or water year.

Most of the low-flow frequency data in table 1 were derived from computer fits of the log-Pearson Type III distribution to the data for each set of consecutive days. The family of curves obtained were plotted on log-normal probability paper. Figure 1 gives examples for eight selected stations. When the log-Pearson theoretical distribution did not adequately represent the data, graphical fits were made using assigned plotting positions based on the formula:

$$R.I. = \frac{n+1}{m}$$

where R.I. is the recurrence interval in years, n the number of years of record, and m the order of magnitude.

The low-flow frequency data in table 1 for continuous-record gaging stations were not adjusted to a standard base period. A more rigorous method involves estimating low flows for additional years by regression on a longer record and using both estimates and recorded flows to define the frequency curves. However,

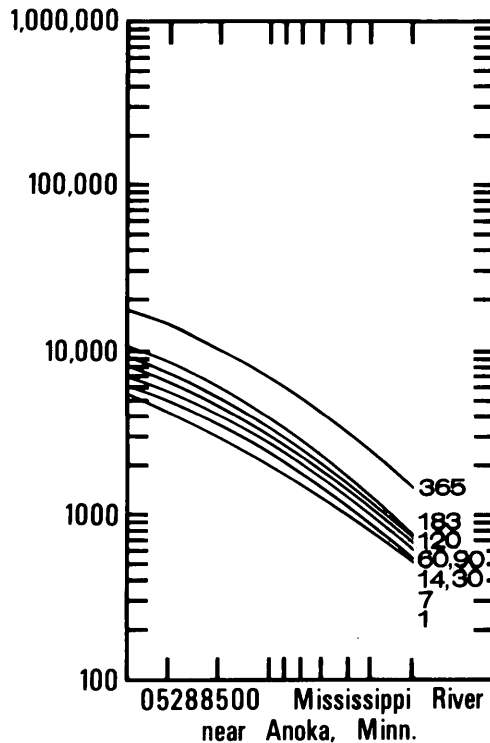
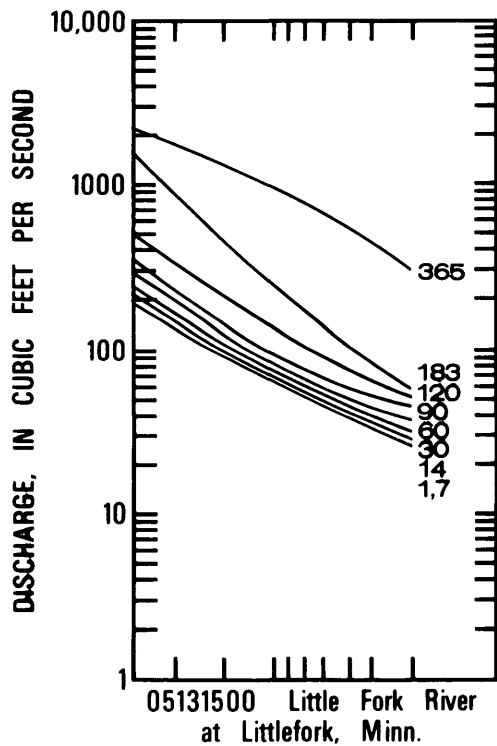
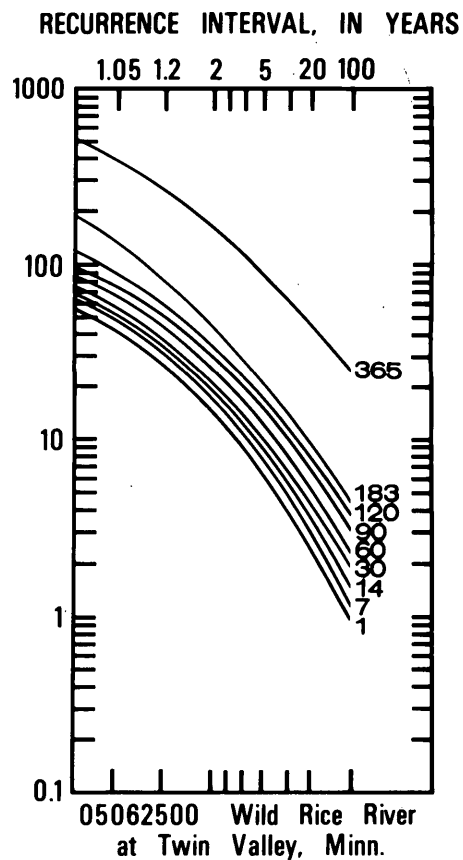
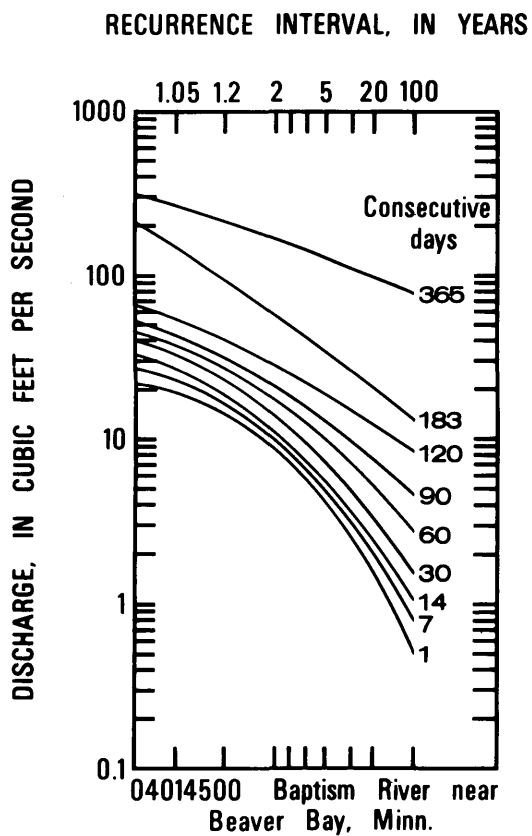


Figure 1.--Magnitude and frequency of annual low flows at selected gaging stations.

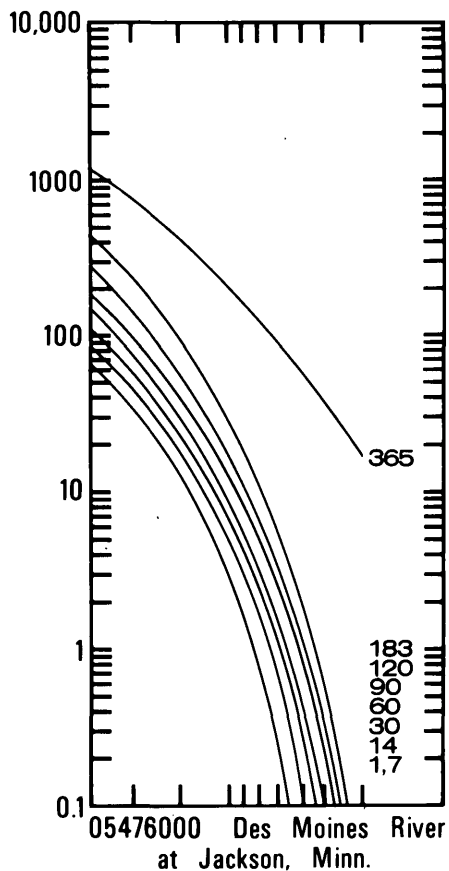
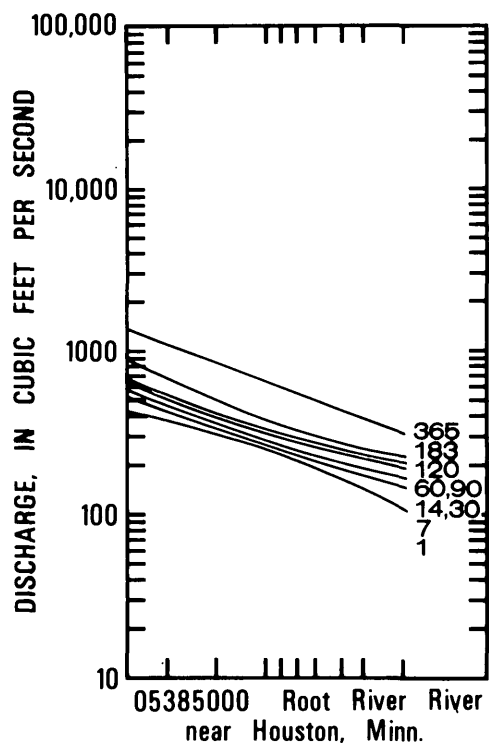
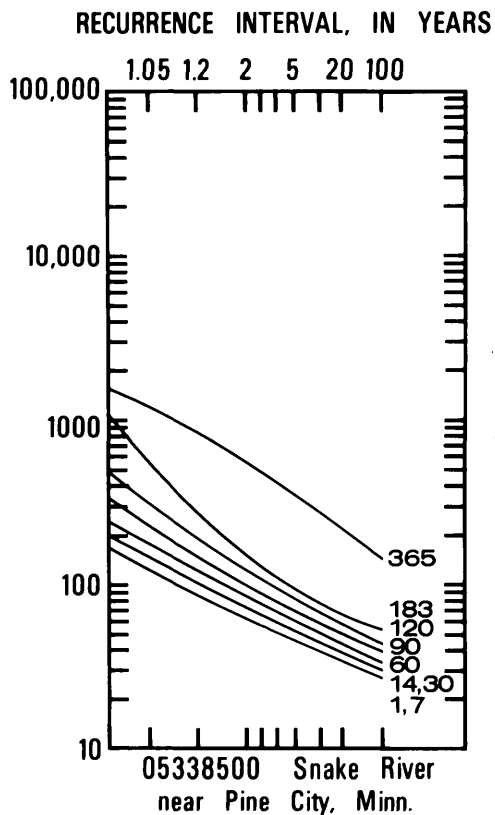
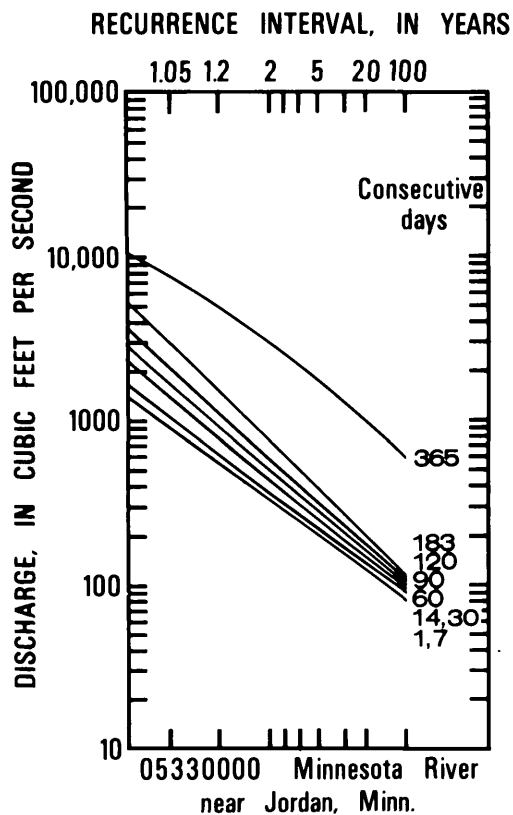


Figure 1.--Continued

because most correlation coefficients between short- and long-term stations in Minnesota are less than 0.8, no appreciable increases in reliability would be obtained. (See Riggs, 1968.) Where obvious discrepancies between two sets of flows for two different stations on the same stream are caused by differences in lengths of record, low-flow frequency data are given for both periods of record at the station having the longer record. The ratio of the low-flow value obtained from the longer record divided by the value obtained from the shorter can be used to evaluate what effect the period of record has on the value. This is assuming the longer sample of past experience is more reliable for predicting future flows.

Seasonal low-flow characteristics may be studied in the same manner as annual ones. Users only interested in seasonal activities may limit their study to specific periods. Minimum low flows in parts of Minnesota generally occur during the winter, but periods of low flow are common also in the summer. Low-flow frequency values in table 1 were developed using all flows.

#### Low-Flow Characteristics at Partial-Record Stations and Miscellaneous-Measurement Sites

Computing magnitude and frequency of low flows  
at partial-record stations by relating discharge  
measurements to daily flows at nearby continuous-  
record gaging stations

A partial-record station as used in this report refers to a station where there are or eventually will be sufficient base-flow measurements to define an adequate relationship with concurrent flows at a nearby gaging station. All stations listed in table 2 are or have been operated with the intent of establishing an adequate relation.

The technique used to determine low-flow characteristics for sites having only low-flow measurements depends on the number of measurements, the range of discharge measured, and the degree of correlation with a nearby, continuous-record gaging station. The technique normally used is a graphical relation of measurements made at a partial-record station with concurrent daily flows at a continuous-record station. This graphical technique can be used for sites where an adequate number of discharge measurements are available.

The discharges at the partial-record station are plotted on graph paper against the concurrent daily flows at a nearby continuous-record gaging station (index station). Daily flows

at index stations are used instead of concurrent hourly values because daily flows are readily available in published reports and are generally not significantly different from hourly flows. Putting it another way, discharge measurements generally represent daily mean flows during low-flow periods.

The flows, partial-record versus index station, are generally plotted on logarithmic graph paper, and a line of best fit is drawn through the plotted points. This relation line, or regression, is then used to transfer low-flow characteristics from the index station to the partial-record station.

The continuous-record gaging station to be used as the index station must be carefully selected. The basin for the index station should be reasonably close to the basin for the partial-record station, and their antecedent weather conditions should be similar. Also, the index station should have sufficient record to define the low-flow characteristics intended to be transferred to the low-flow partial-record station; more than 10 years are desirable.

The relation curves are customarily plotted with index station data on the horizontal axis (abscissa) and low-flow partial-record station data on the vertical axis (ordinate). Although relation lines are commonly straight on logarithmic paper, there are exceptions. For example, if flow at a partial-record station approaches or recedes to zero at times, the low end of the relation line tends to curve downward, approaching the vertical. Conversely, if index-station flow tends to cease while partial-record station flow does not, the relation line will approach the horizontal. In any case, a straight line or smooth curve that best fits the data should be used.

To plot points for the correlation curve, daily flows for the index station must be tabulated for the dates of measurement at the partial-record station. These flow data are often contained in several annual reports. Table 4 will assist in assembling and selecting the volumes one may need.

Flows and related data through the 1960 water year, for the index stations are published by major natural drainage basins in Water-Supply Papers of the U.S. Geological Survey entitled "Surface-Water Supply of the United States." Daily flows for water years 1961-70 are in 5-year compilations, 1961-65 and 1966-70, also entitled "Surface-Water Supply of the United States." Records for Minnesota streams are contained in Part 4, volume 1 (Streams tributary to Lakes Superior, Michigan, and Huron); Part 5, volumes 1-3 (Hudson Bay and Upper Mississippi River basins); and Part 6, volume 2 (Missouri River basin from

Williston, N. Dak. to Sioux City, Iowa). Copies of Water-Supply Papers still in print may be purchased from Superintendent of Documents, Washington, D.C. 20402.

Beginning with the 1961 water year, daily flows and related data have been prepared according to state boundaries and released in a series of annual reports by each district office of the U.S. Geological Survey. The reports of Minnesota in this series are not listed in table 4. The 1961-65 reports are entitled "Surface Water Records of Minnesota." Since 1965, the reports have been entitled "Water Resources Data for Minnesota." Copies of these reports for most years may be obtained by request to the District Chief, Water Resources Division, U.S. Geological Survey, 1033 Post Office Bldg., St. Paul, MN 55101. All of the reports are available for consultation in the St. Paul District Office.

A procedure for obtaining low-flow characteristics at partial-record stations where adequate measurements are available is illustrated with the following example:

Given, for partial-record station number 05339490, Rock Creek near Rush City, in table 2.--Ten low-flow measurements; drainage area, 58.5 mi<sup>2</sup>; and location data.

Procedure for obtaining low-flow characteristics.--

1. Locate Rock Creek near Rush City, in Chisago County, on plate 1.
2. Referring to plate 1, select the nearby index station having the most similar basin characteristics. Station 05338500, Snake River near Pine City; drainage area, 958 mi<sup>2</sup> was selected for this example. The user may want to try several stations, choosing the one that correlates best with the low-flow partial-record station.
3. Tabulate concurrent discharges from table 2 for Rock Creek, and from annual reports for Snake River. Refer to table 4 for questions concerning where to find daily-mean flows for the index station.

Tabulate data as follows:

Date	Discharge measured at low-flow partial-record station, Rock Creek near Rush City (ft <sup>3</sup> /s)	Daily discharge at index station, Snake River near Pine City (ft <sup>3</sup> /s)
8-16-67	1.62	65
9- 5-67	1.78	69
9-27-67	1.65	36
9- 9-68	4.37	111
10- 1-68	26.2	1460
11- 6-68	12.3	822
8-22-69	2.42	67
9- 5-74	2.67	90
10- 2-75	4.43	140
9-22-76	2.43	45

4. Plot data on logarithmic graph paper and fit a relation line as shown in figure 2.

5. Enter the horizontal axis with the 7-day, 2- and 10-year low flows for the index station. These values are taken from table 1 and are 64.8 and 40.3 ft<sup>3</sup>/s, respectively, for this example. The corresponding 7-day, 2- and 10-year low flows for the partial-record station are read on the vertical scale as 2.4 and 1.7 ft<sup>3</sup>/s, respectively. The procedure is illustrated in figure 2.

In summary, concurrent data for the low-flow partial-record station of interest and the index station are assembled and plotted on logarithmic graph paper. A line of best fit is drawn based on the plotted points. Low-flow characteristics are then transferred to the low-flow partial-record station by using the relation line.

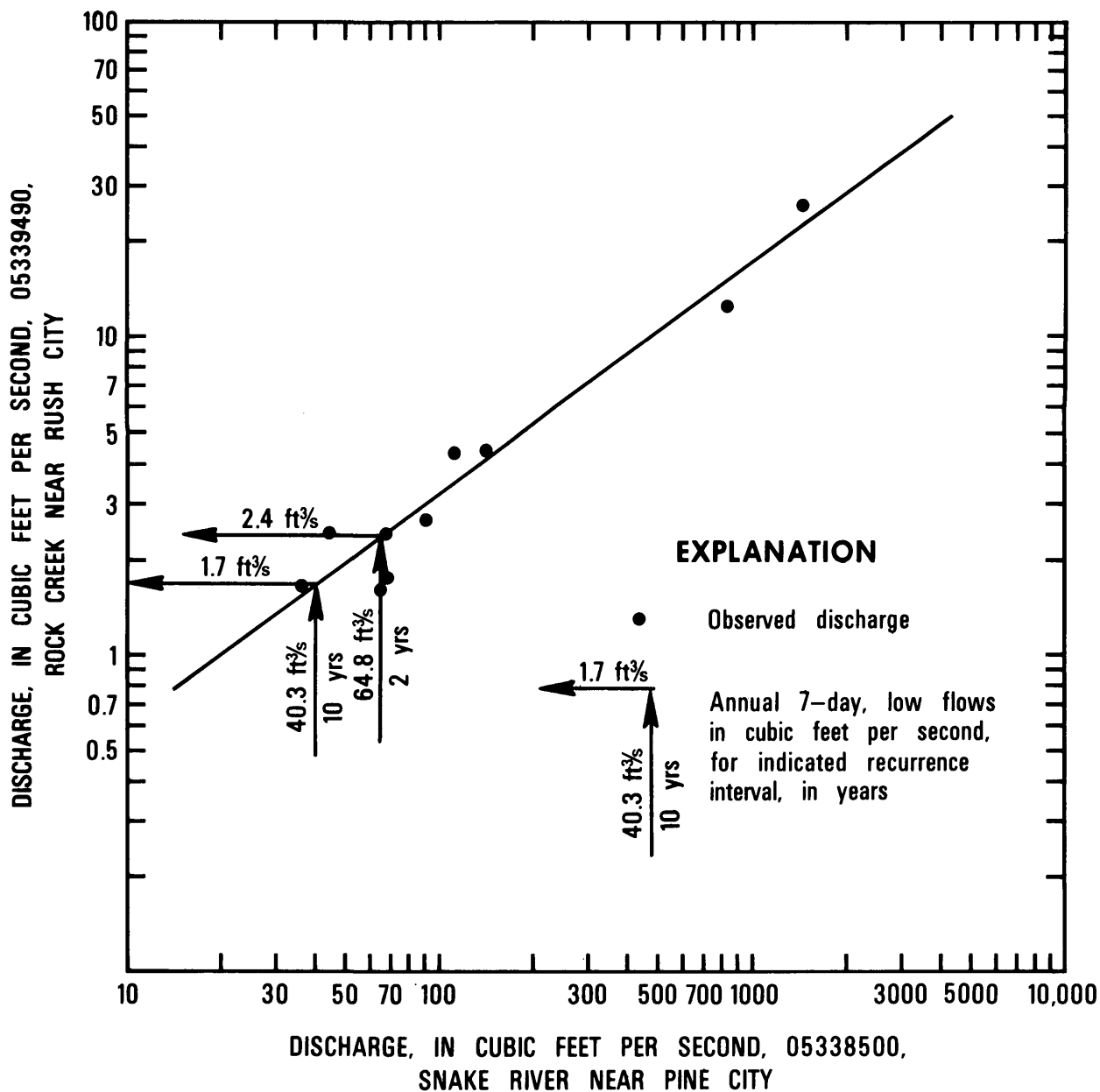


Figure 2.--Correlation curve for a low-flow partial-record station for which measurements are adequate to define the relation with an index station.

Estimating magnitude and frequency of low flows  
at miscellaneous-measurement sites by relating  
discharge measurements to daily flows at nearby  
continuous-record gaging stations

Less than five measurements are available at many miscellaneous-measurement sites in Minnesota. The measurements for a specific site may be clustered in such a way that they do not define a relation line between the site and the index station. An equal-yield line used in conjunction with a limited number of measurements will help estimate a relation line. Although steps outlined in the preceding example for partial-record stations also apply to miscellaneous-measurement sites with only a few measurements, another example which in addition utilizes the equal-yield line is given below.

Equal-yield line.--An equal-yield line is constructed by plotting multiples of drainage area for the miscellaneous-measurement site versus corresponding multiples for the index station.

Given, for miscellaneous-measurement site, West Branch Rum River near Milaca, in table 3.--One low-flow measurement; drainage area, 115 mi<sup>2</sup>; and location data.

Procedure for estimating low-flow characteristics.--

1. Locate West Branch Rum River near Milaca, in Mille Lacs County, on plate 1.

2. Referring to plate 1, select a nearby index station with similar basin characteristics. Station 05338500, Snake River near Pine City; drainage area, 958 mi<sup>2</sup> was selected for this example also. Although there is no choice in some instances but to relate a miscellaneous-measurement site with a station in a different physiographic region, an index station in a similar region is preferred, particularly when using the equal-yield line.

3. Tabulate concurrent discharges from table 3 for West Branch Rum River, and from annual reports for Snake River.

Tabulate as follows:

Date	Discharge measured at miscellaneous low-flow site, West Branch Rum River near Milaca (ft <sup>3</sup> /s)	Daily discharge at index station, Snake River near Pine City (ft <sup>3</sup> /s)
8-18-70	3.64	64

4. Plot corresponding discharges for each site on logarithmic graph paper as shown in figure 3.

When only a few measurements are available, it is important to determine whether or not flows at both sites represent base flow. Examine daily flows at the index station for several days preceding dates of measurements, looking for sudden increases. If flow during the preceding days was receding or steady, most of the flow at the index station probably represents flow from the ground-water system. Also consult climatological records to assure that antecedent precipitation is similar at both stations.

5. Construct equal-yield line. Plot corresponding drainage areas, 115 and 958 mi<sup>2</sup>, respectively, on the appropriate axis. Also plot multiples, such as 1/10 and 1/100 of the areas, (11.5 and 95.8; 1.15 and 9.58, respectively). The points define a straight line on logarithmic graph paper as shown in figure 3.

Drainage areas are not given for many miscellaneous-measurement sites in table 3. For such sites, the user will have to outline the drainage basin on topographic maps and compute the drainage area before using the method outlined here.

6. Fit a relation line as shown in figure 3, considering the positions of measurements and slope of the equal-yield line.

7. Enter on the horizontal axis the 7-day, 2- and 10-year low flows for the index station. These low-flow values are taken from table 1 and are 64.8 and 40.3 ft<sup>3</sup>/s, respectively, for this example. The corresponding 7-day, 2- and 10-year low flows for the miscellaneous-measurement site are read on the vertical axis as 3.6 and 2.3 ft<sup>3</sup>/s, respectively. The procedure is illustrated in figure 3.

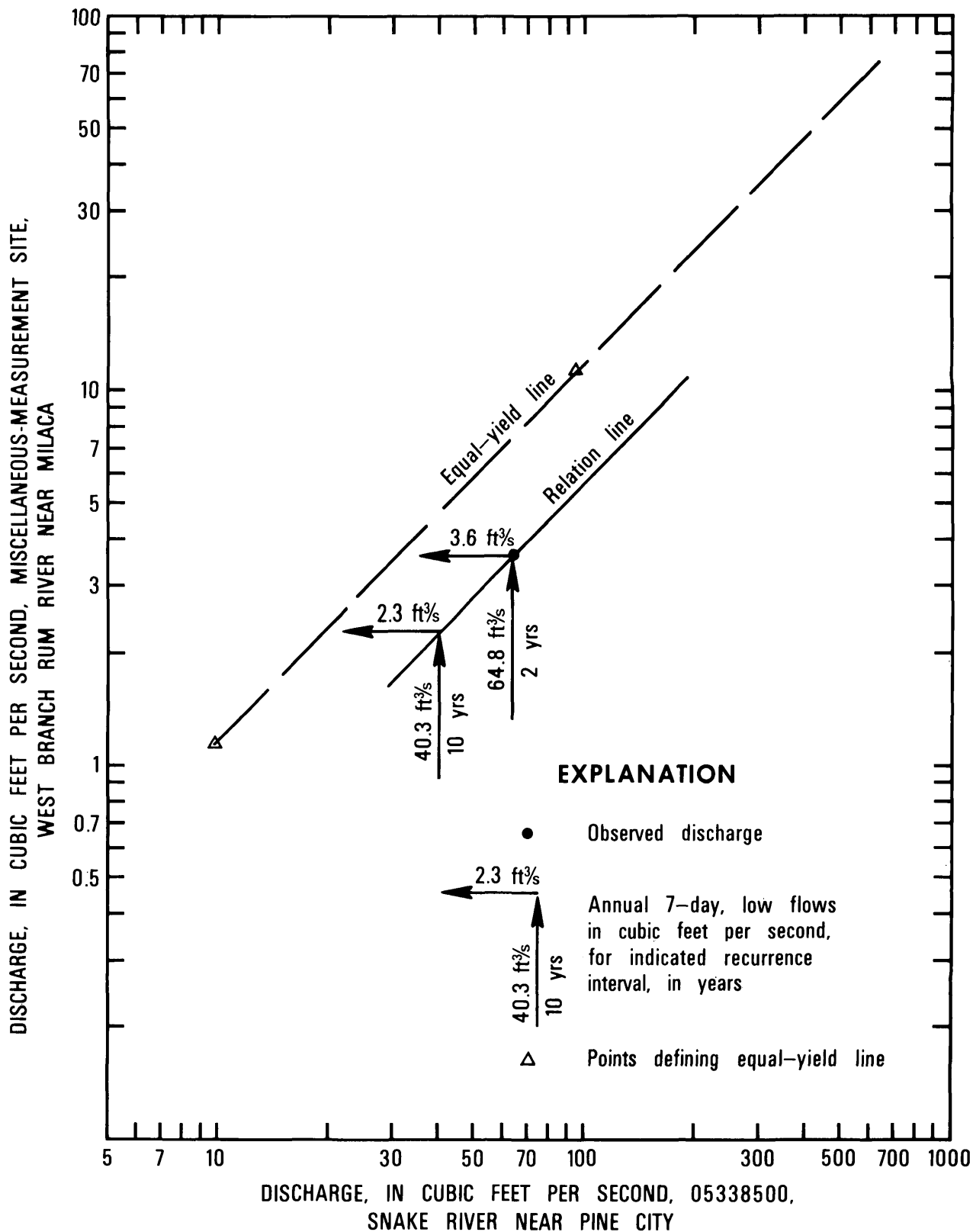


Figure 3.--Correlation curve for a low-flow site for which measurements alone are not adequate to define the relation with an index station.

Estimating magnitude and frequency  
of low flows at sites where only zero  
flows have been observed

Many of the sites in tables 2 and 3 have no current-meter measurements of flow, only observations of zero flow. If, for a given low-flow site, only one observation of zero flow is available, the investigator may approximate the low-flow potential of the site as follows: (1) Select an index station; (2) consult an annual report and determine daily flow for the day of zero flow at the site in question; (3) consult table 1 and interpolate, if necessary, the approximate recurrence interval of daily flow at the index station. Arithmetic interpolation is adequate for this purpose. The difference between daily and 7-day flows is less than the inherent inaccuracies associated with the method and may be ignored.

Because zero flow may have been observed at the site several days or weeks after flow ceased, the recurrence interval determined from the index station may not represent the actual condition when flow ceased. The investigator knows, however, that zero flow occurs at recurrence intervals equal to or less than the flow that was determined using the index station. For example, if the recurrence interval determined is 5 years, the recurrence interval of zero flow at the low-flow site may be 4, 3, or even less than 2 years.

For sites where several observations of zero flow are available, the observation when the concurrent flow at the index station was highest should be used as the only observation. The procedure described in preceding paragraphs is then used. An example demonstrating the use of zero flow observations at a site follows:

Given, for site number 06483070, Ash Creek at Ash Creek,  
in table 2.--Five observations of zero flow; drainage area,  
13.4 mi<sup>2</sup>; and location data.

Procedure.--

1. Locate Ash Creek at Ash Creek, in Rock County, on plate 1.

2. Select a nearby gaging station for an index station. Use Des Moines River at Jackson, 05476000; drainage area, 1220 mi<sup>2</sup>.

3. Determine concurrent daily flows for the index station from reports listed in table 4.

4. Using 7-day values from table 1, estimate the recurrence interval for the index station on days when zero flow was observed at the low-flow site, and tabulate as shown below:

Date of zero-flow observation at low flow site, Ash Creek at Ash Creek	Daily flow at index station, Des Moines River at Jackson (ft <sup>3</sup> /s)	Approximate recurrence interval for 7-day flow (yrs)
9-24-69	41	< 2
8-26-70	72	< 2
10-13-72	40	< 2
8-31-73	6.0	< 2
7-24-74	50	< 2

5. Because all index station flows exceed the 7-day, 2-year value of 3.92 ft<sup>3</sup>/s, we can be confident the 7-day, 2-year annual low flow for Ash Creek at Ash Creek is zero. Certainly the 7-day, 10-year low flow is zero.

#### SUMMARY AND CONCLUSIONS

All U.S. Geological Survey data presently available for determining low-flow characteristics of Minnesota streams are presented in this report. Methods and procedures are described for computing low-flow frequency curves at continuous-record gaging stations, determining low-flow characteristics at partial-record stations by graphical techniques, estimating low-flow characteristics at miscellaneous-measurement sites, and determining frequency of low flows at sites where only zero flows were observed. The frequency curves of flows at the continuous-record gaging stations are either mathematical or graphical fits of data for the 1-, 7-, 14-, 30-, 60-, 90-, 120-, 183-, and 365-day low flows, for frequencies ranging from once in 2 years to once in 100 years. Low-flow characteristics for partial-record stations are determined by relating an adequate number

(generally, eight or more) of low-flow measurements with concurrent daily flows at nearby index stations. At miscellaneous-measurement sites having an inadequate number of measurements, low-flow characteristics can be estimated utilizing an equal-yield line to assist in establishing the relation. The frequency at which sites having only zero-flow observations become dry also can be estimated by determining frequencies of concurrent daily flows at nearby index stations.

It should be understood that flow frequencies determined from partial-record stations and miscellaneous-measurement sites by methods presented in this report are estimates which may be subject to large errors. Similarly, all low-flow characteristics obtained at short-term continuous-record gaging stations by fitting frequency curves to annual events are subject to the same errors. Despite inadequacies, this report will fill many needs for streamflow information until the low-flow characteristics can be compiled and published in a more convenient form. Methods for determining low-flow characteristics within more acceptable limits of accuracy may be available in the near future. Before low flows can be understood and determined by more sophisticated methods, the influence on these flows by physiographic and climatic factors and hydrologic processes must be studied in more detail.

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# **LOW-FLOW DATA**

## **TABLES 1–4**

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Table 1.--Magnitude and frequency of annual low flows at continuous-record gaging stations.

Station No.	Station Name and Location	Record Used in Analysis	Drainage Area (mi <sup>2</sup> )	Period (consecutive days)	Annual low flow, in cubic feet per second, for indicated recurrence in years					
					2	5	10	20	50	100
STREAMS TRIBUTARY TO LAKE SUPERIOR										
04010500	Pigeon River at Middle Falls near Grand Portage LOCATION.--Lat 48°00'44", long 89°36'58", in NE¼ sec.24, T.64 N., R.6 E., Cook County, 4.7 miles northeast of Grand Portage, Minn.	1925-75	600	1 7 14 30 60 90 120 183 365	71.6 73.8 78.0 84.7 95.3 107 124 174 494	51.1 52.6 55.3 60.4 69.5 78.0 87.2 111 376	43.2 44.5 46.5 51.1 60.0 67.7 74.3 89.0 322	37.7 38.8 40.5 44.8 53.7 59.3 65.8 74.9 282	32.5 33.4 34.8 38.8 47.9 52.0 58.1 65.0 240	29.5 30.4 31.6 35.4 44.6 48.0 53.8 60.0 216
04012500	Poplar River at Lutsen LOCATION.--Lat 47°38'23", long 90°42'31", in SW¼NE¼ sec.33, T.60 N., R.3 W., Cook County, at Lutsen, Minn.	1914-17 1931-32 1935-47 1954-61	112	1 7 14 30 60 90 120 183 365	14.4 16.1 17.8 20.7 25.8 29.3 34.5 45.9 106	9.69 11.2 12.7 14.9 18.6 21.3 25.4 33.7 84.4	7.63 9.04 10.4 12.2 15.1 17.6 21.3 28.7 72.9	6.16 7.48 8.67 10.2 12.5 14.8 18.2 25.1 63.7	4.75 5.96 6.97 8.14 9.89 12.0 15.1 21.6 53.8	3.95 5.08 5.98 6.94 8.35 10.4 13.2 19.5 47.7
04014500	Baptism River near Beaver Bay LOCATION.--Lat 47°20'15", long 91°12'00", in SE¼NE¼ sec.15, T.56 N., R.7 W., Lake County, 7 miles northeast of Beaver Bay, Minn.	1931-47 1951-75	140	1 7 14 30 60 90 120 183 365	9.15 10.1 11.4 14.1 17.5 20.7 28.5 56.3 164	4.32 5.00 5.82 7.35 10.0 12.8 19.1 33.7 128	2.57 3.17 3.77 4.87 7.14 9.67 15.1 25.6 112	1.55 2.08 2.52 3.35 5.24 7.53 12.4 20.4 99.5	.82 1.22 1.52 2.10 3.60 5.57 9.74 15.7 87.3	.50 .83 1.06 1.51 2.75 4.50 8.24 13.2 79.8
04015500	Second Creek near Aurora LOCATION.--Lat 47°31'25", long 92°11'35", in SW¼ sec.12, T.58 N., R.15 W., St. Louis County, 2.1 miles east of Aurora, Minn.	1956-75	26.3	1 7 14 30 60 90 120 183 365	4.86 5.16 5.47 5.92 6.81 7.61 8.49 12.1 21.0	2.68 2.84 2.99 3.24 3.72 4.38 5.18 7.57 16.2	1.96 2.09 2.18 2.37 2.70 3.30 4.06 6.03 14.4	1.52 1.62 1.68 1.83 2.07 2.61 3.35 5.05 13.1	1.14 1.22 1.26 1.37 1.53 2.01 2.71 4.17 11.9	-- -- -- -- -- -- -- -- --
(Natural flow affected by continually changing iron-mining activities)										
04016000	Partridge River near Aurora LOCATION.--Lat 47°31'02", long 92°11'24", in SE¼SW¼ sec.12, T.58 N., R.15 W., St. Louis County, 2.5 miles east of Aurora, Minn.	1944-75	156	1 7 14 30 60 90 120 183 365	10.8 11.4 11.9 12.7 14.4 16.5 21.6 36.8 112	6.18 6.53 6.78 7.23 8.34 10.1 13.8 20.3 76.5	4.47 4.74 4.90 5.31 6.24 7.86 10.8 14.8 61.2	3.36 3.57 3.70 4.08 4.88 6.38 8.82 11.4 50.2	2.39 2.55 2.65 3.01 3.70 5.06 7.00 8.51 39.5	1.88 2.02 2.10 2.45 3.06 4.33 5.99 6.98 33.4
(Flow regulated at times by storage in off-channel Partridge Reservoir, formerly known as Whitewater Lake)										
04016500	St. Louis River near Aurora LOCATION.--Lat 47°29'30", long 92°14'20", in SW¼ sec.22, T.58 N., R.15 W., St. Louis County, 1.5 miles south of Aurora, Minn.	1944-75	291	1 7 14 30 60 90 120 183 365	24.5 25.8 27.6 28.9 32.5 38.5 49.7 82.5 227	14.5 15.4 16.6 18.0 21.1 25.8 33.4 47.0 172	10.7 11.4 12.3 13.8 16.7 20.8 26.7 34.6 148	8.19 8.80 9.51 11.0 13.7 17.4 22.0 26.8 130	5.96 6.45 6.98 8.38 11.0 14.1 17.5 20.0 113	4.77 5.19 5.62 6.97 9.44 12.3 15.0 16.3 102
(Flow regulated at times by storage in off-channel Partridge Reservoir, formerly known as Whitewater Lake)										
04017000	Embarrass River at Embarrass LOCATION.--Lat 47°39'24", long 92°11'51", in NW¼ sec.25, T.60 N., R.15 W., St. Louis County, at Embarrass, Minn.	1944-64	93.8	1 7 14 30 60 90 120 183 365	3.32 3.61 3.88 4.18 4.87 5.65 7.91 15.8 61.7	2.16 2.30 2.46 2.69 3.18 3.82 5.44 9.02 44.9	1.67 1.75 1.86 2.08 2.46 3.06 4.45 6.71 37.8	1.34 1.44 1.51 1.65 1.95 2.53 3.76 5.24 32.6	1.02 1.06 1.13 1.26 1.47 2.03 3.10 3.96 27.5	-- -- -- -- -- -- -- -- --

Table 1.--Magnitude and frequency of annual low flows at continuous-record gaging stations.

Station No.	Station Name and Location	Record Used in Analysis	Drainage Area (mi <sup>2</sup> )	Period (consecutive days)	Annual low flow, in cubic feet per second, for indicated recurrence in years					
					2	5	10	20	50	100
STREAMS TRIBUTARY TO LAKE SUPERIOR--Continued										
04018000	Embarrass River near McKinley LOCATION.--Lat 47°27'10", long 92°23'00", in NW¼ sec.4, T.57 N., R.16 W., St. Louis County, 4.5 miles southeast of McKinley, Minn.	1955-62	171	1	17.7	14.1	12.4	--	--	--
				7	20.9	18.2	16.3	--	--	--
				14	21.5	19.3	17.8	--	--	--
				30	23.2	21.7	20.9	--	--	--
				60	25.6	24.4	24.1	--	--	--
				90	28.0	26.2	25.7	--	--	--
				120	31.5	28.8	27.7	--	--	--
				183	43.3	36.1	32.9	--	--	--
				365	103	86.0	79.2	--	--	--
04018750	St. Louis River at Forbes LOCATION.--Lat 47°21'48", long 92°35'56", in NE¼SE¼ sec.3, T.56 N., R.18 W., St. Louis County, 0.6 mile south of Forbes, Minn.	1966-75	713	1	43.8	27.2	21.2	--	--	--
				7	86.0	53.1	41.3	--	--	--
				14	97.1	60.3	47.2	--	--	--
				30	106	65.9	51.2	--	--	--
				60	113	70.4	55.0	--	--	--
				90	131	81.2	63.5	--	--	--
				120	164	103	77.5	--	--	--
				183	283	179	137	--	--	--
				365	592	491	441	--	--	--
(Natural flow affected by continually changing iron-mining activities)										
04018900	East Two River near Iron Junction LOCATION.--Lat 47°24'04", long 92°39'52", in NW¼NW¼ sec.29, T.57 N., R.18 W., St. Louis County, 2.2 miles southwest of Iron Junction, Minn.	1968-75	40.0	1	6.74	5.62	5.05	--	--	--
				7	6.87	5.72	5.11	--	--	--
				14	7.00	5.83	5.23	--	--	--
				30	7.50	6.16	5.57	--	--	--
				60	8.35	6.81	6.22	--	--	--
				90	9.32	7.61	6.98	--	--	--
				120	10.8	8.71	7.83	--	--	--
				183	18.4	13.0	10.8	--	--	--
				365	34.9	29.2	26.4	--	--	--
(Natural flow affected by continually changing iron-mining activities)										
04019000	West Two River near Iron Junction LOCATION.--Lat 47°24'05", long 92°42'10", in SW¼SW¼ sec.24, T.57 N., R.19 W., St. Louis County, 5 miles southwest of Iron Junction, Minn.	1955-62	68.4	1	6.36	4.56	3.83	3.32	--	--
		1967-75		7	6.48	4.62	3.87	3.34	--	--
				14	6.71	4.71	3.94	3.41	--	--
				30	6.98	4.93	4.17	3.66	--	--
				60	7.71	5.42	4.54	3.95	--	--
				90	8.43	5.99	5.07	4.45	--	--
				120	9.94	7.14	6.08	5.35	--	--
				183	15.6	9.70	7.75	6.52	--	--
				365	45.6	36.3	32.0	28.6	--	--
(Flow regulated at times by storage in West Two River Reservoir for taconite processing)										
04019300	West Swan River near Silica LOCATION.--Lat 47°17'36", long 93°02'30", in SW¼NW¼ sec.32, T.56 N., R.21 W., St. Louis County, 2 miles northwest of Silica, Minn.	1964-75	16.3	1	.25	0	0	--	--	--
				7	.37	0	0	--	--	--
				14	.49	.07	0	--	--	--
				30	.65	.16	.04	--	--	--
				60	1.05	.26	.10	--	--	--
				90	1.07	.40	.24	--	--	--
				120	1.42	.69	.49	--	--	--
				183	3.70	1.86	1.26	--	--	--
				365	9.96	7.79	6.92	--	--	--
(Natural flow affected by extensive iron-mining activities)										
04019500	East Swan River near Toivola LOCATION.--Lat 47°16'55", long 92°50'05", in NE¼NE¼ sec.2, T.55 N., R.20 W., St. Louis County, 8 miles northwest of Toivola, Minn.	1955-62	112	1	16.0	12.5	11.0	9.83	--	--
		1966-71		7	16.5	12.9	11.2	9.94	--	--
				14	17.0	13.3	11.7	10.4	--	--
				30	18.3	14.5	12.8	11.5	--	--
				60	19.9	15.8	14.0	12.6	--	--
				90	21.3	17.1	15.4	14.2	--	--
				120	23.7	18.6	16.7	15.4	--	--
				183	34.9	25.1	21.3	18.7	--	--
				365	92.4	77.9	71.1	65.9	--	--
(Natural flow may be affected by continually changing iron-mining activities)										
04024000	St. Louis River at Scanlon LOCATION.--Lat 46°42'12", long 92°25'07", in NW¼ sec.30, T.49 N., R.16 W., Carlton County, at Scanlon, Minn.	1909-75	3430	1	523	329	248	192	141	113
				7	642	436	348	286	227	193
				14	679	459	367	302	239	204
				30	729	497	399	330	264	226
				60	805	543	436	360	287	246
				90	870	589	471	387	306	260
				120	934	634	508	418	333	284
				183	1090	756	631	547	469	424
				365	2220	1620	1370	1180	991	880
(Flow partly regulated by Whiteface Reservoir and Boulder, Island, Rice, and Fish Lakes)										

Table 1.--Magnitude and frequency of annual low flows at continuous-record gaging stations.

Station No.	Station Name and Location	Record Used in Analysis	Drainage Area (mi <sup>2</sup> )	Period (consecutive days)	Annual low flow, in cubic feet per second, for indicated recurrence in years					
					2	5	10	20	50	100
RED RIVER OF THE NORTH BASIN										
05030000	Otter Tail River near Detroit Lakes LOCATION.--Lat 46°50'12", long 95°41'57", in NE¼SW¼ sec.23, T.139 N., R.40 W., Becker County, 7.5 miles east of Detroit Lakes, Minn.	1938-71	270	1	3.25	.91	.43	.22	.10	.06
				7	3.86	1.17	.58	.32	.15	.09
				14	5.13	1.60	.80	.43	.21	.12
				30	6.45	2.24	1.20	.69	.36	.22
				60	9.84	3.66	2.00	1.15	.59	.36
				90	12.3	5.46	3.46	2.33	1.47	1.06
				120	14.7	6.92	4.51	3.11	2.01	1.48
				183	18.1	10.1	7.56	5.96	4.58	3.86
				365	51.2	30.7	22.3	16.6	11.6	8.97
				(Flow partly regulated by Minnesota Department of Conservation dams)						
05030500	Otter Tail River at German Church, near Fergus Falls LOCATION.--Lat 46°22'10", long 96°01'00", on south line sec.31, T.134 N., R.42 W., Otter Tail County, 5 miles north of Fergus Falls, Minn.	1906-17	a1230	1	166	83.5	47.8	--	--	--
				7	174	88.0	54.2	--	--	--
				14	176	90.6	56.7	--	--	--
				30	183	96.2	61.4	--	--	--
				60	203	105	67.2	--	--	--
				90	218	120	80.8	--	--	--
				120	240	133	90.9	--	--	--
				183	281	158	108	--	--	--
				365	353	226	173	--	--	--
				(Flow affected by natural storage in lakes)						
05040000	Pelican River near Detroit Lakes LOCATION.--Lat 46°43'26", long 95°54'56", in NE¼SW¼ sec.31, T.138 N., R.41 W., Becker County, 6.5 miles southwest of Detroit Lakes, Minn.	1944-53	123	1	.28	.06	.04	--	--	--
				7	.48	.10	.06	--	--	--
				14	.62	.13	.08	--	--	--
				30	.80	.15	.10	--	--	--
				60	1.09	.17	.11	--	--	--
				90	1.58	.20	.12	--	--	--
				120	2.47	.24	.15	--	--	--
				183	5.95	.76	.26	--	--	--
				365	37.3	20.1	12.7	--	--	--
				(Flow affected by natural storage in lakes)						
05040500	Pelican River near Fergus Falls LOCATION.--Lat 46°20'10", long 96°07'10", in NE¼ sec.17, T.133 N., R.43 W., Otter Tail County, 3 miles northwest of Fergus Falls, Minn.	1911-12 1944-75	482	1	12.5	2.22	.23	0	0	0
				7	15.3	3.23	.37	0	0	0
				14	15.7	3.26	.42	0	0	0
				30	16.6	3.76	.52	0	0	0
				60	19.2	4.35	1.03	0	0	0
				90	21.6	4.50	1.28	.36	.07	.02
				120	24.2	7.97	3.94	2.05	.92	.51
				183	31.1	12.6	7.25	4.37	2.35	1.51
				365	77.2	48.8	36.4	27.8	19.8	15.5
				(Flow affected by natural storage in lakes)						
05046000	Otter Tail River below Orwell Dam, near Fergus Falls LOCATION.--Lat 46°12'35", long 96°11'05", in NE¼ sec.34, T.132 N., R.44 W., Otter Tail County, 8 miles southwest of Fergus Falls, Minn.	1932-75	a1830	1	43.1	11.6	5.48	2.82	1.29	.74
				7	65.3	22.9	12.6	7.52	4.09	2.68
				14	72.9	25.9	14.4	8.61	4.70	3.08
				30	85.3	31.7	17.9	10.9	6.01	3.97
				60	105	39.5	22.1	13.1	7.00	4.49
				90	118	44.8	25.0	14.9	7.90	5.05
				120	129	49.2	27.5	16.3	8.64	5.50
				183	150	59.2	33.5	20.0	10.6	6.75
				365	272	114	64.5	37.7	19.1	11.6
				(Flow regulated by Orwell Lake beginning March 21, 1953)						
05048500	West Branch Mustinka River, below Mustinka ditch, near Charlesville LOCATION.--Lat 45°53'20", long 96°21'45", in SE¼SE¼ sec.18, T.128 N., R.45 W., Traverse County, 6 miles southwest of Charlesville, Minn.	1945-55	--	1	0	0	0	--	--	--
				7	0	0	0	--	--	--
				14	0	0	0	--	--	--
				30	0	0	0	--	--	--
				60	0	0	0	--	--	--
				90	.05	0	0	--	--	--
				120	.45	.15	.08	--	--	--
				183	1.05	.46	.30	--	--	--
				365	41.5	23.1	17.3	--	--	--
				(Flow affected by diversions)						
05049000	Mustinka River above Wheaton LOCATION.--Lat 45°49'15", long 96°29'25", on line between secs.7 and 8, T.127 N., R.46 W., Traverse County, 1.2 miles north of Wheaton, Minn.	1917 1920-24 1932-58	834	1	0	0	0	0	0	0
				7	0	0	0	0	0	0
				14	0	0	0	0	0	0
				30	0	0	0	0	0	0
				60	0	0	0	0	0	0
				90	0	0	0	0	0	0
				120	.20	0	0	0	0	0
				183	.33	0	0	0	0	0
				365	27.9	8.19	3.96	2.08	.96	.55
				(Some diversion about 10 miles upstream to Rabbit River during extreme high flow)						

a Approximately.

Table 1.--Magnitude and frequency of annual low flows at continuous-record gaging stations.

Station No.	Station Name and Location	Record Used in Analysis	Drainage Area (mi <sup>2</sup> )	Period (consecutive days)	Annual low flow, in cubic feet per second, for indicated recurrence in years					
					2	5	10	20	50	100
RED RIVER OF THE NORTH BASIN--Continued										
05050000	Bois de Sioux River near White Rock LOCATION.--Lat 45°51'45", long 96°34'25", in SW¼SW¼ sec.27, T.128 N., R.47 W., Roberts County, 4 miles south of White Rock, S. Dak.	1943-75	a1160	1	0	0	0	0	0	0
				7	0	0	0	0	0	0
				14	0	0	0	0	0	0
				30	0	0	0	0	0	0
				60	0	0	0	0	0	0
				90	0	0	0	0	0	0
				120	.16	0	0	0	0	0
				183	.76	.07	.01	0	0	0
				365	33.0	6.42	2.49	1.08	.40	.20
				(Flow regulated by Lake Traverse-Bois de Sioux Flood Control and Water Conservation project)						
05050500	Bois de Sioux River near Fairmount LOCATION.--Lat 46°03'00", long 96°33'25", on line between secs.22 and 27, T.130 N., R.47 W., Richland County, 2 miles east of Fairmount, N. Dak.	1920-44	a1540	1	0	0	0	0	0	0
				7	0	0	0	0	0	0
				14	0	0	0	0	0	0
				30	0	0	0	0	0	0
				60	0	0	0	0	0	0
				90	0	0	0	0	0	0
				120	0	0	0	0	0	0
				183	0	0	0	0	0	0
				365	1.70	0	0	0	0	0
				(Flow affected by storage in Lake Traverse)						
05051000	Rabbit River at Campbell LOCATION.--Lat 46°05'40", long 96°24'40", in SE¼SE¼ sec.2, T.130 N., R.46 W., Wilkin County, at Campbell, Minn.	1944-51	266	1	0	0	0	--	--	--
				7	0	0	0	--	--	--
				14	0	0	0	--	--	--
				30	0	0	0	--	--	--
				60	0	0	0	--	--	--
				90	0	0	0	--	--	--
				120	.01	0	0	--	--	--
				183	.06	0	0	--	--	--
				365	33.5	16.6	10.3	--	--	--
				(During periods of high flow, some water is diverted from Mustinka River basin)						
05051500	Red River of the North at Wahpeton LOCATION.--Lat 46°15'55", long 96°35'40", in NE¼ sec.8, T.132 N., R.47 W., Richland County, at Wahpeton, N. Dak.	1944-75	a4010	1	74.5	30.8	18.6	12.0	7.18	5.02
				7	103	47.1	30.1	20.3	12.8	9.25
				14	116	56.9	38.1	27.0	18.0	13.6
				30	135	71.2	49.9	36.7	25.7	20.1
				60	158	95.3	73.3	59.0	46.3	39.4
				90	176	110	85.8	70.1	55.9	48.1
				120	191	120	94.3	77.2	61.6	53.0
				183	217	138	109	89.4	71.6	61.8
				365	495	336	273	230	189	165
				(Flow regulated by Orwell Reservoir, Lake Traverse, and numerous other controlled lakes and ponds)						
		1963-75		1	70.8	28.1	16.8	--	--	--
				7	91.6	39.3	24.7	--	--	--
				14	106	46.7	29.4	--	--	--
				30	131	63.0	41.3	--	--	--
				60	165	97.0	73.0	--	--	--
				90	190	120	94.2	--	--	--
				120	208	137	111	--	--	--
				183	235	158	128	--	--	--
				365	531	376	319	--	--	--
				05054000	Red River of the North at Fargo LOCATION.--Lat 46°51'40", long 96°47'00", in NW¼NE¼ sec.18, T.139 N., R.48 W., Cass County, on 4th St. South in Fargo, N. Dak.	1903-75	a6800	1	55.6	9.82
7	66.8	15.7	1.00					0	0	0
14	75.8	19.9	1.85					0	0	0
30	93.1	21.3	2.90					0	0	0
60	104	22.2	5.05					.07	0	0
90	129	29.6	9.30					1.98	0	0
120	135	37.6	14.4					4.62	.65	.12
183	198	46.8	14.9					4.66	.98	.30
365	433	189	114					72.9	42.2	28.6
(Flow regulated by Orwell Reservoir, Lake Traverse, and numerous other controlled lakes and ponds)										
		1963-75		1	71.0	26.0	12.0	--	--	--
				7	90.2	29.9	15.2	--	--	--
				14	102	42.2	25.5	--	--	--
				30	129	53.9	31.8	--	--	--
				60	167	84.3	56.9	--	--	--
				90	190	110	81.4	--	--	--
				120	208	128	98.8	--	--	--
				183	237	149	116	--	--	--
				365	664	434	356	--	--	--

a Approximately.

Table 1.--Magnitude and frequency of annual low flows at continuous-record gaging stations.

Station No.	Station Name and Location	Record Used in Analysis	Drainage Area (mi. <sup>2</sup> )	Period (consecutive days)	Annual low flow, in cubic feet per second, for indicated recurrence in years					
					2	5	10	20	50	100
RED RIVER OF THE NORTH BASIN--Continued										
05061000	Buffalo River near Hawley LOCATION.--Lat 46°51'00", long 96°19'45", near center of SE¼ sec.14, T.139 N., R.45 W., Clay County, 2 miles southwest of Hawley, Minn.	1946-75	322	1	12.5	9.58	8.28	7.32	6.35	5.77
				7	13.2	10.2	8.98	8.09	7.22	6.70
				14	13.6	10.6	9.41	8.54	7.68	7.17
				30	14.4	11.3	10.1	9.19	8.30	7.78
				60	15.6	12.3	11.1	10.2	9.29	8.78
				90	17.0	13.6	12.2	11.2	10.3	9.71
				120	19.0	15.1	13.5	12.3	11.2	10.5
				183	22.0	16.5	14.5	13.1	11.8	11.1
				365	71.2	51.6	42.7	36.1	29.5	25.6
05061500	South Branch Buffalo River at Sabin LOCATION.--Lat 46°46'20", long 96°37'40", in SW¼SW¼ sec.9, T.138 N., R.47 W., Clay County, 1 mile east of Sabin, Minn.	1946-75	522	1	0	0	0	0	0	0
				7	0	0	0	0	0	0
				14	0	0	0	0	0	0
				30	0	0	0	0	0	0
				60	.03	0	0	0	0	0
				90	.40	0	0	0	0	0
				120	1.83	.43	.16	.07	.02	.01
				183	4.38	2.20	1.54	1.15	.83	.67
				365	42.2	25.7	20.0	16.4	13.2	11.5
05062000	Buffalo River near Dilworth LOCATION.--Lat 46°57'40", long 96°39'40", in SW¼SE¼ sec.6, T.140 N., R.47 W., Clay County, 6.5 miles northeast of Dilworth, Minn.	1932-75	a1040	1	8.55	2.39	.83	.25	0	0
				7	9.47	2.86	1.10	.34	.03	0
				14	10.6	3.35	1.34	.42	.04	0
				30	11.4	4.13	1.74	.62	.06	0
				60	13.3	5.13	2.17	.89	.26	.10
				90	14.6	6.43	3.72	2.22	1.15	.71
				120	17.1	8.68	5.83	4.09	2.68	1.99
				183	21.8	11.3	7.97	5.93	4.23	3.36
				365	100	52.9	36.9	27.1	18.9	14.7
05062500	Wild Rice River at Twin Valley LOCATION.--Lat 47°16'00", long 96°14'40", in NE¼ sec.27, T.144 N., R.44 W., Norman County, 0.8 mile northeast of Twin Valley, Minn.	1911-17 1932-75	888	1	14.6	6.47	3.94	2.52	1.46	.99
				7	17.5	8.02	4.92	3.15	1.82	1.23
				14	18.8	8.87	5.58	3.67	2.19	1.51
				30	20.9	10.2	6.58	4.43	2.74	1.94
				60	24.8	12.2	7.97	5.40	3.36	2.40
				90	29.1	14.9	9.94	6.90	4.42	3.21
				120	34.4	18.0	12.1	8.47	5.48	4.02
				183	43.9	21.4	14.1	9.74	6.26	4.59
				365	154	86.0	61.4	45.6	32.0	24.9
05064000	Wild Rice River at Hendrum LOCATION.--Lat 47°16'05", long 96°47'50", in SE¼ sec.19, T.144 N., R.48 W., Norman County, 0.5 mile east of Hendrum, Minn.	1945-75	a1600	1	15.4	5.23	2.27	.69	.04	0
				7	19.0	7.03	3.32	1.11	.08	0
				14	23.2	8.08	3.55	1.44	.28	0
				30	29.0	9.13	3.99	1.60	.35	.09
				60	33.1	11.1	4.64	1.90	.57	.23
				90	36.4	13.1	6.20	2.97	1.13	.55
				120	43.1	16.1	7.82	3.86	1.53	.76
				183	54.5	19.2	9.51	4.87	2.08	1.11
				365	234	152	119	97.5	77.1	65.6
(Flow affected by diversions, mainly into Marsh River during high flow)										
05064500	Red River of the North at Halstad LOCATION.--Lat 47°21'10", long 96°50'50", on line between secs.24 and 25, T.145 N., R.49 W., Traill County, 0.5 mile west of Halstad, Minn.	1963-75	a21800	1	213	150	128	--	--	--
				7	230	163	139	--	--	--
				14	249	180	155	--	--	--
				30	277	199	171	--	--	--
				60	318	230	198	--	--	--
				90	368	265	226	--	--	--
				120	409	292	247	--	--	--
				183	453	305	259	--	--	--
				365	1630	1080	865	--	--	--
05067500	Marsh River near Shelly LOCATION.--Lat 47°24'45", long 96°45'50", in NE¼NW¼ sec.3, T.145 N., R.48 W., Norman County, 3.8 miles southeast of Shelly, Minn.	1945-75	151	1	0	0	0	0	0	0
				7	0	0	0	0	0	0
				14	0	0	0	0	0	0
				30	0	0	0	0	0	0
				60	0	0	0	0	0	0
				90	.03	0	0	0	0	0
				120	.15	0	0	0	0	0
				183	.62	0	0	0	0	0
				365	32.8	10.2	5.49	3.28	1.83	1.24
(Flow affected by diversions, mainly from Wild Rice River during high flow)										

a Approximately.

Table 1.--Magnitude and frequency of annual low flows at continuous-record gaging stations.

Station No.	Station Name and Location	Record Used in Analysis	Drainage Area (mi <sup>2</sup> )	Period (consecutive days)	Annual low flow, in cubic feet per second, for indicated recurrence in years					
					2	5	10	20	50	100
RED RIVER OF THE NORTH BASIN--Continued										
05068000	Sand Hill River at Beltrami LOCATION.--Lat 47°32'50", long 96°32'00", in NE¼SW¼ sec.16, T.147 N., R.46 W., Polk County, at Beltrami, Minn.	1945-58	--	1	0	0	0	0	--	--
				7	0	0	0	0	--	--
				14	0	0	0	0	--	--
				30	0	0	0	0	--	--
				60	0	0	0	0	--	--
				90	.10	0	0	0	--	--
				120	.26	.07	.03	.01	--	--
				183	.79	.35	.21	.14	--	--
				365	5.08	2.64	1.69	1.11	--	--
				(Diversion through Sand Hill ditch from 5 miles upstream of station returns to river 4 miles downstream)						
05068500	Sand Hill ditch at Beltrami LOCATION.--Lat 47°32'10", long 96°32'00", in SE¼NW¼ sec.21, T.147 N., R.46 W., Polk County, 0.5 mile south of Beltrami, Minn.	1947-50 1953-58	--	1	6.25	3.16	1.86	--	--	--
				7	6.59	3.31	1.92	--	--	--
				14	7.12	3.58	2.07	--	--	--
				30	7.59	3.80	2.18	--	--	--
				60	8.17	4.43	2.77	--	--	--
				90	8.65	5.46	4.07	--	--	--
				120	9.41	7.05	6.05	--	--	--
				183	11.3	9.02	8.18	--	--	--
				365	33.7	25.8	23.2	--	--	--
				(Ditch diverts from Sand Hill River 4.5 miles upstream from station and returns to river 3.2 miles downstream)						
05069000	Sand Hill River at Climax LOCATION.--Lat 47°36'43", long 96°48'52", in NE¼NE¼ sec.30, T.148 N., R.48 W., Polk County, at Climax, Minn.	1947-75	426	1	7.00	4.30	3.07	2.22	1.46	1.07
				7	7.46	4.69	3.37	2.45	1.62	1.19
				14	7.62	4.92	3.66	2.76	1.92	1.47
				30	8.14	5.38	4.10	3.19	2.32	1.84
				60	8.93	6.12	4.87	3.97	3.09	2.59
				90	9.93	6.96	5.69	4.77	3.87	3.35
				120	11.3	8.15	6.87	5.95	5.07	4.55
				183	14.0	10.1	8.77	7.95	7.22	6.83
				365	56.1	32.2	24.1	19.0	14.5	12.1
				05074500	Red Lake River near Red Lake LOCATION.--Lat 47°57'27", long 95°16'35", in NW¼ sec.28, T.152 N., R.36 W., Clearwater County, 13 miles northwest of Red Lake, Minn.	1935-75	a1950	1	43.4	6.58
7	71.7	8.52	1.68					.22	0	0
14	75.1	10.9	3.12					.97	.22	.08
30	111	18.9	5.97					2.03	.52	.19
60	145	25.6	8.33					2.92	.79	.30
90	203	42.6	14.9					5.46	1.53	.60
120	242	53.3	19.0					7.09	2.01	.79
183	273	65.8	25.6					10.4	3.38	1.47
365	406	115	47.7					20.5	6.88	3.07
(Flow completely regulated by outlet dam on Lower Red Lake)										
05075000	Red Lake River at High Landing, near Goodridge LOCATION.--Lat 48°02'34", long 95°48'28", on line between secs.28 and 29, T.153 N., R.40 W., Pennington County, 7 miles south of Goodridge, Minn.	1931-75	a2300	1	95.4	6.62	0	0	0	0
				7	139	8.68	.10	0	0	0
				14	164	12.3	.20	0	0	0
				30	177	20.9	.91	0	0	0
				60	195	27.9	2.92	0	0	0
				90	231	37.4	5.15	.34	0	0
				120	263	42.6	9.89	1.65	0	0
				183	288	47.7	14.8	4.81	1.15	.40
				365	380	95.3	38.2	16.1	5.43	2.45
				(Flow regulated by outlet dam on Lower Red Lake)						
		1936-75		1	128	22.3	3.15	0	0	0
				7	159	29.8	6.32	.10	0	0
				14	176	37.7	9.49	.40	0	0
				30	199	49.7	16.3	1.00	0	0
				60	252	63.8	25.1	4.50	0	0
				90	284	80.5	30.1	7.95	6.08	.06
				120	329	84.7	32.6	10.3	1.70	.34
				183	383	97.1	35.8	13.4	3.71	1.42
				365	512	168	77.3	36.5	13.9	6.77
				05076000	Thief River near Thief River Falls LOCATION.--Lat 48°11'08", long 96°10'11", in NW¼SW¼ sec.3, T.154 N., R.43 W., Marshall County, 5 miles north of Thief River Falls, Minn.	1911-17 1921 1924 1930-75	959	1	0	0
7	0	0	0					0	0	0
14	0	0	0					0	0	0
30	0	0	0					0	0	0
60	.02	0	0					0	0	0
90	.10	0	0					0	0	0
120	.48	0	0					0	0	0
183	2.84	.003	0					0	0	0
365	111	30.9	13.6					6.32	2.43	1.22
(Flow partly regulated by Thief and Mud Lakes)										

a Approximately.

Table 1.--Magnitude and frequency of annual low flows at continuous-record gaging stations.

Station No.	Station Name and Location	Record Used in Analysis	Drainage Area (mi <sup>2</sup> )	Period (consecutive days)	Annual low flow, in cubic feet per second, for indicated recurrence in years									
					2	5	10	20	50	100				
RED RIVER OF THE NORTH BASIN--Continued														
05076500	Red Lake River at Thief River Falls LOCATION.--Lat 48°06'40", long 96°10'50", in NW¼ sec.34, T.154 N., R.43 W., Pennington County, at Thief River Falls, Minn.	1911-18 1921-30	a3450	1	39.3	10.6	4.05	0	--	--				
				7	98.7	31.8	15.1	7.46	--	--				
				14	114	39.5	20.0	10.6	--	--				
				30	142	50.3	24.6	12.4	--	--				
				60	178	64.6	30.5	14.5	--	--				
				90	198	73.9	35.6	17.3	--	--				
				120	225	87.3	42.3	20.5	--	--				
				183	265	115	62.6	34.5	--	--				
				365	447	258	192	150	--	--				
				(Flow partly regulated by outlet dam on Lower Red Lake)										
				05077500	Clearwater River near Leonard LOCATION.--Lat 47°44'00", long 95°13'00", in NE¼SW¼ sec.12, T.149 N., R.36 W., Clearwater County, 7 miles northeast of Leonard, Minn.	1936-47	153	1	16.2	5.80	3.03	--	--	--
7	20.8	10.2	6.37					--	--	--				
14	24.1	13.3	8.83					--	--	--				
30	26.9	15.8	10.9					--	--	--				
60	28.5	18.8	14.4					--	--	--				
90	29.2	21.0	17.4					--	--	--				
120	30.8	22.5	19.0					--	--	--				
183	35.7	25.7	21.7					--	--	--				
365	56.1	41.6	35.6					--	--	--				
(Flow regulated by Clearwater Lake)														
05077700	Ruffy Brook near Gonvick LOCATION.--Lat 47°44'50", long 95°24'45", on line between secs.5 and 8, T.149 N., R.37 W., Clearwater County, 4.8 miles east of Gonvick, Minn.	1962-75	45.2					1	.87	.50	.29	.15	--	--
				7	1.14	.66	.41	.24	--	--				
				14	1.34	.76	.47	.29	--	--				
				30	1.71	.90	.55	.33	--	--				
				60	1.95	1.34	1.09	.92	--	--				
				90	2.30	1.56	1.26	1.05	--	--				
				120	2.75	1.88	1.52	1.28	--	--				
				183	3.83	2.48	1.97	1.63	--	--				
				365	14.5	10.2	8.36	6.98	--	--				
				05078000	Clearwater River at Plummer LOCATION.--Lat 47°55'24", long 96°02'46", in SE¼SW¼ sec.4, T.151 N., R.42 W., Red Lake County, 0.9 mile northwest of Plummer, Minn.	1941-75	512	1	29.6	19.5	15.0	11.8	8.84	7.17
								7	32.3	21.8	17.2	13.9	10.8	8.96
14	33.9	23.5	18.9					15.6	12.3	10.4				
30	37.0	26.5	21.7					18.2	14.8	12.7				
60	41.0	29.7	24.5					20.7	16.9	14.6				
90	45.5	32.9	27.2					22.8	18.5	16.0				
120	50.5	36.3	30.0					25.5	21.0	18.3				
183	66.2	44.7	36.3					30.4	24.9	21.8				
365	172	120	97.6					81.7	66.2	57.3				
(Some diversions for flooding of wild rice paddies)														
05078230	Lost River at Oklee LOCATION.--Lat 47°50'35", long 95°51'30", on west edge of sec.1, T.150 N., R.41 W., Red Lake County, at northwest edge of Oklee, Minn.	1962-75	266					1	1.07	.10	0	0	--	--
				7	1.50	.15	0	0	--	--				
				14	1.94	.20	0	0	--	--				
				30	2.83	.39	.04	0	--	--				
				60	3.85	.88	.33	.13	--	--				
				90	6.17	1.91	.83	.37	--	--				
				120	8.93	3.33	1.68	.87	--	--				
				183	14.4	5.10	2.74	1.57	--	--				
				365	78.5	46.5	34.0	25.7	--	--				
				05078500	Clearwater River at Red Lake Falls LOCATION.--Lat 47°53'15", long 96°16'25", in NW¼NE¼ sec.22, T.151 N., R.44 W., Red Lake County, in Red Lake Falls, Minn.	1911-17 1936-75	a1370	1	33.3	12.7	4.40	1.36	.31	.10
								7	35.7	19.5	12.7	8.03	3.82	1.73
14	39.2	22.4	15.1					9.98	5.49	2.97				
30	42.2	25.5	18.3					13.1	7.94	4.58				
60	47.6	28.7	20.9					15.3	10.0	6.94				
90	52.1	32.6	24.3					18.1	12.0	8.46				
120	61.8	37.2	27.5					20.5	13.7	9.90				
183	80.7	46.8	33.7					24.9	16.0	11.2				
365	280	162	119					90.6	65.8	52.7				
(Flow partly regulated by Clearwater Lake and several smaller lakes)														
	1941-75							1	34.6	19.2	12.4	7.80	3.72	1.83
				7	40.6	24.3	17.5	13.0	8.93	6.81				
				14	43.2	26.6	19.6	14.8	10.5	8.19				
				30	46.4	30.6	23.9	19.2	14.8	12.3				
				60	51.0	35.9	29.6	25.1	20.7	18.2				
				90	58.1	40.9	33.8	28.7	23.8	21.0				
				120	67.0	46.3	38.1	32.4	26.9	23.8				
				183	90.0	57.0	45.5	38.0	31.2	27.5				
				365	329	214	169	138	109	93.3				

a Approximately.

Table 1.--Magnitude and frequency of annual low flows at continuous-record gaging stations.

Station No.	Station Name and Location	Record Used in Analysis	Drainage Area (mi <sup>2</sup> )	Period (consecutive days)	Annual low flow, in cubic feet per second, for indicated recurrence in years									
					2	5	10	20	50	100				
RED RIVER OF THE NORTH BASIN--Continued														
05079000	Red Lake River at Crookston LOCATION.--Lat 47°46'32", long 96°36'33", in SW¼SW¼ sec.30, T.150 N., R.46 W., Polk County, at Crookston, Minn.	1903-72 1975	a5280	1	154	43.4	19.7	9.53	3.89	2.04				
				7	207	60.2	27.6	13.4	5.52	2.90				
				14	228	67.9	31.4	15.4	6.38	3.37				
				30	257	80.1	38.0	19.1	8.12	4.37				
				60	294	94.2	45.2	22.9	9.76	5.26				
				90	330	107	51.4	25.9	11.0	5.88				
				120	363	120	58.5	29.7	12.7	6.80				
				183	427	144	71.0	36.6	16.0	8.71				
				365	909	413	256	166	98.2	67.5				
				(Flow partly regulated by outlet dam on Lower Red Lake)										
		1936-72 1975		1	179	53.6	24.5	11.8	4.69	2.40				
				7	246	77.4	36.4	18.0	7.43	3.90				
				14	274	87.8	41.9	21.0	8.86	4.72				
				30	315	102	48.9	24.6	10.3	5.51				
				60	368	125	61.8	31.7	13.7	7.41				
				90	411	141	69.0	35.2	15.1	8.08				
				120	445	155	76.0	38.7	16.4	8.70				
				183	515	182	90.9	47.3	20.7	11.3				
				365	1040	492	311	205	124	86.2				
				05082500	Red River of the North at Grand Forks LOCATION.--Lat 47°56'34", long 97°03'10", in SW¼NE¼ sec.33, T.152 N., R.50 W., Grand Forks County, at Grand Forks, N. Dak.	1905-75	a30100	1	447	138	60.4	27.1	9.63	4.46
		7						478	147	64.8	29.3	10.5	4.90	
		14						497	156	69.2	31.6	11.5	5.41	
		30						530	172	77.9	36.2	13.5	6.48	
60	556	198	99.5					51.9	22.8	12.4				
90	607	224	115					61.2	27.6	15.4				
120	661	257	137					76.0	36.1	20.9				
183	798	302	156					83.6	37.7	21.0				
365	2040	1020	684					481	316	236				
(Flow regulated by many lakes and reservoirs on tributaries)														
1963-75	1	776	537			437		--	--	--				
	7	898	596			469		--	--	--				
	14	939	625			492		--	--	--				
	30	998	692			560		--	--	--				
	60	1100	798			662		--	--	--				
	90	1190	862			715		--	--	--				
	120	1250	918			765		--	--	--				
	183	1460	1070			894		--	--	--				
	365	3630	2520			2060		--	--	--				
	05087500	Middle River at Argyle LOCATION.--Lat 48°20'27", long 96°49'02", in SE¼SW¼ sec.10, T.156 N., R.48 W., Marshall County, at Argyle, Minn.	1952-75			265		1	0	0	0	0	0	--
7								0	0	0	0	0	--	
14								0	0	0	0	0	--	
30								0	0	0	0	0	--	
60				.07	0		0	0	0	--				
90				.23	0		0	0	0	--				
120				.43	.07		.02	.003	0	--				
183				.91	.15		.04	.007	0	--				
365				36.2	13.4		6.88	3.66	1.65	--				
05092000				Red River of the North at Drayton LOCATION.--Lat 48°34'20", long 97°08'50", in SE¼SE¼ sec.24, T.159 N., R.51 W., Pembina County, 1.5 miles northeast of Drayton, N. Dak.	1950-75		a34800	1	648	374	269	200	140	108
								7	696	398	285	211	148	115
								14	731	416	298	222	156	122
								30	789	458	333	252	181	143
	60	859	506			372		283	205	163				
	90	906	531			388		294	211	167				
	120	956	568			418		320	232	185				
	183	1100	654			489		381	284	232				
	365	3220	1880			1400		1080	806	659				
	(Flow regulated by many lakes and reservoirs on tributaries)													
	1963-75	1	788		555	453		--	--	--				
		7	891		617	485		--	--	--				
		14	954		650	517		--	--	--				
30		1030	725	589	--	--	--							
60		1130	814	669	--	--	--							
90		1190	860	709	--	--	--							
120		1270	919	756	--	--	--							
365		4310	2950	2360	--	--	--							

a Approximately.

Table 1.--Magnitude and frequency of annual low flows at continuous-record gaging stations.

Station No.	Station Name and Location	Record Used in Analysis	Drainage Area (mi <sup>2</sup> )	Period (consecutive days)	Annual low flow, in cubic feet per second, for indicated recurrence in years						
					2	5	10	20	50	100	
RED RIVER OF THE NORTH BASIN--Continued											
05093000	South Branch Two Rivers at Pelan LOCATION.--Lat 48°38'45", long 96°23'15", in NW¼ sec.31, T.160 N., R.44 W., Roseau County, 0.2 mile West of Pelan, Minn.	1930-38 1955-56	281	1	0	0	0	--	--	--	
				7	0	0	0	--	--	--	
				14	0	0	0	--	--	--	
				30	0	0	0	--	--	--	
				60	0	0	0	--	--	--	
				90	0	0	0	--	--	--	
				120	0	0	0	--	--	--	
				183	0	0	0	--	--	--	
				365	10.5	4.69	3.00	--	--	--	
05094000	South Branch Two Rivers at Lake Bronson LOCATION.--Lat 48°43'50", long 96°39'50", in SW¼SW¼ sec.30, T.161 N., R.46 W., Kittson County, at Lake Bronson, Minn.	1930-36 1942-43 1946-47 1955-75	444	1	1.08	.47	.18	0	0	0	
				7	1.21	.55	.24	0	0	0	
				14	1.34	.64	.32	.07	0	0	
				30	1.51	.79	.55	.40	.27	.21	
				60	1.94	1.03	.71	.51	.34	.26	
				90	2.25	1.21	.85	.62	.42	.33	
				120	2.61	1.42	1.01	.76	.54	.43	
				183	5.28	2.38	1.56	1.12	.76	.60	
				365	61.6	22.0	12.1	7.12	3.78	2.43	
(Flow partly regulated by Bronson Lake)											
05095500	Two Rivers below Hallock LOCATION.--Lat 48°46'50", long 97°02'25", in NE¼SE¼ sec.7, T.161 N., R.49 W., Kittson County, 4 miles west of Hallock, Minn.	1946-55	644	1	.03	0	0	--	--	--	
				7	.09	0	0	--	--	--	
				14	.12	0	0	--	--	--	
				30	.15	0	0	--	--	--	
				60	.27	.06	0	--	--	--	
				90	.82	.31	.19	--	--	--	
				120	1.55	.56	.33	--	--	--	
				183	4.17	1.36	.77	--	--	--	
				365	64.1	25.3	15.3	--	--	--	
(Flow partly regulated by Bronson Lake)											
05096000	North Branch Two Rivers near Lancaster LOCATION.--Lat 48°53'21", long 96°40'01", in NE¼ sec.1, T.162 N., R.47 W., Kittson County, 7 miles northeast of Lancaster, Minn.	1930-38 1942-55	a32	1	0	0	0	0	0	--	
				7	0	0	0	0	0	--	
				14	0	0	0	0	0	--	
				30	0	0	0	0	0	--	
				60	0	0	0	0	0	--	
				90	0	0	0	0	0	--	
				120	0	0	0	0	0	--	
				183	0	0	0	0	0	--	
				365	2.31	.47	.20	.10	.04	--	
(During periods of high flow, some water enters river from Roseau River basin)											
05096500	State ditch No. 85 near Lancaster LOCATION.--Lat 48°52'02", long 96°40'01", in SW¼SW¼ sec.6, T.162 N., R.46 W., Kittson County, 6.5 miles northeast of Lancaster, Minn.	1930-38 1943-55	a95	1	0	0	0	0	0	--	
				7	0	0	0	0	0	--	
				14	0	0	0	0	0	--	
				30	0	0	0	0	0	--	
				60	0	0	0	0	0	--	
				90	0	0	0	0	0	--	
				120	0	0	0	0	0	--	
				183	0	0	0	0	0	--	
				365	8.44	2.28	1.09	.58	.27	--	
(During periods of high flow, some water enters ditch from Roseau River basin and some water is diverted from ditch to Two Rivers)											
05102500	Red River of the North at Emerson LOCATION.--Lat 49°00'30", long 97°12'40", in sec.2, T.1, R.2 E., in Emerson, Manitoba	1914-75	a40200	1	477	136	53.1	20.9	6.14	2.43	
				7	512	151	60.4	24.2	7.23	2.90	
				14	540	160	64.2	25.9	7.86	3.19	
				30	582	176	71.2	28.9	8.76	3.55	
				60	635	200	82.3	33.8	10.3	4.21	
				90	643	216	98.5	45.7	16.8	7.97	
				120	675	247	126	66.0	29.1	15.9	
				183	819	300	153	80.8	35.9	19.8	
				365	2570	1310	901	651	444	342	
				(Flow partly regulated by reservoirs on tributaries)							
		1963-75		1	785	511	402	--	--	--	
				7	870	580	460	--	--	--	
				14	979	640	498	--	--	--	
				30	1060	728	582	--	--	--	
				60	1140	806	649	--	--	--	
				90	1210	851	688	--	--	--	
				120	1300	915	749	--	--	--	
				183	1560	1110	911	--	--	--	
				365	5010	3310	2580	--	--	--	

a Approximately.

Table 1.--Magnitude and frequency of annual low flows at continuous-record gaging stations.

Station No.	Station Name and Location	Record Used in Analysis	Drainage Area (mi <sup>2</sup> )	Period (consecutive days)	Annual low flow, in cubic feet per second, for indicated recurrence in years					
					2	5	10	20	50	100
RED RIVER OF THE NORTH BASIN--Continued										
05104000	South Fork Roseau River near Malung LOCATION.--Lat 48°47'00", long 95°44'16", in NE¼SW¼ sec.7, T.161 N., R.39 W., Roseau County, 1.1 miles northwest of Malung, Minn.	1913-14 1930-38 1941-46	312	1	0	0	0	0	--	--
				7	0	0	0	0	--	--
				14	0	0	0	0	--	--
				30	0	0	0	0	--	--
				60	0	0	0	0	--	--
				90	.04	0	0	0	--	--
				120	.12	0	0	0	--	--
				183	.26	0	0	0	--	--
				365	16.9	5.70	3.05	1.77	--	--
				05104500	Roseau River below South Fork, near Malung LOCATION.--Lat 48°47'30", long 95°44'40", in SW¼ sec.6, T.161 N., R.39 W., Roseau County, 1.5 miles northwest of Malung, Minn.	1948-75	573	1	1.43	.60
7	1.82	.70	.39					.18	0	0
14	2.10	.89	.50					.25	0	0
30	2.74	1.29	.78					.38	0	0
60	4.65	2.00	1.13					.58	.18	.05
90	5.72	2.80	1.78					1.17	.70	.48
120	7.69	4.11	2.87					2.10	1.45	1.12
183	17.3	6.60	4.07					2.71	1.72	1.26
365	128	70.9	51.2					38.8	28.1	22.5
(Undetermined amount of high flow bypasses the station through overflow channel 0.8 mile upstream and returns to river 0.5 mile downstream)										
05106000	Sprague Creek near Sprague LOCATION.--Lat 48°59'33", long 95°39'43", in NE¼ sec.34, T.164 N., R.39 W., Roseau County, 3.5 miles south of Sprague, Manitoba	1941-75	169	1	.78	.26	.06	0	0	0
				7	.91	.31	.08	0	0	0
				14	1.02	.34	.11	0	0	0
				30	1.26	.51	.27	.14	.06	.03
				60	1.46	.80	.56	.40	.26	.20
				90	1.76	1.02	.75	.58	.43	.35
				120	2.61	1.40	1.02	.79	.60	.49
				183	9.20	3.50	2.09	1.33	.81	.56
				365	59.3	28.8	17.7	11.1	6.15	3.98
				05107000	Pine Creek near Pine Creek LOCATION.--Lat 48°59'35", long 95°55'04", in SW¼SW¼ sec.26, T.164 N., R.41 W., Roseau County, 2 miles northeast of Pine Creek, Minn.	1930-53	74.6	1	4.00	2.18
7	4.45	2.54	1.35					0	0	--
14	4.77	2.78	1.61					.40	0	--
30	5.32	3.19	2.20					1.53	.95	--
60	5.91	4.05	3.14					2.47	1.82	--
90	6.58	4.55	3.55					2.80	2.07	--
120	7.19	5.21	4.33					3.68	3.04	--
183	10.6	6.96	5.58					4.64	3.77	--
365	24.9	16.6	13.2					10.8	8.60	--
05107500	Roseau River at Ross LOCATION.--Lat 48°54'37", long 95°55'18", in SE¼ sec.27, T.163 N., R.41 W., Roseau County, 0.2 mile north of Ross, Minn.	1930-75	a1220					1	5.78	2.50
				7	7.00	2.88	1.52	.76	.31	.15
				14	7.59	3.47	2.04	1.23	.64	.40
				30	8.33	4.26	2.80	1.91	1.19	.85
				60	10.4	5.62	3.84	2.71	1.77	1.30
				90	12.3	7.04	5.08	3.81	2.70	2.13
				120	16.6	9.45	7.00	5.45	4.10	3.38
				183	33.7	15.3	10.2	7.25	4.92	3.82
				365	225	112	74.3	51.8	33.7	24.9
				05112000	Roseau River below State ditch No. 51, near Caribou LOCATION.--Lat 48°58'54", long 96°27'46", in SE¼SW¼ sec.34, T.164 N., R.45 W., Kittson County, 0.6 mile west of Caribou, Minn.	1921-30 1933 1937 1941-43 1973-75	1570	1	16.0	5.57
7	16.6	5.85	2.64					1.18	--	--
14	16.7	6.61	3.30					1.65	--	--
30	16.9	7.93	5.01					3.29	--	--
60	18.3	10.1	7.38					5.73	--	--
90	20.0	11.6	9.02					7.44	--	--
120	25.8	14.5	11.0					8.86	--	--
183	51.1	23.7	16.0					11.6	--	--
365	226	128	94.1					72.4	--	--
LAKE OF THE WOODS BASIN										
05124480	Kawishiwi River near Ely LOCATION.--Lat 47°55'22", long 91°32'06", in SE¼ sec.24, T.63 N., R.10 W., Lake County, 14 miles east of Ely, Minn.	1968-75	253	1	45.5	34.8	29.4	--	--	--
				7	47.6	36.7	31.3	--	--	--
				14	50.8	38.4	32.6	--	--	--
				30	54.2	40.9	34.8	--	--	--
				60	61.5	45.2	37.5	--	--	--
				90	71.1	53.0	44.2	--	--	--
				120	89.5	64.0	51.2	--	--	--
				183	139	96.2	77.2	--	--	--
				365	252	201	177	--	--	--

a Approximately.

Table 1.--Magnitude and frequency of annual low flows at continuous-record gaging stations.

Station No.	Station Name and Location	Record Used in Analysis	Drainage Area (mi <sup>2</sup> )	Period (consecutive days)	Annual low flow, in cubic feet per second, for indicated recurrence in years					
					2	5	10	20	50	100
LAKE OF THE WOODS BASIN--Continued										
05124500	Isabella River near Isabella LOCATION.--Lat 47°48'00", long 91°31'15", in NW¼NE¼ sec.6, T.61 N., R.9 W., Lake County, 14.5 miles northwest of Isabella, Minn.	1954-61	341	1	51.3	43.5	39.5	--	--	--
				7	54.4	44.3	39.6	--	--	--
				14	56.2	45.7	40.7	--	--	--
				30	60.2	49.0	43.3	--	--	--
				60	66.2	54.2	47.7	--	--	--
				90	72.1	60.0	53.7	--	--	--
				120	85.7	73.2	66.8	--	--	--
				183	112	86.6	75.1	--	--	--
				365	283	232	207	--	--	--
05125000	South Kawishiwi River near Ely LOCATION.--Lat 47°50'24", long 91°41'43", in NE¼SW¼ sec.23, T.62 N., R.11 W., Lake County, 9 miles southeast of Ely, Minn.	1953-61	--	1	107	69.6	49.1	--	--	--
				7	111	72.8	51.8	--	--	--
				14	114	75.9	55.4	--	--	--
				30	120	81.3	59.5	--	--	--
				60	137	97.5	73.3	--	--	--
				90	150	113	89.6	--	--	--
				120	166	123	96.0	--	--	--
				183	193	134	103	--	--	--
				365	429	339	296	--	--	--
05125500	Stony River near Isabella LOCATION.--Lat 47°41'10", long 91°38'20", in NW¼NW¼ sec.17, T.60 N., R.10 W., Lake County, 12.8 miles northwest of Isabella, Minn.	1954-64	180	1	13.9	9.29	7.32	--	--	--
				7	14.7	9.77	7.65	--	--	--
				14	15.1	10.1	7.86	--	--	--
				30	16.4	11.1	8.76	--	--	--
				60	18.8	13.4	10.9	--	--	--
				90	22.3	16.4	13.4	--	--	--
				120	28.0	21.5	18.4	--	--	--
				183	43.7	30.3	24.1	--	--	--
				365	121	94.6	83.2	--	--	--
05126000	Dunka River near Babbitt LOCATION.--Lat 47°41'55", long 91°52'05", in NW¼NE¼ sec.9, T.60 N., R.12 W., St. Louis County, 3.8 miles southeast of Babbitt, Minn.	1953-62	53.0	1	1.82	1.14	.85	--	--	--
				7	2.14	1.39	1.04	--	--	--
				14	2.41	1.56	1.17	--	--	--
				30	2.50	1.62	1.22	--	--	--
				60	2.81	1.91	1.51	--	--	--
				90	3.56	2.43	1.90	--	--	--
				120	4.79	3.49	2.87	--	--	--
				183	9.76	6.51	5.08	--	--	--
				365	33.8	28.4	26.3	--	--	--
05126500	Bear Island River near Ely LOCATION.--Lat 47°49'56", long 91°50'12", in SE¼SW¼ sec.23, T.62 N., R.12 W., St. Louis County, 5.0 miles south of Ely, Minn.	1954-62	68.5	1	2.23	.82	.46	--	--	--
				7	2.84	1.23	.76	--	--	--
				14	3.46	1.62	1.04	--	--	--
				30	4.93	2.35	1.46	--	--	--
				60	7.21	3.96	2.67	--	--	--
				90	9.62	5.92	4.16	--	--	--
				120	11.9	7.77	5.64	--	--	--
				183	15.4	9.94	7.32	--	--	--
				365	39.3	28.0	23.1	--	--	--
(Flow affected by storage in lakes)										
05127000	Kawishiwi River near Winton LOCATION.--Lat 47°56'05", long 91°45'50", in NE¼NW¼ sec.20, T.63 N., R.11 W., Lake County, 1.8 miles east of Winton, Minn.	1907	a1200	1	44.4	0	0	0	0	0
		1914		7	200	97.5	43.4	0	0	0
		1917		14	214	107	61.2	31.9	10.3	3.05
		1925-75		30	240	136	90.3	60.3	35.6	24.0
				60	279	175	130	98.6	69.7	54.2
				90	332	221	173	139	106	87.9
				120	391	255	197	155	117	95.1
				183	471	294	227	183	143	120
				365	994	752	649	573	498	453
(Flow regulated by power plant and numerous lakes)										
05127500	Basswood River near Winton LOCATION.--Lat 48°04'55", long 91°39'10", in sec.30, T.65 N., R.10 W., Lake County, 14 miles north- east of Winton, Minn.	1932-37	a1740	1	388	270	209	163	118	93.1
		1940-75		7	396	275	214	169	125	99.4
				14	407	282	221	175	131	106
				30	430	293	229	183	139	113
				60	483	322	249	196	146	118
				90	535	349	269	213	160	130
				120	582	371	285	225	170	140
				183	667	414	320	257	200	169
				365	1330	1000	866	765	665	605
(Flow affected by storage in many lakes)										

a Approximately.

Table 1.--Magnitude and frequency of annual low flow at continuous-record gaging stations.

Station No.	Station Name and Location	Record Used in Analysis	Drainage Area (mi <sup>2</sup> )	Period (consecutive days)	Annual low flow, in cubic feet per second, for indicated recurrence in years					
					2	5	10	20	50	100
LAKE OF THE WOODS BASIN--Continued										
05128000	Namakan River at outlet of Lac la Croix LOCATION.--Lat 48°23'00", long, 92°10'40", at Campbell's Camp, 2.5 miles west of outlet of Lac la Croix, Ontario	1924-75	5170	1	1170	886	759	665	569	509
				7	1190	900	768	670	570	510
				14	1230	923	784	680	574	511
				30	1350	985	824	707	590	521
				60	1520	1070	878	743	611	535
				90	1640	1120	918	772	633	553
				120	1740	1170	945	792	648	567
				183	1980	1290	1040	869	714	628
				365	3700	2690	2240	1910	1580	1380
05128500	Pike River near Embarrass LOCATION.--Lat 47°39'36", long 92°18'54", in NE¼NW¼ sec.25, T.60 N., R.16 W., St. Louis County, 5.4 miles west of Embarrass, Minn.	1955-64	115	1	4.91	2.31	1.26	--	--	--
				7	5.12	2.37	1.29	--	--	--
				14	5.28	2.49	1.38	--	--	--
				30	5.51	2.71	1.60	--	--	--
				60	5.89	3.12	2.09	--	--	--
				90	6.88	4.04	2.96	--	--	--
				120	9.43	6.26	5.01	--	--	--
				183	18.1	11.0	8.44	--	--	--
				365	74.0	62.3	56.6	--	--	--
05129000	Vermilion River below Vermilion Lake, near Tower LOCATION.--Lat 47°57'41", long 92°28'33", in SE¼SW¼ sec.2, T.63 N., R.17 W., St. Louis County, 14.2 miles northwest of Tower, Minn.	1913-17 1930-75	483	1	72.8	31.8	16.5	7.33	.52	0
				7	76.7	36.4	19.4	9.75	3.19	1.14
				14	80.7	38.3	22.4	13.3	6.78	4.09
				30	87.8	44.3	27.7	17.7	9.98	6.54
				60	99.2	53.2	35.3	24.0	14.8	10.4
				90	108	59.1	40.6	28.8	18.9	13.9
				120	118	64.3	44.9	32.6	22.2	16.9
				183	132	73.2	53.1	40.5	29.6	23.9
				365	303	223	189	165	141	127
05130500	Sturgeon River near Chisholm LOCATION.--Lat 47°40'25", long 92°54'00", in NE¼NW¼ sec.20, T.60 N., R.20 W., St. Louis County, 11.5 miles north of Chisholm, Minn.	1944-75	187	1	14.1	10.0	8.44	7.32	6.25	5.53
				7	14.7	10.4	8.71	7.51	6.36	5.69
				14	15.7	11.0	9.07	7.72	6.58	5.82
				30	16.4	11.7	9.83	8.50	7.21	6.45
				60	17.8	12.8	10.8	9.37	7.98	7.16
				90	19.8	14.2	12.0	10.4	8.90	8.02
				120	24.8	17.3	14.3	12.2	10.2	9.05
				183	43.0	25.4	19.3	15.4	11.7	9.95
				365	124	97.3	84.9	75.5	65.8	59.9
05131000	Dark River near Chisholm LOCATION.--Lat 47°41'27", long 92°49'15", in SW¼SW¼ sec.12, T.60 N., R.20 W., St. Louis County, 12.2 miles northeast of Chisholm, Minn.	1944-61 1967-75	50.6	1	6.50	3.61	2.42	1.56	.87	.57
				7	6.70	4.21	3.15	2.42	1.74	1.38
				14	7.05	4.64	3.60	2.87	2.18	1.79
				30	7.29	5.25	4.42	3.82	3.24	2.90
				60	7.91	5.88	5.07	4.50	3.94	3.61
				90	8.59	6.38	5.47	4.83	4.20	3.83
				120	9.94	7.31	6.25	5.49	4.76	4.33
				183	14.5	9.65	7.86	6.65	5.54	4.91
				365	37.2	30.0	26.7	24.1	21.5	19.9
(Natural flow affected by continually changing iron-mining activities)										
05131500	Little Fork River at Littlefork LOCATION.--Lat 48°23'55", long 93°33'56", in NW¼ sec.9, T.68 N., R.25 W., Koochiching County, at Littlefork, Minn.	1912-17 1930-75	a1730	1	67.4	47.3	39.6	34.3	29.2	26.4
				7	69.9	49.1	41.0	35.5	30.2	27.2
				14	73.0	51.0	42.7	37.1	31.8	28.8
				30	76.2	54.2	46.1	40.6	35.6	32.7
				60	84.5	61.1	52.8	47.3	42.3	39.5
				90	97.8	70.0	60.2	53.8	48.0	44.8
				120	134	92.4	77.5	67.7	58.8	53.9
				183	264	144	106	85.5	67.3	58.0
				365	983	675	544	452	362	311
05132000	Big Fork River at Big Falls LOCATION.--Lat 48°11'45", long 93°48'25", in sec.35, T.155 N., R.25 W., Koochiching County, at Big Falls, Minn.	1930-75	a1460	1	74.1	42.2	30.5	23.0	16.4	12.9
				7	78.3	45.9	33.9	26.1	19.2	15.5
				14	83.3	48.8	36.0	27.7	20.3	16.4
				30	89.6	51.9	38.2	29.3	21.4	17.3
				60	99.2	57.3	42.3	32.6	24.1	19.6
				90	114	65.2	47.8	36.6	26.8	21.6
				120	141	80.0	57.9	43.6	31.3	24.8
				183	238	118	79.2	55.8	36.8	27.6
				365	683	405	287	208	139	103

a Approximately.

Table 1.--Magnitude and frequency of annual low flows at continuous-record gaging stations.

Station No.	Station Name and Location	Record Used in Analysis	Drainage Area (mi <sup>2</sup> )	Period (consecutive days)	Annual low flow, in cubic feet per second, for indicated recurrence in years					
					2	5	10	20	50	100
LAKE OF THE WOODS BASIN--Continued										
05133500	Rainy River at Manitou Rapids LOCATION.--Lat 48°38'04", long 93°54'47", in sec.36, T.160 N., R.26 W., Koochiching County, at Manitou Rapids, Minn.	1934-75	a19400	1	4280	3270	2830	2510	2200	2010
				7	5720	4340	3700	3210	2710	2400
				14	6110	4730	4100	3630	3150	2860
				30	6680	5100	4380	3830	3280	2950
				60	7150	5440	4670	4100	3520	3170
				90	7620	5790	4970	4370	3760	3390
				120	8100	6060	5180	4540	3900	3510
				183	8890	6600	5670	5020	4380	4000
				365	13100	9940	8520	7470	6410	5760
				(Flow partly regulated by Rainy and Namakan Lakes)						
05134200	Rapid River near Baudette LOCATION.--Lat 48°32'10", long 94°33'45", in NE¼ sec.1, T.158 N., R.31 W., Lake of the Woods County, 12 miles south of Baudette, Minn.	1958-75	543	1	5.30	2.06	1.09	.59	--	--
				7	5.80	2.21	1.18	.65	--	--
				14	5.92	2.32	1.36	.85	--	--
				30	6.73	2.86	1.80	1.22	--	--
				60	7.55	3.75	2.68	2.07	--	--
				90	9.74	4.99	3.69	2.94	--	--
				120	17.6	8.35	5.66	4.12	--	--
				183	70.0	24.4	13.1	7.50	--	--
365	321	187	134	98.8	--	--				
05139500	West Branch Warroad River near Warroad LOCATION.--Lat 48°51'57", long 95°21'07", in SW¼NW¼ sec.7, T.162 N., R.36 W., Roseau County, 2.5 miles south of Warroad, Minn.	1947-75	162	1	.27	.04	0	0	0	0
				7	.48	.09	0	0	0	0
				14	.57	.18	.07	0	0	0
				30	.95	.33	.13	0	0	0
				60	1.49	.58	.31	.13	0	0
				90	2.04	.89	.54	.34	.20	.14
				120	2.66	1.39	.98	.74	.53	.43
				183	4.86	1.89	1.17	.82	.56	.45
				365	37.5	20.3	14.3	10.5	7.30	5.66
				05140000	Bulldog Run near Warroad LOCATION.--Lat 48°51'30", long 95°20'18", in SW¼SE¼ sec.7, T.162 N., R.36 W., Roseau County, 2.5 miles south of Warroad, Minn.	1947-51 1968-75	11.1	1	0	0
7	0	0	0					--	--	--
14	0	0	0					--	--	--
30	0	0	0					--	--	--
60	0	0	0					--	--	--
90	0	0	0					--	--	--
120	0	0	0					--	--	--
183	.02	0	0					--	--	--
365	2.60	.90	.44	--	--	--				
05140500	East Branch Warroad River near Warroad LOCATION.--Lat 48°51'29", long 95°18'40", in NE¼NE¼ sec.17, T.162 N., R.36 W., Roseau County, 2.5 miles south of Warroad, Minn.	1947-54 1968-75	45.8	1	.09	0	0	0	--	--
				7	.26	0	0	0	--	--
				14	.32	0	0	0	--	--
				30	.63	.01	0	0	--	--
				60	1.17	.26	0	0	--	--
				90	1.69	.58	0	0	--	--
				120	2.13	.86	.34	0	--	--
				183	3.92	1.15	.42	0	--	--
365	21.8	13.7	10.6	8.50	--	--				
MISSISSIPPI RIVER MAIN STEM										
05201500	Mississippi River at Winnibigoshish Dam, near Deer River LOCATION.--Lat 47°25'42", long 94°03'00", in SW¼ sec.25, T.146 N., R.27 W., Itasca County, 14 miles northwest of Deer River, Minn.	1961-75	1442	1	85.7	60.1	48.8	40.6	--	--
				7	90.3	63.7	52.5	44.4	--	--
				14	91.1	64.4	53.1	45.0	--	--
				30	109	75.3	61.3	51.5	--	--
				60	157	96.5	74.7	59.8	--	--
				90	207	118	87.3	66.9	--	--
				120	274	154	108	80.3	--	--
				183	369	199	138	97.7	--	--
				365	549	358	273	214	--	--
(Flow completely regulated)										
LEECH LAKE RIVER BASIN										
05206500	Leech Lake River at Federal Dam LOCATION.--Lat 47°14'45", long 94°13'12", in sec.29, T.144 N., R.28 W., Cass County, at Federal Dam, Minn.	1962-75	1163	1	76.6	55.3	45.0	37.3	--	--
				7	82.9	61.5	50.3	42.0	--	--
				14	85.1	62.8	51.7	43.4	--	--
				30	92.0	65.3	53.5	44.8	--	--
				60	112	68.3	54.7	45.2	--	--
				90	146	80.0	60.6	48.1	--	--
				120	187	103	74.7	57.4	--	--
				183	242	135	98.6	76.1	--	--
				365	453	296	229	181	--	--
(Flow completely regulated)										

a Approximately.

Table 1.--Magnitude and frequency of annual low flows at continuous-record gaging stations.

