



Water Resources Data for Wisconsin

U.S. GEOLOGICAL SURVEY WATER-DATA REPORT WI-80-1

WATER YEAR 1980

Prepared in cooperation with the State of Wisconsin

CALENDAR FOR WATER YEAR 1980

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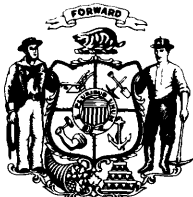
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Water Resources Data for Wisconsin

U.S. GEOLOGICAL SURVEY WATER-DATA REPORT WI-8C

WATER YEAR 1980

Prepared in cooperation with the State of Wisconsin

UNITED STATES DEPARTMENT OF THE INTERIOR

JAMES G. WATT, *SECRETARY*

GEOLOGICAL SURVEY

Doyle G. Frederick, *Acting Director*

Prepared in cooperation with

Wisconsin Department of Natural Resources
Wisconsin Department of Transportation
The University of Wisconsin-Extension
Geological and Natural History