Station No.	Station Name and Location	Record Used in Analysis	Drainage Area (mi <sup>2</sup> )	Period (consecutive days)	Annual low flow, in cubic feet per second, for indicated recurrence in years							
					2	5	10	20	50	100		
MISSISSIPPI RIVER MAIN STEM												
05211000	Mississippi River at Grand Rapids LOCATION.--Lat 47°13'56", long 93°31'48", in SW¼NW¼ sec.21, T.55 N., R.25 W., Itasca County, at Grand Rapids, Minn.	1943-75	3370	1	282	114	58.0	23.6	0	0		
				7	342	144	83.0	49.9	26.5	16.8		
				14	419	190	115	73.1	41.6	27.8		
				30	570	259	156	96.8	53.4	34.6		
				60	660	352	246	179	123	94.5		
				90	768	427	303	225	157	122		
				120	890	505	358	262	180	137		
				183	1030	642	481	371	271	216		
				365	1380	918	702	546	398	315		
				(Flow completely regulated)								
		1961-75		1	317	187	142	114	--	--		
				7	379	210	152	116	--	--		
				14	435	232	163	121	--	--		
				30	520	266	181	128	--	--		
				60	623	321	217	153	--	--		
				90	728	381	259	183	--	--		
				120	842	449	304	212	--	--		
				183	968	582	429	326	--	--		
				365	1370	944	749	607	--	--		
				PRAIRIE RIVER BASIN								
05212700	Prairie River near Taconite LOCATION.--Lat 47°23'20", long 93°22'50", in NW¼SW¼ sec.27, T.57 N., R.24 W., Itasca County, 5 miles north of Taconite, Minn.	1969-75	a360	1	47.8	24.6	14.8	--	--	--		
				7	50.7	29.2	19.3	--	--	--		
				14	54.5	35.0	25.4	--	--	--		
				30	60.9	38.7	28.2	--	--	--		
				60	66.2	41.7	30.1	--	--	--		
				90	73.7	54.7	44.7	--	--	--		
				120	85.6	72.5	65.4	--	--	--		
				183	131	98.0	84.5	--	--	--		
				365	252	225	211	--	--	--		
				SWAN RIVER BASIN								
05216860	Swan River near Calumet LOCATION.--Lat 47°17'20", long 93°13'54", in SW¼ sec.35, T.56 N., R.23 W., Itasca County, 3.1 miles southeast of Calumet, Minn.	1965-75	114	1	8.63	4.62	3.09	--	--	--		
				7	9.46	5.14	3.47	--	--	--		
				14	10.8	5.66	3.77	--	--	--		
				30	13.0	6.43	4.15	--	--	--		
				60	18.5	9.18	5.85	--	--	--		
				90	23.1	12.5	8.47	--	--	--		
				120	27.4	15.4	10.6	--	--	--		
				183	35.3	17.8	11.5	--	--	--		
				365	67.3	49.2	40.7	--	--	--		
				(Natural flow affected by continually changing iron-mining activities)								
05217000	Swan River near Warba LOCATION.--Lat 47°06'40", long 93°15'50", in SE¼ sec.33, T.54 N., R.23 W., Itasca County, 1.2 miles south of Warba, Minn.	1955-69	254	1	34.3	24.9	20.3	16.9	--	--		
				7	35.4	25.8	21.3	17.9	--	--		
				14	36.3	26.7	22.2	18.7	--	--		
				30	38.8	29.0	24.5	21.2	--	--		
				60	43.6	32.7	27.6	23.9	--	--		
				90	46.4	34.4	29.3	25.5	--	--		
				120	49.5	37.3	32.3	28.8	--	--		
				183	56.6	41.4	36.1	32.6	--	--		
				365	122	96.1	85.4	77.6	--	--		
				(Natural flow affected by iron-mining activities)								
SANDY RIVER BASIN												
05219000	Sandy River at Sandy Lake Dam, at Libby LOCATION.--Lat 46°47'20", long 93°19'10", in sec.25, T.50 N., R.24 W., Aitkin County, at Libby, Minn.	1962-75	421	1	3.80	0	0	0	--	--		
				7	7.50	3.40	1.72	0	--	--		
				14	10.3	4.86	3.30	2.41	--	--		
				30	12.4	5.43	3.63	2.65	--	--		
				60	33.0	12.8	7.28	4.39	--	--		
				90	54.4	19.4	9.77	5.09	--	--		
				120	76.9	25.5	12.0	5.81	--	--		
				183	119	53.3	32.4	20.7	--	--		
				365	259	163	124	97.4	--	--		
				(Flow completely regulated)								
MISSISSIPPI RIVER MAIN STEM												
05220500	Mississippi River below Sandy River, near Libby LOCATION.--Lat 46°47'23", long 93°19'43", in SE¼NE¼ sec.25, T.50 N., R.24 W., Aitkin County, 0.8 mile northwest of Libby, Minn.	1932-75	a5060	1	559	277	185	130	85.0	63.3		
				7	661	351	244	178	123	94.4		
				14	716	383	268	197	137	106		
				30	808	439	310	229	161	126		
				60	962	517	360	262	179	138		
				90	1080	576	399	288	194	147		
				120	1180	637	441	318	215	163		
				183	1360	742	513	368	245	183		
				365	1900	1180	888	689	507	408		
				(Flow regulated by power plants and several lakes)								

a Approximately.

Table 1.--Magnitude and frequency of annual low flows at continuous-record gaging stations.

Station No.	Station Name and Location	Record Used in Analysis	Drainage Area (mi <sup>2</sup> )	Period (consecutive days)	Annual low flow, in cubic feet per second, for indicated recurrence in years					
					2	5	10	20	50	100
MISSISSIPPI RIVER MAIN STEM--Continued										
05227500	Mississippi River at Aitkin LOCATION.--Lat 46°32'26", long 93°42'26", in W½ sec.24, T.47 N., R.27 W., Aitkin County, at north edge of Aitkin, Minn.	1946-75	a6140	1	959	540	379	276	186	141
				7	1030	611	448	341	245	194
				14	1110	667	492	375	270	214
				30	1220	745	554	426	310	247
				60	1400	862	636	481	341	266
				90	1560	981	735	564	407	322
				120	1680	1080	827	649	484	392
				183	1880	1260	995	808	628	527
				365	2920	2080	1690	1400	1110	942
				(Flow partly regulated by power plants and several lakes)						
PINE RIVER BASIN										
05231000	Pine River at Cross Lake Dam, at Cross Lake LOCATION.--Lat 45°40'09", long 94°06'44", in SW¼NW¼ sec.21, T.137 N., R.27 W., Crow Wing County, at Cross Lake, Minn.	1943-75	562	1	39.9	18.2	10.8	6.65	3.59	2.29
				7	41.5	21.6	14.8	10.6	7.20	5.48
				14	47.9	25.5	17.4	12.3	8.10	6.01
				30	56.2	30.6	21.2	15.3	10.2	7.69
				60	74.1	44.6	33.5	26.2	19.6	16.1
				90	109	61.2	43.1	31.5	21.6	16.5
				120	125	71.9	52.3	39.5	28.3	22.5
				183	161	102	78.7	62.8	48.0	39.8
				365	247	172	140	117	94.0	81.0
				(Flow completely regulated)						
RABBIT RIVER BASIN										
05241500	Rabbit River near Crosby LOCATION.--Lat 46°30'55", long 93°57'35", in NE¼ sec.35, T.47 N., R.29 W., Crow Wing County, 2 miles north of Crosby, Minn.	1947-63	8.38	1	.60	0	0	0	--	--
				7	.72	0	0	0	--	--
				14	.80	0	0	0	--	--
				30	.86	.09	0	0	--	--
				60	1.04	.22	.06	0	--	--
				90	1.25	.29	.11	.05	--	--
				120	1.45	.38	.16	.07	--	--
				183	1.80	.52	.24	.12	--	--
				365	4.47	1.65	.85	.46	--	--
				(Flow affected by pumping from Rabbit Lake and underground mine)						
CROW WING RIVER BASIN										
05244000	Crow Wing River at Nimrod LOCATION.--Lat 46°38'25", long 94°52'44", in SE¼NW¼ sec.32, T.137 N., R.33 W., Wadena County, 0.2 mile north of Nimrod, Minn.	1940-75	a1010	1	232	171	140	116	90.8	76.1
				7	249	189	159	136	112	96.9
				14	258	197	166	142	118	103
				30	268	206	175	150	125	109
				60	282	218	186	161	135	119
				90	295	231	199	174	147	131
				120	313	246	212	185	157	140
				183	349	271	232	202	170	150
				365	484	378	324	281	236	209
				(Flow affected by natural storage in lakes)						
		1940-64		1	214	155	126	104	81.8	68.8
				7	225	171	144	124	104	91.4
				14	234	178	151	131	110	97.1
				30	245	188	160	139	117	103
				60	259	200	172	149	126	112
				90	271	212	184	161	138	123
				120	286	226	196	172	147	132
				183	320	248	213	187	159	142
				365	442	345	298	261	222	198
				(Flow affected by natural storage in lakes)						
05246000	Crow Wing River at Pillager LOCATION.--Lat 46°18'58", long 94°28'52", on line between SE¼ and SW¼ sec.20, T.133 N., R.30 W., Morrison County, 1 mile southwest of Pillager, Minn.	1911-13 1927-64	a3230	1	226	121	81.3	56.6	36.1	26.1
				7	280	162	115	83.7	56.5	42.5
				14	295	174	124	91.4	62.2	47.1
				30	314	189	137	102	71.1	54.6
				60	334	213	162	127	94.2	76.2
				90	357	233	180	143	109	89.5
				120	385	254	199	160	123	103
				183	457	293	228	182	140	117
				365	803	520	407	328	255	214
				(Flow affected by natural storage in lakes)						
		1940-64		1	291	188	142	110	80.2	63.8
				7	356	245	194	156	119	97.5
				14	370	261	210	173	136	115
				30	392	282	231	193	155	132
				60	412	305	257	221	185	164
				90	435	329	281	246	211	189
				120	465	354	306	270	235	214
				183	567	426	368	326	285	260
				365	1060	788	663	569	474	417
				(Flow affected by natural storage in lakes)						

a Approximately.

Table 1.--Magnitude and frequency of annual low flows at continuous-record gaging stations.

Station No.	Station Name and Location	Record Used in Analysis	Drainage Area (mi <sup>2</sup> )	Period (consecutive days)	Annual low flow, in cubic feet per second, for indicated recurrence in years					
					2	5	10	20	50	100
CROW WING RIVER BASIN--Continued										
05247000	Gull River at Gull Lake Dam, near Brainerd LOCATION.--Lat 46°24'40", long 94°21'12", in sec.20, T.134 N., R.29 W., Cass County, 8 miles northwest of Brainerd, Minn.	1961-75	287	1	15.6	8.39	5.66	3.93	--	--
				7	16.0	9.01	6.29	4.53	--	--
				14	17.3	9.50	6.66	4.85	--	--
				30	19.0	9.90	6.94	5.13	--	--
				60	25.3	14.1	10.6	8.51	--	--
				90	36.3	18.7	13.0	9.61	--	--
				120	46.2	21.7	14.2	9.79	--	--
				183	66.7	37.5	26.9	20.1	--	--
365	119	79.8	64.0	53.1	--	--				
MISSISSIPPI RIVER MAIN STEM										
05267000	Mississippi River near Royalton LOCATION.--Lat 45°51'40", long 92°21'30", in lot 2, sec.20, T.39 N., R.32 W., Morrison County, 4 miles northwest of Royalton, Minn.	1925-75	a11600	1	1190	693	504	380	271	214
				7	1540	938	696	533	386	307
				14	1650	994	735	562	407	324
				30	1750	1060	796	616	453	365
				60	1890	1150	861	667	492	398
				90	2040	1230	922	715	528	427
				120	2170	1330	1000	785	589	482
				183	2530	1540	1150	891	658	532
365	3990	2560	2000	1600	1240	1040				
(Flow partly regulated by power plants and several lakes)										
SAUK RIVER BASIN										
05270500	Sauk River near St. Cloud LOCATION.--Lat 45°33'35", long 94°14'00", in SE¼SW¼ sec.8, T.124 N., R.28 W., Stearns County, 3 miles west of St. Cloud, Minn.	1911-12 1931 1935-75	925	1	39.8	16.2	8.66	4.76	2.21	1.25
				7	45.6	21.3	12.4	7.35	3.73	2.25
				14	47.7	23.0	13.9	8.59	4.62	2.92
				30	51.3	25.0	15.6	10.0	5.76	3.84
				60	58.4	28.4	18.0	11.8	7.01	4.81
				90	64.4	31.5	20.5	13.9	8.69	6.22
				120	70.6	34.4	22.7	15.8	10.2	7.57
				183	83.9	41.5	28.1	20.2	13.8	10.6
365	227	116	78.0	54.6	35.4	26.1				
(Flow partly regulated by power plants and reservoirs)										
ELK RIVER BASIN										
05275000	Elk River near Big Lake LOCATION.--Lat 45°20'02", long 93°40'00", in NE¼SW¼ sec.23, T.33 N., R.27 W., Sherburne County, 4 miles east of Big Lake, Minn.	1913-17 1935-75	615	1	74.0	44.6	29.1	18.6	10.2	6.36
				7	78.0	47.6	31.3	20.3	11.2	7.07
				14	81.2	48.6	32.0	20.8	11.6	7.43
				30	83.8	51.5	35.3	24.1	14.5	9.85
				60	92.9	59.0	41.9	29.7	18.9	13.4
				90	101	65.3	47.5	34.8	23.1	17.0
				120	111	70.9	52.6	39.6	27.7	21.3
				183	127	83.0	64.9	52.2	40.3	33.6
365	235	157	125	103	81.5	69.3				
MISSISSIPPI RIVER MAIN STEM										
05275500	Mississippi River at Elk River LOCATION.--Lat 45°18'00", long 93°34'00", in SW¼ sec.34, T.33 N., R.26 W., Sherburne County, at Elk River, Minn.	1917-56	a14500	1	1600	961	725	571	432	357
				7	1920	1160	874	682	509	415
				14	2040	1230	925	721	537	438
				30	2130	1300	977	765	574	470
				60	2230	1360	1030	815	617	510
				90	2330	1430	1100	870	666	555
				120	2480	1560	1210	967	748	628
				183	2980	1840	1390	1090	811	661
365	4830	3110	2430	1970	1540	1300				
(Flow partly regulated by six reservoirs on headwaters)										
CROW RIVER BASIN										
05278000	Middle Fork Crow River near Spicer LOCATION.--Lat 45°15'45", long 94°48'10", in NE¼ sec.27, T.121 N., R.33 W., Kandiyohi County, 6.8 miles northeast of Spicer, Minn.	1950-75	179	1	1.50	.23	0	0	0	0
				7	1.70	.28	0	0	0	0
				14	2.20	.36	.02	0	0	0
				30	2.50	.45	.15	.03	0	0
				60	3.36	.77	.36	.19	.10	.06
				90	4.52	1.16	.57	.32	.17	.11
				120	5.47	1.44	.73	.42	.23	.16
				183	7.94	2.21	1.15	.67	.37	.25
365	40.3	17.7	10.9	7.10	4.24	2.94				
(Flow affected by natural storage in lakes)										

a Approximately.

Table 1.--Magnitude and frequency of annual low flows at continuous-record gaging stations.

Station No.	Station Name and Location	Record Used in Analysis	Drainage Area (mi <sup>2</sup> )	Period (consecutive days)	Annual low flow, in cubic feet per second, for indicated recurrence in years					
					2	5	10	20	50	100
CROW RIVER BASIN--Continued										
05278500	South Fork Crow River at Cosmos LOCATION.--Lat 44°56'05", long 94°40'20", in SW¼ sec.14, T.117 N., R.32 W., Meeker County, 1 mile east of Cosmos, Minn.	1946-64	221	1	0	0	0	0	--	--
				7	0	0	0	0	--	--
				14	0	0	0	0	--	--
				30	0	0	0	0	--	--
				60	.07	0	0	0	--	--
				90	.61	.01	0	0	--	--
				120	1.28	.08	0	0	--	--
				183	3.25	.32	.06	0	--	--
				365	25.7	11.6	7.82	5.67	--	--
05279000	South Fork Crow River near Mayer LOCATION.--Lat 44°54'20", long 93°53'05", in SW¼SW¼ sec.30, T.117 N., R.25 W., Carver County, 1.3 miles north of Mayer, Minn.	1935-75	a1170	1	1.30	0	0	0	0	0
				7	1.90	0	0	0	0	0
				14	2.00	0	0	0	0	0
				30	2.35	.11	0	0	0	0
				60	3.70	.32	.01	0	0	0
				90	6.60	.83	.21	.05	0	0
				120	8.82	1.79	.74	.35	.14	.08
				183	15.8	3.68	1.68	.87	.41	.25
				365	186	81.7	50.9	33.7	20.7	14.7
05280000	Crow River at Rockford LOCATION.--Lat 45°05'12", long 93°44'02", in sec.29, T.119 N., R.24 W., Hennepin County, at Rockford, Minn.	1914-17 1936-75	a2520	1	43.2	21.2	14.7	10.9	7.81	6.28
				7	45.9	22.4	15.6	11.6	8.42	6.82
				14	49.4	23.7	16.4	12.1	8.70	7.00
				30	53.6	25.8	17.8	13.2	9.45	7.60
				60	61.6	29.7	20.7	15.5	11.3	9.16
				90	70.2	33.1	22.8	17.0	12.3	10.0
				120	81.3	37.3	25.8	19.4	14.3	11.9
				183	110	47.2	31.3	22.6	16.0	12.8
				365	518	272	191	143	102	80.7
RUM RIVER BASIN										
05286000	Rum River near St. Francis LOCATION.--Lat 45°19'40", long 93°22'20", in SE¼ sec.19, T.33 N., R.24 W., Anoka County, 4 miles south of St. Francis, Minn.	1931 1934-75	a1360	1	137	78.8	58.3	45.2	33.8	27.7
				7	146	82.9	60.9	46.9	34.6	28.0
				14	151	85.2	62.2	47.5	34.8	28.1
				30	157	88.9	64.9	49.6	36.2	29.3
				60	169	96.8	71.3	55.0	40.7	33.1
				90	180	104	77.2	60.1	45.1	37.2
				120	196	112	82.6	64.3	48.5	39.8
				183	231	129	95.2	73.9	55.5	45.9
				365	528	304	219	164	116	90.4
MISSISSIPPI RIVER BASIN										
05288500	Mississippi River near Anoka LOCATION.--Lat 45°07'36", long 93°17'48", in SW¼ sec.12, T.119 N., R.21 W., Hennepin County, 6.5 miles downstream from Anoka, Minn.	1933-75	a19100	1	1990	1270	992	800	622	524
				7	2470	1550	1180	919	682	552
				14	2680	1650	1240	957	699	560
				30	2870	1770	1320	1020	745	596
				60	3100	1910	1430	1100	805	644
				90	3310	2030	1520	1170	858	688
				120	3500	2150	1620	1260	937	760
				183	3950	2360	1750	1340	977	783
				365	7070	4400	3320	2590	1910	1550
(Flow partly regulated by six reservoirs on headwaters)										
MINNEHAHA CREEK BASIN										
05289500	Minnehaha Creek at Minnetonka Mills LOCATION.--Lat 44°56'30", long 93°26'45", near center of E¼ sec.15, T.117 N., R.22 W., Hennepin County, at Minnetonka Mills, Minn.	1955-64	130	1	0	0	0	--	--	--
				7	0	0	0	--	--	--
				14	0	0	0	--	--	--
				30	0	0	0	--	--	--
				60	0	0	0	--	--	--
				90	.002	0	0	--	--	--
				120	.07	0	0	--	--	--
				183	.15	0	0	--	--	--
				365	5.97	1.04	.36	--	--	--
(Flow regulated by fixed-crest dam on Minnetonka Lake)										
MINNESOTA RIVER BASIN										
05290000	Little Minnesota River near Peever LOCATION.--Lat 45°36'05", long 96°52'18", in SW¼ sec.13, T.125 N., R.50 W., Roberts County, 5.3 miles northeast of Peever, S. Dak.	1941-75	447	1	.18	0	0	0	0	0
				7	.19	.04	0	0	0	0
				14	.23	.07	.03	.01	0	0
				30	.35	.13	.07	.04	.01	0
				60	.55	.19	.11	.06	.03	.02
				90	.79	.33	.21	.15	.10	.08
				120	1.10	.47	.32	.23	.16	.13
				183	1.27	.54	.36	.27	.20	.17
				365	30.2	14.1	9.52	6.88	4.78	3.76

a Approximately.

Table 1.--Magnitude and frequency of annual low flows at continuous-record gaging stations.

Station No.	Station Name and Location	Record Used in Analysis	Drainage Area (mi <sup>2</sup> )	Period (consecutive days)	Annual low flow, in cubic feet per second, for indicated recurrence in years					
					2	5	10	20	50	100
MINNESOTA RIVER BASIN--Continued										
05291000	Whetstone River near Big Stone City LOCATION.--Lat 45°17'32", long 96°29'14", in SE¼NW¼ sec.18, T.121 N., R.46 W., Grant County, 1.5 miles west of Big Stone City, S. Dak.	1932-75	389	1	1.03	.14	0	0	0	0
				7	1.27	.21	0	0	0	0
				14	1.38	.31	0	0	0	0
				30	1.88	.40	.03	0	0	0
				60	2.45	.79	.25	.03	0	0
				90	3.13	.99	.46	.22	.09	.04
				120	3.51	1.39	.83	.53	.32	.22
				183	3.96	1.58	.97	.65	.41	.30
				365	32.1	13.1	7.91	5.12	3.07	2.16
05292000	Minnesota River at Ortonville LOCATION.--Lat 45°17'44", long 96°26'38", in NE¼NW¼ sec.16, T.121 N., R.46 W., Big Stone County, at Ortonville, Minn.	1939-75	a1160	1	1.20	.29	.12	.05	.01	0
				7	1.39	.39	.20	.12	.06	.04
				14	1.76	.50	.26	.15	.08	.05
				30	2.20	.61	.31	.18	.09	.06
				60	2.76	.74	.39	.23	.13	.09
				90	3.63	.98	.51	.30	.17	.11
				120	5.16	1.40	.70	.40	.21	.14
				183	8.70	2.70	1.46	.88	.50	.34
				365	75.1	32.4	20.5	13.9	8.84	6.51
(Flow partly regulated by Big Stone Lake)										
05292500	Minnesota River near Odessa LOCATION.--Lat 45°15'22", long 96°20'20", in SW¼SW¼ sec.29, T.121 N., R.45 W., Big Stone County, 0.6 mile southwest of Odessa, Minn.	1946-63	a1340	1	1.56	.10	0	0	--	--
				7	1.94	.13	0	0	--	--
				14	2.10	.22	0	0	--	--
				30	2.70	.38	0	0	--	--
				60	3.58	.54	.09	0	--	--
				90	4.50	.96	.28	.03	--	--
				120	5.90	1.52	.71	.36	--	--
				183	9.64	3.55	2.18	1.49	--	--
				365	95.0	36.8	20.9	12.7	--	--
(Flow partly regulated by Big Stone Lake)										
05293000	Yellow Bank River near Odessa LOCATION.--Lat 45°13'35", long 96°21'12", in SE¼SE¼ sec.1, T.120 N., R.46 W., Lac qui Parle County, 2.5 miles southwest of Odessa, Minn.	1941-75	398	1	1.12	.27	.06	0	0	0
				7	1.24	.38	.14	0	0	0
				14	1.36	.47	.19	.01	0	0
				30	1.88	.59	.27	.07	0	0
				60	2.05	.75	.42	.26	.14	.10
				90	2.90	1.19	.73	.48	.30	.22
				120	4.08	1.67	1.03	.69	.44	.32
				183	4.86	2.03	1.32	.93	.63	.50
				365	47.0	23.7	16.3	11.8	8.06	6.22
05294000	Pomme de Terre River at Appleton LOCATION.--Lat 45°12'10", long 96°01'20", in SW¼NW¼ sec.14, T.120 N., R.43 W., Swift County, at Appleton, Minn.	1936-75	a905	1	5.90	1.70	.40	0	0	0
				7	6.84	1.92	.66	0	0	0
				14	7.58	2.40	.86	.12	0	0
				30	9.00	2.82	1.14	.15	0	0
				60	11.4	3.46	1.54	.21	0	0
				90	15.0	4.77	2.30	1.17	.50	.27
				120	18.8	7.92	4.81	3.11	1.85	1.29
				183	24.7	12.1	8.26	6.01	4.19	3.28
				365	80.9	45.4	33.7	26.3	20.0	16.6
(Flow affected by natural storage in lakes)										
05300000	Lac qui Parle River near Lac qui Parle LOCATION.--Lat 44°59'42", long 95°55'09", in SW¼SW¼ sec.27, T.118 N., R.42 W., Lac qui Parle County, 0.5 mile southwest of Lac qui Parle, Minn.	1913	983	1	.57	0	0	0	0	0
		1932		7	.76	0	0	0	0	0
		1935-75		14	.86	0	0	0	0	0
				30	1.28	0	0	0	0	0
				60	2.20	.07	0	0	0	0
				90	3.70	.35	.01	0	0	0
				120	5.80	.86	.08	0	0	0
				183	6.58	1.27	.15	0	0	0
				365	86.3	32.9	18.7	11.4	6.29	4.15
05301000	Minnesota River near Lac qui Parle LOCATION.--Lat 45°01'17", long 95°52'05", in NW¼NE¼ sec.24, T.118 N., R.42 W., Chippewa County, 2.4 miles northeast of Lac qui Parle, Minn.	1944-75	a4050	1	21.8	8.09	3.76	0	0	0
				7	25.4	13.2	8.72	5.55	0	0
				14	27.8	14.3	9.66	6.23	0	0
				30	32.7	16.8	11.3	7.01	0	0
				60	42.0	22.2	16.4	13.1	10.3	8.95
				90	51.9	26.2	18.8	14.5	11.0	9.19
				120	62.7	30.4	21.2	16.0	11.7	9.63
				183	88.7	42.5	29.3	21.6	15.5	12.4
				365	521	247	160	109	68.6	49.7
(Flow partly regulated by several lakes)										

a Approximately.

Table 1.--Magnitude and frequency of annual low flows at continuous-record gaging stations.

Station No.	Station Name and Location	Record Used in Analysis	Drainage Area (mi <sup>2</sup> )	Period (consecutive days)	Annual low flow, in cubic feet per second, for indicated recurrence in years					
					2	5	10	20	50	100
MINNESOTA RIVER BASIN--Continued										
05304500	Chippewa River near Milan LOCATION.--Lat 45°06'39", long 95°47'57", in SE¼SE¼ sec.16, T.119 N., R.41 W., Chippewa County, 5.5 miles east of Milan, Minn.	1939-75	a1870	1	9.68	3.63	2.02	1.14	0	0
				7	11.2	3.97	2.26	1.21	0	0
				14	12.0	4.24	2.39	1.34	0	0
				30	13.4	4.92	2.83	1.51	0	0
				60	16.2	6.44	3.88	2.36	0	0
				90	22.0	8.21	4.73	2.64	1.02	.29
				120	29.8	13.2	8.83	6.39	4.50	3.58
				183	44.9	20.6	14.1	10.4	7.53	6.11
				365	196	101	72.2	54.5	39.9	32.4
				(Flow regulated by several small lakes)						
05311000	Minnesota River at Montevideo LOCATION.--Lat 44°56'00", long 95°44'00", in NW¼NW¼ sec.19, T.117 N., R.40 W., Lac qui Parle County, at Montevideo, Minn.	1911-17 1930-75	a6180	1	47.4	10.5	2.16	.12	0	0
				7	52.7	11.8	2.62	.16	0	0
				14	57.5	13.7	3.79	.32	0	0
				30	62.5	15.9	5.02	1.41	.23	.06
				60	66.3	16.9	6.68	2.76	.90	.39
				90	78.9	20.5	8.28	3.50	1.18	.53
				120	93.5	24.6	10.2	4.43	1.55	.72
				183	117	32.9	14.8	7.12	2.88	1.50
				365	469	176	98.3	58.6	31.4	20.3
				(Flow regulated by several lakes)						
		1940-75		1	53.3	27.1	18.9	14.0	9.90	7.85
				7	58.2	31.5	23.3	18.2	14.0	11.8
				14	61.3	32.9	24.1	18.9	14.5	12.2
				30	67.8	36.2	26.6	20.8	15.9	13.4
				60	77.8	41.8	31.0	24.6	19.2	16.4
				90	90.5	46.8	34.0	26.4	20.2	17.0
				120	106	52.8	37.4	28.5	21.3	17.6
				183	138	64.0	43.5	31.8	22.5	17.9
				365	630	319	219	160	110	85.9
				05311400	South Branch Yellow Medicine River at Minneota LOCATION.--Lat 44°33'50", long 95°59'50", in SE¼ sec.26, T.113 N., R.43 W., Lyon County, 0.5 mile northwest of Minneota, Minn.	1961-75	a111	1	0	0
7	0	0	0					0	--	--
14	0	0	0					0	--	--
30	.03	0	0					0	--	--
60	.20	0	0					0	--	--
90	.43	.02	0					0	--	--
120	.71	.14	.05					.02	--	--
183	1.24	.25	.09					.04	--	--
365	16.3	7.06	4.38					2.89	--	--
05313500	Yellow Medicine River near Granite Falls LOCATION.--Lat 44°43'18", long 95°31'07", in SW¼ sec.35, T.115 N., R.39 W., Yellow Medicine County, 8 miles south of Granite Falls, Minn.	1936-38 1941-75	653					1	2.91	1.04
				7	3.03	1.14	.55	0	0	0
				14	3.21	1.18	.63	.27	0	0
				30	3.50	1.30	.71	.41	.21	.13
				60	4.05	1.92	1.31	.96	.68	.54
				90	5.15	2.56	1.84	1.42	1.08	.91
				120	6.65	3.10	2.13	1.58	1.15	.95
				183	7.98	3.39	2.24	1.62	1.21	1.00
				365	75.9	32.1	19.6	12.8	7.69	5.40
				05315000	Redwood River at Marshall LOCATION.--Lat 44°27'05", long 95°47'13", in SE¼NW¼ sec.4, T.111 N., R.41 W., Lyon County, at Marshall, Minn.	1941-75	307	1	.66	.01
7	.85	.06	0					0	0	0
14	.98	.23	.08					.03	0	0
30	1.54	.61	.35					.18	0	0
60	2.14	.84	.45					.24	.09	.04
90	2.97	1.60	1.18					.92	.71	.60
120	3.95	2.21	1.66					1.32	1.03	.88
183	4.88	2.68	2.02					1.62	1.28	1.11
365	35.9	18.0	12.4					8.97	6.19	4.81
05316500	Redwood River near Redwood Falls LOCATION.--Lat 44°31'25", long 95°10'20", in SE¼NE¼ sec.9, T.112 N., R.36 W., Redwood County, 3 miles west of Redwood Falls, Minn.	1912 1936-75	697					1	1.79	.60
				7	2.30	.67	.34	.16	.04	.02
				14	2.32	.75	.38	.20	.09	.05
				30	2.56	.93	.52	.32	.18	.12
				60	3.65	1.41	.82	.52	.30	.21
				90	5.37	2.02	1.16	.72	.41	.28
				120	7.89	2.92	1.64	.99	.54	.36
				183	10.6	3.78	2.08	1.23	.66	.42
				365	72.3	31.6	19.8	13.3	8.27	5.97

a Approximately.

Table 1.--Magnitude and frequency of annual low flows at continuous-record gaging stations.

Station No.	Station Name and Location	Record Used in Analysis	Drainage Area (mi <sup>2</sup> )	Period (consecutive days)	Annual low flow, in cubic feet per second, for indicated recurrence in years							
					2	5	10	20	50	100		
MINNESOTA RIVER BASIN--Continued												
05317000	Cottonwood River near New Ulm LOCATION.--Lat 44°17'40", long 94°26'40", in N½ sec.33, T.110 N., R.30 W., Brown County, 1.8 miles south of New Ulm, Minn.	1912-13 1936-38 1940-75	a1280	1	7.75	3.11	1.88	1.22	.74	.52		
				7	10.0	4.08	2.50	1.66	1.04	.75		
				14	10.9	4.48	2.77	1.85	1.16	.85		
				30	13.7	5.92	3.74	2.52	1.61	1.18		
				60	17.6	7.60	4.87	3.36	2.21	1.67		
				90	21.8	10.1	6.84	5.03	3.59	2.89		
				120	28.2	13.0	8.86	6.50	4.62	3.70		
				183	35.5	16.3	11.2	8.43	6.21	5.12		
				365	205	98.4	65.4	46.1	30.7	23.2		
				(Flow partly regulated by Cottonwood Lake)								
05317500	Minnesota River at Judson LOCATION.--Lat 44°12'00", long 94°11'36", in E½ sec.33, T.109 N., R.28 W., Blue Earth County, 0.2 mile northeast of Judson, Minn.	1940-50	a11200	1	154	69.2	41.0	--	--	--		
				7	158	72.4	43.1	--	--	--		
				14	162	75.6	45.9	--	--	--		
				30	171	81.4	50.4	--	--	--		
				60	192	92.0	60.2	--	--	--		
				90	227	111	73.3	--	--	--		
				120	262	125	81.3	--	--	--		
				183	317	139	87.4	--	--	--		
				365	1410	724	479	--	--	--		
				05318000	East Branch Blue Earth River near Bricelyn LOCATION.--Lat 43°37'50", long 93°47'25", in NE¼NE¼ sec.23, T.102 N., R.25 W., Faribault County, 5 miles northeast of Bricelyn, Minn.	1952-70	132	1	0	0	0	0
7	0	0	0					0	--	--		
14	0	0	0					0	--	--		
30	0	0	0					0	--	--		
60	.02	0	0					0	--	--		
90	.31	0	0					0	--	--		
120	.89	0	0					0	--	--		
183	2.30	0	0					0	--	--		
365	33.3	14.4	8.96					5.91	--	--		
05320000	Blue Earth River near Rapidan LOCATION.--Lat 44°05'44", long 94°06'33", in SE¼SE¼ sec.6, T.107 N., R.27 W., Blue Earth County, 2 miles west of Rapidan, Minn.	1941-45 1951-75	a2430					1	22.3	12.6	9.78	8.15
				7	42.3	21.2	14.5	10.4	7.16	5.53		
				14	48.0	24.3	16.6	11.9	8.09	6.19		
				30	55.8	30.0	21.3	15.9	11.4	9.01		
				60	72.6	37.8	26.7	19.9	14.2	11.3		
				90	98.3	46.6	31.3	22.4	15.3	11.8		
				120	122	55.2	36.1	25.2	16.8	12.7		
				183	178	73.3	44.5	28.9	17.4	12.8		
				365	756	411	286	207	139	106		
				(Flow partly regulated by Rapidan Reservoir)								
05320500	Le Sueur River near Rapidan LOCATION.--Lat 44°06'40", long 94°02'28", in SW¼ sec.35, T.108 N., R.27 W., Blue Earth County, 1.8 miles northeast of Rapidan, Minn.	1941-45 1951-75	a1100	1	15.8	7.40	4.63	3.02	1.79	1.23		
				7	17.1	7.93	4.91	3.17	1.84	1.25		
				14	18.3	8.41	5.17	3.32	1.92	1.29		
				30	21.8	9.35	5.71	3.71	2.21	1.54		
				60	28.1	11.9	7.25	4.72	2.84	2.00		
				90	36.1	14.6	8.94	5.88	3.63	2.61		
				120	46.2	18.1	11.0	7.27	4.55	3.32		
				183	66.1	23.1	13.5	8.75	5.39	3.92		
				365	360	174	113	77.7	49.3	35.8		
				05325000	Minnesota River at Mankato LOCATION.--Lat 44°09'54", long 94°00'45", in NE¼NE¼ sec.13, T.108 N., R.27 W., Blue Earth County, in Mankato, Minn.	1905 1911-17 1930-75	a14900	1	178	93.8	66.3	49.4
7	195	103	72.5					53.9	38.3	30.4		
14	204	107	75.8					56.4	40.2	31.9		
30	220	115	81.7					61.2	44.0	35.2		
60	259	132	92.1					68.5	48.9	39.0		
90	312	154	105					76.7	53.5	42.0		
120	368	171	114					80.8	54.8	42.2		
183	481	212	138					95.7	63.4	48.0		
365	2050	1060	733					537	375	293		
1936-75		1	203			112		81.6	62.5	46.1	37.6	
		7	226			123		88.8	67.3	48.8	39.3	
		14	236			128		92.2	69.9	50.9	41.1	
		30	256			138		99.6	75.8	55.6	45.2	
		60	305			160		114	85.6	62.2	50.3	
		90	370			187		129	95.0	66.7	52.5	
		120	435			209		142	102	70.7	55.2	
		183	590			264		170	117	76.0	56.6	
		365	2520			1420		1030	786	570	457	

a Approximately.

Table 1.--Magnitude and frequency of annual low flows at continuous-record gaging stations.

Station No.	Station Name and Location	Record Used in Analysis	Drainage Area (mi <sup>2</sup> )	Period (consecutive days)	Annual low flow, in cubic feet per second, for indicated recurrence in years					
					2	5	10	20	50	100
MINNESOTA RIVER BASIN--Continued										
05330000	Minnesota River near Jordan LOCATION.--Lat 44°41'35", long 93°38'30", in NW¼SW¼ sec.7, T.114 N., R.23 W., Carver County, 1.5 miles northwest of Jordan, Minn.	1936-75	a16200	1	325	196	151	122	95.6	81.6
				7	350	216	168	137	110	94.6
				14	360	221	173	141	113	97.3
				30	384	234	182	149	119	100
				60	442	257	195	157	120	102
				90	518	286	210	164	124	103
				120	596	316	228	175	130	107
				183	779	388	268	197	139	110
				365	2950	1710	1260	973	720	586
				05330900	Nine Mile Creek at Bloomington LOCATION.--Lat 44°48'46", long 93°18'07", in NW¼ sec.21, T.27 N., R.24 W., Hennepin County, at Bloomington, Minn.	1964-73	a39	1	3.11	1.88
7	3.33	2.07	1.59					--	--	--
14	3.58	2.20	1.66					--	--	--
30	3.90	2.34	1.75					--	--	--
60	4.52	2.50	1.78					--	--	--
90	5.11	2.79	1.98					--	--	--
120	5.99	3.21	2.27					--	--	--
183	8.39	4.37	3.06					--	--	--
365	15.7	10.6	8.65					--	--	--
MISSISSIPPI RIVER MAIN STEM										
05331000	Mississippi River at St. Paul LOCATION.--Lat 44°56'40", long 93°05'20", in SE¼NE¼ sec.6, T.28 N., R.22 W., Ramsey County, at St. Paul, Minn.	1895 1897 1901-05 1907-75	a36800	1	--	--	--	--	--	--
				7	2750	1810	1430	1180	935	799
				14	2900	1900	1510	1230	979	836
				30	3050	2010	1610	1320	1060	913
				60	3240	2150	1720	1430	1160	1000
				90	3490	2310	1850	1540	1250	1080
				120	3850	2540	2030	1680	1360	1180
				183	4770	3020	2340	1890	1470	1240
				365	9250	5860	4550	3660	2850	2390
				(Flow partly regulated by reservoirs on headwaters and by power plants; add diversions through metro sewage disposal plant to current flows before comparing with values given above and below)						
		1933-75		1	--	--	--	--	--	--
				7	2870	1770	1340	1050	788	643
				14	3080	1890	1420	1110	819	663
				30	3320	2050	1550	1210	900	731
				60	3590	2220	1680	1320	987	807
				90	3860	2380	1810	1420	1070	873
				120	4140	2530	1920	1510	1140	935
				183	4790	2810	2080	1610	1190	962
				365	10100	6130	4580	3540	2600	2100
				ST. CROIX RIVER BASIN						
05333500	St. Croix River near Danbury LOCATION.--Lat 46°04'30", long 92°14'50", in sec.33, T.42 N., R.15 W., Burnett County, 10 miles northeast of Danbury, Wis.	1915-75	1590	1	696	573	514	468	420	389
				7	725	601	542	497	448	418
				14	744	616	555	506	455	423
				30	774	642	578	528	475	442
				60	814	684	621	573	521	488
				90	849	716	652	601	548	514
				120	891	750	682	629	573	537
				183	961	799	728	674	619	586
				365	1280	1070	964	886	805	754
				05336000	St. Croix River near Grantsburg LOCATION.--Lat 45°55'25", long 92°38'20", near center of sec.30, T.40 N., R.18 W., Burnett County, 10 miles north of Grantsburg, Wis.	1925-70	a2820	1	1050	821
7	1110	878	770					687	602	549
14	1140	903	792					707	618	563
30	1180	941	828					740	648	591
60	1250	1020	913					830	742	688
90	1330	1090	975					889	800	745
120	1420	1160	1030					941	843	783
183	1560	1270	1150					1070	982	931
365	2250	1810	1610					1450	1300	1200
05336200	Glaisby Brook near Kettle River LOCATION.--Lat 46°27'19", long 92°51'34", in SE¼NW¼ sec.22, T.46 N., R.20 W., Carlton County, 2.4 miles south of Kettle River, Minn.	1961-70	24.2					1	.20	.09
				7	.30	.16	.12	--	--	--
				14	.37	.19	.14	--	--	--
				30	.49	.25	.19	--	--	--
				60	.70	.32	.22	--	--	--
				90	.81	.37	.25	--	--	--
				120	.90	.43	.32	--	--	--
				183	1.60	.54	.34	--	--	--
				365	17.9	11.1	8.60	--	--	--

a Approximately.

Table 1.--Magnitude and frequency of annual low flows at continuous-record gaging stations.

Station No.	Station Name and Location	Record Used in Analysis	Drainage Area (mi <sup>2</sup> )	Period (consecutive days)	Annual low flow, in cubic feet per second, for indicated recurrence in years					
					2	5	10	20	50	100
ST. CROIX RIVER BASIN--Continued										
05336700	Kettle River below Sandstone LOCATION.--Lat 46°06'20", long 92°51'50", in NW¼SW¼ sec.22, T.42 N., R.20 W., Pine County, 1.8 miles south of Sandstone, Minn.	1969-75	863	1	131	94.0	77.0	--	--	--
				7	135	97.9	78.4	--	--	--
				14	140	102	81.6	--	--	--
				30	148	111	91.2	--	--	--
				60	159	126	111	--	--	--
				90	171	137	122	--	--	--
				120	202	164	146	--	--	--
				183	416	278	221	--	--	--
				365	736	603	558	--	--	--
05338500	Snake River near Pine City LOCATION.--Lat 45°50'30", long 92°56'00", in SE¼NW¼ sec.26, T.39 N., R.21 W., Pine County, 1.5 miles northeast of Pine City, Minn.	1915-17	958	1	56.9	42.3	36.9	33.2	29.8	27.9
		1953-75		7	64.8	47.2	40.3	35.4	30.8	28.1
		14		69.5	49.6	41.8	36.4	31.2	28.2	
		30		76.7	54.3	45.5	39.4	33.5	30.1	
		60		86.6	60.9	51.0	44.2	37.8	34.2	
		90		99.0	68.6	57.8	50.6	44.1	40.4	
		120		112	77.7	66.5	59.6	53.5	50.3	
		183		155	95.2	77.2	66.4	57.2	52.4	
				365	550	353	275	222	173	145
05339500	St. Croix River near Rush City LOCATION.--Lat 45°42'15", long 92°52'20", in SW¼ sec.8, T.37 N., R.20 W., Chisago County, 5 miles east of Rush City, Minn.	1924-61	a5120	1	1280	954	814	711	609	548
				7	1360	1040	894	788	682	617
				14	1390	1060	914	804	693	627
				30	1440	1110	955	842	727	658
				60	1540	1210	1060	943	823	749
				90	1640	1290	1130	1010	882	805
				120	1740	1370	1210	1080	954	875
				183	1970	1520	1340	1210	1090	1020
				365	3380	2510	2150	1890	1640	1490
05340000	Sunrise River near Stacy LOCATION.--Lat 45°24'30", long 92°55'55", in NW¼NW¼ sec.26, T.34 N., R.21 W., Chisago County, 2.5 miles northeast of Stacy, Minn.	1950-65	167	1	11.5	6.78	5.10	4.02	--	--
				7	12.5	7.60	5.89	4.77	--	--
				14	13.3	8.74	7.14	6.10	--	--
				30	14.3	9.36	7.68	6.58	--	--
				60	16.5	10.8	8.86	7.56	--	--
				90	19.2	12.5	10.1	8.52	--	--
				120	21.9	14.1	11.3	9.42	--	--
				183	26.6	16.6	13.0	10.7	--	--
				365	55.9	36.9	29.4	24.3	--	--
05340050	Sunrise River near Lindstrom LOCATION.--Lat 45°27'00", long 92°53'10", in SW¼NE¼ sec.7, T.34 N., R.20 W., Chisago County, 4.5 miles northwest of Lindstrom, Minn.	1967-75	231	1	11.1	6.79	5.44	--	--	--
				7	12.1	7.25	5.71	--	--	--
				14	13.3	8.10	6.39	--	--	--
				30	15.0	9.55	7.68	--	--	--
				60	22.6	14.6	11.5	--	--	--
				90	26.0	17.5	14.6	--	--	--
				120	31.6	20.3	16.6	--	--	--
				183	44.4	26.1	19.6	--	--	--
				365	84.3	66.1	57.1	--	--	--
(Flow partly regulated by Minnesota Game and Fish Wildlife Refuge ponds)										
05340500	St. Croix River at St. Croix Falls LOCATION.--Lat 45°24'25", long 92°38'49", in NW¼ sec.30, T.34 N., R.18 W., Polk County, at St. Croix Falls, Wis.	1903	a5930	1	819	407	265	179	111	78.7
		1905		7	1490	1210	1080	989	893	835
		1911-75		14	1580	1270	1130	1020	910	843
		30		1670	1340	1190	1070	946	870	
		60		1780	1440	1290	1170	1050	981	
		90		1860	1510	1350	1240	1120	1050	
		120		1970	1590	1430	1320	1200	1130	
		183		2250	1750	1570	1440	1320	1250	
				365	3860	2880	2470	2180	1890	1720
(Flow partly regulated by power plant)										
MISSISSIPPI RIVER MAIN STEM										
05344500	Mississippi River at Prescott LOCATION.--Lat 44°44'45", long 92°48'00", in sec.9, T.26 N., R.20 W., Pierce County, at Prescott, Wis.	1930-75	a44800	1	4450	3100	2520	2110	1710	1480
				7	5290	3790	3160	2710	2260	2000
				14	5640	3980	3280	2770	2270	2010
				30	5950	4220	3480	2950	2430	2130
				60	6280	4480	3720	3190	2670	2360
				90	6630	4720	3940	3380	2850	2540
				120	7100	5040	4220	3640	3090	2770
				183	8070	5520	4540	3870	3240	2880
				365	15000	10000	8010	6600	5270	4510
(Flow partly regulated by reservoirs, navigation dams, and power plants)										

a Approximately.

Table 1.--Magnitude and frequency of annual low flows at continuous-record gaging stations.

Station No.	Station Name and Location	Record Used in Analysis	Drainage Area (mi <sup>2</sup> )	Period (consecutive days)	Annual low flow, in cubic feet per second, for indicated recurrence in years					
					2	5	10	20	50	100
CANNON RIVER BASIN										
05353800	Straight River near Faribault LOCATION.--Lat 44°15'29", long 93°13'51", in W½SE¼ sec.9, T.109 N., R.20 W., Rice County, 3.2 miles southeast of Faribault, Minn.	1967-75	442	1	27.5	16.8	12.2	--	--	--
				7	28.5	17.4	13.4	--	--	--
				14	29.3	17.5	13.6	--	--	--
				30	32.8	17.6	13.8	--	--	--
				60	40.2	20.2	14.3	--	--	--
				90	47.8	24.0	17.0	--	--	--
				120	55.6	27.7	19.6	--	--	--
				183	74.6	32.7	21.8	--	--	--
			365	236	176	151	--	--	--	
05355200	Cannon River at Welch LOCATION.--Lat 44°33'50", long 92°43'55", in NW¼SW¼ sec.27, T.113 N., R.16 W., Goodhue County, at Welch, Minn.	1912-13 1932-71	a1320	1	72.5	49.4	39.6	32.6	25.8	22.0
				7	101	72.7	61.6	53.9	46.6	42.3
				14	109	80.6	70.0	62.7	55.9	52.0
				30	118	86.9	75.3	67.4	60.0	55.7
				60	135	97.6	83.2	73.3	63.9	58.5
				90	150	105	87.7	76.2	65.5	59.4
				120	161	110	92.1	79.8	68.5	62.2
				183	182	122	102	88.6	76.7	70.1
			365	422	278	227	193	162	144	
ZUMBRO RIVER BASIN										
05373000	South Fork Zumbro River near Rochester LOCATION.--Lat 44°04'00", long 92°27'55", in SE¼ sec.14, T.107 N., R.14 W., Olmsted County, 1.6 miles north of Rochester, Minn.	1953-75	304	1	28.4	21.4	18.9	17.2	15.7	--
				7	32.2	24.3	21.4	19.5	17.8	--
				14	33.2	24.8	21.9	20.1	18.5	--
				30	36.1	26.5	23.2	21.1	19.2	--
				60	39.4	28.6	24.9	22.6	20.4	--
				90	44.5	31.0	26.4	23.5	20.8	--
				120	48.0	33.7	29.3	26.7	24.5	--
				183	55.2	36.4	30.6	27.1	24.8	--
			365	137	88.2	69.7	57.2	45.7	--	
(Flow partly regulated by Silver Lake and sewage-plant effluent)										
05374000	Zumbro River at Zumbro Falls LOCATION.--Lat 44°17'12", long 92°25'56", in sec.36, T.110 N., R.14 W., Wabasha County, at Zumbro Falls, Minn.	1911-17 1931-75	a1130	1	85.6	63.6	54.9	48.9	43.1	39.8
				7	114	87.0	77.1	70.5	64.5	61.2
				14	123	93.2	82.4	75.2	68.6	64.9
				30	135	102	89.5	81.2	73.5	69.2
				60	151	113	99.6	90.4	81.9	77.1
				90	166	125	110	101	91.7	86.8
				120	178	133	117	107	98.7	94.0
				183	202	146	127	115	105	99.1
				365	468	323	265	225	186	164
		1939-56		1	92.9	72.5	63.5	57.0	--	--
				7	125	97.3	86.4	78.7	--	--
				14	133	104	92.7	85.0	--	--
				30	142	111	99.8	91.8	--	--
				60	160	124	110	99.4	--	--
				90	176	135	119	107	--	--
				120	183	140	123	111	--	--
				183	209	147	130	118	--	--
				365	486	329	266	223	--	--
05374500	Zumbro River at Theilman LOCATION.--Lat 44°17'15", long 92°11'25", in sec.36, T.110 N., R.12 W., Wabasha County, at Theilman, Minn.	1939-56	a1320	1	141	111	96.6	86.1	--	--
				7	170	139	127	118	--	--
				14	179	144	130	120	--	--
				30	192	153	137	125	--	--
				60	214	167	147	133	--	--
				90	234	183	160	143	--	--
				120	246	191	169	153	--	--
				183	278	207	179	160	--	--
			365	585	415	344	294	--	--	
WHITENWATER RIVER BASIN										
05376000	North Fork Whitewater River near Elba LOCATION.--Lat 44°05'30", long 92°03'57", in sec.7, T.107 N., R.10 W., Winona County, 2.4 miles west of Elba, Minn.	1969-75	101	1	20.3	15.3	13.4	--	--	--
				7	21.3	15.9	13.8	--	--	--
				14	21.7	16.7	14.6	--	--	--
				30	22.7	17.1	14.9	--	--	--
				60	23.5	18.0	15.8	--	--	--
				90	24.3	18.4	16.0	--	--	--
				120	25.7	19.4	16.9	--	--	--
				183	27.9	21.0	18.0	--	--	--
			365	44.5	30.3	24.7	--	--	--	

a Approximately.

Table 1.--Magnitude and frequency of annual low flows at continuous-record gaging stations.

Station No.	Station Name and Location	Record Used in Analysis	Drainage Area (mi <sup>2</sup> )	Period (consecutive days)	Annual low flow, in cubic feet per second, for indicated recurrence in years						
					2	5	10	20	50	100	
WHITEWATER RIVER BASIN--Continued											
5376500	South Fork Whitewater River near Altura LOCATION.--Lat 44°04'10", long 91°58'49", in SE¼ sec.14, T.107 N., R.10 W., Winona County, 2 miles west of Altura, Minn.	1941-71	76.8	1	10.6	9.23	8.57	8.05	7.49	7.12	
				7	10.8	9.45	8.79	8.27	7.71	7.36	
				14	11.0	9.71	9.09	8.61	8.10	7.77	
				30	11.3	10.0	9.48	9.06	8.63	8.36	
				60	12.0	10.6	9.88	9.38	8.87	8.56	
				90	12.6	11.0	10.2	9.70	9.16	8.84	
				120	13.2	11.4	10.7	10.2	9.75	9.48	
				183	14.7	12.3	11.3	10.5	9.76	9.30	
				365	26.2	19.4	16.5	14.5	12.4	11.2	
5377500	Whitewater River at Beaver LOCATION.--Lat 44°09'28", long 92°00'18", in sec.15, T.108 N., R.10 W., Winona County, 0.5 mile northeast of Beaver, Minn.	1941-56	288	1	70.3	56.6	49.1	43.0	--	--	
				7	72.5	59.8	52.9	47.3	--	--	
				14	73.2	60.8	54.2	48.9	--	--	
				30	75.6	64.2	58.4	53.6	--	--	
				60	78.2	67.9	62.7	58.6	--	--	
				90	80.6	70.1	64.7	60.3	--	--	
				120	82.3	71.9	66.6	62.4	--	--	
				183	88.0	75.0	68.7	63.7	--	--	
				365	131	109	98.7	91.3	--	--	
MISSISSIPPI RIVER MAIN STEM											
5378500	Mississippi River at Winona LOCATION.--Lat 44°03'20", long 91°38'15", in sec.23, T.107 N., R.7 W., Winona County, at Winona, Minn.	1930-75	a59200	1	8370	5900	4770	3940	3120	2640	
				7	9620	7130	5950	5070	4170	3640	
				14	10100	7700	6620	5810	5000	4500	
				30	10800	8190	7050	6210	5370	4860	
				60	11700	8900	7710	6850	5990	5470	
				90	12400	9410	8150	7240	6330	5790	
				120	13100	9830	8490	7540	6600	6050	
				183	14400	10600	9040	7980	6960	6370	
				365	24800	18300	15500	13500	11600	10400	
(Flow partly regulated by reservoirs, navigation dams, and power plants)											
GILMORE CREEK BASIN											
5379000	Gilmore Creek at Winona LOCATION.--Lat 44°02'40", long 91°41'25", in SE¼NW¼ sec.29, T.107 N., R.7 W., Winona County, at west edge of Winona, Minn.	1941-63	8.95	1	2.21	1.64	1.34	1.10	.86	--	
				7	2.40	1.79	1.46	1.21	.95	--	
				14	2.49	1.89	1.58	1.33	1.08	--	
				30	2.64	2.16	1.92	1.73	1.52	--	
				60	2.84	2.40	2.18	2.01	1.82	--	
				90	2.94	2.52	2.31	2.14	1.97	--	
				120	3.02	2.61	2.41	2.26	2.09	--	
				183	3.15	2.74	2.53	2.37	2.20	--	
				365	3.70	3.21	2.96	2.76	2.53	--	
MISSISSIPPI RIVER MAIN STEM											
5383500	Mississippi River at La Crosse LOCATION.--Lat 43°48'45", long 91°15'25", in sec.31, T.16 N., R.7 W., La Crosse County, at La Crosse, Wis.	1931-55	a62800	1	9120	6520	5400	4580	3780	3310	
				7	10100	7240	5990	5070	4170	3650	
				14	10600	7780	6600	5750	4910	4410	
				30	11200	8300	7080	6200	5340	4820	
				60	12100	9120	7850	6930	6020	5480	
				90	12700	9680	8420	7510	6610	6070	
				120	13200	10000	8660	7700	6760	6200	
				183	14700	10800	9200	8110	7070	6470	
				365	26300	19100	16000	13800	11700	10500	
(Flow partly regulated by reservoirs, navigation dams, and power plants)											
ROOT RIVER BASIN											
5384000	Root River near Lanesboro LOCATION.--Lat 43°44'58", long 91°58'43", in sec.1, T.103 N., R.10 W., Fillmore County, 2.5 miles northeast of Lanesboro, Minn.	1912-14	615	1	89.0	64.3	53.7	46.0	38.5	34.1	
				7	92.6	69.4	60.0	53.4	47.0	43.3	
		1942-75		14	95.2	72.4	63.3	57.0	50.9	47.3	
				30	102	77.4	67.6	60.6	53.9	49.9	
				60	112	85.6	74.6	66.7	58.8	54.1	
				90	122	91.3	78.6	69.4	60.4	55.1	
				120	129	95.3	82.2	73.2	64.5	59.6	
				183	149	103	85.9	74.5	64.8	59.8	
				365	309	210	169	141	114	98.1	
5384500	Rush Creek near Rushford LOCATION.--Lat 43°50'00", long 91°46'40", on line between secs.3 and 10, T.104 N., R.8 W., Fillmore County, 1.5 miles northwest of Rushford, Minn.	1944-75	129	1	30.1	25.1	22.9	21.3	19.8	18.8	
				7	31.1	27.2	25.9	25.0	24.2	23.7	
				14	31.7	28.4	27.2	26.5	26.0	25.7	
				30	33.0	29.4	28.2	27.4	26.8	26.5	
				60	34.4	31.2	30.2	29.6	29.2	29.0	
				90	35.3	32.2	31.3	30.7	30.4	30.2	
				120	35.8	32.6	31.7	31.1	30.7	30.5	
				183	37.8	33.6	32.1	31.2	30.8	30.6	
				365	51.7	43.1	39.6	37.1	34.7	33.3	

a Approximately.

Table 1.--Magnitude and frequency of annual low flows at continuous-record gaging stations.

Station No.	Station Name and Location	Record Used in Analysis	Drainage Area (mi <sup>2</sup> )	Period (consecutive days)	Annual low flow, in cubic feet per second, for indicated recurrence in years					
					2	5	10	20	50	100
ROOT RIVER BASIN--Continued										
05385000	Root River near Houston LOCATION.--Lat 43°46'05", long 91°35'11", in sec.32, T.104 N., R.6 W., Houston County, 1 mile west of Houston, Minn.	1911-17 1931-75	a1270	1	244	180	151	128	106	92.7
				7	249	196	175	159	144	134
		14		252	206	189	177	166	160	
		30		265	221	205	194	184	179	
		60		289	238	219	205	193	186	
		90		309	252	230	214	199	190	
		120		324	262	238	221	206	196	
		183		361	280	249	230	212	202	
		365		622	465	400	352	306	278	
05385500	South Fork Root River near Houston LOCATION.--Lat 43°44'19", long 91°33'50", in NE¼SW¼ sec.9, T.103 N., R.6 W., Houston County, 1.5 miles south of Houston, Minn.	1954-75	275	1	72.4	59.6	54.3	50.5	46.8	--
				7	75.3	61.7	56.0	51.9	47.7	--
				14	76.9	63.1	57.2	53.0	48.7	--
				30	79.5	64.7	58.3	53.6	48.9	--
				60	82.4	67.4	61.1	56.6	52.0	--
				90	84.5	70.1	64.2	60.0	55.9	--
				120	87.4	72.5	66.4	62.0	57.7	--
				183	92.0	75.5	68.7	63.7	58.9	--
				365	126	101	90.7	83.0	75.3	--
05386000	Root River below South Fork near Houston LOCATION.--Lat 43°46'13", long 91°32'03", in SE¼NE¼ sec.34, T.104 N., R.6 W., Houston County, 1.5 miles northeast of Houston, Minn.	1939-61	a1560	1	310	254	230	211	192	--
				7	335	274	246	224	201	--
				14	347	284	255	232	208	--
				30	370	302	268	242	214	--
				60	401	321	282	251	219	--
				90	420	334	292	259	224	--
				120	437	346	303	269	234	--
				183	478	365	315	278	241	--
				365	790	597	512	449	386	--
IOWA RIVER BASIN										
05457000	Cedar River near Austin LOCATION.--Lat 43°38'10", long 92°58'20", in NE¼SE¼ sec.15, T.102 N., R.18 W., Mower County, 1.1 miles south of Austin, Minn.	1911-14 1946-75	425	1	38.5	23.2	15.1	9.65	4.20	0
				7	40.9	28.6	22.9	18.8	14.7	12.4
		14		41.4	30.6	25.9	22.5	19.1	17.1	
		30		43.6	32.4	28.0	24.9	21.9	20.1	
		60		48.1	36.2	31.6	28.5	25.5	23.9	
		90		53.3	39.3	34.3	30.9	27.9	26.2	
		120		56.2	41.1	36.3	33.4	30.9	29.6	
		183		65.4	44.1	37.6	33.7	30.4	28.8	
		365		163	101	78.1	62.8	48.9	41.2	
DES MOINES RIVER BASIN										
05476000	Des Moines River at Jackson LOCATION.--Lat 43°37'10", long 94°59'10", in SE¼SW¼ sec.24, T.102 N., R.35 W., Jackson County, at Jackson, Minn.	1936-75	a1220	1	3.15	.17	0	0	0	0
				7	3.92	.36	0	0	0	0
				14	5.24	.50	0	0	0	0
				30	7.00	.66	.01	0	0	0
				60	10.8	1.55	.24	0	0	0
				90	15.0	2.50	.74	.17	0	0
				120	18.8	4.32	1.70	.60	0	0
				183	28.2	5.85	2.10	.71	0	0
				365	209	92.7	58.1	38.6	23.7	16.9
(Flow partly regulated by several lakes)										
05476500	Des Moines River at Estherville LOCATION.--Lat 43°23'51", long 94°50'38", in SW¼SE¼ sec.10, T.99 N., R.34 W., Emmett County, at Estherville, Iowa	1953-73	1372	1	7.05	1.86	.81	.38	.15	--
				7	8.44	2.64	1.29	.67	.30	--
				14	10.0	3.15	1.53	.79	.35	--
				30	12.3	3.99	1.95	1.01	.45	--
				60	17.2	5.52	2.68	1.37	.59	--
				90	23.1	7.25	3.47	1.76	.76	--
				120	29.7	9.28	4.43	2.24	.96	--
				183	44.0	12.4	5.31	2.38	.86	--
				365	235	102	62.6	40.8	24.6	--
BIG SIOUX RIVER BASIN										
06483270	Rock River at Rock Rapids LOCATION.--Lat 43°26'13", long 96°09'58", in NE¼SW¼ sec.33, T.100 N., R.45 W., Lyon County, at Rock Rapids, Iowa	1962-74	788	1	4.29	2.08	1.38	--	--	--
				7	5.19	2.44	1.59	--	--	--
				14	5.90	2.82	1.83	--	--	--
				30	7.58	3.75	2.49	--	--	--
				60	10.5	5.34	3.63	--	--	--
				90	15.0	7.67	5.21	--	--	--
				120	19.7	10.3	7.23	--	--	--
				183	27.5	15.1	10.6	--	--	--
				365	119	62.5	45.4	--	--	--

a Approximately.

Table 1.--Magnitude and frequency of annual low flows at continuous-record gaging stations.

Station No.	Station Name and Location	Record Used in Analysis	Drainage Area (mi <sup>2</sup> )	Period (consecutive days)	Annual low flow, in cubic feet per second, for indicated recurrence in years					
					2	5	10	20	50	100
LITTLE SIOUX RIVER BASIN										
06603000	Little Sioux River near Lakefield LOCATION.--Lat 43°37'10", long 95°16'30", in SE¼ sec.21, T.102 N., R.37 W., Jackson County, 6.7 miles southwest of Lakefield, Minn.	1950-63	17.1	1	0	0	0	0	--	--
				7	0	0	0	0	--	--
				14	0	0	0	0	--	--
				30	0	0	0	0	--	--
				60	0	0	0	0	--	--
				90	0	0	0	0	--	--
				120	0	0	0	0	--	--
				183	0	0	0	0	--	--
				365	2.36	.66	.31	.16	--	--
06603500	Jackson County ditch 11 near Lakefield LOCATION.--Lat 43°37'10", long 95°16'10", in SW¼ sec.22, T.102 N., R.37 W., Jackson County, 6.5 miles southwest of Lakefield, Minn.	1950-61	7.69	1	0	0	0	--	--	--
				7	0	0	0	--	--	--
				14	0	0	0	--	--	--
				30	0	0	0	--	--	--
				60	0	0	0	--	--	--
				90	0	0	0	--	--	--
				120	0	0	0	--	--	--
				183	0	0	0	--	--	--
				365	1.10	.33	.16	--	--	--

Table 2.--Low-flow measurements at partial-record stations.

Station No.	Station Name	Location	Drainage Area (mi <sup>2</sup> )	Date	Discharge (ft <sup>3</sup> /s)	Measurements		Date	Discharge (ft <sup>3</sup> /s)	Specific Conductance (micromhos/cm at 25°C)
						Specific Conductance (micromhos/cm at 25°C)				
Streams tributary to Lake Superior										
04010850	Brule River near Grand Marais, Minn.	Lat 47°55'57", long 90°18'37", in SE¼SW¼ sec.15, T.63 N., R.1 E., Cook County, at bridge on National Forest Development Road 309, 0.5 mile upstream from South Brule River, and 13 miles north of Grand Marais.	88.8	8-12-70	16.5	<50		10- 9-75	23.6	55
				9-28-71	13.2	<50		6- 9-76	26.2	58
				8- 1-74	20.3	50		9- 8-76	2.55	
				9-25-74	76.7	<50				
04010900	South Brule River near Grand Marais, Minn.	Lat 47°55'34", long 90°18'22", in SW¼NE¼ sec.22, T.63 N., R.1 E., Cook County, at bridge on County Highway 12 (Gunflint Trail), 0.1 mile upstream from mouth, and 12 miles north of Grand Marais.	76.5	8-12-70	35.7	<50		10- 9-75	22.1	<50
				9-28-71	22.1	<50		6- 9-76	26.4	<50
				8- 1-74	35.1	<50		9- 8-76	13.0	<50
				9-25-74	31.4	<50				
04011000	Brule River near Hovland, Minn.	Lat 47°49'06", long 90°03'04", in SE¼SW¼ sec.27, T.62 N., R.3 E., Cook County, at bridge on U.S. Highway 61, 0.3 mile upstream from mouth, and 4.5 miles southwest of Hovland.	264	8-20-12	32.5			9-25-74	160	<50
				8-17-70	65.8	50		10- 9-75	55.7	<50
				9-28-71	51.3	58		6- 8-76	95.6	50
				8- 1-74	61.4	55		9- 8-76	20.4	65
*04011500	Devil Track River near Grand Marais, Minn.	Lat 47°46'12", long 90°15'39", in SW¼NE¼ sec.13, T.61 N., R.1 E., Cook County, at bridge on U.S. Highway 61, 0.1 mile upstream from mouth, and 3.9 miles northeast of Grand Marais.	74.8	7- 3-11	10.9			8- 1-74	13.8	80
				8- 3-11	43.2			9-23-74	15.4	70
				8-21-12	16.2			10- 9-75	15.9	70
				8-12-70	22.6	60		6- 8-76	35.6	70
*04012000	Cascade River near Grand Marais, Minn.	Lat 47°42'26", long 90°31'21", in NE¼SW¼ sec.1, T.60 N., R.2 W., Cook County, at bridge on U.S. Highway 61, at mouth, and 9.2 miles southwest of Grand Marais.	111	9-28-71	18.3	68		9- 8-76	1.45	120
				6-28-11	61.6			7- 3-74	199	60
				8- 4-11	45.6			7-31-74	36.4	
				10- 5-11	109			9-26-74	29.5	70
04012500	Poplar River at Lutsen, Minn.	Lat 47°38'23", long 90°42'31", in SW¼NE¼ sec.33, T.60 N., R.3 W., Cook County, 350 feet upstream from bridge on U.S. Highway 61 at Lutsen, and 0.3 mile upstream from mouth. (Site of continuous-record gaging station, 1912-17, 1928-47, 1952-61; annual maximums available since 1972)	112	8-22-12	29.8			10- 8-75	19.0	80
				8-12-70	21.0	80		6- 8-76	33.8	68
				9-28-71	21.4	85		9- 9-76	4.70	115
				9-26-62	100			8- 1-74	49.8	
04012600	Temperance River near Tofte, Minn.	Lat 47°48'04", long 90°50'43", in NE¼NW¼ sec.4, T.61 N., R.4 W., Cook County, at bridge on National Forest Development Road 165, 1.8 miles downstream from Sawbill Creek, and 16 miles north of Tofte.	87.6	9-24-63	24.3			8- 2-74	52.4	85
				8-12-70	52.2	<50		9-16-74	66.9	70
				9-29-71	48.0	82		9-25-74	35.8	75
				4-18-72	139			8-19-75	16.3	84
04012700	Temperance River near Schroeder, Minn.	Lat 47°33'17", long 90°52'28", in SE¼NE¼ sec.31, T.59 N., R.4 W., Cook County, at bridge on U.S. Highway 61, 0.1 mile upstream from mouth, and 1.2 miles northeast of Schroeder.	185	5-22-73	151	75		10- 8-75	23.0	75
				8- 1-73	69.0	70		6- 8-76	74.6	80
				9- 5-73	158	70		9- 7-76	7.28	100
				7- 9-11	35.1			7-31-74	37.5	70
04013000	Cross River at Schroeder, Minn.	Lat 47°32'40", long 90°54'10", in NE¼NE¼ sec.1, T.58 N., R.5 W., Cook County, at bridge on U.S. Highway 61, at Schroeder. (Site of continuous-record gaging station, 1931-32)	a91	8- 4-11	106			9-24-74	45.3	65
				10- 6-11	180			10- 8-75	32.7	70
				8-22-12	27.6			6- 7-76	36.2	70
				8-12-70	54.5	60		9- 7-76	12.1	85
04013000	Cross River at Schroeder, Minn.	Lat 47°32'40", long 90°54'10", in NE¼NE¼ sec.1, T.58 N., R.5 W., Cook County, at bridge on U.S. Highway 61, at Schroeder. (Site of continuous-record gaging station, 1931-32)	a91	9-28-71	48.7	70				
				7-13-11	7.6			8-23-12	12.7	
				8- 1-11	90			8-15-30	26.9	
				10- 6-11	66			9-24-74	12.9	

\* High-flow measurements are also available in Geological Survey files.

a Approximately.

&lt; Less than.

Table 2.--Low-flow measurements at partial-record stations.

Station No.	Station Name	Location	Drainage Area (mi <sup>2</sup> )	Date	Discharge (ft <sup>3</sup> /s)	Measurements		Date	Discharge (ft <sup>3</sup> /s)	Specific Conductance (micromhos/cm at 25°C)
						Specific Conductance (micromhos/cm at 25°C)				
Streams tributary to Lake Superior--Continued										
04013200	Caribou River near Little Marais, Minn.	Lat 47°27'51", long 91°01'50", in NW¼SE¼ sec.36, T.58 N., R.6 W., Lake County, at culvert on U.S. Highway 61, 0.2 mile upstream from mouth, and 5.2 miles northeast of Little Marais. (Annual maximums available since 1961)	22.7	9-20-60	4.50			4- 8-69	13.6	
				6-22-61	7.77			6-24-69	16.0	
				3-28-62	9.97			9- 2-69	3.74	
				7-28-65	6.71			6- 9-70	22.3	
				9-28-65	10.4			8-18-70	3.51	130
				8-10-66	13.8			7-29-71	15.6	
				8-16-66	7.80			10- 4-71	18.4	115
				9-13-66	3.54			8- 1-74	6.41	
				8-11-67	12.6			9-24-74	4.61	
				5- 7-68	16.8			9-19-75	2.54	
8-12-68	2.04			9- 9-76	2.31	125				
*04013300	Manitou River near Little Marais, Minn.	Lat 47°26'40", long 91°04'07", in SE¼SE¼ sec.3, T.57 N., R.6 W., Lake County, at bridge on U.S. Highway 61, 0.3 mile upstream from mouth, and 3 miles northeast of Little Marais.	98.2	8-23-12	34.0			9-24-74	13.1	100
				8-13-70	5.48			10- 8-75	23.8	90
				9-27-71	21.3	90		6- 7-76	48.1	95
				7- 2-74	80.3	70		9- 8-76	6.49	140
				7-31-74	30.8	110				
04014500	Baptism River near Beaver Bay, Minn.	Lat 47°20'15", long 91°12'00", in SE¼NE¼ sec.15, T.56 N., R.7 W., Lake County, at bridge on U.S. Highway 61, 0.2 mile upstream from mouth, and 7 miles northeast of village of Beaver Bay. (Site of continuous-record gaging station since 1928)	140	5- 8-11	135			10- 7-11	139	
				7-22-11	19.1			8-23-12	28.7	
				8- 5-11	272					
04015000	Beaver River at Beaver Bay, Minn.	Lat 47°15'37", long 91°17'45", in SE¼SW¼ sec.12, T.55 N., R.8 W., Lake County, at bridge on U.S. Highway 61, 0.1 mile upstream from mouth at Beaver Bay. (Site of continuous-record gaging station, 1911-14, 1928-31)	126	5- 8-68	252			7-31-74	6.84	
				7-18-68	221			9-24-74	5.07	140
				8-14-68	7.21			10- 8-75	7.08	130
				8-13-70	.74			6- 8-76	21.3	
				9-27-71	3.88	140		9- 7-76	.11	200
04015140	Gooseberry River near Two Harbors, Minn.	Lat 47°08'37", long 91°28'05", in SW¼SW¼ sec.22, T.54 N., R.9 W., Lake County, at bridge on U.S. Highway 61, in Gooseberry Falls State Park, about 1 mile upstream from mouth, 2.5 miles northeast of Castle Danger, and 12.5 miles northeast of Two Harbors.	74.6	4-25-11	49.2			7-31-74	5.90	195
				7-29-11	26.8			9-25-74	7.24	200
				8- 6-11	15.4			10- 7-75	5.97	175
				8-11-70	1.41	200		6- 8-76	5.94	
				9-27-71	6.36	170		9- 7-76	1.21	210
				7- 2-74	13.5	130				
04015330	Knife River near Two Harbors, Minn.	Lat 46°56'49", long 91°47'43", in SE¼NE¼ sec.36, T.52 N., R.12 W., St. Louis County, at north bridge on U.S. Highway 61, 0.8 mile upstream from Lake Superior, and 8 miles southwest of Two Harbors. (Site of continuous-record gaging station since 1974)	85.6	8-11-70	2.02	240		6-27-74	16.2	155
				9-22-71	3.50	205		7- 2-74	14.8	220
04015340	Sucker River near Duluth, Minn.	Lat 46°55'27", long 91°51'02", in SE¼SW¼ sec.3, T.51 N., R.12 W., St. Louis County, at culvert on County Highway 61, 0.2 mile upstream from mouth, and 15 miles northeast of aerial bridge in Duluth.	38.5	8-10-70	3.52	170		9-25-74	6.53	210
				9-22-71	4.11	215		10- 7-75	5.92	200
				7- 1-74	8.01	183		6- 7-76	3.52	
				7-30-74	6.52	220		9- 7-76	1.86	230
04015350	French River near Duluth, Minn.	Lat 46°53'59", long 91°53'32", in NE¼SW¼ sec.17, T.51 N., R.12 W., St. Louis County, at bridge on County Highway 61, at mouth, and 12.7 miles northeast of aerial bridge in Duluth.	18.4	8-10-70	.70	190		9-24-74	1.68	200
				9-22-71	.71	195		10- 7-75	4.80	160
				7- 1-74	3.78	175		6- 7-76	.71	
				7-30-74	2.89	135		9- 7-76	.62	210
04015387	Amity Creek at Duluth, Minn.	Lat 46°50'39", long 92°00'36", in SE¼NE¼ sec.5, T.50 N., R.13 W., St. Louis County, at bridge on Parkway Road, 0.4 mile upstream from Lester River, and 6 miles northeast of aerial bridge in Duluth.	16.2	8-10-70	.047			9-24-74	.63	250
				9-22-71	.36	260		10- 7-75	.62	300
				7- 1-74	1.51	220		6- 7-76	.79	
				7-30-74	1.10	240		9- 7-76	.026	310

\* High-flow measurements are also available in Geological Survey files.

Table 2.--Low-flow measurements at partial-record stations.

Station No.	Station Name	Location	Drainage Area (mi <sup>2</sup> )	Date	Discharge (ft <sup>3</sup> /s)	Measurements		Date	Discharge (ft <sup>3</sup> /s)	Specific Conductance (micromhos/cm at 25°C)
						Specific Conductance (micromhos/cm at 25°C)				
Streams tributary to Lake Superior--Continued										
04015390	Lester River at Duluth, Minn.	Lat 46°50'12", long 92°00'21", in NE¼NE¼ sec.8, T.50 N., R.13 W., St. Louis County, at bridge on U.S. Highway 61, at mouth, and 5.7 miles northeast of aerial bridge in Duluth.	53.1	8-10-70 9-22-71 7- 1-74 7-30-74	1.36 3.65 4.87 4.66	230 190 230		9-24-74 10- 7-75 6- 7-76 9- 7-76	3.86 4.19 1.69 .35	220 260 285
*04015438	St. Louis River near Skibo, Minn.	Lat 47°28'58", long 92°02'24", in NE¼SW¼ sec.30, T.58 N., R.13 W., St. Louis County, at bridge on Forest Service Road 133, 2 miles southwest of Skibo, and 6 miles southeast of Hoyt Lakes.	a84	10- 6-70 9-17-74 8-17-76	.57 8.21 1.66	55 82		8-24-76 9-28-76	.95 .44	93 140
*04015455	South Branch Partridge River near Babbitt, Minn.	Lat 47°34'03", long 91°56'05", in SE¼NW¼ sec.25, T.59 N., R.13 W., St. Louis County, at bridge on County Highway 680, 10 miles northeast of Hoyt Lakes.	a17	9-16-74 12- 2-75 1-27-76 3- 2-76 5-25-76	2.44 3.22 .75 1.22 2.46	60 70 70 61 64		7- 7-76 8-18-76 8-24-76 9-27-76 10- 5-76	4.25 0 0 0 0	82
04015475	Partridge River above Colby Lake, at Hoyt Lakes, Minn.	Lat 47°31'38", long 92°07'21", in SW¼NE¼ sec.9, T.58 N., R.14 W., St. Louis County, at bridge on County Highway 110, 1 mile east of Hoyt Lakes.	a106	9-17-74	25.2	175		8-23-76	.50	185
*04017000	Embarrass River at Embarrass, Minn.	Lat 47°39'24", long 92°11'51", in NW¼ sec.25, T.60 N., R.15 W., St. Louis County, at bridge on County Highway 362 in Embarrass. (Site of continuous-record gaging station, 1942-64)	93.8	10-22-70 9-16-74 8-21-75 9-22-75 11- 3-75 12-15-75	80.0 21.8 30.5 75.2 46.1 21.6	165 190 127 163 165		2- 3-76 3- 9-76 5-25-76 7- 6-76 8-19-76 8-23-76 9-27-76	9.69 11.8 20.5 26.3 2.33 1.76 2.26	275 315 140 120 232 430
04018000	Embarrass River near McKinley, Minn.	Lat 47°27'10", long 92°23'00", in NW¼ sec.4, T.57 N., R.16 W., St. Louis County, at bridge on County Highway 20, 0.9 mile downstream from Esquagama Lake, and 4.5 miles southeast of McKinley. (Site of continuous-record gaging station, 1954-62)	171	9-17-74	40.1	110				
04018710	Mud Hen Creek near Forbes, Minn.	Lat 47°21'29", long 92°28'24", on line between secs.3 and 10, T.56 N., R.17 W., St. Louis County, at bridge on County Highway 16, 0.9 mile upstream from mouth, 4.5 miles north of Central Lakes, and 6 miles southeast of Forbes.	101	8-12-70 10- 7-70 9-24-71 8-30-73 7- 1-74 7-30-74	3.49 2.07 9.27 22.0 15.6 4.65	130 140		9-18-74 8- 6-75 10- 8-75 6- 7-76 9- 1-76 10-13-76	2.41 12.5 4.03 3.01 .74 1.23	200 165 200 245
*04018770	Elbow Creek near Iron Junction, Minn.	Lat 47°24'04", long 92°36'35", in SW¼SE¼ sec.22, T.57 N., R.18 W., St. Louis County, at culvert on State Highway 37, 1.2 miles south of Iron Junction.	a12	7-19-58 8-16-58 10-25-58 5- 1-59 7- 2-59 8- 2-59 8-26-59 7- 6-60 7-27-60	5.86 4.74 6.80 12.6 6.10 1.02 11.0 2.76 7.82			8-24-60 9-20-60 10-19-60 6-13-61 7-12-61 8-11-61 9- 6-61 10- 4-61 10-31-61	2.02 3.25 2.10 8.04 2.76 1.21 2.16 2.91 3.62	
*04018900	East Two River near Iron Junction, Minn.	Lat 47°24'04", long 92°39'52", in NW¼NW¼ sec.29, T.57 N., R.18 W., St. Louis County, at culvert on State Highway 37, 2.2 miles southwest of Iron Junction. (Site of continuous-record gaging station since 1966)	40.0	11-19-57 12-21-57 1-27-58 2-28-58 3-29-58 4-26-58 5-23-58 6-19-58 6-24-58 7-19-58 8-11-58 10-25-58 5- 1-59	14.4 11.3 8.07 19.5 20.5 14.6 8.18 27.7 18.5 14.4 11.9 14.8 23.8			7- 2-59 8- 3-59 8-25-59 7- 6-60 8-24-60 9-20-60 10-19-60 7-12-61 8-11-61 9- 6-61 10- 4-61 10-31-61	23.4 9.85 20.2 12.8 16.4 9.79 9.18 9.47 9.50 11.1 13.7 15.8	

\* High-flow measurements are also available in Geological Survey files.  
a Approximately.

Table 2.--Low-flow measurements at partial-record stations.

Station No.	Station Name	Location	Drainage Area (mi <sup>2</sup> )	Date	Discharge (ft <sup>3</sup> /s)	Measurements		Date	Discharge (ft <sup>3</sup> /s)	Specific Conductance (micromhos/cm at 25°C)
						Specific Conductance (micromhos/cm at 25°C)				
Streams tributary to Lake Superior--Continued										
04019010	West Two River near Forbes, Minn.	Lat 47°20'21", long 92°40'59", in NW¼NW¼ sec.18, T.56 N., R.18 W., St. Louis County, at bridge on County Highway 661, 0.6 mile upstream from mouth, and 4.5 miles southwest of Forbes.	a78	10-19-70	38.9			9-17-74	7.72	220
04019500	East Swan River near Toivola, Minn.	Lat 47°16'55", long 92°50'05", in NE¼NE¼ sec.2, T.55 N., R.20 W., St. Louis County, at bridge on County Highway 442, 4.8 miles upstream from confluence with West Swan River, 8 miles northwest of Toivola, and 8.8 miles upstream from St. Louis River. (Site of continuous-record gaging station, 1954-62, 1965-71)	112	9-19-74	56.8	560		10-20-76	15.1	600
04020000	Swan River near Toivola, Minn.	Lat 47°15'02", long 92°48'36", in NE¼NE¼ sec.13, T.55 N., R.20 W., St. Louis County, at bridge on County Highway 5, 3 miles upstream from mouth, and 5.8 miles north of Toivola. (Site of continuous-record gaging station, 1953-62)	254	10-19-70 9-19-74	91.1 68.9		490	10-20-76	20.2	610
04020800	Paleface River near Cotton, Minn.	Lat 47°12'37", long 92°29'17", in NW¼NW¼ sec.34, T.55 N., R.17 W., St. Louis County, at bridge on U.S. Highway 53, about 2 miles upstream from mouth, and 2.9 miles north of Cotton.	62.6	8-12-70 9-24-71 8-30-73 7-1-74 7-30-74 9-20-74	.17 2.53 11.5 8.35 2.96 .43		120 115 165	8-6-75 10-8-75 6-7-76 9-1-76 10-13-76	14.3 2.48 .45 0 0	110 150
04021000	Whiteface River below Meadowslands, Minn.	Lat 47°02'21", long 92°44'35", in NW¼NW¼ sec.34, T.53 N., R.19 W., St. Louis County, at bridge on County Highway 5, 2 miles south of Meadowslands, and 5.5 miles above mouth. (Site of continuous-record gaging station, 1909-17)	a453	4-27-55	523			9-19-74	34.8	170
04021200	Floodwood River near Floodwood, Minn.	Lat 46°58'05", long 92°54'29", in SW¼SW¼ sec.20, T.52 N., R.20 W., St. Louis County, at bridge on farm driveway, 2.8 miles north of Floodwood, and 3.8 miles upstream from mouth.	190	8-14-70 9-13-71 9-22-71 8-31-73 7-3-74 9-16-74 8-7-75	4.12 71.5 27.8 52.8 44.9 31.4 14.5		120 150 100 150 190	8-22-75 10-7-75 6-7-76 8-11-76 8-31-76 9-10-76 10-14-76	4.73 11.8 10.5 8.83 2.68 1.81 2.50	275 240 275 320 360
04021250	East Savanna River at Floodwood, Minn.	Lat 46°55'17", long 92°54'43", in SE¼NE¼ sec.7, T.51 N., R.20 W., St. Louis County, at bridge on U.S. Highway 2, 0.4 mile upstream from mouth at Floodwood.	114	8-14-70 9-13-71 9-22-71 8-31-73 7-1-74 9-16-74	.13 13.7 4.78 81.4 20.8 16.2		130 105 120	8-7-75 10-7-75 6-2-76 8-31-76 10-14-76	2.04 3.53 2.50 .086 .21	175 205 265 200 530
04021530	Stoney Brook at Brookston, Minn.	Lat 46°51'42", long 92°36'17", in NW¼SE¼ sec.34, T.51 N., R.18 W., St. Louis County, at bridge on County Highway 31, 0.8 mile upstream from mouth at Brookston.	97.3	8-13-70 9-13-71 9-22-71 8-31-73 7-1-74 8-1-74	8.84 46.9 29.5 51.0 36.4 17.3		200 145 170	9-17-74 8-7-75 10-7-75 6-7-76 8-31-76 10-14-76	28.0 13.0 11.2 19.6 3.14 7.65	200 245 275 210 305 325
04021700	Cloquet River near Brimson, Minn.	Lat 47°15'24", long 91°52'02", in SE¼SW¼ sec.9, T.55 N., R.12 W., St. Louis County, at bridge on County Highway 44 (Forest Service Road 6202), about 1 mile upstream from Pine Creek, and 1.5 miles south of Brimson.	144	8-13-70 9-23-71 8-30-73 7-1-74 7-30-74 9-17-74	8.11 18.8 69.1 46.7 30.8 28.8		115 95	8-6-75 10-8-75 6-8-76 9-1-76 10-13-76	24.1 40.0 25.6 3.96 12.8	110 85 140 130

a Approximately.

Table 2.--Low-flow measurements at partial-record stations.

Station No.	Station Name	Location	Drainage Area (mi <sup>2</sup> )	Date	Discharge (ft <sup>3</sup> /s)	Measurements		Date	Discharge (ft <sup>3</sup> /s)	Specific Conductance (micromhos/cm at 25°C)
Streams tributary to Lake Superior--Continued										
04021960	Cloquet River near Island Lake, Minn.	Lat 47°06'57", long 92°01'28", in SW <sup>1</sup> / <sub>4</sub> SW <sup>1</sup> / <sub>4</sub> sec.32, T.54 N., R.13 W., St. Louis County, at boat launching site on State Forest Road (Carroll Forest Road), 1.7 miles upstream from Little Cloquet River, and 7.5 miles northeast of village of Island Lake.	327	8-12-70 9-23-71 7- 1-74 7-30-74 9-18-74	18.1 44.8 127 75.6 56.6	115 60 100		8- 6-75 10- 8-75 6- 8-76 9- 1-76 10-13-76	76.4 75.8 44.2 12.0 24.0	75 135 135
04022970	Us-Kab-Wan-Ka River near Twig, Minn.	Lat 46°58'55", long 92°20'01", in SE <sup>1</sup> / <sub>4</sub> SW <sup>1</sup> / <sub>4</sub> sec.14, T.52 N., R.16 W., St. Louis County, at bridge on trail, 0.8 mile upstream from mouth, and 6.2 miles north of Twig.	38.9	8-13-70 9-23-71 8-31-73 7- 3-74 7-31-74 9-19-74	2.57 6.15 14.1 12.7 8.09 6.58	180 160 85 185		8- 6-75 10- 8-75 6- 3-76 9- 1-76 10-14-76	6.84 6.00 3.65 2.05 4.21	165 210 195 235 225
04023000	Cloquet River at Independence, Minn.	Lat 46°57'19", long 92°27'42", in NW <sup>1</sup> / <sub>4</sub> SE <sup>1</sup> / <sub>4</sub> sec.26, T.52 N., R.17 W., St. Louis County, at bridge on U.S. Highway 53 at Independence. (Site of continuous-record gaging station, 1907-17)	a750	9- 2-65	505					
04023100	Cloquet River at Burnett, Minn.	Lat 46°54'00", long 92°30'18", in NE <sup>1</sup> / <sub>4</sub> SW <sup>1</sup> / <sub>4</sub> sec.16, T.51 N., R.17 W., St. Louis County, at bridge on County Highway 7, 0.9 mile east of Burnett.	a770	9-19-74	639	80				
04023400	Pine River near Cloquet, Minn.	Lat 46°47'52", long 92°26'58", on line between secs.23 and 24, T.50 N., R.17 W., St. Louis County, at concrete box culvert on State Highway 33, 0.9 mile upstream from mouth, and 5.2 miles north of Cloquet.	43.2	8-13-70 9-13-71 9-22-71 8-31-73 7- 3-74 7-31-74	7.73 14.5 9.68 20.1 24.1 16.6	210 200 180		9-17-74 8- 7-75 10- 7-75 6- 3-76 8-31-76 10-14-76	12.2 7.32 8.94 6.16 3.22 6.26	200 240 265 248 275 270
04024010	Midway River at Thomson, Minn.	Lat 46°40'56", long 92°23'08", in NE <sup>1</sup> / <sub>4</sub> SE <sup>1</sup> / <sub>4</sub> sec.32, T.49 N., R.16 W., Carlton County, at bridge on county road, 0.2 mile north of Thomson city limits, and 0.9 mile upstream from Thomson Reservoir.	64.2	9- 3-68 8-13-70 9-13-71 9-22-71 7- 3-74 7-31-74	15.1 6.18 22.2 8.22 14.8 13.6	260 200		9-18-74 8- 7-75 10- 7-75 6- 3-76 9- 1-76 10-14-76	9.16 6.62 8.43 5.14 5.19 6.31	260 280 300 285 250 320
04024092	Blackhoof River near Holyoke, Minn.	Lat 46°31'38", long 92°27'52", in SW <sup>1</sup> / <sub>4</sub> NW <sup>1</sup> / <sub>4</sub> sec.26, T.47 N., R.17 W., Carlton County, at bridge on County Highway 6, 3.5 miles upstream from Nemadji River, 5.6 miles northwest of Holyoke, and 11 miles northeast of Barnum.	44.5	8-11-70 9-23-71 7- 3-74 7-31-74 9-23-74	18.6 23.2 38.4 22.6 24.1	200 210 210 210		10- 7-75 6- 3-76 8-31-76 9-22-76	18.9 19.6 15.1 17.3	245 215 230 220
04024095	Nemadji River near Holyoke, Minn.	Lat 46°31'04", long 92°23'22", in NE <sup>1</sup> / <sub>4</sub> NE <sup>1</sup> / <sub>4</sub> sec.32, T.47 N., R.16 W., Carlton County, at bridge on State Highway 23, 3.5 miles north of Holyoke, about 5 miles upstream from Minnesota-Wisconsin border, and 7 miles south of Wrenshall. (Annual maximums available since 1973)	118	8-11-70 9-23-71 11-15-72 9-18-73 10-25-73 6-27-74 7- 3-74 7-31-74	22.5 31.0 78.0 35.8 75.5 35.4 45.8 26.8	220 185 180 178 160		9-19-74 9-24-74 11- 7-74 8-21-75 10- 7-75 6- 3-76 8-31-76	28.1 24.5 81.2 20.1 21.1 23.2 14.1	210 215 190 225 245 200 245
04024200	South Fork Nemadji River near Holyoke, Minn.	Lat 46°29'38", long 92°24'36", in SE <sup>1</sup> / <sub>4</sub> SE <sup>1</sup> / <sub>4</sub> sec.6, T.46 N., R.16 W., Carlton County, at culvert on State Highway 23, 1.7 miles downstream from Clear Creek, and 2.0 miles northwest of Holyoke. (Annual maximums available since 1961)	19.4	10-17-60 4-11-61 5-26-61 6-25-61 8-24-64 5-23-66 8-15-66 9-12-66 8- 8-67 5- 6-68 8-12-68 9-16-68	3.72 6.80 13.4 3.95 15.9 17.4 2.74 2.93 3.74 7.04 1.53 4.10			6-23-69 8- 4-69 9- 3-69 10- 6-69 7- 9-70 8-11-70 10-15-70 7-21-71 7-22-74 9-24-74 8-21-75	4.04 5.16 3.53 6.37 10.1 2.38 9.13 4.19 7.57 4.51 4.23	188 165

a Approximately.

Table 2.--Low-flow measurements at partial-record stations.

Station No.	Station Name	Location	Drainage Area (mi <sup>2</sup> )	Date	Discharge (ft <sup>3</sup> /s)	Measurements		Date	Discharge (ft <sup>3</sup> /s)	Specific Conductance (micromhos/cm at 25°C)
						Specific Conductance (micromhos/cm at 25°C)				
Red River of the North basin										
05029501	Otter Tail River near Rochert, Minn.	Lat 46°52'49", long 95°38'15", in NE¼SW¼ sec.5, T.139 N., R.39 W., Becker County, at Height of Land Lake outlet, at bridge on County Highway 126, and 2.9 miles northeast of Rochert.	182	9-26-33	6.95			4-12-45	170	
				7-12-43	234			5-23-45	182	
				10- 7-43	6.67			6-19-45	123	
				4-22-44	51.6			8- 7-45	15.0	
				10- 6-44	151					
05030140	Otter Tail River northwest of Luce, Minn.	Lat 46°40'20", long 95°39'56", in NW¼SW¼ sec.19, T.137 N., R.39 W., Otter Tail County, at bridge on U.S. Highway 10, 1 mile northwest of Luce.	331	10-25-67	28.2			5-11-71	91.8	385
				6- 6-68	171			11-14-72	65.3	380
				8-22-68	60.3			8-30-73	67.4	315
				12- 5-69	37.6			11- 1-73	199	340
				5-12-70	194	360		8- 6-74	105	300
				6- 3-70	187	350		8-18-76	b2.00	
				8-25-70	14.6					
05030181	Otter Tail River at Little Pine Lake outlet, near Perham, Minn.	Lat 46°37'36", long 95°32'23", in NW¼NE¼ sec.1, T.136 N., R.39 W., Otter Tail County, at bridge on County Highway 8, 2.2 miles northeast of Perham.	a383	9-27-33	11.9			9-30-65	152	
				4-21-64	305			8- 4-66	157	
				5-27-64	195			9-19-66	179	
				7- 8-64	114			5-12-70	226	370
				8-20-64	53.8			8-25-70	21.1	
				10-28-64	59.0			8-30-73	67.8	285
				5-18-65	331			8- 7-74	133	315
				7- 1-65	244			8-18-76	3.16	
				8-27-65	79.4					
05030255	Toad River near Perham, Minn.	Lat 46°39'55", long 95°31'27", in S¼NE¼ sec.19, T.137 N., R.38 W., Otter Tail County, at bridge on County Highway 60, 5.5 miles northeast of Perham.	111	10-25-67	7.70			8-25-70	.32	
				6- 4-68	25.4			8-30-73	9.00	400
				8-21-68	12.6			8- 6-74	30.6	335
				8- 4-70	3.38			8-18-76	0	
				8-17-70	1.01	380				
*05030260	Toad River above Big Pine Lake, near Perham, Minn.	Lat 46°39'05", long 95°31'10", on line between secs.29 and 30, T.137 N., R.38 W., Otter Tail County, at bridge on County Highway 13, 0.8 mile upstream from Big Pine Lake, and 4.2 miles northeast of Perham.	112	5-27-64	29.2			12- 5-69	8.71	
				7- 8-64	18.4			5-12-70	53.0	440
				8-20-64	4.84			6- 3-70	43.2	450
				10-28-64	11.5			8- 4-70	3.26	
				5-18-65	89.7			8-17-70	1.29	380
				7- 1-65	33.0			5-11-71	32.8	460
				8-27-65	8.88			5-23-72	89.0	430
				9-30-65	58.5			11-14-72	17.3	500
				8- 4-66	50.9			8-30-73	8.84	400
				9-19-66	21.2			11- 1-73	62.2	430
				10-25-67	8.96			8- 7-74	33.3	335
				6- 4-68	31.4			8-18-76	.08	
				8-21-68	9.74					
05030300	Otter Tail River near Richville, Minn.	Lat 46°30'48", long 95°31'04", on line between secs.7 and 18, T.135 N., R.38 W., Otter Tail County, at bridge on County Highway 14, 5 miles east of Richville.	a765	10-24-67	52.3			5-11-71	206	380
				6- 5-68	299			5-24-72	595	360
				8-14-68	97.8			11-14-72	106	350
				12- 4-69	94.0	365		8-30-73	91.3	310
				5-12-70	438	340		11- 2-73	499	335
				6- 3-70	350	340		8- 7-74	208	300
				8-25-70	32.2			8-18-76	14.8	
05030401	Otter Tail River at Otter Tail Lake outlet, near Amor, Minn.	Lat 46°21'34", long 95°44'00", in NE¼SW¼ sec.4, T.133 N., R.40 W., Otter Tail County, at bridge on County Highway 72, 4 miles south of Amor.	a1,160	12-21-32	14.1			6- 3-70	426	310
				9-27-33	6.13			8-25-70	117	
				10-11-34	32.7			5-11-71	224	350
				10-26-34	48.6			5-24-72	852	320
				8- 8-36	49.8			11-14-72	174	335
				6- 6-68	370			8-30-73	107	305
				8-22-68	218			11- 2-73	528	322
				12- 4-69	74.5	380		8- 8-74	317	285
				5-13-70	534	320		8-18-76	39.6	
*05033800	Campbell Creek near Detroit Lakes, Minn.	Lat 46°53'29", long 95°51'57", on line between sec.4, T.139 N., and sec.33, T.140 N., R.41 W., Becker County, at culvert on county road, 5.3 miles north of Detroit Lakes.	12.8	7- 1-69	.16	520		8-31-70	0	
				7-29-69	.11	500		10- 5-70	.17	800
				9- 4-69	0			11-16-70	.06	800
				10- 9-69	.16			12-15-70	.57	
				11-13-69	1.21			1-18-71	0	
				12-15-69	.11	730		2-22-71	0	
				1-19-70	0			3-22-71	0	
				2-24-70	0			5-10-71	.14	840
				3-30-70	b.10			6-17-71	.24	825
				6- 2-70	1.95	720		7-12-71	.82	600
				8- 3-70	0			1-10-72	.15	1,080

\* High-flow measurements are also available in Geological Survey files.

a Approximately.

b Estimated.

Table 2.--Low-flow measurements at partial-record stations.

Station No.	Station Name	Location	Drainage Area (mi <sup>2</sup> )	Date	Discharge (ft <sup>3</sup> /s)	Measurements		Date	Discharge (ft <sup>3</sup> /s)	Specific Conductance (micromhos/cm at 25°C)
						Specific Conductance (micromhos/cm at 25°C)				
Red River of the North basin--Continued										
*05033810	Floyd Lake outlet near Detroit Lakes, Minn.	Lat 46°52'42", long 95°50'23", in SE¼ sec.3, T.139 N., R.41 W., Becker County, at culvert on County Highway 21, 3.7 miles northeast of Detroit Lakes.	21.1	9- 4-69 10- 9-69 11-13-69 12-15-69 1-19-70 2-24-70 3-30-70 8- 3-70	0 0 0 .22 .35 .17 .20 .19		420 440 490 430	8-31-70 10- 5-70 11-16-70 12-15-70 1-18-71 2-22-71 3-23-71	0 0 .21 .28 .21 .37 0	390   440
*05033940	Pelican River tributary near Detroit Lakes, Minn.	Lat 46°46'52", long 95°48'01", in SE¼ sec.12, T.138 N., R.41 W., Becker County, at culvert on county road, 100 feet upstream from Detroit Lake, 0.8 mile north of Sucker Creek, and 3.2 miles southeast of Detroit Lakes.	1.93	7-26-68 8-14-68 9- 5-68 9-30-68 11- 6-68 12-10-68 1-14-69 2-18-69 5-27-69 7- 1-69	.05 0 b.01 .25 .53 .32 .46 .64 .36 .06		730 700 730 610 600	7-29-69 9- 4-69 10- 9-69 11-13-69 12-15-69 1-19-70 2-24-70 3-30-70 6-25-70	.07 0 0 .05 .31 .20 .24 .60 0	390   625 740 775 800 725
*05033960	Sucker Creek near Detroit Lakes, Minn.	Lat 46°46'25", long 95°48'23", in NW¼ sec.13, T.138 N., R.41 W., Becker County, at culvert on county road, 200 feet upstream from Detroit Lake, and 3.5 miles southeast of Detroit Lakes.	4.11	8-14-68 9- 5-68 9-30-68 12-10-68 1-14-69 2-18-69 7- 1-69 7-29-69	1.14 .80 1.20 1.55 1.89 1.89 1.83 1.17		570 570 340 590 520	9- 4-69 10- 9-69 11-13-69 12-15-69 1-19-70 2-24-70 3-30-70	.61 1.50 1.83 1.82 1.75 1.67 1.97	630 540 500 550 600 550 625
*05036000	Monson Lake outlet near Detroit Lakes, Minn.	Lat 46°47'15", long 95°53'30", in NW¼ sec.8, T.138 N., R.41 W., Becker County, 50 feet upstream from culvert, 100 feet downstream from Monson Lake, 800 feet upstream from Lake Sallie, and 3 miles southwest of Detroit Lakes.	1.09	7-26-68 8-15-68 9- 6-68 10- 1-68 11- 7-68 12-11-68 1-15-69 2-19-69 3-26-69 5-28-69 7- 2-69 7-30-69 9- 4-69 10- 9-69 11-12-69 12-16-69 1-20-70 2-24-70 3-31-70 4- 8-70 6-25-70 8- 4-70 8-31-70 10- 6-70 11-17-70 12-16-70 1-20-71 2-23-71	.06 0 b.02 .01 .01 .06 0 .28 .21 .31 .04 .03 0 0 0 0 0 0 0 0 0 .07 .02 0					

\* High-flow measurements are also available in Geological Survey files.  
b Estimated.

Table 2.--Low-flow measurements at partial-record stations.

Station No.	Station Name	Location	Drainage Area (mi <sup>2</sup> )	Date	Discharge (ft <sup>3</sup> /s)	Measurements		Date	Discharge (ft <sup>3</sup> /s)	Specific Conductance (micromhos/cm at 25°C)
						Specific Conductance (micromhos/cm at 25°C)				
Red River of the North basin--Continued										
05036100	Pelican River tributary near Detroit Lakes, Minn.	Lat 46°47'02", long 95°53'07", in NE¼ sec.8, T.138 N., R.41 W., Becker County, at State Fish Hatchery, at bridge over outlet from rearing ponds, 1,000 feet north of Muskrat Lake outlet, and 3 miles southwest of Detroit Lakes.	1.24	6-12-68	.60			6-17-71	.41	400
				7-26-68	.41			7-13-71	.33	370
				8-15-68	.24			8-25-71	.15	430
				9- 6-68	.25			9-28-71	.10	320
				10- 1-68	.38			10-27-71	.23	410
				11- 7-68	.33			11-30-71	.45	470
				12-11-68	.10	480		1-10-72	.35	470
				1-15-69	.12	380		2- 9-72	.34	
				2-19-69	.16	470		3-13-72	.35	450
				3-26-69	.15			4-18-72	.56	310
				4-12-69	.37			5-23-72	.70	415
				4-29-69	b.10			6-28-72	.34	410
				5-28-69	.47	415		8-15-72	.29	360
				7- 2-69	.56	380		9-14-72	.27	385
				7-30-69	.39	320		10-18-72	.13	440
				9- 4-69	.22	390		11-22-72	.23	480
				10- 9-69	.28	400		1-10-73	.18	430
				11-13-69	.26	410		2-21-73	.16	
				12-16-69	.31	440		3-21-73	.50	310
				1-20-70	.28	540		4-23-73	.42	365
				2-25-70	.29	470		5-31-73	.29	395
				3-31-70	.40	440		7- 5-73	.08	360
				4- 8-70	.64	370		8- 8-73	.13	370
				4-28-70	.50	390		9-11-73	.14	405
				6- 3-70	.39	390		10-19-73	.53	390
				6-25-70	.26			11-27-73	.23	440
				8- 4-70	.25			12-27-73	.38	465
				8-31-70	.26			1-24-74	b.01	410
				10- 6-70	.20	400		3- 5-74	.14	520
				11-17-70	.27	430		3-28-74	.12	550
				12-16-70	.20			4-15-74	.48	295
				1-20-71	.16			5-21-74	.52	430
				2-23-71	.18	460		6-25-74	.22	365
				3-23-71	.43			8- 6-74	.30	285
				4- 7-71	.54	360		9-10-74	.06	315
				5-11-71	.49	380		11- 1-74	.30	380
*05036900	Fox Lake outlet near Detroit Lakes, Minn.	Lat 46°46'24", long 95°54'37", in NE¼ sec.18, T.138 N., R.41 W., Becker County, 500 feet downstream from Fox Lake, 800 feet upstream from Lake Sallie, and 4.5 miles southwest of Detroit Lakes.	1.15	7-26-68	.36			8- 5-70	.004	
				8-15-68	.10			8-31-70	0	
				9- 6-68	b.03			10- 6-70	0	
				10- 1-68	.34			11-17-70	.01	390
				11- 7-68	.01			6-16-71	.02	375
				1-15-69	0			8-25-71	.38	400
				9- 4-69	0			9-28-71	.38	370
				10- 8-69	0			9-14-72	.41	365
				11-12-69	b.01			10-18-72	0	
				12-16-69	0			7- 5-73	.06	420
				1-20-70	0			8- 6-74	.20	350
				2-24-70	0			9-10-74	.34	365
05040000	Pelican River near Detroit Lakes, Minn.	Lat 46°43'26", long 95°54'56", in NE¼SW¼ sec.31, T.138 N., R.41 W., Becker County, at highway crossing at Buck's Mill, 200 feet downstream from concrete millpond dam on Buck Lake, and 6.5 miles southwest of city of Detroit Lakes. (Site of continuous-record gaging station, 1942-53)	123	8- 8-68	25.5			2-25-70	14.0	460
				8-16-68	15.0			3-31-70	25.5	450
				9- 5-68	6.24			4- 9-70	27.8	500
				10- 1-68	13.6			8- 4-70	5.40	
				11- 8-68	14.7			8-18-70	.65	
				12-11-68	25.0	440		9- 1-70	.07	
				1-16-69	33.2	370		9-23-70	.18	
				2- 4-69	43.4	450		10- 6-70	.07	460
				2-12-69	45.6	460		10-27-70	.53	
				2-19-69	45.8	390		11-17-70	8.46	430
				3-25-69	37.8			12-16-70	11.0	
				5-27-69	66.2	405		1-20-71	18.6	460
				7- 3-69	5.29	375		2-23-71	24.7	460
				7-28-69	18.0	330		3-23-71	33.7	
				9- 9-69	.24	425		4- 7-71	42.4	470
				10- 9-69	.08	400		5-12-71	33.8	
				11-12-69	.05	430		6-18-71	15.2	395
				12-16-69	10.6	500		7-13-71	32.7	340
1-20-70	16.6	460		8-18-76	b.20					
05046500	Otter Tail River at Breckenridge, Minn.	Lat 46°16'20", long 96°34'40", in NW¼SW¼ sec.4, T.132 N., R.47 W., Wilkin County, at bridge on U.S. Highway 75 at Breckenridge, 1 mile upstream from Red River of the North. (Site of continuous-record gaging station, 1932, additional gage heights available 1930-47)	a2,040	5- 6-12	590			1- 2-31	16.0	
				5- 8-30	377			2-14-31	30.1	
				6-17-30	207			3-21-31	167	
				7-20-30	170			4-20-31	89.8	
				8-23-30	13.7			5-16-31	312	
				9- 9-30	12.8			6-12-42	638	
				11- 6-30	9.20			6-16-42	369	
				11-30-30	18.5			9-10-42	206	

\* High-flow measurements are also available in Geological Survey files.

a Approximately.

b Estimated.

Table 2.--Low-flow measurements at partial-record stations.

Station No.	Station Name	Location	Drainage Area (mi <sup>2</sup> )	Date	Discharge (ft <sup>3</sup> /s)	Measurements		Date	Discharge (ft <sup>3</sup> /s)	Specific Conductance (micromhos/cm at 25°C)
						Specific Conductance				
						(micromhos/cm at 25°C)				
Red River of the North basin--Continued										
05046900	Mustinka River near Elbow Lake, Minn.	Lat 45°54'19", long 96°02'23", on line between secs.11 and 14, T.128 N., R.43 W., Grant County, at bridge on County Highway 8, 6.7 miles southwest of Elbow Lake.	a120	4-20-64 5-26-64 7- 7-64 8-19-64 4-28-65 6-30-65	10.4 .53 .23 .10 47.6 47.6			8-31-65 11- 2-65 5-13-70 8-26-70 8-31-73 8- 8-74	18.2 34.7 1.77 .01 .14 .10	1,600
*05047490	Fivemile Creek near Wheaton, Minn.	Lat 45°48'13", long 96°15'31", on line between secs.13 and 24, T.127 N., R.45 W., Traverse County, at bridge on State Highway 27, 11.5 miles east of Wheaton.	a105	4-22-43 4-26-43 6-27-43	40.5 27.1 37.3			4-19-50 4-16-51	40.5 11.7	
05047500	Mustinka ditch above West Branch Mustinka River, near Charlesville, Minn.	Lat 45°53'25", long 96°21'30", in NW¼NW¼ sec.20, T.128 N., R.45 W., Traverse County, at bridge on county road, 1000 feet upstream from West Branch Mustinka River, and 5.9 miles southwest of Charlesville. (Site of continuous-record gaging station, 1944-55)	--	8- 1-43	28.7			9-15-43	14.7	
05047800	West Branch Mustinka River near Wheaton, Minn.	Lat 45°46'24", long 96°22'56", on line between secs.30 and 31, T.127 N., R.45 W., Traverse County, at bridge on County Highway 72, 0.2 mile upstream from Twelvemile Creek, and 5.9 miles southeast of Wheaton.	a200	4-20-64 5-26-64 7- 7-64 8-19-64 4-28-65 6-30-65	6.69 0 0 0 5.84 5.01			9- 1-65 11- 5-65 5-14-70 8-26-70 8-30-73 8- 6-74	.39 .82 .37 0 0 0	1,750
05047850	Twelvemile Creek near Dumont, Minn.	Lat 45°41'33", long 96°18'57", on line between secs.27 and 28, T.126 N., R.45 W., Traverse County, at culvert on county road, 0.5 mile upstream from West Fork, and 5.6 miles southeast of Dumont.	a115	4-20-64 5-26-64 7- 7-64 8-19-64 4-25-65 6-30-65	9.22 .001 0 0 17.0 6.92			9- 1-65 11- 4-65 5-14-70 8-26-70 8-30-73 8- 6-74	1.32 b1.60 1.26 0 0 0	925
05047950	Twelvemile Creek near Wheaton, Minn.	Lat 45°46'24", long 96°22'36", on line between secs.30 and 31, T.127 N., R.45 W., Traverse County, at bridge on County Highway 72, 0.1 mile upstream from mouth, and 6.1 miles southeast of Wheaton.	a175	4-20-64 5-26-64 7- 7-64 8-19-64 4-28-65 6-30-65	23.0 .005 0 0 19.4 7.01			9- 1-65 11- 4-65 5-14-70 8-26-70 8-30-73 8- 6-74	1.07 2.62 2.03 0 0 0	1,120
05048000	Mustinka ditch below West Branch Mustinka River, near Charlesville, Minn.	Lat 45°53'20", long 96°21'45", in SE¼SE¼ sec.18, T.128 N., R.45 W., Traverse County, 100 feet downstream from West Branch Mustinka River, 6 miles southwest of Charlesville, and 8 miles northeast of Wheaton. (Site of continuous-record gaging station, 1944-55)	--	8- 1-43	1.98					
05048500	West Branch Mustinka River, below Mustinka ditch, near Charlesville, Minn.	Lat 45°53'20", long 96°21'45", in SE¼SE¼ sec.18, T.128 N., R.45 W., Traverse County, 150 feet downstream from Mustinka ditch, 1.8 miles upstream from mouth, 6 miles southwest of Charlesville and 7.7 miles northeast of Wheaton. (Site of continuous-record gaging station, 1944-55)	--	4-10-43	502			6-18-43	403	

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a Approximately.

b Estimated.

Table 2.--Low-flow measurements at partial-record stations.

Station No.	Station Name	Location	Drainage Area (mi <sup>2</sup> )	Date	Discharge (ft <sup>3</sup> /s)	Measurements		Discharge (ft <sup>3</sup> /s)	Specific Conductance (micromhos/cm at 25°C)
						Specific Conductance (micromhos/cm at 25°C)	Date		
Red River of the North basin--Continued									
*05049000	Mustinka River above Wheaton, Minn.	Lat 45°49'15", long 96°29'25", on line between secs.7 and 8, T.127 N., R.46 W., Traverse County, at bridge on U.S. Highway 75, 1 mile upstream from railroad bridge, 1.2 miles north of Wheaton, and 8 miles upstream from mouth. (Site of continuous-record gaging station, 1915-24, 1930-58)	834	4-20-64 5-26-64 7- 7-64 8-19-64 4-28-65	95.1 1.68 .43 0 144		6-30-65 9- 1-65 11- 2-65 5-14-70	105 22.7 48.3 6.46	1,400
05050800	Wilkin County ditch near Campbell, Minn.	Lat 46°05'05", long 96°23'19", on line between secs.7 and 12, T.130 N., R.45 and 46 W., Wilkin County, at box culvert on county road, 0.1 mile south of Rabbit River, 0.2 mile upstream from mouth, and 1.1 miles southeast of Campbell.	a100	4-20-64 5-26-64 7- 7-64 8-19-64 4-28-65 6-30-65	4.35 0 0 0 4.86 11.3		9- 1-65 11- 5-65 5-13-70 8-26-70 8-30-73 8- 6-74	2.33 3.74 .40 0 .04 .02	1,900 2,100
05050900	South Fork Rabbit River near Campbell, Minn.	Lat 46°03'54", long 96°23'01", on line between secs.18 and 19, T.130 N., R.45 W., Wilkin County, at bridge on County Highway 152, 2 miles upstream from mouth, and 2.2 miles southeast of Campbell.	a60	4-20-64 5-26-64 7- 7-64 8-19-64 4-28-65 6-30-65	7.58 .001 0 0 1.30 .21		9- 1-65 11- 5-65 5-13-70 8-26-70 8-30-73 8- 6-74	.09 .36 .29 0 0 0	1,250
*05051000	Rabbit River at Campbell, Minn.	Lat 46°05'40", long 96°24'40", in SE½SE¼ sec.2, T.130 N., R.46 W., Wilkin County, at bridge on County Highway 4 at Campbell, 1 mile downstream from South Fork, and 10 miles upstream from mouth. (Site of continuous-record gaging station, 1942-51)	266	4-20-64 5-26-64 7- 7-64 8-19-64 4-28-65	21.6 .13 0 0 7.53		6-30-65 9- 1-65 11- 2-65 5-13-70	15.9 2.40 12.8 .72	1,500
05051500	Red River of the North at Wahpeton, N.Dak.	Lat 46°15'55", long 96°35'40", in NE¼ sec.8, T.132 N., R.47 W., Richland County, 800 feet downstream from confluence of Bois de Sioux and Otter Tail Rivers, at mile 548.6, and between Wahpeton and Breckenridge. (Site of continuous-record gaging station since 1942)	a4,010	8- 8-36	5.79				
05051520	Whisky Creek near Kent, Minn.	Lat 46°24'41", long 96°39'32", on line between secs.13 and 24, T.134 N., R.48 W., Wilkin County, at double pipe-arch culvert on County Highway 20, 1.7 miles southeast of Kent.	61.3	4-23-64 5-25-64 7- 6-64 8-18-64 10-29-64 4-29-65 7- 1-65 8-31-65 9-28-65 8- 5-66 9-20-66	28.8 0 .18 0 0 .90 0 .87 22.2 44.2 1.10		5-13-70 8-24-70 9-17-71 8-23-72 8- 9-73 8-30-73 8- 6-74 5-25-76 7-28-76 9-15-76 10-14-76	.40 0 .004 4.44 0 0 0 0 0 0 0	1,500 2,350 890
05051525	Wolverton Creek at Comstock, Minn.	Lat 46°39'59", long 96°44'13", on line between secs.21 and 22, T.137 N., R.48 W., Clay County, at bridge on county road, 1 mile northeast of Comstock.	89.3	4-23-64 5-25-64 7- 6-64 8-18-64 10-27-64 4-29-65 7- 1-65 8-31-65 9-28-65 8- 5-66	16.5 0 0 0 0 1.31 0 0 .10 7.03		9-20-66 5-13-70 8-24-70 9-17-71 8-24-72 8- 9-73 5-25-76 7-28-76 9-15-76 10-14-76	.65 .18 0 .58 2.15 0 0 0 0 0	790 420 740

\* High-flow measurements are also available in Geological Survey files.  
a Approximately.

Table 2.--Low-flow measurements at partial-record stations.

Station No.	Station Name	Location	Drainage Area (mi <sup>2</sup> )	Date	Discharge (ft <sup>3</sup> /s)	Measurements		Date	Discharge (ft <sup>3</sup> /s)	Specific Conductance (micromhos/cm at 25°C)
						Specific Conductance (micromhos/cm at 25°C)				
Red River of the North basin--Continued										
05060820	Buffalo River near Ogema, Minn.	Lat 46°59'31", long 96°02'08", on line between secs.29 and 32, T.141 N., R.42 W., Becker County, at bridge on County Highway 14, 6 miles west of Callaway, and about 9.5 miles southwest of Ogema.	128	8-25-70 9-16-71 8-23-72 8- 9-73	.86 23.2 19.0 11.0	526 440 380 350		5-25-76 7-29-76 9-15-76 10-14-76	7.23 0 0 0	370
05061080	Deerhorn Creek near Lawndale, Minn.	Lat 46°34'45", long 96°29'17", on line between secs.20 and 21, T.136 N., R.46 W., Wilkin County, at bridge on county road, 1.2 miles west of State Highway 9, about 6 miles southwest of Barnesville, and 6.4 miles northwest of Lawndale.	48.4	8-24-70 9-16-71 8-23-72 8- 9-73 5-25-76	2.91 4.37 5.23 4.76 4.22	850 850 860 750 890		7-28-76 8-25-76 9-15-76 10-14-76	3.04 2.27 3.47 3.50	1,050 695
*05061100	South Branch Buffalo River near Barnesville, Minn.	Lat 46°39'35", long 96°34'57", on line between secs.23 and 26, T.137 N., R.47 W., Clay County, at bridge on County Highway 2, 4 miles south of Baker, and 7.4 miles west of Barnesville.	a185	5-25-64 7- 6-64 8-19-64 10-27-64 4-29-65 7- 1-65 8-31-65 9-28-65 9-20-66	5.41 4.79 2.78 4.36 18.2 8.06 5.41 17.4 .42		5-13-70 8-24-70 9-16-71 8-23-72 8- 9-73 5-25-76 7-29-76 10-14-76	11.5 2.57 4.50 7.56 5.08 3.04 1.83 1.64	1,100 760 950 840 650 860	
*05061490	Stony Creek near Sabin, Minn.	Lat 46°44'48", long 96°36'26", on line between secs.22 and 27, T.138 N., R.47 W., Clay County, at bridge on County Highway 65, 3 miles southeast of Sabin.	a145	5-28-64 7- 6-64 8-19-64 10-27-64 7- 1-65 8-31-65 9-28-65 8- 4-66 9-20-66	3.82 .57 0 .28 8.05 0 15.8 .66 0		5-13-70 8-24-70 9-16-71 8-24-72 8- 9-73 5-25-76 7-29-76 9-15-76 10-14-76	22.7 0 3.22 0 0 0 0 0 0	875 900	
*05062335	Wild Rice River near Roy Lake, Minn.	Lat 47°23'14", long 95°38'11", in NW¼SW¼ sec.9, T.145 N., R.39 W., Mahnomon County, at bridge on County Highway 4, 5.8 miles northwest of Roy Lake.	a270	10-29-64 8-27-65 9-21-65 8- 4-66 9-21-66 7-21-67 9-19-67 8-25-70	29.7 14.8 35.9 22.0 10.8 50.4 9.95 2.58	470 482	9-15-71 8-25-72 8- 8-73 5-26-76 7-28-76 8-11-76 9-16-76	19.4 34.8 74.0 43.0 8.00 7.40 6.83	385 410 400 370 475 480 440	
05062435	White Earth River near Mahnomon, Minn.	Lat 47°18'53", long 95°55'58", in NW¼SW¼ sec.6, T.144 N., R.41 W., Mahnomon County, at bridge on county road, 1.2 miles east of Mahnomon.	a190	4-22-64 5-28-64 7- 9-64 10-29-64 5-17-65 8-27-65 9-28-65 8- 4-66 9-21-66 7-21-67	153 80.1 29.6 3.50 140 2.49 10.0 7.81 3.46 19.2		9-20-67 8-25-70 9-15-71 8-24-72 8- 8-73 5-26-76 7-28-76 8-11-76 9-15-76	b.06 .02 10.3 1.67 3.08 13.1 .07 .04 .04	780 480 415 605 420 440 755 830	
*05062440	Wild Rice River at Mahnomon, Minn.	Lat 47°18'40", long 95°57'07", in SW¼SW¼ sec.1, T.144 N., R.42 W., Mahnomon County, at bridge on County Highway 25, at southeast corner of Mahnomon, and 0.5 mile east of intersection of U.S. Highway 59 with County Highway 25.	a610	7- 9-64 10-29-64 8-27-65 9-28-65 8- 4-66 9-21-66 7-21-67 9-20-67	134 46.5 35.4 74.2 103 36.7 124 13.7	500	8-25-70 9-15-71 8-24-72 8- 8-73 5-26-76 7-28-76 8-11-76 9-15-76	12.8 35.1 55.6 86.9 70.9 5.29 6.38 4.69	520 420 425 340 430 520 535 635	
*05062465	Marsh Creek near Mahnomon, Minn.	Lat 47°19'31", long 96°03'19", in NE¼NW¼ sec.6, T.144 N., R.42 W., Mahnomon County, at bridge on State Highway 200, 4.2 miles west of Mahnomon.	a130	5-28-64 7- 9-64 10-30-64 8-27-65 9-28-65 9-21-66 7-21-67 8-25-70	6.20 27.9 .11 0 7.56 0 .66 .64	660	9-15-71 8-25-72 8- 9-73 5-26-76 7-28-76 8-11-76 9-15-76	.03 7.09 0 .02 0 0 0	560 680	

\* High-flow measurements are also available in Geological Survey files.

a Approximately.

b Estimated.

Table 2.--Low-flow measurements at partial-record stations.

Station No.	Station Name	Location	Drainage Area (mi <sup>2</sup> )	Date	Discharge (ft <sup>3</sup> /s)	Measurements		Specific Conductance (micromhos/cm at 25°C)					
						Date	Discharge (ft <sup>3</sup> /s)						
Red River of the North basin--Continued													
*05062650	Mashaug Creek at Heiberg, Minn.	Lat 47°17'05", long 96°16'35", in SW <sup>1</sup> / <sub>4</sub> SW <sup>1</sup> / <sub>4</sub> sec.16, T.144 N., R.44 W., Norman County, at footbridge in park at Heiberg, 0.2 mile upstream from mouth, and 1.5 miles northwest of Twin Valley.	72.3	5-28-64	.59		9-19-67	b.10	480				
				7- 9-64	.45		8-25-70	.07	820				
				8-18-64	b.10		9-15-71	6.89	478				
				10-30-64	.15		8-24-72	2.33	600				
				5-17-65	14.6		8- 9-73	.13	670				
				8-26-65	.10		5-26-76	.56	870				
				9-28-65	1.96		7-27-76	.02	770				
				8- 4-66	.59		8-12-76	.03	750				
				9-21-66	.07		9-15-76	0					
				7-21-67	.06								
*05062900	Wild Rice River above Ada, Minn.	Lat 47°17'29", long 96°26'09", on line between sec.13, T.144 N., R.46 W., and sec.18, T.144 N., R.45 W., Norman County, at bridge on County Highway 24, 3.2 miles southeast of Ada.	1,050	6-21-45	165		4-28-49	192					
*05063220	South Branch Wild Rice River near White Earth, Minn.	Lat 47°04'45", long 96°00'19", in NW <sup>1</sup> / <sub>4</sub> NE <sup>1</sup> / <sub>4</sub> sec.33, T.142 N., R.42 W., Becker County, at culvert on county road, about 4 miles southwest of Ogema, and 8 miles west of White Earth.	30.8	6- 3-64	2.06		9-16-71	2.17	660				
				7- 9-64	1.57		8-24-72	.97	620				
				10-29-64	2.62		8- 9-73	1.66	600				
				8-27-65	.50		5-26-76	.66					
				8- 4-66	2.07		7-28-76	.51	640				
				9-20-66	.13		8-11-76	b.003					
				7-21-67	.51		9-15-76	0					
				9-18-67	.36	400							
				*05063400	South Branch Wild Rice River near Felton, Minn.	Lat 47°07'23", long 96°24'25", on line between secs.8 and 9, T.142 N., R.45 W., Clay County, at bridge on County Highway 40, 5.5 miles northeast of Felton.	a180	4-10-59	36.0		4-11-63	35.9	
				4-28-59	16.1		4-24-63	18.0					
5-28-59	29.5		5-24-63	12.4									
6-23-59	42.7		6-26-63	9.10									
7-29-59	7.82		7-25-63	2.31									
8-27-59	28.7		8-28-63	9.66									
9-29-59	3.06		10- 3-63	3.14									
10-26-59	13.2		10-30-63	4.66									
5-25-60	21.1		5-28-64	10.7									
6-29-60	27.9		7- 6-64	9.68									
7-25-60	7.98		7-28-64	3.98									
8-24-60	12.0		9- 3-64	3.10									
9-27-60	5.48		9-28-64	18.3									
10-27-60	5.99		10-26-64	6.77									
3-31-61	39.2		5-25-65	35.7									
6- 1-61	17.5		6-28-65	13.9									
6-28-61	3.01		7-26-65	7.10									
7-25-61	2.02		8-26-65	3.79									
8-29-61	1.12		9-29-65	21.5									
9-29-61	2.18		11- 4-65	7.75									
10-31-61	6.80		9-20-66	2.85									
4-27-62	39.8		9-19-67	2.54	390								
6-27-62	39.1		4- 3-68	16.1									
7-31-62	11.2		4-25-68	27.4									
8-30-62	3.51		4- 4-73	14.2	560								
9-26-62	6.01		6- 8-76	4.72	595								
10-26-62	6.90		8-12-76	.90	600								
05063500	South Branch Wild Rice River near Borup, Minn.	Lat 47°11'40", long 96°34'40", in NW <sup>1</sup> / <sub>4</sub> NW <sup>1</sup> / <sub>4</sub> sec.24, T.143 N., R.47 W., Norman County, at bridge on County Highway 193, 3.5 miles upstream from Wild Rice River, and 4 miles northwest of Borup. (Site of continuous-record gaging station, 1944-49; annual maximums available since 1972)	254	9-20-66	2.60		8- 7-74	5.84					
9-19-67	1.70	380	10- 2-74	2.85	700								
6-29-72	5.40	850	8-28-75	11.7									
8- 3-72	2.49		6- 8-76	5.34	655								
9- 7-72	1.74	590	8-12-76	.16	580								
4- 4-73	14.8	530	8-31-76	0									
6-14-73	4.44	680	9-15-76	0									
7-18-73	1.30		10-13-76	1.65									
8-22-73	1.35	425											

\* High-flow measurements are also available in Geological Survey files.

a Approximately.

b Estimated.

Table 2.--Low-flow measurements at partial-record stations.

Station No.	Station Name	Location	Drainage Area (mi <sup>2</sup> )	Date	Discharge (ft <sup>3</sup> /s)	Measurements		Date	Discharge (ft <sup>3</sup> /s)	Specific Conductance (micromhos/cm at 25°C)
						Specific Conductance (micromhos/cm at 25°C)				
Red River of the North basin--Continued										
*05063800	State Ditch No. 45 near Felton, Minn.	Lat 47°02'00", long 96°29'59", on line between secs.15 and 16, T.141 N., R.46 W., Clay County, at culvert on State Highway 9, 3 miles south of Felton.	29.4	3-25-59	4.21			4-11-63	3.73	
				4-10-59	3.76			4-24-63	3.34	
				4-28-59	3.92			5-24-63	3.45	
				6-23-59	5.96			6-26-63	2.48	
				7-29-59	2.06			7-25-63	.97	
				8-27-59	4.07			8-28-63	4.19	
				9-29-59	2.18			10- 3-63	1.24	
				10-26-59	4.30			10-30-63	1.83	
				5-25-60	5.00			5-28-64	2.44	
				7-25-60	2.37			7- 6-64	2.89	
				9-27-60	1.64			7-28-64	2.90	
				10-27-60	1.89			9- 3-64	2.34	
				3-31-61	4.24			9-28-64	3.34	
				6- 1-61	2.45			10-26-64	2.75	
				6-28-61	3.83			6-28-65	4.41	
				7-25-61	.84			7-26-65	2.80	
				8-29-61	.56			8-26-65	2.80	
				9-29-61	1.05			9-29-65	5.48	
				10-31-61	1.13			9-20-66	2.30	
				6-27-62	4.25			9-19-67	1.40	340
				7-31-62	2.70			4- 3-68	3.23	
				8-30-62	1.58			6- 8-76	1.22	480
				9-26-62	2.54			8-12-76	.21	510
				10-26-62	2.41					
*05067900	Sand Hill River at Fertile, Minn.	Lat 47°32'35", long 96°15'31", in NE¼NE¼ sec.21, T.147 N., R.44 W., Polk County, at bridge on County Highway 12, about 1 mile northeast of Fertile.	a225	5-26-64	23.0			9-21-67	6.54	440
				7- 9-64	27.2			8-25-70	4.61	690
				8-18-64	9.57			9-15-71	17.1	605
				10-30-64	10.8			8-25-72	15.6	700
				8-27-65	11.5			8- 8-73	6.24	500
				9-28-65	21.4			8-20-75	18.6	
				8- 3-66	13.0			5-26-76	16.3	755
				9-20-66	3.02			7-27-76	4.87	595
				11- 2-66	11.7			8-12-76	7.22	720
				7-21-67	12.7			9-15-76	5.43	625
				05068500	Sand Hill ditch at Beltrami, Minn.	Lat 47°32'10", long 96°32'00", in SE¼NW¼ sec.21, T.147 N., R.46 W., Polk County, at bridge on State Highway 9, 150 feet upstream from Great Northern Railway bridge, and 0.5 mile south of Beltrami. (Site of continuous-record gaging station, 1947-58)	--	11- 1-66	20.6	710
*05073530	Tamarack River at Waskish, Minn.	Lat 48°10'31", long 94°30'45", in NE¼NE¼ sec.8, T.154 N., R.30 W., Beltrami County, at bridge on State Highway 72 at Waskish, 0.2 mile upstream from mouth.	a280	8-19-64	3.11			9-20-65	104	
				10-20-64	91.2			8- -2-66	7.22	
				8-17-65	19.5			7-20-67	116	
*05073560	Shotley Brook near Shotley, Minn.	Lat 48°04'38", long 94°35'05", in NW¼NE¼ sec.14, T.153 N., R.31 W., Beltrami County, at bridge on County Highway 23, 2 miles upstream from mouth, and 3.2 miles northeast of Shotley.	42.4	5-26-64	13.3			9-23-66	1.80	
				7- 2-64	18.5			7-20-67	2.80	
				8-20-64	0			8-26-70	.66	410
				10-21-64	10.6			9-16-71	2.72	
				8-17-65	.07			9-22-72	4.64	270
				9-20-65	9.04			7-27-73	8.34	306
				8- 2-66	1.00			8-21-75	2.01	360
				8- 4-66	b.90			5-26-76	2.78	
				9-21-66	2.17			8-31-76	.02	340
*05073630	South Branch Battle River near Kelliher, Minn.	Lat 47°56'24", long 94°31'54", in NW¼SE¼ sec.31, T.152 N., R.30 W., Beltrami County, at bridge on County Highway 36, 3.4 miles west of Kelliher, and about 11 miles upstream from Lower Red Lake.	47.1	5-26-64	7.09			9-23-66	2.77	380
				7- 2-64	12.9			7-20-67	4.78	
				8-20-64	2.22			8-26-70	2.88	600
				10-21-64	5.24			9-16-71	3.42	
				8-17-65	2.84			9-22-72	3.79	500
				9-20-65	3.69			7-27-73	12.5	484
				8- 2-66	3.81			8-21-75	6.82	530
				8- 4-66	b4.20		380	5-26-76	6.10	450
				9-21-66	3.74			8-31-76	2.11	612

\* High-flow measurements are also available in Geological Survey files.

a Approximately.

b Estimated.

Table 2.--Low-flow measurements at partial-record stations.

Station No.	Station Name	Location	Drainage Area (mi <sup>2</sup> )	Date	Discharge (ft <sup>3</sup> /s)	Measurements		Date	Discharge (ft <sup>3</sup> /s)	Specific Conductance (micromhos/cm at 25°C)
						Specific Conductance (micromhos/cm at 25°C)				
Red River of the North basin--Continued										
*05073770	Blackduck River at Quiring, Minn.	Lat 47°52'36", long 94°43'16", in SE¼SE¼ sec.22, T.151 N., R.32 W., Beltrami County, at bridge on County Highway 101, 0.2 mile downstream from South Branch Cormorant River, and 0.5 mile southwest of Quiring.	a200	5-26-64	47.7			9-23-66	4.41	360
				7- 2-64	35.2			7-20-67	9.20	
				8-19-64	1.65			9-16-71	<.01	
				10-21-64	11.6			9-22-72	9.92	478
				8-18-65	5.44			7-26-73	37.9	440
				9-21-65	10.8			8-21-75	66.3	360
				8- 3-66	13.2			5-26-76	19.3	430
				8- 4-66	7.96	300	8-31-76	2.02	487	
*05073790	North Cormorant River near Shooks, Minn.	Lat 47°54'19", long 94°32'51", in SW¼SW¼ sec.7, T.151 N., R.30 W., Beltrami County, at bridge on County Highway 36, 5.5 miles northwest of Shooks.	33.8	5-26-64	4.02			7-20-67	0	
				7- 2-64	5.51			8-26-70	0	
				8-20-64	b.02			9-16-71	.01	
				10-21-64	1.10			9-22-72	b.30	
				8-18-65	.03			7-26-73	6.66	440
				9-20-65	.46			8-21-75	1.34	440
				8- 2-66	.21			5-26-76	.83	370
				8- 4-66	b.30	350	8-31-76	.03	607	
9-21-66	0									
*05073980	Sandy River near Red Lake, Minn.	Lat 47°50'44", long 95°13'33", in NE¼NW¼ sec.2, T.150 N., R.36 W., Clearwater County, at U.S. Indian Service Road, 2.5 miles upstream from mouth, and 4.2 miles southwest of village of Red Lake.	67.9	5-25-64	24.3			9-22-66	10.2	530
				7- 1-64	18.0			7-20-67	8.94	
				8-19-64	5.15			8-26-70	7.50	530
				10-21-64	12.2			9-16-71	10.5	
				8-17-65	8.79			9-22-72	12.9	486
				9-21-65	16.1			7-26-73	20.0	590
				8- 3-66	12.4			8-21-75	15.4	450
				8- 4-66	13.0	310	5-26-76	11.2	500	
9-19-66	9.38			9- 2-76	4.04	544				
05074500	Red Lake River near Red Lake, Minn.	Lat 47°57'27", long 95°16'35", in NW¼ sec.28, T.152 N., R.36 W., Clearwater County, at lower Red Lake outlet, 13 miles northwest of village of Red Lake. (Site of continuous-record gaging station since 1933)	a1,950	6- 1-31	131			5-27-32	2.69	
				8-22-31	7.72			8- 2-32	18.2	
				10-26-31	70.6			10-16-32	29.7	
*05075700	Mud River near Grygla, Minn.	Lat 48°19'31", long 95°44'35", in SE¼SE¼ sec.14, T.156 N., R.40 W., Marshall County, at bridge on State Highway 89, 6 miles west of Grygla.	170	8-19-70	0			8-19-75	1.14	440
				9-15-71	.18			5-26-76	5.40	420
				9-22-72	.27	594	9- 2-76	0		
				9-26-73	0					
05076000	Thief River near Thief River Falls, Minn.	Lat 48°11'08", long 96°10'11", in NW¼SW¼ sec.3, T.154 N., R.43 W., Marshall County, 0.2 mile upstream from highway bridge, 5 miles north of Thief River Falls, 7 miles upstream from mouth, and 9 miles downstream from Mud Lake National Wildlife Refuge. (Site of continuous-record gaging station, 1909-17, 1920-24, and since 1928)	959	4-14-25	18.8			9- 1-26	8.00	
				8-31-25	5.80			8-26-27	3.00	
05076500	Red Lake River at Thief River Falls, Minn.	Lat 48°06'40", long 96°10'50", in NW¼ sec.34, T.154 N., R.43 W., Pennington County, at bridge on U.S. Highway 59 in Thief River Falls, 0.4 mile downstream from Thief River. (Site of continuous-record gaging station, 1909-18, 1920-30)	a3,450	10- 7-43	702			9-19-66	1,220	
				10-11-43	673					
05077500	Clearwater River near Leonard, Minn.	Lat 47°44'05", long 95°12'26", in NE¼SW¼ sec.12, T.149 N., R.36 W., Clearwater County, at bridge on County Highway 4, 500 feet downstream from Clearwater Lake, and 7 miles northeast of Leonard. (Site of continuous-record gaging station, 1934-47)	153	3-13-31	12.1			10-26-33	20.5	

\* High-flow measurements are also available in Geological Survey files.

&lt; Less than.

a Approximately.

b Estimated.

Table 2.--Low-flow measurements at partial-record stations.

Station No.	Station Name	Location	Drainage Area (mi <sup>2</sup> )	Date	Discharge (ft <sup>3</sup> /s)	Measurements		Date	Discharge (ft <sup>3</sup> /s)	Specific Conductance (micromhos/cm at 25°C)
						Specific Conductance (micromhos/cm at 25°C)				
Red River of the North basin--Continued										
05077700	Ruffy Brook near Gonvick, Minn.	Lat 47°44'50", long 95°24'45", on line between secs.5 and 8, T.149 N., R.37 W., Clearwater County, at bridge on County Highway 67, 4 miles upstream from mouth, and 4.8 miles east of Gonvick. (Site of continuous-record gaging station since 1960)	45.2	5-24-57	9.63			8-20-58	.61	
				6-17-57	6.67			9-22-58	.82	
				7-17-57	7.57			7-24-59	4.27	
				8-20-57	2.30			8-14-59	3.93	
				9- 5-57	6.09			9-16-59	.97	
				10-24-57	5.03			9-29-59	1.45	
				11-22-57	4.73			10-14-59	2.62	
				3-25-58	2.75			5-18-60	6.87	
				4- 8-58	5.53			8- 1-60	.97	
				5-23-58	3.49			9- 7-60	2.44	
	7-23-58	9.32								
05078000	Clearwater River at Plummer, Minn.	Lat 47°55'24", long 96°02'46", in SE¼SW¼ sec.4, T.151 N., R.42 W., Red Lake County, at bridge on U.S. Highway 59, at Plummer, and 8 miles upstream from Hill River. (Site of continuous-record gaging station since 1939)	512	1- 6-33	14.6			10-25-33	19.8	
05078230	Lost River at Oklee, Minn.	Lat 47°50'35", long 95°51'30", on line between secs.1 and 2, T.150 N., R.41 W., Red Lake County, at bridge on State Highway 222, at northwest edge of Oklee, and 12 miles upstream from mouth. (Site of continuous-record gaging station since 1960)	266	8-20-57	7.57			8-20-58	1.29	
				3-25-58	15.8			9-22-58	.26	
				4- 8-58	25.0			6-16-59	23.2	
				5-23-58	18.8			8-14-59	21.5	
				6-18-58	35.4			9-16-59	4.00	
				7-23-58	22.3			10-14-59	15.5	
*05078340	Hill River at Brooks, Minn.	Lat 47°49'22", long 96°00'00", in NE¼SW¼ sec.11, T.150 N., R.42 W., Red Lake County, at bridge on U.S. Highway 59, at Brooks.	a185	10-25-33	b1.00			7-25-73	5.31	555
				9-21-66	6.51			8-20-75	8.22	490
				8-25-70	4.36		420	5-26-76	7.51	520
				9-14-71	14.2			9- 1-76	1.33	514
				9-21-72	8.52		542			
*05078380	Poplar River near Brooks, Minn.	Lat 47°48'13", long 96°03'30", in NW¼NE¼ sec.20, T.150 N., R.42 W., Red Lake County, at bridge on County Highway B3, 2.5 miles upstream from mouth, and 2.8 miles west of Brooks.	a155	5-25-64	27.9			9-22-66	3.72	580
				7- 1-64	32.9			7-21-67	3.20	
				8-20-64	4.52			8-25-70	0	
				10-21-64	11.7			9-14-71	3.73	
				5- 4-65	151			9-21-72	10.3	620
				8-18-65	6.03			7-25-73	0	
				9-20-65	13.0			8-20-75	10.6	560
				8- 3-66	3.54			5-26-76	7.04	615
				9-20-66	3.45			9- 1-76	0	
05078490	Badger Creek near Red Lake Falls, Minn.	Lat 47°50'48", long 96°13'53", on line between sec.1, T.150 N., R.44 W., and sec.36, T.151 N., R.44 W., Red Lake County, at bridge on County Highway A4, about 1 mile upstream from mouth, and 3 miles southeast of Red Lake Falls.	105	8-20-70	0			8-20-75	0	
				9-14-71	0			5-26-76	.03	770
				9-21-72	<.01			9- 1-76	0	
				7-25-73	0					
05078500	Clearwater River at Red Lake Falls, Minn.	Lat 47°53'15", long 96°16'25", in NW¼NE¼ sec.22, T.151 N., R.44 W., Red Lake County, at Great Northern Railroad bridge in Red Lake Falls, 1.4 miles upstream from mouth, and 3 miles downstream from Badger Creek. (Site of continuous-record gaging station, 1909-17, and since 1934)	a1,370	6-19-24	66.0					
05079900	Burnham Creek at Girard, Minn.	Lat 47°43'53", long 96°39'41", in NW¼NE¼ sec.15, T.149 N., R.47 W., Polk County, at bridge on county road, 0.2 mile upstream from U.S. Highway 75, and 0.8 mile northeast of Girard.	135	4-28-64	23.1			9-22-66	b.04	390
				5-25-64	3.23			7-21-67	0	
				7- 2-64	4.04			8-25-70	0	
				8-20-64	0			9-14-71	.95	
				10-21-64	.42			9-22-72	0	
				5- 4-65	39.3			7-25-73	0	
				8-18-65	0			8-20-75	0	
				9-21-65	0			6- 3-76	0	
				8- 3-66	b.05			9- 1-76	0	
				9-20-66	.08					

\* High-flow measurements are also available in Geological Survey files.

&lt; Less than.

a Approximately.

b Estimated.

Table 2.--Low-flow measurements at partial-record stations.

Station No.	Station Name	Location	Drainage Area (mi <sup>2</sup> )	Date	Discharge (ft <sup>3</sup> /s)	Measurements		Date	Discharge (ft <sup>3</sup> /s)	Specific Conductance (micromhos/cm at 25°C)
						Specific Conductance (micromhos/cm at 25°C)				
Red River of the North basin--Continued										
*05082200	Red Lake River at East Grand Forks, Minn.	Lat 47°55'24", long 97°00'59", in SW¼SW¼ sec.1, T.151 N., R.50 W., Polk County, at bridge on State Highway 220, in East Grand Forks, and 0.3 mile upstream from mouth.	a5,660	3-23-06	853			5-13-11	360	
				1-20-08	449			7-18-11	173	
				8-10-10	393			8-19-70	869	
				8-20-10	214			10-13-70	707	
				10-16-10	328			11-17-70	656	
				3-4-11	134			9-14-71	596	
05082610	Grand Marais Creek near East Grand Forks, Minn.	Lat 48°01'09", long 97°01'13", in NE¼NE¼ sec.2, T.152 N., R.50 W., Polk County, at culvert on State Highway 220, 6 miles upstream from mouth, and 6 miles north of East Grand Forks.	177	8-19-70	0			8-20-75	0	
				9-22-72	0			6-3-76	0	
				7-26-73	0			9-1-76	0	
05083500	Red River of the North at Oslo, Minn.	Lat 48°11'35", long 97°08'25", in SE¼SW¼ sec.31, T.155 N., R.50 W., Marshall County, at bridge on State Highway 1, at Oslo, and at mile 271.1. (Site of continuous-record gaging station, 1936-37, 1941-43, 1945-60)	a31,200	11-7-31	218			5-31-32	600	
				4-28-32	1,360			5-5-41	2,850	
05085500	Snake River at Warren, Minn.	Lat 48°11'50", long 96°46'45", in SE¼ sec.36, T.155 N., R.48 W., Marshall County, at bridge on Minnesota Street in Warren. (Site of continuous-record gaging station, 1945, 1953-56)	175	10-10-45	8.42			4-13-71	55.3	
				4-16-46	99.3			8-22-72	0	
				5-5-48	97.0			11-3-72	0	
				4-13-49	153			9-21-76	0	
05086000	Snake River at Alvarado, Minn.	Lat 48°11'50", long 97°00'20", in SW¼SE¼ sec.31, T.155 N., R.49 W., Marshall County, at bridge on State Highway 1, at west edge of Alvarado, and 22 miles upstream from mouth. (Site of continuous-record gaging station, 1945, 1953-56)	a309	10-10-45	9.26			5-5-48	101	
				4-16-46	116			4-24-51	130	
05086500	SNAKE RIVER near Argyle, Minn.	Lat 48°21'30", long 97°04'00", in E½SE¼ sec.3, T.156 N., R.50 W., Marshall County, at bridge on County Highway 17, 1 mile upstream from Middle River, and 12 miles west of Argyle. (Site of continuous-record gaging station, 1945)	a481	10-9-45	9.64			4-17-46	156	
05087000	Middle River near Strandquist, Minn.	Lat 48°22'01", long 96°33'53", in NW¼NW¼ sec.3, T.156 N., R.46 W., Marshall County, 0.5 mile north of entrance to Old Mill State Park, and 9.5 miles southwest of Strandquist. (Site of continuous-record gaging station, 1953-56)	--	7-19-54	.31			7-18-72	.27	515
				8-18-71	.19			8-22-72	.48	470
				9-15-71	.09			9-20-72	.02	
				10-14-71	.36	450		11-3-72	.24	
				6-16-72	.80	650				
05087500	Middle River at Argyle, Minn.	Lat 48°20'27", long 96°49'02", in SE¼SW¼ sec.10, T.156 N., R.48 W., Marshall County, at bridge on U.S. Highway 75 in Argyle, and 14 miles upstream from mouth. (Site of continuous-record gaging station, 1945, and since 1950)	265	10-9-45	23.0					
05090500	Tamarac River near Strandquist, Minn.	Lat 48°25'30", long 96°37'40", in NE¼NE¼ sec.18, T.157 N., R.46 W., Marshall County, at bridge on County Highway 1, 1.2 miles south of Florian, and 9 miles southwest of Strandquist. (Site of continuous-record gaging station, 1953-56)	--	10-9-63	.15			11-20-63	.60	

\* High-flow measurements are also available in Geological Survey files.  
a Approximately.

Table 2.--Low-flow measurements at partial-record stations.

Station No.	Station Name	Location	Drainage Area (mi²)	Date	Discharge (ft³/s)	Measurements		Date	Discharge (ft³/s)	Specific Conductance (micromhos/cm at 25°C)
						Specific Conductance (micromhos/cm at 25°C)				
Red River of the North basin--Continued										
05091000	Tamarac River at Stephen, Minn.	Lat 48°26'58", long 96°53'22", in NE¼SE¼ sec.6, T.157 N., R.48 W., Marshall County, at bridge at western city limits of Stephen. (Site of continuous-record gaging station, 1945)	a254	10- 9-45 4-17-46	22.2 95.7			10- 9-63 11-20-63	0 0	
05091500	Tamarac River near Stephen, Minn.	Lat 48°29'30', long 96°57'20", in SE¼NE¼ sec.22, T.158 N., R.49 W., Marshall County, at bridge on County Highway 22, 4.7 miles northwest of Stephen, and 8 miles upstream from mouth. (Site of continuous-record gaging station, 1945, 1953-55)	a320	6-17-45 7-24-45 10- 9-45	18.5 5.71 19.7			4-17-46 5-16-47 10- 9-63	95.6 25.0 0	
05092000	Red River of the North at Drayton, N.Dak.	Lat 48°34'20", long 97°08'50", in SE¼SE¼ sec.24, T.159 N., R.51 W., Pembina County, at bridge on Interstate Highway 29, 1.5 miles northeast of Drayton, and at mile 206.7. (Site of continuous-record gaging station, 1936-37, and since 1941)	a34,800	5- 3-41	3,620			5-10-41	2,360	
05092500	Middle Branch Two Rivers near Hallock, Minn.	Lat 48°45'56", long 96°53'12", on line between secs.16 and 17, T.161 N., R.48 W., Kittson County, at bridge on county road, 2.4 miles upstream from South Branch Two Rivers, and 2.8 miles east of Hallock. (Site of continuous-record gaging station, 1931-38)	a131	5-22-30	51.1					
05095000	Two Rivers at Hallock, Minn.	Lat 48°46'30", long 96°55'52", in SE¼SE¼ sec.12, T.161 N., R.49 W., Kittson County, at bridge on State Highway 175 at east edge of Hallock, and 0.2 mile downstream from South Branch Two Rivers. (Site of continuous-record gaging station, 1911-14, 1929-30, 1941-43)	a625	4- 1-67 4-12-69	991 938			9-21-76	.51	485
05096500	State ditch No. 85 near Lancaster, Minn.	Lat 48°52'02", long 96°40'01", in SW¼SW¼ sec.6, T.162 N., R.46 W., Kittson County, at bridge on County Highway 4, 1.3 miles upstream from mouth, and 6.5 miles northeast of Lancaster. (Site of continuous-record gaging station, 1929-38, 1942-55)	a95	8- 9-28	17.5			8-23-28	5.22	
05102900	Roseau River near Skime, Minn.	Lat 48°38'30", long 95°35'47", in SE¼SW¼ sec.30, T.160 N., R.38 W., Roseau County, at bridge on County Highway 4, 6.5 miles north of Skime, and about 11 miles southeast of Malung.	134	9-15-71 8-24-72 7-26-73	.35 4.71 .48	280 360		8-19-75 5-27-76 9- 1-76	3.69 17.6 .68	420 190 370
05103000	Roseau River near Malung, Minn.	Lat 48°45'45", long 95°42'05", in SE¼SE¼ sec.17, T.161 N., R.39 W., Roseau County, at bridge on county road, 0.8 mile downstream from Bear Creek, 1.2 miles southeast of Malung, and 3.2 miles upstream from South Fork. (Site of continuous-record gaging station, 1928-46)	252	10-26-46 11-26-46 3-22-47	2.97 3.64 .74			3-25-47 3-28-47	1.83 1.99	

a Approximately.

Table 2.--Low-flow measurements at partial-record stations.

Station No.	Station Name	Location	Drainage Area (mi <sup>2</sup> )	Date	Discharge (ft <sup>3</sup> /s)	Measurements		Date	Discharge (ft <sup>3</sup> /s)	Specific Conductance (micromhos/cm at 25°C)
						Specific Conductance (micromhos/cm at 25°C)				
Red River of the North basin--Continued										
05104000	South Fork Roseau River near Malung, Minn.	Lat 48°47'00", long 95°44'16", in NE¼SW¼ sec.7, T.161 N., R.39 W., Roseau County, at bridge on County Highway 2, 500 feet downstream from Sucker Creek, 0.5 mile upstream from mouth, and 1.1 miles northwest of Malung. (Site of continuous-record gaging station, 1911-14, 1928-46)	312	10-26-46	0			3-28-47	.68	
				11-25-46	.81			4-21-47	59.6	
				3-22-47	.59			5- 8-47	42.8	
				3-25-47	.77					
*05105000	Roseau River at Roseau, Minn.	Lat 48°51'53", long 95°45'37", in SW¼ sec.13, T.162 N., R.40 W., Roseau County, at bridge on State Highway 11, at Roseau. (Gage-height records available, 1940-47)	--	6-28-11	28.9			8-16-13	14.5	
				9-14-11	3.19			7-24-14	45.9	
				9-18-12	101			5- 7-43	510	
				4-29-13	197			4-12-68	150	
*05105200	Hay Creek near Salol, Minn.	Lat 48°51'39", long 95°35'39", in SE¼SE¼ sec.7, T.162 N., R.38 W., Roseau County, at culvert on State Highway 11, 1.3 miles southwest of Salol, and about 8.5 miles northeast of Malung.	66.1	5-12-30	103			7-26-73	.45	410
				4-10-49	130			8-19-75	.23	550
				9-15-71	.19			5-27-76	3.08	420
				8-25-72	.32	480		9- 1-76	1.09	270
*05105300	Roseau River below Roseau, Minn.	Lat 48°53'28", long 95°43'50", in SW¼SE¼ sec.31, T.163 N., R.39 W., Roseau County, at bridge on County Highway 28, 900 feet downstream from Hay Creek, and 3.2 miles northeast of Roseau.	--	10-26-72	4.28	612		10- 2-74	31.6	380
				11-28-72	10.5	488		12-18-74	15.7	525
				1- 4-73	4.54	690		2- 6-75	13.9	540
				2- 5-73	4.77	724		3-17-75	10.3	545
				4-17-73	16.9	469		9- 8-75	8.75	540
				6-26-73	15.8	414		10-14-75	7.27	580
				7-24-73	2.56	505		12- 1-75	23.6	360
				8-29-73	16.0	476		1-12-76	8.70	600
				12-11-73	23.0	440		2-17-76	7.30	590
				1-22-74	7.77	410		3-29-76	22.9	530
				3- 5-74	7.14	560		8- 3-76	7.30	495
				7- 9-74	28.6	365		9-13-76	.49	560
*05105500	Roseau River near Roseau, Minn.	Lat 48°55'24", long 95°46'02", on line between secs.23 and 24, T.163 N., R.40 W., Roseau County, at bridge on State Highway 310 (Richardson's bridge), 1.3 miles upstream from Sprague Creek, and 5.3 miles north of Roseau. (Gage-height records available, 1930-60)	--	5- 1-42	1,960			4-22-50	1,810	
				4-11-49	1,950					
05107000	Pine Creek near Pine Creek, Minn.	Lat 48°59'35", long 95°55'04", in SW¼SW¼ sec.26, T.164 N., R.41 W., Roseau County, at culvert 0.5 mile south of international boundary, and 2 miles northeast of Pine Creek. (Site of continuous-record gaging station, 1928-53)	74.6	5-15-74	42.9					
05109000	Badger Creek near Badger, Minn.	Lat 48°48'15", long 96°01'44", in NW¼ sec.2, T.161 N., R.42 W., Roseau County, at bridge on county road, downstream from Skunk Creek ditch, and 1.7 miles northwest of Badger. (Site of continuous-record gaging station, 1929-30, 1931-38)	a2.2	4-15-31	b.30			4-13-38	b.20	
*05110500	Roseau River at head of State ditch No. 51, near Oak Point, Minn.	Lat 48°56'53", long 96°22'56", in NE¼NE¼ sec.18, T.163 N., R.44 W., Roseau County, at head of State ditch 51 (known locally as Caribou cut-off ditch), 2 miles southeast of Oak Point. (Gage-height records available, 1933-42)	--	5-11-33	254			9- 8-33	b3.50	

\* High-flow measurements are also available in Geological Survey files.

a Approximately.

b Estimated.

Table 2.--Low-flow measurements at partial-record stations.

Station No.	Station Name	Location	Drainage	Date	Discharge (ft <sup>3</sup> /s)	Measurements		Date	Discharge (ft <sup>3</sup> /s)	Specific Conductance (micromhos/cm at 25°C)
			Area (mi <sup>2</sup> )			Conductance (micromhos/cm at 25°C)				
Red River of the North basin--Continued										
05111000	Roseau River at Oak Point, Minn.	Lat 48°58'48", long 96°24'19", in SE $\frac{1}{4}$ sec.36, T.164 N., R.45 W., Kittson County, at bridge on County Highway 24, 1.5 miles south of international boundary at Oak Point. (Gage-height records available, 1933-39, 1941-60)	--	4-19-57	659					
Lake of the Woods basin										
05124480	Kawishiwi River near Ely, Minn.	Lat 47°55'22", long 91°32'06", in SE $\frac{1}{4}$ sec.24, T.63 N., R.10 W., Lake County, upstream from rapids, 2 miles upstream from South Kawishiwi River, 2.2 miles southwest of Fernberg Lookout Tower, and 14 miles east of Ely. (Site of continuous-record gaging station since 1966)	253	7-12-51	218					
05124497	Little Isabella River near Isabella, Minn.	Lat 47°44'24", long 91°30'20", in SE $\frac{1}{4}$ sec.29, T.61 N., R.9 W., Lake County, at bridge on National Forest Development Road 173, 7 miles upstream from mouth, 10 miles southwest of Forest Center Landing, and 11 miles northwest of Isabella.	48.3	8-13-70	11.3	100	10-25-72	31.3	75	
				9-29-70	13.9		8-11-75	10.6		
				8-11-71	29.0		8-25-76	6.93	95	
				9-14-71	28.6	90	9-28-76	8.04	85	
				6-15-72	35.8	60				
05124500	Isabella River near Isabella, Minn.	Lat 47°48'00", long 91°31'15", in NW $\frac{1}{4}$ sec.6, T.61 N., R.9 W., Lake County, 200 feet upstream from Bald Eagle Lake, 0.5 mile upstream from Snake River, and 14.5 miles northwest of Isabella. (Site of continuous-record gaging station, 1952-61, and since 1976)	341	9-27-67	104		2- 2-68	61.9		
05125000	South Kawishiwi River near Ely, Minn.	Lat 47°50'24", long 91°41'43", in NE $\frac{1}{4}$ sec.23, T.62 N., R.11 W., Lake County, 5 miles upstream from Birch Lake, and 9 miles southeast of Ely. (Site of continuous-record gaging station, 1951-61, and since 1976)	--	5-19-67	1,090		3-26-68	117		
05125500	Stony River near Isabella, Minn.	Lat 47°41'10", long 91°38'20", in NW $\frac{1}{4}$ sec.17, T.60 N., R.10 W., Lake County, at bridge on State Highway 1 at Slate Lake outlet, 11 miles upstream from Birch Lake, and 12.8 miles northwest of Isabella. (Site of continuous-record gaging station, 1952-64)	180	5-19-67	260		1-28-76	36.5	92	
				9-27-67	61.5		3- 4-76	27.9	52	
				2- 1-68	15.8		4- 6-76	207	67	
				9-24-68	226		5-26-76	72.3	61	
				6-15-72	113		7- 8-76	138	59	
				10-25-72	112	50	8-19-76	9.84	97	
				8-27-75	41.0	86	9-29-76	4.93	140	
				11- 6-75	84.1	64				
05126000	Dunka River near Babbitt, Minn.	Lat 47°41'55", long 91°52'05", in NW $\frac{1}{4}$ sec.9, T.60 N., R.12 W., St. Louis County, 1.8 miles upstream from Birch Lake, and 2.5 miles east of Babbitt. (Site of continuous-record gaging station, 1951-62, and since 1975)	53.0	6-15-72	27.9					
05127207	Bjorkman's Creek near Ely, Minn.	Lat 47°55'31", long 91°53'26", in NW $\frac{1}{4}$ sec.20, T.63 N., R.12 W., St. Louis County, at bridge on County Highway 88, at mouth, 2.5 miles northwest of Ely. (Site of continuous-record gaging station since 1972)	1.36	8-14-69	.16		8-20-70	0		

Table 2.--Low-flow measurements at partial-record stations.

Station No.	Station Name	Location	Drainage Area (mi <sup>2</sup> )	Date	Discharge (ft <sup>3</sup> /s)	Measurements		Discharge (ft <sup>3</sup> /s)	Specific Conductance (micromhos/cm at 25°C)
						Specific Conductance (micromhos/cm at 25°C)	Date		
Lake of the Woods basin--Continued									
05127219	Shagawa Lake tributary at Ely, Minn.	Lat 47°54'24", long 91°52'23", in NE¼SW¼ sec.28, T.63 N., R.12 W., St. Louis County, 200 feet upstream from mouth, and 500 feet northwest of sewage plant in Ely. (Site of continuous-record gaging station since 1971)	.71	4-28-70 8-20-70	1.02 .12		9-23-70	.42	
05128400	Sand River near Britt, Minn.	Lat 47°37'52", long 92°33'24", in NW¼ sec.6, T.59 N., R.17 W., St. Louis County, at bridge on U.S. Highway 53, 1.3 miles southwest of Britt.	--	4-26-58 5-21-58 6-18-58 6-25-58 7-19-58 8-16-58 9-24-58 10-23-58 11-21-58 5- 1-59 5-27-59 7- 2-59 8- 4-59 8-26-59 7- 6-60	12.5 10.6 26.8 21.8 15.7 5.65 11.2 10.9 38.1 18.6 62.0 25.4 3.13 18.5 8.55		7-28-60 8-24-60 10-29-60 11-16-60 12-22-60 1-23-61 2-21-61 5-23-61 6-21-61 7-17-61 8-14-61 9-13-61 10-19-61 11- 2-61	26.7 9.00 4.39 8.94 .39 .37 .54 61.0 4.99 1.34 .38 23.7 23.6 15.0	
05128500	Pike River near Embarrass, Minn.	Lat 47°39'36", long 92°18'54", in NE¼NW¼ sec.25, T.60 N., R.16 W., St. Louis County, at bridge on County Highway 373, 5.4 miles west of Embarrass, and 8.5 miles downstream from Sandy River. (Site of continuous-record gaging station, 1953-64)	115	8-30-73	47.5		6- 7-76	4.89	
05129105	Pelican River near Orr, Minn.	Lat 48°08'09", long 92°45'40", in NE¼NE¼ sec.10, T.65 N., R.19 W., St. Louis County, at bridge on trail, 4.5 miles northeast of Cusson, 5.7 miles northeast of Orr, and about 10 miles upstream from mouth.	177	8-12-70 9-29-70 8-12-71 9-14-71 6- 8-72	39.4 12.7 39.2 38.9 95.3	85  80 60	10-25-72 8-12-75 6- 3-76 9- 2-76	47.4 65.5 38.1 9.67	90 <50 70 <50
05129150	Little Indian Sioux River near Buyck, Minn.	Lat 48°08'34", long 92°12'25", in SW¼NW¼ sec.1, T.65 N., R.15 W., St. Louis County, at bridge on County Highway 116 (Echo Trail), 1 mile upstream from Range Line Creek, and 15 miles east of Buyck.	72.0	8-12-70 9-29-70 8-12-71 9-14-71 6-15-72	8.42 40.1 6.86 7.66 46.5	<50  <50 <50	10-25-72 8-12-75 6- 3-76 9- 2-76	17.0 6.66 13.1 2.28	<50 <50 <50 <50
05129280	Ash River near Ray, Minn.	Lat 48°20'07", long 92°54'57", in SW¼NW¼ sec.33, T.68 N., R.20 W., St. Louis County, at bridge on county road, 0.5 mile upstream from Black Duck River, 8 miles north of Ash Lake, and 14 miles southeast of Ray.	54.7	8-12-70 9-30-70 8-12-71 9-14-71 6- 8-72	2.34 17.4 2.26 1.57 6.86	320  340 230	10-24-72 8-12-75 6- 3-76 9- 1-76	10.1 4.08 4.55 1.24	285 270 340 360
05129380	Rat Root River near Littlefork, Minn.	Lat 48°24'35", long 93°21'55", at center of sec.1, T.68 N., R.24 W., Koochiching County, at bridge on county road, 5.7 miles southwest of Ericsburg, and 9 miles east of Littlefork.	89.6	8-12-70 9-30-70 8-12-71 9-15-71 6- 8-72	.27 30.8 .34 2.46 9.12	260  225 190	10-24-72 8-13-75 6- 3-76 9- 1-76	21.0 1.95 2.75 .004	180 185 300
05129390	East Branch Rat Root River near Ray, Minn.	Lat 48°26'32", long 93°11'58", on line between secs.29 and 30, T.69 N., R.22 W., Koochiching County, at bridge on County Highway 3, 2 miles north of Ray.	63.9	8-12-70 9-30-70 8-12-71 9-15-71 6- 8-72	.08 24.3 .18 4.80 6.22	290  190 170	10-24-72 8-12-75 6- 3-76 9- 1-76	13.1 1.11 .53 .01	170 200 230

&lt; Less than.

Table 2.--Low-flow measurements at partial-record stations.

Station No.	Station Name	Location	Drainage Area (mi <sup>2</sup> )	Date	Discharge (ft <sup>3</sup> /s)	Measurements		Date	Discharge (ft <sup>3</sup> /s)	Specific Conductance (micromhos/cm at 25°C)
Lake of the Woods basin--Continued										
*05129650	Little Fork River at Cook, Minn.	Lat 47°51'16", long 92°41'56", in NE¼SE¼ sec.13, T.62 N., R.19 W., St. Louis County, at bridge on U.S. Highway 53, 0.6 mile west of Cook.	61.5	4-25-58	27.6			9-27-63	5.91	
				5-21-58	27.3			10-14-63	2.48	
				6-18-58	30.9			12- 9-63	7.70	
				6-25-58	20.4			1-14-64	.80	
				7-18-58	25.3			2-25-64	.73	
				8-16-58	2.47			3-30-64	.47	
				9-25-58	20.9			7- 8-64	32.5	
				10-22-58	12.0			8- 5-64	5.39	
				4-30-59	40.1			9-11-64	30.6	
				7- 3-59	11.4			10- 7-64	30.5	
				8- 4-59	2.75			11- 1-64	9.03	
				8-26-59	18.7			12- 8-64	2.53	
				7- 6-60	6.49			6-18-65	19.4	
				7-28-60	2.80			7-23-65	21.3	
				8-24-60	1.91			11-17-65	37.7	
				9-20-60	61.50			2- 7-66	4.65	
				6-14-61	38.2			2-25-66	2.81	
				7-13-61	.91			6- 1-66	31.2	
				8-12-61	.32			6-28-66	9.40	
				9- 7-61	.85			7-21-66	4.80	
				10- 4-61	36.6			8-18-66	9.25	
				10-31-61	25.5			8-15-68	.47	
				11- 1-61	24.7			8- 5-71	1.68	
				4-17-62	39.7			9- 8-71	7.80	
				9-27-62	23.2			6- 6-72	19.6	
				10-11-62	11.5			9-12-72	22.4	
				12- 4-62	7.99			10-17-72	28.2	70
				2-12-63	.60			9-20-73	9.33	
				7-17-63	16.8			10- 1-74	11.1	120
				8-22-63	17.4			6- 2-76	2.79	285
*05129690	Rice River near Angora, Minn.	Lat 47°42'30", long 92°38'41", in SW¼SW¼ sec.4, T.60 N., R.18 W., St. Louis County, at bridge on U.S. Highway 53, 1.7 miles south of Idington, and 5.1 miles south of Angora.	--	4-26-58	20.5			7-28-60	19.5	
				5-21-58	18.6			8-24-60	15.1	
				6-18-58	20.8			9-21-60	8.86	
				6-25-58	23.0			10-20-60	9.55	
				7-18-58	27.6			11-16-60	21.7	
				8-16-58	11.6			7-13-61	7.56	
				9-24-58	25.1			8-12-61	5.06	
				10-23-58	17.6			9- 7-61	4.91	
				5- 1-59	30.0			10- 4-61	27.0	
				7- 2-59	26.0			10-31-61	28.0	
				8- 4-59	8.57			9-11-72	19.9	50
				8-26-59	26.9			10-17-72	22.7	65
				7- 6-60	22.4			9-19-73	24.1	
*05129900	Rice River near Cook, Minn.	Lat 47°48'33", long 92°40'27", in NW¼SW¼ sec.32, T.62 N., R.18 W., St. Louis County, at bridge on U.S. Highway 53, 3.5 miles south of Cook.	--	4-26-58	38.4			7-28-60	43.2	
				5-21-58	41.1			8-24-60	22.4	
				6-18-58	45.6			9-21-60	16.2	
				6-25-58	39.8			10-20-60	17.4	
				7-18-58	50.6			7-13-61	9.64	
				8-16-58	19.9			8-12-61	8.57	
				9-25-58	41.6			9- 7-61	8.56	
				10-23-58	30.2			10- 4-61	51.2	
				5- 1-59	59.7			11- 1-61	50.2	
				7- 3-59	43.5			9-27-62	38.7	
				8- 4-59	14.0			9-12-72	39.6	73
				8-26-59	31.1			10-18-72	43.5	70
				7- 6-60	36.3			9-19-73	33.4	
05129920	Little Fork River near Gheen, Minn.	Lat 47°51'46", long 92°54'15", in NE¼NW¼ sec.16, T.62 N., R.20 W., St. Louis County, at bridge on State Highway 1, 2.5 miles east of Meadow Brook, and 8.5 miles southwest of Gheen.	a290	7-30-70	31.2	136		10-19-72	110	55
				8-11-70	13.5	155		9-20-73	52.8	
				9-29-70	15.8			8-15-75	14.9	125
				8- 5-71	24.5			6- 2-76	27.8	105
				9- 8-71	44.1	155		8-16-76	10.9	120
				9-15-71	91.8	160		9-16-76	2.94	180
				6- 6-72	112	55				
05130300	Boriin Creek near Chisholm, Minn.	Lat 47°36'14", long 92°51'58", in SE¼SE¼ sec.9, T.59 N., R.20 W., St. Louis County, at culvert on State Highway 73, 1.2 miles upstream from mouth, and 7.8 miles north of Chisholm. (Annual maximums available since 1959)	13.7	6-29-60	3.92			8-16-68	3.12	
				7-16-63	1.97			6-27-69	2.21	
				6-16-64	4.14			9- 5-69	2.95	
				8- 4-64	.77			9- 3-71	1.35	160
				6-28-65	1.90			10-19-72	2.60	80
				7-26-65	.80			9-19-73	1.49	160
				8-18-66	3.52			6- 2-76	.95	170

\* High-flow measurements are also available in Geological Survey files.

a Approximately.

b Estimated.

Station No.	Station Name	Location	Drainage Area (mi <sup>2</sup> )	Date	Discharge (ft <sup>3</sup> /s)	Measurements		Date	Discharge (ft <sup>3</sup> /s)	Specific Conductance (micromhos/cm at 25°C)
						Specific Conductance (micromhos/cm at 25°C)				
Lake of the Woods basin--Continued										
05131310	Bear River near Togo, Minn.	Lat 47°49'20", long 93°03'04", on line between secs.29 and 32, T.62 N., R.21 W., St. Louis County, at bridge on County Highway 5, 2 miles upstream from mouth, and 4.5 miles east of Togo.	a170	7-30-70	20.3	256		9-12-72	66.3	164
				8-11-70	22.5	240		10-17-72	68.6	108
				9-29-70	18.1			9-21-73	40.2	
				8- 5-71	23.1			8-15-75	19.5	240
				9- 7-71	27.1	230		6- 2-76	21.9	245
				9-15-71	21.4	240		8-16-76	18.9	200
				6- 6-72	71.5	130		9-16-76	12.7	315
05131320	Sturgeon River near Togo, Minn.	Lat 47°51'56", long 93°02'07", on line between secs.9 and 16, T.62 N., R.21 W., St. Louis County, at bridge on State Highway 1, 2 miles upstream from mouth, 3.8 miles west of Meadow Brook, and 6 miles northeast of Togo.	a375	7-30-70	82.8	198		10-19-72	146	90
				8-11-70	62.4	200		9-20-73	168	
				9-29-70	64.6			8-15-75	75.1	190
				8- 5-71	83.4			6- 2-76	95.7	190
				9- 7-71	103	210		9- 2-76	32.3	215
				9-15-71	86.8	190		9-16-76	24.5	265
				6- 6-72	278	110				
05131325	Valley River near Rauch, Minn.	Lat 47°57'28", long 93°11'21", in SE¼NE¼ sec.7, T.63 N., R.22 W., Koochiching County, at bridge on County Highway 57, 2 miles upstream from mouth, 2 miles west of Rauch, and 9.5 miles northwest of Togo.	68.5	7-30-70	5.38	262		9-12-72	10.5	130
				8-11-70	1.87	340		10-20-72	12.9	98
				9-29-70	7.46			9-21-73	6.19	
				8- 5-71	1.93			8-15-75	1.85	340
				9- 7-71	5.09	280		6- 3-76	2.64	325
				9-15-71	3.58	260		8-16-76	2.02	310
				6- 2-72	11.0	180		9-16-76	.62	425
*05131470	Nett Lake River near Littlefork, Minn.	Lat 48°13'00", long 93°26'40", in SE¼SE¼ sec.8, T.66 N., R.24 W., Koochiching County, at bridge on County Highway 8, 2.2 miles upstream from mouth, and 13 miles southeast of Littlefork.	a215	7-29-70	86.1	132		9-12-72	55.0	
				8-11-70	12.0	175		10-17-72	71.5	125
				9-29-70	33.4			9-20-73	2.35	
				8- 6-71	49.3			8-13-75	136	105
				9- 7-71	14.7	180		6- 3-76	85.4	115
				9-15-71	9.07	180		8-16-76	1.03	270
				6- 7-72	200	70		9-16-76	.03	320
*05131510	Beaver Brook near Littlefork, Minn.	Lat 48°24'12", long 93°30'57", on line between secs.2 and 11, T.68 N., R.25 W., Koochiching County, at bridge on State Highway 217, 1.5 miles upstream from mouth, and 1.5 miles east of Littlefork.	97.4	7-29-70	1.38	284		9-13-72	4.54	
				8-11-70	.47	300		10-16-72	30.4	240
				9-29-70	31.0			9-20-73	5.44	
				8- 6-71	1.79			8-13-75	2.32	210
				9- 7-71	4.20	300		6- 3-76	2.18	330
				9-15-71	4.01	305		8-16-76	b.02	
				6- 7-72	29.6	270		9-15-76	.01	345
05131600	Bowstring River near Talmoon, Minn.	Lat 47°32'12", long 93°47'45", on line between secs.23 and 24, T.147 N., R.25 W., Itasca County, at bridge on State Highway 6, 0.4 mile south of Bowstring, and 4.5 miles southwest of Talmoon.	90.2	9-10-69	41.8			9-13-71	8.62	225
				7-14-70	35.7	264		6- 6-72	37.6	246
				7-30-70	14.2	268		8-30-72	49.1	230
				8-11-70	11.0			8-18-75	11.3	240
				9-29-70	2.73	275		6- 4-76	15.2	295
				8- 4-71	20.1			8-19-76	8.34	250
				9- 7-71	12.8	255		9-14-76	.29	300
*05131730	Big Fork River at Dora Lake, Minn.	Lat 47°44'22", long 94°03'00", in S½NW¼ sec.12, T.149 N., R.27 W., Itasca County, at bridge on County Highway 29, at Dora Lake, and 4.5 miles west of Wirt.	--	8-27-65	86.4			2-27-68	10.1	
				7-29-66	142			6- 4-68	131	
				8- 2-66	80.3			8- 2-68	49.2	
				8-25-66	117			9-16-68	145	
				9-14-66	146			7-29-69	141	
				2- 3-67	94.6			8-28-69	133	
				6-30-67	155			10- 2-69	189	
				7-31-67	120			3-18-70	146	
				9-25-67	118			8- 7-70	112	
				11- 2-67	61.5			2-16-71	94.6	
				05131750	Big Fork River near Bigfork, Minn.	Lat 47°44'56", long 93°46'31", in SE¼SE¼ sec.1, T.149 N., R.25 W., Itasca County, at bridge on State Highway 6, 5.5 miles west of Bigfork. (Annual maximums available since 1973)	602	7-14-70	218	208
7-30-70	122	238						8- 6-73	70.1	230
8-11-70	113							9- 5-73	278	195
9-29-70	138	250						9-10-73	209	180
8- 4-71	138							6- 4-76	192	240
9-13-71	147	235						8-17-76	44.1	200
6- 6-72	284	209						9-14-76	39.2	280
8-30-72	240	210								
05131760	Rice River near Bigfork, Minn.	Lat 47°40'28", long 93°39'17", on line between secs.16 and 21, T.60 N., R.26 W., Itasca County, at bridge on County Highway 254, 5 miles south of Bigfork.	82.8	9-10-69	39.0			9-13-71	7.22	320
				7-14-70	26.6	246		6- 6-72	47.7	244
				7-30-70	23.9	290		8-30-72	56.0	255
				8-10-70	25.2			8-14-75	20.8	230
				9-29-70	6.34	355		6- 4-76	9.64	315
				8- 4-71	28.4			8-19-76	15.6	300
				9- 7-71	7.39	340		9-14-76	3.70	350

\* High-flow measurements are also available in Geological Survey files.

a Approximately.

b Estimated.

Table 2.--Low-flow measurements at partial-record stations.

Station No.	Station Name	Location	Drainage Area (mi <sup>2</sup> )	Date	Measurements		Date	Discharge (ft <sup>3</sup> /s)	Specific Conductance (micromhos/cm at 25°C)
					Discharge (ft <sup>3</sup> /s)	Specific Conductance (micromhos/cm at 25°C)			
Lake of the Woods basin--Continued									
05131770	Gale Brook near Bigfork, Minn.	Lat 47°43'22", long 93°39'26", in NE¼NW¼ sec.4, T.60 N., R.26 W., Itasca County, at culvert on County Highway 7, 1.5 miles south of Bigfork.	27.8	9-10-69	9.21		9-13-71	.84	340
				7-14-70	5.60	284	6- 6-72	5.46	192
				7-30-70	.10	302	9- 1-72	10.4	180
				8-11-70	0		8-14-75	b.01	
				9-29-70	.17	390	6- 4-76	.49	305
				8- 4-71	1.57		8-19-76	.20	265
				9- 7-71	5.77	310	9-14-76	.006	290
05131870	Big Fork River near Effie, Minn.	Lat 47°57'13", long 93°45'16", in NW¼NE¼ sec.14, T.63 N., R.27 W., Koochiching County, at bridge on State Highway 6, 0.2 mile upstream from Bowerman Brook, 1 mile south of County Highway 5, and 9 miles northwest of Effie.	a1,020	7-28-70	195	278	6- 6-72	445	210
				8-11-70	160		8-30-72	472	215
				9-29-70	187	255	6- 2-76	263	270
				8- 4-71	188		8-19-76	83.6	285
				9-14-71	169	210	9-15-76	50.7	320
05131880	Bowerman Brook at Caldwell Road, near Effie, Minn.	Lat 47°56'44", long 93°45'52", in SW¼SW¼ sec.14, T.63 N., R.27 W., Koochiching County, at culvert on Caldwell Road, 8 miles northwest of Effie.	25.9	10-21-69	29.6		6- 7-72	1.33	156
				7-28-70	.27	204	9- 1-72	.79	
				8-11-70	.06		8-14-75	0	
				9-29-70	1.07	165	6- 2-76	.09	255
				8- 4-71	.29		8-19-76	0	
9-14-71	0		9-15-76	0					
05131900	Caldwell Brook at Caldwell Road, near Effie, Minn.	Lat 47°57'15", long 93°52'54", in NW¼SW¼ sec.29, T.152 N., R.25 W., Koochiching County, at bridge on Caldwell Road, 12 miles northwest of Effie.	122	9-10-69	5.72		6- 7-72	5.13	340
				7-28-70	1.50	280	8-31-72	2.34	370
				8-12-70	1.17		8-14-75	2.16	395
				9-30-70	2.03	440	6- 2-76	1.95	470
				8- 4-71	12.4		8-19-76	.44	555
9-14-71	1.57		9-15-76	.12	580				
05132000	Big Fork River at Big Falls, Minn.	Lat 48°11'45", long 93°48'25", in sec.35, T.155 N., R.25 W., Koochiching County, at Big Falls, 700 feet downstream from falls, 0.3 mile upstream from bridge on U.S. Highway 71, and 4.8 miles upstream from Sturgeon River. (Site of continuous-record gaging station, 1909-12, and since 1928)	a1,460	1-16-13	27.6		8-13-14	448	
05132200	Sturgeon River near Big Falls, Minn.	Lat 48°12'57", long 93°55'54", in NE¼SE¼ sec.26, T.155 N., R.26 W., Koochiching County, at bridge on County Highway 30, 6.2 miles northwest of Big Falls.	a280	10-21-69	490		6- 7-72	101	70
				7-28-70	20.2	598	8-31-72	33.0	144
				8-12-70	2.88		8-13-75	8.27	125
				9-30-70	37.9	90	6- 2-76	42.8	100
				8- 5-71	45.0		8-19-76	3.94	150
9-14-71	33.8	95	9-15-76	.02	240				
05132400	Bear River near Littlefork, Minn.	Lat 48°24'13", long 93°41'21", on line between secs.4 and 9, T.68 N., R.26 W., Koochiching County, at bridge on County Highway 1, 5.5 miles west of Littlefork.	105	9-12-69	76.4		6- 7-72	17.1	112
				7-29-70	2.76	162	8-31-72	18.4	110
				8-12-70	.89		8-13-75	1.49	160
				9-30-70	34.9	90	6- 2-76	2.92	215
				8- 5-71	7.97		8-16-76	1.27	185
9-14-71	6.55	210	9-15-76	0					
05132900	Black River near Loman, Minn.	Lat 48°27'19", long 93°49'38", in SW¼SE¼ sec.34, T.158 N., R.25 W., Koochiching County, at end of county road, near farm house, 4 miles southwest of Loman.	a280	7-16-70	56.8		6-14-72	61.0	155
				8-12-70	.16		8-29-72	9.00	190
				9-30-70	13.1	135	8-11-75	2.03	
				8- 4-71	36.5		5-27-76	34.4	120
				9- 7-71	88.4	180	8-31-76	.76	150
9-14-71	29.4	120							
05133000	Black River at Loman, Minn.	Lat 48°30'46", long 93°47'57", in NE¼NE¼ sec.14, T.158 N., R.25 W., Koochiching County, at bridge on County Highway 11, at Loman. (Gage-height records available, 1909)	--	7- 1-09	11.8				
05133200	West Fork Black River near Loman, Minn.	Lat 48°31'37", long 93°49'54", in SE¼SW¼ sec.3, T.158 N., R.25 W., Koochiching County, at bridge on County Highway 82, 1.6 miles northwest of Loman.	a288	9-12-69	23.6		6-14-72	35.0	60
				7-14-70	59.1		8-28-72	7.96	120
				7-16-70	37.8		8-11-75	.09	
				9-30-70	5.61	80	5-27-76	5.82	120
				8- 4-71	1.10		8-31-76	.32	<50
9-14-71	13.6	85							

\* High-flow measurements are also available in Geological Survey files.

&lt; Less than.

a Approximately.

b Estimated.

Table 2.--Low-flow measurements at partial-record stations.

Station No.	Station Name	Location	Drainage Area (mi <sup>2</sup> )	Date	Discharge (ft <sup>3</sup> /s)	Measurements		Date	Discharge (ft <sup>3</sup> /s)	Specific Conductance (micromhos/cm at 25°C)
						Specific Conductance (micromhos/cm at 25°C)				
Lake of the Woods basin--Continued										
05134100	North Branch Rapid River near Baudette, Minn.	Lat 48°31'56", long 94°38'50", in NW¼SW¼ sec.4, T.158 N., R.31 W., Lake of the Woods County, at bridge on County Highway 1, 13 miles southwest of Baudette.	a180	9-11-69	18.6			6-15-72	158	170
				7-15-70	75.9			8-30-72	1.66	314
				8-13-70	.95			8-12-75	2.11	270
				10- 1-70	5.38	270		5-27-76	28.8	190
				8- 5-71	18.8			8-31-76	2.90	205
				9-15-71	4.09	320				
05135000	East Fork Rapid River near Clementson, Minn.	Lat 48°40'00", long 94°24'33", in NE¼NE¼ sec.19, T.160 N., R.29 W., Koochiching County, at Eidems Rapid, 1.9 miles upstream from Rapid River, and 2 miles southeast of Clementson.	a300	7-15-70	30.5			6-14-72	69.5	
				8-13-70	.97			8-30-72	7.54	190
				9-30-70	3.09	130		8-11-75	.73	
				8- 4-71	3.78			5-27-76	15.5	180
				9-15-71	6.74	190		8-31-76	1.93	
*05135100	Rapid River at Clementson, Minn.	Lat 48°41'28", long 94°25'59", in NE¼SE¼ sec.12, T.160 N., R.30 W., Lake of the Woods County, at bridge on State Highway 11 at Clementson, 0.3 mile upstream from mouth.	a700	9-11-69	74.1			6-14-72	223	210
				7-14-70	258			8-30-72	67.0	230
				8-13-70	17.6			8-11-75	45.8	240
				10- 1-70	22.0	272		5-27-76	85.9	250
				8- 4-71	131			8-31-76	27.8	230
				9-15-71	57.1	180				
05136000	Baudette River near Baudette, Minn.	Lat 48°39'25", long 94°37'23", on line between secs.22 and 27, T.160 N., R.31 W., Lake of the Woods County, at bridge on county road, 4 miles southwest of Baudette.	45.6	9-11-69	1.15			6-15-72	4.86	310
				7-15-70	2.18			8-30-72	.004	580
				8-13-70	0			8-12-75	.004	
				10- 1-70	.06	540		5-27-76	.41	480
				8- 5-71	1.17			8-31-76	.02	
05137000	Winter Road River near Baudette, Minn.	Lat 48°42'51", long 94°41'50", in SE¼SE¼ sec.36, T.161 N., R.32 W., Lake of the Woods County, at bridge on old State Highway 11, 4.5 miles west of Baudette.	145	9-11-69	8.49			6-15-72	48.9	255
				7-15-70	17.5			8-28-72	.44	500
				8-13-70	.67			8-12-75	2.07	410
				10- 1-70	5.07	392		5-27-76	14.4	300
				8- 5-71	6.44			8-31-76	.84	360
				9-15-71	.62	500				
05138000	Lake of the Woods County ditch No. 1 near Williams, Minn.	Lat 48°50'38", long 94°57'32", in NE¼NE¼ sec.24, T.162 N., R.34 W., Lake of the Woods County, at triple box culvert on County Highway 2, 5.2 miles north of Williams.	17.5	9-11-69	3.02			6-15-72	3.48	390
				7-15-70	2.14			8-29-72	.43	510
				8-13-70	0.58			8-12-75	.48	420
				10- 1-70	.65	490		5-27-76	1.53	470
				8- 4-71	2.69			8-31-76	.37	
				9-15-71	.54	440				
Mississippi River main stem										
05200010	Mississippi River at Lake Itasca, Minn.	Lat 47°14'35", long 95°12'38", in NW¼SW¼ sec.35, T.144 N., R.36 W., Clearwater County, at first culvert downstream from Lake Itasca, at County Highway 38 in Itasca State Park, 1 mile south of town of Lake Itasca, and about 22 miles southwest of Bemidji.	38.6	6- 4-64	5.75			8- 9-71	8.03	
				8- 8-64	2.41			8-28-73	8.75	300
				11-18-64	1.45			7- 9-74	8.81	
				6-17-65	26.6			10-23-75	2.11	290
				8- 3-65	5.74			5-27-76	4.90	330
				9- 5-67	1.41			9-30-76	.07	425
				8- 6-70	1.98	282				
05200445	Mississippi River at Bemidji, Minn.	Lat 47°27'04", long 94°54'23", in NW¼NW¼ sec.20, T.146 N., R.33 W., Beltrami County, at bridge on County Highway 11, 1.5 miles southwest of intersection of U.S. Highway 2 with County Highway 7 in Bemidji. (Annual maximums available since 1973)	a400	6- 4-64	68.0			7-20-73	55.7	350
				8- 7-64	61.6			7-10-74	81.4	340
				11-18-64	97.2			8-14-75	115	375
				8-25-65	57.0			5-27-76	64.6	470
				8- 6-70	50.6	414		8-26-76	36.6	480
				8- 9-71	104			9-23-76	28.0	440
				11- 3-72	102	380		9-30-76	28.8	445
				6-18-73	69.2	410		11- 4-76	43.3	435
Schoolcraft River basin										
*05200450	Schoolcraft River near Bemidji, Minn.	Lat 47°24'48", long 94°54'46", in SW¼SE¼ sec.31, T.146 N., R.33 W., Beltrami County, at bridge on County Highway 2, 0.1 mile downstream from Lake Plantagenet outlet, and 4.6 miles south of Bemidji.	a165	8-18-47	58.9			8-28-73	49.1	295
				6- 4-64	65.0			7- 9-74	29.7	320
				8- 8-64	26.4			8-14-75	47.9	280
				11-17-64	48.1			5-27-76	47.6	330
				8-25-65	30.9			8-26-76	15.0	360
				8- 6-70	19.8			9-30-76	9.75	315
				8- 9-71	53.5	292				

\* High-flow measurements are also available in Geological Survey files.  
a Approximately.

Table 2.--Low-flow measurements at partial-record stations.

Station No.	Station Name	Location	Drainage Area (mi <sup>2</sup> )	Date	Discharge (ft <sup>3</sup> /s)	Measurements		Date	Discharge (ft <sup>3</sup> /s)	Specific Conductance (micromhos/cm at 25°C)
Turtle River basin										
*05200850	Turtle River near Pennington, Minn.	Lat 47°32'34", long 94°35'52", in SE¼SW¼ sec.15, T.147 N., R.31 W., Beltrami County, at bridge on County Highway 20, 7 miles northwest of Pennington.	a165	6- 5-64	71.7			9-19-73	75.3	
				8- 7-64	67.8			7-10-74	85.3	290
				11-17-64	37.7			8-12-75	114	315
				6-29-65	97.6			6- 3-76	38.9	368
				8- 6-70	38.1		302	8-26-76	18.6	420
				8- 9-71	32.2			9-30-76	6.76	555
				8-27-73	47.4		330			
*05200920	North Turtle River near Pennington, Minn.	Lat 47°32'29", long 94°34'02", in NE¼NE¼ sec.23, T.147 N., R.31 W., Beltrami County, at bridge on County Highway 20, 0.5 mile upstream from mouth, and 5.8 miles northwest of Pennington.	76.5	6- 5-64	24.6			8-27-73	11.3	340
				8- 7-64	6.16			9-19-73	41.2	
				11-17-64	9.38			7-10-74	40.2	280
				6-29-65	39.9			8-12-75	67.1	295
				8-25-65	4.23			6- 3-76	18.4	420
				8- 6-70	4.26		380	8-26-76	4.49	380
				8- 9-71	5.49			9-30-76	1.16	590
Leech Lake River basin										
05204400	Boy River at Longville, Minn.	Lat 46°59'00", long 94°12'33", in NW¼SE¼ sec.34, T.141 N., R.28 W., Cass County, at bridge on State Highway 84, at Girl Lake outlet at Longville.	a160	8-12-53	101			8- 5-70	21.2	226
				9-16-53	78.9			8- 9-71	36.9	220
				4-14-54	79.6			8-28-73	47.8	310
				6- 5-64	43.4			8-11-75	52.8	247
				7-29-64	33.6			5-24-76	32.1	270
				10-16-64	24.1			8- 3-76	17.5	220
				5-19-65	68.6			9- 2-76	1.85	255
8- 3-65	58.9									
*05205200	Boy River near Remer, Minn.	Lat 47°04'51", long 94°05'54", in SE¼SE¼ sec.28, T.142 N., R.27 W., Cass County, at bridge on County Highway 53, 1.5 miles upstream from Boy Lake, and about 9 miles northwest of Remer.	a310	7-29-64	57.3			8-28-73	85.7	260
				10-16-64	85.9			8-11-75	102	300
				5-19-65	223			5-24-76	65.7	310
				8-12-65	116			8- 3-76	29.3	255
				8- 5-70	42.0		282	9- 2-76	21.0	225
				8- 9-71	80.3		272			
Mississippi River main stem										
05210000	Mississippi River near Deer River, Minn.	Lat 47°15'10", long 93°48'00", in NW¼NE¼ sec.35, T.144 N., R.25 W., Itasca County, at bridge on County Highway 18, (Collinge Bridge), 5.7 miles south of Deer River, and 20 miles downstream from Leech Lake River. (Site of continuous-record gaging station, 1945-50)	a3,190	7- 9-45	1,490			10-22-45	1,270	
				8-16-45	1,460			10-31-50	2,460	
				9- 7-45	1,330					
Prairie River basin										
*05212200	Prairie River near Nashwauk, Minn.	Lat 47°29'37", long 93°19'14", in NW¼SW¼ sec.19, T.58 N., R.23 W., Itasca County, at bridge on County Highway 336, about 10 miles northwest of Nashwauk.	a220	6- 6-64	85.8			8- 9-71	23.1	
				8- 3-64	29.2			8-28-73	63.8	
				11- 4-64	62.8			8-12-75	21.1	158
				8-19-65	25.2			6- 4-76	18.0	155
				8-11-70	16.0			9- 3-76	4.33	210
*05213000	Prairie River near Grand Rapids, Minn.	Lat 47°17'07", long 93°29'52", in SW¼SE¼ sec.34, T.56 N., R.25 W., Itasca County, at bridge on County Highway 61, at power plant and Blandin Paper Company, 3.5 miles northeast of Grand Rapids. (Gage-height records available, 1909, 1925-49)	a485	6- 8-09	187			8-20-29	181	
				8- 4-09	120			8-21-29	188	
				8-20-11	95.6			9- 5-29	177	
Swan River basin										
05216700	O'Brien Creek near Nashwauk, Minn.	Lat 47°22'59", long 93°08'08", in NE¼NE¼ sec.33, T.57 N., R.22 W., Itasca County, at culvert on U.S. Highway 169, 1.5 miles east of Nashwauk, and 3.0 miles upstream from Welcome Creek. (Annual maximums available, 1959-72)	8.26	11-10-55	1.77			10-16-68	.60	
				6-28-60	.42			5-13-69	.89	
				4-16-62	.68			8-27-69	.55	
				4- 9-63	3.69			8-13-70	.53	318
				4- 6-64	.29					

\* High-flow measurements are also available in Geological Survey files.  
a Approximately.

Table 2.--Low-flow measurements at partial-record stations.

Station No.	Station Name	Location	Drainage Area (mi <sup>2</sup> )	Date	Discharge (ft <sup>3</sup> /s)	Measurements		Date	Discharge (ft <sup>3</sup> /s)	Specific Conductance (micromhos/cm at 25°C)
						Specific Conductance (micromhos/cm at 25°C)				
Swan River basin--Continued										
05216800	O'Brien Creek near Pengilly, Minn.	Lat 47°18'56", long 93°09'26", in SW <sup>1</sup> / <sub>4</sub> SE <sup>1</sup> / <sub>4</sub> sec.20, T.56 N., R.22 W., Itasca County, at bridge on county road, downstream from Little O'Brien Lake, 1.0 mile upstream from Swan Lake, and 2.2 miles southeast of Pengilly. (Site of continuous-record gaging station, 1963-68)	--	11-10-55	18.9					
05216830	Hay Creek near Pengilly, Minn.	Lat 47°18'18", long 93°05'42", in SW <sup>1</sup> / <sub>4</sub> NE <sup>1</sup> / <sub>4</sub> sec.26, T.56 N., R.22 W., Itasca County, at culvert on Duluth, Missabe and Iron Range Railroad, 1.9 miles upstream from Hay Lake, and 5.0 miles southeast of Pengilly. (Annual maximums available, 1964-66)	14.5	11- 2-65 7-27-66	5.15 .46			9-25-67	.11	
05217000	Swan River near Warba, Minn.	Lat 47°06'40", long 93°15'50", in SE <sup>1</sup> / <sub>4</sub> sec.33, T.54 N., R.23 W., Itasca County, at bridge on County Highway 72, 1.2 miles south of Warba, and 22 miles upstream from mouth. (Site of continuous-record gaging station, 1953-69)	254	10-20-70 9- 2-76	87.8 20.7	310		10-20-76	26.6	300
Willow River basin										
*05220670	Willow River near Hill City, Minn.	Lat 46°54'00", long 93°36'50", on line between secs.14 and 15, T.51 N., R.26 W., Aitkin County, at bridge on U.S. Highway 169, 6 miles south of intersection of State Highway 200 with U.S. Highway 169 at south edge of Hill City.	a160	6- 6-64 7-29-64 11- 5-64 8-25-65 8-10-70 8- 9-71	81.4 39.2 50.4 46.7 13.5 43.8			8-29-73 7- 9-74 8-18-75 6- 2-76 8- 2-76 9- 2-76	41.0 104 72.6 27.0 23.9 13.1	320 295 292 352 415 440
05221000	Willow River near Palisade, Minn.	Lat 46°43'06", long 93°31'39", on line between secs.20 and 21, T.49 N., R.25 W., Aitkin County, at bridge on county road, 0.5 mile north of County Highway 3, and 1.9 miles northwest of Palisade. (Site of continuous-record gaging station, 1929-30)	a442	7- 9-29 8-14-29 9-27-29	71.2 45.3 16.3			10-18-29 11- 1-29 11- 3-44	57.0 68.3 127	
05221020	Willow River below Palisade, Minn.	Lat 46°42'36", long 93°33'21", in NW <sup>1</sup> / <sub>4</sub> NE <sup>1</sup> / <sub>4</sub> sec.30, T.49 N., R.25 W., Aitkin County, at bridge on County Highway 3, 3.2 miles west of Palisade. (Annual maximums available since 1972)	a445	7-31-64 11- 5-64 8-26-65 8-10-70 8- 9-71 10-18-71 9-17-73	68.8 153 81.9 29.0 98.9 158 124			9-26-74 8-18-75 6- 1-76 6-18-76 8- 2-76 9- 2-76 10-22-76	68.4 114 82.0 76.0 48.4 23.2 23.7	260 375 395 385 410 420
Rice River basin										
*05222200	Rice River at Hassman, Minn.	Lat 46°35'57", long 93°36'47", on line between secs.34 and 35, T.48 N., R.26 W., Aitkin County, at bridge on U.S. Highway 169, 0.5 mile south of intersection of U.S. Highways 169 and 210 at Hassman.	a284	11- 3-44 4-11-49 6- 7-64 7-13-64 7-14-65 8-26-65 8-10-70	61.2 316 91.7 83.2 100 16.5 4.22			8- 9-71 8-29-73 7- 9-74 8-18-75 6- 2-76 8- 2-76 9- 2-76	8.70 394 108 11.8 16.2 13.9 .10	110 150 200 200 150 220

\* High-flow measurements are also available in Geological Survey files.  
a Approximately.

Table 2.--Low-flow measurements at partial-record stations.

Station No.	Station Name	Location	Drainage Area (mi <sup>2</sup> )	Date	Discharge (ft <sup>3</sup> /s)	Measurements		Date	Discharge (ft <sup>3</sup> /s)	Specific Conductance (micromhos/cm at 25°C)				
						Specific Conductance (micromhos/cm at 25°C)								
Ripple River basin														
*05227480	Ripple River at Aitkin, Minn.	Lat 46°31'47", long 93°42'26", in NE¼NE¼ sec.26, T.47 N., R.27 W., Aitkin County, at bridge on U.S. Highway 169, 0.2 mile south of intersection of U.S. Highway 169 with State Highway 210 in Aitkin, and 0.8 mile upstream from mouth.	a125	6- 7-64	40.6			8-28-73	96.7	170				
				7-14-64	16.9			8-11-75	65.9	185				
				8-10-64	27.7			6- 2-76	3.48	228				
				8-26-65	37.1			8- 2-76	5.71	200				
				8- 5-70	6.95	200		9- 2-76	1.16	240				
				8- 9-71	20.6									
Mississippi River main stem														
05227500	Mississippi River at Aitkin, Minn.	Lat 46°32'26", long 93°42'26", in W¼ sec.24, T.47 N., R.27 W., Aitkin County, at bridge on County Highway 1, at north edge of Aitkin, 1 mile downstream from Ripple River, and at mile 1,055.9 upstream from Ohio River. (Site of continuous-record gaging station since 1945)	a6,140	7-27-29	2,550			11-12-30	768					
				9- 7-29	2,480			12-17-30	657					
				11- 5-29	2,520			2- 9-31	711					
				5-14-30	5,240			3-23-31	592					
				7-23-30	1,780			4-29-31	815					
				9-17-30	2,140			6- 2-33	5,990					
				Pine River basin										
				05229500	Pine River near Jenkins, Minn.	Lat 46°41'37", long 94°18'14", in NE¼SE¼ sec.11, T.137 N., R.29 W., Crow Wing County, at bridge on County Highway 15, 0.8 mile upstream from Upper Whitefish Lake, and 3.5 miles northeast of Jenkins.	a285	6- 8-64	72.1			8- 9-71	64.7	206
7-15-64	97.3							8-28-73	127					
8-19-64	61.6							8-19-75	56.6	260				
10-19-64	120							5-24-76	75.4	305				
8-11-65	156							8- 3-76	38.3	255				
8- 5-70	60.5	240						9- 3-76	11.4	315				
05235500	Little Pine River near Cross Lake, Minn.	Lat 46°37'48", long 93°59'04", in SW¼SW¼ sec.33, T.137 N., R.26 W., Crow Wing County, at bridge on county road, 5 miles upstream from mouth, 6 miles southeast of town of Cross Lake, and about 10 miles north of Crosby.	a195	6- 7-64	38.4			8- 9-71	22.2	178				
				7-14-64	61.6			8-28-73	103	150				
				8-15-64	22.0			8-19-75	12.8	180				
				10-19-64	85.0			5-24-76	11.7	240				
				8-10-65	21.2			8- 3-76	5.12	230				
				8- 5-70	8.00	205		9- 3-76	2.86	270				
				Rabbit River basin										
				05241500	Rabbit River near Crosby, Minn.	Lat 46°30'55", long 93°57'35", in SE¼NE¼ sec.35, T.47 N., R.29 W., Crow Wing County, at bridge on State Highway 6, 0.3 mile downstream from Clinker Lake, and 2 miles north of Crosby. (Site of continuous-record gaging station, 1945-63)	8.38	7-30-43	2.14			8- 7-43	3.03	
Crow Wing River basin														
05242502	Crow Wing River near Akeley, Minn.	Lat 46°57'03", long 94°48'26", in NW¼NW¼ sec.13, T.140 N., R.33 W., Hubbard County, at bridge on County Highway 119, 0.1 mile downstream from Eighth Crow Wing Lake outlet dam, 1.2 miles southeast of Nevis, and 5.3 miles southwest of Akeley.	--	9-27-65	27.5			10-15-75	29.4	340				
				10- 4-74	26.3	295		6- 1-76	21.0	355				
				7-28-75	24.0	270		9- 7-76	.81	345				

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a Approximately.

Table 2.--Low-flow measurements at partial-record stations.

Station No.	Station Name	Location	Drainage Area (mi <sup>2</sup> )	Date	Discharge (ft <sup>3</sup> /s)	Measurements		Date	Discharge (ft <sup>3</sup> /s)	Specific Conductance (micromhos/cm at 25°C)
						Specific Conductance (micromhos/cm at 25°C)				
Crow Wing River basin--Continued										
05242700	Little Sand Lake outlet near Dorset, Minn.	Lat 46°59'00", long 94°55'00", in NE¼ sec.36, T.141 N., R.34 W., Hubbard County, 0.5 mile downstream from Little Sand Lake, and 3 miles northeast of Dorset. (Site of continuous-record gaging station, 1930-41)	a74	10-10-41	13.8			2-19-61	19.6	
				1- 5-56	18.7			7-23-61	18.8	
				7-12-56	17.5			8-22-61	10.6	
				9- 7-56	16.8			9-28-61	12.2	
				10- 9-56	11.6			10-26-61	10.0	
				12- 4-56	18.9			11-30-61	8.99	
				2- 5-57	19.2			1- 5-62	12.3	
				10- 4-57	17.7			2-10-62	13.3	
				11- 1-57	15.8			11- 3-62	14.5	
				12- 7-57	15.2			11-29-62	12.1	
				1- 4-58	18.4			1-11-63	19.6	
				2-14-58	19.3			2- 7-63	19.3	
				8-13-58	12.6			10-25-63	14.8	
				9-11-58	13.2			11-22-63	14.0	
				10- 9-58	9.33			12-18-63	12.2	
				11- 5-58	11.0			1-25-64	17.6	
				12- 4-58	13.8			2-17-64	18.6	
				1- 8-59	13.9			10-13-64	18.2	
				2- 5-59	12.6			12-22-64	18.1	
				5-19-59	17.8			2- 6-65	18.2	
				9-16-60	19.1			10-31-67	5.22	
				10-14-60	14.1			11-20-67	10.4	
				11-18-60	11.3			1-22-68	19.7	
				12-24-60	14.6			8-31-70	12.4	330
				1-13-61	18.2			10- 5-70	12.4	
05242960	Crow Wing River near Hubbard, Minn.	Lat 46°50'48", long 94°52'29", in NE¼NE¼ sec.20, T.139 N., R.33 W., Hubbard County, at bridge on State Highway 87, at Third Crow Wing Lake outlet, and 6.6 miles east of Hubbard.	a218	7-15-30	42.4			9-28-65	104	
				7-28-30	54.1			8- 2-66	150	
				9-11-30	34.4			9-15-66	114	
				8- 3-31	49.0			8-26-70	74.4	
				6- 3-64	60.2			9-14-71	100	
				7-15-64	52.0			8-28-73	104	270
				8-17-64	59.5			10- 4-74	105	285
				10-13-64	78.2			7-29-75	112	360
				5-20-65	104			8- 5-76	58.2	230
				8- 4-65	71.4			9- 7-76	45.6	280
05242985	Bender Creek near Huntersville, Minn.	Lat 46°49'47", long 94°50'17", in NW¼NE¼ sec.27, T.139 N., R.33 W., Hubbard County, at culvert on road at First Crow Wing Lake inlet, 4.5 miles northeast of Huntersville.	--	10- 4-74	4.60	260		6- 1-76	4.21	220
				7-29-75	3.03	325		9- 7-76	1.93	305
				10-15-75	3.70	270				
05242990	Crow Wing River near Huntersville, Minn.	Lat 46°49'23", long 94°52'18", in NW¼SW¼ sec.28, T.139 N., R.33 W., Hubbard County, downstream from First Crow Wing Lake outlet at bridge on County Highway 109, 3.4 miles northeast of Huntersville.	--	9-22-55	97.1			10-16-75	104	310
				10- 3-74	94.8	270		6- 1-76	76.2	260
				7-28-75	128	340		9- 7-76	41.1	295
05242998	Fish Creek near Ponsford, Minn.	Lat 46°58'12", long 95°24'50", in NE¼SE¼ sec.1, T.140 N., R.38 W., Becker County, at culvert on County Highway 26, 1.4 miles west of Ponsford.	--	7-30-75	.76	390		10-15-75	.50	360
05243002	Shell River near Ponsford, Minn.	Lat 46°56'50", long 95°24'38", in NW¼NW¼ sec.18, T.140 N., R.37 W., Becker County, at culvert on County Highway 39, at Shell Lake outlet, 2.0 miles southwest of Ponsford.	--	10- 2-74	1.32	225		6- 1-76	4.84	290
				7-30-75	9.36	220		9- 8-76	0	
				10-15-75	4.04	280				
05243100	Shell River near Park Rapids, Minn.	Lat 46°51'45", long 95°11'30", in NW¼NE¼ sec.14, T.139 N., R.36 W., Becker County, at bridge on County Highway 42, 7.5 miles southwest of Park Rapids, and 8.8 miles northwest of Hubbard.	--	10- 2-74	9.11	400		10-16-75	5.49	430
				7-30-75	17.4	360		6- 1-76	10.7	400
05243250	Blueberry River at Menahga, Minn.	Lat 46°45'31", long 95°06'01", in NW¼NW¼ sec.22, T.138 N., R.35 W., Wadena County, at bridge on U.S. Highway 71 in Menahga.	--	10- 3-74	19.2	475		10-16-75	21.2	400
				7-30-75	19.5	380		9- 8-76	3.94	440

a Approximately.

Table 2.--Low-flow measurements at partial-record stations.

Station No.	Station Name	Location	Drainage Area (mi <sup>2</sup> )	Date	Discharge (ft <sup>3</sup> /s)	Measurements		Date	Discharge (ft <sup>3</sup> /s)	Specific Conductance (micromhos/cm. at 25°C)
						Specific Conductance (micromhos/cm at 25°C)				
Crow Wing River basin--Continued										
05243712	Fishhook River near Park Rapids, Minn.	Lat 46°52'42", long 95°02'02", in SW¼SW¼ sec.6, T.139 N., R.34 W., Hubbard County, site on private land, 0.6 mile upstream from Straight River, and 3.2 miles south of Park Rapids.	--	7-29-75	67.8	270		6- 2-76	26.2	325
				10-15-75	41.7	285		9- 9-76	11.2	275
05243720	Straight River at Osage, Minn.	Lat 46°55'14", long 95°15'08", in NE¼NE¼ sec.29, T.140 N., R.36 W., Becker County, at Straight Lake outlet, at culvert on State Highway 34, at Osage.	--	10- 7-43	22.7			10-15-75	27.1	340
				10- 2-74	16.8	335		6- 1-76	23.9	360
				7-30-75	22.2	320		9- 9-76	16.2	350
05243725	Straight River near Park Rapids, Minn.	Lat 46°52'30", long 95°03'56", in NW¼NE¼ sec.11, T.139 N., R.35 W., Hubbard County, at bridge on U.S. Highway 71, 3.2 miles south of Park Rapids, and 3.7 miles northwest of Hubbard.	53.2	8-26-70	46.5			10-16-75	58.2	390
				9-14-71	66.4			6- 2-76	48.6	415
				8-28-73	52.3	380		8- 4-76	35.2	390
				10- 2-74	58.4	380		9- 9-76	40.8	405
				7-29-75	56.1	395				
05243730	Fishhook River near Hubbard, Minn.	Lat 46°51'48", long 95°01'30", in NW¼NE¼ sec.18, T.139 N., R.34 W., Hubbard County, at bridge on State Highway 87, 0.5 mile downstream from Straight River, 2 miles northwest of Hubbard, and 4.4 miles southeast of Park Rapids.	a374	6- 3-64	82.5			8-26-70	77.6	
				7-15-64	92.5			9-14-71	98.2	
				8-17-64	85.9			8-28-73	146	320
				10-14-64	119			10- 2-74	96.2	365
				5-21-65	337			7-29-75	130	330
				8- 4-65	150			6- 2-76	83.6	300
				8- 2-66	215			8- 4-76	54.5	350
				9-15-66	182			9- 9-76	56.3	360
05243740	Long Lake outlet at Hubbard, Minn.	Lat 46°50'28", long 95°00'44", in SW¼NW¼ sec.20, T.139 N., R.34 W., Hubbard County, at bridge on State Highway 87, at Hubbard.	22.5	7-15-64	17.4			8-28-73	24.8	250
				10-14-64	17.2			10- 3-74	11.0	260
				7-21-65	20.8			7-28-75	17.0	220
				8-19-65	19.4			10-15-75	17.1	255
				8- 2-66	48.1			6- 2-76	14.0	280
				9-15-66	22.7			8- 5-76	10.2	210
				8-26-70	14.2			9- 8-76	6.49	280
				9-14-71	23.4					
05243750	Shell River near Hubbard, Minn.	Lat 46°49'47", long 95°01'53", in SW¼NW¼ sec.30, T.139 N., R.34 W., Hubbard County, at bridge on county road, just downstream from Fishhook River, and 1.2 miles southwest of Hubbard.	a600	6- 3-64	160			8-26-70	121	
				7-15-64	203			9-14-71	232	
				8-17-64	119			8-28-73	264	360
				10-13-64	202			10- 3-74	146	360
				5-20-65	576			7-29-75	215	335
				8- 4-65	221			10-15-75	162	365
				9-28-65	372			6- 2-76	143	350
				8- 2-66	376			8- 5-76	68.4	320
				9-15-66	314			9- 8-76	75.0	390
05243805	Shell River near Sebeka, Minn.	Lat 46°47'16", long 95°01'02", in NW¼NW¼ sec.8, T.138 N., R.34 W., Wadena County, at bridge on County Highway 23, 6.0 miles west of Huntersville, and 11 miles northeast of Sebeka.	--	10- 3-74	156	325		10-16-75	186	380
				7-30-75	195	310		6- 2-76	122	290
05243830	Shell River near Nimrod, Minn.	Lat 46°48'26", long 94°53'21", in SW¼SW¼ sec.32, T.139 N., R.33 W., Hubbard County, at bridge on County Highway 13, 500 feet upstream from mouth, 2.2 miles north of Huntersville, and 12 miles north of Nimrod.	--	9-28-65	422			10-16-75	225	380
				10- 3-74	197	290		6- 1-76	151	325
				7-29-75	271	315		9- 7-76	47.4	335
05243891	Big Swamp Creek near Menahga, Minn.	Lat 46°42'37", long 94°48'27", in SE¼NE¼ sec.2, T.137 N., R.33 W., Wadena County, at culvert on Bunny Hill Road, 6.1 miles southeast of Huntersville, and 14 miles southeast of Menahga.	--	10- 2-74	4.14	320		10-16-75	3.06	300
				7-30-75	4.60	660				

a Approximately.

Table 2.--Low-flow measurements at partial-record stations

Station No.	Station Name	Location	Drainage Area (mi <sup>2</sup> )	Date	Discharge (ft <sup>3</sup> /s)	Measurements		Date	Discharge (ft <sup>3</sup> /s)	Specific Conductance (micromhos/cm at 25°C)
						Specific Conductance (micromhos/cm at 25°C)				
Crow Wing River basin--Continued										
05243990	Big Swamp Creek near Nimrod, Minn.	Lat 46°40'07", long 94°51'15", in SW¼NE¼ sec.21, T.137 N., R.33 W., Wadena County, at bridge on county road, 2.4 miles northeast of Nimrod.	--	10- 2-74	7.03	340		6- 2-76	7.60	260
				7-30-75	9.22	325		9- 7-76	1.30	333
				10-16-75	5.16	310				
05244100	Kitten Creek near Sebeka, Minn.	Lat 46°40'33", long 95°04'46", in SE¼SE¼ sec.15, T.137 N., R.35 W., Wadena County, at culvert on county road, 3.2 miles north of Sebeka, and 3.3 miles upstream from mouth. (Annual maximums available since 1961)	14.7	9-16-60	1.56			8-26-68	2.08	
				10-15-60	1.53			3-24-69	2.02	
				3-28-61	2.56			10-27-69	4.44	
				7-11-62	6.64			8-31-70	1.04	550
				9- 7-62	1.62			10- 5-70	.83	
				10- 4-62	2.88			4- 6-71	8.10	
				11- 3-62	2.12			6- 7-71	2.23	
				3-26-63	4.89			8-16-71	.88	
				5-15-63	8.08			9-27-71	.88	
				7-12-63	1.08			9- 5-72	2.57	530
				8- 8-63	2.25			8-20-73	2.29	450
				9- 6-63	4.68			10- 3-74	1.66	560
				11-22-63	4.83			7-28-75	12.0	
				8-22-66	8.88			6- 1-76	.88	540
				5-22-67	9.59			9- 8-76	.31	550
				8-21-67	.49					
05244200	Cat River near Nimrod, Minn.	Lat 46°37'49", long 94°55'51", in SW¼SW¼ sec.36, T.137 N., R.34 W., Wadena County, at bridge on State Highway 227, 2.5 miles west of Nimrod, and 3.0 miles upstream from mouth. (Annual maximums available since 1961)	49.2	9-16-60	11.0			3-24-69	16.2	
				10-15-60	8.80			6- 9-69	21.1	
				3-28-61	10.9			7-15-69	18.2	
				9-28-61	10.6			8-18-69	12.4	
				6-12-63	11.3			9-22-69	13.0	
				8- 8-63	20.9			6-26-70	22.2	
				9- 6-63	24.3			7-28-70	8.18	
				5-28-64	16.3			8-31-70	6.84	
				8-18-64	8.55			10- 5-70	6.50	
				5-23-66	23.1			11- 2-70	24.4	
				6-20-66	16.8			6-11-71	19.0	
				7-25-66	15.9			7-12-71	18.1	
				9-19-66	16.0			9-27-71	9.72	
				8- 8-67	12.9			10-26-71	16.3	
				8-21-67	9.47			9- 5-72	11.3	465
				9-21-67	2.44			8-20-73	16.9	380
10-31-67	12.4			10- 4-74	10.9	490				
11-20-67	10.5			7-29-75	12.5	460				
3-18-68	7.86			8-29-75	10.4					
7-29-68	23.5			9- 8-76	2.71	410				
8-26-68	17.6									
05244205	Cat River at Nimrod, Minn.	Lat 46°37'46", long 94°53'04", in NW¼NW¼ sec.5, T.136 N., R.33 W., Wadena County, at bridge on County Highway 26, at Nimrod, 0.5 mile upstream from mouth.	--	10- 4-74	13.3	490		6- 2-76	12.2	450
				7-29-75	12.4	455		9- 7-76	1.24	418
				10-16-75	13.6	485				
05244295	Farnham Creek near Aldrich, Minn.	Lat 46°30'27", long 94°47'34", in SE¼NW¼ sec.13, T.135 N., R.33 W., Wadena County, at bridge on County Highway 30, 0.5 mile upstream from mouth, and 12 miles northeast of Aldrich.	--	10- 4-74	10.2	360		6- 3-76	5.52	280
				7-30-75	12.7	335		9- 8-76	.36	390
				10-15-75	5.89	375				
*05244335	Willow Creek near Henning, Minn.	Lat 46°23'02", long 95°26'33", on line between secs.26 and 35, T.134 N., R.38 W., Otter Tail County, at bridge on County Highway 50, 1.2 miles upstream from mouth, 4.4 miles north of Henning, and 5.8 miles west of Deer Creek.	--	10-13-71	6.03	690		5-30-73	14.6	560
				12- 2-71	11.4	620		7- 5-73	5.16	510
				5-22-72	28.0	490		8- 7-73	4.50	
				6-27-72	12.4	470		9-11-73	6.64	560
				10-17-72	21.9	460		10-18-73	19.8	495
				4-23-73	27.2	490				
05244340	Leaf River near Bluffton, Minn.	Lat 46°26'57", long 95°16'13", in SE¼NW¼ sec.6, T.134 N., R.36 W., Otter Tail County, at bridge on County Highway 143, 2.2 miles southwest of Bluffton, and 4.6 miles northeast of Deer Creek.	167	8-26-70	8.07			6- 4-76	14.4	430
				5-14-71	65.2	410		8- 4-76	5.36	390
				9-16-71	24.2			9- 9-76	.06	490
				8-29-73	16.3	440				

\* High-flow measurements are also available in Geological Survey files.

Table 2.--Low-flow measurements at partial-record stations.

Station No.	Station Name	Location	Drainage Area (mi <sup>2</sup> )	Date	Discharge (ft <sup>3</sup> /s)	Measurements		Date	Discharge (ft <sup>3</sup> /s)	Specific Conductance (micromhos/cm at 25°C)
						Specific Conductance (micromhos/cm at 25°C)				
Crow Wing River basin--Continued										
*05244343	South Bluff Creek near Deer Creek, Minn.	Lat 46°23'47", long 95°13'05", in NW¼NW¼ sec.27, T.134 N., R.36 W., Otter Tail County, at bridge on county road, 0.1 mile north of junction with County Highway 50, and 4.9 miles east of Deer Creek.	--	10-13-71	3.54	775		10-17-72	4.71	590
				12- 2-71	12.3	640		7- 5-73	2.70	560
				6-27-72	3.11	540		8- 7-73	2.15	
				9-13-72	7.53	600		9-30-73	1.34	570
*05244349	Oak Creek near Wadena, Minn.	Lat 46°27'53", long 95°12'19", in SW¼NE¼ sec.34, T.135 N., R.36 W., Otter Tail County, at box culvert on U.S. Highway 10, 3.5 miles northwest of Wadena.	--	10-18-67	1.94			7- 5-73	6.33	500
				10-14-71	4.65	640		8- 7-73	3.41	480
				6-27-72	8.42	510		9-11-73	3.45	520
				10-17-72	8.50	420				
05244350	Leaf River near Wadena, Minn.	Lat 46°28'09", long 95°10'33", in NW¼NW¼ sec.36, T.135 N., R.36 W., Otter Tail County, at bridge on County Highway 75, 2 miles northwest of Wadena.	334	10-18-67	29.9			6-26-74	74.5	490
				12- 9-69	35.6			6- 3-76	27.4	530
				5-22-70	140	470		8- 3-76	13.8	480
				6- 4-70	182	480		9- 9-76	2.47	535
				8-29-73	28.4	480				
05244355	Union Creek near Wadena, Minn.	Lat 46°28'13", long 95°05'40", on line between secs.28 and 33, T.135 N., R.35 W., Wadena County, at bridge on county road, 0.1 mile east of U.S. Highway 71, and 3 miles northeast of Wadena.	21.2	10-18-67	5.27			8-29-73	9.26	590
				12- 9-69	6.97			6-26-74	12.7	575
				5-22-70	16.1	550		6- 3-76	4.86	650
				6- 4-70	13.0	570				
05244360	Leaf River near Verndale, Minn.	Lat 46°29'28", long 95°00'34", on line between secs.19 and 20, T.135 N., R.34 W., Wadena County, at bridge on County Highway 22, 6.4 miles north of Verndale.	424	6- 2-64	72.4			7- 6-70	69.6	
				7-14-64	41.3			8-25-70	19.4	
				8-15-64	35.7			5-13-71	124	540
				10-15-64	79.4			9-15-71	59.8	
				7- 7-65	175			10-18-72	101	500
				8-12-65	64.7			9-12-73	58.6	480
				8- 3-66	172			6-26-74	110	490
				9-16-66	93.7			6- 3-76	41.4	550
				10-17-67	44.3			8- 3-76	13.8	480
				8-29-69	21.3	445		9- 8-76	4.24	500
				5-21-70	219	490				
				*05244370	Wing River near Hewitt, Minn.	Lat 46°21'16", long 95°05'35", on line between secs.3 and 4, T.133 N., R.35 W., Todd County, at bridge on county road, 2 miles north of Hewitt.	136	7-18-67	18.5	
10-16-67	9.90							9-13-72	65.4	520
8-28-69	1.21	500						10-17-72	43.6	510
12- 8-69	17.4							10-18-72	42.8	490
5-22-70	39.8	480						4-23-73	99.9	495
6- 4-70	43.0	480						5-30-73	62.0	510
8-25-70	.68							7- 5-73	15.5	430
5-13-71	29.8	510						8- 7-73	17.7	465
9-15-71	18.5							9-11-73	12.3	500
10-13-71	24.2	645						9-12-73	10.6	610
12- 1-71	62.0	530						10-18-73	45.2	495
5-22-72	113	450						6-26-74	25.3	475
6-27-72	22.3	460		6- 4-76	6.07	470				
05244380	Wing River near Verndale, Minn.	Lat 46°23'26", long 95°03'44", in SE¼NW¼ sec.26, T.134 N., R.35 W., Wadena County, at bridge on County Highway 1, 2.5 miles west of Verndale.	144	7-18-67	21.7			5-13-71	35.1	530
				10-16-67	13.1			9-15-71	22.3	
				8-28-69	3.21	480		10-18-72	51.5	515
				5-21-70	46.1	470		9-12-73	13.3	510
				7- 6-70	17.1			9- 9-76	2.47	535
8-25-70	2.85									
05244390	Wing River at Verndale, Minn.	Lat 46°24'29", long 95°01'47", in SW¼NW¼ sec.19, T.134 N., R.34 W., Wadena County, at bridge on County Highway 111, 1 mile northwest of Verndale.	148	7-18-67	28.0			8-25-70	6.83	
				10-16-67	17.9			5-13-71	39.1	530
				8-28-69	8.24	455		9-15-71	31.0	
				5-21-70	49.6	470		10-18-72	51.5	520
				7- 6-70	23.8			9-12-73	18.2	540
*05244400	Wing River below Verndale, Minn.	Lat 46°26'28", long 95°00'02", on line between secs.5 and 8, T.134 N., R.34 W., Wadena County, at bridge on County Highway 4, 3.1 miles north of Verndale.	152	6- 2-64	27.8			6- 4-70	60.3	520
				7-14-64	15.4			7- 6-70	22.6	
				8-15-64	13.2			8-25-70	9.39	
				10-15-64	30.7			5-13-71	45.2	520
				8-12-65	26.1			9-15-71	30.8	
				9-16-66	32.6			10-18-72	55.2	530
				7-19-67	29.2			9-12-73	20.6	520
				10-16-67	21.9			6-26-74	40.3	490
				8-28-69	10.3	455		6- 4-76	16.2	480
				12- 9-69	29.9			8- 4-76	6.45	490
				5-21-70	57.3	470				

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Table 2.--Low-flow measurements at partial-record stations.

Station No.	Station Name	Location	Drainage Area (mi <sup>2</sup> )	Date	Discharge (ft <sup>3</sup> /s)	Measurements		Date	Discharge (ft <sup>3</sup> /s)	Specific Conductance (micromhos/cm at 25°C)		
						Specific Conductance (micromhos/cm at 25°C)						
Crow Wing River basin--Continued												
05244403	Wing River near Wadena, Minn.	Lat 46°28'13", long 94°59'23", in SE¼SE¼ sec.29, T.135 N., R.34 W., Wadena County, at bridge on county road, 1 mile upstream from mouth, 5 miles north of Verndale, and 7 miles northeast of Wadena.	162	7-19-67	33.7			9-15-71	31.5			
				10-16-67	22.2			10-18-72	58.6	520		
				8-28-69	11.2			9-12-73	25.0	520		
				7- 6-70	27.2			10-12-73	103	480		
				8-25-70	11.3			9- 9-76	5.64	380		
				5-13-71	51.6	530						
*05244410	Redeye River at Sebeka, Minn.	Lat 46°37'44", long 95°05'42", in NE¼NE¼ sec.4, T.136 N., R.35 W., Wadena County, at bridge on U.S. Highway 71, at Sebeka.	138	5-27-68	39.1			10-27-69	28.2			
				6-18-68	96.9			8-26-70	1.91			
				8-26-68	15.1			9-16-71	17.3			
				9-30-68	22.4			8-29-73	12.6	420		
				5- 5-69	113			7-30-75	16.3	515		
				6- 9-69	25.9			6- 4-76	10.1	500		
				7-15-69	27.4			8- 4-76	.22	600		
				8-18-69	10.0			9- 7-76	.02	630		
				9-22-69	15.5							
05244412	Redeye River near Nimrod, Minn.	Lat 46°37'48", long 95°00'26", in NW¼NW¼ sec.5, T.136 N., R.34 W., Wadena County, at bridge on State Highway 227, 3.9 miles east of Sebeka, and 6.1 miles west of Nimrod.	--	10- 4-74	16.5	580		10-16-75	14.8	550		
				7-30-75	17.4	510		6- 3-76	10.3	560		
*05244420	Redeye River near Aldrich, Minn.	Lat 46°29'58", long 94°54'30", on line between secs.13 and 24, T.135 N., R.34 W., Wadena County, at bridge on County Highway 7, 1.5 miles upstream from mouth, 3.5 miles north of Central, and 8.5 miles north of Aldrich.	221	6- 2-64	38.2			7- 7-70	32.3			
				7-14-64	47.5			8-25-70	8.42			
				8-18-64	17.5			5-14-71	72.6	410		
				10-15-64	47.5			9-15-71	31.9			
				7- 8-65	59.2			10-19-72	19.8	470		
				8-15-65	24.7			8-30-73	37.6	420		
				8- 2-66	132			9-13-73	35.8	405		
				9-15-66	45.3			6-27-74	65.6	420		
				10-17-67	22.7			10- 4-74	25.8	490		
				8-29-69	9.49	395		7-30-75	35.7	360		
				12-10-69	29.2			6- 3-76	24.2	480		
				5-21-70	109	400		8- 3-76	4.20	380		
				6- 4-70	121	430		9- 8-76	2.33	410		
				*05244440	Leaf River near Aldrich, Minn.	Lat 46°27'25", long 94°50'29", in SW¼SW¼ sec.34, T.135 N., R.33 W., Wadena County, at bridge on County Highway 29, 2.3 miles upstream from mouth, and 7 miles northeast of Aldrich. (Annual maximums available since 1972)	860	10-17-67	109			10-30-73
12-10-69	132							12- 3-73	335	525		
5-21-70	429	430						6-27-74	237	455		
6- 4-70	509	450						8-13-74	338	420		
5-14-71	279	440						10- 1-74	133	460		
9-15-71	142							10- 4-74	118	450		
10-26-71	223	510						7-31-75	120	410		
9- 5-72	404	350						10-16-75	105	465		
10-19-72	198	475						6- 2-76	112	470		
6-11-73	217	480						6-17-76	251	395		
7-17-73	202	420						7-27-76	43.4	420		
8-20-73	168	450						8- 3-76	31.9	440		
8-29-73	140	450						9- 8-76	16.3	430		
9-13-73	137	460						10-20-76	31.0	435		
05244460	Partridge River at Aldrich, Minn.	Lat 46°22'31", long 94°56'28", in NW¼SW¼ sec.35, T.134 N., R.34 W., Wadena County, at bridge on U.S. Highway 10, at Aldrich.	84.4	7-17-67	4.08			7- 7-70	3.68			
				10-17-67	.88			8-29-73	8.84	600		
				12- 9-69	3.68			6-25-74	10.6	530		
				5-22-70	12.8	590		6- 4-76	.15	560		
				6- 4-70	13.2	590						
*05244470	Partridge River near Aldrich, Minn.	Lat 46°25'02", long 94°50'28", in NW¼SW¼ sec.15, T.134 N., R.33 W., Wadena County, at bridge on County Highway 29, 0.7 mile upstream from mouth, and 5.5 miles northeast of Aldrich.	93.5	6- 2-64	5.63			7- 7-70	9.41			
				7-14-64	4.29			8-25-70	2.63			
				8-18-64	1.98			5-14-71	19.4	500		
				10-14-64	6.86			9-15-71	12.0			
				7- 8-65	16.3			10-19-72	12.6	540		
				8- 5-65	6.31			8-29-73	12.4	540		
				8- 3-66	30.3			9-13-73	8.05	530		
				9-16-66	10.4			6-25-74	16.9	495		
				7-17-67	7.11			10- 5-74	5.64	420		
				10-17-67	5.33			7-30-75	5.89	460		
				8-29-69	3.02	415		10-16-75	5.70	435		
				12- 9-69	10.4			6- 2-76	3.98	390		
				5-21-70	21.0	540		8- 3-76	1.68	430		
				6- 4-70	18.6	560		9- 8-76	1.80	420		

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Station No.	Station Name	Location	Drainage Area (mi <sup>2</sup> )	Date	Discharge (ft <sup>3</sup> /s)	Measurements		Date	Discharge (ft <sup>3</sup> /s)	Specific Conductance (micromhos/cm at 25°C)				
						Specific Conductance (micromhos/cm at 25°C)								
Crow Wing River basin--Continued														
05244491	Swan Creek near Aldrich, Minn.	Lat 46°24'08", long 94°45'36", in NE¼SE¼ sec.19, T.134 N., R.32 W., Cass County, at culvert on County Highway 32, 1.4 miles upstream from mouth, 4 miles northeast of Staples, and 9 miles northeast of Aldrich.	--	10- 4-74	3.16	390		6- 2-76	2.43	225				
				7-30-75	9.90	380		9- 8-76	.73	440				
				10-15-75	6.28	380								
05244495	Crow Wing River near Staples, Minn.	Lat 46°22'06", long 94°43'50", in SE¼SW¼ sec.33, T.134 N., R.32 W., Cass County, at bridge on County Highway 33, 2.1 miles east of Staples.	--	10- 4-74	513	400		6- 2-76	415	360				
				7-30-75	582	330		9- 7-76	142	340				
				10-16-75	483	345								
05244540	Mosquito Creek at Motley, Minn.	Lat 46°20'39", long 94°38'18", in SE¼SW¼ sec.7, T.133 N., R.31 W., Cass County, at bridge on State Highway 210, 0.2 mile upstream from mouth, and 0.6 mile northeast of Motley.	53.4	7-28-64	4.03			8-26-70	2.37					
				10-14-64	8.88			9-16-71	3.75					
				7- 8-65	10.5			8-29-73	11.9	390				
				8-11-65	2.97			6- 2-76	4.36	330				
				8- 3-66	10.9			8- 2-76	.92	420				
				9-16-66	5.51			9- 7-76	.37	425				
				5-21-70	21.7	300								
*05244852	Long Prairie River near Carlos, Minn.	Lat 45°58'54", long 95°18'44", on line between secs.14 and 15, T.129 N., R.37 W., Douglas County, at bridge on State Highway 29, 1.2 miles northwest of Carlos, and 1.5 miles downstream from Lake Carlos.	--	10-21-43	55.0			10-17-72	134	380				
				5- 4-44	60.5			4-23-73	125	395				
				10-11-44	6.35			5-30-73	112	415				
				5-31-45	59.3			7- 5-73	57.9	390				
				8- 1-45	14.1			8- 7-73	40.4	380				
				10-14-71	12.4	420		9-11-73	25.0	400				
				12- 1-71	73.8	380		10- 1-73	18.2					
				3-20-72	85.4	360		10-18-73	17.9					
				*05244900	Spruce Creek near Miltna, Minn.	Lat 46°02'56", long 95°13'21", on line between secs.21 and 28, T.130 N., R.36 W., Douglas County, at bridge on County Highway 14, 3.4 miles east of Miltna.	--	10-14-71	10.1	645		4-23-73	33.3	480
								12- 1-71	38.9	520		5-30-73	16.7	500
3-20-72	55.1	340						7- 5-73	11.1	480				
5-22-72	35.9							8- 7-73	10.4	445				
6-27-72	15.6	490						9-11-73	8.32	525				
8-14-72	60.9	460						10- 2-73	8.18					
9-13-72	21.7	520						10-18-73	25.5	540				
10-17-72	23.0	520												
05245200	Eagle Creek at Browerville, Minn.	Lat 46°05'35", long 94°51'53", in SE¼SW¼ sec.5, T.130 N., R.33 W., Todd County, at bridge on County Highway 21, 0.5 mile upstream from mouth, and 0.5 mile north of Browerville.	77.0	8-25-70	1.50			6- 4-76	3.24	490				
				9-16-71	7.14			8- 3-76	.70	540				
				8-29-73	7.32	580		9- 7-76	.20	575				
05245500	Long Prairie River near Motley, Minn.	Lat 46°19'10", long 94°38'50", in NW¼ sec.19, T.133 N., R.31 W., Morrison County, at bridge on U.S. Highway 10, 1.5 miles south of Motley, and 3.3 miles upstream from mouth. (Site of continuous-record gaging station, 1909-17, 1930-31)	a973	9-29-65	317									
Nokasippi River basin														
05261351	Nokasippi River near Brainerd, Minn.	Lat 46°15'45", long 94°06'44", in NW¼SE¼ sec.27, T.44 N., R.30 W., Crow Wing County, at bridge on State Highway 25, 7.8 miles southeast of Brainerd.	69.9	8-20-69 8-17-70	10.2 2.87	220		10- 2-74	6.59					
05261440	Daggett Brook near Crow Wing, Minn.	Lat 46°13'42", long 94°07'15", on line between secs.3 and 10, T.43 N., R.30 W., Crow Wing County, at bridge on county road, 9.1 miles southeast of Crow Wing.	47.7	8-20-69 8-17-70	.42 .38	345		10- 2-74	2.47					

\* High-flow measurements are also available in Geological Survey files.  
a Approximately.

Table 2.--Low-flow measurements at partial-record stations.

Station No.	Station Name	Location	Drainage Area (mi <sup>2</sup> )	Date	Discharge (ft <sup>3</sup> /s)	Measurements		Date	Discharge (ft <sup>3</sup> /s)	Specific Conductance (micromhos/cm at 25°C)
						Specific Conductance (micromhos/cm at 25°C)				
Nokasippi River basin--Continued										
05261520	Nokasippi River below Fort Ripley, Minn.	Lat 46°12'02", long 94°19'03", on line between secs.13 and 24, T.43 N., R.32 W., Crow Wing County, at bridge on County Highway 2, 3 miles northeast of Fort Ripley.	178	11-15-67 8-28-68 10- 9-68 8-20-69 9-11-69	84.1 33.6 60.3 19.7 21.2			10-23-69 8-17-70 10- 2-74 9- 3-76	26.5 10.2 27.3 5.00	280   315
Fletcher Creek basin										
*05262500	Fletcher Creek at Camp Ripley Junction, Minn.	Lat 46°03'46", long 94°19'39", in NE¼SW¼ sec.1, T.41 N., R.32 W., Morrison County, at box culvert on U.S. Highway 371, 0.5 mile upstream from mouth, and 0.6 mile south of Camp Ripley Junction.	19.2	8-20-69 8-17-70	b.14 0			10- 1-74 9-28-76	.05 0	
Elk River basin										
05263000	Elk River near Little Falls, Minn.	Lat 46°01'13", long 94°22'38", in NW¼NE¼ sec.6, T.129 N., R.29 W., Morrison County, at bridge on County Highway 13, 1 mile upstream from mouth, and 3 miles north of Little Falls.	152	8-28-68 10- 9-68 11- 4-68 11-15-68 8-20-69 9-11-69 10-23-69 8-18-70	3.50 16.0 39.3 26.6 4.85 3.24 8.35 .14			10-17-72 9-12-73 7- 8-74 7-30-74 10- 3-74 6- 3-76 9-28-76	51.9 24.6 9.50 4.25 2.04 3.73 0	345 390 340 470   370
Swan River basin										
05265500	Swan River near Flensburg, Minn.	Lat 45°56'03", long 94°34'57", in SW¼SE¼ sec.33, T.129 N., R.31 W., Morrison County, at bridge on county road, 2.8 miles southwest of Flensburg.	137	8-20-69 8-17-70	11.0 6.57	395		10- 3-74 9-24-76	6.52 0	
*05265700	Swan River near Little Falls, Minn.	Lat 45°56'00", long 94°24'34", in NW¼NW¼ sec.1, T.128 N., R.30 W., Morrison County, at bridge on State Highway 238, 2.4 miles upstream from mouth, and 3 miles southwest of Little Falls.	167	8-28-68 10- 9-68 11- 7-68 11-15-68 8-20-69	6.03 21.9 46.2 38.8 14.2			9-11-69 10-23-69 8-17-70 10- 3-74 9-30-76	12.5 17.4 12.9 15.1 2.37	410 430   
North Branch Two Rivers basin										
05267170	North Branch Two Rivers near Elmdale, Minn.	Lat 45°50'25", long 94°27'06", on line between secs.3 and 4, T.127 N., R.30 W., Morrison County, at bridge on county road, 2 miles east of Elmdale.	--	8-18-70 10-17-72 9-12-73	.20 2.00 .29			7-31-74 8-22-75 6- 3-76 9-29-76	.06 .25 .27 0	650 455 440
05267200	North Branch Two Rivers near Bowlus, Minn.	Lat 45°49'56", long 94°21'38", in NE¼NW¼ sec.8, T.127 N., R.29 W., Morrison County, at bridge on County Highway 224, 0.3 mile upstream from mouth, and 2.2 miles northeast of Bowlus.	23.0	11- 7-68 8-20-69 8-18-70 10-17-72 9-12-73	5.31 1.69 1.88 5.24 1.94	380		7-31-74 10- 3-74 8-22-75 6- 3-76 9-30-76	1.11 1.70 2.01 2.20 .78	500  385 410 420
Two Rivers basin										
05267400	Two Rivers near Bowlus, Minn.	Lat 45°49'19", long 94°21'45", in SW¼SW¼ sec.8, T.127 N., R.29 W., Morrison County, at bridge on County Highway 25, 0.5 mile upstream from mouth, and 2 miles east of Bowlus.	158	8-28-68 11- 7-68 8-20-69	b.60 41.7 1.04			8-18-70 10- 3-74 9-30-76	6.43 1.98 .27	
Spunk Creek basin										
05267580	Spunk Creek near Royalton, Minn.	Lat 45°47'04", long 94°18'54", in SW¼NE¼ sec.27, T.127 N., R.29 W., Morrison County, at bridge on County Highway 21, 1.5 miles upstream from mouth, and 3.5 miles southwest of Royalton.	83.6	8-28-68 10-11-68 11- 7-68 11-15-68 8-21-69 9-11-69 10-23-69	2.83 25.7 23.1 17.6 2.70 2.32 3.88			8-18-70 10-17-72 9-12-73 7-31-74 10- 3-74 6- 3-76 8-18-76 9-29-76	4.22 22.9 7.24 2.63 3.79 11.9 .53 .35	485 440 595  440 471 490

\* High-flow measurements are also available in Geological Survey files.

b Estimated.

Table 2.--Low-flow measurements at partial-record stations.

Station No.	Station Name	Location	Drainage Area (mi <sup>2</sup> )	Date	Discharge (ft <sup>3</sup> /s)	Measurements		Discharge (ft <sup>3</sup> /s)	Specific Conductance (micromhos/cm at 25°C)
						Specific Conductance (micromhos/cm at 25°C)	Date		
Platte River basin									
05267700	Platte River near Harding, Minn.	Lat 46°05'27", long 94°06'10", on line between secs.26 and 27, T.42 N., R.30 W., Morrison County, at triple box culvert on State Highway 25, 3.5 miles southwest of Harding.	101	11- 5-68 11- 6-68 8-22-69	b85.0 79.5 .66		8-20-70 10- 1-74 9-28-76	1.13 1.01 .23	370
05267810	Big Mink Creek near Pierz, Minn.	Lat 46°00'22", long 94°10'00", on line between secs.29 and 30, T.41 N., R.30 W., Morrison County, at bridge on county road, 3.6 miles northwest of Pierz.	18.6	11- 5-68 8-20-69 8-20-70	b6.20 .86 .64		10- 1-74 9-28-76	1.04 .22	350
05267830	Little Mink Creek near Pierz, Minn.	Lat 45°59'12", long 94°11'15", on line between sec.31, T.41 N., R.30 W., and sec.36, T.41 N., R.31 W., Morrison County, at bridge on County Highway 255, 4.1 miles west of Pierz.	18.8	11- 4-68 8-21-69	3.46 .02		10- 1-74 9-28-76	b.05 0	
05267880	Skunk River near Lastrup, Minn.	Lat 46°01'02", long 94°01'09", on line between secs.20 and 21, T.41 N., R.29 W., Morrison County, at double box culvert on County Highway 267, 2.6 miles southeast of Lastrup.	--	8-20-69 8-18-70 10-19-72 9- 3-73	1.03 3.13 9.00 5.88	280	8- 1-74 8-22-75 6- 4-76 9-28-76	2.54 11.3 2.74 1.36	265 245 320 370
05267890	Skunk River near Pierz, Minn.	Lat 45°59'00", long 94°04'52", on line between sec.9, T.40 N., R.30 W., and sec.36, T.41 N., R.30 W., Morrison County, at double box culvert on County Highway 39, 1.1 miles east of Pierz.	55.6	11- 6-68 8-20-69 8-18-70 10-19-72 9-13-73	25.0 5.87 7.45 16.9 9.11	325 310	8- 1-74 10- 1-74 8-22-75 6- 4-76 9-28-76	6.20 5.11 14.7 6.06 3.14	355  310 310 350
05267900	Hillman Creek near Pierz, Minn.	Lat 45°58'27", long 94°04'21", in NE¼SE¼ sec.9, T.40 N., R.30 W., Morrison County, at bridge on county road, 1.1 miles upstream from mouth, and 1.5 miles east of Pierz. (Annual maximums available since 1964)	46.7	8-13-63 10- 2-63 4-30-64 6-14-65 8- 3-65 9- 2-65 3-28-68 5-16-68 10- 8-68 11- 6-68	27.1 .81 14.0 27.1 5.75 9.08 15.6 20.5 3.47 11.7		5-28-69 8-20-69 5- 5-70 8-18-70 10- 1-74 5-12-75 6-12-75 7-16-75 9-28-76	8.53 .22 18.9 1.74 b.10 29.6 12.1 6.61 b.20	440
05267920	Skunk Creek near Genola, Minn.	Lat 45°56'42", long 94°05'40", on line between secs.20 and 21, T.40 N., R.30 W., Morrison County, at bridge on County Highway 239, 1.5 miles southeast of Genola.	--	11- 7-68 8-20-69 8-18-70 10-18-72 7- 9-73	2.59 .07 .07 .45 .35		8-10-73 9-13-73 10-23-73 8- 1-74 6- 4-76 9-28-76	.24 .12 1.51 .07 .07 .07	280 315 360
05267930	Skunk River near Buckman, Minn.	Lat 45°55'56", long 94°10'41", in SE¼SE¼ sec.27, T.40 N., R.31 W., Morrison County, at bridge on county road, 4.6 miles northwest of Buckman.	133	11- 4-68 8-22-69 8-18-70 10-18-72 9-13-73 8- 1-74	54.8 10.0 11.6 33.4 12.9 9.55	295 300 368	10- 1-74 8-21-75 6- 4-76 9-28-76 9-29-76	10.3 15.0 9.60 3.49 4.33	285 260 300 305
05267950	Buckman Creek near Buckman, Minn.	Lat 45°54'42", long 94°11'58", on line between sec.4, T.39 N., R.31 W., and sec.33, T.40 N., R.31 W., Morrison County, at bridge on county road, 5.2 miles northwest of Buckman.	32.8	11- 4-68 8-21-69	11.5 .70		10- 1-74 9-29-76	0 .31	255
05267970	Rice Creek near Little Falls, Minn.	Lat 45°57'21", long 94°14'14", on line between secs.17 and 20, T.40 N., R.31 W., Morrison County, at triple culvert on county road, 0.7 mile upstream from Rice Lake, and 6.1 miles east of Little Falls.	37.8	11- 4-68 8-21-69 8-19-70	16.2 3.69 4.03	290	10- 2-74 9-29-76	1.97 1.19	330

b Estimated.

Table 2.--Low-flow measurements at partial-record stations.

Station No.	Station Name	Location	Drainage Area (mi <sup>2</sup> )	Date	Discharge (ft <sup>3</sup> /s)	Measurements		Discharge (ft <sup>3</sup> /s)	Specific Conductance (micromhos/cm at 25°C)
						Specific Conductance (micromhos/cm at 25°C)	Date		
Platte River basin--Continued									
*05267980	Platte River near Little Falls, Minn.	Lat 45°55'31", long 94°15'35", in NW¼ sec.31, T.40 N., R.31 W., Morrison County, at bridge on County Highway 35, 0.5 mile downstream from Rice Lake, and 6 miles southeast of Little Falls.	--	7-24-63	24.4		12- 1-64	20.7	
				8-27-63	61.4		1- 5-65	20.8	
				10- 2-63	28.4		2- 7-65	22.5	
				12-16-63	13.0		3-25-65	20.1	
				1-26-64	13.8		8-21-69	50.2	280
				2-18-64	13.8		8-18-70	46.8	
				6- 8-64	57.1		7-31-74	40.6	240
				7-20-64	54.1		8-21-75	43.3	245
				10- 9-64	64.2		6- 3-76	54.3	195
				10-28-64	49.1		9-29-76	3.27	320
05268000	Platte River at Royalton, Minn.	Lat 45°50'43", long 94°17'40", in SE¼NW¼ sec.26, T.39 N., R.32 W., Morrison County, at bridge on County Highway 27, 0.6 mile north of Royalton, and 6.6 miles upstream from mouth. (Site of continuous-record gaging station, 1929-36; annual maximums available since 1972)	335	10- 8-36	4.73		8-21-69	49.0	
				11-19-36	16.6		6- 3-76	53.9	245
				12-15-36	4.93		8-17-76	5.43	253
							9-29-76	3.89	280
Little Rock Creek basin									
05268500	Little Rock Creek near Royalton, Minn.	Lat 45°49'50", long 94°12'02", in SE¼NE¼ sec.33, T.39 N., R.31 W., Morrison County, at triple box culvert on County Highway 26, 4.5 miles east of Royalton.	34.2	11- 7-68	14.2		7-31-74	3.32	345
				8-21-69	4.18	280	10- 1-74	.91	
				8-18-70	2.21		8-22-75	2.69	280
				10-18-72	9.96		6- 3-76	3.69	270
				9-12-73	6.01	295	8-17-76	.67	248
						9-29-76	.69	340	
05268700	Little Rock Creek at Rice, Minn.	Lat 45°45'48", long 94°12'15", in NW¼NE¼ sec.28, T.38 N., R.31 W., Benton County, at bridge on County Highway 12, at northeast corner of Rice, and 2 miles upstream from Little Rock Lake.	73.4	8-21-69	15.4	295	10- 2-74	10.3	
				8-19-70	10.6		8-17-76	7.70	280
Watab River basin									
05269800	Watab River near Sartell, Minn.	Lat 45°37'09", long 94°13'38", in NE¼SE¼ sec.20, T.125 N., R.28 W., Stearns County, at bridge on county road, 1.1 miles west of Sartell.	90.1	8-22-69	5.38	420	9-17-74	12.9	400
				8-19-70	5.31		8-18-76	5.27	400
Sauk River basin									
05270110	Sauk River near Little Sauk, Minn.	Lat 45°50'47", long 94°54'47", in NE¼NE¼ sec.2, T.127 N., R.34 W., Todd County, at bridge on county road, 1.1 miles south of Little Sauk.	191	8-20-69	17.2	390	10- 4-74	9.09	
				8-17-70	14.2		9-24-76	1.74	440
05270130	Ashley Creek at Westport, Minn.	Lat 45°43'10", long 95°10'50", on line between secs.14 and 15, T.126 N., R.36 W., Pope County, at bridge on county road, 0.7 mile northwest of Westport.	24.1	12- 8-69	8.85		11-13-72	21.6	400
				6- 9-70	10.2	375	11- 2-73	13.0	340
				8-18-70	2.46		7-31-74	1.44	345
				5-12-71	13.4	420	8-18-76	.85	
05270150	Ashley Creek near Sauk Centre, Minn.	Lat 45°46'46", long 94°58'52", in NW¼SE¼ sec.29, T.127 N., R.34 W., Todd County, at bridge on County Highway 11, 3 miles north of Sauk Centre.	113	8-28-68	3.59		10-23-69	16.8	460
				10- 9-68	19.2		8-18-70	4.96	
				11-19-68	12.4		9-20-74	9.97	500
				8-20-69	9.24	480	8-17-76	.32	540
				9-10-69	8.92	480			
*05270180	Sauk River at Sauk Centre, Minn.	Lat 45°43'22", long 94°56'17", in SW¼NE¼ sec.15, T.126 N., R.34 W., Stearns County, at bridge on County Highway 186 in Sauk Centre, 2.1 miles downstream from Sauk Lake.	367	8-20-69	19.5	372	9-20-74	42.8	350
				8-18-70	20.6		8-17-76	7.51	330

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Station No.	Station Name	Location	Drainage Area (mi <sup>2</sup> )	Date	Discharge (ft <sup>3</sup> /s)	Measurements		Date	Discharge (ft <sup>3</sup> /s)	Specific Conductance (micromhos/cm at 25°C)
						Conductance	Specific Conductance			
						(micromhos/cm at 25°C)	(micromhos/cm at 25°C)			
Sauk River basin--Continued										
05270210	Adley Creek near Melrose, Minn.	Lat 45°41'00", long 94°46'13", in NE¼NE¼ sec.36, T.126 N., R.33 W., Stearns County, at culvert on County Highway 168, 0.1 mile upstream from mouth, and 2.2 miles east of Melrose.	87.8	8-20-69 8-18-70	4.81 5.28	366		10- 4-74 8-17-76	2.22 1.25	350
05270230	Sauk River at New Munich, Minn.	Lat 45°37'32", long 94°45'39", in NE¼NW¼ sec.19, T.125 N., R.32 W., Stearns County, at bridge on County Highway 30, 0.5 mile southwest of New Munich.	559	8-28-68 10- 9-68 11-19-68 8-20-69 9-10-69	22.6 47.5 93.8 33.0 30.3		470 520	10-23-69 8-18-70 9-19-74 8-17-76	43.8 36.4 60.8 13.4	480 450 500
05270250	Stearns County ditch No. 44 near New Munich, Minn.	Lat 45°35'58", long 94°46'03", in NE¼NE¼ sec.36, T.125 N., R.33 W., Stearns County, at bridge on county road, 0.4 mile upstream from mouth, and 2.3 miles southwest of New Munich.	29.9	8-21-69 8-18-70	.22 .10	570		9-19-74 8-18-76	.09 0	610
05270280	Getchell Creek near New Munich, Minn.	Lat 45°34'36", long 94°45'50", in NE¼SE¼ sec.1, T.124 N., R.33 W., Stearns County, at bridge on County Highway 12, 0.5 mile upstream from mouth, and 4 miles south of New Munich.	65.7	8-21-69 8-18-70	.39 .79	460		9-18-74 8-18-76	.44 b.005	575 470
05270350	Sauk River near Farming, Minn.	Lat 45°29'56", long 94°37'44", in NE¼NW¼ sec.6, T.123 N., R.31 W., Stearns County, at bridge on county road, 1.9 miles southwest of Farming.	766	8-21-69 8-18-70	43.8 46.0	482		9-19-74 8-17-76	76.0 17.4	395 560
05270455	Mill Creek at Rockville, Minn.	Lat 45°28'20", long 94°20'21", on line between secs.9 and 16, T.123 N., R.29 W., Stearns County, at bridge on State Highway 23, at Rockville, and 0.2 mile upstream from mouth.	51.6	8-21-69 8-19-70	3.52 4.85	420		9-18-74 8-17-76	6.85 2.01	385 420
Mississippi River main stem										
*05270600	Mississippi River at Sauk Rapids, Minn.	Lat 45°35'12", long 94°10'06", in S¼ sec.35, T.125 N., R.28 W., Stearns County, at bridge on State Highway 152 at Sauk Rapids.	12,400	7-26-68	6,530					
Johnson Creek basin										
05272300	Johnson Creek near St. Augusta, Minn.	Lat 45°27'49", long 94°09'19", in NW¼SW¼ sec.13, T.123 N., R.28 W., Stearns County, at bridge on County Highway 7, 1.0 mile south of St. Augusta, and 3.3 miles upstream from mouth. (Annual maximums available since 1964)	46.7	10- 3-63 5- 1-64 6-12-64 7- 9-64 6-16-65 7- 8-65 9- 1-65 4-24-67 3-28-68 5-17-68 6-22-68 7-25-68 8-29-68	6.21 29.2 11.0 4.65 39.6 38.7 15.7 18.3 23.4 23.4 23.6 6.93 6.51			10-11-68 8-21-69 8-19-70 5-13-71 6-15-71 3-28-73 9-18-74 5-15-75 6-11-75 7-15-75 9-30-75 8-18-76	13.7 5.17 6.46 17.3 24.0 55.2 8.22 40.7 28.4 23.5 11.6 4.01	470 480 410
Plum Creek basin										
05272600	Plum Creek near Clearwater, Minn.	Lat 45°25'35", long 94°04'47", in NE¼NE¼ sec.33, T.123 N., R.27 W., Stearns County, at culvert on State Highway 152, 1.7 miles northwest of Clearwater.	23.3	8-22-69 8-19-70	2.28 1.32	390		9-17-74 10- 1-76	4.19 1.90	400

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b Estimated.

Table 2.--Low-flow measurements at partial-record stations.

Station No.	Station Name	Location	Drainage Area (mi <sup>2</sup> )	Date	Discharge (ft <sup>3</sup> /s)	Measurements		Discharge (ft <sup>3</sup> /s)	Specific Conductance (micromhos/cm at 25°C)
						Specific Conductance (micromhos/cm at 25°C)	Date		
Clearwater River basin									
05273000	Clearwater River near Kimball, Minn.	Lat 45°17'54", long 94°15'38", in SW¼SW¼ sec.7, T.121 N., R.28 W., Stearns County, at bridge on State Highway 55 and 24, 0.1 mile upstream from Lake Louisa, and 2.1 miles southeast of Kimball.	82.3	8-22-69 8-19-70	1.07 .40	465	9-18-74 10- 1-76	3.18 1.45	550
05273498	Clearwater River above Clearwater, Minn.	Lat 45°24'40", long 94°03'41", in NW¼NE¼ sec.3, T.122 N., R.27 W., at Wright-Stearns County line, at culvert on county road at southwest corner of Clearwater.	174	8-22-69 8-19-70	4.10 5.68	450	9-17-74 8-20-76	13.9 1.13	245 380
Silver Creek basin									
05273600	Silver Creek near Hasty, Minn.	Lat 45°22'37", long 93°56'31", in SW¼NE¼ sec.15, T.122 N., R.26 W., Wright County, at bridge on county road, 0.7 mile upstream from mouth, and 1.6 miles northeast of Hasty.	30.9	8-22-69 5-19-70 8-19-70	2.20 7.90 1.55	364 340	9-17-74 10- 1-76	2.08 0	295
Elk River basin									
05273990	Mayhew Creek near St. Cloud, Minn.	Lat 45°35'14", long 94°02'35", in NE¼NW¼ sec.26, T.36 N., R.30 W., Benton County, 300 feet upstream from mouth, 500 feet northwest of Elk River bridge on State Highway 95, and 6 miles east of St. Cloud.	53.2	8-27-68 10-11-68 11-18-68 8-22-69 9-10-69	.52 4.77 2.76 .71 .67		10-22-69 8-19-70 9-18-74 8-19-76	.46 .18 1.22 .35	375 410
05274000	Elk River near St. Cloud, Minn.	Lat 45°35'13", long 94°02'24", in NE¼NW¼ sec.26, T.36 N., R.30 W., Benton County, at bridge on State Highway 95, 300 feet downstream from Mayhew Creek, and 6 miles east of St. Cloud.	137	8-27-68 10-11-68 11-18-68 8-22-69 9-10-69	3.04 33.1 20.0 4.36 5.18	380 380	10-22-69 8-19-70 9-18-74 8-18-76	6.20 3.70 6.45 2.57	360 330
05274300	Rice Creek near Clear Lake, Minn.	Lat 45°29'57", long 93°58'28", in NE¼NW¼ sec.29, T.35 N., R.29 W., Sherburne County, at bridge on County Highway 61, 1.0 mile upstream from mouth, and 3.8 miles northeast of Clear Lake.	39.6	8-22-69 5-19-70 8-19-70	4.63 13.0 3.49	370 320	9-30-74 8-19-76	.79 b.17	280
05274380	Elk River near Becker, Minn.	Lat 45°26'11", long 93°54'07", on line between secs.13 and 14, T.34 N., R.29 W., Sherburne County, at bridge on State Highway 25, 2.2 miles northwest of Becker.	250	8-22-69 8-19-70	40.1 22.3	320	9-30-74 8-19-76	34.4 9.57	260
05274480	Snake River near Big Lake, Minn.	Lat 45°23'18", long 93°46'28", in SW¼SW¼ sec.36, T.34 N., R.28 W., Sherburne County, at culvert on County Highway 73, 0.9 mile upstream from mouth, and 4.1 miles northwest of Big Lake.	31.9	8-22-69 5-19-70 8-19-70	9.74 21.5 8.46	363 360	9-30-74 8-20-76	9.55 2.65	
05274700	St. Francis River at Santiago, Minn.	Lat 45°32'30", long 93°48'50", in NE¼ sec.10, T.35 N., R.28 W., Sherburne County, 0.2 mile east of Santiago, and 0.4 mile upstream from bridge on county road. (Site of continuous-record gaging station, 1965-70)	87.4	11- 9-62 10- 1-70	5.40 1.23		8-19-76	1.25	438

b Estimated.

Table 2.--Low-flow measurements at partial-record stations.

Station No.	Station Name	Location	Drainage Area (mi <sup>2</sup> )	Date	Discharge (ft <sup>3</sup> /s)	Measurements		Date	Discharge (ft <sup>3</sup> /s)	Specific Conductance (micromhos/cm at 25°C)
						Specific Conductance (micromhos/cm at 25°C)	Specific Conductance (micromhos/cm at 25°C)			
Elk River basin--Continued										
*05274800	Battle Brook near Zimmerman, Minn.	Lat 45°28'39", long 93°37'56", in NW¼SW¼ sec.31, T.35 N., R.26 W., Sherburne County, at bridge on County Highway 1, at dam at Elk Lake outlet, and 2.7 miles northwest of Zimmerman.	--	11-24-64	6.57			3-22-68	7.94	
				2-24-65	6.92			6-24-68	7.70	
				3-29-65	7.74			7-31-68	7.86	
				10-15-65	6.13			8-30-68	5.12	
				10-25-67	7.26			9-10-69	7.11	
				11-15-67	7.30			2-24-70	7.73	
				12-13-67	7.67			6- 9-70	6.36	
				1-22-68	7.10			8-28-70	4.33	
				2-21-68	6.71					
05274900	St. Francis River near Big Lake, Minn.	Lat 45°23'07", long 93°44'02", in NW¼NW¼ sec.5, T.33 N., R.27 W., Sherburne County, 3.6 miles north of Big Lake, and 4 miles upstream from mouth. (Site of continuous-record gaging station, 1965-70)	209	10- 1-70	32.5			8-20-76	15.3	260
Mississippi River main stem										
05275500	Mississippi River at Elk River, Minn.	Lat 45°18'00", long 93°34'00", in SW¼ sec.34, T.33 N., R.26 W., Sherburne County, at Elk River, and at mile 884.6 upstream from Ohio River. (Site of continuous-record gaging station, 1915-56)	14,500	11-13-56	5,140			9- 5-68	3,300	
				10-11-66	4,780					
Crow River basin										
05275970	North Fork Crow River near Georgeville, Minn.	Lat 45°29'06", long 94°55'37", on line between secs.3 and 10, T.123 N., R.34 W., Stearns County, at bridge on County Highway 32, 2 miles east of U.S. Highway 71, and 4 miles north of Georgeville.	166	12- 3-69	10.7	600		11-13-72	74.6	570
				6- 9-70	25.8	500		11- 2-73	18.8	600
				5-12-71	43.8	550		10- 4-76	.37	560
				9-20-71	6.98	530				
05276000	North Fork Crow River near Regal, Minn.	Lat 45°22'45", long 94°47'40", in S¼ sec.11, T.122 N., R.33 W., Kandiyohi County, at bridge on county road, 3 miles southeast of Regal. (Site of continuous-record gaging station, 1943-54)	215	9- 4-69	2.15	570		11-13-72	83.8	570
				12- 3-69	11.5	600		11- 2-73	24.5	600
				6- 9-70	32.2			8-19-76	.04	550
				8-17-70	3.26	530		10- 4-76	0	
				5-12-71	48.1	560				
05277050	Grove Creek near Manannah, Minn.	Lat 45°14'23", long 94°36'26", on line between sec.6, T.120 N., R.31 W., and sec.32, T.121 N., R.31 W., Meeker County, at bridge on County Highway 46, 1.1 miles southeast of Manannah, and 8.5 miles northwest of Litchfield.	47.9	8-16-69	.93			8-18-70	.68	600
				9- 4-69	1.10	655		6- 8-71	14.6	500
				9-17-69	.59			7-13-71	20.3	
				10-23-69	1.15			8- 5-71	6.12	440
				11-25-69	1.68			9-20-71	2.72	480
				4-27-70	8.62	760		9-21-71	2.55	
				5-26-70	2.21	640		10-18-71	3.95	560
				6-30-70	2.27			10- 4-76	.17	600
				8- 6-70	1.03					
05278100	North Fork Crow River at Forest City, Minn.	Lat 45°12'26", long 94°28'00", in NW¼NE¼ sec.17, T.120 N., R.30 W., Meeker County, at bridge on County Highway 2, 0.1 mile north of Forest City.	757	9- 5-69	52.6	635		9-20-71	78.4	505
				8-18-70	48.7	540		10- 4-76	12.0	730
05278150	Washington Creek near Kingston, Minn.	Lat 45°09'47", long 94°18'43", in NW¼NW¼ sec.34, T.120 N., R.29 W., Meeker County, at bridge on County Highway 4, 2.1 miles south of Kingston.	81.0	9- 5-69	.29	440		9-21-71	3.41	445
				8-18-70	2.63	400		8-12-76	0	

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a Approximately.

Table 2.--Low-flow measurements at partial-record stations.

Station No.	Station Name	Location	Drainage Area (mi <sup>2</sup> )	Date	Discharge (ft <sup>3</sup> /s)	Measurements		Date	Discharge (ft <sup>3</sup> /s)	Specific Conductance (micromhos/cm at 25°C)
						Specific Conductance (micromhos/cm at 25°C)				
Crow River basin--Continued										
*05278340	North Fork Crow River near Delano, Minn.	Lat 45°05'22", long 93°52'07", on line between secs.29 and 30, T.119 N., R.25 W., Wright County, at bridge on State Highway 25, 5 miles northwest of Delano, 5.2 miles south of Buffalo, and 9.5 miles upstream from confluence with South Fork.	a1,250	8-16-69	112			8-18-70	90.0	530
				9- 5-69	65.1	700		9- 8-70	52.4	
				9-17-69	69.3			10-12-70	130	
				10-23-69	48.2			11-16-70	368	
				11-25-69	54.5			6- 8-71	446	520
				4-28-70	753	460		8- 5-71	453	
				5-20-70	392	460		9-21-71	146	505
				5-27-70	340			10-19-71	163	530
				7- 1-70	472			8-10-76	29.2	
				8- 5-70	138					
*05278400	North Fork Crow River near Rockford, Minn.	Lat 45°05'44", long 93°47'18", in SE¼SE¼ sec.23, T.119 N., R.25 W., Wright County, at bridge on county road, 2.7 miles west of Rockford. (Gage-height records available, 1909-10)	--	7-22-09	438			9-23-09	262	
				7-31-09	303			6- 4-10	108	
				8-11-09	329			8-20-76	25.2	650
05278500	South Fork Crow River at Cosmos, Minn.	Lat 44°56'05", long 94°40'20", in SW¼ sec.14, T.117 N., R.32 W., Meeker County, at bridge on State Highway 7, 1 mile east of Cosmos. (Site of continuous-record gaging station, 1945-64)	221	9-10-69	0			10- 4-76	.02	905
			8-19-70	2.71	1,000					
05278590	South Fork Crow River at Biscay, Minn.	Lat 44°50'11", long 94°17'16", in SE¼SW¼ sec.23, T.116 N., R.29 W., McLeod County, at bridge on State Highway 22, 1 mile northwest of Biscay.	a495	9-10-69	4.74	1,200		8-28-75	24.1	1,000
				8-19-70	6.88	1,000		10- 4-76	2.26	1,400
				9-21-71	27.1	825				
05278830	Buffalo Creek near Buffalo Lake, Minn.	Lat 44°46'05", long 94°32'48", in SW¼NE¼ sec.15, T.115 N., R.31 W., Renville County, at bridge on County Highway 25 just upstream from right bank tributary, 2 miles northwest of Stewart, and 2 miles northeast of town of Buffalo Lake.	127	8- 8-69	3.96			10-13-70	42.6	
				9-10-69	1.27	1,150		11-17-70	78.9	
				9-17-69	.68			6- 9-71	114	1,000
				10-23-69	1.01			7-14-71	69.8	
				4-30-70	24.4	1,200		8- 5-71	11.3	800
				5-26-70	12.4	1,175		9-20-71	1.84	
				6-30-70	26.3			9-21-71	1.65	990
				8- 6-70	2.80			10-18-71	3.19	1,025
				8-19-70	4.68	1,100		8-28-75	5.98	700
				8-24-70	1.76			8- 9-76	.21	
9- 9-70	3.00									
05278835	Renville County Judicial ditch No. 15 near Buffalo Lake, Minn.	Lat 44°46'05", long 94°32'55", in NW¼SE¼ sec.15, T.115 N., R.31 W., Renville County, 0.1 mile upstream from mouth, in vicinity of County Highway 25 bridge over Buffalo Creek, 2 miles northwest of Stewart, and 2 miles northeast of town of Buffalo Lake.	94.9	8- 8-69	3.06			10-13-70	46.9	
				9-10-69	1.98	1,150		11-17-70	66.4	
				9-17-69	0			6- 9-71	116	1,050
				10-23-69	1.19			7-14-71	41.0	
				4-30-70	13.7	1,200		8- 5-71	5.24	810
				5-26-70	4.76	1,125		9-20-71	2.67	
				6-30-70	11.5			9-21-71	2.91	1,220
				8- 6-70	1.46			10-18-71	3.01	
				8-19-70	5.94			8-28-75	3.35	975
				8-24-70	1.08			8-10-76	.41	
9- 9-70	2.10									
05278950	Buffalo Creek near Plato, Minn.	Lat 44°48'03", long 94°02'24", in NW¼NE¼ sec.2, T.115 N., R.27 W., McLeod County, at bridge on County Highway 9, 2 miles north of Plato, and 6 miles northeast of Glencoe.	407	8- 8-69	12.6			9-10-70	12.6	
				9-10-69	1.49	5,200		10-13-70	58.5	
				9-17-69	1.50			11-17-70	400	
				10-22-69	.62			6- 9-71	183	975
				4-30-70	141			7-14-71	340	
				5-20-70	33.9	1,800		8- 6-71	39.7	2,000
				5-25-70	29.4	1,175		9-21-71	7.22	1,120
				7- 1-70	102			9-22-71	7.93	
				8- 7-70	2.60			10-20-71	10.2	900
				8-19-70	1.89	1,350		8-28-75	7.11	1,400
8-24-70	5.45			8-11-76	.13					
05279500	South Fork Crow River near Rockford, Minn.	Lat 45°03'34", long 93°46'34", in NW¼ sec.1, T.118 N., R.25 W., Wright County, at bridge on county road, 2 miles upstream from North Fork Crow River, and 3.5 miles southwest of Rockford. (Site of continuous-record gaging station, 1909-12)	a1,250	7-22-09	235			9- 9-10	2.53	
				7-31-09	136			6-15-11	12.8	
				8-11-09	111			12-22-11	35.9	
				9-23-09	204			2- 2-12	5.6	
				7-14-10	57.8			8-18-70	22.2	950

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a Approximately.

Table 2.--Low-flow measurements at partial-record stations.

Station No.	Station Name	Location	Drainage Area (mi <sup>2</sup> )	Measurements											
				Date	Discharge (ft <sup>3</sup> /s)	Specific Conductance (micromhos/cm at 25°C)	Date	Discharge (ft <sup>3</sup> /s)	Specific Conductance (micromhos/cm at 25°C)						
Rum River basin															
*05284101	Rum River at Vineland, Minn.	Lat 46°09'37", long 93°45'46", in SE¼SW¼ sec.33, T.43 N., R.27 W., Mille Lacs County, at bridge on U.S. Highway 169, at Mille Lacs Lake outlet, at Vineland.	a378	9-22-09	77.6		7-25-52	281							
				11- 1-09	93.8		8-12-52	308							
				11- 7-09	93.1		9-18-52	316							
				11- 6-45	252		11- 7-52	209							
				8-27-46	256		12- 1-52	181							
				1-20-47	205		7-14-65	185							
				2- 2-52	222		8-20-69	121							204
				2-18-52	2.14		8-17-70	96.0							195
				2-29-52	17.4		8-27-70	83.2							
				3-18-52	42.0		7-25-72	342							
				4- 1-52	128		2- 6-73	359							
				4-27-52	397										
05284500	Rum River at Onamia, Minn.	Lat 46°03'40", long 93°39'43", in NE¼SE¼ sec.6, T.41 N., R.26 W., Mille Lacs County, at bridge on U.S. Highway 169, 0.2 mile upstream from Black Brook, and 0.8 mile south of Onamia. (Site of continuous-record gaging station, 1909-12)	464	11- 5-45	253		8-27-68	155							
				8-27-46	264		10- 8-68	188							
				1-20-47	235		11-14-68	254							
				2- 1-52	209		8-20-69	130							173
				2-18-52	149		9- 9-69	110							170
				2-29-52	28.0		10-22-69	70.2							200
				3-18-52	7.04		5-20-70	240							
				4- 1-52	111		8-17-70	107							165
				8-12-52	337		8-27-70	79.6							
				9-18-52	310		2- 6-73	398							
				10-23-52	276		10-14-74	139							195
				12- 1-52	188		9-23-76	11.3							310
				7-14-65	198										
05284660	Rum River near Milaca, Minn.	Lat 45°46'44", long 93°39'29", on line between secs.13 and 24, T.38 N., R.27 W., Mille Lacs County, at bridge on County Highway 9, 1.8 miles north of Milaca.	671	8-27-68	176		10-22-69	78.7							230
				10- 8-68	267		8-18-70	97.2							170
				11-14-68	349		8-27-70	90.7							
				8-20-69	141	173	10-14-74	111							210
				9- 9-69	123	180	9-29-76	8.99							305
05284710	West Branch Rum River at Princeton, Minn.	Lat 45°34'24", long 93°34'47", in NW¼NE¼ sec.33, T.36 N., R.26 W., Mille Lacs County, at bridge on U.S. Highway 169 at Princeton, 0.1 mile upstream from mouth.	184	5-23-61	76.8		9- 9-69	10.1							310
				7-22-65	19.4		10-22-69	11.3							340
				8-27-68	11.4		8-18-70	7.39							310
				10- 7-68	78.5		10-14-74	9.18							325
				11-14-68	67.0		8-12-76	4.06							
				8-20-69	7.82	307									
05284750	Rum River at Spencer Brook, Minn.	Lat 45°31'45", long 93°26'21", in NW¼NE¼ sec.15, T.35 N., R.25 W., Isanti County, at bridge on County Highway 7, 200 feet downstream from Spencer Brook, 0.5 mile north of village of Spencer Brook, and 7.5 miles southeast of Princeton. (Site of continuous-record gaging station, 1960-64)	a1,000	10- 2-64	49.2		7-22-65	295							
				10-19-64	57.0		8-18-70	141							240
05284810	Green Lake Brook at West Point, Minn.	Lat 45°33'49", long 93°23'20", in NE¼SE¼ sec.36, T.36 N., R.25 W., Isanti County, at bridge on State Highway 47, 0.2 mile upstream from mouth, and 0.5 mile north of West Point.	29.7	7-22-65	25.7		10-11-74	9.93							
				8-21-69	2.86	325	8-12-76	3.51							
				8-19-70	4.79	260									
05284950	Stanchfield Creek at Springvale, Minn.	Lat 45°36'58", long 93°18'06", on line between secs.11 and 14, T.36 N., R.24 W., Isanti County, at bridge on County Highway 32, 1 mile south of Springvale, and 3 miles northeast of Walbo.	92.6	7-23-65	27.2		10-22-69	9.38							480
				8-27-68	8.55		5-21-70	22.4							
				10- 7-68	88.0		8-19-70	5.86							470
				11-15-68	51.7		10-11-74	10.1							
				8-22-69	2.97	493	9-23-76	2.52							560
				9- 9-69	5.47										
05284970	Lower Stanchfield Creek near Grandy, Minn.	Lat 45°37'50", long 93°13'46", in SW¼SE¼ sec.5, T.36 N., R.23 W., Isanti County, at culvert on County Highway 6, 0.1 mile downstream from Little Stanchfield Lake, and 1.9 miles southwest of Grandy.	40.9	8-22-69	2.26	236	10-11-74	4.48							
				5-21-70	10.2		8-13-76	2.61							
				8-19-70	4.18	260									

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			Area (mi <sup>2</sup> )			Specific Conductance (micromhos/cm at 25°C)				
Rum River basin--Continued										
05285000	Rum River at Cambridge, Minn.	Lat 45°34'20", long 93°14'00", in NE¼NW¼ sec.32, T.36 N., R.23 W., Isanti County, at bridge on County Highway 64, at Cambridge. (Site of continuous-record gaging station, 1909-14)	al,160	7-23-65 8-22-69	433 202	267		8-19-70	163	300
05285300	Long Lake outlet near Isanti, Minn.	Lat 45°26'31", long 93°19'14", on line between secs.10 and 15, T.34 N., R.24 W., Isanti County, at culvert on county road, 4.5 miles northeast of St. Francis, and 5.3 miles southwest of Isanti.	15.4	7-27-65 8-21-69 8-20-70	b6.90 2.12 1.01	236 220		10-11-74 8-12-76	3.09 .56	
05285800	Seelye Brook near St. Francis, Minn.	Lat 45°21'58", long 93°22'20", in SW¼NE¼ sec.7, T.33 N., R.24 W., Anoka County, at bridge on County Highway 55, 0.9 mile upstream from mouth, and 1.6 miles south of St. Francis.	37.5	7-27-65 8-21-69 5-21-70 8-20-70	6.24 2.39 7.24 2.02	386 360 410		9- 6-74 10- 6-75 10- 5-76	1.52 5.56 .95	355 420
05286300	Cedar Creek near Anoka, Minn.	Lat 45°17'57", long 93°21'59", in SW¼SW¼ sec.32, T.33 N., R.24 W., Anoka County, at bridge on county road, 0.5 mile upstream from mouth, 4.3 miles southwest of Cedar, and 7 miles north of Anoka.	84.8	7-27-65 8-27-68 10-14-68 11-20-68 8-21-69 9- 9-69	29.8 21.4 108 74.2 24.2 19.2	353		10-22-69 5-21-70 8-20-70 9- 6-74 10- 6-75 8-13-76	24.7 19.6 20.9 20.1 36.5 20.8	360  380  330
05286500	Rum River near Anoka, Minn.	Lat 45°17'30", long 93°23'18", on line between sec.6, T.32 N., R.24 W., and sec.1, T.32 N., R.25 W., Anoka County, at bridge on County Highway 7, 2.5 miles downstream from Cedar Creek, 6 miles north of Anoka, and 10 miles upstream from mouth. (Site of continuous-record gaging station, 1905-06, 1909-10)	al,430	7-27-65	514					
*05286800	Trott Brook near Nowthen, Minn.	Lat 45°17'16", long 93°25'08", in SW¼SE¼ sec.2, T.32 N., R.25 W., Anoka County, at bridge on State Highway 47, 0.8 mile upstream from mouth, and 3.9 miles southeast of Nowthen.	72.0	7-27-65 8-21-69 5-21-70 8-21-70	15.5 5.12 11.9 7.64	472 420 460		9- 6-74 9-29-75 8-13-76	6.48 20.6 5.76	415
*05287000	Rum River at Anoka, Minn.	Lat 45°11'54", long 93°23'28", in SE¼SE¼ sec.1, T.31 N., R.25 W., Anoka County, at bridge on Main Street in Anoka, 450 feet downstream from dam, and 0.6 mile upstream from mouth.	al,580	7-27-65 8-21-70 7-10-73 8- 2-73 8-30-73 11-12-73 12-12-73 1-11-74 2-20-74 3-25-74 7-31-74 9- 5-74 10- 8-74	573 202 585 573 666 686 632 382 447 630 470 367 336	320 254 256 269 321 351 357 305 320 270 295 290		11-15-74 12-30-74 1-21-75 2-19-75 3-20-75 9-23-75 10-14-75 12-22-75 1-14-75 7-30-76 8-13-76 9-24-76	354 297 304 335 467 691 510 493 469 228 215 132	280 325 340 335 355 396 330 365 370 370 320 351

\* High-flow measurements are also available in Geological Survey files.

a Approximately.

b Estimated.

Table 2.--Low-flow measurements at partial-record stations.

Station No.	Station Name	Location	Drainage Area (mi <sup>2</sup> )	Date	Discharge (ft <sup>3</sup> /s)	Measurements		Date	Discharge (ft <sup>3</sup> /s)	Specific Conductance (micromhos/cm at 25°C)
						Specific Conductance (micromhos/cm at 25°C)				
Elm Creek basin										
*05287900	Elm Creek at Champlin, Minn.	Lat 45°11'04", long 93°24'06", on line between sec.19, T.120 N., R.21 W., and sec. 24, T.120 N., R.22 W., Hennepin County, at bridge on Cartway Road at south edge of Champlin.	103	3-18-69	12.9			9-17-70	4.54	
				6- 6-69	4.53			10-20-70	5.57	
				7-23-69	4.09	450		12-21-70	6.10	
				10-27-69	9.12			1-29-71	2.69	
				12- 4-69	3.87			2-24-71	.85	
				1-12-70	2.40			7-21-71	36.0	
				2-24-70	4.60			8- 6-71	9.45	460
				4- 2-70	6.80	710		9-16-71	5.95	
				5- 8-70	19.5	580		10-12-71	6.50	520
				6- 5-70	10.7			12-21-71	31.6	
				7- 8-70	3.35			1-11-72	22.6	490
				8-11-70	4.34			2-16-72	9.34	
Coon Creek basin										
*05288490	Coon Creek at Coon Rapids, Minn.	Lat 45°09'00", long 93°17'49", in NW¼NE¼ sec.26, T.31 N., R.24 W., Anoka County, at bridge on Coon Rapids Boulevard, at southeast edge of Coon Rapids.	96.4	9-29-32	5.95			7- 8-70	20.7	
				8-15-33	6.27			8-11-70	16.8	
				8-17-34	2.70			9-17-70	20.7	
				7-14-36	9.42			10-20-70	34.7	
				4- 4-41	6.80			1-29-71	38.0	
				1-31-55	14.9			2-24-71	37.4	470
				1-14-56	11.2			4-29-71	94.7	375
				3-18-69	64.3			6- 3-71	81.3	400
				6- 6-69	33.7			7-21-71	32.6	
				7-23-69	24.3	420		8- 6-71	25.6	
				10-27-69	13.2			9-16-71	24.8	400
				12- 4-69	24.3			10-12-71	26.8	380
				1-12-70	25.0			11-10-71	69.0	400
				2-24-70	4.88			12-21-71	109	
				4- 2-70	34.0	430		1-11-72	59.8	350
				5- 8-70	48.6	460		2-16-72	36.6	
				6- 5-70	42.0	460				
Rice Creek basin										
*05288600	Rice Creek at Fridley, Minn.	Lat 45°05'30", long 93°15'47", in NW¼ sec.14, T.30 N., R.24 W., Anoka County, at culvert on State Highway 47 (University Avenue) at north edge of Fridley, 1 mile upstream from mouth.	149	3-18-69	63.1			2-13-73	10.3	703
				6- 6-69	30.8			7- 3-73	56.0	406
				7-23-69	11.3	570		8- 1-73	20.7	409
				10-27-69	3.63			8-31-73	8.21	467
				12- 4-69	9.63			10-19-73	19.3	466
				1-12-70	10.6			11-12-73	14.3	469
				2-24-70	7.31			12-10-73	27.9	522
				4- 2-70	16.3	1,100		1-11-74	66.00	540
				5- 8-70	47.6	700		2-21-74	14.9	680
				6- 5-70	28.0	710		3-29-74	43.0	500
				7- 8-70	5.11			8- 5-74	80.4	405
				8-11-70	7.32			9- 5-74	8.64	460
				9-17-70	12.5			10- 8-74	7.15	435
				10-20-70	21.5			11-18-74	9.78	482
				12-21-70	83.9			12-30-74	5.43	600
				1-29-71	14.5			1-24-75	3.29	790
				2-24-71	18.8	800		2-13-75	3.00	750
				7-21-71	40.3			3-25-75	26.7	590
				8- 6-71	28.1			10-21-75	52.2	381
				9-16-71	16.1	420		11-17-75	44.0	440
				10-12-71	17.9	380		12-18-75	38.1	580
				11-10-71	50.4	400		1-22-76	16.8	590
				12-21-71	34.0			2-24-76	45.9	648
				1-11-72	25.9	300		5-11-76	77.3	361
				10-18-72	21.5	454		6-14-76	12.3	415
				11-24-72	56.5	448		7-28-76	9.32	435
				12-14-72	25.6	528		8-16-76	2.28	527
				1-17-73	14.2	679		9-21-76	.78	610
Shingle Creek basin										
*05288700	Shingle Creek at Brooklyn Center, Minn.	Lat 45°04'45", long 93°18'55", in NE¼NW¼ sec.35, T.119 N., R.21 W., Hennepin County, at bridge on 69th Avenue North in Brooklyn Center.	22.6	3-18-69	25.6			10-20-70	10.1	
				6- 6-69	10.8			12-21-70	30.8	
				7-23-69	9.17	760		1-29-71	40.7	
				10-27-69	6.75			2-24-71	35.8	900
				12- 4-69	5.92			4-29-71	34.3	650
				1-13-70	5.03			6- 3-71	39.0	650
				2-24-70	12.5			8- 3-71	19.0	725
				4- 2-70	9.24	825		9-16-71	8.50	
				5- 8-70	12.7	850		10-12-71	11.8	560
				6- 5-70	15.3			11-10-71	16.4	700
				7- 8-70	5.64			12-21-71	19.2	
				8-11-70	6.28			1-11-72	14.8	690
				9-17-70	8.57			2-16-72	17.1	

\* High-flow measurements are also available in Geological Survey files.

b Estimated.

Table 2.--Low-flow measurements at partial-record stations.

Station No.	Station Name	Location	Drainage Area (mi <sup>2</sup> )	Date	Discharge (ft <sup>3</sup> /s)	Measurements		Discharge (ft <sup>3</sup> /s)	Specific Conductance (micromhos/cm at 25°C)
						Specific Conductance (micromhos/cm at 25°C)	Date		
Bassett Creek basin									
*05288800	Bassett Creek at Golden Valley, Minn.	Lat 44°59'58", long 93°21'17", in W½ sec.28, T.118 N., R.21 W., Hennepin County, at bridge on County Highway 66, 0.2 mile west of underpass on State Highway 100 in Golden Valley.	--	7-29-63	4.67		6- 2-69	7.17	
				8- 7-63	5.70		8-20-69	5.39	
				9-20-63	3.46		9-18-69	5.17	
				10- 7-63	1.75		10-27-69	2.38	
				11-18-63	.85		7- 7-70	9.35	
				12- 9-63	.46		8-10-70	9.01	
				3-25-64	1.32		10-19-70	5.54	
				4-21-64	5.84		9-15-71	4.46	
				5-19-64	6.18		10-14-71	5.19	
				6-15-64	3.12		7-13-72	9.86	
				7-26-64	2.90		9-14-72	9.00	
				8-16-64	7.19		10-17-72	6.00	745
				9-23-64	7.10		11-20-72	9.07	
				10- 8-64	2.83		7-13-73	7.05	640
				11-17-64	.81		9-21-73	6.10	
				4- 3-65	5.92		10-25-73	6.83	
				8-16-65	7.19		3-18-74	3.21	825
				5-31-66	5.33		9- 6-74	2.91	620
				8- 2-66	6.05		10- 7-74	1.58	550
				8-20-66	4.38		11-19-74	1.56	800
				9-12-66	4.75		8-15-75	9.86	
				10-14-66	7.75		9-26-75	6.13	775
				11- 7-66	1.74		11- 5-75	6.87	750
				10-13-67	3.01		4-29-76	8.06	
				11-16-67	1.10		6-14-76	5.88	
				3-28-68	6.40		6-25-76	2.51	
				4-17-68	4.92		7-20-76	3.12	530
9- 9-68	3.52		8-10-76	5.64	530				
9-30-68	4.97								
*05288810	North Fork Bassett Creek at Crystal, Minn.	Lat 45°01'06", long 93°21'32", in NW¼ sec.21, T.118 N., R.21 W., Hennepin County, at culvert on 34th Avenue North at Crystal, and 0.8 mile upstream from mouth.	--	4-12-63	.54		8-20-69	0	
				5-13-63	1.58		9-18-69	0	
				6-21-63	1.43		10-27-69	0	
				7-29-63	0		5- 7-70	.67	540
				8- 7-63	0		6- 4-70	1.12	430
				9-20-63	0		7- 7-70	0	
				10- 7-63	0		8-10-70	.47	
				11-18-63	0		10-19-70	.48	
				12- 9-63	0		4-27-71	1.43	
				3-25-64	.22		7-20-71	.42	
				4-21-64	.25		9-15-71	0	
				5-19-64	0		10-14-71	.62	
				6-15-64	0		11-11-71	.28	
				7-26-64	0		6- 8-72	.97	
				9-23-64	.79		7-13-72	.72	
				10- 8-64	0		8-10-72	1.99	360
				11-17-64	0		9-14-72	.98	
				7-15-65	.80		10-17-72	.41	380
				10-22-65	1.12		11-20-72	.47	
				4-22-66	.85		3-22-73	1.07	
				5-31-66	b.002		5-10-73	1.35	
				8- 2-66	0		6- 7-73	.26	560
				8-20-66	.38		7-13-73	b.05	
				9-12-66	b.01		9-21-73	0	
				10-14-66	.84		10-25-73	b.05	
				11- 7-66	.04		3-18-74	.45	730
				4-18-67	1.02		5-24-74	1.13	540
				5-12-67	.79		6-24-74	1.03	
				7- 7-67	.92		9- 6-74	0	
				9-13-67	1.90		10- 7-74	0	
				10-13-67	0		11-19-74	b.05	
				11-16-67	0		7-22-75	0	
				3-28-68	1.98		8-16-75	0	
				4-17-68	.45		9-26-75	b.01	
				5-20-68	1.60		11- 5-75	0	
				8- 1-68	.92		4-29-76	b.10	
9- 9-68	.06		6-14-76	b.10					
9-30-68	1.51		6-25-76	b.02					
11-12-68	.38		8-10-76	0					
4-25-69	.33		9-20-76	.30	560				
6- 2-69	.05								

\* High-flow measurements are also available in Geological Survey files.

b Estimated.

Table 2.--Low-flow measurements at partial-record stations.

Station No.	Station Name	Location	Drainage Area (mi <sup>2</sup> )	Date	Discharge (ft <sup>3</sup> /s)	Measurements		Discharge (ft <sup>3</sup> /s)	Specific Conductance (micromhos/cm at 25°C)
						Specific Conductance (micromhos/cm at 25°C)	Date		
Bassett Creek basin--Continued									
*05288850	South Fork Bassett Creek at Golden Valley, Minn.	Lat 44°59'04", long 93°20'40", near center of W½ sec.19, T.29 N., R.24 W., Hennepin County, at culvert on Olson Memorial Highway (State Highway 55), 0.2 mile east of State Highway 100 in Golden Valley.	--	8- 7-63	1.11		11-20-72	.95	
				11-18-63	.85		6- 7-73	.90	1,025
				12- 9-63	.86		7-13-73	.81	1,025
				3-25-64	.99		9-21-73	.91	
				5-19-64	.97		10-25-73	.91	920
				6-15-64	.93		3-18-74	.93	1,075
				7-26-64	.78		4-19-74	1.45	1,075
				10- 8-64	1.06		5-24-74	.96	950
				11-17-64	.76		6-24-74	1.32	975
				5-31-66	1.25		9- 6-74	.87	1,090
				11- 7-66	1.47		10- 7-74	.77	950
				11-16-67	1.24		11-19-74	.68	950
				5-20-68	1.26		7-22-75	1.44	
				9-30-68	1.05		9-26-75	1.25	850
				4-25-69	1.33		11- 5-75	1.20	900
				6- 2-69	1.12		4-29-76	1.46	
				11-25-70	.69		6-14-76	1.06	
				6- 8-72	1.12		6-25-76	1.21	
				8-10-72	1.30	940	8-10-76	.57	
				9-14-72	1.17		9-20-76	1.58	725
				10-17-72	1.11	1,130			
*05288880	Bassett Creek near Golden Valley, Minn.	Lat 44°59'37", long 93°19'17", in SW¼ sec.17, T.29 N., R.24 W., Hennepin County, at stone arch bridge on Theodore Wirth Parkway in Wirth Park at Golden Valley.	--	9-19-53	2.83		6-13-55	2.81	
				10-17-53	3.43		7-19-55	3.20	
				12-23-53	4.36		7-25-55	1.91	
				3-10-54	4.53		8-15-55	.80	
				8-12-54	2.42		9-19-55	.53	
				9-11-54	3.12		10-17-55	.74	
				10-25-54	4.57		11-14-55	1.94	
				11-16-54	4.45		5- 7-56	4.22	
				5-13-55	4.10		6- 5-56	2.80	
*05288890	Bassett Creek at Minneapolis, Minn.	Lat 44°59'03", long 93°19'10", near center of sec.20, T.29 N., R.24 W., Hennepin County, at twin box culverts on Olson Memorial Highway (State Highway 55), at Minneapolis.	--	9-19-53	3.73		6-13-55	2.80	
				10-17-53	3.67		7-19-55	2.07	
				11-27-53	4.68		7-25-55	1.58	
				12-23-53	3.76		8-15-55	1.53	
				3-10-54	3.89		11-14-55	2.16	
				10-25-54	4.58		5- 7-56	2.47	
				11-16-54	4.57		6- 5-56	3.05	
				5-13-55	4.25				
*05288900	Bassett Creek at Fruen Mill, at Minneapolis, Minn.	Lat 44°58'45", long 93°18'48", in SE¼ sec.20, T.29 N., R.24 W., Hennepin County, at Fruen Mill, 700 feet downstream from Glenwood Avenue, in Minneapolis.	41.6	9-19-53	9.37		11-17-64	2.29	
				10-17-53	3.36		8-16-65	7.24	
				11-27-53	5.76		5-31-66	8.22	
				12-23-53	3.60		8- 2-66	8.33	
				3-10-54	4.79		9-12-66	9.06	
				6-15-54	9.35		11- 7-66	3.20	
				8-12-54	2.89		5-12-67	.07	
				9-11-54	3.93		10-13-67	6.63	
				10-25-54	5.36		11-16-67	2.37	
				11-16-54	5.44		4-17-68	5.44	
				5-13-55	4.13		9-30-68	8.44	
				6-13-55	3.33		6- 2-69	8.88	
				7-19-55	2.55		8-20-69	8.65	
				7-25-55	2.09		9-18-69	4.07	
				8-15-55	1.62		10-27-69	2.52	
				9-19-55	.49		5- 7-70	3.87	620
				10-17-55	1.38		10-19-70	8.23	
				11-14-55	2.19		9-15-71	6.73	
				5- 7-56	3.55		10-14-71	5.40	
				6- 5-56	3.19		7-13-72	8.98	
				4-12-63	7.76		10-17-72	5.59	700
				7-29-63	8.02		7-13-73	6.27	510
				8- 7-63	6.84		9-21-73	6.44	
				9-20-63	6.15		10-25-73	3.93	420
				10- 7-63	4.43		3-28-74	6.30	880
				11-18-63	3.03		9- 6-74	3.36	685
				12- 9-63	3.13		10- 7-74	3.38	470
				3-25-64	4.04		11-19-74	4.00	
				4-21-64	9.75		8-15-75	9.92	
				5-19-64	9.91		10- 5-75	9.66	700
				7-26-64	2.38		8-10-76	9.78	480
				10- 8-64	4.82		9-20-76	8.18	

\* High-flow measurements are also available in Geological Survey files.

Table 2.--Low-flow measurements at partial-record stations.

Station No.	Station Name	Location	Drainage Area (mi <sup>2</sup> )	Date	Discharge (ft <sup>3</sup> /s)	Measurements	
						Specific Conductance (micromhos/cm at 25°C)	Specific Conductance (micromhos/cm at 25°C)
Mississippi River main stem							
*05288920	Mississippi River at Minneapolis, Minn.	Lat 44°58'46", long 93°14'50", in SE¼ sec.23, T.29 N., R.24 W., Hennepin County, at lower St. Anthony Falls lock and dam in Minneapolis, at mile 853.3 upstream from Ohio River. (Discharge measurements made between Hennepin Avenue and Interstate Highway 94 bridges over the Mississippi River are included)	a19,700	2-12-12	2,380	9- 8-65	5,350
				6-27-38	5,990	7-21-66	6,500
				6-28-38	5,560	7-24-74	5,580
				8- 4-39	2,670	9-26-74	3,250
				8-30-39	2,780	8-19-75	5,200
				11-13-56	5,620	6-29-76	3,070
				7-23-64	2,510		
*05288950	Mississippi River at Ford Plant, at St. Paul, Minn.	Lat 44°54'57", long 93°11'59", in NE¼ sec.17, T.28 N., R.23 W., Ramsey County, at Ford Motor Company hydroelectric plant, 800 feet downstream from Ford Parkway bridge, 3.5 miles upstream from Minnesota River, and at mile 847.6 upstream from Ohio River.	a19,700	12-19-24	2,240	10-12-66	4,440
				12-20-24	1,940	8-21-67	3,460
				9-27-35	1,810	9-29-67	2,240
				6-27-38	5,990	11- 3-67	3,200
				8- 4-39	2,270	9-18-68	4,630
				8-30-39	2,980	9-30-69	3,130
				1- 5-43	5,160	11- 3-69	4,750
				2-12-45	5,800	7-21-70	4,250
				2-14-46	3,290	9- 9-70	1,700
				1-21-47	5,200	8- 3-73	5,430
				11-21-47	4,850	9-25-73	4,180
				10-13-48	3,030	7-15-74	6,390
				2-13-50	3,820	8-20-74	5,900
				12- 7-53	3,950	9-23-74	4,000
				11-13-56	5,760	8-21-75	6,520
				10-28-58	3,090	9-22-75	5,740
				7-31-61	2,070	11- 6-75	6,550
				10-17-63	2,530	5-21-76	3,800
				11-19-64	5,170	6-30-76	3,270
				9- 9-65	5,210	7-12-76	1,600
				9-23-66	5,040	9-18-76	892
							335
							340
							385
							300
							345
							385
							400
Minnehaha Creek basin							
05289500	Minnehaha Creek at Minnetonka Mills, Minn.	Lat 44°56'30", long 93°26'45", near center of E½ sec.15, T.117 N., R.22 W., Hennepin County, at bridge on County Highway 16 at Minnetonka Mills, 2.2 miles downstream from Lake Minnetonka outlet, and 2.9 miles northwest of Hopkins. (Site of continuous-record gaging station, 1953-64)	130	6- 3-42	48.3	10-13-42	63.6
				6-15-42	47.5	11-23-42	3.16
				8- 4-42	31.6		
Minnesota River basin							
*05290020	Little Minnesota River at Browns Valley, Minn.	Lat 45°35'27", long 96°50'01", in S½ sec.33, T.125 N., R.49 W., Traverse County, at bridge on County Highway 4 at Browns Valley.	a450	4-12-39	34.8	10-13-39	b.10
				5- 2-39	13.0	10-27-39	b.40
				6-15-39	94.5	12-29-39	b.12
				7-27-39	2.04	2- 2-40	0
				8-11-39	1.25	3- 9-40	b.10
				9-15-39	0	4-13-47	3.02
*05291050	Whetstone River at Big Stone City, S. Dak.	Lat 45°17'10", long 96°27'10", in SE¼ sec.17, T.121 N., R.46 W., Grant County, downstream from diversion, and at Big Stone City.	a400	7-25-09	14.2	10- 3-45	7.73
				8-16-09	9.70	11-17-45	11.0
				9-18-09	5.00	1-29-46	1.51
				3-28-44	3.51	3-28-46	19.0
				4-15-44	10.6	6-24-46	.18
				5- 5-44	18.5	6-10-47	14.7
				5-25-44	1.78	3-30-48	19.3
				3-21-45	4.83	5-17-48	49.7
				5-14-45	.40	4- 5-49	10.2
				8- 2-45	0	11-21-53	.02
				9-10-45	1.99		
05292000	Minnesota River at Ortonville, Minn.	Lat 45°17'44", long 96°26'38", in NE¼ sec.16, T.121 N., R.46 W., Big Stone County, downstream from Big Stone Lake outlet at Ortonville. (Site of continuous-record gaging station since 1938)	a1,160	5-27-37	444	8- 9-37	58.2
				6-22-37	222	9-22-37	27.9
				7-14-37	12.4		

\* High-flow measurements are also available in Geological Survey files.  
a Approximately.  
b Estimated.

Table 2.--Low-flow measurements at partial-record stations.

Station No.	Station Name	Location	Drainage Area (mi <sup>2</sup> )	Date	Discharge (ft <sup>3</sup> /s)	Measurements		Date	Discharge (ft <sup>3</sup> /s)	Specific Conductance (micromhos/cm at 25°C)
						Specific Conductance (micromhos/cm at 25°C)				
Minnesota River basin--Continued										
*05292050	Minnesota River near Ortonville, Minn.	Lat 45°15'37", long 96°24'35", in NE½SE¼ sec.27, T.121 N., R.46 W., Big Stone County, at bridge on County Highway 17, 3.9 miles southeast of Ortonville.	a1,170	5-24-44 10-19-44 11-25-44 12-19-44 3-21-45 5-14-45	457 7.24 34.0 62.8 452 98.2			8- 1-45 10- 3-45 3-28-47 8-12-47 7-29-48	151 10.4 230 36.9 34.8	
05292400	Stony Run at Odessa, Minn.	Lat 45°16'09", long 96°20'36", on line between secs.20 and 29, T.121 N., R.45 W., Big Stone County, at culvert on U.S. Highway 75, 0.8 mile northwest of Odessa, and 1 mile upstream from mouth.	125	8-28-63 9-24-63 10-23-63 11-20-63 5-15-64	1.21 1.75 1.12 .89 4.02			5-19-70 8-28-73 8-12-74 9-29-75 8-19-76	3.99 .78 1.65 .52 .06	625 900 810
05292500	Minnesota River near Odessa, Minn.	Lat 45°15'22", long 96°20'20", in SW¼SW¼ sec.29, T.121 N., R.45 W., Big Stone County, at bridge on county road, 0.6 mile southwest of Odessa, and 5.0 miles upstream from Yellow Bank River. (Site of continuous-record gaging station, 1909-12, 1944-63)	a1,340	5-24-44 8-21-44 9- 4-44 7-10-63	438 55.6 43.7 52.0			4- 5-65 8- 2-67 5- 1-68	96.9 40.0 19.2	
05292900	South Fork Yellow Bank River near Bellingham, Minn.	Lat 45°10'31", long 96°21'14", in NE½SE¼ sec.25, T.120 N., R.46 W., Lac qui Parle County, at bridge on county road, 0.7 mile upstream from North Fork, and 4.4 miles northwest of Bellingham.	199	9-24-63 10-23-63 11-20-63 6- 2-64 5-19-70	7.67 5.66 5.59 4.44 20.4		1,000	8-28-73 8-12-74 9-29-75 8-19-76	1.03 3.33 0 0	975 725
05293003	Lac qui Parle County ditch No. 13 near Bellingham, Minn.	Lat 45°11'21", long 96°14'21", near center of sec.24, T.120 N., R.45 W., Lac qui Parle County, at bridge on county road, 3 miles upstream from mouth, and 4 miles northeast of Bellingham.	46.0	9-26-63 10-31-63 6- 2-64 5-19-70	2.39 1.10 .90 2.54		2,600	8-28-73 8-12-74 9-29-75 8-19-76	1.21 .89 .49 .15	1,540 1,100
05293006	Five Mile Creek near Correll, Minn.	Lat 45°13'21", long 96°06'56", in NE½NW¼ sec.12, T.120 N., R.44 W., Big Stone County, at culvert on State Highway 7, 2.3 miles east of Correll, and 3.5 miles upstream from mouth.	85.3	9-27-63 10-22-63 11-19-63 6- 3-64 5-19-70	2.68 2.58 2.24 2.19 3.39		1,100	8-28-73 8-12-74 9-25-75 8-19-76	2.72 1.60 .88 .39	1,080 875
05293370	Pomme de Terre River near Elbow Lake, Minn.	Lat 45°59'06", long 95°53'37", in NE½SE¼ sec.13, T.129 N., R.42 W., Grant County, at bridge on county road, 1 mile downstream from Pomme de Terre Lake, and 4 miles east of Elbow Lake.	a334	9-24-63 10-24-63 11-22-63 5-19-64 8-11-64 9-12-64	4.77 10.4 15.4 86.5 1.61 9.30			10-27-64 8-25-70 8-31-73 8- 8-74 9-30-75 8-18-76	1.26 .13 .53 10.3 15.1 b.01	525
05293600	Mud Creek near Morris, Minn.	Lat 45°32'26", long 95°54'44", on line between secs.22 and 23, T.124 N., R.42 W., Stevens County, at culvert on U.S. Highway 59, 1 mile upstream from mouth, and 3 miles south of Morris.	a137	9-25-63 10-22-63 11-21-63 5-19-64 8-11-64 9-10-64 10- 9-64	.37 .64 .41 1.87 .10 .32 .07			11-17-64 9-23-69 8-26-70 9- 4-73 8- 8-74 9-30-75 8-19-76	.09 .17 .11 .15 .07 .07 .02	2,100 1,640 1,625
05294000	Pomme de Terre River near Appleton, Minn.	Lat 45°14'22", long 95°59'06", in NW¼NE¼ sec.1, T.120 N., R.43 W., Swift County, at bridge on County Highway 54, 3 miles northeast of Appleton, and 12 miles upstream from mouth. (Site of continuous-record gaging station, 1931-52; at site 4 miles downstream since 1953)	a885	8-11-64	13.6			11-18-64	20.5	

\* High-flow measurements are also available in Geological Survey files.

a Approximately.

b Estimated.

Table 2.--Low-flow measurements at partial-record stations.

Station No.	Station Name	Location	Drainage Area (mi <sup>2</sup> )	Date	Discharge (ft <sup>3</sup> /s)	Measurements		Date	Discharge (ft <sup>3</sup> /s)	Specific Conductance (micromhos/cm at 25°C)
						Specific Conductance (micromhos/cm at 25°C)				
Minnesota River basin--Continued										
05294500	Emily Creek near Louisburg, Minn.	Lat 45°05'38", long 96°00'02", in NE¼ sec.26, T.119 N., R.43 W., Lac qui Parle County, at twin culverts on county road, 1 mile upstream from mouth, and 9.7 miles southeast of Louisburg.	34.4	9-24-63 10-30-63 5-14-64 5-20-70	2.81 1.80 3.92 1.97		1,600	8-28-73 8-12-74 9-29-75 8-19-76	2.04 2.18 1.19 .82	1,240 950
*05298500	Lac qui Parle River near Canby, Minn.	Lat 44°47'25", long 96°09'04", on line between secs.3 and 10, T.115 N., R.44 W., Yellow Medicine County, at bridge on State Highway 67, 0.5 mile upstream from Lazarus Creek, and 8 miles northeast of Canby.	a180	9-23-63 9-26-63 11- 1-63 6- 3-64 7- 7-64 8- 5-64 9- 3-64 10- 6-64 11- 5-64	3.57 15.3 2.51 4.12 0 0 0 0 0			7-13-65 8- 5-65 8-17-65 10- 7-65 11- 6-65 9-25-69 5-21-70 8-28-73 8-12-74	10.3 0 0 2.35 b.43 0 18.2 0 0	1,000
*05299600	Lazarus Creek near Canby, Minn.	Lat 44°49'16", long 96°11'43", on line between secs.29 and 30, T.116 N., R.44 W., Lac qui Parle County, at bridge on U.S. Highway 75, 8.5 miles northeast of Canby.	a120	6- 3-64 7- 7-64 8- 5-64 9- 3-64 10- 6-64 11- 6-64 7-13-65 8- 5-65	6.81 4.75 .23 .51 0 .56 11.7 2.87			8-17-65 10- 7-65 11- 6-65 5-21-70 8-28-73 8-12-74 8-18-75 10- 2-75	4.79 22.3 6.70 14.5 .54 2.03 .09 0	1,410 1,000 1,450
*05299800	West Branch Lac qui Parle River at Dawson, Minn.	Lat 44°55'47", long 96°03'01", in SE¼ sec.21, T.117 N., R.43 W., Lac qui Parle County, at dam, about 400 feet downstream from railroad and highway bridge in Dawson.	a485	9-26-63 10-31-63 6- 2-64 7- 7-64 8- 6-64 9- 3-64 10- 6-64 11- 6-64 7-13-65 8- 4-65	3.87 4.17 11.0 1.13 1.40 2.79 0 1.79 45.2 6.40			8-17-65 10- 6-65 11- 6-65 4- 5-68 5- 2-68 5-21-70 8-28-73 8-13-74 8-18-75 10- 2-75	3.87 55.7 15.3 0 30.1 38.5 .82 4.71 0 0	1,190 1,180 1,250
05301000	Minnesota River near Lac qui Parle, Minn.	Lat 45°01'17", long 95°52'05", in NW¼ sec.24, T.118 N., R.42 W., Chippewa County, at bridge on County Highway 33, at Lac qui Parle Lake outlet, 2.4 miles northeast of Lac qui Parle. (Site of continuous-record gaging station since 1942)	a4,050	12-30-33	13.6					
05301802	Chippewa River near Evansville, Minn.	Lat 45°56'01", long 95°45'37", in SE¼SW¼ sec.31, T.129 N., R.40 W., Douglas County, at bridge on County Highway 54, downstream from Albert Lake outlet, 6 miles southwest of Evansville.	--	10-23-43 5- 3-44 10-10-44	5.64 67.9 .77			6- 1-45 8- 1-45	28.3 b.40	
*05301950	Chippewa River near Cyrus, Minn.	Lat 45°37'54", long 95°44'16", on line between secs.17 and 18, T.125 N., R.40 W., Pope County, at bridge on County Highway 3, 1.2 miles north of Cyrus.	a400	9-25-63 10-22-63 11-21-63 5-20-64 9-10-64 10- 9-64 11-17-64 8-11-65	9.43 12.4 1.92 90.2 26.2 0 .81 64.3			8-31-65 10- 4-65 11- 1-65 9-23-69 8-26-70 9- 4-73 9-11-74	41.2 82.7 87.4 .57 0 5.72 .33	800 760 725
05302500	Little Chippewa River near Starbuck, Minn.	Lat 45°36'52", long 95°37'12", on line between secs.19 and 30, T.125 N., R.39 W., Pope County, at bridge on State Highway 28, 4.4 miles west of Starbuck. (Site of continuous-record gaging station, 1938-39)	a111	4-13-40	12.8			4-18-40	5.38	

\* High-flow measurements are also available in Geological Survey files.

a Approximately.

b Estimated.

Table 2.--Low-flow measurements at partial-record stations.

Station No.	Station Name	Location	Drainage Area (mi <sup>2</sup> )	Date	Discharge (ft <sup>3</sup> /s)	Measurements		Discharge (ft <sup>3</sup> /s)	Specific Conductance (micromhos/cm at 25°C)
						Specific Conductance (micromhos/cm at 25°C)	Date		
Minnesota River basin--Continued									
05302700	Little Chippewa River near Cyrus, Minn.	Lat 45°35'46", long 95°40'32", on line between secs.34 and 35, T.125 N., R.40 W., Pope County, at bridge on County Highway 73, 3.2 miles south-east of Cyrus.	--	9-23-69 8-26-70	.02 .03	1,200	9- 4-73 7-30-74	0 0	
05302980	Lake Emily outlet near Hancock, Minn.	Lat 45°30'56", long 95°41'45", in S½S½ sec.28, T.124 N., R.40 W., Pope County, at bridge on county road, 5 miles east of Hancock.	--	9-23-69 8-26-70 9- 4-73	9.41 2.63 15.4	950 670	7-30-74 8-19-76	4.78 0	565
05303280	East Branch Chippewa River at Terrace, Minn.	Lat 45°30'34", long 95°19'24", in S½NE¼ sec.33, T.124 N., R.37 W., Pope County, at bridge on State Highway 104, at west edge of Terrace.	94.4	12- 5-69 6- 9-70 8-26-70 5-12-71 11-13-72	11.5 27.5 3.01 33.3 33.6	520 395 470 430	9- 4-73 11- 2-73 7-31-74 8-18-76	13.7 15.1 6.20 1.50	520 580 390
05303350	East Branch Chippewa River near Swift Falls, Minn.	Lat 45°22'35", long 95°24'51", in S½NW¼ sec.14, T.122 N., R.38 W., Swift County, at bridge on County Highway 28, 1.7 miles southeast of Swift Falls.	200	9-24-69 8-26-70 9- 4-73	12.4 5.99 29.3	520 380	7-31-74 8-18-76	29.1 1.22	380
05303400	Mud Creek near Swift Falls, Minn.	Lat 45°21'54", long 95°22'34", in S½NW¼ sec.19, T.122 N., R.37 W., Swift County, at bridge on County Highway 87, 3.4 miles southeast of Swift Falls.	114	9-24-69 8-26-70 9- 4-73	13.3 1.87 4.85	750 600	7-31-74 8-18-76	.66 .84	740
05303430	Mud Creek near Benson, Minn.	Lat 45°18'46", long 95°32'29", on line between secs.2 and 3, T.121 N., R.39 W., Swift County, at bridge on county road, 2.9 miles east of Benson.	85.0	9-24-69 8-26-70 9- 4-73	4.99 1.92 4.02	800 700	7-31-74 8-19-76	1.73 .56	545
05303470	East Branch Chippewa River near Benson, Minn.	Lat 45°20'53", long 95°35'37", in SE¼NW¼ sec.29, T.122 N., R.39 W., Swift County, at bridge on county road, 2.2 miles north of Benson.	a520	10-21-63 11-21-63 5-20-64 8-12-64 9-10-64 10-12-64 11-16-64 6- 9-65 7- 7-65	45.4 25.4 107 2.78 16.5 6.18 14.1 410 84.8		8-11-65 8-31-65 10- 4-65 11- 1-65 9-24-69 8-26-70 9- 4-73 8-28-74 8-19-76	52.4 44.4 169 168 35.7 7.48 36.1 14.3 1.51	590 520 430
05304000	Shakopee Creek near Benson, Minn.	Lat 45°12'50", long 95°38'10", in SE¼ sec.11, T.120 N., R.40 W., Swift County, at bridge on county road, 1.5 miles upstream from mouth, and 7 miles southwest of Benson. (Site of continuous-record gaging station, 1949-54)	a352	10-13-54 11-10-54 12- 7-54 1-11-55	3.38 5.93 1.67 0		9-24-69 8-26-70 9- 4-73 8- 1-74	8.04 1.84 14.7 5.00	810 725 600
05304800	Dry Weather Creek near Montevideo, Minn.	Lat 45°03'00", long 95°46'00", in NE¼NW¼ sec.11, T.118 N., R.41 W., Chippewa County, at bridge on county road, 7.4 miles northwest of Montevideo.	105	9-24-69 5-20-70 8-27-70 9- 4-73	6.38 5.44 .33 1.07	1,000 1,700 1,500	8- 1-74 10- 2-75 8-18-76	.21 .12 0	1,200

a Approximately.

Table 2.--Low-flow measurements at partial-record stations.

Station No.	Station Name	Location	Drainage Area (mi²)	Date	Discharge (ft³/s)	Measurements		Date	Discharge (ft³/s)	Specific Conductance (micromhos/cm at 25°C)
						Specific Conductance (micromhos/cm at 25°C)				
Minnesota River basin--Continued										
05305000	Chippewa River near Watson, Minn.	Lat 45°01'20", long 95°47'28", on line between secs.15 and 22, T.118 N., R.41 W., Chippewa County, at culvert on County Highway 13, 1.5 miles northeast of Watson, 2.4 miles downstream from Dry Weather Creek, and 10 miles upstream from mouth. (Site of continuous-record gaging station, 1910-17, 1931-36)	a2,050	10-28-36	7.92			8-19-54	57.7	
				11-13-36	7.14			9-14-54	73.4	
				1-18-37	0			11-10-54	70.4	
				3-23-43	112			12- 7-54	41.6	
				4-15-43	162			1-11-55	28.2	
				4-27-43	141			2- 4-55	16.6	
				3-23-44	112			3-24-55	94.4	
				4-10-44	153			4- 8-55	355	
				4-17-44	146			5- 8-55	245	
				5-23-44	154			6- 6-55	73.2	
				11-23-44	57.3			8- 9-55	174	
				12-17-44	25.5			9-13-55	19.5	
				1-28-45	11.9			10-10-55	42.2	
				3-19-45	150			11- 7-55	24.9	
				5-11-45	139			12-14-55	10.7	
				6-13-45	110			1-18-56	6.22	
				7-31-45	89.1			2-22-56	8.35	
				9- 6-45	24.4			3-27-56	244	
				10- 1-45	27.4			5- 3-56	210	
				11-16-45	27.4			5-29-56	127	
				4- 2-46	165			6-26-56	153	
				5-16-46	134			7-24-56	86.4	
				7-25-46	124			8-22-56	192	
				9-25-46	51.1			9-17-56	69.0	
				11- 1-46	120			10-16-56	28.1	
				12- 4-46	101			11- 8-56	149	
				1-10-47	43.6			12- 6-56	53.4	
				2-13-47	29.9			1-12-57	9.92	
				4- 4-47	119			2-16-57	4.54	
				4-11-47	135			5- 7-57	311	
				4-23-47	158			12-19-57	271	
				6-14-47	183			1-14-58	153	
				7-16-47	117			3-18-58	395	
				8-13-47	96.3			7- 6-61	27.3	
				10-15-47	36.2			8- 2-61	15.9	
				3-25-48	260			10- 4-61	28.1	
				4- 1-48	257			10-30-61	27.8	
				4- 8-48	115			12- 5-61	17.0	
				5-20-48	91.2			1-11-62	7.15	
				8-27-48	36.2			2-13-62	3.89	
				9-24-48	21.6			4- 8-64	366	
				4- 3-49	165			3-29-66	231	
				4- 7-49	136			1-17-69	15.0	970
				4-28-49	107			4- 7-69	408	
				4-11-50	300			9-17-69	24.1	
				4-19-50	72.5			10-28-69	9.20	650
				5-23-50	110			11-25-69	75.9	920
				7- 8-50	36.5			4- 3-70	125	
				4-26-51	156			8-19-70	47.1	
				2-10-54	50.8			9-16-70	18.0	940
				3-11-54	222			10-21-70	70.3	
				4-20-54	343			8-11-71	98.5	
				5-19-54	414			9-15-71	48.0	
				7-22-54	86.3					
05305200	Spring Creek near Montevideo, Minn.	Lat 44°58'41", long 95°42'57", in NW¼NW¼ sec.5, T.117 N., R.40 W., Chippewa County, at culvert on State Highway 29, 1.2 miles upstream from mouth, and 2.0 miles north of Montevideo. (Annual maximums available since 1959)	16.0	3-14-61	.93			6- 3-71	4.99	
				5-26-61	1.62			7-12-71	5.25	
				4-17-62	11.3			9-16-71	1.03	
				9-25-62	.78			10-19-71	1.88	
				5- 4-64	3.03			11-23-71	4.56	
				6- 1-64	1.03			4- 5-72	9.56	
				7- 7-64	.76			5- 4-72	9.73	
				9- 2-64	.42			6-19-72	6.20	
				6-19-67	10.6			7-18-72	2.90	
				7-11-67	9.65			8-18-72	1.53	
				7-17-67	2.15			11- 3-72	6.66	
				9- 7-67	.68			3- 9-73	4.31	
				10- 5-67	.73			6-29-73	1.06	
				11- 1-67	1.02			9- 5-73	.77	1,010
				4- 8-68	4.09			10-16-73	.87	1,125
				10-14-68	.35			11-16-73	.62	1,010
				9-24-69	1.31	1,225		3- 6-74	7.65	410
				5-20-70	2.07	1,300		8- 1-74	.31	800
				8-27-70	.44			10-31-74	.60	850
				10-20-70	2.00	1,650		10- 3-75	.24	875
				11-18-70	7.25			9-28-76	0	
				4-28-71	4.92					

a Approximately.

Table 2.--Low-flow measurements at partial-record station.

Station No.	Station Name	Location	Drainage Area (mi <sup>2</sup> )	Date	Discharge (ft <sup>3</sup> /s)	Measurements		Date	Discharge (ft <sup>3</sup> /s)	Specific Conductance (micromhos/cm at 25°C)
						Specific Conductance (micromhos/cm at 25°C)				
Minnesota River basin--Continued										
05311100	Palmer Creek near Granite Falls, Minn.	Lat 44°50'54", long 95°33'47", in SW¼SW¼ sec.16, T.116 N., R.39 W., Chippewa County, at bridge on county road, 2.5 miles north of Granite Falls.	34.2	9-22-69	2.06			10- 3-75	.63	700
				5-21-70	3.41	1,350		8-18-76	.03	
				8- 1-74	.41	750				
05311350	Yellow Medicine River near Minneota, Minn.	Lat 44°37'25", long 95°59'30", on line between secs.1 and 2, T.113 N., R.43 W., Lyon County, at bridge on County Highway 3, 3 miles upstream from South Branch Yellow Medicine River, and 4.4 miles north of Minneota.	189	9-23-63	7.75			10- 7-65	5.13	
				10- 2-63	8.93			11- 6-65	1.82	
				6- 3-64	5.74			3-21-66	84.9	
				7- 8-64	2.20			8-26-66	1.15	
				8- 6-64	.81			9-21-66	.53	
				9- 4-64	.44			9-23-69	6.75	875
				10- 6-64	.25			8-29-73	.27	890
				11- 5-64	1.61			8-28-74	.26	800
				7-12-65	6.78			8-18-75	.20	
				8-16-65	.75			10- 2-75	.34	775
	9- 9-65	.40			8-18-76	0				
05311500	Yellow Medicine River near Cottonwood, Minn.	Lat 44°38'45", long 95°48'35", in SE¼SE¼ sec.29, T.114 N., R.41 W., Yellow Medicine County, at bridge on U.S. Highway 59 at Normania, 5.4 miles southeast of Spring Creek, and 7 miles northwest of Cottonwood. (Site of continuous-record gaging station, 1945-46)	a465	3-26-45	49.2					
05313670	Hawk Creek near Clara City, Minn.	Lat 44°58'41", long 95°21'40", on line between sec.31, T.118 N., R.37 W., and sec. 6, T.117 N., R.37 W., Chippewa County, at bridge on county road, 1.5 miles north of Clara City.	197	9-23-69	5.24	1,500		10- 3-75	1.17	650
				8- 1-74	1.00	680		8-18-76	.16	
05314000	Chetomba Creek near Maynard, Minn.	Lat 44°52'30", long 95°26'30", in NW¼NW¼ sec.9, T.116 N., R.38 W., Renville County, at bridge on county road, 2.8 miles southeast of Maynard. (Site of continuous-record gaging station, 1949-51)	a200	11- 5-51	4.25			7-18-67	0	
				9-14-66	0			9- 3-67	0	
				10-11-66	0			9- 4-67	0	
				11-10-66	0			10-31-67	0	
				5-10-67	.05			4- 1-68	0	
				6-22-67	.91			8- 8-68	0	
				6-26-67	0			9-13-68	0	
05314520	Spring Creek near Maynard, Minn.	Lat 44°51'16", long 95°26'30", in SW¼NW¼ sec.16, T.116 N., R.38 W., Renville County, at culvert on farm road, 75 feet upstream from mouth, and 3.5 miles southeast of Maynard.	162	9-23-69	3.01	1,010		10- 3-75	1.27	
				5-22-70	7.21	1,200		8-18-76	<.01	
				8-14-74	17.2	1,000				
05314530	Hawk Creek near Granite Falls, Minn.	Lat 44°49'58", long 95°26'01", in SE¼SW¼ sec.21, T.116 N., R.38 W., Renville County, at bridge on county road, 1.5 miles downstream from Spring Creek, and 5 miles northeast of Granite Falls. (Daily discharges available, March-November, 1968)	a486	3-13-68	17.0			9-23-69	8.14	1,030
				4-10-68	36.9			5-27-70	24.4	1,120
				5-10-68	13.9			8-15-74	73.4	800
				7-22-68	44.3			10- 3-75	3.08	
				8-13-68	5.86			8-18-76	.16	
				9-17-68	4.34					
05314600	Boiling Spring Creek near Belview, Minn.	Lat 44°40'02", long 95°19'10", on line between secs.20 and 21, T.114 N., R.37 W., Redwood County, at bridge on county road, 1 mile upstream from mouth and 3.6 miles north of Belview.	29.1	9-23-69	.62	1,450		10- 2-75	.43	
				8-29-73	.78	1,390		8-20-76	.23	1,500
				8-14-74	1.38	1,075				
05314650	Echo Creek near Belview, Minn.	Lat 44°38'02", long 95°16'44", on line between secs.34 and 35, T.114 N., R.37 W., Redwood County, at bridge on county road, 2.2 miles northeast of Belview.	13.8	9-23-69	0			8-14-74	.04	950
				8-30-73	0			8-20-76	0	

\* High-flow measurements are also available in Geological Survey files.

&lt; Less than.

a Approximately.

Table 2.--Low-flow measurements at partial-record stations.

Station No.	Station Name	Location	Drainage Area (mi <sup>2</sup> )	Date	Discharge (ft <sup>3</sup> /s)	Measurements		Discharge (ft <sup>3</sup> /s)	Specific Conductance (micromhos/cm at 25°C)
						Specific Conductance (micromhos/cm at 25°C)	Date		
Minnesota River basin--Continued									
05314700	Sacred Heart Creek near Delhi, Minn.	Lat 44°40'14", long 95°14'43", in NW¼NE¼ sec.24, T.114 N., R.37 W., Renville County, at bridge on County Highway 15, 4.8 miles northwest of Delhi.	42.7	9-23-69 8-14-74	.30 .79	1,300 750	10- 3-75 8-20-76	.12 .01	1,400
05314750	Middle Creek near Delhi, Minn.	Lat 44°37'25", long 95°09'37", in SE¼NE¼ sec.3, T.113 N., R.36 W., Renville County, at bridge on County Highway 15, 0.3 mile upstream from mouth, and 2.8 miles northeast of Delhi.	13.1	9-23-69 8-14-74	.19 .31	900 900	10- 3-75 8-20-76	.18 .01	1,000
05314800	Smith Creek near North Redwood, Minn.	Lat 44°36'21", long 95°07'10", in NE¼SE¼ sec.12, T.113 N., R.36 W., Renville County, at bridge on County Highway 15, 0.7 mile upstream from mouth, and 3 miles northwest of North Redwood.	14.6	9-23-69 8-14-74	.70 .77	920 900	10- 3-75 8-20-76	.56 .32	975
*05314950	Redwood River near Russell, Minn.	Lat 44°17'52", long 95°58'25", on line between secs.25 and 36, T.110 N., R.43 W., Lyon County, at bridge on county road, 1.2 miles southwest of Russell.	131	11- 3-65 6-21-66 7-13-66 9-14-66 10-11-66 11-10-66 5-11-67 7-18-67	1.22 .29 14.8 1.88 .39 .76 5.48 28.6		8-11-67 9- 8-67 10-12-67 9-23-69 8-29-73 8-28-74 8-18-76	.49 .08 .62 6.82 .11 .02 0	1,000 1,900 1,400
05314970	Coon Creek near Russell, Minn.	Lat 44°19'22", long 95°58'42", on line between secs.23 and 24, T.110 N., R.43 W., Lyon County, at bridge on county road, 1.3 miles west of Russell.	91.0	11- 3-65 9-14-66 10-11-66 11-10-66 5-11-67 6-26-67 7-12-67	.08 0 0 0 4.11 12.9 3.84		8-11-67 9- 8-67 10-12-67 9-23-69 8-29-73 8-28-74 0	.15 0 0 1.96 0 0 0	775
05315300	Threemile Creek near Ghent, Minn.	Lat 44°31'30", long 95°50'12", on line between sec.7, T.112 N., R.41 W., and sec. 12, T.112 N., R.42 W., Lyon County, at bridge on County Highway 65, 2.9 miles northeast of Ghent.	73.4	9-23-69 8-29-73 7-23-74	11.1 .95 1.92	1,380 1,580 1,400	8-18-75 10- 2-75 8-18-76	.69 1.34 .29	1,400 1,300
*05315400	Threemile Creek at Green Valley, Minn.	Lat 44°32'21", long 95°45'05", in NW¼NW¼ sec.2, T.112 N., R.41 W., Lyon County, at culvert on State Highway 23, 0.8 mile northeast of Green Valley.	--	8-26-58 10-30-58 12- 3-58 4-13-59 5-17-59 7- 9-59 7-11-59 8-12-59 9-10-59 10- 7-59 11- 4-59 4-27-60 6-10-60 7- 8-60 8- 4-60 9- 6-60 9-28-60	.25 1.56 .40 4.86 2.95 1.37 0 0 0 0 2.06 17.0 4.36 7.24 1.53 6.43 2.00		10-26-60 4-26-61 7- 8-61 8- 3-61 8-30-61 10- 6-61 11- 3-61 12- 7-61 1-17-62 2-15-62 8-30-62 9-26-62 10-25-62 5- 8-63 6- 5-63 9-23-69 7-23-74	1.33 10.6 3.06 5.26 0 6.01 3.95 .81 0 0 1.15 2.14 5.85 11.4 4.76 15.3 1.55	1,425 1,350

\* High-flow measurements are also available in Geological Survey files.

b Estimated.

Table 2.--Low-flow measurements at partial-record stations.

Station No.	Station Name	Location	Drainage Area (mi <sup>2</sup> )	Date	Discharge (ft <sup>3</sup> /s)	Measurements		Discharge (ft <sup>3</sup> /s)	Specific Conductance (micromhos/cm at 25°C)
						Specific Conductance (micromhos/cm at 25°C)	Date		
Minnesota River basin--Continued									
*05316300	Clear Creek at Seaforth, Minn.	Lat 44°28'48", long 95°19'22", on line between secs.29 and 32, T.112 N., R.37 W., Redwood County, at bridge on county road, 0.8 mile southeast of Seaforth, and 1 mile upstream from mouth.	--	8-25-58	.64		4-26-61	6.39	
				10-30-58	.34		5-27-61	20.9	
				12- 4-58	0		7- 8-61	5.68	
				4-22-59	.67		8- 7-61	9.65	
				5-18-59	.48		8-30-61	1.68	
				6-10-59	.28		10-12-61	2.10	
				7-13-59	.12		11- 7-61	.97	
				8-12-59	0		12- 8-61	1.14	
				9-10-59	b.003		1-17-62	0	
				10- 6-59	.30		2-15-62	0	
				5- 6-60	7.40		8-29-62	3.74	
				6-13-60	3.85		9-26-62	2.81	
				8- 2-60	6.00		11- 2-62	3.57	
				9- 6-60	3.87		5- 7-63	7.66	
				9-28-60	9.16		9-22-69	1.39	1,300
				10-26-60	2.82		8-14-74	2.67	1,325
				05316540	Ramsey Creek near Redwood Falls, Minn.	Lat 44°33'08", long 95°08'49", in NE¼NW¼ sec.35, T.113 N., R.36 W., Redwood County, at bridge on County Highway 17, 1.5 miles upstream from mouth, and 1.8 miles northwest of Redwood Falls.	--	8-25-58	1.05
9-27-58	.74		8-30-61					.86	
4-22-59	.85		10-12-61					1.44	
5-18-59	.80		11- 6-61					1.68	
6-10-59	.10		12- 8-61					.50	
7-13-59	.44		1-16-62					0	
8-12-59	.06		2-15-62					0	
9-10-59	1.62		4-20-62					38.6	
10- 6-59	1.16		5-21-62					15.9	
5- 5-60	12.1		6-22-62					13.9	
6-14-60	4.78		7-25-62					24.6	
7-11-60	39.1		8-29-62					3.74	
8- 9-60	5.97		9-26-62					2.91	
9- 7-60	3.97		11- 2-62					6.85	
9-28-60	6.20		5- 7-63					10.3	
10-26-60	2.14		6- 4-63					40.6	
4-26-61	7.69		9-22-69					1.21	980
5-27-61	14.4		8-15-74	2.98	875				
7- 8-61	3.39								
05316570	Beaver Creek at Beaver Falls, Minn.	Lat 44°35'03", long 95°02'49", in NE¼NW¼ sec.22, T.113 N., R.35 W., Renville County, at bridge on County Highway 2, in Beaver Falls. (Annual maximums available since 1972)	194	11- 2-65	24.2		7-13-67	62.7	
				6-20-66	16.2		8-10-67	11.8	
				7-12-66	13.2		9- 7-67	7.94	
				9-14-66	5.96		10-11-67	7.08	
				10-11-66	4.96		9-23-69	4.15	
				11- 9-66	7.99		10- 3-75	6.23	
				5-10-67	17.7		8-20-76	1.61	975
05316590	Birch Coulee Creek near Morton, Minn.	Lat 44°32'30", long 94°57'12", at Common Corner of secs.32 and 33, T.113 N., R.34 W., and sec.5, T.112 N., R.34 W., Renville County, at bridge on State Highway 19, 1.6 miles southeast of Morton.	68.4	9-23-69	.53	990	10- 3-75	.49	
				8-14-74	1.10	900	8-20-76	.10	850
05316630	Wabasha Creek near Morton, Minn.	Lat 44°29'45", long 94°54'23", in NE¼NE¼ sec.22, T.112 N., R.34 W., Redwood County, at bridge on county road, 5.4 miles southeast of Morton.	73.0	9-22-69	.59	910	10- 2-75	.27	
				8-30-73	.67	1,000	8-18-76	.20	850
				8-14-74	.68	1,025			
05316680	Ridgely Creek at Fort Ridgely State Memorial Park, near St. George, Minn.	Lat 44°26'49", long 94°43'22", in NW¼SW¼ sec.5, T.111 N., R.32 W., Nicollet County, at culvert on County Highway 29, 10 miles northwest of St. George.	70.4	9-23-69	.56	800	10- 2-75	.30	
				6-23-70	11.7		8-19-76	.15	800
				9- 3-74	.25	640			
*05316740	Little Rock Creek near Fairfax, Minn.	Lat 44°23'41", long 94°37'15", in NW¼NW¼ sec.30, T.111 N., R.31 W., Nicollet County, at bridge on County Highway 21, 0.7 mile upstream from mouth, and 10 miles southeast of Fairfax.	86.3	11- 2-65	2.35		7-13-67	30.1	
				6-20-66	2.98		8-10-67	0	
				7-12-66	.74		9- 7-67	1.56	
				9-13-66	.07		10-11-67	0	
				10-10-66	0		9-23-69	0	
				11- 9-66	5.12		6-23-70	13.3	
				5-10-67	8.55		9- 3-74	0	

\* High-flow measurements are also available in Geological Survey files.  
b Estimated.

Table 2.--Low-flow measurements at partial-record stations.

Station No.	Station Name	Location	Drainage Area (mi <sup>2</sup> )	Date	Discharge (ft <sup>3</sup> /s)	Measurements		Date	Discharge (ft <sup>3</sup> /s)	Specific Conductance (micromhos/cm at 25°C)
						Specific Conductance (micromhos/cm at 25°C)				
Minnesota River basin--Continued										
05316770	Minnesota River at New Ulm, Minn.	Lat 44°19'29", long 94°27'09", in NE¼NE¼ sec.20, T.110 N., R.30 W., Nicollet County, at bridge on U.S. Highway 14, at New Ulm, and 6.1 miles upstream from Cottonwood River. (Site of continuous-record gaging station since 1967)	9,530	7- 6-38	372			6-11-40	394	
				7-27-38	298			6-25-40	339	
				8-22-38	154			7-25-40	82.7	
				9-15-38	105			10- 1-40	54.6	
				11-22-38	45.3			11-19-40	72.5	
				12-20-38	42.1			12-11-40	71.6	
				1-24-39	41.4			1-24-41	88.4	
				2-14-39	25.7			2-28-41	90.4	
				3-14-39	209			3-18-41	824	
				6-12-39	102			5-21-41	837	
				7-11-39	643			6-21-41	782	
				8- 7-39	84.9			7-21-41	516	
				9-12-39	48.7			9- 3-41	79.9	
				11- 3-39	36.2			9-22-41	93.1	
				12- 4-39	36.1			10-22-41	90.0	
				12-26-39	35.9			11-17-41	132	
				1-30-40	14.8			12-13-41	102	
				3- 7-40	35.7			9-26-43	807	
				3-31-40	193			7-28-44	668	
				5-17-40	666			11-21-44	300	
05316840	Cottonwood River near Tracy, Minn.	Lat 44°20'41", long 95°36'50", on line between secs.11 and 12, T.110 N., R.40 W., Lyon County, at bridge on County Highway 11, 7.2 miles north of Tracy.	76.7	9- 4-68	1.51	1,550		7-23-74	1.48	1,240
				9-23-69	2.47	1,400		9-30-75	1.07	
				8-29-73	.03	1,520		8-18-76	0	
05316855	Meadow Creek near Tracy, Minn.	Lat 44°21'16", long 95°36'50", on line between secs.11 and 12, T.110 N., R.40 W., Lyon County, at bridge on County Highway 11, 7.9 miles north of Tracy.	97.7	9-23-69	0			7-23-74	.08	1,700
				8-29-73	0					
05316870	Plum Creek near Walnut Grove, Minn.	Lat 44°16'09", long 95°25'39", on line between secs.4 and 9, T.109 N., R.38 W., Redwood County, at bridge on county road, 3.8 miles northeast of Walnut Grove.	82.6	9-22-69	.76	1,300		7-23-74	b.005	
				8-29-73	0					
05316879	Pell Creek near Lamberton, Minn.	Lat 44°14'47", long 95°19'56", in SE¼NE¼ sec.18, T.109 N., R.37 W., Redwood County, at bridge on county road, 3 miles west of Lamberton.	51.5	9-22-69	.30	1,100		7-23-74	.25	1,150
				8-29-73	0					
*05316880	Cottonwood River near Lamberton, Minn.	Lat 44°15'17", long 95°18'40", in SE¼SE¼ sec.8, T.109 N., R.37 W., Redwood County, 500 feet upstream from county road, 0.5 mile downstream from Pell Creek, 2.2 miles upstream from dam, and 2.5 miles northwest of Lamberton.	a430	11- 3-65	7.67			4- 8-68	20.5	
				6-23-66	b.20			5-10-68	7.24	
				7-21-66	0			6-20-68	1.21	
				9-16-66	.72			7- 9-68	1.30	
				10-13-66	.35			8-16-68	23.6	
				5-13-67	44.1			9-20-68	31.1	
				7-20-67	20.5			9-22-69	4.00	1,125
				8-16-67	.85			8-29-73	.08	1,050
				9-11-67	.15			8-29-74	0	
				10-13-67	.19					
05316890	Dutch Charley Creek near Lamberton, Minn.	Lat 44°12'58", long 95°16'12", on line between secs.26 and 27, T.109 N., R.37 W., Redwood County, at bridge on County Highway 6, 1.2 miles south of Lamberton.	88.2	9-22-69	.65	1,225		7-24-74	.06	1,150
				8-29-73	0					
05316895	Highwater Creek near Lamberton, Minn.	Lat 44°12'36", long 95°14'45", on line between secs.25 and 36, T.109 N., R.37 W., Redwood County, at bridge on County Highway 15, 1.9 miles southeast of Lamberton.	108	9-22-69	3.18	1,200		9-29-75	.83	
				8-29-73	.60	1,660		8-19-76	.49	1,125
				7-24-74	.81	1,390				

\* High-flow measurements are also available in Geological Survey files.

a Approximately.

b Estimated.

Table 2.--Low-flow measurements at partial-record stations.

Station No.	Station Name	Location	Drainage Area (mi <sup>2</sup> )	Date	Discharge (ft <sup>3</sup> /s)	Measurements		Date	Discharge (ft <sup>3</sup> /s)	Specific Conductance (micromhos/cm at 25°C)
						Specific Conductance (micromhos/cm at 25°C)				
Minnesota River basin--Continued										
05316910	Dry Creek at Sanborn, Minn.	Lat 44°11'43", long 95°08'15", on line between sec.35, T.109 N., R.36 W., Redwood County and sec.2, T.108 N., R.36 W., Cottonwood County, at bridge on County Highway 41, at the southwest limits of Sanborn, and 1.5 miles upstream from mouth.	39.6	9-22-69 8-29-73 7-24-74	.61 .07 .13	940 840 740		9-29-75 8-19-76	.22 .02	700
05316940	Mound Creek near Springfield, Minn.	Lat 44°11'40", long 95°03'34", in NW¼NW¼ sec.4, T.108 N., R.35 W., Brown County, at bridge on County Highway 2, 0.9 mile upstream from mouth, and 5 miles southwest of Springfield.	53.0	9- 5-68 9-24-69 8-29-73	3.16 2.27 .61	740 730 775		7-24-74 10- 2-75 8-19-76	1.18 .82 .38	620  625
05316960	Coal Mine Creek near Springfield, Minn.	Lat 44°13'28", long 95°01'55", on line between secs.22 and 27, T.109 N., R.35 W., Brown County, at bridge on county road, 1.2 miles upstream from mouth, and 3 miles southwest of Springfield.	44.8	9- 5-68 9-24-69	1.37 .02	1,080 780		8-30-73 7-24-74	0 0	
*05316970	Cottonwood River at Leavenworth, Minn.	Lat 44°13'39", long 94°48'22", on line between secs.21 and 22, T.109 N., R.33 W., Brown County, at bridge on County Highway 8, 0.2 mile north of Leavenworth.	a850	11- 3-65 6-23-66 7-21-66 9-16-66 10-13-66 5-11-67 7-20-67 8-16-67 9-11-67 10-11-67 4- 8-68	64.4 39.6 11.4 13.2 5.36 122 64.5 8.35 5.66 5.82 48.6			5- 9-68 7- 9-68 8-16-68 9-20-68 9-24-69 6-24-70 8-29-73 8-29-74 9-29-75 8-19-76	31.4 8.51 162 131 18.8 270 3.64 2.83 3.65 .15	         920         600
*05316990	Sleepy Eye Creek near Cobden, Minn.	Lat 44°15'41", long 94°49'35", on line between secs.8 and 9, T.109 N., R.33 W., Brown County, at bridge on county road, 1.8 miles southeast of Cobden.	a290	11- 3-65 6-22-66 7-21-66 9-16-66 10-13-66 7-20-67 8-16-67 9-11-67 10-11-67 4- 8-68	13.4 13.1 5.40 7.31 5.58 15.0 7.19 9.17 7.87 19.0			5- 9-68 6- 7-68 7- 9-68 9-24-69 6-24-70 8-29-73 8-29-74 10- 2-75 8-19-76	17.4 6.89 8.84 6.23 28.2 3.25 2.23 2.50 1.41	         1,030         1,150
*05317200	Little Cottonwood River near Courtland, Minn.	Lat 44°14'47", long 94°20'19", in SW¼NE¼ sec.17, T.109 N., R.29 W., Blue Earth County, at bridge on State Highway 68, 0.7 mile upstream from mouth, and 1.5 miles south of Courtland. (Site of continuous-record gaging station since 1973)	a230	11- 2-65 6-24-66 7-22-66 9-13-66 10-10-66 11- 8-66 5-11-67 6-20-67 7-13-67 8- 8-67 9- 5-67	50.5 20.7 14.2 6.53 5.63 17.3 74.5 77.3 71.4 9.71 10.1			10-11-67 4-22-68 5-21-68 6-24-68 9- 9-68 11-13-68 9-22-69 6-24-70 8-30-73 9- 5-73	6.68 26.0 12.4 10.3 108 155 7.53 84.7 2.01 1.15	  <

\* High-flow measurements are also available in Geological Survey files.

a Approximately.

Table 2.--Low-flow measurements at partial-record stations.

Station No.	Station Name	Location	Drainage Area (mi <sup>2</sup> )	Date	Discharge (ft <sup>3</sup> /s)	Measurements		Date	Discharge (ft <sup>3</sup> /s)	Specific Conductance (micromhos/cm at 25°C)
						Specific Conductance (micromhos/cm at 25°C)				
Minnesota River basin--Continued										
05317500	Minnesota River at Judson, Minn.	Lat 44°12'00", long 94°11'36", in E½ sec.33, T.109 N., R.28 W., Blue Earth County, at bridge on county road, 0.2 mile northeast of Judson, and 11 miles upstream from Blue Earth River. (Site of continuous-record gaging station, 1938-50)	all,200	4-23-68 9- 9-68	1,160 480			7- 1-69	3,800	
*05317818	Blue Earth River near Blue Earth, Minn.	Lat 43°34'22", long 94°06'08", in SW¼SW¼ sec.5, T.101 N., R.27 W., Faribault County, at bridge on County Highway 4, 4.8 miles south of Blue Earth.	a310	4-18-68 5-24-68 7- 1-68 8- 8-68 9-11-68 11-20-68	6.39 12.4 229 73.7 6.30 160	900 760 700 772 850 900		7-30-69 8-27-69 9- 4-69 10-10-69 5-18-70 9-22-76	241 17.5 28.4 12.7 236 .34	825     675
05317830	Coon Creek near Blue Earth, Minn.	Lat 43°36'57", long 94°05'51", on line between secs.20 and 29, T.102 N., R.27 W., Faribault County, at bridge on county road, 0.5 mile upstream from mouth, and 1.8 miles south of Blue Earth.	96.6	9- 4-69 5-19-70	7.89 60.6	680 750		8-18-71 6-10-76	.39 2.10	
05317840	Badger Creek near Blue Earth, Minn.	Lat 43°38'26", long 94°08'16", in SW¼NE¼ sec.13, T.102 N., R.28 W., Faribault County, at bridge on county road, 1.2 miles upstream from mouth, and 1.2 miles west of Blue Earth.	80.6	9- 4-69 5-19-70	6.69 82.2	850 700		8-18-71 6-10-76	.27 .11	
05318120	East Branch Blue Earth River at Blue Earth, Minn.	Lat 43°38'58", long 94°06'10", in NW¼SW¼ sec.8, T.102 N., R.27 W., Faribault County, at bridge on U.S. Highway 169 in Blue Earth.	a285	9- 5-69 5-19-70	23.1 209	675 710		8-18-71 9-27-76	6.60 .05	
05318140	South Creek near Winnebago, Minn.	Lat 43°42'33", long 94°10'38", in NW¼SE¼ sec.22, T.103 N., R.28 W., Faribault County, at bridge on County Highway 5, 3.5 miles south of Winnebago.	106	9- 4-69 6-11-70	8.22 44.2	595		6-11-76	.42	
05318160	Lily Creek near Fairmont, Minn.	Lat 43°40'47", long 94°29'30", in NW¼SW¼ sec.31, T.103 N., R.30 W., Martin County, at culvert on Interstate 90, 1.5 miles upstream from mouth, and 2.3 miles northwest of Fairmont.	41.7	9- 3-69 5-20-70 8-19-71	b.50 47.7 0	705 675		10- 2-74 6-10-76	b.05 0	
*05318180	Center Creek near Huntley, Minn.	Lat 43°43'50", long 94°12'26", on line between secs.16 and 17, T.103 N., R.28 W., Faribault County, at bridge on county road, 1.5 miles east of Huntley, and 2 miles upstream from mouth.	a130	4-18-68 5-24-68 7- 1-68 8- 8-68 9-11-68	6.73 4.98 32.7 20.0 13.5	1,400 1,217 850 1,080 1,415		8-27-69 9- 4-69 10-10-69 6-11-70 6-11-76	10.4 11.3 6.60 64.8 2.25	960
05318200	Elm Creek near Trimont, Minn.	Lat 43°45'15", long 94°39'10", in SW¼NW¼ sec.2, T.103 N., R.32 W., Martin County, at bridge on county road, 3 miles east of Trimont.	128	9- 3-69 8-19-71	2.42 0	640		10- 2-74 6-10-76	0 0	
05318220	Cedar Creek near Trimont, Minn.	Lat 43°45'51", long 94°39'16", on line between secs.34 and 35, T.104 N., R.32 W., Martin County, at bridge on County Highway 123, 2 miles upstream from mouth, and 3 miles east of Trimont.	54.0	9- 3-69 5-20-70 8-19-71	2.45 18.8 0	650 700		9- 4-74 10- 2-74 6-10-76	.03 0 0	875

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a Approximately.

b Estimated.

Table 2.--Low-flow measurements at partial-record stations.

Station No.	Station Name	Location	Drainage Area (mi <sup>2</sup> )	Date	Discharge (ft <sup>3</sup> /s)	Measurements		Date	Discharge (ft <sup>3</sup> /s)	Specific Conductance (micromhos/cm at 25°C)
						Specific Conductance (micromhos/cm at 25°C)				
Minnesota River basin--Continued										
*05318250	Elm Creek near Winnebago, Minn.	Lat 43°45'02", long 94°12'32", in NE¼SE¼ sec.5, T.103 N., R.28 W., Faribault County, at bridge on county road, 1.5 miles upstream from mouth, and 2.5 miles southwest of Winnebago.	a260	4-18-68 5-24-68 7- 1-68 8- 7-68 9-11-68 11-20-68	2.37 1.75 21.6 20.4 3.85 120	1,090 1,014 650 552 780 850		7-30-69 8-27-69 9- 4-69 10-10-69 6-11-76	169 20.2 14.2 2.22 0	660
*05318700	Watonwan River at La Salle, Minn.	Lat 44°03'53", long 94°35'22", on line between secs.19 and 20, T.107 N., R.31 W., Watonwan County, at bridge on county road, 1 mile southwest of La Salle.	a210	4-17-68 5-22-68 7- 1-68 8-28-69 9- 5-69 10- 7-69	11.9 4.72 10.7 20.3 7.76 3.96	990 875 925 800		5-20-70 9- 3-74 10- 2-74 9-29-75 6- 8-76	44.6 .15 .25 .07 .83	800 650
*05318800	St. James Creek near La Salle, Minn.	Lat 44°03'04", long 94°33'27", on line between secs.21 and 28, T.107 N., R.31 W., Watonwan County, at bridge on County Highway 3, 100 feet downstream from Butterfield Creek, and 1.4 miles southeast of La Salle.	a115	4-12-68 5-22-68 7- 1-68 9-11-68 8-28-69 9- 4-69	5.90 5.42 20.4 35.3 9.40 5.55	1,900 1,565 1,000 1,000 600		10- 7-69 5-20-70 9- 3-74 10- 2-74 9-29-75 6- 8-76	4.04 34.5 1.64 2.53 1.85 1.88	900 875
05318900	South Fork Watonwan River near Ormsby, Minn.	Lat 43°53'03", long 94°41'09", in NW¼SE¼ sec.21, T.105 N., R.32 W., Watonwan County, at bridge on State Highway 4, 2.5 miles north of Ormsby.	110	9- 4-69 5-20-70 8-19-71	4.14 35.8 b.50	860 900		9- 4-74 10- 2-74 9-27-76	.06 .08 .06	600 690
*05319100	South Fork Watonwan River near Madelia, Minn.	Lat 44°02'33", long 94°27'42", in NE¼SW¼ sec.29, T.107 N., R.30 W., Watonwan County, at bridge on County Highway 116, 0.7 mile upstream from mouth, and 2.3 miles southwest of Madelia.	a185	4-17-68 5-22-68 7- 1-68 8- 7-68 9-11-68 8- 6-69 8-28-69	3.80 2.33 8.18 50.7 19.2 54.1 15.7	815 875 720 805 750		9- 5-69 10- 9-69 5-21-70 9- 3-74 10- 2-74 6- 9-76	8.36 1.86 64.5 1.36 .73 .52	800 900 700
05319490	Watonwan River above Garden City, Minn.	Lat 44°01'32", long 94°13'45", in NE¼SE¼ sec.31, T.107 N., R.28 W., Blue Earth County, at bridge on County Highway 20, 3.5 miles southwest of Garden City. (Annual maximums available since 1972)	a800	4-17-68 5-22-68 6-28-68 9-11-68 8-28-69 10- 8-69	32.4 28.5 132 162 71.7 24.1	970 941 700 750		6-28-73 3-13-74 4- 2-74 10- 2-74 6- 8-76	133 162 117 7.76 9.57	875 775 850
05319500	Watonwan River near Garden City, Minn.	Lat 44°02'45", long 94°11'38", in SW¼NE¼ sec.28, T.107 N., R.28 W., Blue Earth County, at bridge on County Highway 13, 1.5 miles west of Garden City. (Site of continuous-record gaging station, 1940-45, and since 1976)	a812	8-16-61	113			9- 5-69	69.8	800
05320000	Blue Earth River near Rapidan, Minn.	Lat 44°05'44", long 94°06'33", in SE¼SE¼ sec.6, T.107 N., R.27 W., Blue Earth County, 2 miles west of Rapidan, 3.5 miles downstream from Watonwan River, and 7.8 miles upstream from Le Sueur River. (Site of continuous-record gaging station 1909-10, 1939-45, and since 1949)	a2,430	7-18-12	262					
05320020	Le Sueur River near New Richland, Minn.	Lat 43°56'43", long 93°27'21", in SW¼NE¼ sec.34, T.106 N., R.22 W., Waseca County, at bridge on County Highway 56, 3.8 miles northeast of New Richland.	75.6	9- 3-69 8-18-71	1.88 .78	575		9-27-76	.02	420

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a Approximately.

b Estimated.

Table 2.--Low-flow measurements at partial-record stations.

Station No.	Station Name	Location	Drainage Area (mi <sup>2</sup> )	Date	Discharge (ft <sup>3</sup> /s)	Measurements		Date	Discharge (ft <sup>3</sup> /s)	Specific Conductance (micromhos/cm at 25°C)
						Specific Conductance (micromhos/cm at 25°C)				
Minnesota River basin--Continued										
05320040	Boot Creek near New Richland, Minn.	Lat 43°56'07", long 93°30'52", on line between sec.6, T.105 N., R.22 W., and sec. 31, T.106 N., R.22 W., Waseca County, at bridge on county road, 0.5 mile upstream from mouth, and 3 miles northwest of New Richland.	48.6	9- 3-69 8-18-71	1.08 .22	625		9-27-76	.04	420
05320060	Little Le Sueur River near Wilton, Minn.	Lat 44°00'06", long 93°30'32", in SE¼NE¼ sec.7, T.106 N., R.22 W., Waseca County, at bridge on County Highway 51, 0.3 mile upstream from mouth, and 1.5 miles southeast of Wilton.	23.9	9- 3-69 8-18-71	1.21 1.40	630		9-28-76	.06	650
*05320070	Le Sueur River at Wilton, Minn.	Lat 44°00'52", long 93°31'38", in NE¼SE¼ sec.1, T.106 N., R.23 W., Waseca County, at bridge on County Highway 4, 0.2 mile east of Wilton.	a155	4-18-68 5-27-68 9-12-68 6-24-69 8- 4-69	6.01 60.7 66.4 43.0 13.1	620 678 805		8-26-69 9- 3-69 10-15-69 9-23-76	3.99 4.97 5.92 0	625
*05320330	Cobb River near Good Thunder, Minn.	Lat 44°02'50", long 94°00'00", in SE¼NW¼ sec.30, T.107 N., R.26 W., Blue Earth County, at bridge on County Highway 16, 4.5 miles northeast of Good Thunder.	a305	4-17-68 5-23-68 8- 6-69 8-29-69	2.19 15.0 28.5 2.46	760 705		9- 5-69 10- 8-69 10- 1-74 9-22-76	6.94 .24 .26 0	695
05320480	Maple River near Rapidan, Minn.	Lat 44°03'54", long 94°01'32", on line between secs.13 and 24, T.107 N., R.27 W., Blue Earth County, at bridge on County Highway 35, 3 miles southeast of Rapidan. (Annual maximums available since 1972)	a310	4-17-68 5-23-68 9-10-68 11-22-68 8- 6-69 8-28-69 9- 5-69 10- 8-69	8.15 15.2 136 150 61.3 14.8 26.4 6.74	970 818 750 830		3-30-72 5- 9-72 11-14-73 7-17-74 10- 1-74 3-26-76 9-24-76	114 220 87.8 41.0 4.38 106 .66	600
*05326200	Judicial ditch No. 1A near New Sweden, Minn.	Lat 44°24'40", long 94°15'02", in NW¼NW¼ sec.19, T.111 N., R.28 W., Nicollet County, at bridge on County Highway 4, 1,000 feet upstream from Nicollet County ditch No. 9, 3 miles west of New Sweden and 9.5 miles upstream from mouth.	--	10- 7-63 12- 9-63 2-24-64 8-10-64 12- 7-64 1- 8-65 10-10-66	.78 .02 .32 .16 .06 .01 .36			1-10-67 2-14-67 9- 6-67 10-11-67 11-13-67 12-11-67 7-11-68	.87 .65 .65 .66 .28 .01 .74	
05326400	Rush River near Henderson, Minn.	Lat 44°29'57", long 93°54'18", in NW¼NW¼ sec.24, T.112 N., R.26 W., Sibley County, at bridge on State Highway 93, 0.4 mile upstream from mouth, and 2 miles south of Henderson.	a397	5-20-70 8-19-71	32.8 13.4	695		6-16-76	2.62	
05327000	High Island Creek near Henderson, Minn.	Lat 44°34'19", long 93°55'18", in NE¼NW¼ sec.26, T.113 N., R.26 W., Sibley County, at bridge on County Highway 6, 1.6 miles upstream from mouth, and 3.1 miles north of Henderson. (Site of continuous-record gaging station since 1973)	237	5-20-70	12.0	800				
05329900	Bevens Creek at East Union, Minn.	Lat 44°42'44", long 93°40'59", in SW¼NW¼ sec.2, T.114 N., R.24 W., Carver County, at bridge on County Highway 40, 0.4 mile south of East Union, and 2.3 miles upstream from mouth.	126	9-12-69 5-20-70	1.91 5.83	680 625		10- 6-75 6-16-76	1.64 2.33	680

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a Approximately.

Table 2.--Low-flow measurements at partial-record stations.

Station No.	Station Name	Location	Drainage Area (mi <sup>2</sup> )	Date	Discharge (ft <sup>3</sup> /s)	Measurements		Date	Discharge (ft <sup>3</sup> /s)	Specific Conductance (micromhos/cm at 25°C)
						Specific Conductance (micromhos/cm at 25°C)				
Minnesota River basin--Continued										
05330000	Minnesota River near Carver, Minn.	Lat 44°43'28", long 93°37'58", in NE¼SW¼ sec.31, T.115 N., R.23 W., Carver County, 2.5 miles south of Carver, and at mile 36 upstream from Mississippi River. (Site of continuous-record gaging station, 1934-66)	16,200	6-12-34 7-25-34	257 118			8-14-34 9-13-34	110 120	
*05330650	Carver Creek near Carver, Minn.	Lat 44°45'01", long 93°39'00", in SW¼SE¼ sec.24, T.115 N., R.24 W., Carver County, at bridge on County Highway 40, 1.3 miles upstream from mouth, and 1.5 miles southwest of Carver.	--	3-26-68 6- 3-69 7-23-69 9-12-69 10-27-69 12- 3-69 1- 9-70 2-20-70 4- 1-70 7- 2-70	5.45 16.2 13.2 4.14 2.61 1.62 2.26 1.71 7.38 6.70		510 630	8- 5-70 9-10-70 10-14-70 12-16-70 1-26-71 2-18-71 8- 4-71 9-20-71 10-18-71 1-12-72	3.09 2.71 11.9 14.3 4.64 2.22 18.7 4.15 3.50 19.8	580 700 690 550
*05330700	Chaska Creek at Chaska, Minn.	Lat 44°47'19", long 93°36'19", in NE¼NE¼ sec.8, T.115 N., R.23 W., Carver County, at bridge on U.S. Highway 212 in Chaska, 1 mile upstream from mouth.	14.8	3-19-68 4- 8-69 5-20-70	13.4 68.3 1.61		690	10- 6-75 6-16-76	.74 .01	700
*05330750	Riley Creek at Eden Prairie, Minn.	Lat 44°49'23", long 93°28'48", on line between secs.28 and 29, T.116 N., R.22 W., Hennepin County, at culvert on County Highway 4, 2.2 miles south of Eden Prairie.	--	7-23-69 10-27-69 12- 2-69 1- 9-70 2-20-70 4- 1-70 5- 1-70 6- 3-70 7- 2-70 8- 5-70 9-10-70	.94 .79 .66 1.11 1.11 .83 1.08 .82 1.42 1.29 1.14	550		10-14-70 11-10-70 11-19-70 12-16-70 1-26-71 2-18-71 9-20-71 10-18-71 11- 5-71 1-12-72	.81 .96 1.28 1.24 .91 .76 1.05 1.21 .95 1.48	625 675 550
05330800	Purgatory Creek at Eden Prairie, Minn.	Lat 44°49'27", long 93°25'34", in NW¼SE¼ sec.26, T.116 N., R.22 W., Hennepin County, 0.5 mile downstream from County Highway 1, 2 miles upstream from mouth, and 3 miles southeast of Eden Prairie. (Site of continuous-record gaging station since 1975)	26.8	3-26-68 5-27-69 7-23-69 9-15-69 10-27-69 12- 2-69 1- 9-70 2-20-70 7- 2-70 8- 5-70	6.84 9.65 9.11 2.66 .61 2.61 1.26 .60 .86 3.17	550 560		9-10-70 12-16-70 1-26-71 2-18-71 8- 4-71 9-20-71 10-18-71 11-15-71 1-12-72	3.00 6.39 3.20 .96 3.95 1.48 2.42 9.16 4.73	400 800 550 580
05330910	Minnesota River at Bloomington, Minn.	Lat 44°49'36", long 93°13'55", in NW¼SE¼ sec.13, T.27 N., R.24 W., Dakota-Hennepin County line, 400 feet upstream from State Highway 36 between Burnsville and Bloomington.	--	3-27-68	1,460					
05330915	Black Dog Creek at Burnsville, Minn.	Lat 44°49'46", long 93°13'08", in SE¼NW¼ sec.18, T.27 N., R.23 W., Dakota County, 0.2 mile upstream from mouth, and 0.8 mile northeast of Black Dog Lake at Burnsville.	--	8-27-75 9-18-75 10-22-75 11-24-75 12-23-75 1-20-76 2-17-76 3-24-76	4.30 1.80 5.09 3.02 3.13 1.51 2.54 8.91	715 591 710 675 670 700 710 575		4-27-76 5-12-76 6-16-76 8- 2-76 8-31-76 9-23-76 10-12-76	7.64 8.43 37.3 9.17 32.8 46.6 36.2	537 771 880 850 881 905 896

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a Approximately.

Table 2.--Low-flow measurements at partial-record stations.

Station No.	Station Name	Location	Drainage Area (mi <sup>2</sup> )	Date	Discharge (ft <sup>3</sup> /s)	Measurements		Date	Discharge	Specific Conductance (micromhos/cm at 25°C)
Minnesota River basin--Continued										
*05330920	Minnesota River at Fort Snelling State Park, at St. Paul, Minn.	Lat 44°52'13", long 93°11'32", in NE¼SE¼ sec.32, T.28 N., R.23 W., Hennepin County, 3 miles upstream from mouth.	a16,900	10-27-31	278			8-17-33	348	
				11-27-31	578			10-10-33	153	
				12- 4-31	472			12-11-33	192	
				12-11-31	446			1- 4-34	180	
				2-27-32	444			2- 9-34	223	
				7- 8-32	939			3-21-34	235	
				8-18-32	356			4-23-34	447	
				9-28-32	283			6- 4-34	218	
				10-10-32	270			6-12-34	335	
				12-29-32	254			7-26-34	182	
				2-21-33	298			8-13-34	170	
				3-14-33	1,920			9-14-34	189	
				6- 2-33	1,060			2-26-35	791	
				7-24-33	304			5-25-35	1,400	
Mississippi River main stem										
05331580	Mississippi River at Hastings, Minn.	Lat 44°44'48", long 92°51'08", on line between secs.21 and 22, T.115 N., R.17 W., Dakota-Washington County line, at bridge on U.S. Highway 61, at Hastings, 2.5 miles upstream from St. Croix River.	a37,100	5- 7-31	3,970			10-11-33	3,530	
				5-15-31	3,170			4- 9-34	5,440	
				11-10-31	2,180			4- 9-35	5,810	
				11-20-31	3,560			6-11-35	3,600	
				9-15-32	1,840			6-14-35	3,020	
				7- 3-33	2,150			7-11-35	5,270	
				7-25-33	2,240			7-16-35	2,610	
				8- 3-33	2,640			8-30-35	3,840	
				8-16-33	1,470			4-13-38	5,800	
				8-23-33	1,210			9- 2-71	5,670	
St. Croix River basin										
05335110	Lower Tamarack River near Duxbury, Minn.	Lat 46°05'56", long 92°30'00", on line between secs.21 and 28, T.42 N., R.17 W., Pine County, at bridge on County Highway 25, 2 miles south of Duxbury.	75.3	9- 7-67	1.99			9-19-74	3.96	160
				5-18-70	41.6			9-16-76	.61	220
05335130	McDermott Creek near Duxbury, Minn.	Lat 46°05'56", long 92°28'30", on line between secs.22 and 27, T.42 N., R.17 W., Pine County, at bridge on County Highway 25, 0.6 mile upstream from mouth, and 2.5 miles southeast of Duxbury.	43.9	9- 7-67	.99			9-19-74	4.98	175
				5-18-70	42.5			9-16-76	.006	260
05335150	Hay Creek near Markville, Minn.	Lat 46°05'18", long 92°24'33", in NE¼SE¼ sec.30, T.42 N., R.16 W., Pine County, at bridge on County Highway 25, 4 miles west of Markville.	56.6	9- 7-67	2.58			9-19-74	b2.00	
				5-19-70	38.4			9-16-76	.13	260
05335151	Lower Tamarack River near Markville, Minn.	Lat 46°04'49", long 92°23'37", in SE¼NW¼ sec.32, T.42 N., R.16 W., Pine County, at bridge on county road, 3 miles southwest of Markville.	188	9- 7-67	7.93			9-19-74	14.2	200
				5-18-70	136			9-16-76	3.00	255
*05335170	Crooked Creek near Hinckley, Minn.	Lat 46°00'42", long 92°31'45", in NE¼NE¼ sec.30, T.41 N., R.17 W., Pine County, at bridge on State Highway 48, 2.7 miles upstream from mouth, 8 miles south of Duxbury, and 19 miles east of Hinckley.	93.0	7-19-66	12.8			4-16-68	67.3	
				8-16-66	23.1			6-18-68	69.0	
				9-13-66	12.7			7-24-68	47.2	
				10- 3-66	13.2			8-26-68	17.2	
				5- 9-67	54.2			10- 2-68	56.2	
				7-21-67	14.6			11- 8-68	50.8	
				8-16-67	8.76			5-18-70	52.1	
				9- 7-67	9.95			9-20-74	16.1	200
				9-26-67	9.58			10- 3-75	23.1	160
				10-19-67	10.6			9-16-76	7.21	236
05335800	Sand Creek near Sandstone, Minn.	Lat 46°07'43", long 92°42'50", on line between secs.11 and 14, T.42 N., R.19 W., Pine County, at bridge on County Highway 30, 7 miles east of Sandstone.	--	9- 7-67	4.89					

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a Approximately.

b Estimated.

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Station No.	Station Name	Location	Drainage Area (mi <sup>2</sup> )	Date	Discharge (ft <sup>3</sup> /s)	Measurements		Date	Discharge (ft <sup>3</sup> /s)	Specific Conductance (micromhos/cm at 25°C)
						Specific Conductance (micromhos/cm at 25°C)				
St. Croix River basin--Continued										
05335890	Little Sand Creek near Hinckley, Minn.	Lat 45°58'59", long 92°39'55", in SW <sup>1</sup> / <sub>4</sub> SE <sup>1</sup> / <sub>4</sub> sec.31, T.41 N., R.18 W., Pine County, at bridge on county road, 14 miles southeast of Hinckley.	27.7	9- 6-67 5-18-70	1.71 12.8			9-20-74 9-15-76	2.16 .67	220 185
*05335900	Sand Creek near Hinckley, Minn.	Lat 45°57'08", long 92°40'04", in NW <sup>1</sup> / <sub>4</sub> SW <sup>1</sup> / <sub>4</sub> sec.13, T.40 N., R.19 W., Pine County, at bridge on St. Croix State Park road, 2.5 miles upstream from mouth, 5.4 miles southeast of Cloverdale, and 14 miles southeast of Hinckley.	110	7-19-66 8-16-66 9-13-66 10- 3-66 5- 9-67 7-21-67 8-16-67 9- 7-67 9-26-67 10-23-67	17.0 45.9 15.5 17.2 71.6 19.5 11.6 10.5 12.2 12.9			4-16-68 6-18-68 7-24-68 8-26-68 10- 2-68 11- 8-68 5-18-70 9-20-74 10- 3-75 9-15-76	83.5 96.9 74.2 25.3 62.6 74.5 67.2 31.5 21.9 5.85	105       230 130 162
05336005	Bear Creek near Hinckley, Minn.	Lat 45°56'45", long 92°42'44", in NE <sup>1</sup> / <sub>4</sub> NE <sup>1</sup> / <sub>4</sub> sec.21, T.40 N., R.19 W., Pine County, at bridge on St. Croix State Park road, 12 miles southeast of Hinckley.	54.8	9- 6-67 5-18-70 9-20-74	3.39 18.8 7.27		210	10- 3-75 9-15-76	6.74 2.59	200 182
05336150	West Branch Kettle River near Kettle River, Minn.	Lat 46°32'38", long 92°54'32", on line between secs.19 and 20, T.47 N., R.20 W., Carlton County, at bridge on State Highway 73, 4 miles northwest of Kettle River.	--	9- 5-67	1.07					
05336200	Glaisby Brook near Kettle River, Minn.	Lat 46°27'19", long 92°51'34", in SE <sup>1</sup> / <sub>4</sub> NW <sup>1</sup> / <sub>4</sub> sec.22, T.46 N., R.20 W., Carlton County, at bridge on State Highways 27 and 73, 1.0 mile upstream from mouth, and 2.4 miles south of Kettle River. (Site of continuous-record gaging station, 1959-70; annual maximums available since 1971)	24.2	7-21-71 4-10-72 10- 3-72	3.02 14.6 17.8			4-10-74 8-21-75	8.27 .54	
05336220	Split Rock River near Kettle River, Minn.	Lat 46°26'09", long 92°54'29", on line between secs.29 and 30, T.46 N., R.20 W., Carlton County, at bridge on county highway, 4 miles southwest of Kettle River.	--	9- 6-67	1.16					
*05336240	Kettle River near Sturgeon Lake, Minn.	Lat 46°23'26", long 92°52'57", in NW <sup>1</sup> / <sub>4</sub> NW <sup>1</sup> / <sub>4</sub> sec.16, T.45 N., R.20 W., Pine County, at bridge on County Highway 46, 2.9 miles northwest of Sturgeon Lake.	299	7-20-66 8-17-66 9-14-66 10- 4-66 5-10-67 7-19-67 8-14-67 9- 6-67 9-26-67 10-24-67	59.1 424 42.4 30.0 243 20.1 4.85 4.91 6.04 7.70			4-17-68 6-20-68 7-23-68 8-27-68 10- 2-68 11- 7-68 9-18-74 10- 7-75 9-29-76	235 437 263 23.0 102 172 26.1 7.98 3.15	220 160 300
05336280	Moose River at Barnum, Minn.	Lat 46°30'15", long 92°41'32", in NE <sup>1</sup> / <sub>4</sub> NW <sup>1</sup> / <sub>4</sub> sec.1, T.46 N., R.19 W., Carlton County, at bridge on County Highway 61, at Barnum.	76.1	9- 6-67 9-21-71 9-18-74	3.96 6.03 6.22		170 140	10- 8-75 9-23-76	3.35 1.19	185 220
*05336320	Moose River at Sturgeon Lake, Minn.	Lat 46°22'57", long 92°50'27", in NW <sup>1</sup> / <sub>4</sub> SW <sup>1</sup> / <sub>4</sub> sec.14, T.45 N., R.20 W., Pine County, at bridge on County Highway 46 at Sturgeon Lake, 1.5 miles upstream from mouth.	140	9-30-65 7-20-66 9-14-66 10- 4-66 5-10-67 7-20-67 8-14-67 9- 6-67 9-25-67 10-23-67	237 99.7 50.0 22.8 154 36.2 16.4 17.8 15.7 13.7			4-17-68 6-19-68 7-23-68 8-27-68 10- 2-68 11- 7-68 9-18-74 10- 7-75 9-17-76	148 250 141 37.1 85.5 112 26.4 15.3 9.62	118       180 240 197

\* High-flow measurements are also available in Geological Survey files.

Table 2.--Low-flow measurements at partial-record stations.

Station No.	Station Name	Location	Drainage Area (mi <sup>2</sup> )	Date	Discharge (ft <sup>3</sup> /s)	Measurements		Discharge (ft <sup>3</sup> /s)	Specific Conductance (micromhos/cm at 25°C)
						Specific Conductance (micromhos/cm at 25°C)	Date		
St. Croix River basin--Continued									
05336360	Willow River near Kerrick, Minn.	Lat 46°21'38", long 92°38'41", in NW¼NE¼ sec.29, T.45 N., R.18 W., Pine County, at bridge on County Highway 46, 3 miles northwest of Kerrick.	--	9- 6-67	2.64				
05336365	Hay Creek near Kerrick, Minn.	Lat 46°21'38", long 92°40'29", in NW¼NW¼ sec.30, T.45 N., R.18 W., Pine County, at bridge on County Highway 46, 4.5 miles northwest of Kerrick.	--	9- 7-67	.13				
05336370	Little Willow River near Bruno, Minn.	Lat 46°19'02", long 92°41'29", on line between secs.1 and 12, T.44 N., R.19 W., Pine County, at bridge on county road, 3 miles northwest of Bruno.	--	9- 6-67	1.08				
*05336380	Willow River at Willow River, Minn.	Lat 46°19'24", long 92°50'26", in NW¼SW¼ sec.2, T.44 N., R.20 W., Pine County, at bridge on County Highway 41, at Willow River, and 0.6 mile upstream from mouth.	126	9- 5-43 6-28-47 9- 6-67	24.5 50.7 17.5		10- 7-75 9-17-76	23.6 10.7	150 170
05336440	Pine River near Rutledge, Minn.	Lat 46°16'26", long 92°58'15", on line between secs.22 and 27, T.44 N., R.21 W., Pine County, at bridge on County Highway 150, 6 miles northwest of Rutledge.	--	9- 7-67	6.50				
05336460	Bremen Creek near Rutledge, Minn.	Lat 46°16'52", long 92°58'47", near center of sec.22, T.44 N., R.21 W., Pine County, at bridge on county highway, 7 miles northwest of Rutledge.	--	9- 7-67	1.23				
05336480	Pine River at Rutledge, Minn.	Lat 46°15'18", long 92°51'56", on line between secs.33 and 34, T.44 N., R.20 W., Pine County, at bridge on County Highway 61, 0.4 mile south of Rutledge, and 0.7 mile upstream from mouth.	139	9- 7-67 10- 7-75	13.8 20.6		9-17-76	8.56	220
*05336500	Kettle River near Sandstone, Minn.	Lat 46°10'48", long 92°49'58", in SW¼NE¼ sec.26, T.43 N., R.20 W., Pine County, at bridge on State Highway 23, 4 miles northeast of Sandstone. (2 miles upstream from site of continuous-record gaging station, 1908-16)	a825	7-19-66 9-14-66 10- 4-66 5-10-67	320 235 144 685		7-19-67 8-15-67 9- 7-67	161 82.0 108	
05336700	Kettle River below Sandstone, Minn.	Lat 46°06'20", long 92°51'50", in NW¼SW¼ sec.22, T.42 N., R.20 W., Pine County, 900 feet downstream from abandoned power plant dam, on Sandstone Federal Correctional Institution property, and 1.8 miles south of Sandstone. (Site of continuous-record gaging station since 1967)	863	9- 7-67	108		9-25-67	102	
05336900	North Branch Grindstone River near Hinckley, Minn.	Lat 46°02'03", long 92°58'16", on line between secs.14 and 15, T.41 N., R.21 W., Pine County, at bridge on county road, 1.8 miles northwest of Hinckley.	43.8	9- 7-67 5-19-70 9-18-74	5.65 19.9 19.6	175	10- 2-75 9-15-76	7.73 2.26	190 260

\* High-flow measurements are also available in Geological Survey files.  
a Approximately.

Table 2.--Low-flow measurements at partial-record stations.

Station No.	Station Name	Location	Drainage Area (mi <sup>2</sup> )	Date	Discharge (ft <sup>3</sup> /s)	Measurements		Date	Discharge (ft <sup>3</sup> /s)	Specific Conductance (micromhos/cm at 25°C)
						Specific Conductance (micromhos/cm at 25°C)				
St. Croix River basin--Continued										
05336990	South Branch Grindstone River near Hinckley, Minn.	Lat 46°01'28", long 92°58'16", on line between secs.22 and 23, T.41 N., R.21 W., Pine County, at culvert on county road, 1.5 miles northwest of Hinckley.	34.0	9- 7-67 5-19-70 9-18-74	.23 7.02 2.62	230		10- 2-75 9-15-76	.87 .007	300 320
05337010	Grindstone River near Hinckley, Minn.	Lat 46°00'40", long 92°52'37", on line between secs.21 and 28, T.41 N., R.20 W., Pine County, at bridge on State Highway 48, 1.6 miles upstream from mouth, and 2.8 miles east of Hinckley.	89.4	9- 7-67 5-19-70 9-19-74	6.59 35.8 19.2	180		10- 2-75 9-15-76	10.9 5.76	220 280
05337100	Snake River at Pliny, Minn.	Lat 46°20'21", long 93°15'42", on line between secs.32 and 33, T.45 N., R.23 W., Aitkin County, at bridge on State Highways 65 and 27, 0.5 mile north of Pliny.	--	9- 5-67	.14					
05337150	Snake River near McGrath, Minn.	Lat 46°13'05", long 93°14'25", in NW¼NW¼ sec.15, T.43 N., R.23 W., Aitkin County, at bridge on State Highway 18, 2 miles southeast of McGrath.	--	9- 5-67	1.09					
05337200	Snake River near Warman, Minn.	Lat 46°01'29", long 93°13'51", on line between secs.15 and 22, T.41 N., R.23 W., Kanabec County, at bridge on County Highway 3, 0.4 mile east of bridge over Snowshoe Brook, and 3.2 miles southeast of Warman.	273	9- 5-67 8-27-69 5-20-70	14.1 15.4 115	285		9-17-74 10- 2-75 9-21-76	21.3 23.2 10.1	220 215 320
05337220	Snowshoe Brook near Warman, Minn.	Lat 46°01'29", long 93°14'20", on line between secs.15 and 22, T.41 N., R.23 W., Kanabec County, at bridge on County Highway 3, 0.3 mile upstream from mouth, and 3 miles southeast of Warman.	22.4	9- 5-67 5-20-70 9-17-74	.65 1.96 1.15	240		10- 2-75 9-21-76	.99 .64	240 240
05337300	Knife River near Warman, Minn.	Lat 46°02'47", long 93°25'57", on line between sec.7, T.41 N., R.24 W., and sec. 12, T.41 N., R.25 W., on Kanabec-Mille Lacs County line, at bridge on State Highway 47, 7 miles west of Warman.	32.3	9- 6-67 5-20-70 9-17-74	1.64 8.14 b.20			10- 2-75 9-29-76	.37 .009	250 440
05337400	Knife River near Mora, Minn.	Lat 45°55'12", long 93°18'26", in SW¼SW¼ sec.26, T.40 N., R.24 W., Kanabec County, at bridge on County Highway 77, 1.1 miles upstream from mouth, and 2.5 miles north of Mora. (Site of continuous-record gaging station since 1974)	102	7-18-66 8-18-66 9-15-66 10- 5-66 5-11-67 7-24-67 9- 6-67 9-27-67	14.0 14.0 6.82 4.94 55.2 8.54 1.85 2.10		10-24-67 7-24-68 8-28-68 10- 8-68 11- 8-68 8-27-69 5-20-70	2.11 25.5 4.04 47.7 57.7 2.14 36.3	158       	
05337500	Snake River at Mora, Minn.	Lat 45°51'50", long 93°17'47", in SW¼SE¼ sec.14, T.39 N., R.24 W., Kanabec County, at bridge on State Highway 23 and 65, at Mora. (Site of continuous-record gaging station, 1909-13)	440	7-18-66 8-18-66 9-15-66 10- 5-66 5-11-67 7-24-67 8-11-67 9- 6-67 9-27-67	67.5 125 76.3 54.2 229 51.5 18.0 32.4 30.3		10-24-67 4-17-68 7-24-68 8-28-68 10- 8-68 11- 8-68 8-26-69 9-18-74 9-24-76	38.4 269 213 41.2 228 242 38.9 57.5 26.7	148        	
05337530	Little Ann River near Mora, Minn.	Lat 45°56'01", long 93°25'11", on line between secs.23 and 26, T.40 N., R.25 W., Kanabec County, at bridge on County Highway 26, 7 miles northwest of Mora.	29.3	9- 6-67 5-20-70	.09 5.63		9-17-74 9-22-76	.86 0	275	

b Estimated.

N.

Table 2.--Low-flow measurements at partial-record stations.

Station No.	Station Name	Location	Drainage Area (mi <sup>2</sup> )	Date	Discharge (ft <sup>3</sup> /s)	Measurements		Date	Discharge (ft <sup>3</sup> /s)	Specific Conductance (micromhos/cm at 25°C)
						Specific Conductance (micromhos/cm at 25°C)				
St. Croix River basin--Continued										
05337550	Ann River near Mora, Minn.	Lat 45°50'07", long 93°19'54", in NE¼SE¼ sec.28, T.39 N., R.24 W., Kanabec County, at bridge on County Highway 14, 3.5 miles southwest of Mora.	75.8	9- 6-67 5-20-70 9-17-74	3.83 21.3 9.61	220		10- 8-75 9-22-76	7.43 4.13	215 250
05337600	Groundhouse River near Ogilvie, Minn.	Lat 45°48'12", long 93°23'52", on line between secs.1 and 12, T.38 N., R.25 W., Kanabec County, at bridge on county road, 2 miles southeast of Ogilvie.	64.7	9- 6-67 8-26-69 5-20-70	1.55 2.63 11.9	215		9-16-74 9-22-76	4.13 1.13	260 210
05337650	South Fork Groundhouse River near Ogilvie, Minn.	Lat 45°47'20", long 93°23'48", on line between secs.12 and 13, T.38 N., R.25 W., Kanabec County, at bridge on county road, 3 miles southeast of Ogilvie.	48.2	9- 6-67 8-26-69 5-20-70	2.24 1.68 11.1	295		9-16-74 9-22-76	9.38 1.06	300 260
05337700	Groundhouse River at Brunswick, Minn.	Lat 45°47'28", long 93°16'33", in SW¼SE¼ sec.12, T.38 N., R.24 W., Kanabec County, at bridge on county road in Brunswick, 2 miles upstream from mouth.	128	7-18-66 8-18-66 9-15-66 10- 5-66 5-11-67 7-24-67 8-11-67 9- 6-67 9-27-67 10-24-67 4-18-68	10.1 10.2 6.25 7.55 46.0 12.0 6.74 6.76 6.82 7.77 50.3			5-16-68 6-19-68 7-24-68 8-27-68 10- 7-68 11- 8-68 8-26-69 5-19-70 9-16-74 9-22-76	105 87.2 27.4 8.66 52.0 65.2 7.84 35.5 31.2 6.17	258      275  250 290
05337790	Mud Creek at Quamba, Minn.	Lat 45°55'10", long 93°09'48", in SE¼SE¼ sec.26, T.40 N., R.23 W., Kanabec County, at bridge on State Highway 23, 0.8 mile northeast of Quamba.	28.0	9- 6-67 5-19-70 9-17-74	.09 2.36 1.25	275		10- 7-75 9-21-76	.42 0	320
05337900	Snake River at Grasston, Minn.	Lat 45°47'19", long 93°08'48", in SW¼SE¼ sec.12, T.38 N., R.23 W., Kanabec County, at bridge on State Highway 70, near south boundary of Grasston.	789	9- 7-67 8-25-69 5-19-70	64.1 61.9 340	280		9-16-74 9-24-76	163 51.6	240 320
05339400	Rock Creek near Rush City, Minn.	Lat 45°42'58", long 92°53'15", in NW¼NE¼ sec.7, T.37 N., R.20 W., Chisago County, at bridge on County Highway 3, 4.5 miles northeast of Rush City.	58.5	8-16-67 9- 5-67 9-27-67 9- 9-68 10- 1-68	1.62 1.78 1.65 4.37 26.2			11- 6-68 8-22-69 9- 5-74 10- 2-75 9-22-76	12.3 2.42 2.67 4.43 2.43	500 450 465 580
*05339720	Rush Creek near Rush City, Minn.	Lat 45°39'19", long 92°53'55", on line between sec.31, T.37 N., R.20 W., and sec. 36, T.37 N., R.21 W., Chisago County, at bridge on County Highway 56, 3.5 miles southeast of Rush City.	60.2	8-16-67 9- 5-67 9-27-67 9- 9-68 10- 1-68	15.1 13.0 6.99 9.75 60.5			8-21-69 9- 5-74 10- 2-75 9-30-76	2.03 6.14 24.1 1.88	395 340 610
05339750	Goose Creek near Harris, Minn.	Lat 45°36'45", long 92°55'29", in NW¼NE¼ sec.14, T.36 N., R.21 W., Chisago County, at bridge on County Highway 57, 3 miles northeast of Harris.	63.9	9- 5-67 8-21-69 9- 5-74	5.59 2.28 2.93	360 350		9-30-75 9-22-76	14.9 3.48	305 400
05339800	Sunrise River near Wyoming, Minn.	Lat 45°19'59", long 92°57'05", in SW¼NW¼ sec.22, T.33 N., R.21 W., Chisago County, at bridge on State Highway 98, 2 miles east of Wyoming.	45.3	9- 6-67 8-21-69 5-21-70	2.68 .99 5.76	295 415		9-24-74 9-30-75 10- 5-76	2.16 15.7 .41	295 365
*05339950	West Branch Sunrise River at Stacy, Minn.	Lat 45°23'29", long 92°59'52", in SE¼NE¼ sec.31, T.34 N., R.21 W., Chisago County, at bridge on county road, at southwest edge of Stacy, and 2.0 miles upstream from mouth.	53.5	9- 6-67 8-21-69 5-21-70	11.1 5.27 24.9	225 240		9-24-74 10- 1-75 9-24-76	5.54 22.4 2.24	245 310

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Station No.	Station Name	Location	Drainage Area (mi <sup>2</sup> )	Date	Discharge (ft <sup>3</sup> /s)	Measurements		Date	Discharge (ft <sup>3</sup> /s)	Specific Conductance (micromhos/cm at 25°C)
						Specific Conductance (micromhos/cm at 25°C)				
St. Croix River basin--Continued										
05340060	Sunrise River tributary near Lindstrom, Minn.	Lat 45°27'19", long 92°53'51", in SE¼SE¼ sec.1, T.34 N., R.21 W., Chisago County, at culvert on County Highway 15, 0.7 mile upstream from mouth, and 5.5 miles northwest of Lindstrom.	4.25	8-20-69	1.73	280		10- 1-75	.73	200
				9- 6-74	.25			9-22-76	.08	225
05340100	North Branch Sunrise River tributary near Weber, Minn.	Lat 45°30'00", long 93°04'44", in SW¼SW¼ sec.22, T.35 N., R.22 W., Isanti County, at culvert on County Highway 5, 0.6 mile upstream from mouth, and 2.8 miles northeast of Weber.	12.4	8-21-69	b.02			10- 1-75	1.92	320
				5-21-70	1.40			9-23-76	.14	500
				9- 6-74	0					
05340110	North Branch Sunrise River near Weber, Minn.	Lat 45°29'59", long 93°03'22", in SE¼SW¼ sec.23, T.35 N., R.22 W., Isanti County, at bridge on County Highway 5, 3.8 miles northeast of Weber.	30.7	8-21-69	4.04	330		10- 1-75	9.16	340
				5-21-70	7.50			9-24-76	2.95	385
				9- 6-74	.07					
05340130	North Branch Sunrise River at North Branch, Minn.	Lat 45°30'57", long 92°58'47", in SW¼SW¼ sec.16, T.35 N., R.21 W., Chisago County, at culvert on County Highway 30, at North Branch.	53.5	8-20-69	15.1	320		10- 1-75	24.6	325
				9- 6-74	10.8	320		9-30-76	11.0	350
05340170	North Branch Sunrise River near North Branch, Minn.	Lat 45°30'48", long 92°53'36", on line between secs.18 and 19, T.35 N., R.20 W., Chisago County, at bridge on State Highway 95, 4 miles east of North Branch.	71.8	8-16-67	22.8			8-20-69	20.7	320
				9- 6-67	27.4			5-21-70	32.7	
				9-27-67	23.1			9- 5-74	22.5	320
				9- 9-68	29.5			9-30-75	36.9	330
				10- 1-68	70.0			9-30-76	20.2	360
				11- 5-68	84.8					
05340550	Lawrence Creek at Franconia, Minn.	Lat 45°22'16", long 92°41'37", in SE¼SE¼ sec.3, T.33 N., R.19 W., Chisago County, at bridge on county road, 1.0 mile upstream from mouth at Franconia.	16.2	8-22-69	2.21	430		9-30-75	2.31	430
				5-21-70	1.65	440		9-21-76	1.76	410
				9-24-74	1.96					
05340600	St. Croix River at Marine on St. Croix, Minn.	Lat 45°12'10", long 92°45'55", in SW¼SW¼ sec.6, T.31 N., R.19 W., Washington County, at Marine on St. Croix, 0.7 mile downstream from Greenburg Island, and 4.2 miles upstream from Apple River.	--	11- 6-73	3,560					
05341540	Browns Creek at Stillwater, Minn.	Lat 45°04'35", long 92°48'21", in NE¼NE¼ sec.21, T.30 N., R.20 W., Washington County, at culvert on State Highway 95, 0.1 mile upstream from mouth at Stillwater.	30.8	8-22-69	2.00	380		9-29-75	4.40	365
				9-24-74	3.31			9-21-76	3.86	400
*05341780	Valley Branch at Afton, Minn.	Lat 44°54'40", long 92°46'48", in NW¼SW¼ sec.14, T.28 N., R.20 W., Washington County, at bridge on State Highway 95, 0.8 mile north of Afton.	13.0	9- 6-67	9.62	400		8- 3-70	9.59	
				5-26-69	9.13			9-16-70	8.98	
				7-23-69	8.38			10-16-70	9.99	
				8-22-69	8.49		415	11-23-70	8.84	
				10-28-69	8.16			1-20-71	9.13	390
				12- 3-69	8.70			2-19-71	10.6	480
				2-19-70	8.02			5- 6-71	10.4	460
				3-26-70	10.9		470	7-16-71	10.8	
				5- 6-70	10.7		420	8-10-71	10.0	
				7- 6-70	8.52			1-19-72	10.8	
05341790	St. Croix River tributary at Afton, Minn.	Lat 44°53'49", long 92°46'59", in NE¼SE¼ sec.22, T.28 N., R.20 W., Washington County, at bridge on County Highway 21, 0.2 mile upstream from mouth at Afton.	2.49	8-22-69	b.10	475		9-29-75	.48	400
				9-24-74	.31			9-21-76	.35	455

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b Estimated.

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						Specific Conductance (micromhos/cm at 25°C)				
St. Croix River basin--Continued										
05341810	Trout Brook near Afton, Minn.	Lat 44°51'49", long 92°48'04", in SW¼SW¼ sec.34, T.28 N., R.20 W., Washington County, at bridge on County Highway 21, 1.9 miles upstream from mouth, and 2.9 miles southwest of Afton.	5.90	8-22-69 9-24-74	.26 .32	435		9-29-75 9-21-76	.58 .33	440 440
05344490	St. Croix River at Prescott, Wis.	Lat 44°44'57", long 92°48'16", in SE¼SE¼ sec.9, T.26 N., R.20 W., Pierce County, at bridge in Prescott, 0.1 mile upstream from mouth.	a7,650	5-25-28 8-25-28 3- 5-30 6- 1-33 4- 9-34 3-21-35 4-13-38	5,620 2,640 5,980 3,970 5,290 3,880 5,890		9-16-53 8- 1-57 7-24-62 7-13-65 5- 1-67 4- 1-69 6-19-72	5,200 4,620 2,960 2,590 5,070 2,920 3,960		
Mississippi River main stem										
*05344980	Mississippi River at lock and dam No. 3, near Red Wing, Minn.	Lat 44°36'36", long 92°36'36", in SW¼NW¼ sec.10, T.113 N., R.15 W., Goodhue County, at lock and dam No. 3, 5 miles northwest of Red Wing, and at mile 796.7 upstream from Ohio River.	a46,600	7-30-29 9-13-29 9-23-29 4- 7-30 7-26-30 8-24-30 1- 4-40 1-31-40 2-27-40	7,640 7,380 7,510 9,060 6,510 5,700 3,510 3,440 3,590		3-16-40 12- 3-40 12- 9-40 12-10-40 12-11-40 1- 8-41 2-21-41 7-15-41 8- 3-71	4,360 5,580 7,380 8,360 8,430 7,450 6,010 10,300 10,400		
Vermillion River basin										
05345000	Vermillion River near Empire City, Minn.	Lat 44°40'00", long 93°03'17", on line between secs.23 and 24, T.114 N., R.19 W., Dakota County, at bridge on County Highway 79, 2 miles northwest of Empire City, and 3.7 miles southwest of Coates. (Site of continuous-record gaging station, 1942-45, and since 1973)	110	9-21-69 2-18-70 3-26-70 5- 5-70 7- 3-70 8- 4-70 9-11-70 10-16-70 11-20-70 12-17-70 1-20-71 2-19-71 3-26-71 5- 6-71 6-10-71 8- 9-71	16.1 17.8 37.8 50.5 31.6 22.1 22.2 33.5 70.1 39.4 33.9 33.2 87.0 55.7 61.4 33.0	520  510 585      390 600  620 580	9-23-71 10-21-71 11-18-71 12- 9-71 1-19-72 10-16-72 11-16-72 12-13-72 1-16-73 2-12-73 4- 9-73 5-15-73 7- 2-73 7-30-73 9- 4-73	33.1 31.3 65.2 40.4 20.4 31.3 41.2 21.3 26.1 25.6 59.2 67.0 40.7 38.9 29.5		580         590 626 585 587 637 608 596 576 618 613
05346000	Vermillion River at Hastings, Minn.	Lat 44°43'12", long 92°51'57", in SE¼SW¼ sec.33, T.115 N., R.17 W., Dakota County, at bridge on County Highway 47 in Hastings, 0.7 mile upstream from mill dam, and 3 miles upstream from Vermillion Slough. (Site of continuous-record gaging station, 1942-47)	195	6-17-35 9-21-35 6-12-36 9-27-69 12- 3-69 1- 7-70 2-18-70 3-26-70 5- 6-70 7- 3-70 8- 4-70 9-16-70 10-16-70 11-20-70 12-17-70 1-20-71 2-19-71 5- 6-71 6-10-71 8-10-71 9-23-71 10-21-71 11-18-71 12-10-71 1-19-72 10-16-72 11-16-72 12-14-72 1-16-73 2-12-73 4- 9-73	54.5 9.61 10.1 23.2 45.8 34.2 24.4 66.9 65.9 41.0 34.2 33.6 56.1 104 66.5 35.4 38.0 84.3 80.3 45.0 48.0 47.3 87.1 91.0 29.1 47.4 60.7 33.2 32.4 34.3 90.3	240       530 530      540 625 610 600    540   556 578 574 543 569 572	7- 2-73 7-30-73 9- 4-73 10-17-73 11- 9-73 12-11-73 1-15-74 2-19-74 3-28-74 5- 6-74 6- 6-74 7- 3-74 8- 1-74 9- 9-74 10-10-74 11-13-74 12-20-74 1-17-75 2-10-75 3-21-75 9-24-75 10-22-75 11-13-75 12-17-75 1-23-76 4-22-76 6-15-76 7-27-76 8-12-76 9-20-76	47.5 57.1 40.6 52.7 23.2 39.4 24.3 33.4 63.2 56.1 89.3 43.7 28.4 26.3 29.0 28.2 24.6 16.2 19.2 47.3 49.7 43.6 94.4 9.46 33.1 73.6 35.0 13.7 19.4 25.4		542 566 560 582 621 665 561 540 616 520 554 570 545 600 510 535 540 539 600 520 620 570 538 612 610 554 640 630 604 599

\* High-flow measurements are also available in Geological Survey files.  
a Approximately.

Table 2.--Low-flow measurements at partial-record stations.

Station No.	Station Name	Location	Drainage Area (mi <sup>2</sup> )	Date	Discharge (ft <sup>3</sup> /s)	Measurements		Date	Discharge (ft <sup>3</sup> /s)	Specific Conductance (micromhos/cm at 25°C)
						Specific Conductance (micromhos/cm at 25°C)				
Cannon River basin										
*05352010	Cannon River at Faribault, Minn.	Lat 44°18'28", long 93°16'22", in SW¼NE¼ sec.30, T.110 N., R.20 W., Rice County, at mill dam, 0.1 mile upstream from bridge on State Highway 3 in Faribault, and 0.3 mile upstream from Straight River.	a341	8-31-65	111			5- 1-68	31.0	
				9-27-65	59.5			5-28-68	66.5	
				10-22-65	72.2			7- 3-68	50.4	
				11-18-65	29.3			9-12-68	81.4	
				1-21-66	57.9			10- 8-68	91.5	
				5-23-66	97.2			12-19-68	138	450
				6-20-66	84.8			1-20-69	86.9	559
				7-19-66	15.9			2-27-69	75.1	505
				8-15-66	22.0			6-23-69	15.2	
				9-19-66	16.8			8- 4-69	56.2	
				10-21-66	43.6			8-25-69	27.6	
				11-21-66	57.0			10-17-69	50.0	
				12-12-66	30.0			11-21-69	6.00	
				1-19-67	9.36			12-18-69	13.5	
				2-21-67	34.5			1-27-70	17.6	
				3-20-67	67.6			3- 2-70	30.8	595
				6-26-67	136			3-31-70	22.1	540
				8-21-67	28.9			7-13-70	69.6	
				9-27-67	14.0			8-18-70	b.50	
				10-30-67	11.7			8-27-70	18.2	465
				11-20-67	3.67			9-21-70	24.6	
				12-19-67	11.9			1- 5-71	113	260
				1-22-68	7.51			2- 8-71	63.4	
				2-22-68	11.9			9-13-71	16.3	505
				3-25-68	20.7			11-22-71	94.9	480
05352810	Turtle Creek near Owatonna, Minn.	Lat 44°02'00", long 93°14'46", on line between secs.32 and 33, T.107 N., R.20 W., Steele County, at bridge on county road, 0.7 mile upstream from mouth, and 3.7 miles south of Owatonna.	41.1	9-25-69	.57	590		8- 6-71	.47	
				8-18-70	.83			9-26-74	.50	599
				8-27-70	.19			10- 5-76	.05	560
05352850	Straight River at Owatonna, Minn.	Lat 44°05'04", long 93°13'48", in SE¼ sec.9, T.107 N., R.20 W., Steele County, at bridge on West Bridge Street, in Owatonna.	209	4-27-66	112			9-12-68	88.3	805
				5-24-66	70.2			11-19-68	102	780
				6-21-66	27.0			6-24-69	63.5	
				7-20-66	22.0			8- 4-69	45.4	
				8-30-66	9.32			8-26-69	22.9	
				9-19-66	8.79			10-14-69	24.0	
				10-24-66	23.4			11-14-69	12.4	
				11-22-66	19.8			5- 1-70	124	680
				4-18-67	140			7-14-70	33.5	
				5-16-67	73.8			8-18-70	22.9	675
				7-18-67	64.8			8-27-70	16.3	
				8-22-67	23.5			9-22-70	24.9	
				9-27-67	11.0			12- 1-70	117	
				10-31-67	22.0			4-20-71	137	
				4-30-68	57.6			6-29-71	79.5	625
				5-27-68	77.9	650		9-13-71	11.6	745
				7- 2-68	123	700		10-14-71	13.1	775
				8- 5-68	79.1	750		11-23-71	33.6	690
05352900	Maple Creek at Owatonna, Minn.	Lat 44°05'42", long 93°13'24", in NW¼NW¼ sec.10, T.107 N., R.20 W., Steele County, 0.3 mile upstream from mouth, and at Elm Street bridge in Owatonna.	39.0	9-25-69	1.89	380		8- 6-71	1.98	
				8-18-70	2.33			9-26-74	1.22	650
				8-27-70	1.47	512		10- 5-76	.26	590

\* High-flow measurements are also available in Geological Survey files.

a Approximately.

b Estimated.

Table 2.--Low-flow measurements at partial-record stations.

Station No.	Station Name	Location	Drainage Area (mi <sup>2</sup> )	Date	Discharge (ft <sup>3</sup> /s)	Measurements		Discharge (ft <sup>3</sup> /s)	Specific Conductance (micromhos/cm at 25°C)
						Specific Conductance (micromhos/cm at 25°C)	Date		
Cannon River basin--Continued									
*05353600	Crane Creek at Clinton Falls, Minn.	Lat 44°08'49", long 93°15'22", in SE¼NW¼ sec.20, T.108 N., R.20 W., Steele County, at culvert on service road, 0.8 mile northwest of Clinton Falls.	105	8-31-65	43.3		5- 1-68	18.0	
				9-27-65	65.3		5-28-68	67.5	
				10-22-65	30.7		7- 2-68	52.8	
				11-18-65	17.1		12-19-68	17.5	815
				12-16-65	50.0		1-21-69	17.8	970
				1-21-66	8.10		2-26-69	11.4	880
				2-16-66	67.4		5-23-69	62.4	
				4-27-66	52.3		6-24-69	25.4	
				5-24-66	26.8		8- 4-69	9.50	
				6-21-66	10.5		8-25-69	4.46	
				7-20-66	2.09		10-15-69	3.50	
				8-30-66	.60		11-14-69	1.89	
				9-19-66	.62		12-16-69	4.95	
				10-24-66	2.19		1-27-70	1.76	
				11-22-66	2.10		3- 3-70	4.48	500
				12-12-66	.94		4- 1-70	25.2	700
				1-20-67	.86		6-12-70	35.6	
				2-22-67	.38		7-14-70	32.7	
				3-20-67	36.4		8-18-70	8.49	660
				5-15-67	55.0		8-27-70	4.62	740
				8-21-67	26.2		9-21-70	11.3	
				9-27-67	1.93		10-26-70	67.8	730
				10-30-67	2.18		12- 1-70	73.1	
				11-20-67	1.16		1- 6-71	5.45	
				12-19-67	2.00		2- 9-71	4.75	600
				1-23-68	2.75		6-28-71	38.6	725
				2-22-68	1.74		9-13-71	3.26	835
				3-25-68	3.17				
05354600	Wolf Creek near Dundas, Minn.	Lat 44°24'38", long 93°13'15", on line between secs.21 and 22, T.111 N., R.20 W., Rice County, at bridge on County Highway 8, 0.7 mile upstream from mouth, and 1.5 miles southwest of Dundas.	42.1	9-25-69	1.07	550	5-23-72	9.03	
				8-18-70	.79		9- 5-74	.78	570
				8-26-70	.61		10- 9-75	1.36	
				8- 6-71	1.04		10- 5-76	.71	560
05355020	Heath Creek near Northfield, Minn.	Lat 44°26'48", long 93°11'15", in NW¼SE¼ sec.2, T.111 N., R.20 W., Rice County, at bridge on County Highway 78, 0.2 mile upstream from mouth, and 1.5 miles southwest of Northfield.	40.7	8-23-65	.87		5-23-72	11.2	
				9-24-69	.24		9- 5-74	.27	585
				8-18-70	.16		10- 9-75	.69	
				8-26-70	.10	550	10- 4-76	.11	610
				8- 6-71	.36				
05355040	Chub Creek at Randolph, Minn.	Lat 44°31'23", long 93°01'46", in NE¼NW¼ sec.7, T.112 N., R.18 W., Dakota County, at bridge on County Highway 94, at west edge of Randolph.	85.1	8-23-65	11.8		5-23-72	18.6	
				9-22-69	5.95	550	9- 5-74	4.89	535
				8-18-70	8.37		10- 9-75	8.75	
				8-26-70	6.58	580	10- 4-76	.34	460
				8- 5-71	8.93				
05355060	Spring Creek near Cannon Falls, Minn.	Lat 44°30'21", long 92°59'40", in NE¼SW¼ sec.16, T.112 N., R.18 W., Goodhue County, at bridge on county road, 0.5 mile upstream from mouth, and 4.4 miles west of Cannon Falls.	11.3	9-25-69	b.30		5-23-72	.81	
				8-18-70	.57		9- 5-74	.73	585
				8-26-70	.48	550	10- 9-75	1.08	
				8- 5-71	.84		10- 4-76	.10	590
05355080	Prairie Creek near Cannon Falls, Minn.	Lat 44°29'10", long 92°59'14", on line between secs.21 and 28, T.112 N., R.18 W., Goodhue County, at bridge on State Highway 19, 4.5 miles southwest of Cannon Falls.	79.0	5- 2-66	29.9		8-26-68	12.3	
				6- 7-66	24.8		10- 8-68	27.8	
				6-29-66	10.4		11- 6-68	27.7	
				8- 8-66	8.14		8- 9-69	15.0	
				8-30-66	7.45		9-15-69	11.1	
				9-26-66	6.82		9-25-69	10.7	480
				10-21-66	8.37		10-21-69	10.6	
				4-24-67	19.8		5- 5-70	27.6	625
				5-19-67	13.0		6- 2-70	64.4	560
				7- 7-67	10.6		7- 3-70	16.6	
				7-25-67	8.97		8- 4-70	13.6	
				8-29-67	7.03		8-25-70	8.14	
				9-27-67	6.39		9-11-70	17.8	
				10-31-67	8.16		10-15-70	31.9	
				4-19-68	7.37		11-20-70	66.4	
				5-13-68	6.16		9- 5-74	9.99	530
				7- 5-68	8.22		10- 9-75	12.7	
				8- 5-68	14.7		10- 7-76	6.40	500

\* High-flow measurements are also available in Geological Survey files.

b Estimated.

Table 2.--Low-flow measurements at partial-record stations.

Station No.	Station Name	Location	Drainage Area (mi <sup>2</sup> )	Date	Discharge (ft <sup>3</sup> /s)	Measurements		Date	Discharge (ft <sup>3</sup> /s)	Specific Conductance (micromhos/cm at 25°C)				
						Specific Conductance (micromhos/cm at 25°C)								
Cannon River basin--Continued														
*05355140	Little Cannon River near Cannon Falls, Minn.	Lat 44°28'25", long 92°55'53", in SE¼SW¼ sec.25, T.112 N., R.18 W., Goodhue County, at bridge on county highway, 2.5 miles south of Cannon Falls.	85.0	5- 2-66	46.5			8-26-68	21.0					
				6- 7-66	41.8			11- 6-68	48.2					
				6-29-66	20.1			8- 9-69	20.1					
				8- 8-66	13.4			9-15-69	14.2					
				8-29-66	11.2			9-25-69	16.0	530				
				9-26-66	11.3			10-21-69	18.0					
				10-21-66	14.5			5- 5-70	42.0	625				
				4-24-67	29.2			6- 2-70	139	610				
				5-19-67	23.2			7- 3-70	33.2					
				7- 7-67	21.0			8- 4-70	20.9					
				7-25-67	14.4			8-25-70	12.4					
				8-29-67	12.6			9-11-70	17.5					
				9-27-67	10.7			10-15-70	46.5					
				10-31-67	14.5			11-20-70	86.5					
				4-19-68	5.83			9- 5-74	14.8	565				
				5-13-68	11.4			10- 8-75	18.6					
				7- 5-68	23.9			10- 7-76	12.4	570				
				8- 8-68	29.4									
				05355150	Pine Creek near Cannon Falls, Minn.	Lat 44°32'27", long 92°53'40", in NE¼NE¼ sec.6, T.112 N., R.17 W., Goodhue County, at culvert on State Highway 20, 2.0 miles upstream from mouth, and 2.1 miles north of Cannon Falls. (Annual maximums available since 1960)	20.2	10-15-59	9.89			3-15-63	8.35	
								5-20-60	7.18			4-19-63	3.68	
6-18-60	10.1							5-17-63	3.72					
7- 7-60	7.86							6-14-63	2.48					
8- 1-60	7.01							7-22-63	2.59					
9-27-60	5.54							8-15-63	3.00					
10-22-60	6.39							9-19-63	2.86					
3-17-61	5.52							10- 4-63	2.34					
4-29-61	8.07							11-19-63	2.11					
6-15-61	7.41							3-20-64	2.32					
7-12-61	5.39							4-16-64	2.10					
8-14-61	3.94							5-15-64	2.61					
9- 5-61	4.49							7-17-64	1.35					
10-16-61	4.50							9- 3-65	3.70					
11-17-61	4.46							10- 7-68	3.23					
5- 7-62	7.50							3-25-70	4.39					
5-26-62	7.85							5- 5-70	4.90					
6-23-62	6.18							7- 3-70	8.01					
7-21-62	5.16							8- 4-70	7.71					
8-17-62	5.05							8-25-70	4.55					
9-14-62	5.58			8- 5-71	6.46									
10-13-62	5.11			5-23-72	7.40									
11-12-62	5.26			8-18-75	6.67									
*05355215	Belle Creek near Vasa, Minn.	Lat 44°32'01", long 92°44'11", in NE¼SE¼ sec.4, T.112 N., R.16 W., Goodhue County, at bridge on County Highway 7, 2 miles northwest of Vasa.	72.4	8-24-65	12.0			8- 8-68	14.7					
				5- 5-66	15.6			9-10-68	19.1					
				6- 7-66	30.8			11- 5-68	24.0	460				
				6-29-66	11.4			8- 9-69	11.7					
				8-29-66	5.25			9-15-69	10.0	520				
				9-29-66	6.44			9-25-69	11.0	460				
				11- 7-66	7.31			10-21-69	14.4					
				11-25-66	7.94			5- 4-70	22.9					
				5- 5-67	15.8			7- 6-70	18.7					
				5-22-67	9.88			8- 3-70	14.6					
				7- 7-67	10.1			8-25-70	9.87					
				7-25-67	6.99			9-16-70	21.8					
				8-29-67	7.29			10-16-70	22.6					
				9-27-67	5.39			11-23-70	30.7					
				4-19-68	0			9-18-74	0					
				5-13-68	5.54			10- 8-75	15.7					
				7- 5-68	13.0			10- 7-76	12.5	520				
				Spring Creek basin										
				05355260	Spring Creek near Red Wing, Minn.	Lat 44°33'42", long 92°36'42", on line between secs.27 and 28, T.113 N., R.15 W., Goodhue County, at bridge on County Highway 53, 4 miles west of Red Wing.	23.1	9-24-69	3.07	470		9-18-74	6.30	
								8-20-70	2.80			10- 8-75	6.36	
8-13-71	4.92	460						10- 1-76	5.84	470				

\* High-flow measurements are also available in Geological Survey files.

Table 2.--Low-flow measurements at partial-record stations.

Station No.	Station Name	Location	Drainage	Date	Discharge (ft <sup>3</sup> /s)	Measurements		Date	Discharge (ft <sup>3</sup> /s)	Specific Conductance (micromhos/cm at 25°C)
			Area (mi <sup>2</sup> )			Specific Conductance (micromhos/cm at 25°C)				
Hay Creek basin										
*05355280	Hay Creek at Red Wing, Minn.	Lat 44°33'09", long 92°33'46", in SE¼NW¼ sec.36, T.113 N., R.15 W., Goodhue County, at bridge on county road in Red Wing, 1.9 miles upstream from mouth.	45.6	5-20-40	15.1			4-29-41	15.7	
				6- 4-40	17.6			5-29-41	13.7	
				6-24-40	38.4			6-23-41	10.4	
				8-10-40	15.2			8- 5-41	12.4	
				9- 9-40	11.0			9-24-69	15.0	470
				10- 8-40	12.4			8-20-70	14.8	
				11- 5-40	14.4			8-13-71	19.3	1,900
				12-19-40	16.6			9-18-74	27.4	
				1-12-41	15.5			10- 7-75	29.1	
				2- 5-41	13.7			10- 1-76	25.5	1,300
				3-13-41	17.4					
Wells Creek basin										
05355350	Wells Creek near Frontenac, Minn.	Lat 44°30'32", long 92°19'26", in NE¼NW¼ sec.13, T.112 N., R.13 W., Goodhue County, at bridge on county road leading to Old Frontenac, 1.2 miles south of Old Frontenac, and 1.6 miles east of Frontenac.	68.9	9-24-69	17.8	465		9-18-74	29.4	
				6-24-70	24.9	500		10- 7-75	33.1	
				8-13-71	21.8	500		10- 5-76	30.3	450
Miller Creek basin										
05355360	Miller Creek near Lake City, Minn.	Lat 44°25'51", long 92°16'35", in NW¼SE¼ sec.8, T.111 N., R.12 W., Wabasha County, at bridge on County Highway 9, 1.3 miles south of Lake City.	14.6	9-24-69	2.06	495		9-18-74	4.62	
				6-24-70	2.38	520		10- 8-75	4.44	
				8-12-71	2.58	465		10- 5-76	3.69	420
Mississippi River main stem										
*05371500	Mississippi River at Wabasha, Minn.	Lat 44°23'07", long 92°01'58", in SE¼ sec.29, T.111 N., R.10 W., Wabasha County, at Wabasha, 3 miles downstream from Chippewa River, and at mile 760 upstream from Ohio River. (Site of continuous-record gaging station, 1934)	a56,600	6- 6-34	7,820			8-31-34	4,410	
				8- 1-34	4,770			9-22-34	5,740	
Zumbro River basin										
05372800	South Fork Zumbro River on Belt Line at Rochester, Minn.	Lat 44°00'26", long 92°28'19", in SE¼SW¼ sec.2, T.106 N., R.14 W., Olmsted County, at bridge on west-bound lane of U.S. Highway 14 at Rochester, 1.5 miles upstream from Bear Creek. (Annual maximums available since 1969)	155	8-20-68	26.4			3-19-69	46.3	
				11-15-68	38.7			5-27-69	71.5	
05372930	Bear Creek at Rochester, Minn.	Lat 44°00'29", long 92°26'44", in SW¼SE¼ sec.1, T.106 N., R.14 W., Olmsted County, at bridge on U.S. Highway 14 and 52, in Rochester, and 1.2 miles upstream from mouth. (Annual maximums available since 1969)	80.0	3- 2-65	74.9			6- 5-70	99.5	
				8-20-68	20.6			8-10-71	38.4	500
				4-23-69	66.9			9-24-74	26.1	516
				7- 1-69	75.3			9-30-76	8.98	500
05372950	Silver Creek at Rochester, Minn.	Lat 44°01'44", long 92°25'44", in SW¼NE¼ sec.31, T.107 N., R.13 W., Olmsted County, at bridge on county road at east edge of Rochester, 1.7 miles upstream from mouth. (Annual maximums available since 1969)	17.3	8-20-68	3.41			4-18-75	21.6	440
				7- 1-69	9.79			7-19-76	0	
				6- 4-70	15.0			8- 3-76	0	
				8-11-71	4.85	540		8-23-76	0	
				4- 6-72	3.86			9-30-76	0	
				10-24-72	21.4	510		10- 8-76	0	
9-24-74	.16	537								
05372990	Cascade Creek at Rochester, Minn.	Lat 44°01'51", long 92°28'18", in SE¼NW¼ sec.35, T.107 N., R.14 W., Olmsted County, at bridge on 7th Street Northwest in Rochester, 0.6 mile upstream from mouth. (Annual maximums available since 1969)	37.0	8-20-68	1.97			8-10-71	3.69	750
				10-11-68	20.3			9-23-74	4.65	778
				7- 1-69	21.5			9-30-76	1.71	650

\* High-flow measurements are also available in Geological Survey files.

a Approximately.

Table 2.--Low-flow measurements at partial-record stations.

Station No.	Station Name	Location	Drainage Area (mi <sup>2</sup> )	Date	Discharge (ft <sup>3</sup> /s)	Measurements		Discharge (ft <sup>3</sup> /s)	Specific Conductance (micromhos/cm at 25°C)
						Date	Specific Conductance (micromhos/cm at 25°C)		
Zumbro River basin--Continued									
05373100	Milliken Creek near Concord, Minn.	Lat 44°08'04", long 92°46'07", in SW <sup>1</sup> / <sub>4</sub> NE <sup>1</sup> / <sub>4</sub> sec.29, T.108 N., R.16 W., Dodge County, at bridge on County Highway 22, 3.5 miles southeast of Concord.	28.6	8-20-70 8-10-71	.36 1.09	475	9-25-74 9-28-76	.98 .14	515 550
*05373130	North Branch Middle Fork Zumbro River at Pine Island, Minn.	Lat 44°12'10", long 92°38'45", in SW <sup>1</sup> / <sub>4</sub> NW <sup>1</sup> / <sub>4</sub> sec.32, T.109 N., R.15 W., Goodhue County, at bridge on Main Street in Pine Island, 0.3 mile upstream from Middle Fork Zumbro River.	58.6	8-20-70 8-11-71 9-25-74	5.03 8.35 6.83	430 537	11-25-74 10- 1-76	4.92 1.21	530
05373150	Middle Fork Zumbro River near Oronoco, Minn.	Lat 44°10'10", long 92°34'24", in SW <sup>1</sup> / <sub>4</sub> SW <sup>1</sup> / <sub>4</sub> sec.12, T.108 N., R.15 W., Olmsted County, at bridge on County Highway 31, 2 miles west of Oronoco.	203	9-23-69 6- 5-70 8-11-71	19.3 153 32.6	480 600 480	9-25-74 9-30-76	30.5 10.2	558 560
05373200	Dodge Center Creek near Dodge Center, Minn.	Lat 44°01'48", long 92°53'14", in SW <sup>1</sup> / <sub>4</sub> NE <sup>1</sup> / <sub>4</sub> sec.32, T.107 N., R.17 W., Dodge County, at bridge on County Road H, 1.5 miles west of Dodge Center.	77.5	8-19-70 8-10-71	1.75 3.84	820	9-26-74 9-28-76	2.97 .38	557 530
05373290	South Branch Middle Fork Zumbro River near Oronoco, Minn.	Lat 44°08'35", long 92°35'51", in NW <sup>1</sup> / <sub>4</sub> SW <sup>1</sup> / <sub>4</sub> sec.23, T.108 N., R.15 W., Olmsted County, at bridge on County Highway 3, 3.5 miles southwest of Oronoco.	a210	9-23-69 6- 5-70 8-19-70	18.8 156 17.1	570 615	8-11-71 9-25-74 9-30-76	26.8 28.3 7.56	560 605 550
05373400	Dry Run Creek near Oronoco, Minn.	Lat 44°11'33", long 92°30'17", in NW <sup>1</sup> / <sub>4</sub> NE <sup>1</sup> / <sub>4</sub> sec.4, T.108 N., R.14 W., Olmsted County, at bridge on county road, 2 miles northeast of Oronoco.	29.3	8-19-70 8-11-71	3.96 4.38	530	9-25-74 9-30-76	6.36 4.68	563 490
05373850	North Fork Zumbro River at Mazeppa, Minn.	Lat 44°16'00", long 92°32'58", in NW <sup>1</sup> / <sub>4</sub> NW <sup>1</sup> / <sub>4</sub> sec.7, T.109 N., R.14 W., Wabasha County, at bridge on County Highway 1, at southwest edge of Mazeppa.	174	9-23-69 6- 5-70 8-12-71	33.8 135 37.2	530 625 580	9- 6-74 10-14-76	38.9 26.7	550
05373950	Trout Brook near Mazeppa, Minn.	Lat 44°16'34", long 92°31'16", in SW <sup>1</sup> / <sub>4</sub> NE <sup>1</sup> / <sub>4</sub> sec.5, T.109 N., R.14 W., Wabasha County, at bridge on State Highway 60, 1.3 miles east of Mazeppa.	53.8	9-23-69 6-26-70 8-12-71	8.56 12.1 12.7	470 505 495	9- 6-74 10-14-76	16.4 12.2	495
*05373995	Cold Creek at Zumbro Falls, Minn.	Lat 44°17'18", long 92°26'02", in SE <sup>1</sup> / <sub>4</sub> NE <sup>1</sup> / <sub>4</sub> sec.36, T.110 N., R.14 W., Wabasha County, at triple box culvert on State Highway 60, 0.2 mile upstream from mouth, and 0.6 mile northwest of Zumbro Falls.	45.9	2-10-16 9-23-69 6-26-70	7.87 6.43 7.46	440 480	8-12-71 9- 6-74 10- 6-76	11.0 17.2 13.0	485 485 450
05374420	Long Creek near Millville, Minn.	Lat 44°15'58", long 92°14'24", in SW <sup>1</sup> / <sub>4</sub> SE <sup>1</sup> / <sub>4</sub> sec.3, T.109 N., R.12 W., Wabasha County, at bridge on new road along right bank of Zumbro River, 0.2 mile upstream from mouth, and 3.2 miles northeast of Millville.	33.0	6-24-70 8-12-71	5.02 7.16	520 490	9- 6-74 10- 6-76	13.7 7.32	520 500
05374450	Middle Creek near Theilman, Minn.	Lat 44°15'58", long 92°13'39", on line between secs.2 and 11, T.109 N., R.12 W., Wabasha County, at bridge on county road, 0.7 mile upstream from mouth, 2.5 miles southwest of Theilman, and 3.7 miles northeast of Millville.	17.2	6-24-70 8-12-71	3.73 4.58	465 450	9-18-74 10- 6-76	12.2 5.92	460

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a Approximately.

Table 2.--Low-flow measurements at partial-record stations.

Station No.	Station Name	Location	Drainage	Date	Discharge (ft <sup>3</sup> /s)	Measurements		Date	Discharge (ft <sup>3</sup> /s)	Specific Conductance (micromhos/cm at 25°C)
			Area (mi <sup>2</sup> )			Specific Conductance (micromhos/cm at 25°C)				
Zumbro River basin--Continued										
05374480	Spring Creek near West Albany, Minn.	Lat 44°18'06", long 92°14'36", in NE¼SW¼ sec.27, T.110 N., R.12 W., Wabasha County, at bridge on County Highway 11, 0.8 mile upstream from mouth, and 2.2 miles east of West Albany.	63.6	9-23-69	8.20	490		9- 6-74	18.7	490
				5-22-70	8.76	500		10- 6-76	15.3	510
				8-12-71	11.4	510				
05374500	Zumbro River at Theilman, Minn.	Lat 44°17'15", long 92°11'25", in sec.36, T.110 N., R.12 W., Wabasha County, 0.2 mile upstream from bridge, and 1 mile upstream from West Indian Creek. (Site of continuous-record gaging station, 1938-56)	a1,320	6-12-36	419			10-21-60	314	
				7-17-36	188			11-28-60	194	
				11- 7-56	228			5- 1-61	281	
				10-21-59	327			6-26-61	199	
				11-23-59	273			7-25-61	173	
				12-16-59	375			9- 5-61	344	
				8- 5-60	208			10-31-61	384	
	9-22-60	310								
05374520	West Indian Creek at Theilman, Minn.	Lat 44°17'21", long 92°10'58", in SE¼NW¼ sec.31, T.110 N., R.11 W., Wabasha County, at bridge on County Highway 4, 0.3 mile upstream from mouth, and 0.5 mile east of Theilman.	26.4	6-24-70	7.43	515		9- 6-74	11.1	450
				8-12-71	8.75	475		10- 5-76	10.9	400
05374600	Trout Brook at Dumfries, Minn.	Lat 44°20'49", long 92°06'53", in SW¼NE¼ sec.10, T.110 N., R.11 W., Wabasha County, at bridge on State Highway 60, 0.3 mile east of intersection of County Highway 30 and State Highway 60 in Dumfries, and 1.2 miles upstream from mouth.	21.6	9-23-69	0			9-18-74	.54	
				5-22-70	.21	610		10- 5-76	0	
05374900	Zumbro River at Kellogg, Minn.	Lat 44°18'43", long 92°00'14", in SW¼ sec.22, T.110 N., R.10 W., Wabasha County, at bridge on U.S. Highway 61 at Kellogg, 4 miles upstream from mouth. (Site of continuous-record gaging station since 1975)	a1,400	6-24-32	325			9- 9-35	344	
				9- 7-32	222			8-19-70	330	
				3-24-33	433			8-12-71	440	505
Gorman Creek basin										
05375000	Gorman Creek near Kellogg, Minn.	Lat 44°17'34", long 91°59'21", on line between secs.34 and 35, T.110 N., R.10 W., Wabasha County, at bridge on U.S. Highway 61, 1.1 miles southeast of Kellogg.	16.6	9-24-69	.81	480		9-18-74	1.60	
				5-22-70	.65	500		10- 8-76	1.44	500
				8-20-71	.93	520				
Whitewater River basin										
05376200	Middle Fork Whitewater River at Elba, Minn.	Lat 44°04'51", long 92°01'39", in SW¼SE¼ sec.9, T.107 N., R.10 W., Winona County, at bridge on State Highway 74, at Elba, and 0.7 mile upstream from North Fork Whitewater River.	53.4	9-22-69	16.2	460		8-20-71	23.6	496
				5-22-70	20.7	495		10- 7-76	23.7	480
05376500	South Fork Whitewater River near Altura, Minn.	Lat 44°04'10", long 91°58'49", in SE¼ sec.14, T.107 N., R.10 W., Winona County, 500 feet upstream from bridge on county road, 2 miles west of Altura, and 2.4 miles upstream from Keefer Creek. (Site of continuous-record gaging station, 1939-71; annual maximums available since 1973)	76.8	10-13-71	18.3	475				
05377000	Beaver Creek at Beaver, Minn.	Lat 44°09'10", long 92°01'00", in NW¼SE¼ sec.15, T.108 N., R.10 W., Winona County, at bridge on State Highway 74, at Beaver. (Site of continuous-record gaging station, 1939-40)	15.4	11-19-40	8.46			5- 8-41	8.74	
				12-17-40	7.02			6-26-41	7.09	
				1-14-41	7.72			7-31-41	7.31	
				2-10-41	8.80			4- 3-50	11.7	
				3-11-41	9.80			3- 7-56	11.7	
				3-23-41	9.27					

a Approximately.

Table 2.--Low-flow measurements at partial-record stations.

Station No.	Station Name	Location	Drainage Area (mi <sup>2</sup> )	Date	Discharge (ft <sup>3</sup> /s)	Measurements		Date	Discharge (ft <sup>3</sup> /s)	Specific Conductance (micromhos/cm at 25°C)
						Specific Conductance (micromhos/cm at 25°C)				
Whitewater River basin--Continued										
*05377500	Whitewater River at Beaver, Minn.	Lat 44°09'28", long 92°00'18", in sec.15, T.108 N., R.10 W., Winona County, 500 feet downstream from Beaver Creek, and 0.5 mile northeast of Beaver. (Site of continuous-record gaging station, 1939-56)	288	6-12-36	102			8-22-38	83.6	
				7-17-36	60.9			3- 2-39	99.0	
				3-29-37	111			6-21-39	104	
				8- 4-37	115			7-12-39	75.0	
				9- 1-37	70.2			8- 9-39	74.9	
				4- 6-38	79.3			9-12-39	70.3	
*05377510	Whitewater River at Weaver, Minn.	Lat 44°12'40", long 91°55'36", in SE¼SW¼ sec.29, T.109 N., R.9 W., Wabasha County, at bridge on old U.S. Highway 61, 100 feet upstream from new Route 61 bridge, and 0.6 mile southeast of Weaver.	a310	6-24-32	102			9-10-40	64.9	
				7-22-32	73.3			11- 5-40	80.8	
				9- 7-32	74.2			12-18-40	84.6	
				12- 2-32	82.4			2- 5-41	85.2	
				3-24-33	91.8			3-14-41	121	
				4- 2-33	296			5- 8-41	100	
				4-14-33	122			6-23-41	101	
				3-16-35	167			8- 4-41	70.0	
				3-17-35	126			9- 5-41	66.1	
				5-13-35	162			9-24-41	85.0	
				5-14-35	106			10-25-41	94.7	
				9- 9-35	93.0			11-25-41	96.7	
				12-17-39	76.4			12-21-41	84.8	
				1-16-40	66.4			2-21-42	77.6	
				2- 9-40	54.8			5-10-71	178	
				3- 5-40	77.2			8-20-71	116	490
				6-25-40	87.5			9-18-74	163	
				8- 4-40	78.5					
Mississippi River main stem										
05378000	Mississippi River at lock and dam No. 5, near Minnesota City, Minn.	Lat 44°09'35", long 91°48'45", in NW¼ sec.17, T.108 N., R.8 W., Winona County, at U.S. lock and dam No. 5, 0.7 mile north of Whitman, and 5 miles northwest of Minnesota City. (Site of continuous-record gaging station, 1930-31)	58,800	9-10-35	15,200			6- 1-36	23,800	
				9-18-35	13,200			6-29-36	11,300	
				10- 4-35	11,300			5-28-41	18,000	
				11- 4-35	22,500			8-21-41	11,400	
				12- 3-35	9,830			8-22-41	10,500	
				2-17-36	7,830			11- 1-66	22,000	
				2-25-36	10,600			11- 4-66	19,200	
Garvin Brook basin										
*05378240	Garvin Brook at Minnesota City, Minn.	Lat 44°05'07", long 91°45'36", on line between secs.10 and 11, T.107 N., R.8 W., Winona County, at bridge on one lane road, 0.5 mile upstream from mouth, and 0.6 mile southwest of Minnesota City.	47.7	9- 9-35	47.2			5-21-70	21.8	490
				9-23-69	9.29	470		8-19-71	20.6	450
05378400	Rollingstone Creek near Minnesota City, Minn.	Lat 44°05'52", long 91°46'44", in NW¼SW¼ sec.3, T.107 N., R.8 W., Winona County, at bridge on county road, 1.4 miles west of Minnesota City.	49.7	9-23-69	17.8	495		8-19-71	19.6	480
				5-21-70	18.1	490		10- 7-76	20.2	460
Mississippi River main stem										
05378500	Mississippi River at Winona, Minn.	Lat 44°03'20", long 91°38'15", in sec.23, T.107 N., R.7 W., Winona County, at pumping station in Winona, 9.5 miles upstream from Trempealeau River, and at mile 725.7 upstream from Ohio River. (Site of continuous-record gaging station since 1928)	a59,200	9- 4-12	27,800					
Gilmore Creek basin										
05379000	Gilmore Creek at Winona, Minn.	Lat 44°02'40", long 91°41'25", in SE¼NW¼ sec.29, T.107 N., R.7 W., Winona County, at bridge on U.S. Highway 14 at west edge of Winona, 2.2 miles upstream from Lake Winona, and 6.5 miles upstream from mouth. (Site of continuous-record gaging station, 1939-63; annual maximums available, 1964-65)	8.95	5-10-71	2.73			8-19-71	1.90	505

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a Approximately.

Table 2.--Low-flow measurements at partial-record stations.

Station No.	Station Name	Location	Drainage Area (mi <sup>2</sup> )	Date	Discharge (ft <sup>3</sup> /s)	Measurements		Date	Discharge (ft <sup>3</sup> /s)	Specific Conductance (micromhos/cm at 25°C)
						Specific Conductance (micromhos/cm at 25°C)				
Burns Valley Creek basin										
*05379050	Burns Valley Creek at Winona, Minn.	Lat 44°01'30", long 91°37'15", in NE¼SE¼ sec.35, T.107 N., R.7 W., Winona County, at bridge on County Highway 17, at southeast edge of Winona.	14.3	3-11-67	9.84			5-21-70	5.41	495
				4-22-68	6.41			8-19-71	5.94	480
				3-28-69	9.08			10- 8-76	7.04	420
				9-23-69	5.29	475				
Pleasant Valley Creek basin										
*05379090	Pleasant Valley Creek at Winona, Minn.	Lat 44°01'12", long 91°36'08", on line between sec.36, T.107 N., R.7 W., and sec.1, T.106 N., R.7 W., Winona County, at bridge on County Highway 15, at southeast edge of Winona.	12.0	3-11-67	8.17			5-21-70	4.97	510
				4-22-68	7.59			8-19-71	5.78	495
				3-28-69	7.87			10- 8-76	7.43	500
				9-23-69	4.77	495				
Mississippi River main stem										
05380500	Mississippi River at Lamoyille, Minn.	Lat 44°00'23", long 91°28'38", in SW¼ sec.6, T.106 N., R.5 W., Winona County, at Lamoyille, at mouth of Trempealeau River, 0.9 mile downstream from Cedar Creek, 2 miles west of Trempealeau, Wis., and at mile 716 upstream from Ohio River. (Site of continuous-record gaging station, 1930-31)	a60,000	6-23-36	12,900			8- 6-36	5,750	
				6-25-36	12,600			9-30-36	7,530	
				7-13-36	8,380			11-12-36	8,930	
				7-17-36	8,400			12- 2-36	6,210	
				7-23-36	6,400			12-29-36	10,600	
				7-27-36	6,010					
Pine Creek basin										
05383520	Pine Creek at La Crescent, Minn.	Lat 43°49'04", long 91°19'30", in NE¼NW¼ sec.16, T.104 N., R.4 W., Houston County, at bridge on County Highway 25, 1 mile southwest of La Crescent.	55.2	5-10-71	26.7			10- 8-76	26.9	480
				8-19-71	25.5	470				
Root River basin										
05383740	North Branch Root River near Chatfield, Minn.	Lat 43°49'21", long 92°10'24", in SE¼SE¼ sec.8, T.104 N., R.11 W., Fillmore County, at bridge on County Highway 5, 1.6 miles upstream from Middle Branch Root River, and 1.7 miles southeast of Chatfield.	a225	9-22-69	36.6	500		8-17-71	40.2	505
				5-20-70	130	515		10-14-76	25.8	
05383900	Middle Branch Root River near Chatfield, Minn.	Lat 43°48'24", long 92°11'18", on line between secs.17 and 18, T.104 N., R.11 W., Fillmore County, at bridge on County Highway 7, 1 mile upstream from North Branch Root River, and 2.7 miles south of Chatfield.	a250	9-22-69	44.7	495		8-17-71	37.2	465
				5-20-70	136	510		10-14-76	19.6	
05383940	Trout Run near Pilot Mound, Minn.	Lat 43°49'04", long 92°02'59", in NE¼NE¼ sec.17, T.104 N., R.10 W., Fillmore County, at bridge on State Highway 30, 1.3 miles west of Pilot Mound.	30.3	5-11-71	29.2			10-14-76	27.2	
				8-17-71	27.6	490				
*05384000	Root River near Lanesboro, Minn.	Lat 43°44'58", long 91°58'43", in sec.1, T.103 N., R.10 W., Fillmore County, 0.5 mile upstream from bridge on State Highway 250, 1.2 miles upstream from South Branch, and 2.5 miles northeast of Lanesboro. (Site of continuous-record gaging station, 1910-17, and since 1940)	615	6-23-39	139			3- 6-40	121	
				9-13-39	105			4-19-40	153	
				12-13-39	100			5-24-40	127	
				1-10-40	54.7			6-26-40	115	
				2-10-40	105					

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a Approximately.

Table 2.--Low-flow measurements at partial-record stations.

Station No.	Station Name	Location	Drainage Area (mi <sup>2</sup> )	Date	Discharge (ft <sup>3</sup> /s)	Measurements		Date	Discharge (ft <sup>3</sup> /s)	Specific Conductance (micromhos/cm at 25°C)
						Specific Conductance (micromhos/cm at 25°C)				
Root River basin--Continued										
*05384120	South Branch Root River at Lanesboro, Minn.	Lat 43°43'19", long 91°58'43", in NW¼SE¼ sec.13, T.103 N., R.10 W., Fillmore County, at West Coffe Street bridge leading to ball park in Lanesboro, 2.5 miles upstream from mouth. (Annual maximums available since 1973)	a297	10-28-15	170			10-24-41	90.8	
				12-13-39	15.0			11-28-41	91.6	
				1-11-40	14.7			12-19-41	98.2	
				2-10-40	15.9			1-19-42	41.8	
				3- 6-40	78.3			2-20-42	72.2	
				5-24-40	13.6			3-24-42	334	
				6-26-40	89.1			3-26-42	349	
				9- 7-40	69.4			3-31-42	210	
				11- 9-40	94.0			4-28-42	126	
				12-15-40	15.1			6- 3-42	320	
				1-15-41	36.1			7-24-42	155	
				2- 9-41	63.7			9- 3-42	264	
				3-12-41	222			9-22-42	187	
				3-13-41	164			6-29-67	143	
				5-21-41	84.1			8-17-71	85.2	495
				6-24-41	121			7-24-73	213	575
				7-26-41	58.9			9-18-74	129	
				7-28-41	12.4			5-20-75	274	460
				8-30-41	7.72			8-12-75	128	525
				9-19-41	95.8			9-23-76	67.7	490
05384450	Pine Creek near Rushford, Minn.	Lat 43°51'12", long 91°48'16", in NW¼SE¼ sec.32, T.105 N., R.8 W., Winona County, at bridge on County Highway 2, 4.5 miles northwest of Rushford.	49.4	5-11-71	15.7			9-23-76	13.0	520
				8-18-71	11.8	460				
*05384500	Rush Creek near Rushford, Minn.	Lat 43°50'00", long 91°46'40", on line between secs.3 and 10, T.104 N., R.8 W., Fillmore County, at bridge on county road, 1.5 miles northwest of Rushford, and 3 miles upstream from mouth. (Site of continuous-record gaging station since 1942)	129	5-24-40	33.8			6-24-41	36.6	
				6-26-40	32.8			8-29-41	29.4	
				8- 3-40	34.5			9-19-41	37.6	
				9- 7-40	32.3			10-20-41	39.0	
				10- 2-40	32.4			11-29-41	34.9	
				11- 6-40	32.6			12-19-41	31.3	
				12-16-40	35.8			1-19-42	34.0	
				1-17-41	37.0			2-21-42	32.5	
				2- 6-41	33.8			3-23-42	51.4	
				3-12-41	39.1			4-28-42	33.3	
				3-14-41	41.9			8- 5-42	38.1	
				4-21-41	36.4					
05384900	Money Creek near Houston, Minn.	Lat 43°47'42", long 91°35'40", in NE¼SE¼ sec.19, T.104 N., R.6 W., Houston County, at bridge on State Highway 76, 2.7 miles northwest of Houston.	74.2	9-23-69	23.3	500		9-19-74	40.2	
				5-21-70	27.5	530		9-23-76	24.2	530
				8-18-71	25.0	490				
05385300	Riceford Creek at Yucatan, Minn.	Lat 43°40'52", long 91°41'13", in SW¼NW¼ sec.33, T.103 N., R.7 W., Houston County, at bridge on county road, 0.4 mile east of Yucatan, and 0.7 mile upstream from mouth.	61.1	5-11-71	33.1			9-19-74	38.9	
				8-18-71	25.5	480		9-24-76	23.8	520
05385400	Beaver Creek near Sheldon, Minn.	Lat 43°42'24", long 91°36'01", in NW¼SE¼ sec.19, T.103 N., R.6 W., Houston County, at bridge on County Highway 10, 1.3 miles upstream from mouth, and 2 miles north of Sheldon.	52.6	5-11-71	25.0			9-19-74	31.1	
				8-18-71	23.9	465		9-23-76	25.2	500
*05385900	South Fork Root River at Houston, Minn.	Lat 43°45'53", long 91°32'07", in SE¼ sec.34, T.104 N., R.6 W., Houston County, at bridge on U.S. Highway 16, 1 mile east of Houston.	a299	10- 2-36	72.7			7-13-39	81.9	
				10-22-36	83.8			7-28-39	82.8	
				5-20-37	91.7			9-13-39	87.7	
				6-22-37	116			10-21-39	77.3	
				8-31-37	69.6			12-14-39	58.7	
				4-27-38	84.3			1-14-40	61.7	
				6-22-38	84.1			2-13-40	76.8	
				8- 9-38	113			3- 6-40	78.7	
				8-22-38	126			4-18-40	120	
				10-15-38	107			5-23-40	82.9	
				3- 3-39	103			6- 9-40	88.5	
				4- 5-39	129			10-10-40	74.6	
				4-21-39	138			12-15-43	109	
				5- 6-39	115			1-17-44	94.7	
				6-23-39	76.3			12- 2-47	128	
				6-29-39	84.4					

\* High-flow measurements are also available in Geological Survey files.  
a Approximately.

Table 2.--Low-flow measurements at partial-record stations.

Station No.	Station Name	Location	Drainage	Date	Discharge (ft <sup>3</sup> /s)	Measurements		Date	Discharge (ft <sup>3</sup> /s)	Specific Conductance (micromhos/cm at 25°C)
			Area (mi <sup>2</sup> )			Specific Conductance (micromhos/cm at 25°C)				
Root River basin--Continued										
05386050	Silver Creek near Houston, Minn.	Lat 43°47'10", long 91°29'52", in NW¼NE¼ sec.25, T.104 N., R.6 W., Houston County, at bridge on County Highway 21, 4 miles northeast of Houston.	17.3	5-11-71 8-18-71	9.01 7.29	505		9-19-74 9-24-76	9.84 6.35	555
Crooked Creek basin										
05387040	Crooked Creek at Reno, Minn.	Lat 43°35'22", long 91°16'47", in SW¼SE¼ sec.35, T.102 N., R.4 W., Houston County, at bridge on State Highway 26, 0.8 mile southwest of Reno.	69.7	5-10-71 8-19-71	30.4 27.6	460		9-24-76	27.8	510
Mississippi River main stem										
05387050	Mississippi River at Genoa, Wis.	Lat 43°34'23", long 91°13'42", in E½ sec.29, T.13 N., R.7 W., Vernon County, at lock and dam No. 8 at Genoa, 3.1 miles southeast of Reno, Minn., 4.5 miles upstream from Bad Axe River and at mile 678 upstream from Ohio River. (Site of continuous-record gaging station, 1930-31)	a64,700	7-21-37 7-29-37	8,600 9,640			7-28-66 11- 3-66	17,500 16,700	
Winnebago Creek basin										
05387200	Winnebago Creek near New Albin, Iowa	Lat 43°31'04", long 91°18'28", in SW¼SW¼ sec.27, T.101 N., R.4 W., Houston County, at bridge on County Highway 5, 1.3 miles northwest of New Albin.	59.0	9-24-69 5-21-70	25.7 27.5	460 455		8-19-71 9-24-76	33.2 30.8	460 500
Upper Iowa River basin										
05387240	Upper Iowa River near LeRoy, Minn.	Lat 43°31'38", long 92°32'12", in NW¼NE¼ sec.29, T.101 N., R.14 W., Mower County, at bridge on county road, 2 miles northwest of LeRoy.	36.1	5-11-71 9-15-71	8.25 2.37	415		9-19-74 9-22-76	4.19 2.05	488
05387250	Little Iowa River near LeRoy, Minn.	Lat 43°31'57", long 92°31'06", in SW¼SE¼ sec.21, T.101 N., R.14 W., Mower County, at bridge on county road in Lake Louise State Park, 1.7 miles northwest of LeRoy.	26.8	9-25-69 9-19-74	1.63 1.76	440		9-22-76	.24	390
05387270	Beaver Creek near LeRoy, Minn.	Lat 43°30'28", long 92°23'25", in SE¼NE¼ sec.33, T.101 N., R.13 W., Fillmore County, at bridge on State Highway 56, 1.5 miles northwest of Chester, Iowa, and 5.8 miles east of LeRoy.	26.4	5-11-71 9-16-71	5.43 .84	435		9-22-76	.39	450
Iowa River basin										
05455900	Cedar River near Blooming Prairie, Minn.	Lat 43°51'47", long 93°00'24", on line between secs.29 and 32, T.105 N., R.18 W., Dodge County, at bridge on County Highway 2, 2.1 miles east of Blooming Prairie.	81.6	5-12-71 9- 8-71 9-14-71	10.6 1.05 1.23	525 505		9-18-74 9-22-76	2.66 .50	588
05455930	Roberts Creek near Lansing, Minn.	Lat 43°45'32", long 92°56'59", on line between secs.1 and 2, T.103 N., R.18 W., Mower County, at bridge on county road, 0.4 mile upstream from mouth, and 1.4 miles northeast of Lansing.	39.9	9-25-69 9- 8-71 9-14-71	1.37 .61 .96	430 420 450		9-18-74 9-21-76	1.59 .46	510

a Approximately.

Table 2.--Low-flow measurements at partial-record stations.

Station No.	Station Name	Location	Drainage Area (mi. <sup>2</sup> )	Date	Discharge (ft <sup>3</sup> /s)	Measurements		Date	Discharge (ft <sup>3</sup> /s)	Specific Conductance (micromhos/cm at 25°C)
						Specific Conductance (micromhos/cm at 25°C)				
Iowa River basin--Continued										
05455960	Wolf Creek at Austin, Minn.	Lat 43°41'28", long 92°57'36", in SW¼SE¼ sec.26, T.103 N., R.18 W., Mower County, at bridge on County Highway 25, in Todd Park at Austin, and 0.3 mile upstream from mouth.	10.6	9-24-69	b.02			9-18-74	.33	505
				9- 8-71	.73	460		9-21-76	.43	
				9-14-71	.56	460				
05456500	Turtle Creek near Austin, Minn.	Lat 43°41'05", long 93°02'15", in NE¼NW¼ sec.31, T.103 N., R.18 W., Mower County, at bridge on county road, 3 miles northwest of Austin, and 5.6 miles upstream from mouth. (Site of continuous-record gaging station, 1947-51)	144	9-25-69	14.5	660		9-14-71	10.4	640
				9- 8-71	4.69	630				
05457160	Rose Creek near Austin, Minn.	Lat 43°36'48", long 92°58'10", on line between secs.26 and 27, T.102 N., R.18 W., Mower County, at bridge on County Highway 29, 0.3 mile upstream from mouth, and 3.8 miles south of Austin.	65.8	9-25-69	6.40	420		9-18-74	5.98	455
				9-14-71	5.34	420		9-21-76	2.73	
05457220	Woodbury Creek near Lyle, Minn.	Lat 43°30'37", long 93°00'34", on line between secs.32 and 33, T.101 N., R.18 W., Mower County, at bridge on State Highway 105, 3.3 miles west of Lyle.	40.4	5-12-71	9.65			9-19-74	4.05	485
				9-14-71	1.87	570		9-20-76	.67	
05457280	Otter Creek at Lyle, Minn.	Lat 43°30'00", long 92°55'52", in SE¼SE¼ sec.36, T.101 N., R.18 W., Mower County, at bridge on county road on Minn.-Iowa border in Lyle.	38.3	5-12-71	13.2			9-19-74	5.64	475
				9-15-71	4.49	445		9-21-76	2.75	
05457780	Little Cedar River near Johnsburg, Minn.	Lat 43°30'00", long 92°44'57", in SE¼SE¼ sec.33, T.101 N., R.16 W., Mower County, at bridge on county road on Minn.-Iowa border, 1.1 miles southeast of Johnsburg.	48.0	5-12-71	11.3			9-19-74	4.80	475
				9-15-71	3.38	430		9-22-76	1.95	
05458970	Shell Rock River at Gordonsville, Minn.	Lat 43°30'51", long 93°16'06", on line between secs.29 and 32, T.101 N., R.20 W., Freeborn County, at bridge on County Highway 1, 0.8 mile west of Gordonsville.	191	5-12-71	83.6			9-20-74	24.4	500
				9-15-71	11.6	520		9-20-76	3.46	
05458975	Goose Creek near Gordonsville, Minn.	Lat 43°30'13", long 93°16'24", in NE¼SE¼ sec.31, T.101 N., R.20 W., Freeborn County, at bridge on County Highway 1, 0.2 mile upstream from mouth, and 1.1 miles southwest of Gordonsville.	53.8	5-12-71	20.3			9-20-74	1.50	600
				9-15-71	1.59	650		9-21-76	.41	
05459040	Lime Creek near Emmons, Minn.	Lat 43°30'00", long 93°33'29", in SW¼SE¼ sec.35, T.101 N., R.23 W., Freeborn County, at bridge on County Highway 60, 3.5 miles west of Emmons.	58.4	5-12-71	27.9			9-20-74	5.78	
				9-15-71	2.71	730		9-20-76	2.07	
Des Moines River basin										
05474770	Beaver Creek near Currie, Minn.	Lat 44°03'30", long 95°43'08", in NW¼SW¼ sec.24, T.107 N., R.41 W., Murray County, at bridge on county road, 2.8 miles southwest of Currie.	177	9-23-69	1.72			8-31-73	.90	1,100
				8-25-70	.29	845		7-24-74	.48	1,100
				9-19-72	.86	1,200		9-30-75	.46	1,050
				10-10-72	6.85	1,200		8-18-76	0	

b Estimated.

Table 2.--Low-flow measurements at partial-record stations.

Station No.	Station Name	Location	Drainage Area (mi <sup>2</sup> )	Date	Discharge (ft <sup>3</sup> /s)	Measurements		Date	Discharge (ft <sup>3</sup> /s)	Specific Conductance (micromhos/cm at 25°C)
						Specific Conductance (micromhos/cm at 25°C)				
Des Moines River basin--Continued										
05474800	Lime Creek near Avoca, Minn.	Lat 43°56'58", long 95°31'17", at Common Corner of secs.27, 28, and 33, T.106 N., R.39 W., Murray County, at bridge on County Highway 6, 0.6 mile upstream from mouth, and 6.2 miles east of Avoca.	95.0	9-23-69 8-25-70 9-19-72	.49 .16 .39	1,000 1,000		10-10-72 8-31-73 7-24-74	3.84 0 .02	900
*05474860	Des Moines River near Dundee, Minn.	Lat 43°53'09", long 95°25'52", near center of sec.20, T.105 N., R.38 W., Cottonwood County, at Talcot Lake outlet, 3.2 miles northeast of Dundee.	--	9-10-63 12- 6-63 1-15-64 2-20-64 3-31-64 6- 6-64 7- 9-64 8- 7-64 9- 9-64 10- 8-64 11- 6-64 12- 4-64 1- 1-65 2- 8-65 8-12-65 9-15-65 11-10-65 1-11-66 6-22-66 8-17-66 9-16-66 10-13-66 11-11-66 12- 6-66 1-11-67	19.1 12.7 2.37 2.48 16.0 14.9 .70 .24 4.22 1.59 1.86 1.34 .40 .42 9.56 0 5.20 7.17 2.95 .38 .19 .18 4.64 5.00 1.78		2-16-67 8-15-67 9-12-67 10-12-67 11-15-67 12-11-67 1- 9-68 2-12-68 3-11-68 4- 8-68 5-10-68 7-10-68 12-17-68 1-21-69 9-13-69 10-16-69 11-18-69 12-16-69 1-20-70 2-18-70 7-24-70 8-25-70 9-19-72 10-10-72 7-24-74	1.29 .67 1.26 0 .36 .33 .38 .34 .26 .78 .36 9.86 0 0 .34 5.98 11.7 8.52 5.06 3.93 9.48 9.39 2.05 16.0 <.01	1,000 1,100 1,100	
05474920	Okabena Creek at Okabena, Minn.	Lat 43°44'38", long 95°18'54", on line between secs.7 and 8, T.103 N., R.37 W., Jackson County, at bridge on County Highway 9, 0.3 mile north of Okabena.	141	9-22-69 8-27-70 10-11-72 8-31-73	3.61 5.55 5.89 2.97	1,010 1,500 1,600		7-24-74 9-30-75 8-19-76	4.14 9.90 2.31	1,200 1,425 1,900
05474980	Jack Creek near Heron Lake, Minn.	Lat 43°46'10", long 95°18'54", on line between secs.31 and 32, T.104 N., R.37 W., Jackson County, at bridge on County Highway 9, 1.8 miles south of Heron Lake.	218	9-22-69 8-27-70 10-11-72	1.83 1.12 4.80	800 850		8-31-73 7-24-74	0 .57	800
05475000	Heron Lake Outlet near Heron Lake, Minn.	Lat 43°48'10", long 95°16'30", on line between secs.21 and 22, T.104 N., R.37 W., Jackson County, 0.5 mile downstream from outlet dam, 2 miles east of Heron Lake, and 12 miles upstream from Des Moines River. (Site of continuous-record gaging station, 1930-43)	457	10-11-72	8.37	1,100		9-30-75	1.16	
*05475600	Des Moines River at Windom, Minn.	Lat 43°51'30", long 95°06'55", in NE¼ sec.36, T.105 N., R.36 W., Cottonwood County, at bridge on State Highway 60, at Windom.	--	10-11-72	34.8	940				
05476990	East Fork Des Moines River near Ceylon, Minn.	Lat 43°34'08", long 94°38'04", on line between secs.11 and 12, T.101 N., R.32 W., Martin County, at bridge on County Highway 125, 2.4 miles north of Ceylon.	a155	5-13-71 10-12-72 8-31-73	21.7 2.97 .03	840 750		8-29-74 9-30-75 6-10-76	.27 0 0	760

\* High-flow measurements are also available in Geological Survey files.

&lt; Less than.

a Approximately.

Table 2.--Low-flow measurements at partial-record stations.

Station No.	Station Name	Location	Drainage Area (mi <sup>2</sup> )	Date	Discharge (ft <sup>3</sup> /s)	Measurements		Date	Discharge (ft <sup>3</sup> /s)	Specific Conductance (micromhos/cm at 25°C)
						Specific Conductance (micromhos/cm at 25°C)				
Des Moines River basin--Continued										
*05477010	East Fork Des Moines River at Tuttle Lake outlet, near Ceylon, Minn.	Lat 43°31'44", long 94°34'25", on line between secs.20 and 29, T.101 N., R.31 W., Martin County, at Tuttle Lake outlet, 100 feet upstream from Okamanpeedan Lake, and 2.9 miles east of Ceylon.	--	8-11-32 8-23-33 7-26-35 6-25-37 7-12-37 9-20-37 7-11-39 8- 8-39 9-13-39 11- 4-39 4- 2-40	.04 .05 .30 13.3 2.61 0 2.68 14.7 1.23 0 8.57			5-16-40 6- 5-40 7-26-40 11-22-40 12-14-40 9- 4-41 9-24-41 10-22-41 12-14-44 9-27-45	1.55 2.07 .15 1.39 2.04 .12 2.22 12.6 2.75 5.78	
Big Sioux River basin										
06480600	Flandreau Creek near Cazenovia, Minn.	Lat 44°04'54", long 96°26'27", in NE¼NW¼ sec.13, T.107 N., R.47 W., Pipestone County, at bridge on County Highway 13, 3.5 miles northwest of Cazenovia.	92.2	5-13-71 10-14-72 8-30-73	2.95 3.74 0	980		7-23-74 9-29-75 8-18-76	2.76 1.88 0	745 825
06482520	Pipestone Creek near Pipestone, Minn.	Lat 43°58'49", long 96°26'08", on line between secs.13 and 24, T.106 N., R.47 W., Pipestone County, at bridge on County Highway 55, 6.1 miles southwest of Pipestone.	113	5-13-71 10-14-72 8-30-73	5.46 4.10 .35	930 2,000		7-23-74 9-29-75 8-18-76	.47 2.29 .45	1,200 900 2,600
06482540	Split Rock Creek near Jasper, Minn.	Lat 43°46'36", long 96°26'13", on line between secs.26 and 35, T.104 N., R.47 W., Rock County, at bridge on county road, 5.4 miles southwest of Jasper.	310	9-24-69 8-26-70 10-13-72 8-30-73	3.76 1.59 11.6 2.22	695 770 570		7-24-74 9-29-75 8-18-76	3.47 4.79 1.09	390 530 675
06482710	Beaver Creek near Luverne, Minn.	Lat 43°39'35", long 96°18'51", on line between secs.2 and 11, T.102 N., R.46 W., Rock County, at bridge on County Highway 5, 5.4 miles west of Luverne.	35.5	9-24-69 8-26-70 10-13-72	.39 .03 .31	702 695		8-30-73 7-24-74	0 0	
06482720	Little Beaver Creek near Luverne, Minn.	Lat 43°39'36", long 96°16'50", on line between secs.6 and 7, T.102 N., R.45 W., Rock County, at bridge on County Highway 5, 3.8 miles west of Luverne.	12.8	9-24-69 8-26-70	.005 0			10-13-72 7-24-74	0 0	
06482740	Beaver Creek near Beaver Creek, Minn.	Lat 43°35'31", long 96°25'55", on line between secs.35 and 36, T.102 N., R.47 W., Rock County, at bridge on State Highway 23, 3.8 miles southwest of Beaver Creek.	84.6	9-24-69 8-26-70 10-13-72	2.80 1.20 1.50	710 720		8-30-73 7-24-74	.77 0	675
06482930	Rock River at Edgerton, Minn.	Lat 43°52'14", long 96°08'27", in SW¼NW¼ sec.28, T.105 N., R.44 W., Pipestone County, at bridge on County Highway 1 at west edge of Edgerton, and 1.7 miles upstream from Chanarambie Creek.	121	9-23-69 8-25-70 10-14-72 8-30-73	3.31 1.86 4.42 1.07	550 610 480		7-23-74 9-29-75 8-18-76	1.15 3.80 .46	425 500 500
06482935	Chanarambie Creek at Edgerton, Minn.	Lat 43°52'14", long 96°07'23", in NW¼SW¼ sec.27, T.105 N., R.44 W., Pipestone County, at bridge on County Highway 1 in Edgerton, and 1 mile upstream from mouth.	72.0	9-23-69 8-25-70 10-14-72 8-30-73	2.12 .80 1.80 .31	700 920 560		7-23-74 9-29-75 8-18-76	.43 .58 0	510 480
06482945	Rock River near Hardwick, Minn.	Lat 43°43'04", long 96°09'51", on line between secs.18 and 19, T.103 N., R.44 W., Rock County, at bridge on County Highway 8, 4.3 miles southeast of Hardwick.	312	9-23-69 8-26-70 10-14-72 8-30-73	13.3 7.81 14.8 3.56	497 690 380		7-23-74 9-29-75 8-18-76	1.13 6.80 2.00	430 490

\* High-flow measurements are also available in Geological Survey files.

Table 2.--Low-flow measurements at partial-record stations.

Station No.	Station Name	Location	Drainage Area (mi <sup>2</sup> )	Date	Discharge (ft <sup>3</sup> /s)	Measurements		Date	Discharge (ft <sup>3</sup> /s)	Specific Conductance (micromhos/cm at 25°C)	
						Specific Conductance (micromhos/cm at 25°C)					
Big Sioux River basin--Continued											
06482980	Champepadan Creek near Hardwick, Minn.	Lat 43°42'31", long 96°07'59", in NE¼SE¼ sec.20, T.103 N., R.44 W., Rock County, at bridge on County Highway 9, 1.2 miles upstream from mouth, and 5.8 miles southeast of Hardwick.	75.5	9-23-69	.67			8-30-73	.005		
				8-26-70	.81	655		7-23-74	0		
				10-13-72	3.94	830					
06483000	Rock River at Luverne, Minn.	Lat 43°39'15", long 96°12'03", in SW¼NE¼ sec.11, T.102 N., R.45 W., Rock County, at bridge on Main Street (County Highway 4) in Luverne. (Site of continuous-record gaging station, 1911-14; annual maximums available since 1972)	425	10-12-67	5.07			9-12-72	14.4		
				9-18-68	10.6			10-13-72	24.3	770	
				8-26-70	10.4	525		10-27-72	25.9		
				5-18-71	26.7			11-21-72	48.8		
				7-27-71	24.2	720		1- 9-73	15.0	750	
				10- 5-71	7.09	615		8-30-73	5.82		
				11-10-71	15.3			8-21-74	18.1		
				12- 7-71	26.0			10-30-74	12.2	570	
				1-11-72	10.4			9- 8-75	8.27		
				2-15-72	4.89	985		9-29-75	11.3	640	
				8- 9-72	39.4			8-18-76	2.32	1,050	
06483030	Elk Creek near Luverne, Minn.	Lat 43°36'11", long 96°10'22", on line between sec.25, T.102 N., R.45 W., and sec. 30, T.102 N., R.44 W., Rock County, at bridge on County Highway 9, 4 miles southeast of Luverne.	62.0	9-23-69	.48			8-31-73	.004	750	
				8-26-70	.06	685		7-24-74	0		
				10-13-72	2.00						
06483070	Ash Creek at Ash Creek, Minn.	Lat 43°32'57", long 96°11'46", in NE¼SE¼ sec.14, T.101 N., R.45 W., Rock County, at bridge on county road, 0.7 mile north of Ash Creek.	13.4	9-24-69	0			8-31-73	0		
				8-26-70	0			7-24-74	0		
				10-13-72	0						
06483240	Kananranzi Creek near Kananranzi, Minn.	Lat 43°30'01", long 96°07'12", on line between sec.11, T.100 N., R.45 W., and sec. 33, T.101 N., R.44 W., Rock County, at bridge on county road on Minn.-Iowa border, 5.3 miles southwest of Kananranzi.	192	9-23-69	5.02			7-24-74	.22	570	
				8-26-70	3.71	655		9-29-75	3.04		
				10-13-72	7.02	720		8-18-76	.38	340	
				8-31-73	1.66	600					
06483310	Mud Creek near Hills, Minn.	Lat 43°30'53", long 96°20'27", on line between secs.27 and 34, T.101 N., R.46 W., Rock County, at bridge on county road, 1.2 miles southeast of Hills.	25.9	9-23-69	.005			10-13-72	0		
				8-26-70	0			7-24-74	0		
06483355	Little Rock River near Bigelow, Minn.	Lat 43°30'00", long 95°50'57", in SE¼SW¼ sec.35, T.101 N., R.42 W., Nobles County, at bridge on county road on Minn.-Iowa border, 8 miles west of Bigelow.	91.5	5-13-71	5.66			8-31-73	.02		
				10-12-72	1.21	680		7-24-74	0		
Little Sioux River basin											
06603530	Little Sioux River near Spafford, Minn.	Lat 43°36'08", long 95°15'27", in NE¼NE¼ sec.34, T.102 N., R.37 W., Jackson County, at bridge on county road, 1.6 miles downstream from Jackson County ditch No. 11, and 5.8 miles east of Spafford. (Annual maximums available since 1962)	41.1	10-11-61	.31			6-27-67	21.6		
				4-13-62	48.4			10-30-68	25.7		
				6-20-62	39.2			11-24-68	15.2		
				8- 2-63	36.4			4-23-69	38.2		
				5-12-64	45.0			5-20-69	15.6		
				6- 5-64	4.98			7-29-69	10.4		
				9- 9-64	4.26			8-27-70	.48	975	
				9-10-64	13.5			3-17-72	23.4		
				5- 4-65	24.6			10-12-72	.27	920	
				6- 2-65	27.4			5-23-73	4.72		
				3-17-66	9.80			8-31-73	0		
				6-22-66	3.11			7-24-74	.02	800	
				3-24-67	7.65			7- 2-75	17.8	950	
				4- 5-67	25.9						

Table 2.--Low-flow measurements at partial-record stations.

<u>Station No.</u>	<u>Station Name</u>	<u>Location</u>	<u>Drainage</u>	<u>Date</u>	<u>Discharge (ft<sup>3</sup>/s)</u>	<u>Measurements</u>		<u>Discharge (ft<sup>3</sup>/s)</u>	<u>Specific Conductance (micromhos/cm at 25°C)</u>
			<u>Area (mi<sup>2</sup>)</u>			<u>Specific Conductance (micromhos/cm at 25°C)</u>	<u>Date</u>		
<u>Little Sioux River basin--Continued</u>									
06603540	Little Sioux River near Sioux Valley, Minn.	Lat 43°34'24", long 95°15'28", on line between secs.3 and 10, T.101 N., R.37 W., Jackson County, at bridge on county road, 3.1 miles northeast of Sioux Valley.	--	9-22-69	.22				
06603690	West Fork Little Sioux River near Sioux Valley, Minn.	Lat 43°30'02", long 95°16'46", in SE¼SE¼ sec.33, T.101 N., R.37 W., Jackson County, at bridge on County Highway 62, 3.3 miles southeast of Sioux Valley.	106	5-13-71	18.8		7-24-74	.64	750
				10-12-72	1.49	950	9-30-75	.18	800
				8-31-73	0				

Table 3.--Low-flow measurements at miscellaneous sites.

Stream	Tributary to	Location	Drainage	Date	Measurements	
			Area (mi <sup>2</sup> )		Discharge (ft <sup>3</sup> /s)	Specific Conductance (micromhos/cm at 25°C)
Streams tributary to Lake Superior						
Pigeon River	Lake Superior	NW¼NE¼ sec.27, T.64 N., R.4 E., Cook County, 6 miles above the Great Cascades, and about 11 miles west of Pigeon River, Minn.	--	6- 4-11	107	
Pigeon River	Lake Superior	SE¼SE¼ sec.30, T.64 N., R.5 E., Cook County, at Partridge Falls, 3.5 miles northwest of junction of Forest Service road and County Highway 89, and 8 miles northwest of Grand Portage, Minn.	--	9-24-74	127	55
Arrow River	Pigeon River	Lat 48°05'02", long 89°48'09", Ontario Province, at bridge on Ontario Province Highway 593, 9 miles northwest of Pigeon River, Minn.	--	9-24-74	155	90
Pigeon River	Lake Superior	SE¼NE¼ sec.29, T.64 N., R.7 E., Cook County, at mouth below Pigeon Falls, and about 7 miles east of Pigeon River, Minn.	a603	8-20-12	78.9	
Reservation River	Lake Superior	SW¼ sec.6, T.62 N., R.5 E., Cook County, at bridge on U.S. Highway 61, 0.2 mile upstream from mouth, and 4 miles northeast of Hovland, Minn.	--	9-25-74	4.45	90
Devil Track River	Lake Superior	NW¼NW¼ sec.32, T.62 N., R.1 E., Cook County, at bridge on County Highway 8, 0.5 mile downstream from Devil Track Lake outlet, and 3.5 miles north of Grand Marais, Minn.	--	9-23-74	7.31	<50
Elbow Creek	Devil Track River	NW¼SE¼ sec.34, T.62 N., R.1 E., Cook County, 150 feet upstream from bridge on County Highway 12, 3.5 miles northeast of Grand Marais, Minn.	--	9-23-74	3.20	65
Cascade River	Lake Superior	NE¼SW¼ sec.14, T.62 N., R.2 W., Cook County, near Forest Service Road 158, 1 mile upstream from tributary draining Swamp Lake, and 12 miles northwest of Grand Marais, Minn.	--	9-26-74	10.1	<50
Cascade River	Lake Superior	SE¼SW¼ sec.1, T.61 N., R.2 W., Cook County, at bridge on Forest Service Road 157, 12 miles northeast of Lutsen, and 9 miles northwest of Grand Marais, Minn.	--	9-26-74	22.6	65
Cascade River	Lake Superior	SE¼SW¼ sec.24, T.61 N., R.2 W., at highway bridge, 3.5 miles above mouth, and 8.8 miles west of Grand Marais, Minn.	--	8-22-12 9-24-63	29.8 12.3	
Poplar River	Lake Superior	NW¼SE¼ sec.25, T.61 N., R.4 W., Cook County, at bridge on Forest Service Road 164, 8 miles northwest of Lutsen, Minn.	--	9-25-74	12.6	70
Tait River	Mistletoe Creek	NE¼NW¼ sec.33, T.61 N., R.3 W., Cook County, at culvert on Forest Service Road 164, 0.3 mile downstream from Christine Lake outlet, and 6.5 miles northwest of Lutsen, Minn.	--	9-25-74	3.61	70
Mistletoe Creek	Poplar River	NW¼SE¼ sec.34, T.61 N., R.3 W., Cook County, at culvert on County Highway 4, 1 mile upstream from mouth, and 5 miles north of Lutsen, Minn.	--	9-25-74	5.71	
Temperance River	Lake Superior	SE¼NE¼ sec.26, T.63 N., R.4 W., Cook County, at downstream end of Portage between Weird Lake and Jack Lake, 0.5 mile downstream from Vern River, 2.0 miles upstream from Pipe Creek, and 24 miles north of Tofte, Minn.	--	8-25-71	1.72	
Plouff Creek	Temperance River	SE¼NE¼ sec.18, T.61 N., R.4 W., Cook County, at culvert on County Highway 2, 0.4 mile upstream from mouth, and 13 miles north of Tofte, Minn.	--	9-25-74	3.02	65
Temperance River	Lake Superior	SW¼NW¼ sec.33, T.60 N., R.4 W., Cook County, at bridge on Forest Service Road 166, 4.5 miles north of Tofte, and 8 miles west of Lutsen, Minn.	--	9-25-74	50.1	70

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Table 3.--Low-flow measurements at miscellaneous sites.

Stream	Tributary to	Location	Drainage Area (mi <sup>2</sup> )	Date	Measurements	
					Discharge (ft <sup>3</sup> /s)	Specific Conductance (micromhos/cm at 25°C)
Streams tributary to Lake Superior						
Cross River	Lake Superior	SW $\frac{1}{4}$ NE $\frac{1}{4}$ sec.9, T.59 N., R.5 W., Cook County, at culvert on Forest Service Road 166, 6 miles northwest of Taconite Harbor, Minn.	--	9-24-74	12.9	70
Caribou River	Lake Superior	SW $\frac{1}{4}$ SE $\frac{1}{4}$ sec.2, T.58 N., R.6 W., Lake County, at bridge on County Highway 8, 6 miles west of Taconite Harbor, Minn.	--	9-24-74	2.75	120
Manitou River	Lake Superior	SW $\frac{1}{4}$ SE $\frac{1}{4}$ sec.17, T.58 N., R.6 W., Lake County, at bridge on County Highway 7, 8.6 miles northeast of Finland, Minn.	--	9-24-74	16.1	100
Nine Mile Creek	Manitou River	SW $\frac{1}{4}$ NW $\frac{1}{4}$ sec.16, T.58 N., R.6 W., Lake County, 0.5 mile upstream from mouth, at bridge on County Highway 7, 7 miles north of Little Marais, Minn.	--	9-24-74	3.99	90
Baptism River	Lake Superior	NW $\frac{1}{4}$ NE $\frac{1}{4}$ sec.20, T.57 N., R.7 W., Lake County, at bridge on State Highway 1 at Finland, Minn.	--	9-23-74	10.4	80
East Branch Baptism River	Baptism River	NW $\frac{1}{4}$ NE $\frac{1}{4}$ sec.20, T.57 N., R.7 W., Lake County, at bridge on County Highway 6 at Finland, Minn.	--	9-23-74	5.45	80
Beaver River	Lake Superior	NE $\frac{1}{4}$ NW $\frac{1}{4}$ sec.17, T.55 N., R.8 W., Lake County, at bridge on County Highway 3, 3.5 miles west of Beaver Bay, Minn.	--	9-24-74	2.72	170
Beaver River	Lake Superior	SW $\frac{1}{4}$ SW $\frac{1}{4}$ sec.2, T.55 N., R.8 W., Lake County, at bridge on County Highway 4, 1500 feet upstream from East Branch Beaver River, and 1.5 miles northwest of Beaver Bay, Minn.	--	9-24-74	2.82	170
East Branch Beaver River	Beaver River	SW $\frac{1}{4}$ NW $\frac{1}{4}$ sec.26, T.56 N., R.8 W., Lake County, at bridge on County Highway 4, 4 miles north of Beaver Bay, Minn.	--	9-24-74	2.32	110
East Split Rock River	Split Rock River	NE $\frac{1}{4}$ NE $\frac{1}{4}$ sec.22, T.55 N., R.9 W., Lake County, at culvert on County Highway 3, 7 miles west of Beaver Bay, Minn.	--	9-24-74	.66	160
West Split Rock River	Split Rock River	SW $\frac{1}{4}$ SE $\frac{1}{4}$ sec.16, T.55 N., R.9 W., Lake County, at bridge on County Highway 3, 8.5 miles west of Beaver Bay, Minn.	--	9-24-74	3.13	180
Split Rock River	Lake Superior	NW $\frac{1}{4}$ NW $\frac{1}{4}$ sec.7, T.54 N., R.8 W., Lake County, at bridge on U.S. Highway 61, 0.1 mile upstream from mouth, and 7 miles southwest of Beaver Bay, Minn.	--	9-24-74	4.82	190
Gooseberry River	Lake Superior	SE $\frac{1}{4}$ NE $\frac{1}{4}$ sec.9, T.54 N., R.10 W., Lake County, at bridge on county road, 4.5 miles north of Silver Creek, and about 12 miles north- east of Two Harbors, Minn.	--	9-24-74	5.46	170
Gooseberry River	Lake Superior	SW $\frac{1}{4}$ NE $\frac{1}{4}$ sec.19, T.54 N., R.9 W., Lake County, near end of county road, 100 feet below Dago Creek, 2.5 miles east of County Highway 3, and 4.5 miles northeast of Silver Creek, Minn.	--	9-25-74	6.21	
Silver Creek	Lake Superior	SE $\frac{1}{4}$ NE $\frac{1}{4}$ sec.21, T.53 N., R.10 W., Lake County, at bridge on U.S. Highway 61, 4.3 miles northeast of Two Harbors, Minn.	a25	4-25-11	16.4	
Stewart River	Lake Superior	NE $\frac{1}{4}$ SE $\frac{1}{4}$ sec.3, T.53 N., R.11 W., Lake County, at bridge on County Highway 132, 5.5 miles north of Two Harbors, Minn.	--	9-23-74	1.66	170
Stewart River	Lake Superior	SW $\frac{1}{4}$ SW $\frac{1}{4}$ sec.18, T.53 N., R.10 W., Lake County, at bridge on County Highway 2, 3 miles north of Two Harbors, and 3 miles southeast of Stewart, Minn.	--	9-23-74	2.12	185
Little Stewart River	Stewart River	SW $\frac{1}{4}$ NW $\frac{1}{4}$ sec.19, T.53 N., R.10 W., Lake County, at bridge on County Highway 2, 2.6 miles north of Two Harbors, Minn.	--	9-23-74	.04	220

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Table 3.--Low-flow measurements at miscellaneous sites.

Stream	Tributary to	Location	Drainage	Date	Measurements	
			Area (mi <sup>2</sup> )		Discharge (ft <sup>3</sup> /s)	Specific Conductance (micromhos/cm at 25°C)
Streams tributary to Lake Superior--Continued						
Stewart River	Lake Superior	SW <sup>1</sup> / <sub>4</sub> NE <sup>1</sup> / <sub>4</sub> sec.29, T.53 N., R.10 W., Lake County at bridge on U.S. Highway 61, 0.2 mile upstream from mouth, and 1.5 miles northeast of Two Harbors, Minn.	--	9-23-74	2.21	210
Knife River	Lake Superior	NE <sup>1</sup> / <sub>4</sub> NW <sup>1</sup> / <sub>4</sub> sec.29, T.53 N., R.11 W., Lake County, at bridge on county road, 4 miles southwest of Stewart, and 4.5 miles northwest of Two Harbors, Minn.	14.3	9-25-74	3.54	190
Knife River	Lake Superior	SE <sup>1</sup> / <sub>4</sub> SE <sup>1</sup> / <sub>4</sub> sec.5, T.52 N., R.11 W., Lake County, at bridge on County Highway 9, 0.2 mile upstream from West Branch Knife River, and 2 miles north of Larsmont, Minn.	26.9	9-25-74	4.05	205
West Branch Knife River	Knife River	SW <sup>1</sup> / <sub>4</sub> SW <sup>1</sup> / <sub>4</sub> sec.36, T.53 N., R.12 W., St. Louis County, at bridge on County Highway 41, 6.5 miles west of Two Harbors, Minn.	13.6	9-25-74	1.60	240
West Branch Knife River tributary	West Branch Knife River	NW <sup>1</sup> / <sub>4</sub> SW <sup>1</sup> / <sub>4</sub> sec.31, T.53 N., R.11 W., Lake County, at culvert on County Highway 11, 5.5 miles west of Two Harbors, Minn.	4.46	9-25-74	.62	230
West Branch Knife River	Knife River	SW <sup>1</sup> / <sub>4</sub> SE <sup>1</sup> / <sub>4</sub> sec.5, T.52 N., R.11 W., Lake County, at culvert on County Highway 9, 0.2 mile upstream from mouth, 4 miles west of Two Harbors, and 5 miles northeast of Knife River, Minn.	27.9	9-25-74	2.38	240
Knife River	Lake Superior	NE <sup>1</sup> / <sub>4</sub> NW <sup>1</sup> / <sub>4</sub> sec.36, T.52 N., R.12 W., St. Louis County, at bridge on County Highway 255, 0.5 mile upstream from Little Knife River, and 1 mile northwest of Knife River, Minn.	76.2	9-25-74	6.18	190
Little Knife River	Knife River	NE <sup>1</sup> / <sub>4</sub> NE <sup>1</sup> / <sub>4</sub> sec.35, T.52 N., R.12 W., St. Louis County, at culvert on County Highway 255, 0.8 mile upstream from mouth, and 1.7 miles northwest of Knife River, Minn.	9.29	9-25-74	.15	360
Sucker River	Lake Superior	SE <sup>1</sup> / <sub>4</sub> NE <sup>1</sup> / <sub>4</sub> sec.25, T.52 N., R.13 W., St. Louis County, at bridge on County Highway 40, 4.4 miles upstream from mouth, and 6.5 miles northwest of Knife River, Minn.	--	9-25-74	6.63	210
French River	Lake Superior	SE <sup>1</sup> / <sub>4</sub> NE <sup>1</sup> / <sub>4</sub> sec.34, T.52 N., R.13 W., St. Louis County, at bridge on County Highway 692, 4.8 miles upstream from mouth, and 4.5 miles northwest of French River, Minn.	11.0	9-25-74	.82	160
Lester River	Lake Superior	NE <sup>1</sup> / <sub>4</sub> NE <sup>1</sup> / <sub>4</sub> sec.12, T.51 N., R.14 W., St. Louis County, at culvert on County Highway 37, 6.5 miles upstream from mouth, and 7.5 miles northwest of French River, Minn.	--	9-24-74	1.83	160
Lester River	Lake Superior	SE <sup>1</sup> / <sub>4</sub> SE <sup>1</sup> / <sub>4</sub> sec.5, T.50 N., R.13 W., St. Louis County, at bridge on State Highway 23, above dam in Lester Park in Duluth, Minn.	--	5- 9-11	15.6	
St. Louis River	Lake Superior	NW <sup>1</sup> / <sub>4</sub> SE <sup>1</sup> / <sub>4</sub> sec.22, T.58 N., R.15 W., St. Louis County, 150 feet upstream from Partridge River, 0.7 mile upstream from County Highway 100, and 1.5 miles south of Aurora, Minn.	a149	1-18-66 10- 6-70 9-17-74	37.0 6.25 15.0	110
St. Louis River tributary	St. Louis River	NE <sup>1</sup> / <sub>4</sub> SE <sup>1</sup> / <sub>4</sub> sec.20, T.58 N., R.15 W., St. Louis County, at culvert on County Highway 341, 3 miles southwest of Aurora, Minn.	--	10- 6-70	1.20	
St. Louis River tributary	St. Louis River	NE <sup>1</sup> / <sub>4</sub> SE <sup>1</sup> / <sub>4</sub> sec.19, T.58 N., R.15 W., St. Louis County, at culvert on County Highway 341, about 3 miles southwest of Aurora, Minn.	--	10- 6-70	.07	
St. Louis River tributary	St. Louis River	NE <sup>1</sup> / <sub>4</sub> SE <sup>1</sup> / <sub>4</sub> sec.25, T.58 N., R.16 W., St. Louis County, at culvert on County Highway 341, about 4 miles southwest of Aurora, Minn.	--	10- 7-70	.02	
St. Louis River	Lake Superior	SE <sup>1</sup> / <sub>4</sub> SE <sup>1</sup> / <sub>4</sub> sec.36, T.58 N., R.16 W., St. Louis County, at bridge on county road, 5.4 miles south of Biwabik, Minn.	--	10- 7-70	28.5	

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Table 3.--Low-flow measurements at miscellaneous sites.

Stream	Tributary to	Location	Drainage Area (mi <sup>2</sup> )	Date	Measurements	
					Discharge (ft <sup>3</sup> /s)	Specific Conductance (micromhos/cm at 25°C)
Streams tributary to Lake Superior--Continued						
St. Louis River tributary	St. Louis River	NE¼SE¼ sec.1, T.57 N., R.16 W., St. Louis County, at bridge on County Highway 560, 6.2 miles southeast of Biwabik, Minn.	--	10- 7-70	.34	
St. Louis River	Lake Superior	NW¼SW¼ sec.12, T.57 N., R.16 W., St. Louis County, at bridge on County Highway 4, 3 miles northwest of Palo, Minn.	--	9- 2-65	55.4	
St. Louis River tributary	St. Louis River	NW¼SW¼ sec.18, T.57 N., R.15 W., St. Louis County, at bridge on County Highway 4, 2 miles upstream from mouth, and about 8 miles southeast of Biwabik, Minn.	--	10- 7-70	.15	
St. Louis River tributary (Lost Lake outlet)	St. Louis River	SW¼SE¼ sec.10, T.57 N., R.16 W., St. Louis County, at bridge on County Highway 108, about 0.4 mile upstream from mouth, and about 6 miles southeast of McKinley, Minn.	--	10- 7-70	.40	
St. Louis River	Lake Superior	SW¼SE¼ sec.21, T.57 N., R.16 W., St. Louis County, at bridge on County Highway 95, about 8 miles southeast of McKinley, Minn.	--	10- 7-70 9-18-74	32.4 77.2	320
Embarrass River	St. Louis River	SE¼SE¼ sec.13, T.60 N., R.14 W., St. Louis County, at bridge on County Road 620, 0.1 mile upstream from Spring Mine Creek, and 5.9 miles southwest of Babbitt, Minn.	--	10-22-70	5.28	
Spring Mine Creek	Embarrass River	SE¼NE¼ sec.24, T.60 N., R.14 W., St. Louis County, at bridge on County Road 615, 0.5 mile upstream from mouth, and about 6 miles southwest of Babbitt, Minn.	--	10-22-70	2.48	
Embarrass River tributary	Embarrass River	SW¼NE¼ sec.23, T.60 N., R.14 W., St. Louis County, at bridge on County Road 615, 5.4 miles east of Embarrass, Minn.	--	10-22-70	0	
Embarrass River	St. Louis River	NE¼SE¼ sec.16, T.60 N., R.14 W., St. Louis County, at dead end to County Highway 318, 4 miles northeast of Embarrass, Minn.	--	10-22-70	15.3	
Camp Eight Creek	Embarrass River	NW¼NE¼ sec.16, T.60 N., R.14 W., St. Louis County, at bridge on County Highway 21, 0.7 mile upstream from mouth, and 4 miles northeast of Embarrass, Minn.	--	10-22-70	4.05	
Embarrass River tributary	Embarrass River	SW¼NW¼ sec.22, T.60 N., R.14 W., St. Louis County, at bridge on County Highway 318, 0.1 mile north of intersection with County Road 615, and 3.9 miles east of Embarrass, Minn.	--	10-22-70	5.01	
Trimble Creek	Embarrass River	SW¼NE¼ sec.20, T.60 N., R.14 W., St. Louis County, at bridge on County Highway 615, 2.6 miles east of Embarrass, Minn.	--	10-22-70	3.02	
Trimble Creek tributary	Trimble Creek	SW¼NE¼ sec.20, T.60 N., R.14 W., St. Louis County, at bridge on County Highway 615, 2.4 miles east of Embarrass, Minn.	--	10-22-70	2.55	
Bear Creek	Embarrass River	NE¼NE¼ sec.13, T.60 N., R.15 W., St. Louis County, at bridge on County Highway 21, 0.7 mile upstream from mouth, and 2.1 miles north of Embarrass, Minn.	--	10-22-70 9-16-74	34.9 5.83	75
Heikkilla Lake outlet	Embarrass River	SW¼NW¼ sec.30, T.60 N., R.14 W., St. Louis County, at culvert on private road, 1 mile southeast of Embarrass, Minn.	--	10-22-70	.91	
Embarrass River tributary	Embarrass River	NW¼NE¼ sec.25, T.60 N., R.15 W., St. Louis County, at Embarrass, Minn., 50 feet up- stream from mouth.	--	10-22-70	1.42	
Embarrass River tributary	Embarrass River	NE¼NW¼ sec.26, T.60 N., R.15 W., St. Louis County, at bridge on County Highway 21, 0.3 mile west of Embarrass, Minn.	--	10-22-70	1.10	
Embarrass River	St. Louis River	SE¼NE¼ sec.4, T.59 N., R.15 W., St. Louis County, at bridge on State Highway 135, 3 miles southwest of Embarrass, Minn.	--	10-23-70	91.3	
Embarrass River tributary	Embarrass River	NE¼SE¼ sec.33, T.60 N., R.15 W., St. Louis County, at culvert on County Highway 558, 2.7 miles southwest of Embarrass, Minn.	--	10-23-70	.68	

Table 3.--Low-flow measurements at miscellaneous sites.

Stream	Tributary to	Location	Drainage Area (mi <sup>2</sup> )	Date	Measurements	
					Discharge (ft <sup>3</sup> /s)	Specific Conductance (micromhos/cm at 25°C)
Streams tributary to Lake Superior--Continued						
Embarrass River,	St. Louis River	SW <sup>1</sup> / <sub>4</sub> NW <sup>1</sup> / <sub>4</sub> sec.18, T.59 N., R.15 W., St. Louis County, 0.2 mile upstream from Sabin Lake, and 5 miles north of Biwabik, Minn.	--	10-23-70	119	
Embarrass River	St. Louis River	SE <sup>1</sup> / <sub>4</sub> sec.31, T.59 N., R.15 W., St. Louis County, at bridge on County Highway 416, 0.3 mile downstream from Wynne Lake, and 1.5 miles northeast of Biwabik, Minn.	--	9-16-74	38.2	120
Embarrass River	St. Louis River	NE <sup>1</sup> / <sub>4</sub> SW <sup>1</sup> / <sub>4</sub> sec.20, T.57 N., R.16 W., St. Louis County, at bridge on County Highway 95, about 1 mile upstream from mouth, and 7.4 miles south of McKinley, Minn.	a180	10- 7-70	22.7	
Hay Creek	St. Louis River	SE <sup>1</sup> / <sub>4</sub> SW <sup>1</sup> / <sub>4</sub> sec.19, T.57 N., R.16 W., St. Louis County, at culvert on County Highway 95, 0.4 mile upstream from mouth, and 7.8 miles south of McKinley, Minn.	--	10- 7-70	b.06	
Ely Creek	St. Louis River	NE <sup>1</sup> / <sub>4</sub> SW <sup>1</sup> / <sub>4</sub> sec.26, T.57 N., R.17 W., St. Louis County, at bridge on county road, 0.5 mile upstream from mouth, and 6.8 miles south of Gilbert, Minn.	--	10- 7-70 9-18-74	1.36 2.51	150
St. Louis River	Lake Superior	NW <sup>1</sup> / <sub>4</sub> NW <sup>1</sup> / <sub>4</sub> sec.2, T.56 N., R.17 W., St. Louis County, at bridge on County Highway 957, 8.1 miles south of Gilbert, Minn.	--	10- 7-70	55.3	
Mud Hen Creek	St. Louis River	SE <sup>1</sup> / <sub>4</sub> NW <sup>1</sup> / <sub>4</sub> sec.7, T.56 N., R.16 W., St. Louis County, at bridge on County Highway 93, 2.5 miles west of Makinen, Minn.	--	9-18-74	1.34	200
Water Hen River	Mud Hen Creek	N <sup>1</sup> / <sub>2</sub> sec.18, T.56 N., R.16 W., St. Louis County, at bridge on County Highway 93, 0.6 mile upstream from mouth, and 2.5 miles southwest of Makinen, Minn.	--	9-18-74	.48	185
Long Creek	St. Louis River	SE <sup>1</sup> / <sub>4</sub> SE <sup>1</sup> / <sub>4</sub> sec.36, T.57 N., R.18 W., St. Louis County, at bridge on County Highway 16, at mouth, and 6 miles south of Eveleth, Minn.	--	9-18-74	1.79	150
Elbow Creek	St. Louis River	NE <sup>1</sup> / <sub>4</sub> NE <sup>1</sup> / <sub>4</sub> sec.4, T.56 N., R.18 W., St. Louis County, at bridge on County Highway 16, 1 mile upstream from mouth, and 1 mile west of Forbes, Minn.	--	9-17-74	3.55	270
East Two River	St. Louis River	SE <sup>1</sup> / <sub>4</sub> SW <sup>1</sup> / <sub>4</sub> sec.27, T.58 N., R.18 W., St. Louis County, at bridge on County Highway 102, 4 miles north of Iron Junction, Minn.	--	10-21-70 9-18-74	20.5 10.7	530
East Two River tributary	East Two River	SW <sup>1</sup> / <sub>4</sub> SE <sup>1</sup> / <sub>4</sub> sec.34, T.58 N., R.18 W., St. Louis County, at culvert on County Highway 101, 2.8 miles north of Iron Junction, Minn.	--	10-21-70	.23	
East Two River tributary	East Two River	SW <sup>1</sup> / <sub>4</sub> NE <sup>1</sup> / <sub>4</sub> sec.4, T.57 N., R.18 W., St. Louis County, at farm lane, 700 feet downstream from Duluth, Mesabi and Iron Range rail- road, and 2.5 miles northwest of Iron Junction, Minn.	--	10-21-70	.22	
East Two River	St. Louis River	NW <sup>1</sup> / <sub>4</sub> SW <sup>1</sup> / <sub>4</sub> sec.9, T.57 N., R.18 W., St. Louis County, 600 feet north of dead end on County Highway 754, 2.2 miles northwest of Iron Junction, Minn.	--	10-20-70	25.6	
East Two River	St. Louis River	NW <sup>1</sup> / <sub>4</sub> NW <sup>1</sup> / <sub>4</sub> sec.20, T.57 N., R.18 W., St. Louis County, at bridge on County Highway 452, 2.6 miles west of Iron Junction, Minn.	--	10-20-70	28.5	
East Two River	St. Louis River	NW <sup>1</sup> / <sub>4</sub> NE <sup>1</sup> / <sub>4</sub> sec.5, T.56 N., R.18 W., St. Louis County, at twin culverts on County High- way 16, 2.2 miles west of Forbes, Minn.	--	10-20-70	29.2	
East Two River	St. Louis River	SW <sup>1</sup> / <sub>4</sub> SW <sup>1</sup> / <sub>4</sub> sec.5, T.56 N., R.18 W., St. Louis County, 100 feet upstream from section line, 850 feet east of County Highway 313, 1.2 miles upstream from mouth, and 2.9 miles southwest of Forbes, Minn.	a46	10-20-70	30.1	

a Approximately.

b Estimated.

Table 3.--Low-flow measurements at miscellaneous sites.

Stream	Tributary to	Location	Drainage Area (mi <sup>2</sup> )	Date	Measurements	
					Discharge (ft <sup>3</sup> /s)	Specific Conductance (micromhos/cm at 25°C)
Streams tributary to Lake Superior--Continued						
West Two River	St. Louis River	SW¼SW¼ sec.31, T.58 N., R.18 W., St. Louis County, at bridge on County Highway 661, 6 miles west of Eveleth, Minn.	--	9-18-74	2.89	230
West Two River tributary	West Two River	NW¼SW¼ sec.11, T.57 N., R.19 W., St. Louis County, at bridge on County Highway 25, 0.2 mile upstream from mouth, and 6 miles west of Iron Junction, Minn.	--	9-18-74	.79	210
West Two River	St. Louis River	SW¼NW¼ sec.13, T.57 N., R.19 W., St. Louis County, at bridge on County Highway 447, 4.9 miles west of Iron Junction, Minn.	--	10-20-70	34.2	
St. Louis River	Lake Superior	SW¼NW¼ sec.29, T.56 N., R.18 W., St. Louis County, at bridge on County Highway 27, 2.8 miles west of Zim, Minn.	--	9- 3-65	122	
St. Louis River	Lake Superior	NW¼NE¼ sec.15, T.55 N., R.19 W., St. Louis County, at bridge on County Highway 436, 7 miles southwest of Zim, Minn.	--	10-19-70	630	
St. Louis River tributary	St. Louis River	SE¼NE¼ sec.15, T.55 N., R.19 W., St. Louis County, at culvert on County Highway 83, 0.3 mile upstream from mouth, and 6.9 miles northeast of Toivola, Minn.	--	10-19-70	1.13	
Stony Creek	St. Louis River	SW¼SE¼ sec.28, T.55 N., R.19 W., St. Louis County, at bridge on County Highway 83, 1.5 miles upstream from mouth, and 4.3 miles northeast of Toivola, Minn.	--	10-19-70 9-19-74	3.40 .02	250
St. Louis River	Lake Superior	SW¼SW¼ sec.29, T.55 N., R.19 W., St. Louis County, at bridge on County Highway 230, 0.4 mile upstream from Swan River, and 3.1 miles north of Toivola, Minn.	a1,040	10-19-70	647	
Coons Creek	West Swan River	NW¼SE¼ sec.5, T.55 N., R.21 W., St. Louis County, at bridge on County Highway 440, 0.6 mile northwest of Silica, Minn.	--	10-21-70	1.76	
West Swan River	Swan River	NW¼NW¼ sec.9, T.55 N., R.21 W., St. Louis County, at bridge on State Highway 73, 0.2 mile south of Silica, Minn.	--	10-21-70	3.37	
West Swan River tributary	West Swan River	NE¼SE¼ sec.36, T.56 N., R.21 W., St. Louis County, at bridge on County Highway 57, 0.2 mile upstream from mouth, and about 4 miles northeast of Silica, Minn.	--	10-21-70	3.13	
West Swan River	Swan River	NE¼NE¼ sec.1, T.55 N., R.21 W., St. Louis County, at bridge on County Highway 57, 4 miles northeast of Silica, Minn.	--	10-21-70 9-19-74	8.84 6.42	160
West Swan River tributary	West Swan River	SE¼SW¼ sec.32, T.56 N., R.20 W., St. Louis County, at twin culverts on County Highway 442, 5.6 miles northeast of Silica, Minn.	--	10-21-70	1.32	
West Swan River	Swan River	NW¼SW¼ sec.11, T.55 N., R.20 W., St. Louis County, at bridge on County Highway 965, 6.6 miles northwest of Toivola, Minn.	--	10-21-70	19.0	
West Swan River tributary	West Swan River	NW¼NW¼ sec.23, T.55 N., R.20 W., St. Louis County, at culvert on County Highway 750, 5.3 miles northwest of Toivola, Minn.	--	10-21-70	1.68	
West Swan River	Swan River	NW¼NW¼ sec.13, T.55 N., R.20 W., St. Louis County, at bridge on County Highway 444, 0.5 mile upstream from mouth, and 6 miles north of Toivola, Minn.	a130	10-20-70 9-19-74	20.9 9.24	160
Barber Creek	East Swan River	NE¼NE¼ sec.10, T.57 N., R.20 W., St. Louis County, at culvert on County Highway 92, 4.1 miles east of Hibbing, Minn.	--	10-20-70	7.48	
Barber Creek	East Swan River	NW¼SE¼ sec.22, T.57 N., R.20 W., St. Louis County, at bridge on county road, 0.3 mile upstream from State Highway 37, and 4.3 miles southeast of Hibbing, Minn.	--	10-20-70	8.08	
Barber Creek tributary	Barber Creek	SW¼SW¼ sec.21, T.57 N., R.20 W., St. Louis County, at culvert on State Highway 37, 3.2 miles southeast of Hibbing, Minn.	--	10-20-70	26.4	

a Approximately.

Table 3.--Low-flow measurements at miscellaneous sites.

Stream	Tributary to	Location	Drainage	Date	Measurements	
			Area (mi <sup>2</sup> )		Discharge (ft <sup>3</sup> /s)	Specific Conductance (micromhos/cm at 25°C)
Streams tributary to Lake Superior--Continued						
Barber Creek	East Swan River	SE¼NE¼ sec.3, T.56 N., R.20 W., St. Louis County, at bridge on County Highway 965, 1.3 miles upstream from Demsey Creek, and 4.5 miles southeast of Hibbing, Minn.	--	10-20-70 9-19-74	31.4 47.5	560
Dempsey Creek	East Swan River	NE¼NW¼ sec.12, T.56 N., R.20 W., St. Louis County, at bridge on township road, 0.6 mile upstream from mouth, and 7.4 miles southeast of Hibbing, Minn.	--	10-20-70 9-20-74	12.5 3.53	450
East Swan River tributary	East Swan River	NW¼SW¼ sec.12, T.56 N., R.20 W., St. Louis County, at bridge on County Highway 444, 0.3 mile upstream from mouth, and about 8 miles southeast of Hibbing, Minn.	--	10-20-70	0	
East Swan River tributary	East Swan River	NE¼SE¼ sec.10, T.56 N., R.20 W., St. Louis County, at bridge on County Highway 965, 0.5 mile upstream from mouth, and 5.5 miles southeast of Hibbing, Minn.	--	10-20-70 9-19-74	.62 1.18	580
East Swan River tributary	East Swan River	NE¼NE¼ sec.23, T.56 N., R.20 W., St. Louis County, at culvert on County Highway 444, 0.7 mile upstream from mouth, and 8.8 miles southeast of Hibbing, Minn.	--	10-19-70	0	
East Swan River	Swan River	SW¼SW¼ sec.23, T.56 N., R.20 W., St. Louis County, at bridge on county road, 1.1 miles south of Omega station on Great Northern Railway, and 9.2 miles south of Hibbing, Minn.	--	10-19-70	52.2	
East Swan River tributary	East Swan River	NE¼NE¼ sec.35, T.56 N., R.20 W., St. Louis County, at bridge on County Highway 799, 0.6 mile upstream from mouth, and 9 miles north of Toivola, Minn.	--	10-19-70	.58	
East Swan River tributary	East Swan River	SE¼SE¼ sec.36, T.56 N., R.20 W., St. Louis County, at bridge on County Highway 442, 8 miles north of Toivola, Minn.	--	10-19-70	.43	
East Swan River tributary	East Swan River	SW¼SW¼ sec.6, T.55 N., R.19 W., St. Louis County, at bridge on County Highway 5, 0.8 mile upstream from mouth, and 7.3 miles north of Toivola, Minn.	--	10-19-70	.31	
Swan River tributary	Swan River	SE¼SE¼ sec.7, T.55 N., R.19 W., St. Louis County, at bridge on County Highway 230, about 1 mile upstream from mouth, and 6 miles north of Toivola, Minn.	--	10-19-70	.85	
Swan River	St. Louis River	NE¼SW¼ sec.30, T.55 N., R.19 W., St. Louis County, at dead end on County Highway 433, 0.8 mile upstream from mouth, and 3.5 miles north of Toivola, Minn.	a264	10-19-70	84.6	
St. Louis River	Lake Superior	SE¼SW¼ sec.8, T.54 N., R.19 W., St. Louis County, at bridge on County Highway 52, 0.5 mile upstream from Sand Creek, and 1.5 miles east of Toivola, Minn.	--	9-20-74	216	340
Sand Creek	St. Louis River	NW¼SW¼ sec.17, T.54 N., R.19 W., St. Louis County, at bridge on County Highway 158, 0.4 mile upstream from mouth, and 1 mile southeast of Toivola, Minn.	--	9-19-74	4.79	110
St. Louis River	Lake Superior	On line between secs.17 and 20, T.53 N., R.19 W., St. Louis County, at bridge on County Highway 133, 2 miles west of Meadowlands, Minn.	--	9- 3-65	185	
St. Louis River	Lake Superior	Lat 46°59'48", long 92°48'29", in SE¼SE¼ sec.12, T.52 N., R.20 W., St. Louis County, at bridge on County Highway 29, 1.2 miles upstream from Whiteface River, and 6 miles southwest of Meadowlands, Minn.	--	9-19-74	237	280
North Branch Whiteface River	Whiteface River	NE¼ sec.23, T.56 N., R.14 W., St. Louis County, at bridge on Forest Service Road 118, 6.5 miles northeast of Markham, and 8.5 miles southwest of Fairbanks, Minn.	--	9-19-74	5.42	85

a Approximately.

Table 3.--Low-flow measurements at miscellaneous sites.

Stream	Tributary to	Location	Drainage	Date	Measurements	
			Area (mi <sup>2</sup> )		Discharge (ft <sup>3</sup> /s)	Specific Conductance (micromhos/cm at 25°C)
Streams tributary to Lake Superior--Continued						
South Branch Whiteface River	Whiteface River	NE¼NE¼ sec.3, T.55 N., R.14 W., St. Louis County, at bridge on Forest Service Road 118, 2 miles upstream from Whiteface Reser- voir, and 6 miles southeast of Markham, Minn.	--	9-19-74	3.89	125
Whiteface River	St. Louis River	NW¼NE¼ sec.11, T.55 N., R.15 W., St. Louis County, at bridge on County Highway 4, 1 mile downstream from Whiteface Reservoir, and 2 miles south of Markham, Minn.	--	9-19-74	9.21	70
Bug Creek	Whiteface River	SE¼ sec.34, T.54 N., R.16 W., St. Louis County, at bridge on County Highway 15 in Shaw, Minn., 5.5 miles east of U.S. Highway 53.	--	9-20-74	3.06	175
Whiteface River	St. Louis River	SE¼SW¼ sec.11, T.54 N., R.17 W., St. Louis County, at bridge on County Highway 52, 0.5 mile east of Cotton, Minn.	--	9-20-74	18.8	140
Whiteface River	St. Louis River	NW¼NE¼ sec.29, T.54 N., R.18 W., St. Louis County, at bridge on County Highway 29, 2.5 miles southwest of Kelsey, Minn.	--	9-19-74	26.2	170
Little Whiteface River	Whiteface River	SE¼NE¼ sec.13, T.53 N., R.19 W., St. Louis County, at bridge on County Highway 209, 1 mile above mouth, and 2 miles east of Meadowlands, Minn.	--	9-19-74	5.10	200
Spider Creek	Whiteface River	SW¼SW¼ sec.10, T.52 N., R.19 W., St. Louis County, at bridge on County Highway 5, 0.8 mile upstream from mouth, and 5 miles south of Meadowlands, Minn.	--	9-19-74	3.90	280
St. Louis River	Lake Superior	NE¼SW¼ sec.5, T.51 N., R.20 W., St. Louis County, at bridge on County Highway 8, 0.7 mile east of Floodwood, Minn.	--	11- 3-38	647	
Floodwood River	St. Louis River	NE¼NW¼ sec.17, T.53 N., R.21 W., St. Louis County, at bridge on County Highway 133, 1 mile above Swan River, and 4.5 miles northeast of Wawina, Minn.	--	9-16-74	6.02	225
Floodwood River	St. Louis River	SW¼NE¼ sec.22, T.53 N., R.21 W., St. Louis County, 0.2 mile south of intersection of County Highway 508 and State Highway 73, 0.6 mile downstream from reservoir, and 11 miles west of Meadowlands, Minn.	--	9-16-74	19.3	170
*St. Louis River	Lake Superior	Lat 46°52'12", long 92°36'10", in SW¼SE¼ sec.27, T.51 N., R.18 W., St. Louis County, at bridge on County Highway 31, 0.3 mile north of Brookston, Minn.	--	9-17-74	392	260
Artichoke River	St. Louis River	SE¼ sec.27, T.51 N., R.18 W., St. Louis County, at bridge on County Highway 860, 300 feet above mouth in Brookston, Minn.	--	9-17-74	9.02	250
Stoney Brook	St. Louis River	SW¼SW¼ sec.28, T.50 N., R.18 W., St. Louis County, at bridge on County Highway 851, 6 miles south of Brookston, Minn.	--	9-17-74	17.9	180
Cloquet River	St. Louis River	SE¼NW¼ sec.7, T.56 N., R.10 W., Lake County, at bridge on County Highway 2, 2.5 miles north of McNair, Minn., and 3 miles up- stream from Sullivan Creek.	--	8-31-65 9-16-74	4.21 8.02	80
Langley River	Cloquet River	SE¼ sec.28, T.56 N., R.11 W., Lake County, near Forest Service Road 403, 1.4 miles upstream from mouth, and 5 miles north of Wales, Minn.	--	9-16-74	3.99	115
Cloquet River	St. Louis River	NE¼ sec.25, T.56 N., R.12 W., St. Louis County, at bridge on County Highway 403, 6 miles northeast of Rollins, Minn.	--	8-31-65 9-17-74	17.3 22.4	95
Cloquet River	St. Louis River	NE¼SE¼ sec.10, T.55 N., R.12 W., St. Louis County, at bridge on County Highway 44, 0.2 mile north of Rollins, Minn.	--	8-31-65	27.0	
Pine Creek	Cloquet River	SE¼ sec.16, T.55 N., R.12 W., St. Louis County, at bridge on County Highway 44, 1 mile up- stream from mouth, and 1 mile southwest of Rollins, Minn.	--	9-17-74	4.00	125

\* High-flow measurements are also available in Geological Survey files.

Table 3.--Low-flow measurements at miscellaneous sites.

Stream	Tributary to	Location	Drainage Area (mi <sup>2</sup> )	Date	Measurements	
					Discharge (ft <sup>3</sup> /s)	Specific Conductance (micromhos/cm at 25°C)
Streams tributary to Lake Superior--Continued						
West Branch Cloquet River	Cloquet River	NE¼NW¼ sec.16, T.55 N., R.13 W., St. Louis County, at bridge on County Highway 547, 7 miles west of Rollins, Minn.	--	9-17-74	2.91	130
Petrel Creek	Wolf Creek	SE¼SW¼ sec.3, T.56 N., R.12 W., St. Louis County, at bridge on County Highway 44, 3.5 miles east of Fairbanks, Minn.	--	9-17-74	.75	140
Wolf Creek	West Branch Cloquet River	NE¼NE¼ sec.15, T.55 N., R.13 W., St. Louis County, at bridge on County Highway 547, 5.5 miles west of Rollins, Minn.	--	9-17-74	4.04	<50
Berry Creek	West Branch Cloquet River	SW¼SW¼ sec.6, T.55 N., R.12 W., St. Louis County, at bridge on County Highway 547, 2.5 miles west of Rollins, Minn.	--	9-17-74	4.94	110
Little Cloquet River	Cloquet River	SE¼SE¼ sec.24, T.54 N., R.13 W., St. Louis County, at bridge on County Highway 44, 0.2 mile below Smith Lake, 9 miles south- west of Wales, Minn.	--	9- 1-65	38.0	
Little Cloquet River	Cloquet River	SW¼SE¼ sec.33, T.54 N., R.13 W., St. Louis County, at bridge on County Highway 44, 1.5 miles upstream from mouth, and 9 miles northeast of Island Lake, Minn.	--	9-18-74	24.6	115
Cloquet River	St. Louis River	NE¼NE¼ sec.2, T.52 N., R.14 W., St. Louis County, at bridge on County Highway 273, 0.6 mile upstream from Island Lake Reser- voir, and 4 miles east of Island Lake, Minn.	--	9- 1-65 9-18-74	125 96.9	110
Cloquet River	St. Louis River	SW¼SE¼ sec.16, T.52 N., R.15 W., St. Louis County, at bridge on County Highway 48, 1 mile downstream from Island Lake Reser- voir, and 4 miles east of Taft, Minn.	--	9- 1-65 9-18-74	470 573	70
Beaver River	Cloquet River	SW¼SE¼ sec.7, T.51 N., R.14 W., St. Louis County, at bridge on county road, at Wild Rice Lake outlet, 4 miles north of Duluth, Minn. International Airport.	--	9-19-74	.39	85
Beaver River	Cloquet River	NW¼SW¼ sec.29, T.52 N., R.15 W., St. Louis County, at bridge on County Highway 285, 2 miles upstream from mouth, and 3.5 miles southeast of Taft, Minn.	--	9-19-74	19.3	85
Cloquet River	St. Louis River	On line between secs.26 and 27, T.52 N., R.16 W., St. Louis County, at bridge on County Highway 15, 3 miles south of Taft, Minn.	--	9- 2-65	511	
Us-Kab-Wan-Ka River	Cloquet River	SW¼SW¼ sec.14, T.53 N., R.16 W., St. Louis County, on extension of County Highway 15, 5 miles north of Taft, Minn.	--	9-20-74	1.24	205
Hellwig Creek	Cloquet River	SE¼NW¼ sec.26, T.52 N., R.17 W., St. Louis County, 130 feet upstream from mouth, 0.2 mile east of U.S. Highway 53, and 0.2 mile north of Independence, Minn.	--	9-20-74	6.68	235
Beartrap Creek	Cloquet River	SW¼SW¼ sec.30, T.51 N., R.16 W., St. Louis County, at bridge on County Highway 878, at outlet of Grand Lake, and 1 mile north- east of Saginaw, Minn.	--	9-19-74	0	
Beartrap Creek	Cloquet River	SE¼ sec.16, T.51 N., R.17 W., St. Louis County, at bridge on County Highway 7, 1.2 miles east of Burnett, Minn.	--	9-19-74	7.30	180
Cloquet River	St. Louis River	SE¼SE¼ sec.17, T.51 N., R.17 W., St. Louis County, at bridge on County Highway 694 at Burnett, Minn.	--	9- 2-65	497	
Simian Creek	St. Louis River	SW¼NW¼ sec.21, T.50 N., R.17 W., St. Louis County, at bridge on county road, 0.7 mile north of County Highway 80, and 6.5 miles northwest of Cloquet, Minn.	--	9-17-74	1.95	170
Pine River	St. Louis River	SE¼ sec.8, T.50 N., R.16 W., St. Louis County, at bridge on U.S. Highway 2, 3 miles north- west of Munger, and 7.5 miles north of Cloquet, Minn.	--	9-17-74	4.07	240

Table 3.--Low-flow measurements at miscellaneous sites.

Stream	Tributary to	Location	Drainage Area (mi <sup>2</sup> )	Date	Measurements	
					Discharge (ft <sup>3</sup> /s)	Specific Conductance (micromhos/cm at 25°C)
Streams tributary to Lake Superior--Continued						
Midway River	St. Louis River	SE $\frac{1}{4}$ NE $\frac{1}{4}$ sec.32, T.50 N., R.15 W., St. Louis County, at bridge on U.S. Highway 2, 2 miles northwest of Proctor, Minn.	--	9-18-74	.79	250
Midway River	St. Louis River	N $\frac{1}{2}$ sec.14, T.49 N., R.16 W., Carlton County, at bridge on county road, 0.7 mile upstream from Hay Creek, and 0.7 mile north of Harney, Minn.	--	9-18-74	6.23	240
Hay Creek	Midway River	NW $\frac{1}{4}$ NE $\frac{1}{4}$ sec.15, T.49 N., R.16 W., Carlton County, at bridge on County Highway 2, 5.5 miles west of Proctor, Minn.	--	9-18-74	2.20	260
St. Louis River (old river channel)	Lake Superior	SW $\frac{1}{4}$ SW $\frac{1}{4}$ sec.5, T.48 N., R.16 W., Carlton County, at bridge on County Highway 1, below Thompson Reservoir outlet at Thompson, Minn.	--	9- 3-68	7.97	
Otter Creek	St. Louis River	NW $\frac{1}{4}$ NE $\frac{1}{4}$ sec.29, T.49 N., R.17 W., Carlton County, at bridge on County Highway 5, 3.4 miles southwest of Cloquet, Minn.	--	10-29-47 5-20-58 5-13-59 5-13-59	1.61 3.51 9.49 9.10	
Otter Creek	St. Louis River	SE $\frac{1}{4}$ SE $\frac{1}{4}$ sec.29, T.49 N., R.17 W., Carlton County, 3.6 miles southwest of Cloquet, Minn.	--	10-29-47	1.83	
Otter Creek	St. Louis River	On line between secs.32 and 33, T.49 N., R.17 W., Carlton County, at bridge on county road, 1.6 miles northeast of Iverson, and 3.6 miles southwest of Cloquet, Minn.	--	10-29-47	2.02	
Otter Creek	St. Louis River	SW $\frac{1}{4}$ SE $\frac{1}{4}$ sec.28, T.49 N., R.17 W., Carlton County, near gas pipeline crossing, 2.4 miles northeast of Iverson, and 2.9 miles southwest of Cloquet, Minn.	--	10-29-47	2.60	
Otter Creek	St. Louis River	NW $\frac{1}{4}$ sec.34, T.49 N., R.17 W., Carlton County, 2.3 miles northeast of Iverson, and 2.9 miles southwest of Cloquet, Minn.	--	10-29-47	3.07	
Otter Creek	St. Louis River	At common corner of secs.26, 27, 34, and 35, T.49 N., R.17 W., Carlton County, at dead end of county road, 2.2 miles south of Cloquet, Minn.	--	10-29-47	3.60	
Otter Creek	St. Louis River	NW $\frac{1}{4}$ NW $\frac{1}{4}$ sec.7, T.48 N., R.16 W., Carlton County, at bridge on County Highway 1, 1 mile upstream from mouth, and 0.2 mile south of Carlton, Minn.	--	9-18-74	11.5	240
Keene Creek	St. Louis River	NE $\frac{1}{4}$ sec.13, T.49 N., R.15 W., St. Louis County, at bridge on State Highway 23, 2.5 miles east of Proctor, Minn.	--	9-18-74	.63	320
Nemadji River	Lake Superior	SE $\frac{1}{4}$ SE $\frac{1}{4}$ sec.18, T.46 N., R.17 W., Carlton County, at bridge on County Highway 8, 2.3 miles upstream from Nemadji Creek, and 3.5 miles southeast of Nemadji, Minn.	20.0	9-23-74	1.61	125
Nemadji River	Lake Superior	Lat 46°29'36", long 92°28'04", in SE $\frac{1}{4}$ SE $\frac{1}{4}$ sec.3, T.46 N., R.17 W., Carlton County, at bridge on County Highway 103, 2 miles southeast of Duesler, Minn.	55.1	9-23-74	3.03	190
Blackhoof River	Nemadji River	SW $\frac{1}{4}$ SE $\frac{1}{4}$ sec.17, T.47 N., R.17 W., Carlton County, at bridge on County Highway 105, 5.5 miles southwest of Scotts Corner, Minn.	28.5	9-23-74	7.31	180
Net River	South Fork Nemadji River	NW $\frac{1}{4}$ SE $\frac{1}{4}$ sec.17, T.46 N., R.16 W., Carlton County, at bridge on County Highway 8, in Holyoke, Minn.	26.6	9-24-74	1.83	140
Little Net River	Net River	NW $\frac{1}{4}$ SW $\frac{1}{4}$ sec.10, T.46 N., R.16 W., Carlton County, at culvert on County Highway 8, 1.4 miles upstream from mouth, and 1.5 miles northeast of Holyoke, Minn.	11.3	9-24-74	1.61	240

Table 3.--Low-flow measurements at miscellaneous sites.

Stream	Tributary to	Location	Drainage	Date	Measurements	
			Area (mi <sup>2</sup> )		Discharge (ft <sup>3</sup> /s)	Specific Conductance (micromhos/cm at 25°C)
Red River of the North basin						
Otter Tail River	Red River of the North	NE¼SW¼ sec.6, T.141 N., R.38 W., Becker County, at Many Point Lake outlet in White Earth Indian Reservation, 9.7 miles northwest of Ponsford, Minn.	--	9-26-33	3.98	
Otter Tail River	Red River of the North	NE¼SW¼ sec.18, T.141 N., R.38 W., Becker County, at bridge on County Highway 35, at Round Lake outlet, and 8.6 miles north-east of Ponsford, Minn.	--	9-26-33	7.31	
Cotton Lake diversion	Otter Tail River	N½ sec.12, T.139 N., R.40 W., Becker County, at culvert on County Highway 29, 0.8 mile northeast of Rochert, Minn.	--	9-26-33	1.10	
Acorn Lake outlet	Otter Tail River	SE¼NW¼ sec.28, T.138 N., R.40 W., Becker County, 2.4 miles northwest of Frazee, Minn.	--	10-12-43	5.13	
				4-24-44	5.98	
				10- 6-44	4.96	
				5-29-45	5.11	
				8- 8-45	3.61	
Otter Tail River	Red River of the North	S¼ sec.20, T.137 N., R.39 W., Otter Tail County, at bridge on County Highway 60, 1 mile east of Luce, Minn.	--	6- 5-68	186	
				8-21-68	55.6	
Otter Tail River	Red River of the North	NW¼NW¼ sec.34, T.137 N., R.39 W., Otter Tail County, at bridge on county road, 2.2 miles southeast of Luce, Minn.	--	10-25-67	37.6	
				6- 5-68	220	
				8-21-68	40.0	
Otter Tail River	Red River of the North	NE¼SW¼ sec.17, T.136 N., R.38 W., Otter Tail County, at Big Pine Lake outlet, 3.1 miles east of Perham, Minn.	--	10-11-43	35.3	
				4-24-44	195	
*Otter Tail River	Red River of the North	SE¼ sec.24, T.136 N., R.39 W., Otter Tail County, at bridge on U.S. Highway 10, 1.5 miles southeast of Perham, Minn.	--	8- 8-45	34.6	
				10-24-67	42.1	
				8-14-68	87.2	
Willow Creek	Otter Tail River	On line between secs.15 and 16, T.135 N., R.38 W., Otter Tail County, at bridge on county road, 5 miles west of New York Mills, Minn.	--	6- 7-68	3.14	
				8-14-68	.30	
*Otter Tail River	Red River of the North	SE¼SE¼ sec.4, T.134 N., R.39 W., Otter Tail County, at bridge on County Highway 1, at Otter Tail Lake inlet, and 2.4 miles north-west of Ottertail, Minn.	--	9-27-33	12.8	
				10-11-34	14.0	
				10-26-34	19.0	
				10-20-43	144	
Dead River	Otter Tail River	On line between secs.2 and 3, T.134 N., R.40 W., Otter Tail County, 1 mile southwest of Basswood, Minn.	--	6- 6-68	30.6	
				8-22-68	33.4	
Otter Tail River	Red River of the North	E½SE¼ sec.29, T.134 N., R.41 W., Otter Tail County, at bridge on County Highway 35, 200 feet upstream from West Lost Lake, and 2 miles west of Phelps, Minn.	--	6- 6-68	398	
				8-22-68	182	
Otter Tail River	Red River of the North	NE¼ sec.30, T.134 N., R.41 W., Otter Tail County, at bridge on county road, below West Lost Lake, and 10 miles northeast of Fergus Falls, Minn.	--	10-12-34	23.0	
Pelican River	Otter Tail River	On line between sec.1, T.137 N., R.42 W., Otter Tail County, and sec.36, T.138 N., R.41 W., Becker County, at culvert on County Highway 20, 0.2 mile below Buck Lake, and 6.7 miles southwest of city of Detroit Lakes, Minn.	--	7-25-68	47.3	
				8- 8-68	26.1	
Pelican River	Otter Tail River	SE¼SW¼ sec.17, T.137 N., R.42 W., Otter Tail County, at Pelican Lake outlet, 7.9 miles northeast of Pelican Rapids, Minn.	a214	10-11-43	29.0	
				4-25-44	66.9	
				10- 7-44	126	
				5-23-45	103	
				8- 6-45	11.8	
Pelican River	Otter Tail River	NW¼NW¼ sec.7, T.136 N., R.42 W., Otter Tail County, at bridge on county road, at Lizzie Lake outlet, and 3.8 miles northeast of Pelican Rapids, Minn.	--	10-10-43	26.8	
				4-25-44	68.9	
				10- 7-44	113	
				5-22-45	132	

\* High-flow measurements are also available in Geological Survey files.  
a Approximately.

Table 3.--Low-flow measurements at miscellaneous sites.

Stream	Tributary to	Location	Drainage	Date	Measurements	
			Area (mi <sup>2</sup> )		Discharge (ft <sup>3</sup> /s)	Specific Conductance (micromhos/cm at 25°C)
Red River of the North basin--Continued						
*Otter Tail River	Red River of the North	On line between secs.25 and 26, T.132 N., R.46 W., Wilkin County, at bridge on County Highway 17, 3.8 miles south of Everdell, Minn.	--	12-20-32	65.2	
Otter Tail River	Red River of the North	NE¼NW¼ sec.18, T.132 N., R.46 W., Wilkin County, at bridge on County Highway 14, 4.1 miles east of Breckenridge, Minn.	--	4-17-51	715	
Mustinka River	Bois de Sioux River	Lat 45°51'58", long 96°05'23", on line between secs.28 and 29, T.128 N., R.43 W., Grant County, at bridge on County Highway 9, 5 miles northeast of Herman, Minn.	--	11- 2-65	36.0	
*Mustinka River	Bois de Sioux River	NE¼NE¼ sec.20, T.128 N., R.44 W., Grant County, at bridge on State Highway 9, 1.5 miles northwest of Norcross, Minn.	--	4-21-43 4-25-43 4- 6-44 10-20-44	95.5 80.1 8.61 1.21	
West Fork Twelvemile Creek	Twelvemile Creek	On line between secs.28 and 33, T.126 N., R.45 W., Traverse County, at bridge on County Highway 8, 1 mile upstream from mouth, and 4.4 miles southeast of Dumont, Minn.	--	4-20-64 5-26-64 7- 7-64 8-19-64 4-25-65 6-30-65 9- 1-65 11- 4-65 5-14-70	5.47 0 0 0 2.67 0 0 0 0	
*West Branch Mustinka River	Mustinka River	On line between secs.18 and 19, T.127 N., R.45 W., Traverse County, at bridge on State Highway 27, 6.5 miles east of Wheaton, Minn.	--	4-20-43 4-26-43 6-27-43 4-16-51	90.5 95.0 32.4 110	
West Branch Mustinka River	Mustinka River	On line between secs.20 and 29, T.128 N., R.45 W., Traverse County, at bridge on County Highway 90, 8.2 miles northwest of Wheaton, Minn.	--	4-22-43 4-26-43	136 116	
Traverse County ditch	West Branch Mustinka River	On line between secs.9 and 10, T.128 N., R.45 W., Traverse County, at bridge on county road, 3.1 miles southwest of Charlesville, Minn.	--	4-26-43 6-30-43	27.3 26.5	
*Mustinka River (old channel)	Bois de Sioux River	On line between secs.2 and 11, T.128 N., R.46 W., Traverse County, at bridge on County Highway 16, 6.8 miles east of Boisberg, Minn.	--	4-22-43 4-26-43 6-30-43	194 166 203	
Mustinka ditch	Mustinka River	On line between sec.19, T.128 N., R.45 W., and sec.24, T.128 N., R.46 W., Traverse County, at bridge on County Highway 87, 1.2 miles downstream from West Branch Mustinka River, and 8.4 miles southeast of Boisberg, Minn.	--	6-18-43	106	
*Mustinka ditch	Mustinka River	On line between secs.23 and 24, T.128 N., R.46 W., Traverse County, at bridge on County Highway 11, 7.9 miles southwest of Charlesville, Minn.	--	4-22-43 4-25-43 6-30-43	42.8 32.8 30.9	
Traverse County ditch	Mustinka River	SW¼SW¼ sec.5, T.127 N., R.46 W., Traverse County, at bridge on County Highway 80, 0.8 mile upstream from Mustinka River, and 1.7 miles north of Wheaton, Minn.	--	3-31-17	178	
*Bois de Sioux River	Red River of the North	NW¼NW¼ sec.10, T.128 N., R.47 W., Roberts County, at bridge on County Highway 16, at White Rock, S. Dak., and 8.6 miles northwest of Wheaton, Minn.	--	6-18-21	10.2	
Rabbit River	Bois de Sioux River	NW¼NW¼ sec.36, T.131 N., R.47 W., Wilkin County, at bridge on County Highway 9, 5 miles southwest of Doran, Minn.	--	7-22-43	29.2	
*Bois de Sioux River	Red River of the North	NE¼NE¼ sec.21, T.131 N., R.47 W., Richland County, at bridge on County Highway 6, 3 miles downstream from Rabbit River, and 4.3 miles southwest of Doran, Minn.	--	10- 9-64	1.09	
*Bois de Sioux River	Red River of the North	NE¼ sec.8, T.132 N., R.47 W., Wilkin County, at bridge on State Highway 210, at Breckenridge, Minn., and 300 feet upstream from confluence with Otter Tail River.	--	5- 6-12 6-16-42 9-10-42	47.5 449 218	

\* High-flow measurements are also available in Geological Survey files.

Table 3.--Low-flow measurements at miscellaneous sites.

Stream	Tributary to	Location	Drainage Area (mi <sup>2</sup> )	Date	Measurements	
					Discharge (ft <sup>3</sup> /s)	Specific Conductance (micromhos/cm at 25°C)
Red River of the North basin--Continued						
Red River of the North	Lake Winnipeg	NW¼NW¼ sec.6, T.133 N., R.47 W., Wilkin County, at County Highway 18 bridge, 0.7 mile west of Brushvale, Minn.	--	10-12-34	11.2	
*Red River of the North	Lake Winnipeg	NW¼ sec.28, T.140 N., R.48 W., Clay County, at highway bridge about 2.5 miles north of Fargo, N. Dak.	--	7-14-38 7- 6-45	173 493	
Buffalo River	Red River of the North	NW¼SE¼ sec.35, T.140 N., R.47 W., Clay County, at bridge on County Highway 19, 1.5 miles north of Glyndon, Minn.	--	8-26-65	24.0	
Buffalo River	Red River of the North	SW¼NW¼ sec.34, T.140 N., R.47 W., Clay County, at bridge on County Highway 68, 2.1 miles northwest of Glyndon, Minn.	--	10- 6-47 10-22-47 10-31-47	27.6 23.8 28.7	
Stony Creek	South Branch Buffalo River	On line between secs.2 and 11, T.137 N., R.45 W., Clay County, at bridge on County Highway 31, 0.5 mile downstream from Big Slough, and 5.7 miles northeast of Barnesville, Minn.	--	4- 4-55 5- 4-55 6- 1-55 6-28-55	51.1 15.8 3.81 2.46	
South Branch Buffalo River	Buffalo River	SE¼SE¼ sec.5, T.139 N., R.47 W., Clay County, at bridge on U.S. Highway 10, 2.5 miles west of Glyndon, Minn.	--	10-16-47 10-31-47	1.16 3.54	
Buffalo River	Red River of the North	On line between secs.17 and 20, T.140 N., R.47 W., Clay County, at bridge on County Highway 91, 5 miles southwest of Averill, Minn.	--	10- 7-30 10-22-47 10-31-47	14.1 26.6 30.1	
Buffalo River	Red River of the North	NE¼NE¼ sec.27, T.141 N., R.48 W., Clay County, at bridge on County Highway 5, 1.5 miles northeast of Kragnes, Minn.	--	10-17-47 10-23-47 11- 1-47	31.2 24.1 30.7	
Wild Rice River	Red River of the North	On line between secs.16 and 21, T.145 N., R.37 W., Clearwater County, at bridge on County Highway 36, 4 miles north of Zerkel, Minn.	--	9-18-67	1.79	340
Wild Rice River	Red River of the North	On line between secs.28 and 29, T.145 N., R.37 W., Clearwater County, at bridge on State Highway 92, 0.2 mile downstream from Hier Creek, and 3 miles north of Zerkel, Minn.	--	9-18-67	1.58	
Wild Rice River tributary	Wild Rice River	On line between secs.6 and 7, T.144 N., R.37 W., Clearwater County, at culvert on State Highway 200, 1.8 miles west of Zerkel, Minn.	--	9-19-67	.65	420
Buckboard Creek	Wild Rice River	On line between secs.2 and 11, T.144 N., R.38 W., Clearwater County, at culvert on State Highway 200, 4 miles west of Zerkel, Minn.	--	9-19-67	1.04	440
*Wild Rice River	Red River of the North	Lat 47°23', long 95°29', in NE¼ sec.16, T.145 N., R.38 W., Clearwater County, at Lower Rice Lake outlet, 7 miles northeast of Zerkel, and 10 miles southwest of Bagley, Minn.	--	8- 2-35 10-30-35 8- 4-36	61.8 17.0 0	
Wild Rice River	Red River of the North	SE¼SE¼ sec.8, T.145 N., R.38 W., Clearwater County, at bridge on County Highway 35, 1 mile downstream from Lower Rice Lake outlet, and 7.3 miles northwest of Zerkel, Minn.	--	9-19-67	.16	340
Twin Lake Creek	Wild Rice River	On line between sec.3, T.144 N., R.40 W., and sec.34, T.145 N., R.40 W., Mahnomen County, at culvert on State Highway 200, 4.1 miles southeast of Beaulieu, Minn.	--	11- 4-66 9-20-67	5.59 1.35	390
Twin Lake Creek	Wild Rice River	NW¼NE¼ sec.34, T.145 N., R.40 W., Mahnomen County, at bridge on county road, 3.8 miles east of Beaulieu, Minn.	--	11- 4-66 9-20-67	5.58 1.03	365
White Earth River	Wild Rice River	SW¼SW¼ sec.20, T.144 N., R.41 W., Mahnomen County, at culvert on county road, 6.2 miles north of Waubun, Minn.	--	9-20-67	.54	400
Spring Creek	Wild Rice River	NW¼ sec.30, T.144 N., R.42 W., Mahnomen County, at bridge on county road, 5.8 miles southwest of Mahnomen, Minn.	--	11- 4-66 9-20-67	.95 .41	710 405
Wild Rice River	Red River of the North	On line between secs.14 and 23, T.144 N., R.43 W., Norman County, at bridge on County Highway 29, at Faith, Minn.	--	9-20-67	13.1	320

\* High-flow measurements are also available in Geological Survey files.

Table 3.--Low-flow measurements at miscellaneous sites.

Stream	Tributary to	Location	Drainage	Date	Measurements	
			Area (mi <sup>2</sup> )		Discharge (ft <sup>3</sup> /s)	Specific Conductance (micromhos/cm at 25°C)
Red River of the North basin--Continued						
Wild Rice River tributary	Wild Rice River	On line between secs.22 and 27, T.144 N., R.43 W., Norman County, at culvert on County Highway 173, 2 miles southwest of Faith, Minn.	--	9-20-67	.31	480
Marsh Creek	Wild Rice River	Near common corner of secs.16, 17, 20, and 21, T.144 N., R.43 W., Norman County, at bridge on County Highway 29, 5 miles northeast of Twin Valley, Minn.	--	11- 4-66	.27	940
Wild Rice River tributary	Wild Rice River	On line between secs.5 and 6, T.143 N., R.43 W., Norman County, at bridge on County Highway 36, 0.8 mile south of Fossum, Minn.	--	9-19-67	.77	370
South Branch Wild Rice River tributary	South Branch Wild Rice River	On line between secs.26 and 27, T.142 N., R.42 W., Becker County, at culvert on County Highway 13, 2.5 miles southwest of Ogema, Minn.	--	9-18-67	.70	500
South Branch Wild Rice River	Wild Rice River	On line between secs.23 and 26, T.142 N., R.44 W., Clay County, at bridge on county road, 1.8 miles northeast of Ulen, Minn.	--	9-18-67	.09	600
South Branch Wild Rice River tributary	South Branch Wild Rice River	NW¼NW¼ sec.20, T.142 N., R.44 W., Clay County, at culvert on County Highway 42, 2.5 miles northwest of Ulen, Minn.	--	9-18-67	.12	520
Sand Hill River	Red River of the North	N¼ sec.10, T.147 N., R.41 W., Polk County, at bridge on county road, 5.5 miles west of Fosston, Minn.	--	11- 1-66 9-20-67	1.89 .81	560 720
Sand Hill River tributary	Sand Hill River	On line between secs.3 and 10, T.147 N., R.41 W., Polk County, at bridge on County Highway 31, 4 miles south of McIntosh, Minn.	--	11- 1-66	.45	750
Sand Hill River	Red River of the North	On line between secs.26 and 27, T.147 N., R.42 W., Polk County, at bridge on U.S. Highway 59, 1.5 miles south of Winger, Minn.	--	11- 1-66	2.50	900
Sand Hill River	Red River of the North	NE¼NE¼ sec.32, T.147 N., R.43 W., Polk County, at bridge on county road, 2.5 miles northwest of Rindal, and 8.2 miles west of Winger, Minn.	--	11- 1-66	2.44	850
Sand Hill River	Red River of the North	SW¼SW¼ sec.27, T.147 N., R.45 W., Polk County, at bridge on county road, 5.2 miles southwest of Fertile, Minn.	--	4-24-43	54.6	
Sand Hill River	Red River of the North	NW¼ sec.28, T.147 N., R.45 W., Polk County, at entrance to Sand Hill ditch, 5.5 miles west of Fertile, Minn.	--	11- 1-66 9-21-67	16.8 13.1	700 430
Kittleson Creek	Sand Hill River	On line between secs.4 and 5, T.147 N., R.44 W., Polk County, at bridge on State Highway 32, 2.8 miles north of Fertile, Minn.	--	11- 2-66	.53	650
Kittleson Creek	Sand Hill River	NW¼ sec.21, T.147 N., R.45 W., Polk County, at culvert on County Highway 1, 6.5 miles east of Beltrami, Minn.	--	11- 1-66 9-21-67	1.88 2.42	620 370
Sand Hill River	Red River of the North	NW¼NW¼ sec.29, T.147 N., R.45 W., Polk County, at bridge on county road, 4.8 miles southeast of Beltrami, Minn.	--	4-24-43	69.2	
Sand Hill River	Red River of the North	NW¼NW¼ sec.19, T.147 N., R.46 W., Polk County, at bridge on county road, 2.4 miles west of Beltrami, Minn.	--	4-24-43	7.20	
Red River of the North	Lake Winnipeg	In sec.2, T.151 N., R.50 W., Polk County, just upstream from Red Lake River, at East Grand Forks, Minn.	--	12-13-10	101	
Hay Creek	Lower Red Lake	SW¼SE¼ sec.30, T.151 N., R.32 W., Beltrami County, at bridge on State Highway 1, 5.8 miles east of Redby, Minn.	--	9-22-66	2.49	500
Pike Creek	Lower Red Lake	SW¼SW¼ sec.21, T.151 N., R.34 W., Beltrami County, at culverts on State Highway 1, at Red Lake, Minn.	--	9-22-66	4.82	500

Table 3.--Low-flow measurements at miscellaneous sites.

Stream	Tributary to	Location	Drainage	Date	Measurements	
			Area (mi <sup>2</sup> )		Discharge (ft <sup>3</sup> /s)	Specific Conductance (micromhos/cm at 25°C)
Red River of the North basin--Continued						
*Red Lake River	Red River	NW¼NW¼ sec.18, T.152 N., R.38 W., Clearwater County, at bridge on county road, 100 feet upstream of Clearwater County line and Red Lake Indian Reservation Boundary, and 14 miles northwest of Berner, Minn.	--	10-25-34 8- 7-40	16.4 145	
*Red Lake River	Red River of the North	On line between secs.20 and 21, T.153 N., R.41 W., Pennington County, at bridge on County Highway 22, 6.1 miles west of High Landing, Minn.	--	10-23-30	18.0	
Moose River	Thief River	E½ sec.1, T.157 N., R.39 W., Marshall County, at bridge on County Highway 54, 8.6 miles northeast of Gatzke, Minn.	--	6- 4-64	b4.0	
*Moose River	Thief River	NE¼SE¼ sec.36, T.158 N., R.40 W., Marshall County, at bridge on State Highway 89, 3.3 miles northeast of Gatzke, Minn.	--	4- 9-64 7- 9-64 7-30-64 8-27-64	3.97 b10 0 0	
*Thief River	Red Lake River	NE¼SE¼ sec.20, T.158 N., R.41 W., Marshall County, at bridge on county road at Thief Lake outlet, 9.8 miles northeast of Middle River, Minn.	--	9-17-37 5- 3-41	b2.0 82.7	
Judicial ditch No. 11	Thief River	NW¼NW¼ sec.23, T.156 N., R.41 W., Marshall County, at dike 1.4 miles upstream from Mud Lake Reservoir, 13 miles west of Grygla, Minn.	--	7-28-37 8- 5-37	205 279	
Thief River	Red Lake River	NE¼NE¼ sec.32, T.156 N., R.42 W., Marshall County, at bridge on County Highway 7, 6 miles east of Holt, Minn.	--	7-28-37 8- 5-37	230 340	
Clearwater River	Red Lake River	On line between secs.31 and 32, T.147 N., R.37 W., Clearwater County, at bridge on County Highway 28, 0.5 mile south of Bagley, Minn.	--	9-20-66	9.82	
Clearwater River	Red Lake River	On line between secs.33 and 34, T.148 N., R.36 W., Clearwater County, at bridge on county road, 8.8 miles northeast of Bagley, Minn.	--	9-20-66	26.7	
Clearwater River tributary	Clearwater River	SW¼ sec.22, T.148 N., R.35 W., Beltrami County, at culvert on County Highway 5, 1.5 miles north of Pinewood, Minn.	--	9-20-66	3.85	
Clearwater River	Red Lake River	On line between sec.6, T.148 N., R.35 W., and sec.31, T.149 N., R.35 W., Beltrami County, at bridge on County Highway 24, 5.5 miles northwest of Pinewood, Minn.	--	2-10-31 3-13-31 10-26-33 9-20-66	28.3 30.4 20.8 39.7	
Clearwater River	Red Lake River	On line between secs.9 and 10, T.149 N., R.36 W., Clearwater County, at bridge on County Highway 14, 6 miles north of Leonard, Minn.	--	9-20-66	49.2	
Anderson Lake outlet	Clearwater River	NW¼NW¼ sec.16, T.149 N., R.36 W., Clearwater County, at bridge on County Highway 4, 5.5 miles north of Leonard, Minn.	--	9-20-66	.40	
Clearwater River	Red Lake River	NW¼NE¼ sec.35, T.150 N., R.37 W., Clearwater County, downstream from bridge on County Highway 11, 6.6 miles northeast of Clearbrook, Minn.	--	9-20-66	50.8	
Clearwater River	Red Lake River	SW¼ sec.9, T.150 N., R.37 W., Clearwater County, at bridge on Indian Service Road, 14 miles southwest of Red Lake, Minn.	--	11- 3-66	8.39	
Clearwater County ditch	Clearwater River	NW¼NW¼ sec.8, T.150 N., R.37 W., Clearwater County, at bridge on County Highway 5, near boundary of Red Lake Indian Reservation, 0.1 mile upstream from Clearwater River, and 3 miles northeast of Berner, Minn.	--	6- 5-40	10.4	

\* High-flow measurements are also available in Geological Survey files.

b Estimated.

Table 3.--Low-flow measurements at miscellaneous sites.

Stream	Tributary to	Location	Drainage	Date	Measurements	
			Area (mi <sup>2</sup> )		Discharge (ft <sup>3</sup> /s)	Specific Conductance (micromhos/cm at 25°C)
Red River of the North basin--Continued						
Clearwater River	Red Lake River	SW $\frac{1}{4}$ SW $\frac{1}{4}$ sec.5, T.150 N., R.37 W., Clearwater County, at bridge on Indian Service Road at boundary of Red Lake Indian Reservation, 3 miles northeast of Berner, Minn.	--	6- 5-40	106	
				9-29-59	31.4	
Clearwater River	Red Lake River	On line between secs.2 and 3, T.151 N., R.39 W., Polk County, at bridge on County Highway 2, 11 miles north of Gully, Minn.	--	10-25-33	21.0	
Clearwater River	Red Lake River	SE $\frac{1}{4}$ NE $\frac{1}{4}$ sec.33, T.152 N., R.40 W., Red Lake County, at bridge on County Highway 10, at Roland, Minn.	--	5-26-50	968	
Clearwater River	Red Lake River	At common corner of secs.1 and 2, T.151 N., R.41 W., and secs.35 and 36, T.152 N., R.41 W., Red Lake County, at bridge on County Highway 5, 6.5 miles north of Oklee, Minn.	--	6- 4-40	112	
				9-20-66	55.4	
Clearwater River	Red Lake River	NE $\frac{1}{4}$ NW $\frac{1}{4}$ sec.6, T.150 N., R.42 W., Red Lake County, 0.1 mile upstream from Lost River, and 2.4 miles northeast of Terrebonne, Minn.	--	3-12-31	13.3	
Lost River	Clearwater River	On line between secs.17 and 20, T.148 N., R.38 W., Clearwater County, at bridge on County Highway 18, 1 mile southeast of Weme, Minn.	--	9-21-66	1.20	
Lost River	Clearwater River	N $\frac{1}{2}$ sec.32, T.149 N., R.38 W., Clearwater County, at bridge on County Highway 45, 0.2 mile upstream from Pine Lake, and 4 miles southwest of Gonvick, Minn.	--	9-21-66	1.78	
Lost River	Clearwater River	At center of sec.21, T.149 N., R.38 W., Clearwater County, at bridge on county road, 0.5 mile downstream from Pine Lake, and 2 miles south of Gonvick, Minn.	--	9-21-66	4.93	
Lost River	Clearwater River	On line between secs.34 and 35, T.150 N., R.38 W., Clearwater County, at bridge on county road, 2 miles northeast of Gonvick, Minn.	--	9-21-66	4.49	
Silver Creek	Lost River	On line between secs.30 and 31, T.149 N., R.37 W., Clearwater County, at bridge on County Highway 74, 1 mile west of Clearbrook, Minn.	--	9-21-66	.14	
Silver Creek	Lost River	On line between secs.34 and 35, T.150 N., R.38 W., Clearwater County, at bridge on county road, at Talge Lake outlet, and 2.5 miles northeast of Gonvick, Minn.	--	9-21-66	.68	
Lost River	Clearwater River	On line between secs.18 and 19, T.150 N., R.38 W., Clearwater County, at bridge on county road, 4 miles west of Berner, Minn.	--	8-16-49	78	
				5-13-50	516	
				9-21-66	5.07	
*Lost River	Clearwater River	NW $\frac{1}{4}$ sec.2, T.150 N., R.42 W., Red Lake County, at bridge on U.S. Highway 59, 2 miles north of Brooks, Minn.	--	10-25-33 9-22-66	0 6.76	
Hill River	Lost River	On line between secs.35 and 36, T.150 N., R.41 W., Red Lake County, at bridge on county road, 4.5 miles south of Oklee, Minn.	--	9-21-66	7.13	
Poplar River	Lost River	At center of sec.36, T.148 N., R.40 W., Polk County, at bridge on County Highway 27, 3 miles northeast of Fosston, Minn.	--	9-21-66	4.31	
Poplar River	Lost River	On line between secs.14 and 23, T.148 N., R.41 W., Polk County, at bridge on county road, 1.7 miles east of McIntosh, Minn.	--	9-21-66	3.76	520
Poplar River	Lost River	On line between secs.28 and 33, T.149 N., R.41 W., Polk County, at bridge on County Highway 35, 4.5 miles northeast of Erskine, Minn.	--	9-21-66	3.93	
*Poplar River	Lost River	SE $\frac{1}{4}$ NW $\frac{1}{4}$ sec.14, T.149 N., R.42 W., Polk County, at bridge on U.S. Highway 59, 3.9 miles north of Erskine, Minn.	--	9-21-66	3.99	
Lost River	Clearwater River	SW $\frac{1}{4}$ NE $\frac{1}{4}$ sec.6, T.150 N., R.42 W., Red Lake County, 0.5 mile upstream from Clearwater River, 2.6 miles northeast of Terrebonne, Minn.	--	3-12-31	8.36	

\* High-flow measurements are also available in Geological Survey files.

Table 3.--Low-flow measurements at miscellaneous sites.

Stream	Tributary to	Location	Drainage Area (mi <sup>2</sup> )	Date	Measurements	
					Discharge (ft <sup>3</sup> /s)	Specific Conductance (micromhos/cm at 25°C)
Red River of the North basin--Continued						
Beau Gerlot	Clearwater River	On line between secs.31 and 6, T.150 N., and T.151 N., R.43 W., Red Lake County, at bridge on County Highway 114, 3.6 miles northwest of Terrebonne, Minn.	--	9-22-66	0	
Clearwater River	Red Lake River	NE¼NW¼ sec.26, T.151 N., R.44 W., Red Lake County, at crossing of transmission line, 1.1 miles southeast of Red Lake Falls, Minn.	--	10-25-33	20.6	
Red Lake River	Red River of the North	SW¼ sec.15, T.151 N., R.44 W., Red Lake County, downstream from mouth of Clearwater River, at northwestern city limits of Red Lake Falls, Minn.	--	7- 2-10	716	
*Red Lake River	Red River of the North	SE¼SE¼ sec.28, T.151 N., R.45 W., Red Lake County, at bridge on County Highway 11, at Huot, Minn.	--	11- 1-33	47.4	
Burnham Creek	Red Lake River	On line between secs.8 and 9, T.149 N., R.47 W., Polk County, at bridge on county road, 2 miles northwest of Girard, Minn.	--	5-21-75	4.77	
Burnham Creek	Red Lake River	NE¼NW¼ sec.1, T.149 N., R.48 W., Polk County, at bridge on County Highway 9, 7 miles west of Crookston, Minn.	--	5-20-75	10.3	
Red Lake River	Red River of the North	NE¼NE¼ sec.21, T.150 N., R.48 W., Polk County, at bridge on County Highway 15, at Fisher, Minn.	--	10-27-64 11-12-64	1,230 911	
Snake River	Red River of the North	SE¼SE¼ sec.30, T.155 N., R.46 W., Marshall County, at bridge on County Highway 36, 1 mile south of Radium, Minn.	--	8-22-72	0	
Middle River	Snake River	On line between secs.27 and 28, T.157 N., R.45 W., Marshall County, at bridge on County Highway 28, 6.2 miles northwest of Newfolden, Minn.	--	8-18-71 9-15-71	0 0	
Middle River	Snake River	SW¼SE¼ sec.28, T.157 N., R.45 W., Marshall County, 0.1 mile north of County Highway 115, and 7.5 miles south of Strandquist, Minn.	--	7-19-54	.15	
*Middle River	Snake River	SW¼SW¼ sec.25, T.157 N., R.46 W., Marshall County, at bridge on County Highway 114, 5.8 miles southeast of Florian, and 10 miles west of Newfolden, Minn.	--	8-18-71 9-15-71 10-14-71 6-16-72 7-18-72 8-22-72 9-20-72 11- 3-72	0 0 0 .34 0 .01 0 .05	600
Middle River	Snake River	NW¼NE¼ sec.18, T.156 N., R.46 W., Marshall County, at bridge on County Highway 4, 7.8 miles north of Radium, Minn.	--	7-19-54 8-18-71 9-15-71	.31 0 0	
*Middle River	Snake River	NE¼NE¼ sec.14, T.156 N., R.47 W., Marshall County, at bridge on County Highway 1, at Alma, 7.4 miles east of Argyle, Minn.	--	7-19-54 8-18-71 9-15-71 10-14-71 6-16-72 7-18-72 8-22-72 9-20-72 11- 3-72	.47 0 0 .01 .81 .15 0 0 0	560 650 600
Middle River	Snake River	NE¼NE¼ sec.28, T.156 N., R.47 W., Marshall County, 5.6 miles southeast of Argyle, Minn.	--	7-19-54 8-18-71 9-15-71	.41 .07 .002	
Middle River	Snake River	SW¼NW¼ sec.19, T.156 N., R.47 W., Marshall County, at bridge on county road, 3 miles southeast of Argyle, Minn.	--	8-18-71 9-15-71	.08 .06	
Tamarac River	Red River of the North	N¼ sec.14, T.158 N., R.46 W., Marshall County, 0.1 mile south of County Highway 27, and 4.0 miles northeast of Englund, Minn.	--	10- 9-63 11-20-63	.14 .14	
Tamarac River	Red River of the North	NW¼NW¼ sec.22, T.158 N., R.46 W., Marshall County, 2.3 miles northeast of Englund, Minn.	--	10- 9-63 11-20-63	.22 .29	

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Table 3.--Low-flow measurements at miscellaneous sites.

Stream	Tributary to	Location	Drainage	Date	Measurements	
			Area (mi <sup>2</sup> )		Discharge (ft <sup>3</sup> /s)	Specific Conductance (micromhos/cm at 25°C)
Red River of the North basin--Continued						
Tamarac River	Red River of the North	SE¼NW¼ sec.34, T.158 N., R.46 W., Marshall County, 3 miles northeast of Florian, Minn.	--	10- 9-63 11-20-63	.15 .47	
Tamarac River	Red River of the North	SW¼SW¼ sec.3, T.157 N., R.46 W., Marshall County, at bridge on County Highway 6, 2 miles east of Florian, Minn.	--	10- 9-63 11-20-63	.06 .43	
*Middle Branch Two Rivers	South Branch Two Rivers	On line between sec.1, T.161 N., R.47 W., and sec.6, T.161 N., R.46 W., Kittson County, at bridge on County Highway 15, 4 miles north of Lake Bronson, Minn.	--	7-20-28 4-23-42	22.2 57.9	
Kittson County ditch	South Branch Two Rivers	NE¼NE¼ sec.32, T.161 N., R.45 W., Kittson County, at bridge on county road, 7.2 miles northeast of Halma, Minn.	--	6-20-47	207	
South Branch Two Rivers	Two Rivers	On line between secs.28 and 29, T.161 N., R.47 W., Kittson County, at bridge on county road, 4.4 miles northwest of Lake Bronson, Minn.	--	8-27-64	5.55	
South Branch Two Rivers	Two Rivers	On line between secs.25 and 26, T.161 N., R.48 W., Kittson County, at bridge on county road, 6.3 miles southeast of Hallock, Minn.	--	10-17-63 8-27-64	1.51 5.11	
South Branch Two Rivers	Two Rivers	NW¼NE¼ sec.32, T.161 N., R.48 W., Kittson County, at bridge on county road, 3.7 miles southeast of Hallock, Minn.	--	10-17-63 8-27-64	1.08 6.71	
South Branch Two Rivers	Two Rivers	SE¼NE¼ sec.13, T.161 N., R.49 W., Kittson County, 1000 feet downstream from dam at Hallock, Minn.	--	10-17-63	b.20	
Roseau County North-South lateral	State ditch 72	SW¼SW¼ sec.16, T.162 N., R.43 W., Roseau County, at bridge on County Highway 7, 2.8 miles northwest of Haug, Minn.	--	4-18-42 5- 8-42	b3.0 b2.0	
Roseau County North-South lateral	State ditch 72	SW¼SW¼ sec.17, T.162 N., R.43 W., Roseau County, at bridge on County Highway 7, 3.5 miles northwest of Haug, Minn.	--	4-29-41 4-18-42 5- 8-42	b12 37.2 b6.0	
Roseau County North-South lateral	State ditch 72	SW¼SW¼ sec.18, T.162 N., R.43 W., Roseau County, at bridge on County Highway 7, 4.5 miles northwest of Haug, Minn.	--	4-29-41 4-18-42 5- 8-42	0 31.5 19.2	
Roseau County North-South lateral	State ditch 72	SW¼SW¼ sec.13, T.162 N., R.44 W., at bridge on County Highway 7, 5.5 miles northwest of Haug, Minn.	--	4-29-41 4-18-42 5- 8-42	56.3 100 91.7	
Roseau County North-South lateral	State ditch 72	SW¼SW¼ sec.14, T.162 N., R.44 W., Roseau County, at bridge on County Highway 7, 6.4 miles northwest of Haug, Minn.	--	4-29-41 4-18-42 5- 8-42	123 140 52.4	
Roseau County North-South lateral	State ditch 72	SW¼SW¼ sec.15, T.162 N., R.44 W., Roseau County, at bridge on County Highway 7, 7.4 miles northwest of Haug, Minn.	--	4-29-41 4-18-42 5- 8-42	21.4 174 b3.0	
State ditch 72	North Branch Two Rivers	On line between secs.20 and 21, T.162 N., R.44 W., Roseau County, at bridge on county road, 8.4 miles northwest of Haug, Minn.	--	7-27-28 4-24-41 4-29-41 4-18-42 5- 8-42	80.2 130 152 279 137	
State ditch 72	North Branch Two Rivers	On line between secs.19 and 20, T.162 N., R.44 W., Roseau County, 1 mile east of Roseau-Kittson County line, 9.4 miles north- west of Haug, Minn.	--	6-17-47	55.1	
Kittson County ditch 11	North Fork Two Rivers	On line between secs.1 and 12, T.162 N., R.46 W., Kittson County, at bridge on county road, at mouth of County ditch 18 and State ditch 72, at head of County ditch 11, down- stream from head of State ditch 85, and 10.5 miles east of Lancaster, Minn.	--	5- 9-41	24.7	
Joe River	Red River of the North	SE¼SE¼ sec.12, T.163 N., R.50 W., Kittson County, at bridge on county road, 2.5 miles northeast of Humboldt, Minn.	--	4-14-49 4- 5-51	12.5 236	
Salt Coulee	Joe River	NE¼NW¼ sec.23, T.163 N., R.50 W., Kittson County, at culvert on county road, 1 mile north of Humboldt, Minn.	--	4-14-49	67.1	

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b Estimated.

Table 3.--Low-flow measurements at miscellaneous sites.

Stream	Tributary to	Location	Drainage	Date	Measurements	
			Area (mi <sup>2</sup> )		Discharge (ft <sup>3</sup> /s)	Specific Conductance (micromhos/cm at 25°C)
Red River of the North basin--Continued						
Roseau River	Red River of the North	On line between secs.7 and 18, T.161 N., R.39 W., Roseau County, at bridge on County High- way 2, 0.2 mile north of Malung, Minn.	--	6-27-11 9-13-11 5- 5-43	17.9 2.30 244	
Hay Creek	Roseau River	NW¼NE¼ sec.6, T.162 N., R.39 W., Roseau County, 150 feet upstream from mouth, and 3.1 miles northeast of Roseau, Minn.	--	10-26-72	1.20	
*Roseau River	Red River of the North	SE¼ sec.21, T.163 N., R.43 W., Roseau County, about 2.8 miles downstream from Badger Creek, and 7.5 miles north of Haug, Minn.	--	5-13-31 9-24-31 7-14-43	261 39.0 852	
Lake of the Woods basin						
Kawishiwi River	Basswood River	NE¼NW¼ sec.28, T.63 N., R.10 W., Lake County, 8.7 miles east of Winton, Minn.	--	7-12-51	142	
Burntside River	Kawishiwi River	NW¼SE¼ sec.32, T.63 N., R.13 W., St. Louis County, 0.5 mile downstream from Burntside Lake, and 4.2 miles west of Burntside, Minn.	--	9-23-47	80.8	
Crooked Lake outlet	Iron Lake	On line extended north between secs.5 and 6, T.66 N., R.12 W., St. Louis County, at Curtain Falls, 1000 feet downstream from U.S. Boundary Marker 656, and 23.5 miles north of Ely, Minn.	a1,880	8- 9-45	1,250	
Pike River	Vermilion River	NE¼SW¼ sec.21, T.61 N., R.16 W., St. Louis County, at bridge on U.S. Highway 169, 8 miles southwest of Tower, Minn.	--	5-22-31 7-22-42	184 b2.00	
Vermilion River	Namakan River	S¼ sec.22, T.67 N., R.17 W., St. Louis County, 10 miles north of Buyck, Minn.	--	6-18-11	652	
Loon River	Namakan River	NW¼NW¼ sec.20, T.67 N., R.15 W., St. Louis County, at Lac La Croix outlet at Beatty Portage, 8.7 miles northeast of Crane Lake, Minn.	--	6-10-50 6-27-68	1,480 620	
Loon River	Namakan River	NW¼NW¼ sec.6, T.66 N., R.15 W., St. Louis County, at Loon Lake outlet, at Forest Service boathouse, and 7.4 miles southeast of Crane Lake, Minn.	--	7-18-45	82.9	
Loon River	Namakan River	SE¼NE¼ sec.6, T.67 N., R.16 W., St. Louis County, at Little Vermilion Narrows, 4.4 miles northeast of Crane Lake, Minn.	--	7-20-45	264	
Little Fork River	Rainy River	NE¼NE¼ sec.19, T.62 N., R.17 W., St. Louis County, at bridge on County Highway 420, 7 miles east of Cook, Minn.	--	9-12-72 10-17-72 9-20-73	15.4 18.6 8.80	50 <50
Rice River	Little Fork River	NE¼SE¼ sec.12, T.60 N., R.18 W., St. Louis County, at bridge on County Highway 405, 4 miles northwest of Britt, Minn.	--	9-11-72 10-16-72 9-19-73	11.0 .24 0	50 55
Johnson Creek	Rice River	SE¼SE¼ sec.31, T.61 N., R.18 W., St. Louis County, at triple culverts on County Highway 652, 0.5 mile upstream from mouth, and 1.7 miles southwest of Idington, Minn.	--	10-22-70 9-11-72 10-16-72 9-19-73	9.17 11.0 9.52 5.29	86 <50
Rice River tributary	Rice River	NE¼NE¼ sec.29, T.61 N., R.18 W., St. Louis County, at culvert on county road, 0.6 mile north of Idington, Minn.	--	10-22-70	b.20	
Rice River	Little Fork River	NE¼SE¼ sec.30, T.61 N., R.18 W., St. Louis County, at bridge on County Highway 779, 1.1 miles west of Idington, Minn.	--	10-22-70 9-11-72 10-18-72 9-19-73	67.2 33.7 37.2 26.0	60 50
Rice River tributary	Rice River	SW¼NW¼ sec.19, T.61 N., R.18 W., St. Louis County, at culvert on County Highway 912, 2.6 miles southwest of Shermans Corner, and about 3.3 miles southwest of Angora, Minn.	--	10-22-70	1.27	
Rice River tributary	Rice River tributary	NW¼NW¼ sec.30, T.61 N., R.18 W., St. Louis County, at culvert on County Highway 467, 2 miles northwest of Idington, Minn.	--	10-22-70	2.01	

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&lt; Less than.

a Approximately.

b Estimated.

Table 3.--Low-flow measurements at miscellaneous sites.

Stream	Tributary to	Location	Drainage	Date	Measurements	
			Area (mi <sup>2</sup> )		Discharge (ft <sup>3</sup> /s)	Specific Conductance (micromhos/cm at 25°C)
Lake of the Woods basin--Continued						
Rice River	Little Fork River	NW¼NE¼ sec.19, T.61 N., R.18 W., St. Louis County, at bridge on County Highway 492, 1.9 miles southwest of Shermans Corner, and about 2.6 miles southwest of Angola, Minn.	--	10-22-70	59.8	
				9-11-72	36.3	58
				10-18-72	34.5	60
				9-19-73	28.7	
Rice River tributary	Rice River	On line between secs.17 and 20, T.61 N., R.18 W., St. Louis County, at bridge on County Highway 492, 1.4 miles south of Shermans Corner, and 1.8 miles north of Idington, Minn.	--	10-21-70	b.01	
Rice River tributary	Rice River tributary	SW¼SW¼ sec.17, T.61 N., R.18 W., St. Louis County, at culvert on County Highway 492, 1.5 miles southwest of Shermans Corner, and 1.7 miles southwest of Angola, Minn.	--	10-21-70	b.12	
Rice River tributary	Rice River	NW¼SE¼ sec.8, T.61 N., R.18 W., St. Louis County, at culvert on County Highway 22, at Shermans Corner, 1.1 miles northwest of Angola, Minn.	--	10-21-70	.10	
Rice River	Little Fork River	SE¼SW¼ sec.9, T.61 N., R.18 W., St. Louis County, at bridge on County Highway 22, 0.6 mile west of Angola, and 0.5 mile southeast of Shermans Corner, Minn.	--	10-21-70	67.9	
				9-12-72	32.7	64
				10-18-72	38.6	60
				9-19-73	29.7	
Rice River tributary	Rice River	SE¼SW¼ sec.9, T.61 N., R.18 W., St. Louis County, at culvert on County Highway 22 at west edge of Angola, about 1 mile southeast of Shermans Corner, Minn.	--	10-21-70	.06	
Rice River tributary	Rice River	SE¼SW¼ sec.10, T.61 N., R.18 W., St. Louis County, at bridge on County Highway 22, 0.6 mile upstream from mouth, and 0.6 mile east of Angola, Minn.	--	10-21-70	1.54	
Rice River tributary	Rice River tributary	SW¼SW¼ sec.10, T.61 N., R.18 W., St. Louis County, at culvert on County Highway 22, 0.1 mile east of Angola, Minn.	--	10-21-70	b.01	
Rice River tributary	Rice River	SW¼SW¼ sec.2, T.61 N., R.18 W., St. Louis County, at culvert on County Highway 421, 0.2 mile upstream from mouth, and 1.6 miles northeast of Angola, Minn.	--	10-21-70	b.20	
Sassas Creek	Rice River	SW¼NW¼ sec.2, T.61 N., R.18 W., St. Louis County, at twin culverts on County High- way 421, 0.4 mile south of County Highway 87, and 2 miles northeast of Angola, Minn.	--	10-21-70	6.08	
Rice River	Little Fork River	On line between sec.3, T.61 N., R.18 W., and sec.34, T.62 N., R.18 W., St. Louis County, at bridge on County Highway 87, 2.1 miles northeast of Angola, Minn.	--	10-21-70	76.5	
Rice River	Little Fork River	NW¼NE¼ sec.28, T.62 N., R.19 W., St. Louis County, at bridge on County Highway 25, 0.6 mile upstream from mouth, and 9 miles southeast of Meadow Brook, Minn.	--	9-20-73	43.3	
Flint Creek	Little Fork River	SE¼SW¼ sec.18, T.62 N., R.19 W., St. Louis County, at bridge on County Highway 500, 6 miles west of Cook, Minn.	--	9-12-72	10.8	72
				10-19-72	9.57	65
				9-20-73	5.44	
Sturgeon River	Little Fork River	SW¼NE¼ sec.25, T.60 N., R.21 W., St. Louis County, 0.3 mile west of County Highway 766, upstream from Shannon River, and 3.7 miles east of Side Lake, Minn.	--	10-19-72	57.2	<50
				9-20-73	39.2	85
Shannon River	Sturgeon River	NW¼SE¼ sec.25, T.60 N., R.21 W., St. Louis County, at mouth, 0.3 mile west of County Highway 766, and 3.8 miles east of Side Lake, Minn.	--	10-19-72	26.9	70
				9-20-73	15.5	150
East Branch Sturgeon River	Sturgeon River	SE¼SE¼ sec.1, T.59 N., R.20 W., St. Louis County, at bridge on County Highway 445, 11 miles northwest of Mountain Iron, Minn.	--	10-19-72	8.61	<50
				9-19-73	3.99	95

< Less than.  
b Estimated.

Table 3.--Low-flow measurements at miscellaneous sites.

Stream	Tributary to	Location	Drainage Area (mi <sup>2</sup> )	Date	Measurements	
					Discharge (ft <sup>3</sup> /s)	Specific Conductance (micromhos/cm at 25°C)
Lake of the Woods basin--Continued						
East Branch Sturgeon River	Sturgeon River	SW $\frac{1}{4}$ sec.34, T.60 N., R.20 W., St. Louis County, at bridge on State Highway 73, 7.5 miles southeast of Side Lake, Minn.	--	7-21-42 10-19-72 9-19-73	5.45 13.8 9.38	115
Dark River	Sturgeon River	NE $\frac{1}{4}$ NW $\frac{1}{4}$ sec.12, T.59 N., R.19 W., St. Louis County, at bridge on County Highway 791. 6.9 miles northwest of Mountain Iron, Minn., and about 10 miles upstream from mouth.	--	10-21-70	10.9	
Dark River	Sturgeon River	SE $\frac{1}{4}$ NE $\frac{1}{4}$ sec.3, T.59 N., R.19 W., St. Louis County, at bridge on County Highway 668, 7.6 miles north of Kinney, Minn.	--	10-21-70	12.4	
Dark River tributary	Dark River	SE $\frac{1}{4}$ SW $\frac{1}{4}$ sec.34, T.60 N., R.19 W., St. Louis County, at culvert on county road near Clear Lake outlet, 8.4 miles north of Kinney, Minn.	--	10-21-70	.76	
Dark River	Sturgeon River	SE $\frac{1}{4}$ SW $\frac{1}{4}$ sec.33, T.60 N., R.19 W., St. Louis County, at twin box culverts on County Highway 25, 0.6 mile upstream from Dark Lake, and 9.6 miles north of Buhl, Minn.	--	10-21-70 10-19-72 9-19-73	23.6 9.48 9.19	115 395
Dark River	Sturgeon River	NE $\frac{1}{4}$ SW $\frac{1}{4}$ sec.32, T.60 N., R.19 W., St. Louis County, at Dark Lake outlet, at deadend on County Highway 663, 10 miles north of Buhl, Minn.	--	10-22-70	28.9	
Dark River tributary	Dark River	N $\frac{1}{4}$ sec.30, T.60 N., R.19 W., St. Louis County, at box culvert on County Highway 445, 0.3 mile south of County Highway 65, and 11.4 miles north of Buhl, Minn.	--	10-22-70	1.28	
Dark River	Sturgeon River	N $\frac{1}{4}$ sec.30, T.60 N., R.19 W., St. Louis County, at bridge on County Highway 65, 1.9 miles downstream from Dark Lake, and 10 miles east of Side Lake, Minn.	--	10-18-72 9-19-73	15.0 11.8	120 155
West Knuckey Creek	Dark River	SE $\frac{1}{4}$ NE $\frac{1}{4}$ sec.29, T.60 N., R.19 W., St. Louis County, at box culverts on County Highway 25, about 1 mile upstream from mouth, and 11.1 miles north of Buhl, Minn.	--	10-21-70	3.62	
Leander Creek	Dark River	SE $\frac{1}{4}$ NE $\frac{1}{4}$ sec.20, T.60 N., R.19 W., St. Louis County, at culvert on County Highway 25, 1.7 miles upstream from mouth, and 12.1 miles north of Buhl, Minn.	--	10-22-70	.66	
Dark River	Sturgeon River	SE $\frac{1}{4}$ SE $\frac{1}{4}$ sec.3, T.60 N., R.20 W., St. Louis County, at bridge on County Highway 688, 0.6 mile upstream from mouth, and 9.4 miles southwest of Idington, Minn.	a53	10-21-70	41.4	
Sturgeon River	Little Fork River	NW $\frac{1}{4}$ NE $\frac{1}{4}$ sec.3, T.60 N., R.20 W., St. Louis County, at bridge on County Highway 652, 0.5 mile downstream from Dark River, and 9.8 miles west of Idington, Minn.	--	10-18-72 9-20-73	148 90.8	58 100
Sturgeon River	Little Fork River	On line between secs.15 and 22, T.61 N., R.20 W., St. Louis County, at bridge on County Highway 492, 17.5 miles north of Chisholm, Minn.	--	7-21-42	86.0	
Sturgeon River	Little Fork River	SE $\frac{1}{4}$ SE $\frac{1}{4}$ sec.35, T.62 N., R.21 W., St. Louis County, at bridge on County Highway 923, 4 miles southwest of Meadow Brook, Minn.	--	9-12-72 10-18-72 9-20-73	169 169 100	103 60 120
Sand Creek	Sturgeon River	NE $\frac{1}{4}$ NE $\frac{1}{4}$ sec.3, T.61 N., R.21 W., St. Louis County, at bridge on County Highway 923, 5 miles southwest of Meadow Brook, Minn.	--	9-12-72 10-18-72 9-20-73	7.26 9.54 4.61	112 70 115
Bear River	Sturgeon River	SW $\frac{1}{4}$ SW $\frac{1}{4}$ sec.3, T.60 N., R.23 W., Itasca County, at culvert on County Highway 52, 9.5 miles southwest of Togo, Minn.	--	9-11-72 10-16-72 9-21-73	14.7 11.9 7.19	114 <50 120
Bear River tributary	Bear River tributary	SE $\frac{1}{4}$ SE $\frac{1}{4}$ sec.6, T.60 N., R.23 W., Itasca County, at culvert on County Highway 544, 13.5 miles northwest of Side Lake, Minn.	--	9-11-72 10-16-72 9-21-73	3.97 4.89 3.25	158 121 205

< Less than.  
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					Discharge (ft <sup>3</sup> /s)	Specific Conductance (micromhos/cm at 25°C)
Lake of the Woods basin--Continued						
Bear River tributary	Bear River	NE¼SE¼ sec.6, T.60 N., R.23 W., Itasca County, at culverts on County Highway 544, 14 miles northwest of Side Lake, Minn.	--	9-11-72	2.34	107
				10-16-72	2.47	78
				9-21-73	1.74	150
Bear River tributary	Bear River	NW¼SE¼ sec.22, T.61 N., R.23 W., Itasca County, at bridge on Dahlberg Road, 7 miles southwest of Togo, Minn.	--	9-11-72	6.18	137
				10-16-72	6.63	90
				9-21-73	1.90	430
Bear River	Sturgeon River	SE¼NE¼ sec.30, T.61 N., R.22 W., Itasca County, at bridge on State Highway 65, 6 miles south- west of Bear River, Minn.	--	9-11-72	45.6	130
				10-17-72	41.6	80
				9-21-73	24.0	295
Bear River	Sturgeon River	SE¼SE¼ sec.14, T.61 N., R.22 W., Itasca County, at bridge on County Highway 528, 1.2 miles southwest of Bear River, Minn.	--	9-12-72	55.1	170
				10-17-72	55.8	108
				9-21-73	35.1	
Stony Brook	Bear River	SE¼SW¼ sec.7, T.61 N., R.21 W., St. Louis County, at culvert on County Highway 22, at Bear River, Minn.	--	9-12-72	3.44	146
				10-17-72	7.48	69
				9-21-73	3.80	255
Little Fork River	Rainy River	SW¼SW¼ sec.33, T.63 N., R.21 W., St. Louis County, at bridge on County Highway 114, 4.7 miles northwest of Meadow Brook, Minn.	--	2- 2-11	36.0	
				10-20-72	268	100
				9-21-73	240	
Willow River	Little Fork River	SW¼NW¼ sec.7, T.63 N., R.20 W., St. Louis County, at bridge on County Highway 356, 6 miles west of Gheen, Minn.	--	9-12-72	8.60	74
				10-20-72	5.22	<50
				9-21-73	2.72	
Willow River	Little Fork River	SE¼SE¼ sec.2, T.63 N., R.22 W., Koochiching County, 0.5 mile upstream from mouth, and 1.2 miles south of Silverdale, Minn.	--	10-20-72	15.8	110
				9-21-73	3.40	
Little Fork River	Rainy River	NW¼NW¼ sec.3, T.63 N., R.22 W., Koochiching County, at bridge on State Highway 65, 1.5 miles north of Rauch, Minn.	--	9-11-72	379	
				10-18-72	412	100
				9-19-73	237	
Valley River	Little Fork River	SE¼SE¼ sec.2, T.62 N., R.23 W., Itasca County, at culvert on the Holstrum Spur Trail, 6 miles northwest of Togo, Minn.	--	9-12-72	2.59	206
				10-17-72	5.38	90
				9-21-73	1.13	220
Prairie Creek	Little Fork River	N¼ sec.30, T.64 N., R.22 W., Koochiching County, 1.5 miles upstream from mouth, and 4 miles northwest of Rauch, Minn.	--	10-20-72	10.3	92
Little Fork River	Rainy River	SW¼SE¼ sec.31, T.65 N., R.23 W., Koochiching County, 1.5 miles downstream from Gardner Brook, and 12 miles southwest of Nett Lake, Minn.	--	10-18-72	481	120
				9-19-73	229	
Little Fork River	Rainy River	NW¼NE¼ sec.13, T.66 N., R.25 W., Koochiching County, at bridge on State Highway 65, 13 miles east of Big Falls, Minn.	--	9-12-72	479	
				10-18-72	532	110
				9-19-73	269	
Nett Lake River	Little Fork River	SW¼NW¼ sec.18, T.65 N., R.22 W., Koochiching County, at bridge on Indian Service Road, 6 miles west of Nett Lake, Minn.	--	9-11-72	54.8	
				10-18-72	73.1	130
				9-19-73	.54	
Ester Brook	Little Fork River	NE¼NE¼ sec.20, T.67 N., R.24 W., Koochiching County, at bridge on County Highway 8, 9 miles southeast of Littlefork, Minn.	--	9-12-72	.33	
				10-18-72	2.90	145
				9-20-73	.54	
Cross River	Little Fork River	SW¼SE¼ sec.36, T.68 N., R.25 W., Koochiching County, at bridge on County Highway 73, 5 miles southeast of Littlefork, Minn.	--	9-12-72	3.12	
				10-17-72	14.0	95
				9-20-73	8.38	
Beaver Brook	Little Fork River	NE¼SE¼ sec.36, T.68 N., R.24 W., Koochiching County, at bridge on forest road, 9 miles southwest of Ray, Minn.	--	9-12-72	2.38	
				10-17-72	17.8	210
				9-20-73	3.21	
Little Fork River	Rainy River	NW¼NW¼ sec.6, T.69 N., R.25 W., Koochiching County, 2.3 miles southwest of Pelland, Minn., and about 4 miles upstream from mouth.	--	10-17-72	764	
Bowstring River	Big Fork River	NE¼NW¼ sec.23, T.58 N., R.27 W., Itasca County, at bridge on County Highway 253, 1.1 miles north of Suomi, Minn.	--	8-30-72	10.4	240
Potato Creek	Bowstring River	SW¼SE¼ sec.36, T.59 N., R.27 W., Itasca County, at bridge on County Highway 253, 3.2 miles southwest of Marcell, Minn.	--	8-30-72	3.97	220

&lt; Less than.

Table 3.--Low-flow measurements at miscellaneous sites.

Stream	Tributary to	Location	Drainage	Date	Measurements	
			Area (mi <sup>2</sup> )		Discharge (ft <sup>3</sup> /s)	Specific Conductance (micromhos/cm at 25°C)
Lake of the Woods basin--Continued						
Turtle River	Bowstring River	NW¼NW¼ sec.13, T.59 N., R.27 W., Itasca County, at bridge on State Highway 286, 1.8 miles northwest of Marcell, Minn.	--	8-30-72	12.5	220
Little Turtle Creek	Turtle River	NW¼NE¼ sec.15, T.59 N., R.27 W., Itasca County, at bridge on State Highway 286, 0.8 mile east of Talmoon, Minn.	--	8-30-72	8.62	245
Jessie Brook	Bowstring River	NW¼NE¼ sec.23, T.147 N., R.25 W., Itasca County, at bridge on County Highway 133, 4.5 miles southwest of Talmoon, Minn.	--	8-29-72	16.8	235
Grouse Creek	Bowstring Lake	NE¼NW¼ sec.3, T.146 N., R.25 W., Itasca County, at double box culvert on State Highway 6, 7.8 miles southwest of Talmoon, Minn.	--	8-29-72	9.35	60
Bowstring River	Big Fork River	SE¼NE¼ sec.26, T.149 N., R.27 W., Itasca County, at old dam site, 3.1 miles south of Dora Lake, Minn.	--	8-31-72	128	200
Popple River	Big Fork River	NW¼SE¼ sec.8, T.149 N., R.28 W., Itasca County, at bridge on County Highway 29, 0.8 mile northeast of Alvwood, Minn.	--	8-31-72	8.32	225
Popple River	Big Fork River	NW¼NW¼ sec.12, T.148 N., R.28 W., Itasca County, at bridge on County Highway 32, 3 miles northwest of Squaw Lake, Minn.	--	9- 1-72	9.20	256
Round Lake tributary	Round Lake	NW¼NW¼ sec.9, T.148 N., R.28 W., Itasca County, at culverts on County Highway 32, 5.4 miles northwest of Squaw Lake, Minn.	--	8-31-72	1.06	280
Popple River	Big Fork River	NE¼SE¼ sec.28, T.149 N., R.27 W., Itasca County, at bridge on National Forest Service Road, 4.3 miles southwest of Dora Lake, Minn.	--	9- 1-72	71.6	208
Moose Brook	Big Fork River	NW¼NE¼ sec.35, T.150 N., R.27 W., Itasca County, at triple box culvert on County Highway 26, 2.4 miles northwest of Dora Lake, Minn.	--	9- 1-72	1.88	
Big Fork River tributary	Big Fork River	SE¼NE¼ sec.28, T.61 N., R.26 W., Itasca County, at culvert on County Highway 236, at Bigfork, Minn.	--	9- 1-72	1.30	120
Rice River	Big Fork River	NE¼NW¼ sec.7, T.59 N., R.25 W., Itasca County, at culvert at Clubhouse Lake outlet, at National Forest Service Road, 6 miles north-east of Marcell, Minn.	--	9- 1-72	10.8	220
Rice River tributary	Rice River	NW¼NE¼ sec.7, T.59 N., R.25 W., Itasca County, at East Lake outlet, 6.3 miles northeast of Marcell, Minn.	--	9- 1-72	16.4	175
Rice River tributary	Rice River	SW¼SW¼ sec.5, T.60 N., R.26 W., Itasca County, at culvert on State Highway 38, 3 miles southwest of Bigfork, Minn.	--	9- 1-72	.12	170
Gale Brook	Rice River	SE¼SW¼ sec.21, T.60 N., R.25 W., Itasca County, at culvert on National Forest Service Road, 9.2 miles northeast of Marcell, Minn.	--	9- 1-72	4.52	125
Big Fork River	Rainy River	SE¼SW¼ sec.23, T.62 N., R.25 W., Itasca County, at bridge on State Highway 1, 6.6 miles southeast of Craigville, Minn.	--	9- 1-72	382	210
Deer Creek	Big Fork River	NE¼SE¼ sec.23, T.62 N., R.25 W., Itasca County, at bridge on County Highway 230, 7.2 miles east of Effie, Minn.	--	8-31-72	43.1	220
Plum Creek	Big Fork River	NW¼NW¼ sec.36, T.152 N., R.25 W., Koochiching County, at bridge on Caldwell Trail, 10 miles northwest of Effie, Minn.	--	9- 1-72	.80	
Caldwell Brook	Big Fork River	NE¼SW¼ sec.2, T.151 N., R.27 W., Koochiching County, at bridge on County Highway 52, 6.5 miles east of Mizpah, Minn.	--	8-31-72	.05	325
Big Fork River	Rainy River	NE¼SW¼ sec.13, T.64 N., R.27 W., Koochiching County, at bridge on State Highway 6, 9.8 miles southeast of Margie, Minn.	--	8-31-72	405	

Table 3.--Low-flow measurements at miscellaneous sites.

Stream	Tributary to	Location	Drainage Area (mi <sup>2</sup> )	Date	Measurements	
					Discharge (ft <sup>3</sup> /s)	Specific Conductance (micromhos/cm at 25°C)
Lake of the Woods basin--Continued						
Reilly Brook	Big Fork River	SE $\frac{1}{4}$ SW $\frac{1}{4}$ sec.7, T.63 N., R.25 W., Koochiching County, at bridge on County Highway 62, 4 miles northeast of Craigville, Minn.	--	8-31-72	6.98	110
Reilly Brook	Big Fork River	SW $\frac{1}{4}$ NW $\frac{1}{4}$ sec.8, T.64 N., R.26 W., Koochiching County, at mouth, 11 miles southeast of Big Falls, Minn.	--	8-31-72	30.1	
Big Fork River tributary	Big Fork River	SW $\frac{1}{4}$ SW $\frac{1}{4}$ sec.28, T.65 N., R.26 W., Koochiching County, at culvert on State Highway 6, 8.5 miles southeast of Big Falls, Minn.	--	8-31-72	.08	
Big Fork River tributary	Big Fork River	NW $\frac{1}{4}$ NE $\frac{1}{4}$ sec.21, T.65 N., R.26 W., Koochiching County, at culvert on State Highway 6, 7.2 miles southeast of Big Falls, Minn.	--	8-31-72	.47	
Big Fork River tributary	Big Fork River tributary	SW $\frac{1}{4}$ NW $\frac{1}{4}$ sec.6, T.65 N., R.26 W., Koochiching County, at culvert on State Highway 6, 3.5 miles southeast of Big Falls, Minn.	--	8-31-72	0	
Big Fork River tributary	Big Fork River	SE $\frac{1}{4}$ SE $\frac{1}{4}$ sec.36, T.66 N., R.27 W., Koochiching County, at culvert on State Highway 6, 3.2 miles southeast of Big Falls, Minn.	--	9- 1-72	.05	
Big Fork River tributary	Big Fork River	NE $\frac{1}{4}$ NW $\frac{1}{4}$ sec.1, T.154 N., R.25 W., Koochiching County, at double culvert on State Highway 6, at Big Falls, Minn.	--	9- 1-72	.14	
Big Fork River tributary	Big Fork River	SW $\frac{1}{4}$ SW $\frac{1}{4}$ sec.34, T.155 N., R.25 W., Koochiching County, at culvert on County Highway 30, 1.6 miles west of Big Falls, Minn.	--	9- 1-72	3.60	
Sturgeon River	Big Fork River	SE $\frac{1}{4}$ NE $\frac{1}{4}$ sec.28, T.155 N., R.27 W., Koochiching County, at bridge on State Forest Service Road, 11.5 miles northwest of Margie, Minn.	--	8-31-72	11.7	148
Sturgeon River tributary	Sturgeon River	NE $\frac{1}{4}$ NE $\frac{1}{4}$ sec.28, T.155 N., R.27 W., Koochiching County, at culvert on State Forest Service Road, 14.2 miles west of Big Falls, Minn.	--	8-31-72	1.04	174
Sturgeon River tributary	Sturgeon River	NE $\frac{1}{4}$ SE $\frac{1}{4}$ sec.28, T.155 N., R.27 W., Koochiching County, at bridge on State Forest Service Road, 14.1 miles west of Big Falls, Minn.	--	8-31-72	8.41	136
Dinner Creek	Sturgeon River	SW $\frac{1}{4}$ SE $\frac{1}{4}$ sec.16, T.152 N., R.26 W., Koochiching County, at culvert on State Forest Service Road, 6.9 miles northeast of Gemmell, Minn.	--	8-31-72	1.23	90
Dinner Creek	Sturgeon River	NW $\frac{1}{4}$ SE $\frac{1}{4}$ sec.10, T.153 N., R.26 W., Koochiching County, at box culvert on U.S. Highway 71, at Margie, Minn.	--	8-31-72	7.74	60
Dinner Creek	Sturgeon River	SE $\frac{1}{4}$ SW $\frac{1}{4}$ sec.30, T.155 N., R.26 W., Koochiching County, at mouth, 10.6 miles west of Big Falls, Minn.	--	8-31-72	8.09	148
Sturgeon River tributary	Sturgeon River	SE $\frac{1}{4}$ NE $\frac{1}{4}$ sec.28, T.155 N., R.26 W., Koochiching County, at culvert on County Highway 30, 8.2 miles west of Big Falls, Minn.	--	8-31-72	1.00	318
Big Fork River	Rainy River	NW $\frac{1}{4}$ NE $\frac{1}{4}$ sec.24, T.157 N., R.25 W., Koochiching County, at bridge on State Highway 1, at Lindford, Minn.	--	8-31-72	695	180
Bear River	Big Fork River	SE $\frac{1}{4}$ SW $\frac{1}{4}$ sec.19, T.67 N., R.26 W., Koochiching County, at bridge on U.S. Highway 71, 6.6 miles northeast of Big Falls, Minn.	--	8-31-72	6.42	120
Bear River tributary	Bear River	NW $\frac{1}{4}$ SE $\frac{1}{4}$ sec.7, T.67 N., R.26 W., Koochiching County, at culvert on U.S. Highway 71, 8.9 miles northeast of Big Falls, Minn.	--	8-31-72	2.02	55
Black River	Rainy River	NE $\frac{1}{4}$ SE $\frac{1}{4}$ sec.2, T.157 N., R.28 W., Koochiching County, at culvert on State Forest Service Road, 15 miles southeast of Frontier, Minn.	--	8-29-72	0	
Black River tributary	Black River	NE $\frac{1}{4}$ SE $\frac{1}{4}$ sec.29, T.158 N., R.27 W., Koochiching County, at ditch, 14 miles southeast of Frontier, Minn.	--	8-29-72	0	
Black River	Rainy River	SW $\frac{1}{4}$ SW $\frac{1}{4}$ sec.28, T.158 N., R.27 W., Koochiching County, at bridge on County Highway 101, 11 miles south of Birchdale, Minn.	--	8-29-72	3.52	130

Table 3.--Low-flow measurements at miscellaneous sites.

Stream	Tributary to	Location	Drainage Area (mi <sup>2</sup> )	Date	Measurements	
					Discharge (ft <sup>3</sup> /s)	Specific Conductance (micromhos/cm at 25°C)
Lake of the Woods basin--Continued						
Black River tributary	Black River	SW $\frac{1}{4}$ SE $\frac{1}{4}$ sec.28, T.158 N., R.27 W., Koochiching County, at mouth, 11.5 miles south of Birchdale, Minn.	--	8-29-72	0	
Black River tributary	Black River	NE $\frac{1}{4}$ NE $\frac{1}{4}$ sec.27, T.158 N., R.27 W., Koochiching County, at culvert on County Highway 101, 13 miles west of Loman, Minn.	--	8-29-72	.28	
Black River tributary	Black River	NE $\frac{1}{4}$ NW $\frac{1}{4}$ sec.22, T.157 N., R.25 W., Koochiching County, at culvert on county road, 2.5 miles west of Lindford, Minn.	--	8-29-72	0	
West Fork Black River	Black River	SE $\frac{1}{4}$ SE $\frac{1}{4}$ sec.22, T.159 N., R.27 W., Koochiching County, at bridge on County Highway 86, 4 miles south of Birchdale, Minn.	--	8-29-72	.21	160
West Fork Black River tributary	West Fork Black River	SE $\frac{1}{4}$ SE $\frac{1}{4}$ sec.22, T.159 N., R.27 W., Koochiching County, 100 feet above bridge on County High- way 86, 6 miles southwest of Manitou, Minn.	--	8-29-72	.81	130
Rainy River tributary	Rainy River	SE $\frac{1}{4}$ NW $\frac{1}{4}$ sec.8, T.160 N., R.28 W., Koochiching County, at culvert on State Highway 11 at Border, Minn.	--	8-30-72	0	
Rainy River tributary	Rainy River	NW $\frac{1}{4}$ NW $\frac{1}{4}$ sec.7, T.160 N., R.28 W., Koochiching County, at culvert on State Highway 11, 1 mile west of Border, Minn.	--	8-30-72	0	
Rapid River	Rainy River	SE $\frac{1}{4}$ NE $\frac{1}{4}$ sec.24, T.157 N., R.34 W., Lake of the Woods County, at bridge on State Forest Service Road, 13.5 miles south of Faunce, Minn.	--	8-29-72	1.36	430
Rapid River tributary	Rapid River	SW $\frac{1}{4}$ SW $\frac{1}{4}$ sec.18, T.157 N., R.33 W., Lake of the Woods County, at culvert on State Forest Service Road, 12.5 miles south of Faunce, Minn.	--	8-29-72	.20	360
Rapid River tributary	Rapid River	NE $\frac{1}{4}$ NE $\frac{1}{4}$ sec.24, T.157 N., R.33 W., Lake of the Woods County, at ditch 10.2 miles southwest of Carp, Minn.	--	8-29-72	.11	276
Rapid River tributary	Rapid River	SE $\frac{1}{4}$ SE $\frac{1}{4}$ sec.13, T.157 N., R.33 W., Lake of the Woods County, at culvert on State Forest Service Road, 10 miles southwest of Carp, Minn.	--	8-29-72	.17	283
Rapid River tributary	Rapid River	NW $\frac{1}{4}$ SW $\frac{1}{4}$ sec.16, T.157 N., R.32 W., Lake of the Woods County, at culvert on State Forest Service Road, 8.5 miles southwest of Carp, Minn.	--	8-29-72	4.80	124
Miller Creek	Rapid River	SW $\frac{1}{4}$ NW $\frac{1}{4}$ sec.11, T.157 N., R.32 W., Lake of the Woods County, at culvert on State Forest Service Road, 6.3 miles southwest of Carp, Minn.	--	8-29-72	1.27	172
Rapid River	Rainy River	NE $\frac{1}{4}$ NW $\frac{1}{4}$ sec.11, T.157 N., R.32 W., Lake of the Woods County, 19 miles south of Pitt, Minn.	--	8-28-72	25.4	278
Chase Brook	Rapid River	SW $\frac{1}{4}$ SE $\frac{1}{4}$ sec.1, T.157 N., R.32 W., Lake of the Woods County, at culvert on State Forest Service Road, 4.8 miles southwest of Carp, Minn.	--	8-28-72	2.07	186
Thompson Creek	Chase Brook	SE $\frac{1}{4}$ SE $\frac{1}{4}$ sec.1, T.157 N., R.32 W., Lake of the Woods County, at culvert on State Forest Service Road, 4.7 miles southwest of Carp, Minn.	--	8-28-72	.85	224
Troy Creek	Rapid River	NW $\frac{1}{4}$ NW $\frac{1}{4}$ sec.9, T.157 N., R.31 W., Lake of the Woods County, at bridge on County Highway 77, 4.5 miles south of Carp, Minn.	--	8-28-72	2.60	202
Christy Creek	Rapid River	SW $\frac{1}{4}$ SW $\frac{1}{4}$ sec.11, T.158 N., R.31 W., Lake of the Woods County, at bridge on County Highway 83, 2.3 miles east of Carp, Minn.	--	8-30-72	.16	378
Rapid River	Rainy River	SW $\frac{1}{4}$ SE $\frac{1}{4}$ sec.2, T.158 N., R.31 W., Lake of the Woods County, upstream from North Branch, and 3.0 miles northeast of Carp, Minn.	--	8-30-72	30.0	242

Table 3.--Low-flow measurements at miscellaneous sites.

Stream	Tributary to	Location	Drainage	Date	Measurements	
			Area (mi <sup>2</sup> )		Discharge (ft <sup>3</sup> /s)	Specific Conductance (micromhos/cm at 25°C)
Lake of the Woods basin--Continued						
North Branch Rapid River	Rapid River	NW¼NW¼ sec.30, T.158 N., R.33 W., Lake of the Woods County, at culvert on State Forest Service Road, 7.8 miles south of Faunce, Minn.	--	8-29-72	.37	344
North Branch Rapid River tributary	North Branch Rapid River	NE¼SE¼ sec.36, T.158 N., R.34 W., Lake of the Woods County, at double box culvert on State Forest Service Road, 9 miles south of Faunce, Minn.	--	8-29-72	.14	
North Branch Rapid River	Rapid River	SE¼SE¼ sec.13, T.158 N., R.33 W., Lake of the Woods County, at bridge on State Forest Service Road, 8.2 miles west of Carp, Minn.	--	8-29-72	1.59	308
Kvalnes Creek	North Branch Rapid River	SE¼SE¼ sec.32, T.159 N., R.31 W., Lake of the Woods County, at culvert on County Highway 1, 2.5 miles north of Carp, Minn.	--	8-29-72	0	
Rapid River tributary	Rapid River	SE¼SE¼ sec.1, T.158 N., R.31 W., Lake of the Woods County, at culvert on County Highway 83, 4 miles northeast of Carp, Minn.	--	8-30-72	0	
Rapid River tributary	Rapid River	NE¼SW¼ sec.6, T.158 N., R.30 W., Lake of the Woods County, at bridge on County Highway 16, 4.8 miles northeast of Carp, Minn.	--	8-30-72	3.00	286
Rapid River tributary	Rapid River	SE¼NE¼ sec.28, T.159 N., R.30 W., Lake of the Woods County, at ditch 8 miles northeast of Carp, Minn.	--	8-29-72	0	
East Fork Rapid River	Rapid River	SW¼SE¼ sec.26, T.158 N., R.29 W., Koochiching County, at culvert on State Forest Service Road, 14.5 miles southeast of Carp, Minn.	--	8-29-72	4.34	150
East Fork Rapid River tributary	East Fork Rapid River	NE¼SW¼ sec.28, T.158 N., R.29 W., Koochiching County, at culvert on State Forest Service Road, 12.2 miles southeast of Carp, Minn.	--	8-29-72	0	
Bartons Brook	East Fork Rapid River	NE¼NE¼ sec.36, T.159 N., R.30 W., Lake of the Woods County, at bridge on County Highway 100, 11 miles southwest of Frontier, Minn.	--	8-29-72	0	
Silver Creek	Rainy River	SW¼SE¼ sec.10, T.160 N., R.30 W., Lake of the Woods County, at bridge on County Highway 94, 2 miles west of Clementson, Minn.	--	8-30-72	0	
Rainy River tributary	Rainy River	NW¼NW¼ sec.7, T.160 N., R.30 W., Lake of the Woods County, at culvert on County Highway 78, 1 mile southeast of Baudette, Minn.	--	8-29-72	0	
Baudette River	Rainy River	NW¼SW¼ sec.8, T.159 N., R.31 W., Lake of the Woods County, at bridge on county road, 7 miles northwest of Carp, Minn.	--	8-30-72	0	
Baudette River tributary	Baudette River	NE¼NE¼ sec.8, T.159 N., R.31 W., Lake of the Woods County, at ditch, 7.5 miles north of Carp, Minn.	--	8-30-72	0	
West Fork Baudette River	Baudette River	NW¼NW¼ sec.22, T.160 N., R.31 W., Lake of the Woods County, at bridge on County Highway 5, 3.5 miles southwest of Baudette, Minn.	--	8-30-72	0	
Miller Creek	Rainy River	SW¼SW¼ sec.33, T.161 N., R.31 W., Lake of the Woods County, at culvert on old State Highway 11, at Baudette, Minn.	--	8-28-72	0	
Winter Road River	Rainy River	NW¼NW¼ sec.16, T.160 N., R.33 W., Lake of the Woods County, at bridge on County Highway 14, 6 miles southeast of Williams, Minn.	--	8-29-72	.02	410
Winter Road River	Rainy River	NW¼SW¼ sec.1, T.160 N., R.32 W., Lake of the Woods County, at bridge on County Highway 76, 1.2 miles southeast of Pitt, Minn.	--	8-28-72	.04	260
Peppermint Creek	Winter Road River	SE¼NE¼ sec.21, T.160 N., R.32 W., Lake of the Woods County, at bridge on State Forest Service Road, 3.8 miles southwest of Pitt, Minn.	--	8-28-72	0	
Peppermint Creek tributary	Peppermint Creek	SE¼SE¼ sec.11, T.160 N., R.32 W., Lake of the Woods County, at bridge on County Highway 3, 2.5 miles southeast of Pitt, Minn.	--	8-28-72	0	

Table 3.--Low-flow measurements at miscellaneous sites.

Stream	Tributary to	Location	Drainage Area (mi <sup>2</sup> )	Date	Measurements	
					Discharge (ft <sup>3</sup> /s)	Specific Conductance (micromhos/cm at 25°C)
Lake of the Woods basin--Continued						
Wabanica Creek	Rainy River	SW <sup>1</sup> / <sub>4</sub> NW <sup>1</sup> / <sub>4</sub> sec.14, T.161 N., R.32 W., Lake of the Woods County, at culvert on county road, 3.2 miles northeast of Pitt, Minn.	--	8-28-72	0	
Canfield Creek	Bostick Creek	NW <sup>1</sup> / <sub>4</sub> SW <sup>1</sup> / <sub>4</sub> sec.13, T.161 N., R.33 W., Lake of the Woods County, at bridge on County Highway 96, 1.5 miles northwest of Graceton, Minn.	--	9-29-72	0	
Bostick Creek	Lake of the Woods	NW <sup>1</sup> / <sub>4</sub> NW <sup>1</sup> / <sub>4</sub> sec.6, T.161 N., R.32 W., Lake of the Woods County, at bridge on County Highway 4, 4.2 miles north of Graceton, Minn.	--	8-29-72	0	
Bostick Creek	Lake of the Woods	SW <sup>1</sup> / <sub>4</sub> SW <sup>1</sup> / <sub>4</sub> sec.28, T.162 N., R.32 W., Lake of the Woods County, at bridge on County Highway 70, 7.1 miles northwest of Pitt, Minn.	--	8-29-72	0	
South Branch Zippel Creek	Lake of the Woods	SE <sup>1</sup> / <sub>4</sub> SE <sup>1</sup> / <sub>4</sub> sec.22, T.162 N., R.33 W., Lake of the Woods County, at culverts on County Highway 12, 5.8 miles northeast of Williams, Minn.	--	8-29-72	.27	520
Tomato Creek	County ditch No. 1	NE <sup>1</sup> / <sub>4</sub> NE <sup>1</sup> / <sub>4</sub> sec.3, T.161 N., R.34 W., Lake of the Woods County, at culvert on County Highway 58, 3 miles northwest of Williams, Minn.	--	8-29-72	.19	430
Willow Creek	Lake of the Woods	SE <sup>1</sup> / <sub>4</sub> SW <sup>1</sup> / <sub>4</sub> sec.35, T.163 N., R.35 W., Roseau County, at culvert on county road, 5.8 miles northwest of Roosevelt, Minn.	--	8-29-72	0	
Lake of the Woods tributary	Lake of the Woods	SW <sup>1</sup> / <sub>4</sub> SW <sup>1</sup> / <sub>4</sub> sec.3, T.162 N., R.35 W., Roseau County, at culvert on County Highway 12, 5.2 miles northwest of Roosevelt, Minn.	--	8-29-72	0	
Lake of the Woods tributary	Lake of the Woods	SW <sup>1</sup> / <sub>4</sub> SE <sup>1</sup> / <sub>4</sub> sec.4, T.162 N., R.35 W., Roseau County, at culvert on County Highway 12, 2.8 miles northeast of Swift, Minn.	--	8-29-72	0	
County ditch No. 26	Lake of the Woods	SW <sup>1</sup> / <sub>4</sub> SE <sup>1</sup> / <sub>4</sub> sec.5, T.162 N., R.35 W., Roseau County, at culvert on County Highway 12, 2 miles northeast of Swift, Minn.	--	8-29-72	0	
East Branch Warroad River	Warroad River	NW <sup>1</sup> / <sub>4</sub> NW <sup>1</sup> / <sub>4</sub> sec.35, T.161 N., R.35 W., Roseau County, at bridge on State Forest Service Road, 5.5 miles southwest of Roosevelt, Minn.	--	8-29-72	0	
East Branch Warroad River	Warroad River	NW <sup>1</sup> / <sub>4</sub> NW <sup>1</sup> / <sub>4</sub> sec.2, T.161 N., R.36 W., Roseau County, at culvert on County Highway 2, 4.1 miles southwest of Swift, Minn.	--	8-30-72	.17	
West Branch Warroad River	Warroad River	SW <sup>1</sup> / <sub>4</sub> SW <sup>1</sup> / <sub>4</sub> sec.6, T.161 N., R.36 W., Roseau County, at bridge on County Highway 2, 7.5 miles southwest of Swift, Minn.	--	8-30-72	.04	
*Roseau County ditch No. 6	Warroad River	NW <sup>1</sup> / <sub>4</sub> NE <sup>1</sup> / <sub>4</sub> sec.31, T.163 N., R.36 W., Roseau County, at bridge at mouth, 1 mile southwest of Warroad, Minn.	--	4-10-71 4-14-71	4.07 .68	
Mississippi River main stem						
Mississippi River	Gulf of Mexico	NE <sup>1</sup> / <sub>4</sub> NW <sup>1</sup> / <sub>4</sub> sec.10, T.146 N., R.32 W., Beltrami County, at bridge on County Highway 12, 300 feet downstream from dam, and 7.2 miles east of Bemidji, Minn.	--	8-27-73 9-19-73	182 628	

\* High-flow measurements are also available in Geological Survey files.

Table 3.--Low-flow measurements at miscellaneous sites.

<u>Stream</u>	<u>Tributary to</u>	<u>Location</u>	<u>Drainage Area (mi<sup>2</sup>)</u>	<u>Date</u>	<u>Discharge (ft<sup>3</sup>/s)</u>	<u>Specific Conductance (micromhos/cm at 25°C)</u>
<u>Mississippi River main stem--Continued</u>						
*Mississippi River	Gulf of Mexico	NE¼NE¼ sec.21, T.146 N., R.30 W., Beltrami County, at Cass Lake outlet, 2.3 miles south of Pennington, and 7.5 miles northeast of Cass Lake, Minn.	al,090	10-13-49 1-26-51 3-19-51 4-17-51 3-21-52 4-24-52 1- 7-53 5- 5-53 7-29-55 2- 8-56 9-21-59 10-13-61 11- 5-64 4-26-65 8-27-73 9-19-73	646 560 566 567 551 647 265 583 76.4 524 456 367 398 590 124 446	
<u>Leech Lake River basin</u>						
Boy River	Leech Lake River	NW¼SE¼ sec.15, T.140 N., R.29 W., Cass County, at bridge on County Highway 5, at Woman Lake inlet, 9 miles east of Hackensack, Minn.	--	8-12-53	96.2	
<u>Mississippi River main stem</u>						
*Mississippi River	Gulf of Mexico	NE¼SE¼ sec.12, T.144 N., R.26 W., Itasca County, at Willow Beach Bridge on County Highway 18, 2.2 miles southeast of Ball Club, Minn.	--	4-11-46 4- 2-47 4- 9-48	826 844 488	
<u>Ball Club River basin</u>						
Ball Club River	Mississippi River	NE¼SW¼ sec.31, T.145 N., R.25 W., Itasca County, at culvert on U.S. Highway 2, 1,500 feet downstream from dam at Ball Club Lake outlet, and 2 miles northeast of Ball Club, Minn.	--	10-18-43 5- 9-44 10-23-45 8- 9-46	43.0 61.6 66.8 14.8	
<u>Deer River basin</u>						
Deer River	Mississippi River	NE¼SE¼ sec.25, T.57 N., R.27 W., Itasca County, at dam at Deer Lake outlet, upstream from County Highway 142, and 5.4 miles northeast of Deer River, Minn.	--	10-18-43 5- 9-44 10-31-44 8-15-45 10-24-45 6- 3-46 8-12-46 9- 1-46 10- 7-46	10.2 24.8 14.2 11.1 6.34 31.8 8.23 6.44 10.6	
<u>Prairie River basin</u>						
*Prairie River	Mississippi River	Lat 47°13'59", long 93°29'15", in NW¼SW¼ sec.14, T.55 N., R.25 W., Itasca County, at bridge on U.S. Highway 169, 0.5 mile northeast of Grand Rapids, Minn., and 2.2 miles upstream from mouth.	--	8-14-70	70.8	
Prairie River	Mississippi River	SW¼NE¼ sec.26, T.55 N., R.25 W., Itasca County, at bridge on U.S. Highway 2, 1 mile upstream from mouth, and 2.5 miles southeast of Grand Rapids, Minn.	--	10- 1-70	22.5	
<u>Swan River basin</u>						
Welcome Creek	O'Brien Creek	SE¼NE¼ sec.25, T.57 N., R.22 W., Itasca County, at culvert on U.S. Highway 169, at Keewatin, Minn.	--	9-28-62	2.79	
Welcome Creek	O'Brien Creek	NE¼SW¼ sec.2, T.56 N., R.22 W., Itasca County, at bridge on County Highway 558, 0.3 mile upstream from unnamed tributary, and 2.9 miles south of Keewatin, Minn.	--	11-10-55	8.91	

\* High-flow measurements are also available in Geological Survey files.  
a Approximately.

Table 3.--Low-flow measurements at miscellaneous sites.

Stream	Tributary to	Location	Drainage Area (mi <sup>2</sup> )	Date	Measurements	
					Discharge (ft <sup>3</sup> /s)	Specific Conductance (micromhos/cm at 25°C)
Swan River basin--Continued						
Welcome Creek	O'Brien Creek	NE¼NE¼ sec.10, T.56 N., R.22 W., Itasca County, 0.3 mile downstream from unnamed tributary, and 3.3 miles east of Cooley, Minn.	--	11-10-55	11.9	
Panasa Creek	Swan River	NW¼SE¼ sec.34, T.56 N., R.23 W., Itasca County, 400 feet upstream from mouth, 2,000 feet downstream from Panasa Lake, and 2.8 miles southeast of Calumet, Minn.	--	10-19-70	8.36	
Swan River	Mississippi River	NE¼SE¼ sec.31, T.56 N., R.23 W., Itasca County, at bridge on county road, 2.2 miles south of Marble, Minn.	--	10-19-70	61.7	
Swan River tributary	Swan River	NW¼SW¼ sec.31, T.56 N., R.23 W., Itasca County, at bridge on County Highway 69, 2.5 miles southwest of Marble, Minn.	--	10-19-70	0	
Twin Lakes outlet	Swan River	SE¼SW¼ sec.25, T.56 N., R.24 W., Itasca County, at Twin Lakes outlet, 1.2 miles south of U.S. Highway 169, and 2.2 miles southwest of Marble, Minn.	--	10-19-70	1.58	
Holmon Lake outlet	Swan River	SW¼SW¼ sec.25, T.56 N., R.24 W., Itasca County, at Holmon Lake outlet, 1.5 miles southeast of Taconite, Minn.	--	10-19-70	0	
Swan River	Mississippi River	NE¼NE¼ sec.15, T.55 N., R.24 W., Itasca County, at bridge on County Highway 70, 4.2 miles south of Taconite, Minn.	--	10-19-70	65.1	
Trout Creek	Swan River	SW¼SE¼ sec.15, T.55 N., R.24 W., Itasca County, at bridge on County Highway 10, 4.2 miles north of Blackberry, Minn.	--	10-19-70	1.58	
Swan River tributary	Swan River	NE¼SW¼ sec.23, T.55 N., R.24 W., Itasca County, at culvert on county road, 5.3 miles southeast of Bovey, Minn.	--	10-19-70	.34	
Swan River	Mississippi River	NE¼NW¼ sec.26, T.55 N., R.24 W., Itasca County, at bridge on County Highway 71, 3.5 miles northeast of Blackberry, and 6.5 miles southeast of Bovey, Minn.	--	10-19-70	64.2	
Swan River	Mississippi River	NW¼SE¼ sec.32, T.55 N., R.23 W., Itasca County, at bridge on County Highway 10, 5 miles north of Warba, and 5 miles northeast of Blackberry, Minn.	--	10-19-70	67.4	
Swan River tributary	Swan River	SW¼SE¼ sec.32, T.55 N., R.23 W., Itasca County, 0.2 mile east of County Highway 10, and 5.2 miles northeast of Blackberry, Minn.	--	10-20-70	11.5	
Swan River tributary	Swan River	NW¼SE¼ sec.8, T.54 N., R.23 W., Itasca County, at bridge on County Highway 10, 7.2 miles northwest of Goodland, Minn.	--	10-20-70	0	
Swan River tributary	Swan River	SW¼NW¼ sec.9, T.54 N., R.23 W., Itasca County, at bridge on county road, 0.1 mile north of junction with County Highway 444, and 6.9 miles west of Goodland, Minn.	--	10-20-70	1.22	
Swan River	Mississippi River	NW¼SW¼ sec.9, T.54 N., R.23 W., Itasca County, at bridge on County Highway 444, 6.9 miles west of Goodland, Minn.	--	10-20-70	78.7	
Swan River tributary	Swan River	NE¼NE¼ sec.21, T.54 N., R.23 W., Itasca County, at bridge on county road in Warba, Minn., and 0.6 mile upstream from mouth.	--	10-20-70	1.67	
Swan River tributary	Swan River	NE¼SE¼ sec.20, T.54 N., R.23 W., Itasca County, at bridge on County Highway 10, 0.7 mile north of junction with U.S. Highway 2 in Warba, Minn.	--	10-20-70	b.01	
Swan River tributary	Swan River	SE¼NE¼ sec.29, T.54 N., R.23 W., Itasca County, at culvert on County Highway 10, 0.3 mile north of junction with U.S. Highway 2 in Warba, Minn.	--	10-20-70	b.02	

b Estimated

Table 3.--Low-flow measurements at miscellaneous sites.

Stream	Tributary to	Location	Drainage Area (mi <sup>2</sup> )	Date	Measurements	
					Discharge (ft <sup>3</sup> /s)	Specific Conductance (micromhos/cm at 25°C)
Swan River basin--Continued						
Swan River tributary	Swan River	NE $\frac{1}{4}$ SE $\frac{1}{4}$ sec.33, T.54 N., R.23 W., Itasca County, at culvert on county road, 0.3 mile upstream from mouth, and 1.2 miles south of Warba, Minn.	--	10-20-70	.89	
Sandy River basin						
Minnewawa Creek	Sandy River	SW $\frac{1}{4}$ SW $\frac{1}{4}$ sec.32, T.49 N., R.23 W., Aitkin County, at dam at Minnewawa Lake outlet, 0.1 mile upstream from County Highway 6, and 5.3 miles north of McGregor, Minn.	--	10- 6-43	7.38	
Willow River basin						
*Willow River	Mississippi River	SW $\frac{1}{4}$ SW $\frac{1}{4}$ sec.36, T.49 N., R.26 W., Aitkin County, at bridge on County Highway 69, 1 mile upstream from mouth, and 5.7 miles north of Hassman, Minn.	--	4- 6-48	279	
Mississippi River main stem						
Mississippi River	Gulf of Mexico	NE $\frac{1}{4}$ NE $\frac{1}{4}$ sec.15, T.48 N., R.26 W., Aitkin County, at bridge on U.S. Highway 169, 3.4 miles north of Hassman, Minn.	--	4- 1-51 5- 7-51 6-11-51 4-18-57	6,570 7,520 4,100 6,570	
Mississippi River diversion channel	Mississippi River	NW $\frac{1}{4}$ NW $\frac{1}{4}$ sec.6, T.47 N., R.26 W., Aitkin County, at bridge on County Highway 1, 4.3 miles northeast of Aitkin, Minn.	--	8- 9-53	320	
Sissabagamah Creek	Mississippi River	NW $\frac{1}{4}$ NE $\frac{1}{4}$ sec.20, T.47 N., R.26 W., Aitkin County, at bridge on U.S. Highway 169, 2.0 miles upstream from mouth, and 2.7 miles northeast of Aitkin, Minn.	--	8-29-73	40.8	
Little Willow River basin						
*Little Willow River	Mississippi River	On line between secs.18 and 19, T.49 N., R.26 W., Aitkin County, at bridge on County Highway 3, 0.4 mile downstream from Esquagamah Lake outlet, and 9.8 miles west of Palisade, Minn.	--	10-19-45 8-30-46 10- 2-46	3.80 .52 3.46	
*Little Willow River	Mississippi River	On line between secs.17 and 18, T.48 N., R.26 W., Aitkin County, at bridge on County Highway 1, 4.6 miles northwest of Hassman, Minn.	--	5-20-55 8-24-55	7.26 26.5	
Mississippi River main stem						
*Mississippi River	Gulf of Mexico	In sec.24, T.47 N., R.25 W., Aitkin County, at Pine Knoll, 5.5 miles northwest of Aitkin, Minn.	--	4-15-47 4-30-47 5-19-48 4-19-51	5,290 7,830 6,410 8,220	
Pine River basin						
*Pine River	Mississippi River	NW $\frac{1}{4}$ NE $\frac{1}{4}$ sec.6, T.138 N., R.30 W., Cass County, at dam at Pine Mountain Lake outlet, 0.3 mile upstream from State Highway 87, and 1.2 miles south of Backus, Minn.	--	10-22-43 8-18-45 8-29-46	13.5 12.5 16.2	
*Pine River	Mississippi River	NW $\frac{1}{4}$ SE $\frac{1}{4}$ sec.31, T.139 N., R.29 W., Cass County, at dam at Lake Hattie outlet, 0.6 mile upstream from county road, 4.2 miles southwest of Pontoria, and 5.3 miles north of Chickamaw Beach, Minn.	--	10-21-43 8-18-45 5-28-46 8-29-46	39.0 41.8 42.7 40.8	
Crow Wing River basin						
Crow Wing River	Mississippi River	SW $\frac{1}{4}$ SE $\frac{1}{4}$ sec.15, T.140 N., R.33 W., Hubbard County, at culvert on County Highway 13, at Seventh Crow Wing Lake outlet, and about 1.5 miles south of Nevis, Minn.	--	10- 4-74 7-28-75	39.3 30.6	305 260
Little Sand Lake inlet	Little Sand Lake	SE $\frac{1}{4}$ SW $\frac{1}{4}$ sec.35, T.141 N., R.34 W., Hubbard County, at bridge on County Highway 7, downstream from Boulder Lake, at inlet to Little Sand Lake, and 1.7 miles north of Dorset, Minn.	--	8-10-56	21.8	

\* High-flow measurements are also available in Geological Survey files.

Table 3.--Low-flow measurements at miscellaneous sites.

Stream	Tributary to	Location	Drainage Area (mi <sup>2</sup> )	Date	Measurements	
					Discharge (ft <sup>3</sup> /s)	Specific Conductance (micromhos/cm at 25°C)
Crow Wing River basin--Continued						
Crow Wing River	Mississippi River	NW¼SW¼ sec.29, T.140 N., R.33 W., Hubbard County, at Fifth Crow Wing Lake outlet, 4.5 miles southwest of Nevis, Minn.	--	9-27-65	77.6	
				10- 4-74	78.2	305
				7-28-75	77.3	260
Bender Creek	First Crow Wing Lake	NE¼NE¼ sec.19, T.139 N., R.32 W., Hubbard County, at culvert on county road, near Tripp Lake outlet, 12 miles east of Hubbard, Minn.	--	10- 4-74	.42	200
				7-28-75	5.71	475
Bender Creek tributary	Bender Creek	SE¼SE¼ sec.19, T.139 N., R.32 W., Hubbard County, at bridge on County Highway 110, 7.3 miles northeast of Huntersville, Minn.	--	7-28-75	0	
Shell River	Crow Wing River	NW¼NE¼ sec.30, T.140 N., R.36 W., Becker County, at culvert on State Highway 34, 1.0 mile west of Osage, Minn.	--	10- 2-74	6.87	380
				7-30-75	13.2	290
Shell River	Crow Wing River	NW¼NE¼ sec.9, T.138 N., R.35 W., Wadena County, at bridge on county road, 0.3 mile east of U.S. Highway 71, and 2.6 miles north of Menahga, Minn.	--	10- 3-74	15.5	380
				7-29-75	24.7	350
Blueberry River	Shell River	SE¼SE¼ sec.24, T.139 N., R.36 W., Becker County, at culvert on county road, 2 miles downstream from Blueberry Lake, and 7.2 miles southeast of Osage, Minn.	--	7-30-75	5.07	380
Blueberry River tributary	Blueberry River	SW¼SW¼ sec.35, T.139 N., R.36 W., Becker County, at bridge on County Highway 125, 0.7 mile upstream from mouth, and 6.3 miles northwest of Menahga, Minn.	--	7-30-75	1.33	580
Kettle River	Blueberry River	SW¼SW¼ sec.7, T.138 N., R.35 W., Wadena County, at culvert on county road, 2 miles upstream from mouth, and 3.5 miles northwest of Menahga, Minn.	--	7-30-75	8.07	560
Shell River	Crow Wing River	NE¼SW¼ sec.2, T.138 N., R.35 W., Wadena County, at bridge on county road at Blueberry Lake outlet, 3.1 miles north of Menahga, and 8.3 miles west of Huntersville, Minn.	--	10- 3-74	38.7	340
				7-30-75	43.6	330
Shell River tributary	Shell River	NE¼NE¼ sec.35, T.139 N., R.35 W., Hubbard County, at jeep trail, 0.3 mile upstream from mouth, 0.8 mile downstream from Hinds Lake, and 2.5 miles southwest of Hubbard, Minn.	--	7-29-75	4.62	285
Fishhook River	Shell River	NE¼SW¼ sec.25, T.140 N., R.35 W., Hubbard County, at bridge 0.5 mile south of dam at Park Rapids, Minn.	--	10- 4-74	22.8	290
				7-29-75	66.4	265
Straight River	Fishhook River	SE¼NW¼ sec.6., T.140 N., R.36 W., Becker County, at culvert on road, 0.5 mile upstream from Straight Lake, and 3.7 miles northwest of Osage, Minn.	--	7-30-75	6.61	400
Fishhook River	Shell River	SW¼NW¼ sec.30, T.139 N., R.34 W., Hubbard County, at mouth, 1.3 miles southwest of Hubbard, and 6.1 miles northeast of Menahga, Minn.	--	7-29-75	154	300
Crow Wing River tributary	Crow Wing River	SW¼SW¼ sec.30, T.138 N., R.33 W., Wadena County, at culvert on County Highway 15, 3.2 miles south of Huntersville, Minn.	--	10- 3-74	.12	360
Jim Cook Lake outlet	Crow Wing River	NW¼SW¼ sec.21, T.138 N., R.34 W., Wadena County, at culvert on County Highway 149, at Jim Cook Lake outlet, 5.2 miles southwest of Huntersville, Minn.	--	10- 3-74	.49	200
				7-30-75	.82	180
Yaeger Lake inlet	Crow Wing River	NE¼NW¼ sec.3, T.137 N., R.34 W., Wadena County, at culvert on County Highway 15, 0.6 mile upstream from Yaeger Lake, and 5.3 miles southwest of Huntersville, Minn.	--	10- 3-74	1.08	300
				7-30-75	1.38	240
Unnamed Stream	Crow Wing River tributary	NE¼NE¼ sec.3, T.137 N., R.34 W., Wadena County, at bridge on County Highway 150, 7.3 miles southeast of Menahga, Minn.	--	10- 3-74	0	
Unnamed Stream	Crow Wing River tributary	NW¼NW¼ sec.2, T.137 N., R.34 W., Wadena County, at culvert on County Highway 15, 7.4 miles southeast of Menahga, Minn.	--	10- 3-74	.16	400
				7-30-75	.23	350

Table 3.--Low-flow measurements at miscellaneous sites.

Stream	Tributary to	Location	Drainage Area (mi <sup>2</sup> )	Date	Measurements	
					Discharge (ft <sup>3</sup> /s)	Specific Conductance (micromhos/cm at 25°C)
Crow Wing River basin--Continued						
Crow Wing River tributary	Crow Wing River	NE $\frac{1}{4}$ NE $\frac{1}{4}$ sec.2, T.137 N., R.34 W., Wadena County, at culvert on county road, 0.2 mile upstream from mouth, and 9.6 miles southeast of Hubbard, Minn.	--	10- 3-74 7-29-75	.75 19.5	340 480
Crow Wing River tributary	Crow Wing River	SW $\frac{1}{4}$ SW $\frac{1}{4}$ sec.5, T.137 N., R.33 W., Wadena County, at culvert on County Highway 145, at mouth, 4.3 miles north of Nimrod, Minn.	--	10- 3-74 7-30-75	.22 .66	370 260
Crow Wing River tributary	Crow Wing River	SE $\frac{1}{4}$ SE $\frac{1}{4}$ sec.12, T.138 N., R.33 W., Wadena County, at culvert on county road, 5.0 miles east of Huntersville, and 10 miles northeast of Nimrod, Minn.	--	10- 2-74	.02	240
Unnamed Stream	Crow Wing River tributary	SW $\frac{1}{4}$ SW $\frac{1}{4}$ sec.25, T.138 N., R.33 W., Wadena, County, at bridge on County Highway 155, 4.7 miles southeast of Huntersville, and 7.5 miles northeast of Nimrod, Minn.	--	10- 2-74	0	
Crow Wing River tributary	Crow Wing River	SW $\frac{1}{4}$ SE $\frac{1}{4}$ sec.26, T.138 N., R.33 W., Wadena County, at bridge on County Highway 154, 4.7 miles southeast of Huntersville, and 7.1 miles northeast of Nimrod, Minn.	--	10- 2-74	.08	320
Crow Wing River tributary	Crow Wing River	NW $\frac{1}{4}$ SW $\frac{1}{4}$ sec.9, T.137 N., R.33 W., Wadena County, at culvert on County Highway 145, 3.9 miles north of Nimrod, Minn.	--	10- 2-74 7-30-75	.27 .37	330 340
Big Swamp Creek	Crow Wing River	SW $\frac{1}{4}$ SW $\frac{1}{4}$ sec.9, T.138 N., R.32 W., Cass County, at culvert on county road, 7.0 miles east of Huntersville, Minn.	--	10- 2-74	2.18	310
Big Swamp Creek tributary	Big Swamp Creek	NW $\frac{1}{4}$ SW $\frac{1}{4}$ sec.1, T.137 N., R.33 W., Wadena County, at culvert on Bunny Hill Road, 6.1 miles southeast of Huntersville, and 14 miles southeast of Menahga, Minn.	--	10- 2-74 7-30-75	.74 1.13	330 620
Big Swamp Creek tributary	Big Swamp Creek	SW $\frac{1}{4}$ SE $\frac{1}{4}$ sec.16, T.137 N., R.33 W., Wadena County, at culvert on County Highway 145, 2.6 miles northeast of Nimrod, Minn.	--	7-30-75	0	
Crow Wing River tributary	Crow Wing River	NE $\frac{1}{4}$ SW $\frac{1}{4}$ sec.29, T.137 N., R.33 W., Wadena County, at culvert on County Highway 14, 0.7 mile north of junction with County Highway 12 at Nimrod, Minn.	--	10- 3-74 7-30-75	.63 .06	420 450
Cat River	Crow Wing River	NE $\frac{1}{4}$ SW $\frac{1}{4}$ sec.12, T.137 N., R.35 W., Wadena County, at culvert on County Highway 13, 4.6 miles southeast of Menahga, and 4.9 miles northeast of Sebeka, Minn.	--	10- 3-74 7-28-75	3.37 2.58	550
Cat River	Crow Wing River	NW $\frac{1}{4}$ NW $\frac{1}{4}$ sec.28, T.137 N., R.34 W., Wadena County, at bridge on county road, 5.1 miles northeast of Sebeka, and 5.4 miles northwest of Nimrod, Minn.	--	10- 3-74 7-29-75	8.40 10.8	510 480
Cat River tributary	Cat River	NW $\frac{1}{4}$ NW $\frac{1}{4}$ sec.29, T.137 N., R.34 W., Wadena County, at culvert on County Highway 23, 2.4 miles upstream from mouth, and 3.9 miles northeast of Sebeka, Minn.	--	10- 3-74	0	
Cat River tributary	Cat River	SW $\frac{1}{4}$ NW $\frac{1}{4}$ sec.35, T.137 N., R.34 W., Wadena County, at culvert on county road, 3.5 miles west of Nimrod, and 7.3 miles northeast of Blue Grass, Minn.	--	10- 3-74 7-29-75	.15 0	360
Cat River tributary	Cat River	SE $\frac{1}{4}$ NE $\frac{1}{4}$ sec.36, T.137 N., R.34 W., Wadena County, at culvert on county road, 1.6 miles west of Nimrod, Minn.	--	10- 3-74 7-29-75	.34 .10	500 460
Little Swamp Creek	Crow Wing River	SW $\frac{1}{4}$ SW $\frac{1}{4}$ sec.34, T.137 N., R.33 W., Wadena County, at bridge on County Highway 139, 0.9 mile upstream from mouth, and 1.8 miles southeast of Nimrod, Minn.	--	10- 4-74 7-29-75	.77 0	320
Beaver Creek	Crow Wing River	NE $\frac{1}{4}$ NW $\frac{1}{4}$ sec. T.137 N., R.33 W., Wadena County, at bridge on County Highway 12, 4.8 miles north of Oylen, Minn.	--	7-29-75	1.86	380

Table 3.--Low-flow measurements at miscellaneous sites.

Stream	Tributary to	Location	Drainage Area (mi <sup>2</sup> )	Date	Measurements	
					Discharge (ft <sup>3</sup> /s)	Specific Conductance (micromhos/cm at 25°C)
Crow Wing River basin--Continued						
Beaver Creek tributary	Beaver Creek	NW¼ sec.35, T.137 N., R.33 W., Wadena County, at culvert on County Highway 12, 3.2 miles east of Nimrod, Minn.	--	7-29-75	.14	
Beaver Creek	Crow Wing River	SE¼ sec.3, T.136 N., R.33 W., Wadena County, at bridge on County Highway 139, 0.7 mile upstream from mouth, and 3.2 miles southeast of Nimrod, Minn.	--	10- 4-74 7-29-75	3.00 2.52	350 440
Crow Wing River tributary	Crow Wing River	SE¼ sec.2, T.136 N., R.33 W., Wadena County, at culvert on County Highway 139, 2.9 miles north of Oylen, and 13 miles east of Sebeka, Minn.	--	10- 4-74 7-29-75	.03 .08	270 320
Crow Wing River tributary	Crow Wing River	NE¼ sec.22, T.136 N., R.33 W., Wadena County, at culvert on County Highway 138, 0.4 mile upstream from mouth, and 1.4 miles northwest of Oylen, Minn.	--	7-29-75	.17	360
Crow Wing River tributary	Crow Wing River	NW¼ sec.24, T.136 N., R.33 W., Wadena County, at culvert on County Highway 30, 0.8 mile north of Oylen, and 5 miles west of Poplar, Minn.	--	10- 4-74 7-29-75	.40 .31	470 505
Crow Wing River tributary	Crow Wing River	SW¼ sec.24, T.136 N., R.33 W., Wadena County, at culvert on County Highway 30 at Oylen, Minn.	--	10- 4-74 7-29-75	.51 .67	400 420
Crow Wing River	Mississippi River	SW¼ sec.14, T.135 N., R.33 W., Wadena County, at bridge on County Highway 7, 4.7 miles south of Oylen, and 17 miles northeast of Wadena, Minn.	--	10- 4-74 7-30-75	348 437	320 300
Farnham Creek	Crow Wing River	SE¼ sec.16, T.136 N., R.32 W., Cass County, at culvert on County Highway 23, 3.3 miles east of Oylen, Minn.	--	7-29-75	3.47	420
Leaf River	Crow Wing River	W¼ sec.22, T.134 N., R.38 W., Otter Tail County, between West and East Leaf Lakes, at culvert on State Road 108, and 4 miles east of Ottertail, Minn.	--	6- 7-68 8-14-68	9.96 2.14	
Oak Creek	Leaf River	SE¼ sec.26, T.134 N., R.36 W., Otter Tail County, at bridge on county road, 4 miles southwest of Wadena, Minn.	--	10-18-67	.53	
Oak Creek	Leaf River	SW¼ sec.11, T.134 N., R.36 W., Otter Tail County, at bridge on County Highway 52, 3 miles west of Wadena, Minn.	--	10-18-67	1.04	
Wing River	Leaf River	On line between secs.19 and 20, T.132 N., R.36 W., Otter Tail County, at bridge on county road, 6.4 miles northeast of Parkers Prairie, Minn.	--	10- 2-73	9.62	
Wing River	Leaf River	SE¼ sec.21, T.132 N., R.36 W., Otter Tail County, at bridge on County Highway 42, 3.5 miles southwest of Wrightstown, Minn.	--	10- 2-73	10.4	
Wing River	Leaf River	On line between secs.19 and 30, T.132 N., R.35 W., Todd County, at bridge on County Highway 32, 4.5 miles southwest of Bertha, Minn.	--	10- 2-73	14.0	
Wing River	Leaf River	SE¼ sec.16, T.133 N., R.35 W., Todd County, at bridge on State Highway 210 in Hewitt, Minn.	--	9-16-66 7-18-67 10-16-67	19.1 9.62 17.8	
Leaf River	Crow Wing River	NE¼ sec.30, T.135 N., R.33 W., Wadena County, at bridge on County Highway 26, 0.5 mile upstream from Redeye River, and 2.6 miles north of Central, Minn.	--	10- 5-74 7-30-75	95.6 93.2	470 420
Redeye River tributary	Redeye River	NE¼ sec.22, T.136 N., R.34 W., Wadena County, at culvert on county road, 0.3 mile upstream from mouth, and 4.9 miles southwest of Nimrod, Minn.	--	10- 4-74	.03	390
Redeye River	Leaf River	SE¼ sec.22, T.136 N., R.34 W., Wadena County, at bridge on County Highway 9, 6 miles southwest of Nimrod, and 13 miles northeast of Wadena, Minn.	--	10- 4-74 7-30-75	20.8 24.2	500 460

Table 3.--Low-flow measurements at miscellaneous sites.

Stream	Tributary to	Location	Drainage Area (mi <sup>2</sup> )	Date	Measurements	
					Discharge (ft <sup>3</sup> /s)	Specific Conductance (micromhos/cm at 25°C)
Crow Wing River basin--Continued						
Redeye River tributary	Redeye River	SW¼NW¼ sec.12, T.135 N., R.34 W., Wadena County, at culvert on county road near mouth, 12 miles northeast of Wadena, Minn.	--	10- 5-74	.44	350
Hay Creek	Redeye River	SE¼NE¼ sec.14, T.135 N., R.34 W., Wadena County, at culvert on county road, 1.0 mile upstream from mouth, and 9.2 miles north of Aldrich, Minn.	--	10- 5-74 7-30-75	.63 .21	420 620
Leaf River tributary	Leaf River	SW¼NE¼ sec.10, T.134 N., R.33 W., Wadena County, at bridge on county road, 0.6 mile upstream from mouth, and 6.7 miles northeast of Aldrich, Minn.	--	10- 5-74 7-30-75	4.27 2.72	480 500
Partridge River	Crow Wing River	NE¼NW¼ sec.10, T.133 N., R.34 W., Todd County, at bridge on county road, 1.5 miles southwest of Aldrich, Minn.	--	7-17-67 10-17-67	2.12 1.27	
Partridge River	Crow Wing River	SW¼NW¼ sec.25, T.134 N., R.34 W., Wadena County, at bridge on County Highway 2, 1 mile northeast of Aldrich, Minn.	--	7-17-67 10-17-67 7- 7-70	5.27 1.50 3.51	
Partridge River	Crow Wing River	SE¼SE¼ sec.19, T.134 N., R.33 W., Wadena County, at bridge on County Highway 114, 3 miles northeast of Aldrich, Minn.	--	7-17-67 10-17-67 7- 7-70	8.27 3.63 10.0	
Hayden Creek	Crow Wing River	NW¼NW¼ sec.31, T.134 N., R.32 W., Wadena County, at culvert on county road, 0.8 mile upstream from mouth, and 2.5 miles northeast of Staples, Minn.	--	10- 5-74 7-30-75	2.76 3.02	470 400
Lake Miliona outlet	Lake Ida	Lat 46°01'30", long 95°23'14", in NE¼SW¼ sec.31, T.130 N., R.37 W., Douglas County, upstream from County Highway 5, 5 miles southwest of Miltona, Minn.	--	10-21-43 5- 4-44	23.0 74.3	
Long Prairie River	Crow Wing River	NW¼SW¼ sec.15, T.129 N., R.37 W., Douglas County, at bridge on county road, 0.1 mile downstream from Lake Carlos, and 2 miles west of Carlos, Minn.	--	10- 1-73	15.2	
Long Prairie River	Crow Wing River	NW¼SW¼ sec.6, T.129 N., R.36 W., Douglas County, at bridge on County Highway 65, 3 miles northeast of Carlos, Minn.	--	10- 1-73	18.8	
Long Prairie River	Crow Wing River	NW¼NW¼ sec.9, T.129 N., R.36 W., Douglas County, at bridge on County Highway 3, 0.8 mile north of Belle River, Minn.	--	10- 1-73	20.8	
Spruce Creek	Long Prairie River	NE¼SE¼ sec.29, T.131 N., R.36 W., Otter Tail County, at bridge on County Highway 69, 5 miles southeast of Parkers Prairie, Minn.	--	10- 2-73	17.3	
Spruce Creek	Long Prairie River	NE¼SW¼ sec.16, T.130 N., R.36 W., Douglas County, at bridge on county road at Spruce Center, Minn.	--	10- 2-73	6.20	
Spruce Creek	Long Prairie River	SE¼SE¼ sec.33, T.130 N., R.36 W., Douglas County, at bridge on County Highway 5, 1.5 miles upstream from mouth, and 2 miles northeast of Belle River, Minn.	--	10- 1-73	9.70	
Nokasippi River basin						
*Nokasippi River	Mississippi River	On line between secs.22 and 23, T.45 N., R.29 W., -- Crow Wing County, at bridge on County Highway 8, between Nokay Lake and Pointon Lake, and 3.4 miles northwest of Esden, Minn.	--	11- 2-44 5-23-46	2.04 2.29	
*Hay Creek	Nokasippi River	NW¼NW¼ sec.34, T.45 N., R.29 W., Crow Wing County, -- at Grave Lake outlet, at bridge on County Highway 8, and 3.8 miles west of Esden, Minn.	--	8-30-43 11- 2-44 10-17-45	.90 3.18 4.20	
Hay Creek	Nokasippi River	SW¼SW¼ sec.9, T.43 N., R.31 W., Crow Wing County, -- at bridge on county road, 0.1 mile upstream from mouth, and 4.5 miles southeast of Crow Wing, Minn.	--	8-17-70	.15	

\* High-flow measurements are also available in Geological Survey files.

Table 3.--Low-flow measurements at miscellaneous sites.

Stream	Tributary to	Location	Drainage	Date	Measurements		Specific Conductance (micromhos/cm at 25°C)
			Area (mi <sup>2</sup> )		Discharge (ft <sup>3</sup> /s)		
<u>Nokasippi River basin--Continued</u>							
Little Nokasippi River	Nokasippi River	NW¼NE¼ sec.26, T.43 N., R.32 W., Crow Wing County, at bridge on county road, 0.8 mile upstream from mouth, and 1.6 miles northeast of Fort Ripley, Minn.	--	8-17-70	0		
*Nokasippi River	Mississippi River	Lat 46°10'43", long 94°21'46", in NW¼SE¼ sec.27, T.43 N., R.32 W., Crow Wing County, at bridge on State Highway 371, 600 feet upstream from mouth in Fort Ripley, Minn.	a216	6-29-72	152		
<u>Mississippi River main stem</u>							
*Mississippi River	Gulf of Mexico	NE¼SE¼ sec.35, T.42 N., R.32 W., Morrison County, at bridge on State Highway 115, 0.4 mile west of Camp Ripley Junction, Minn., and at mile 974 upstream from Ohio River.	all,300	6-29-72	6,090		
<u>Mississippi River tributary basin</u>							
Mississippi River tributary	Mississippi River	On line between secs.29 and 30, T.130 N., R.29 W., Morrison County, at box culvert on County Highway 13, 1.9 miles northwest of Belle Prairie, Minn.	--	11- 4-68	b4.40		
				8-20-69	0		
				8-18-70	0		
<u>Elk River basin</u>							
*Elk River	Mississippi River	SW¼SE¼ sec.6, T.130 N., R.30 W., Morrison County, at bridge on County Highway 6 in Randall, Minn., 0.8 mile upstream from Little Elk River.	--	8-18-70	0		
*Little Elk River	Elk River	NE¼SE¼ sec.7, T.130 N., R.30 W., Morrison County, at bridge on U.S. Highway 10 in Randall, Minn., 0.2 mile upstream from mouth.	--	8-18-70	0		
Elk River	Mississippi River	On line between secs.26 and 35, T.130 N., R.30 W., Morrison County, at bridge on county road, 4.1 miles west of Belle Prairie, Minn.	--	11- 4-68	34.6		400
				8-20-69	4.13		
Elk River / tributary	Elk River	On line between secs.25 and 36, T.130 N., R.30 W., Morrison County, at culvert on county road, 4.4 miles northwest of Little Falls, Minn.	--	11- 4-68	b.30		
				8-20-69	0		
				8-18-70	0		
Elk River	Mississippi River	SE¼NW¼ sec.36, T.130 N., R.30 W., Morrison County, at bridge on county road, 3.8 miles northwest of Little Falls, Minn.	--	8-18-70	.26		
<u>Swan River basin</u>							
Swan River	Mississippi River	NE¼SW¼ sec.35, T.129 N., R.32 W., Todd County, at bridge on county road, 0.4 mile northeast of Pillsbury, Minn.	--	8-17-70	0		
*Pillsbury Creek	Swan River	SW¼NW¼ sec.8, T.128 N., R.32 W., Todd County, at bridge on County Highway 13, at Big Swan Lake outlet, and 4.2 miles northwest of Burtrum, Minn.	--	11-20-43	10.6		
				10-11-44	6.18		
				6- 6-45	10.4		
				8-13-45	6.68		
*Pillsbury Creek	Swan River	NW¼NW¼ sec.2, T.128 N., R.32 W., Todd County, at bridge on county road at Pillsbury (Little Swan) Lake outlet, at Pillsbury, Minn.	--	1- 7-44	1.90		
				10-11-44	10.4		
				8-13-45	9.82		
				8-17-70	5.73		
<u>Two Rivers basin</u>							
Two Rivers	Mississippi River	On line between secs.14 and 15, T.127 N., R.30 W., Morrison County, at bridge on county road, 1 mile upstream from South Branch Two Rivers, and 1.5 miles southwest of Bowlus, Minn.	--	8-21-69	.10		
				8-18-70	3.02		
South Branch Two Rivers	Two Rivers	On line between secs.14 and 23, T.127 N., R.30 W., Morrison County, at bridge on County Highway 21, 0.1 mile upstream from mouth, and 1.3 miles southwest of Bowlus, Minn.	--	8-18-70	4.70		

\* High-flow measurements are also available in Geological Survey files.

a Approximately.

b Estimated.

Table 3.--Low-flow measurements at miscellaneous sites.

Stream	Tributary to	Location	Drainage	Date	Measurements	
			Area (mi <sup>2</sup> )		Discharge (ft <sup>3</sup> /s)	Specific Conductance (micromhos/cm at 25°C)
Spunk Creek basin						
Spunk Creek	Mississippi River	On line between sec.2, T.125 N., R.30 W., and sec.35, T.126 N., R.30 W., Stearns County, at bridge on County Highway 52, 4.6 miles southeast of Holdingford, Minn.	--	8- 8-70	2.49	
Platte River basin						
Platte River	Mississippi River	On line between sec.30, T.41 N., R.30 W., and sec.25, T.41 N., R.31 W., Morrison County, at bridge on county road, 3.7 miles south of Freedhem, Minn.	--	11- 5-68 8-21-69	103 2.45	300
Platte River	Mississippi River	Lat 45°59'43", long 94°12'31", in NE¼NE¼ sec.35, T.41 N., R.31 W., Morrison County, at bridge on county road, 4.2 miles south of Freedhem, and 5 miles northwest of Pierz, Minn.	--	10-19-72 9-12-73 7- 8-74 7-30-74 8-21-75	60.4 27.8 15.5 10.3 16.0	200 250 210
Pierz Lake outlet	Platte River	NW¼SE¼ sec.14, T.40 N., R.31 W., Morrison County, at twin culverts on County Highway 36, at Pierz Lake outlet, 3 miles southwest of Pierz, Minn.	--	11- 5-68 8-21-69 8-19-70	1.20 1.05 .42	
Platte River	Mississippi River	On line between secs.16 and 21, T.40 N., R.31 W., Morrison County, at bridge on county road, 4.4 miles west of Genola, Minn.	--	11- 5-68	107	
Hillman Creek	Skunk River	NE¼NE¼ sec.8, T.40 N., R.29 W., Morrison County, at double box culvert on County Highway 39, 4.6 miles southwest of Hillman, Minn.	--	11- 6-68 8-20-69	4.14 .01	
Skunk River tributary	Skunk River	On line between secs.17 and 20, T.40 N., R.30 W., Morrison County, at box culvert on County Highway 38, 0.6 mile south of Genola, Minn.	--	11- 7-68 8-20-69	.20 0	
*Skunk River	Platte River	Lat 45°56'14", long 94°06'55", on line between secs.29 and 30, T.40 N., R.30 W., Morrison County, at culvert on State Highway 25, 1.6 miles south of Genola, Minn.	--	11- 7-68 8-20-69 8-19-70	43.0 8.07 10.2	
Platte River tributary	Platte River	N¼ of line between sec.19, T.40 N., R.31 W., and sec.24, T.40 N., R.32 W., Morrison County, at bridge on County Highway 256, 5 miles southeast of Little Falls, Minn.	--	11- 4-68 8-21-69 8-19-70	b.20 0 0	
*Platte River	Mississippi River	NE¼NW¼ sec.12, T.39 N., R.32 W., Morrison County, at bridge on County Highway 34, 4.7 miles north of Royalton, Minn.	--	8-21-69 8-19-70 7-31-74 8-22-75	41.6 41.2 47.6 46.6	270 270 250
Little Rock Creek basin						
Bunker Hill Creek	Little Rock Creek	NW¼SE¼ sec.10, T.38 N., R.31 W., Benton County, at bridge on County Highway 40, 0.3 mile upstream from mouth, and 3.8 miles northeast of Rice, Minn.	--	8-19-70	.03	
Sucker Creek	Little Rock Creek	NE¼SW¼ sec.11, T.37 N., R.31 W., Benton County, at bridge on county road, 0.4 mile upstream from Little Rock Lake, and 3.9 miles southeast of Rice, Minn.	--	8-19-70	.04	
Watab River basin						
South Fork Watab River	Watab River	SW¼NE¼ sec.9, T.124 N., R.29 W., Stearns County, at bridge on U.S. Highway 52, at northwest edge of St. Joseph, Minn., and 1 mile upstream from North Fork Watab River.	--	8-19-70	.69	
North Fork Watab River	Watab River	SE¼NW¼ sec.4, T.124 N., R.29 W., Stearns County, at bridge on County Highway 3, 0.4 mile upstream from mouth, and 1.4 miles northwest of St. Joseph, Minn.	--	8-19-70	1.78	

\* High-flow measurements are also available in Geological Survey files.

b Estimated.

Table 3.--Low-flow measurements at miscellaneous sites.

Stream	Tributary to	Location	Drainage Area (mi <sup>2</sup> )	Date	Measurements	
					Discharge (ft <sup>3</sup> /s)	Specific Conductance (micromhos/cm at 25°C)
Sauk River basin						
*Sauk River	Mississippi River	NE¼SW¼ sec.16, T.128 N., R.35 W., Todd County, at Lake Osakis outlet, at bridge on County Highway 37, 6.6 miles north of West Union, Minn.	--	8-17-70	2.80	
Ashley Creek	Sauk River	On line between secs.13 and 14, T.126 N., R.36 W., Pope County, at bridge on County Highway 33, 0.4 mile northeast of Westport, Minn.	--	8-18-70	2.46	
Silver Creek	Ashley Creek	SE¼NW¼ sec.25, T.127 N., R.35 W., Todd County, at bridge on county road, 0.3 mile upstream from mouth, 2.7 miles southeast of West Union, and 4.5 miles northwest of Sauk Centre, Minn.	--	8-18-70	1.06	
Hoboken Creek	Sauk River	NW¼NW¼ sec.9, T.126 N., R.34 W., Stearns County, at bridge on County Highway 17 in Sauk Centre, Minn., 0.4 mile upstream from Sauk Lake.	--	8-18-70	0	
Sauk River tributary	Sauk River	NE¼NE¼ sec.2, T.125 N., R.34 W., Stearns County, at bridge on County Highway 29, 3.6 miles northwest of Meire Grove, Minn.	--	8-20-69 8-18-70	0 0	
Sauk River tributary	Sauk River	SE¼SE¼ sec.29, T.126 N., R.33 W., Stearns County, at bridge on County Highway 65, 0.2 mile upstream from mouth, and 2.3 miles northwest of Melrose, Minn.	--	8-18-70	0	
Prairie Creek	Adley Creek	SW¼NE¼ sec.23, T.127 N., R.33 W., Todd County, at bridge on State Highway 28, 0.2 mile upstream from Little Birch Lake, and 0.7 mile northeast of Ward Springs, Minn.	--	8-18-70	0	
Adley Creek	Sauk River	SE¼SE¼ sec.2, T.127 N., R.33 W., Stearns County, at bridge on County Highway 17, at Sylvia Lake outlet, 3.6 miles northwest of St. Rosa, Minn.	--	9- 3-47	1.59	
Sauk River tributary	Sauk River	NW¼NE¼ sec.1, T.125 N., R.33 W., Stearns County, at bridge on county road, 0.7 mile upstream from mouth, and 1.8 miles southeast of Melrose, Minn.	--	8-18-70	0	
Stony Creek	Sauk River	SE¼NE¼ sec.23, T.124 N., R.33 W., Stearns County, at bridge on county road, 0.2 mile upstream from mouth, and 2.2 miles northeast of Spring Hill, Minn.	--	8-21-69 8-18-70	0 1.88	
Sauk River tributary	Sauk River	SE¼NW¼ sec.25, T.124 N., R.33 W., Stearns County, at bridge on county road, 0.3 mile upstream from mouth, and 2.7 miles east of Spring Hill, Minn.	--	8-18-70	.32	
Sauk River tributary	Sauk River	On line between sec.6, T.123 N., R.31 W., and sec.31, T.124 N., R.31 W., Stearns County, at quadruple culvert on County Highway 23, 1.5 miles southwest of Farming, Minn.	--	8-21-69 8-18-70	0 <.01	
Long Lake tributary	Long Lake	NE¼SW¼ sec.2, T.122 N., R.31 W., Stearns County, at bridge on county road, just below confluence with Browns Lake outlet, 0.2 mile above Long Lake, and 3.4 miles southwest of Richmond, Minn.	--	8-21-69 8-19-70	0 0	
Mill Creek	Sauk River	SW¼NE¼ sec.3, T.122 N., R.29 W., Stearns County, at Pearl Lake outlet, 1.1 miles northeast of Marty, Minn.	--	8-19-70	3.30	
Clearwater River basin						
Clearwater River tributary	Clearwater River	NW¼NE¼ sec.21, T.121 N., R.27 W., Wright County, at bridge on County Highway 24, 0.1 mile upstream from Clearwater Lake, and 2.3 miles northeast of Annandale, Minn.	--	8-19-70	.32	

\* High-flow measurements are also available in Geological Survey files.  
< Less than.

Table 3.--Low-flow measurements at miscellaneous sites.

Stream	Tributary to	Location	Drainage	Date	Measurements	
			Area (mi <sup>2</sup> )		Discharge (ft <sup>3</sup> /s)	Specific Conductance (micromhos/cm at 25°C)
Otter Creek basin						
Otter Creek	Mississippi River	NE $\frac{1}{4}$ SW $\frac{1}{4}$ sec.3, T.121 N., R.25 W., Wright County, at bridge on State Highway 152, 0.4 mile upstream from mouth, and 1.4 miles northwest of Monticello, Minn.	--	8-19-70	.62	
Elk River basin						
Elk River	Mississippi River	On line between sec.31, T.35 N., R.29 W., and sec.36, T.35 N., R.30 W., Sherburne County, at bridge on County Highway 20, 2.8 miles northwest of Clear Lake, Minn.	--	8-19-70	13.7	
Briggs Creek	Elk River	On line between secs.15 and 22, T.35 N., R.29 W., Sherburne County, at bridge on County Highway 48, 0.7 mile upstream from Lake Briggs, and 5.9 miles northeast of Clear Lake, Minn.	--	8-19-70	3.32	
Elk River	Mississippi River	On line between secs.1 and 2, T.33 N., R.28 W., Sherburne County, at bridge on County Highway 73, 0.9 mile upstream from Snake River, and 3.6 miles northwest of Big Lake, Minn.	--	8-19-70	29.9	
St. Francis River	Elk River	W $\frac{1}{2}$ sec.10, T.35 N., R.27 W., Sherburne County, south of County Highway 3, 4.5 miles southwest of Princeton, Minn.	--	11- 9-62	12.4	
St. Francis River	Elk River	SW $\frac{1}{4}$ NE $\frac{1}{4}$ sec.27, T.35 N., R.27 W., Sherburne County, at bridge on County Highway 9, about 1 mile above Rice Lake, and 4.2 miles northeast of Orrock, Minn.	--	8-22-69 5-19-70 8-20-70	4.50 42.2 6.09	265
St. Francis River tributary	St. Francis River	On line between secs.2 and 3, T.34 N., R.27 W., Sherburne County, 0.4 mile above mouth, and 3.5 miles northeast of Orrock, Minn.	--	8-22-69 5-19-70 8-20-70	1.06 3.49 .57	324 275
St. Francis River	Elk River	N $\frac{1}{2}$ sec.2, T.34 N., R.27 W., Sherburne County, at Rice Lake outlet, and 1.2 miles west of Elk Lake, Minn.	--	9-11-62	27.7	
Battle Brook	St. Francis River	SE $\frac{1}{4}$ SE $\frac{1}{4}$ sec.19, T.35 N., R.26 W., Sherburne County, at bridge on County Highway 9, 0.5 mile upstream from Elk Lake, and 4.4 miles northwest of Zimmerman, Minn.	--	8-22-69 5-19-70 8-20-70	3.44 6.24 1.72	265
St. Francis River	Elk River	On line between secs.11 and 14, T.34 N., R.27 W., Sherburne County, at bridge on County Highway 4, 3.2 miles west of Zimmerman, Minn.	--	9-26-62 11- 9-62	101 41.0	
St. Francis River	Elk River	SW $\frac{1}{4}$ SW $\frac{1}{4}$ sec.8, T.33 N., R.27 W., Sherburne County, just upstream from mouth, and 1.2 miles north of Big Lake, Minn.	--	11- 9-62	49.0	
Mississippi River tributary basin						
Mississippi River tributary	Mississippi River	SW $\frac{1}{4}$ NE $\frac{1}{4}$ sec.3, T.32 N., R.26 W., Sherburne County, at culvert on access road to office building south of R.E.A. power plant between U.S. Highways 10, 52, and 169, and Northern Pacific and Great Northern Railroad tracks, about 1 mile southeast of Elk River, Minn.	--	12- 5-58	.17	
Crow River basin						
North Fork Crow River	Crow River	S $\frac{1}{2}$ N $\frac{1}{2}$ sec.4, T.123 N., R.34 W., Stearns County, at bridge on U.S. Highway 71, 3.6 miles northeast of Belgrade, Minn.	--	9- 4-69 8-17-70	1.24 1.01	645 560
North Fork Crow River	Crow River	SW $\frac{1}{4}$ NE $\frac{1}{4}$ sec.17, T.122 N., R.32 W., Stearns County, at bridge on State Highway 4, at Paynesville, Minn.	--	1- 7-46 2-11-46 3- 6-46	1.50 .69 1.91	
North Fork Crow River	Crow River	SE $\frac{1}{4}$ SE $\frac{1}{4}$ sec.30, T.121 N., R.31 W., Meeker County, at bridge on County Highway 30, 0.2 mile east of Manannah, Minn., and 0.7 mile upstream from Middle Fork Crow River.	--	8-18-70	6.52	380
Middle Fork Crow River tributary	Middle Fork Crow River	On line between secs.28 and 29, T.122 N., R.34 W., Kandiyohi County, at bridge on graveled road, 0.4 mile upstream from mouth, and 3.8 miles northwest of New London, Minn.	--	12- 3-69	1.91	650

Table 3.--Low-flow measurements at miscellaneous sites.

Stream	Tributary to	Location	Drainage Area (mi <sup>2</sup> )	Date	Measurements	
					Discharge (ft <sup>3</sup> /s)	Specific Conductance (micromhos/cm at 25°C)
Crow River basin--Continued						
Middle Fork Crow River	North Fork Crow River	NW¼SW¼ sec.32, T.121 N., R.31 W., Meeker County, -- at bridge on County Highway 3, 0.4 mile upstream from mouth, and 0.9 mile southeast of Manannah, Minn.		8-18-70	26.8	520
North Fork Crow River	Crow River	SW¼SW¼ sec.35, T.120 N., R.28 W., Wright County, -- at bridge on County Highway 35, 6.4 miles north of Cokato, Minn.		8-18-70	68.7	540
*Twelvemile Creek	North Fork Crow River	NE¼ sec.31, T.119 N., R.26 W., Wright County, at -- dam on Little Waverly Lake outlet, 1.5 miles northwest of Waverly, Minn.		9-23-42 9-25-42	6.56 5.44	
Twelvemile Creek	North Fork Crow River	On line between secs.20 and 29, T.119 N., R.26 W., -- Wright County, at culvert on County Highway 107, 2 miles northwest of Waverly, Minn.		9- 5-69 5-20-70 8-18-70	0 0 b<.001	
South Fork Crow River	Crow River	SW¼NE¼ sec.14, T.117 N., R.31 W., Meeker County, -- at bridge on State Highway 7, at southwest city limit of Cedar Mills, Minn.		8-19-70	2.67	890
*South Fork Crow River	Crow River	Lat 44°53'44", long 94°22'08", in SE¼SW¼ sec.31, -- T.117 N., R.29 W., McLeod County, at bridge on State Highways 15 and 22, at Otter Lake outlet in Hutchinson, Minn.		9- 9-47	27.1	
South Fork Crow River	Crow River	On line between secs.1 and 2, T.116 N., R.27 W., -- McLeod County, at bridge on County Highway 9, 0.7 mile southeast of Lester Prairie, Minn., and 1 mile upstream from Otter Creek.		8-19-70	7.35	890
Buffalo Creek	South Fork Crow River	On line between secs.28 and 33, T.115 N., R.29 W., -- McLeod County, at bridge on U.S. Highway 212, 1.7 miles east of Brownton, Minn.		8-19-70 8-24-70	2.67 2.42	1,200
*Buffalo Creek	South Fork Crow River	At center of sec.13, T.115 N., R.28 W., McLeod -- County, at bridge on U.S. Highway 212 at Glencoe, Minn.		4- 8-47 6-14-68 3-26-69	212 318 217	
Crane Creek	South Fork Crow River	On line between secs.6 and 7, T.116 N., R.26 W., -- Carver County, at bridge on County Highway 30, 1.8 miles southeast of Lester Prairie, Minn.		8-19-70	.006	770
Crow River	Mississippi River	S¼ sec.2, T.120 N., R.23 W., Hennepin County, at -- bridge on State Highway 101, on Hennepin-Wright county line, 2.6 miles north of Rogers, Minn., and 3.5 miles upstream from mouth.		8-18-70	136	620
Crow River	Mississippi River	NE¼SE¼ sec.36, T.121 N., R.23 W., Wright County, -- at bridge on County Highway 12, at Dayton, Minn.		11- 2-05	570	
Rum River basin						
Mille Lacs Lake tributary	Mille Lacs Lake	NE¼SE¼ sec.12, T.44 N., R.28 W., Crow Wing County, at bridge on U.S. Highway 169, 300 feet upstream from mouth, and 0.9 mile northeast of Garrison, Minn.	a35	8-17-70	0	
Bradbury Brook	Rum River	On line between secs.29 and 30, T.41 N., R.26 W., a46 Mille Lacs County, at bridge on U.S. Highway 169, 0.2 mile upstream from mouth, and 5 miles south of Onamia, Minn.		8-20-69 8-17-70	0 .32	245
Rum River	Mississippi River	NW¼ sec.32, T.41 N., R.26 W., Mille Lacs County, -- just downstream of Bradbury Brook, and 5 miles south of Onamia, Minn.		7-15-65	171	
Tibbetts Brook	Rum River	On line between secs.27 and 28, T.39 N., R.27 W., Mille Lacs County, at bridge on County Highway 19, 1 mile upstream from mouth, and 6.9 miles northwest of Milaca, Minn.	a38	8-17-70	.19	280

\* High-flow measurements are also available in Geological Survey files.

< Less than.

a Approximately.

b Estimated.

Table 3.--Low-flow measurements at miscellaneous sites.

Stream	Tributary to	Location	Drainage Area (mi <sup>2</sup> )	Date	Measurements	
					Discharge (ft <sup>3</sup> /s)	Specific Conductance (micromhos/cm at 25°C)
Rum River basin--Continued						
Rum River	Mississippi River	NW¼SE¼ sec.36, T.38 N., R.27 W., Mille Lacs County, at bridge on U.S. Highway 169, at Milaca, Minn.	--	7-16-65	188	
Vondell Brook	Rum River	On line between secs.4 and 9, T.37 N., R.26 W., Mille Lacs County, at bridge on county road, 0.7 mile upstream from mouth, and 3.8 miles southeast of Milaca, Minn.	a20	8-18-70	.04	310
Bogus Brook	Rum River	On line between secs.23 and 26, T.37 N., R.26 W., Mille Lacs County, at bridge on County Highway 1, 0.2 mile upstream from mouth, and 1.6 miles east of Woodward Brook, Minn.	a29	8-20-69 5-20-70 8-18-70	<.01 2.56 0	
Rum River	Mississippi River	SW¼SW¼ sec.3, T.36 N., R.26 W., Mille Lacs County, at bridge on County Highway 13, 3 miles east of Long Siding, and 4 miles north of Princeton, Minn.	--	7-16-65	240	
Rum River	Mississippi River	SE¼SE¼ sec.28, T.36 N., R.26 W., Mille Lacs County, at bridge on State Highway 95, at Princeton, Minn., and 0.2 mile upstream from West Branch Rum River.	a772	5-23-61 7-22-65 8-18-70 8-27-70	154 213 111 82.1	240 238
West Branch Rum River	Rum River	On line between sec.19, T.38 N., R.27 W., and sec.24, T.38 N., R.28 W., Mille Lacs- Benton County line, at bridge on county road, 3.5 miles northwest of Foreston, Minn.	a95	8-18-70	.06	260
West Branch Rum River	Rum River	On line between secs.26 and 35, T.37 N., R.27 W., Mille Lacs County, at bridge on County Highway 12, 0.8 mile upstream from Estes Brook, and 6.2 miles south of Milaca, Minn.	a115	8-18-70	3.64	340
Spencer Brook	Rum River	NW¼ sec.15, T.35 N., R.25 W., Isanti County, at bridge on County Highway 40, 0.2 mile north of Spencer Brook, Minn., and 0.3 mile upstream from mouth.	a21	7-23-65 8-21-69 8-18-70	11.0 5.88 3.03	278 220
*Rum River	Mississippi River	SE¼SE¼ sec.36, T.36 N., R.25 W., Isanti County, at bridge on State Highway 47, at West Point, and 8 miles west of Cambridge, Minn.	a1,010	5-23-61 7-22-65	372 301	
Rum River tributary	Rum River	NE¼NW¼ sec.34, T.36 N., R.24 W., Isanti County, at bridge on County Highway 65, 0.5 mile upstream from mouth, 0.8 mile south of Walbo, and 4.7 miles west of Cambridge, Minn.	a7.0	8-19-70	.77	340
*Rum River	Mississippi River	SW¼ sec.27, T.36 N., R.24 W., Isanti County, at bridge on State Highway 95 at Walbo, and 5 miles west of Cambridge, Minn.	--	7-22-65	411	
Stanchfield Creek	Rum River	On line between secs.21 and 28, T.37 N., R.24 W., Isanti County, at bridge on County Highway 3, 0.5 mile upstream from Ties Creek, 3 miles northeast of Dalbo, and 9 miles northwest of Cambridge, Minn.	a45	8-19-70	2.39	530
Ties Creek	Stanchfield Creek	On line between secs.11 and 14, T.37 N., R.24 W., Isanti County, at bridge on county road, 2.5 miles upstream from mouth, and 6.6 miles southwest of Braham, Minn.	a21	8-19-70	.38	360
Rum River	Mississippi River	Near center of sec.18, T.36 N., R.23 W., Isanti County, at bridge on County Highway 14, 2.5 miles northwest of Cambridge, Minn.	--	7-23-65	369	
Little Stanchfield Lake outlet	Rum River	SE¼ sec.8, T.36 N., R.23 W., Isanti County, at bridge on county road, 3 miles north of Cambridge, Minn.	--	7-27-65	12.0	

\* High-flow measurements are also available in Geological Survey files.

&lt; Less than.

a Approximately.

Table 3.--Low-flow measurements at miscellaneous sites.

Stream	Tributary to	Location	Drainage	Date	Measurements	
			Area (mi <sup>2</sup> )		Discharge (ft <sup>3</sup> /s)	Specific Conductance (micromhos/cm at 25°C)
Rum River basin--Continued						
Beckins Creek	Rum River	NW¼SW¼ sec.21, T.36 N., R.23 W., Isanti County, at bridge on County Highway 33, 0.8 mile north of Cambridge, Minn.	--	7-27-65	1.44	
Isanti Brook	Rum River	At center of S¼ sec.17, T.35 N., R.23 W., Isanti County, at bridge on State Highway 65, 2 miles upstream from mouth, and 2.1 miles northeast of Isanti, Minn.	a18	8-21-69 8-20-70	0 .15	220
Rum River tributary	Rum River	On line between secs.23 and 24, T.35 N., R.24 W., Isanti County, at bridge on County Highway 10, 1 mile upstream from mouth, and 2.1 miles northwest of Isanti, Minn.	a12	8-20-70	1.33	310
*Rum River	Mississippi River	W¼ sec.30, T.35 N., R.23 W., Isanti County at bridge on County Highway 5, 0.8 mile west of Isanti, Minn.	--	7-23-65	429	
*Rum River	Mississippi River	SE¼NE¼ sec.21, T.34 N., R.24 W., Isanti County, at bridge on County Highway 10, 2.5 miles north of St. Francis, Minn.	--	7-27-65	432	
Cedar Creek	Rum River	SE¼NW¼ sec.5, T.33 N., R.23 W., Anoka County, at bridge on State Highway 65, 1.5 miles south of Coopers Corner (intersection of State Highway 65 and County Highway 24), and 2.4 miles southeast of Bethel, Minn.	a29	8-20-70	7.89	340
Crooked Brook	Cedar Creek	SW¼NE¼ sec.30, T.33 N., R.23 W., Anoka County, at bridge on County Highway 22, 1.5 miles upstream from mouth, and 2.4 miles northwest of Soderville, Minn.	a13	8-20-70	1.83	370
Cedar Creek	Rum River	NW¼SW¼ sec.24, T.33 N., R.24 W., Anoka County, at bridge on County Highway 13, 1.2 miles north of Cedar, and 4.9 miles south of Bethel, Minn.	a62	8-20-70	15.6	350
Ford Brook	Trott Brook	NE¼SW¼ sec.2, T.32 N., R.25 W., Anoka County, at bridge on County Highway 63, 0.3 mile upstream from mouth, 3.6 miles southeast of Nowthen, and 6.6 miles northwest of Anoka, Minn.	a32	8-21-70	1.48	460
Minnehaha Creek basin						
Minnehaha Creek	Mississippi River	SE¼NE¼ sec.14, T.28 N., R.24 W., Hennepin County, at bridge on State Highway 36 at Minneapolis, Minn.	--	11-23-42	10.2	
*Minnehaha Creek	Mississippi River	NE¼NE¼ sec.13, T.28 N., R.24 W., Hennepin County, at 30th Avenue South in Minneapolis, Minn.	--	7-31-52	69.3	
*Minnehaha Creek	Mississippi River	SE¼NE¼ sec.18, T.28 N., R.23 W., Hennepin County, at bridge on Minnehaha Avenue, 0.1 mile upstream from Minnehaha Falls, 0.8 mile upstream from mouth, and in Minneapolis, Minn.	--	6-16-42 11-23-42	35.5 9.70	
Minnesota River basin						
Little Minnesota River tributary	Little Minnesota River	SW¼NW¼ sec.34, T.125 N., R.49 W., Traverse County, at bridge on State Highways 7 and 28, at east edge of Browns Valley, Minn.	--	4- 1-68	.23	
*Minnesota River	Mississippi River	SE¼NW¼ sec.3, T.120 N., R.45 W., Big Stone County, 0.3 mile downstream from Yellow Bank River, and 3 miles southeast of Odessa, Minn.	--	4- 3-68	10.8	
*Pomme de Terre River	Minnesota River	NW¼SW¼ sec.7, T.128 N., R.41 W., Grant County, at bridge on County Highway 2, at Barrett Lake outlet at Barrett, Minn.	--	10-22-43 10-20-44 8- 2-45 8-11-64	5.49 27.8 1.39 .49	

\* High-flow measurements are also available in Geological Survey files.  
a Approximately.

Table 3.--Low-flow measurements at miscellaneous sites.

Stream	Tributary to	Location	Drainage Area (mi <sup>2</sup> )	Date	Measurements	
					Discharge (ft <sup>3</sup> /s)	Specific Conductance (micromhos/cm at 25°C)
Minnesota River basin--Continued						
Pomme de Terre River	Minnesota River	NW¼NW¼ sec.29, T.127 N., R.41 W., Grant County, at bridge on County Highway 37, 4.5 miles southwest of Hoffman, Minn.	--	8-11-64	4.47	
Pomme de Terre River	Minnesota River	SW¼NW¼ sec.8, T.125 N., R.41 W., Stevens County, at bridge on County Highway 70, 4.4 miles northeast of Morris, Minn.	--	8-11-64	6.91	
Pomme de Terre River	Minnesota River	NW¼NW¼ sec.24, T.124 N., R.42 W., Stevens County, at bridge on County Highway 59, 0.2 mile upstream from Mud Creek, and 2 miles south of Morris, Minn.	--	8-11-64	4.17	
Pomme de Terre River	Minnesota River	NE¼NW¼ sec.16, T.122 N., R.42 W., Swift County, at bridge on County Highway 22, 3 miles north of Fairfield, Minn.	--	8-11-64	7.57	
Pomme de Terre River	Minnesota River	SW¼SW¼ sec.4, T.121 N., R.42 W., Swift County, at bridge on County Highway 56, 2 miles south of Fairfield, Minn.	--	8-11-64	9.13	
Pomme de Terre River	Minnesota River	SW¼SE¼ sec.18, T.121 N., R.42 W., Swift County, at dam 150 feet upstream from bridge on U.S. Highway 12, 4 miles northwest of Holloway, Minn.	--	8-11-64	10.4	
*Lac qui Parle River	Minnesota River	SW¼NE¼ sec.14, T.114 N., R.45 W., Yellow Medicine County, at bridge on State Highway 68, 2.4 miles southeast of Canby, Minn.	--	4- 9-68 10-17-68	1.73 b15.0	
*Lac qui Parle River	Minnesota River	On line between secs.21 and 22, T.115 N., R.44 W., Yellow Medicine County, at bridge on County Highway D8, 5.7 miles northwest of St. Leo, Minn.	--	5- 9-68	.91	
Lazarus Creek	Lac qui Parle River	SW¼SE¼ sec.15, T.115 N., R.45 W., Yellow Medicine County, at bridge on County Highway 33, 3.8 miles north of Canby, Minn.	--	8- 5-65	.31	
Canby Creek	Lazarus Creek	On line between secs.8 and 9, T.114 N., R.45 W., Yellow Medicine County, at bridge on county road, 1.7 miles southwest of Canby, Minn.	--	8- 5-65	1.15	
Canby Creek	Lazarus Creek	On line between secs.13 and 24, T.115 N., R.45 W., Yellow Medicine County, at bridge on County Highway 33, 4.1 miles northeast of Canby, Minn.	--	8-15-65	1.44	
*Lac qui Parle River	Minnesota River	SE¼SW¼ sec.22, T.117 N., R.43 W., Lac qui Parle County, at bridge on county road, 0.5 mile upstream from West Branch Lac qui Parle River, and 0.5 mile east of Dawson, Minn.	--	4- 6-65 8- 4-65 4- 5-68	72.8 5.22 4.81	
West Branch Lac qui Parle River	Lac qui Parle River	On line between secs.24 and 25, T.117 N., R.46 W., Lac qui Parle County, at bridge on county road, 6.6 miles southeast of Marietta, Minn.	--	8- 5-65	.46	1,030
Lost Creek	West Branch Lac qui Parle River	NW¼SW¼ sec.15, T.117 N., R.46 W., Lac qui Parle County, at bridge on County Highway 7, 4.7 miles south of Marietta, Minn.	--	8- 5-65	.16	1,650
Lost Creek	West Branch Lac qui Parle River	SW¼NW¼ sec.24, T.117 N., R.46 W., Lac qui Parle County, at bridge on County Highway 53, 5.8 miles southeast of Marietta, Minn.	--	8- 5-65	.66	1,780
West Branch Lac qui Parle River	Lac qui Parle River	SE¼SE¼ sec.13, T.117 N., R.46 W., Lac qui Parle County, at bridge on U.S. Highway 212, 6 miles southeast of Marietta, Minn.	--	8- 5-65	1.19	1,400
*Florida Creek	West Branch Lac qui Parle River	On line between secs.8 and 17, T.116 N., R.45 W., Lac qui Parle County, at bridge on county road, 12 miles southwest of Dawson, Minn.	--	3-20-66 4- 5-68	.27 1.92	
*West Branch Lac qui Parle River	Lac qui Parle River	Near center of sec.17, T.117 N., R.44 W., Lac qui Parle County, at bridge on U.S. Highway 75, 4.5 miles south of Madison, Minn.	--	5-17-48 4- 5-68 5- 2-68	49.7 2.10 25.9	
West Branch Lac qui Parle River	Lac qui Parle River	SE¼NW¼ sec.23, T.117 N., R.44 W., Lac qui Parle County, at bridge on County Highway 21, 4 miles west of Dawson, Minn.	--	8- 4-65	7.40	

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b Estimated.

Table 3.--Low-flow measurements at miscellaneous sites.

Stream	Tributary to	Location	Drainage Area (mi <sup>2</sup> )	Date	Measurements	
					Discharge (ft <sup>3</sup> /s)	Specific Conductance (micromhos/cm at 25°C)
Minnesota River basin--Continued						
Lac qui Parle County ditch No. 27	Lac qui Parle River	SW <sup>1</sup> / <sub>4</sub> NE <sup>1</sup> / <sub>4</sub> sec.3, T.117 N., R.43 W., Lac qui Parle County, at bridge on County Highway 69, 3.2 miles north of Dawson, Minn.	--	8- 4-65	.17	
Lac qui Parle River tributary	Lac qui Parle River	At common corner of secs.24 and 25, T.118 N., R.43 W., and sec.19, T.118 N., R.42 W., Lac qui Parle County, at culvert at intersection of County Highways 20, 27, and 73, 3.2 miles west of Lac qui Parle, Minn.	--	8- 4-65	.94	
Lac qui Parle River tributary	Lac qui Parle River	SW <sup>1</sup> / <sub>4</sub> SE <sup>1</sup> / <sub>4</sub> sec.22, T.118 N., R.42 W., Lac qui Parle County, at culvert on County Highway 48, 0.8 mile north of Lac qui Parle, Minn.	--	8- 4-65	.34	
Lac qui Parle County ditch No. 34	Ten Mile Creek	NW <sup>1</sup> / <sub>4</sub> NW <sup>1</sup> / <sub>4</sub> sec.11, T.117 N., R.42 W., Lac qui Parle County, at bridge on county road, 2.8 miles south of Lac qui Parle, Minn.	--	8- 4-65	1.17	
Ten Mile Creek	Lac qui Parle River	SW <sup>1</sup> / <sub>4</sub> SE <sup>1</sup> / <sub>4</sub> sec.26, T.118 N., R.42 W., Lac qui Parle County, at bridge on County Highway 20, 1.2 miles southeast of Lac qui Parle, Minn.	--	8- 4-65	2.58	
Shakopee Creek	Chippewa River	On line between secs.7 and 8, T.119 N., R.38 W., Chippewa County, at bridge on County Highway 4, 0.5 mile upstream from Shakopee Lake, 9 miles south of DeGraff, and 10 miles north of Gluek, Minn.	--	6-22-49	20.1	
Minnesota River tributary	Minnesota River	NW <sup>1</sup> / <sub>4</sub> SW <sup>1</sup> / <sub>4</sub> sec.27, T.117 N., R.40 W., Chippewa County, at bridge on County Highway 15, 2 miles northwest of Wegdahl, Minn.	--	10-17-67	0	
Minnesota River tributary	Minnesota River	SE <sup>1</sup> / <sub>4</sub> SW <sup>1</sup> / <sub>4</sub> sec.27, T.117 N., R.40 W., Chippewa County, at bridge on County Highway 15, 2.1 miles northwest of Wegdahl, Minn.	--	10-17-67	0	
Minnesota River tributary	Minnesota River	SW <sup>1</sup> / <sub>4</sub> NE <sup>1</sup> / <sub>4</sub> sec.34, T.116 N., R.39 W., Chippewa County, at bridge on County Highway 5, at Granite Falls, Minn.	--	10-17-67	0	
Minnesota River	Mississippi River	SW <sup>1</sup> / <sub>4</sub> SW <sup>1</sup> / <sub>4</sub> sec.1, T.115 N., R.39 W., Chippewa County, downstream from Minnesota Falls power plant, and 2.5 miles southeast of Granite Falls, Minn.	--	3-12-42	11.4	
*Yellow Medicine River	Minnesota River	On line between secs.13 and 14, T.113 N., R.44 W., Lincoln County, at bridge on County Highway 8, 3.5 miles southeast of Porter, Minn.	--	3-21-66 4- 9-68	47.9 3.37	
*Mud Creek	Yellow Medicine River	On line between secs.21 and 22, T.114 N., R.44 W., Yellow Medicine County, at bridge on County Highway 12, 2 miles north of Porter, Minn.	--	3-21-66 3-10-69	3.70 0	
*Mud Creek	Yellow Medicine River	On line between secs.28 and 29, T.114 N., R.43 W., Yellow Medicine County, at bridge on County Highway 11, 3.5 miles north of Taunton, Minn.	--	3-21-66 5- 8-68	5.32 .19	
*Yellow Medicine River	Minnesota River	On line between secs.7 and 18, T.114 N., R.40 W., Yellow Medicine County, at bridge on County Highway 18, 4.6 miles west of Hanley Falls, Minn.	--	4- 9-68	20.9	
*Yellow Medicine River	Minnesota River	SW <sup>1</sup> / <sub>4</sub> NW <sup>1</sup> / <sub>4</sub> sec.12, T.114 N., R.40 W., Yellow Medicine County, at bridge on State Highway 23, at northwest corner of Hanley Falls, Minn.	--	7- 7-11	10.7	
Hawk Creek	Minnesota River	NE <sup>1</sup> / <sub>4</sub> SE <sup>1</sup> / <sub>4</sub> sec.18, T.119 N., R.35 W., Kandiyohi County, at bridge on County Highway 5, 2.8 miles west of Willmar, Minn.	--	10-17-67	0	
Hawk Creek tributary	Hawk Creek	On line between secs.35 and 36, T.119 N., R.36 W., Kandiyohi County, at bridge on County Highway 116, 0.4 mile northwest of Priam, Minn.	--	10-17-67	0	

\* High-flow measurements are also available in Geological Survey files.

Table 3.--Low-flow measurements at miscellaneous sites.

Stream	Tributary to	Location	Drainage Area (mi <sup>2</sup> )	Date	Measurements	
					Discharge (ft <sup>3</sup> /s)	Specific Conductance (micromhos/cm at 25°C)
Minnesota River basin--Continued						
*Hawk Creek	Minnesota River	SE $\frac{1}{4}$ NW $\frac{1}{4}$ sec.19, T.118 N., R.36 W., Kandiyohi County, at bridge on State Highway 23, at Raymond, Minn.	--	6-22-49 5- 1-51	1.99 36.2	
Hawk Creek tributary	Hawk Creek	SW $\frac{1}{4}$ SW $\frac{1}{4}$ sec.7, T.117 N., R.38 W., Chippewa County, at bridge on State Highway 7, 2.7 miles southwest of Gluek, Minn.	--	10-17-67	0	
Hawk Creek tributary	Hawk Creek tributary	On line between secs.11 and 14, T.117 N., R.39 W., Chippewa County, at bridge on State Highway 7, 3 miles southwest of Gluek, Minn.	--	10-17-67	0	
*Chetomba Creek	Spring Creek	SE $\frac{1}{4}$ SW $\frac{1}{4}$ sec.16, T.117 N., R.36 W., Kandiyohi County, at bridge on State Highway 7, 0.7 mile west of Prinsburg, Minn.	--	6-22-49	0	
Hawk Creek	Minnesota River	On line between sec.32, T.116 N., R.38 W., and sec.5, T.115 N., R.38 W., Renville County, at bridge on county road, 0.3 mile east of Minnesota Falls, Minn.	--	6-22-49	85.1	
Hawk Creek	Minnesota River	SW $\frac{1}{4}$ SE $\frac{1}{4}$ sec.16, T.115 N., R.38 W., Renville County, at bridge on County Highway 52, 3.5 miles southeast of Minnesota Falls, Minn.	--	10-17-67	4.36	
Minnesota River tributary	Minnesota River	SE $\frac{1}{4}$ SE $\frac{1}{4}$ sec.1, T.114 N., R.38 W., Renville County, at bridge on County Highway 15, 6 miles south of Sacred Heart, Minn.	--	10-16-67	0	
Sacred Heart Creek	Minnesota River	NW $\frac{1}{4}$ NW $\frac{1}{4}$ sec.1, T.114 N., R.37 W., Renville County, at bridge on county road, 5.5 miles southwest of Renville, Minn.	--	10-17-67	0	
*Minnesota River	Mississippi River	SW $\frac{1}{4}$ NE $\frac{1}{4}$ sec.30, T.114 N., R.36 W., Redwood County, at bridge on County Highway 6, 4 miles north of Delhi, Minn.	--	5- 9-68 8-14-68 9-16-68	470 176 79.0	
Smith Creek tributary	Smith Creek	SW $\frac{1}{4}$ SW $\frac{1}{4}$ sec.5, T.113 N., R.35 W., Renville County, at bridge on County Highway 19, 2.7 miles south of Bechyn, Minn.	--	10-17-67	0	
Coon Creek	Redwood River	NW $\frac{1}{4}$ NE $\frac{1}{4}$ sec.26, T.110 N., R.45 W., Lincoln County, at bridge on County Highway 21, at Lake Benton outlet, and 4.5 miles northeast of Lake Benton, Minn.	--	7-24-47	1.44	
Redwood River	Minnesota River	NW $\frac{1}{4}$ NW $\frac{1}{4}$ sec.17, T.112 N., R.36 W., Redwood County, 10 feet downstream from right bank tributary, and 4.5 miles southwest of Redwood Falls, Minn.	--	10-13-53	13.0	
Redwood River	Minnesota River	NW $\frac{1}{4}$ sec.10, T.112 N., R.36 W., Redwood County, 2.2 miles southwest of Redwood Falls, Minn.	--	10- 7-53	12.0	
Redwood River	Minnesota River	SE $\frac{1}{4}$ sec.36, T.113 N., R.36 W., Redwood County, at Redwood Falls, Minn., below dam, and 0.1 mile downstream from State Highways 19 and 67.	--	10- 6-53 10-13-53	6.40 12.1	
Redwood River	Minnesota River	SE $\frac{1}{4}$ SE $\frac{1}{4}$ sec.36, T.113 N., R.36 W., Redwood County, at power plant tailrace, at Redwood Falls, Minn.	--	9-18-13	.76	
Redwood River	Minnesota River	SW $\frac{1}{4}$ SW $\frac{1}{4}$ sec.31, T.113 N., R.35 W., Redwood County, downstream from power plant at Redwood Falls, Minn.	--	7-17-13 9-18-13 2-24-53	19.0 1.24 4.55	
Redwood River	Minnesota River	NE $\frac{1}{4}$ sec.36, T.113 N., R.36 W., Redwood County, 900 feet downstream from State Park bridge and Ramsey Creek, at Redwood Falls, Minn.	--	10- 6-53 10- 7-53 10-13-53	9.70 9.62 14.4	
Redwood River	Minnesota River	SW $\frac{1}{4}$ sec.30, T.113 N., R.35 W., Redwood County, at bridge on county road, 1.4 miles northeast of Redwood Falls, Minn.	--	10- 7-53	9.83	
Redwood River	Minnesota River	SE $\frac{1}{4}$ NE $\frac{1}{4}$ sec.30, T.113 N., R.35 W., Redwood County, at bridge on County Highway 101, at North Redwood, Minn.	--	7-18-13 10- 7-53 10-13-53	17.5 9.07 12.0	

\* High-flow measurements are also available in Geological Survey files.

Table 3.--Low-flow measurements at miscellaneous sites.

Stream	Tributary to	Location	Drainage	Date	Measurements	
			Area (mi <sup>2</sup> )		Discharge (ft <sup>3</sup> /s)	Specific Conductance (micromhos/cm at 25°C)
Minnesota River basin--Continued						
West Fork Beaver Creek	Beaver Creek	SE $\frac{1}{4}$ NE $\frac{1}{4}$ sec.19, T.116 N., R.35 W., Renville County, at bridge on County Highway 1, 4 miles north of Danube, Minn.	--	10-17-67	0	
Eight Mile Creek	Minnesota River	SE $\frac{1}{4}$ SW $\frac{1}{4}$ sec.29, T.111 N., R.31 W., Nicollet County, at bridge on County Highway 21, 2.7 miles west of St. George, Minn.	--	10-17-67	0	
Minnesota River tributary	Minnesota River	SW $\frac{1}{4}$ SE $\frac{1}{4}$ sec.6, T.110 N., R.30 W., Nicollet County, at bridge on County Highway 21, 3 miles southwest of Klossner, Minn.	--	10-17-67	0	
Cottonwood River	Minnesota River	On line between secs.1 and 2, T.109 N., R.38 W., Redwood County, at bridge on county road, 3.8 miles north of Revere, Minn.	--	9- 5-68	1.75	
Dutch Charley Creek	Cottonwood River	On line between sec.30, T.109 N., R.36 W., and sec.25, T.109 N., R.37 W., Redwood County, at bridge on County Highway 15, 2 miles east of Lamberton, Minn.	--	9- 5-68 7-24-74	7.86 .86	
Cottonwood River	Minnesota River	On line between secs.26 and 35, T.109 N., R.36 W., Redwood County, at bridge on County Highway 15, upstream from Dry Creek, and 0.5 mile west of Sanborn, Minn.	--	9- 5-68	14.1	
Sleepy Eye Creek	Cottonwood River	SW $\frac{1}{4}$ SE $\frac{1}{4}$ sec.11, T.109 N., R.33 W., Brown County, at bridge on county road, 500 feet upstream from mouth, and 2.2 miles northeast of Leavenworth, Minn.	--	9- 6-68	18.0	
Cottonwood River	Minnesota River	NE $\frac{1}{4}$ NW $\frac{1}{4}$ sec.3, T.109 N., R.32 W., Brown County, at bridge on County Highway 10, 2.5 miles southeast of Sleepy Eye, Minn.	--	9- 6-68	66.5	
Cottonwood River	Minnesota River	SE $\frac{1}{4}$ SE $\frac{1}{4}$ sec.34, T.110 N., R.30 W., Brown County, at mouth, 3 miles southeast of New Ulm, Minn.	--	7- 6-38 9-15-38 9-16-38	178 90.6 3.65	
Minnesota River	Mississippi River	SE $\frac{1}{4}$ SE $\frac{1}{4}$ sec.34, T.110 N., R.30 W., Nicollet County, just downstream from Cottonwood River, 3 miles southeast of New Ulm, Minn.	--	9-15-38	196	
Little Cottonwood River	Minnesota River	On line between secs.9 and 10, T.108 N., R.33 W., Brown County, at bridge on County Highway 8, 3.8 miles south of Leavenworth, Minn.	--	9- 6-68	13.7	
Little Cottonwood River	Minnesota River	N $\frac{1}{2}$ sec.19, T.109 N., R.29 W., Blue Earth County, at bridge on County Highway 101, 2.5 miles upstream from mouth, and 2.5 miles west of Cambria, Minn.	--	9- 6-68	35.0	
Minnesota River tributary	Minnesota River	NW $\frac{1}{4}$ NW $\frac{1}{4}$ sec.15, T.109 N., R.29 W., Nicollet County, at bridge on county road, 2.3 miles southeast of Courtland, Minn.	--	10-17-67	0	
Swan Lake Outlet	Minnesota River	Lat 44°16'21", long 94°13'49", in NW $\frac{1}{4}$ SW $\frac{1}{4}$ sec.5, T.109 N., R.28 W., Nicollet County, at bridge on U.S. Highway 14, 2 miles west of Nicollet, Minn.	--	4-22-66 10-17-67	22.5 0	
Crystal Lake outlet	Minneopa Creek	SW $\frac{1}{4}$ NW $\frac{1}{4}$ sec.33, T.108 N., R.28 W., Blue Earth County, upstream from State Highway 60, at Lake Crystal, Minn.	--	7-25-47	.53	
Minnesota River tributary	Minnesota River	NW $\frac{1}{4}$ NW $\frac{1}{4}$ sec.15, T.108 N., R.27 W., Nicollet County, at bridge on County Highway 71, 2.7 miles west of Mankato, Minn.	--	10-17-67	0	
West Branch Blue Earth River	Blue Earth River	On line between secs.5 and 8, T.101 N., R.27 W., Faribault County, 300 feet upstream from mouth, and 4.8 miles south of Blue Earth, Minn.	--	9- 4-69	17.4	825
East Branch Blue Earth River	Blue Earth River	SW $\frac{1}{4}$ SW $\frac{1}{4}$ sec.1, T.102 N., R.25 W., Faribault County, at bridge on county road, at South Walnut Lake outlet, and 6.6 miles southwest of Wells, Minn.	--	11- 9-61	41.5	

Table 3.--Low-flow measurements at miscellaneous sites.

Stream	Tributary to	Location	Drainage Area (mi <sup>2</sup> )	Date	Measurements	
					Discharge (ft <sup>3</sup> /s)	Specific Conductance (micromhos/cm at 25°C)
Minnesota River basin--Continued						
Brush Creek	East Branch Blue Earth River	SW <sup>1</sup> / <sub>4</sub> NE <sup>1</sup> / <sub>4</sub> sec.35, T.102 N., R.25 W., Faribault County, at bridge on county road, 0.4 mile upstream from mouth, and 2.2 miles northeast of Brice lyn, Minn.	--	9- 5-69	b3.20	710
East Branch Blue Earth River	Blue Earth River	On line between secs.4 and 5, T.101 N., R.25 W., Faribault County, at bridge on County Highway 21, 1.5 miles northwest of Brice lyn, Minn.	--	9- 5-69	b14.0	630
Blue Earth River	Minnesota River	On line between sec.31, T.103 N., R.27 W., and sec.6, T.102 N., R.27 W., Faribault County, at bridge on County Highway 8, 1.5 miles northwest of Blue Earth, Minn.	--	9- 4-69	101	775
South Creek	Blue Earth River	At common corner of secs.17, 18, 19, and 20, T.102 N., R.29 W., Martin County, at bridge on County Highway 53, 5 miles east of Fairmont, Minn.	--	9- 3-69	5.43	770
South Creek	Blue Earth River	S <sup>1</sup> / <sub>4</sub> sec.19 T.103 N., R.28 W., Faribault County, at bridge on County Highway 1, 1.8 miles south of Huntley, Minn., and 6 miles upstream from mouth.	--	9- 4-69	6.70	500
George Lake outlet	Center Creek	NW <sup>1</sup> / <sub>4</sub> SE <sup>1</sup> / <sub>4</sub> sec.6, T.102 N., R.30 W., Martin County, at bridge on county road, in Fairmont, Minn.	--	9- 4-69	0	
Center Creek	Blue Earth River	N <sup>1</sup> / <sub>2</sub> NW <sup>1</sup> / <sub>4</sub> sec.5, T.102 N., R.30 W., Martin County, at bridge on county road, in Fairmont, Minn.	--	9- 4-69 8-19-71	3.20 .01	510
Center Creek	Blue Earth River	NW <sup>1</sup> / <sub>4</sub> sec.26, T.103 N., R.29 W., Martin County, at bridge on County Highway 59, 3.2 miles east of Granada, Minn.	--	9- 3-69	9.18	925
Elm Creek	Blue Earth River	On line between sec.1, T.103 N., R.32 W., and sec.6, T.103 N., R.31 W., Martin County, at bridge on County Highway 27, 5 miles east of Trimont, Minn.	--	9- 3-69	5.69	620
Elm Creek	Blue Earth River	On line between sec.1, T.103 N., R.31 W., and sec.6, T.103 N., R.30 W., at bridge on County Highway 39, 3.1 miles northwest of Northrop, Minn.	--	9- 3-69	7.31	610
Martin Lake outlet	Elm Creek	NE <sup>1</sup> / <sub>4</sub> NW <sup>1</sup> / <sub>4</sub> sec.5, T.103 N., R.30 W., Martin County, at bridge on County Highway 142, 2.1 miles northwest of Northrop, Minn.	--	9- 3-69	0	
Elm Creek	Blue Earth River	On line between sec.6, T.103 N., R.29 W., and sec.31, T.104 N., R.29 W., Martin County, at bridge on county road, 3.5 miles northeast of Northrop, Minn.	--	9- 3-69	9.41	610
Blue Earth River	Minnesota River	Lat 43°46'10", long 94°11'42", in SW <sup>1</sup> / <sub>4</sub> NE <sup>1</sup> / <sub>4</sub> sec.33, T.104 N., R.28 W., Faribault County, at bridge on County Highway 12, 1.5 miles west of U.S. Highway 169 in Winnebago, Minn.	--	9- 4-69	136	780
Blue Earth River	Minnesota River	E <sup>1</sup> / <sub>4</sub> sec.27, T.106 N., R.28 W., Blue Earth County, at bridge on U.S. Highway 169, at south edge of Vernon Center, Minn.	--	9- 5-69	162	660
Watowan River	Blue Earth River	On line between secs.33 and 34, T.107 N., R.33 W., -- Watowan County, at bridge on County Highway 5, 2 miles southeast of Darfur, Minn.	--	9- 4-69	5.72	810
North Fork Watowan River	Watowan River	At common corner of secs.7, 8, 17, and 18, T.107 N., R.33 W., Watowan County, at bridge on County Highway 4, 1.9 miles north of Darfur, Minn.	--	9- 4-69	3.09	840
St. James Creek	Watowan River	At common corner of secs.1 and 12, T.105 N., R.33 W., and secs.6 and 7, T.105 N., R.32 W., Watowan County, at bridge on County Highway 19, 3.7 miles north of Odin, Minn.	--	9- 4-69	0	

b Estimated.

Table 3.--Low-flow measurements at miscellaneous sites.

Stream	Tributary to	Location	Drainage	Date	Measurements	
			Area (mi <sup>2</sup> )		Discharge (ft <sup>3</sup> /s)	Specific Conductance (micromhos/cm at 25°C)
Minnesota River basin--Continued						
St. James Creek	Watonwan River	On line between secs.7 and 8, T.106 N., R.31 W., at bridge on County Highway 14, 2.7 miles northeast of St. James, Minn.	--	9- 5-69	3.21	1,400
Spring Branch Creek	Perch Creek	SE $\frac{1}{4}$ NE $\frac{1}{4}$ sec.21, T.106 N., R.30 W., Watonwan County, at bridge on State Highways 15 and 30, 3.5 miles north of Lewisville, Minn.	--	9- 4-69	0	
Le Sueur River	Blue Earth River	Near center of NE $\frac{1}{4}$ sec.32, T.106 N., R.22 W., Waseca County, at bridge on State Highway 13, 3.8 miles north of New Richland, Minn.	--	9- 3-69	1.56	655
*Blue Earth River	Minnesota River	SE $\frac{1}{4}$ sec.14, T.108 N., R.27 W., Blue Earth County, at bridge on U.S. Highway 169, at Le Hillier, 0.8 mile upstream from mouth, and 1.7 miles west of Mankato, Minn.	--	6- 1-09 6-16-09 6-16-09	2,670 2,340 2,360	
Warren Creek	Minnesota River	NW $\frac{1}{4}$ NW $\frac{1}{4}$ sec.18, T.108 N., R.26 W., Blue Earth County, at culvert under railroad tracks at mouth at Mankato, Minn.	--	4-24-68 10-17-68	3.18 7.47	
Cherry Creek	Minnesota River	SE $\frac{1}{4}$ SE $\frac{1}{4}$ sec.1, T.110 N., R.26 W., Le Sueur County, at bridge on County Highway 20, 3.3 miles southeast of Ottawa, Minn.	--	9-11-69	0	
Minnesota River	Mississippi River	NE $\frac{1}{4}$ SW $\frac{1}{4}$ sec.35, T.112 N., R.26 W., Le Sueur County, at bridge on State Highway 93 at Le Sueur, Minn.	--	9-18-69	496	
Le Sueur Creek	Minnesota River	SW $\frac{1}{4}$ SW $\frac{1}{4}$ sec.20, T.111 N., R.25 W., Le Sueur County, at bridge on county road, 4.1 miles northeast of Ottawa, Minn.	--	9-11-69	0	
Rush River	Minnesota River	NW $\frac{1}{4}$ NW $\frac{1}{4}$ sec.16, T.112 N., R.27 W., Sibley County, at bridge on County Highway 9, 2.2 miles south of New Rome, Minn.	--	9-12-69	0	
High Island Creek	Minnesota River	NW $\frac{1}{4}$ SW $\frac{1}{4}$ sec.4, T.113 N., R.27 W., Sibley County, at bridge on County Highway 9, 1.2 miles northwest of Arlington, Minn.	--	9-12-69	0	
Buffalo Creek	High Island Creek	NW $\frac{1}{4}$ SW $\frac{1}{4}$ sec.26, T.113 N., R.27 W., Sibley County, at bridge on County Highway 17, 2.4 miles northeast of New Rome, Minn.	--	9-12-69	0	
Minnesota River	Mississippi River	SW $\frac{1}{4}$ SE $\frac{1}{4}$ sec.4, T.113 N., R.25 W., Scott County, near County Highway 6, 1 mile northeast of Blakeley, Minn.	--	9-18-69	580	
Raven Stream	Sand Creek	NE $\frac{1}{4}$ NW $\frac{1}{4}$ sec.16, T.113 N., R.23 W., Scott County, at bridge on State Highway 21, 1.1 miles northeast of St. Benedict, Minn.	--	9-15-69	0	
Porter Creek	Sand Creek	On line between secs.34 and 35, T.114 N., R.23 W., -- Scott County, at bridge on County Highway 15, 5 miles southeast of Jordan, Minn.	--	9-15-69	0	
*Sand Creek	Minnesota River	NE $\frac{1}{4}$ NW $\frac{1}{4}$ sec.19, T.114 N., R.23 W., Scott County, a238 at bridge on U.S. Highway 169 in Jordan, Minn.		3-11-66	532	
Sand Creek	Minnesota River	SW $\frac{1}{4}$ SW $\frac{1}{4}$ sec.29, T.115 N., R.23 W., Scott County, at bridge on county road, 1 mile upstream from mouth, and 4.5 miles north of Jordan, Minn.	--	3-26-68	12.3	
Minnesota River tributary	Minnesota River	NE $\frac{1}{4}$ NE $\frac{1}{4}$ sec.19, T.115 N., R.23 W., Carver County, at culvert on county road, 900 feet upstream from mouth in Carver, Minn.	--	3-26-68	.29	
Minnesota River tributary	Minnesota River	NE $\frac{1}{4}$ SW $\frac{1}{4}$ sec.17, T.115 N., R.23 W., Carver County, at culvert on county road, 300 feet upstream from mouth, and 0.4 mile northeast of Carver, Minn.	--	3-26-68	.44	
Minnesota River	Mississippi River	SE $\frac{1}{4}$ SW $\frac{1}{4}$ sec.9, T.115 N., R.23 W., Carver County, 0.4 mile upstream from State Highway 41 bridge at south edge of Chaska, Minn.	--	3-26-68 8-22-76	921 243	

\* High-flow measurements are also available in Geological Survey files.  
a Approximately.

Table 3.--Low-flow measurements at miscellaneous sites.

Stream	Tributary to	Location	Drainage Area (mi <sup>2</sup> )	Date	Measurements	
					Discharge (ft <sup>3</sup> /s)	Specific Conductance (micromhos/cm at 25°C)
Minnesota River basin--Continued						
Chaska Creek	Minnesota River	NW¼SW¼ sec.9, T.115 N., R.23 W., Carver County, at mouth, 500 feet upstream from Minnesota River bridge on State Highway 41 in Chaska, Minn.	--	3-26-68	.67	
Gifford Lake outlet	Minnesota River	NE¼SE¼ sec.9, T.115 N., R.23 W., Scott County, at mouth, 0.6 mile east of Chaska, and 3 miles west of Shakopee, Minn.	--	3-26-68	.74	
*Minnesota River tributary	Minnesota River	SW¼SW¼ sec.4, T.115 N., R.23 W., Carver County, at bridge on U.S. Highway 212 at Chaska, Minn., and 1 mile upstream from mouth.	--	3-26-68 10-17-68 3-19-69 3-26-69	1.19 44.3 27.2 40.5	
Minnesota River tributary	Minnesota River	NW¼SW¼ sec.3, T.115 N., R.23 W., Carver County, 0.8 mile northeast of Chaska, Minn.	--	3-26-68	.36	
Minnesota River tributary	Minnesota River	NE¼SW¼ sec.3, T.115 N., R.23 W., Carver County, 1 mile northeast of Chaska, Minn.	--	3-26-68	1.34	
Minnesota River tributary	Minnesota River	SW¼NW¼ sec.2, T.115 N., R.23 W., Carver County, 1.2 miles northwest of Shakopee, and 2.2 miles northeast of Chaska, Minn.	--	3-26-68	3.71	
Nyssens Lake outlet	Minnesota River	NW¼SE¼ sec.2, T.115 N., R.23 W., Scott County, 1.2 miles upstream from U.S. Highway 169 bridge at north edge of Shakopee, Minn.	--	3-26-68	.06	
Minnesota River tributary	Minnesota River	SE¼NE¼ sec.2, T.115 N., R.23 W., Carver County, 0.7 mile upstream from U.S. Highway 169 bridge on the Minnesota River, and 3 miles northeast of Chaska, Minn.	--	3-26-68	4.03	
Minnesota River tributary	Minnesota River	NW¼NE¼ sec.6, T.115 N., R.22 W., Scott County, at Shakopee sewage outfall, at north edge of Shakopee, Minn.	--	3-26-68	1.71	
Minnesota River tributary	Minnesota River	SE¼SW¼ sec.32, T.116 N., R.22 W., Scott County, 0.9 mile east of Shakopee, Minn.	--	3-26-68	3.24	
Minnesota River	Mississippi River	On line between sec.5, T.115 N., R.22 W., Scott County, and sec.32, T.116 N., R.22 W., Hennepin County, 2.2 miles downstream from U.S. Highway 169 bridge at north edge of Shakopee, Minn.	--	3-26-68	954	
Rice Lake outlet	Minnesota River	NE¼SE¼ sec.32, T.116 N., R.22 W., Hennepin County, 1.2 miles east of Shakopee, and 2.0 miles south of Eden Prairie, Minn.	--	3-26-68	8.26	
Grass Lake outlet	Minnesota River	SE¼SE¼ sec.32, T.116 N., R.22 W., Hennepin County, 1.5 miles east of Shakopee, and 2.2 miles south of Eden Prairie, Minn.	--	3-26-68	3.69	
Minnesota River tributary	Minnesota River	NW¼NW¼ sec.3, T.115 N., R.22 W., Scott County, at mouth, 2.6 miles east of Shakopee, Minn.	--	3-26-68	.32	
Minnesota River tributary	Minnesota River	NE¼NE¼ sec.3, T.115 N., R.22 W., Scott County, at mouth, 3.5 miles east of Shakopee, Minn.	--	3-26-68 9-15-69	.83 .63	540
Fisher Lake outlet	Minnesota River	NW¼SW¼ sec.6, T.115 N., R.21 W., Scott County, at culvert near County Highway 25, 3 miles northwest of Savage, Minn.	--	3-26-68	6.52	
Eagle Creek	Minnesota River	Lat 44°46'13", long 93°23'52", in SW¼NW¼ sec.18, T.115 N., R.21 W., Scott County, upstream from right bank tributary 30 feet upstream from Boiling Springs, 1.1 miles southwest of intersection of State Highways 13 and 101, and 3 miles southwest of Savage, Minn.	--	9-24-71 5-17-72	.39 .50	

\* High-flow measurements are also available in Geological Survey files.

Table 3.--Low-flow measurements at miscellaneous sites.

Stream	Tributary to	Location	Drainage Area (mi <sup>2</sup> )	Date	Measurements	
					Discharge (ft <sup>3</sup> /s)	Specific Conductance (micromhos/cm at 25°C)
Minnesota River basin--Continued						
Eagle Creek tributary	Eagle Creek	Lat 44°46'13", long 93°23'52", in SW¼NW¼ sec.18, T.115 N., R.21 W., Scott County, 20 feet upstream from Boiling Springs, 1.1 miles southwest of intersection of State Highways 13 and 101, and 3 miles southwest of Savage, Minn.	--	9-24-71 5-17-72	.20 .13	
Eagle Creek	Minnesota River	Lat 44°46'14", long 93°23'52", in SW¼NW¼ sec.18, T.115 N., R.21 W., Scott County, 40 feet downstream from Boiling Springs, 1.1 miles southwest of intersection of State Highways 13 and 101, and 3 miles southwest of Savage, Minn.	--	9-24-71 5-17-72	2.89 3.04	
Eagle Creek	Minnesota River	SE¼NE¼ sec.7, T.115 N., R.21 W., Scott County, at mouth, 1.8 miles northwest of Savage, Minn.	--	3-26-68	11.0	
Minnesota River	Mississippi River	NE¼NE¼ sec.8, T.115 N., R.21 W., Scott County, 0.8 mile upstream from bridge on County Highway 31, 1.2 miles northwest of Savage, Minn.	--	3-27-68	1,140	
Minnesota River tributary	Minnesota River	SE¼NE¼ sec.8, T.115 N., R.21 W., Scott County, at mouth 1 mile northwest of Savage, Minn.	--	3-27-68	12.6	
Credit River	Minnesota River	SE¼SW¼ sec.31, T.27 N., R.24 W., Scott County, at bridge on first city street south of State Highway 101 in Savage, Minn., and 0.6 mile upstream from mouth.	--	3-27-68 9-15-69	6.22 1.34	535
Credit River (old channel)	Minnesota River	SW¼NE¼ sec.31, T.27 N., R.24 W., Scott County, at Savage, Minn.	--	3-27-68	1.05	
Nine Mile Creek	Minnesota River	SE¼SW¼ sec.29, T.27 N., R.24 W., Hennepin County, at mouth at Bloomington, Minn.	--	3-27-68 9-15-69	47.3 5.90	740
Minnesota River tributary	Minnesota River	SE¼NE¼ sec.28, T.27 N., R.24 W., Dakota County, at culvert just upstream of Interstate Highway 35W, on right bank, 1.7 miles northeast of Savage, Minn.	--	3-27-68	11.5	
Black Dog Lake outlet	Minnesota River	SW¼NW¼ sec.27, T.27 N., R.24 W., Dakota County, 0.2 mile downstream from Interstate Highway 35W bridge in Burnsville, Minn.	--	3-27-68	314	
St. Croix River basin						
Upper Tamarack River	St. Croix River	NW¼SE¼ sec.25, T.42 N., R.16 W., Pine County, at bridge on County Highway 25, 1 mile east of Markville, Minn.	--	9- 7-67	3.94	
Partridge Creek	Sand Creek	On line between secs.10 and 15, T.42 N., R.19 W., Pine County, at culvert on County Highway 30, 6.9 miles east of Sandstone, Minn.	--	5-19-70	4.69	
Clover Creek	Sand Creek	SE¼NW¼ sec.19, T.40 N., R.18 W., Pine County, downstream from Clayton Lake in St. Croix State Park, 15 miles southeast of Hinckley, Minn.	--	9- 7-67 5-18-70	2.90 16.4	
Kettle River	St. Croix River	NW¼NW¼ sec.5, T.46 N., R.20 W., Carlton County, at bridge on State Highway 73, 1.2 miles northwest of Kettle River, Minn.	--	9-30-65 9- 5-67	249 1.51	
Kettle River	St. Croix River	NW¼SE¼ sec.21, T.46 N., R.20 W., Carlton County, at bridge on State Highway 27, 2 miles south of Kettle River, Minn.	--	9-30-65	649	
Birch Creek	Kettle River	On line between secs.20 and 21, T.45 N., R.20 W., Pine County, 1 mile north of County Highway 52, and 3 miles southwest of Sturgeon Lake, Minn.	--	9- 6-67	.97	
*Kettle River	St. Croix River	NE¼NW¼ sec.26, T.41 N., R.20 W., Pine County, at bridge on State Highway 48, 4.5 miles east of Hinckley, Minn.	--	9- 7-67 6-20-68 10-23-68	124 2,050 4,500	
Cowan Brook	Snake River	On line between secs.34 and 35, T.43 N., R.23 W., Aitkin County, 4.5 miles northeast of Woodland, Minn.	--	9- 5-67	0	

\* High-flow measurements are also available in Geological Survey files.

Table 3.--Low-flow measurements at miscellaneous sites.

Stream	Tributary to	Location	Drainage Area (mi <sup>2</sup> )	Date	Measurements	
					Discharge (ft <sup>3</sup> /s)	Specific Conductance (micromhos/cm at 25°C)
St. Croix River basin--Continued						
Hay Creek	Snake River	SW¼SW¼ sec.8, T.42 N., R.23 W., Kanabec County, at bridge on State Highways 27 and 65, 1 mile north of Woodland, Minn.	--	9- 5-67	0	
Chelsey Brook	Snake River	On line between secs.12 and 13, T.42 N., R.23 W., Kanabec County, at bridge on county road, 5 miles northeast of Woodland, Minn.	--	9- 5-67 8-27-69 5-20-70	.89 b.40 6.20	205
Knife River	Snake River	On line between secs.9 and 10, T.40 N., R.24 W., Kanabec County, at bridge on County Highway 8, 0.7 mile upstream from Knife Lake, and 6 miles southwest of Warman, Minn.	--	8-27-69 11-14-72	2.06 46.7	310
*Knife River	Snake River	NW¼NE¼ sec.15, T.40 N., R.24 W., Kanabec County, at bridge on County Highway 19, 200 feet downstream from Knife Lake, and 5 miles north of Mora, Minn.	a90	11-14-72	20.3	
Spring Creek	Snake River	NW¼SW¼ sec.24, T.39 N., R.24 W., Kanabec County, at culvert on County Highway 62, 0.1 mile upstream from mouth, and 1.7 miles south of Mora, Minn.	--	8-26-69	2.50	280
Ann River	Snake River	SW¼NE¼ sec.21, T.39 N., R.24 W., Kanabec County, at bridge on State Highway 23, 2.5 miles southwest of Mora, Minn.	--	9- 6-67 8-26-69	3.19 5.10	260
Ann River	Snake River	SE¼SE¼ sec.23, T.39 N., R.24 W., Kanabec County, at Fish Lake outlet, 0.3 mile upstream from Snake River, and 2.2 miles south of Mora, Minn.	--	8-26-69	7.64	185
Mud Creek	Snake River	NE¼ sec.2, T.38 N., R.23 W., Kanabec County, at bridge on County Highway 5, 1.7 miles northwest of Grasston, Minn.	--	9- 7-67 8-25-69	1.35 0	
Pokegama Creek	Snake River	NE¼ sec.14, T.39 N., R.22 W., Pine County, at bridge on County Highway 11, 4.5 miles northwest of Pine City, Minn.	--	9- 7-67 8-25-69	0 0	
Mission Creek	Snake River	NW¼NW¼ sec.31, T.39 N., R.21 W., Pine County, at bridge on County Highway 53, 2.5 miles west of Pine City, Minn.	--	9- 7-67 8-25-69 5-19-70	0 0 10.1	
Snake River	St. Croix River	SW¼SE¼ sec.35, T.39 N., R.20 W., Pine County, 0.1 mile north of County Highway 118, and 8.2 miles east of Pine City, Minn.	--	8-25-69	63.9	225
Rush Creek	St. Croix River	SE¼NW¼ sec.19, T.37 N., R.21 W., Chisago County, at bridge on county road, 0.2 mile south of County Highway 1, and 2.2 miles west of Rush City, Minn.	--	8-21-69	.62	300
Sunrise River	St. Croix River	NW¼SW¼ sec.4, T.35 N., R.20 W., Chisago County, at bridge on County Highway 9, at Sunrise, Minn.	--	9- 5-67 8-20-69	82.6 50.5	295
*St. Croix River	Mississippi River	NW¼NW¼ sec.27, T.33 N., R.19 W., Chisago County, at bridge on State Highway 243, 5.1 miles southeast of Shafer, Minn.	--	8-17-30 9- 5-30 11- 2-30 7-30-31	1,460 1,130 1,670 1,190	
St. Croix River tributary	St. Croix River	SW¼SW¼ sec.6, T.31 N., R.19 W., Washington County, 0.1 mile upstream from mouth, and 0.1 mile downstream from bridge on State Highway 95 in Marine on St. Croix, Minn.	--	8-17-74	2.72	
Cannon River basin						
Cannon River	Mississippi River	SE¼SE¼ sec.18, T.109 N., R.23 W., Le Sueur County, at bridge on County Highway 12, 0.2 mile upstream from Lake Tetonka, and 3.3 miles northwest of Waterville, Minn.	--	8-28-70	1.66	
Cannon River	Mississippi River	SE¼ sec.17, T.109 N., R.22 W., Rice County, at Lower Sakatah Lake outlet, 2 miles northwest of Morristown, Minn.	--	8-17-65	39.8	

\* High-flow measurements are also available in Geological Survey files.

a Approximately.

b Estimated.

Table 3.--Low-flow measurements at miscellaneous sites.

Stream	Tributary to	Location	Drainage Area (mi <sup>2</sup> )	Date	Measurements	
					Discharge (ft <sup>3</sup> /s)	Specific Conductance (micromhos/cm at 25°C)
<u>Cannon River basin--Continued</u>						
Devil Creek	Cannon River	On line between secs.9 and 16, T.109 N., R.22 W., Rice County, at bridge on County Highway 16, 2 miles northwest of Morristown, Minn.	--	8-17-65	1.10	
Cannon River	Mississippi River	SE $\frac{1}{4}$ sec.13, T.109 N., R.22 W., Rice County, at bridge on State Highway 60, 0.5 mile west of Warsaw, Minn.	--	8-17-65	43.4	
Mackenzie Creek	Cannon River	SW $\frac{1}{4}$ sec.9, T.109 N., R.21 W., Rice County, at bridge on State Highway 60, 2 miles east of Warsaw, Minn.	--	8-17-65	.27	
Cannon River	Mississippi River	S $\frac{1}{2}$ sec.25, T.110 N., R.21 W., Rice County, at bridge on U.S. Highway 65 in Faribault, Minn.	--	8-17-65	98.2	
Straight River	Cannon River	Lat 44°18'37", long 93°16'09", in NW $\frac{1}{4}$ NE $\frac{1}{4}$ sec.30, T.110 N., R.20 W., Rice County, at bridge on 14th Street in Faribault, Minn., 200 feet upstream from mouth.	--	8-17-65 8-27-70	55.7 46.9	
Cannon River	Mississippi River	NE $\frac{1}{4}$ NE $\frac{1}{4}$ sec.19, T.110 N., R.20 W., Rice County, at bridge on county road, 0.7 mile downstream from Straight River, and 1.7 miles north of Faribault, Minn.	--	10-15-69	104	
Cannon River	Mississippi River	SE $\frac{1}{4}$ SE $\frac{1}{4}$ sec.10, T.111 N., R.20 W., Rice County, at bridge on County Highway 1, at Dundas, Minn.	--	8-17-65	159	
Cannon River	Mississippi River	N $\frac{1}{2}$ sec.30, T.112 N., R.19 W., Dakota County, at Waterford, Minn.	--	8-23-65	99.9	
Cannon River	Mississippi River	Lat 44°29'15", long 93°07'42", in SW $\frac{1}{4}$ SE $\frac{1}{4}$ sec.20, T.112 N., R.19 W., Dakota County, at bridge on county road, 0.7 mile east of Waterford, Minn.	a915	8-26-70 8-6-71	116 99.9	690
Prairie Creek	Cannon River	On line between secs.16 and 21, T.112 N., R.18 W., Goodhue County, 0.2 mile upstream from mouth, and 2 miles southeast of Randolph, Minn.	--	8-23-65	12.4	
Cannon River	Mississippi River	SE $\frac{1}{4}$ SE $\frac{1}{4}$ sec.12, T.112 N., R.18 W., Goodhue County, at upstream bridge on U.S. Highway 52, at Cannon Falls, Minn.	--	8-23-65	639	
Little Cannon River	Cannon River	N $\frac{1}{2}$ sec.18, T.112 N., R.17 W., Goodhue County, at bridge on old U.S. Highway 52, at Cannon Falls, Minn.	--	8-23-65	27.4	
Pine Creek	Cannon River	SE $\frac{1}{4}$ SE $\frac{1}{4}$ sec.5, T.112 N., R.17 W., Goodhue County, at bridge on County Highway 17, 2 miles northeast of Cannon Falls, Minn.	--	8-24-65	4.32	
Cannon River (South channel)	Mississippi River	SW $\frac{1}{4}$ sec.20, T.113 N., R.15 W., Goodhue County, at bridge on U.S. Highway 61, 4 miles west of Red Wing, Minn.	--	8-24-65	210	
<u>Mississippi River main stem</u>						
Mississippi River	Gulf of Mexico	SE $\frac{1}{4}$ SE $\frac{1}{4}$ sec.14, T.111 N., R.11 W., Wabasha County, 500 feet upstream from Chippewa River (Wisconsin), and 0.8 mile northwest of Reads Landing, Minn.	a47,100	9-22-34	3,030	
<u>Zumbro River basin</u>						
South Fork Zumbro River	Zumbro River	SE $\frac{1}{4}$ NE $\frac{1}{4}$ sec.18, T.106 N., R.14 W., Olmsted County, at bridge on county road, 1.4 miles upstream from Mayowood Lake Dam, and 4.4 miles southwest of Rochester, Minn.	--	3-22-68 3-19-69	13.0 48.0	

a Approximately.

Table 3.--Low-flow measurements at miscellaneous sites.

Stream	Tributary to	Location	Drainage	Date	Measurements	
			Area (mi <sup>2</sup> )		Discharge (ft <sup>3</sup> /s)	Specific Conductance (micromhos/cm at 25°C)
<u>Zumbro River basin--Continued</u>						
*South Fork Zumbro River	Zumbro River	SE $\frac{1}{4}$ SE $\frac{1}{4}$ sec.26, T.107 N., R.14 W., Olmsted County, at bridge on U.S. Highway 63, at Silver Lake outlet, at Rochester, Minn.	--	7-29-44	55.2	
				8-16-44	45.8	
				10-13-44	33.6	
				10-31-44	32.7	
				12- 8-44	26.7	
				1-15-45	21.3	
				2-23-45	22.8	
				7-26-45	119	
	8-25-45	71.4				
<u>Whitewater River basin</u>						
North Fork Whitewater River	Whitewater River	Lat 44°05'07", long 92°01'20", in SE $\frac{1}{4}$ NE $\frac{1}{4}$ sec.9, T.107 N., R.10 W., Winona County, at bridge on State Highway 74, 0.1 mile upstream from Middle Fork Whitewater River, and 0.3 mile southwest of Elba, Minn.	105	4-19-39	54.1	
				6-21-39	25.7	
				8- 9-39	19.3	
				9-12-39	19.5	
				8-19-71	37.0	
<u>Mississippi River main stem</u>						
*Mississippi River	Gulf of Mexico	SE $\frac{1}{4}$ sec.28, T.105 N., R.4 W., Winona County, at U.S. lock and dam No. 7, 2.6 miles southeast of Dresbach, Minn.	a62,300	1-15-48	13,000	
				7-27-66	16,200	
				11- 2-66	17,700	
<u>Root River basin</u>						
Willow Creek	South Branch Root River	On line between secs.1 and 12, T.102 N., R.11 W., Fillmore County, at bridge on County Highway 12, 0.5 mile upstream from mouth, and 1 mile southwest of Preston, Minn.	--	3-26-69	31.4	
*South Branch Root River	Root River	NW $\frac{1}{4}$ SW $\frac{1}{4}$ sec.6, T.102 N., R.10 W., Fillmore County, at bridge on County Highway 17, at south edge of Preston, Minn.	--	3- 3-65	182	
				3-18-68	24.9	
South Branch Root River	Root River	E $\frac{1}{4}$ sec.21, T.103 N., R.10 W., Fillmore County, at bridge on county road, 3.7 miles northeast of Preston, Minn.	--	9-24-69	66.0	510
Duschee Creek	South Branch Root River	NE $\frac{1}{4}$ sec.26, T.103 N., R.10 W., Fillmore County, at State Fish Hatchery, upstream from spring, and 1.8 miles southwest of Lanesboro, Minn.	--	11-13-52	7.12	
Duschee Creek	South Branch Root River	NE $\frac{1}{4}$ sec.26, T.103 N., R.10 W., Fillmore County, at State Fish Hatchery, downstream from spring, and 1.8 miles southwest of Lanesboro, Minn.	--	11-13-52	14.2	
*Root River	Mississippi River	NE $\frac{1}{4}$ NW $\frac{1}{4}$ sec.16, T.103 N., R.9 W., Fillmore County, at bridge on county road, at Whalan, Minn.	--	7- 9-41	379	
				9- 8-41	868	
*Root River	Mississippi River	SE $\frac{1}{4}$ NW $\frac{1}{4}$ sec.21, T.104 N., R.8 W., Fillmore County, at bridge on U.S. Highway 16, 2.8 miles west of Rushford, Minn.	--	9-10-59	267	
				9-29-61	201	
				7-18-62	309	
				11- 9-62	308	
*Root River	Mississippi River	NE $\frac{1}{4}$ NE $\frac{1}{4}$ sec.24, T.104 N., R.8 W., Fillmore County, 0.2 mile southeast of Rushford, Minn., 1 mile downstream from Rush Creek.	a1,150	7- 9-41	381	
*Root River	Mississippi River	Lat 43°45'57", long 91°20'42", in NE $\frac{1}{4}$ SW $\frac{1}{4}$ sec.32, T.104 N., R.4 W., Houston County, at bridge on U.S. Highway 16, at Hokah, Minn.	a1,630	8-18-71	593	430
*Root River	Mississippi River	SE $\frac{1}{4}$ SE $\frac{1}{4}$ sec.27, T.104 N., R.4 W., Houston County, at bridge on State Highway 26, 2.8 miles upstream from mouth, and 3.5 miles south of La Crescent, Minn.	--	9-14-35	574	
<u>Iowa River basin</u>						
Cedar River	Iowa River	Lat 43°42'25", long 92°57'37", in SE $\frac{1}{4}$ SW $\frac{1}{4}$ sec.23, T.103 N., R.18 W., Mower County, at bridge on County Highway 25, 2.8 miles north of Austin, Minn.	--	9-14-71	16.2	455

\* High-flow measurements are also available in Geological Survey files.  
a Approximately.

Table 3.--Low-flow measurements at miscellaneous sites.

<u>Stream</u>	<u>Tributary to</u>	<u>Location</u>	<u>Drainage</u>	<u>Date</u>	<u>Measurements</u>	
			<u>Area</u> (mi <sup>2</sup> )		<u>Discharge</u> (ft <sup>3</sup> /s)	<u>Specific Conductance</u> (micromhos/cm at 25°C)
<u>Iowa River basin--Continued</u>						
*Turtle Creek	Cedar River	On line between secs.26 and 27, T.103 N., R.19 W., -- Freeborn County, at first bridge downstream from Moscow, 0.5 mile southeast of Moscow, and 2.0 miles north of Oakland, Minn.	--	11- 6-46 2-26-47 8-20-47	44.3 16.2 11.5	
*Turtle Creek	Cedar River	SW¼ sec.4, T.102 N., R.18 W., Mower County, at bridge on State Highway 116 in Austin, Minn.	--	6-14-47	25.1	
Cedar River	Iowa River	Lat 43°30'00", long 93°00'07", in SE¼SW¼ sec.33, T.101 N., R.18 W., Mower County, at bridge on county road on Minnesota-Iowa border, 2.9 miles southwest of Lyle, Minn.	--	9-14-71	68.5	640
<u>Des Moines River basin</u>						
Des Moines River	Mississippi River	Lat 43°33'42", long 94°57'14", on line between secs.7 and 8, T.101 N., R.34 W., Jackson County, at bridge on County Highway 23, 0.2 mile downstream from Stony Brook, and 4.4 miles southeast of Jackson, Minn.	a1,270	10-12-72	48.8	960

\* High-flow measurements are also available in Geological Survey files.  
a Approximately.

Table 4.--Water-Supply Papers of the U.S. Geological Survey containing records of daily flows of streams in Minnesota

Year	Water-Supply Paper Number					Year	Water-Supply Paper Number				
	Part 4 (1)	Part 5 (1)	Part 5 (2)	Part 5 (3)	Part 6 (2)		Part 4 (1)	Part 5 (1)	Part 5 (2)	Part 5 (3)	Part 6 (2)
1899	36	36	36	36	36,37	1931	714	715	715	715	716
1900	49	49	49	49	49	1932	729	730	730	730	731
1901	65,75	66,75	a65, 66,75	a65, 66,75	66,75	1933	744	745	745	745	746
1902	83	85	a83,85	a83,85	84	1934	759	760	760	760	761
1903	97	99,100	a98,99	a98,99	99	1935	784	785	785	785	786
1904	129	130	a128, 130	a128, 130	130	1936	804	805	805	805	806
1905	170	171	171	171	172	1937	824	825	825	825	826
1906	206	207	207	207	208	1938	854	855	855	855	856
1907-8	244	245	245	245	246	1939	874	875	875	875	876
1909	264	265	265	265	266	1940	894	895	895	895	896
1910	284	285	285	285	286	1941	924	925	925	925	926
1911	304	305	305	305	306	1942	954	955	955	955	956
1912	324	325	325	325	326	1943	974	975	975	975	976
1913	354	355	355	355	356	1944	1004	1005	1005	1005	1006
1914	384	385	385	385	386	1945	1034	1035	1035	1035	1036
1915	404	405	405	405	406	1946	1054	1055	1055	1055	1055
1916	434	435	435	435	436	1947	1084	1085	1085	1085	1086
1917	454	455	455	455	456	1948	1114	1115	1115	1115	1116
1918	474	475	475	475	476	1949	1144	1145	1145	1145	1146
1919-20	504	505	505	505	506	1950	1174	1175	1175	1175	1176
1921	524	525	525	525	526	1951	1207	1208	1208	1208	1209
1922	544	545	545	545	546	1952	1237	1238	1238	1238	1239
1923	564	565	565	565	566	1953	1277	1278	1278	1278	1279
1924	584	585	585	585	586	1954	1337	1338	1338	1338	1339
1925	604	605	605	605	606	1955	1387	1388	1388	1388	1389
1926	624	625	625	625	626	1956	1437	1438	1438	1438	1439
1927	644	645	645	645	646	1957	1507	1508	1508	1508	1509
1928	664	665	665	665	666	1958	1557	1558	1558	1558	1559
1929	684	685	685	685	686	1959	1627	1628	1628	1628	1629
1930	699	700	700	700	701	1960	1707	1708	1708	1708	1709
						1961-65	1911	1913	1914	1915	1917
						1966-70	2111	2113	2114	2115	2117

a Tributaries of Mississippi River from east.



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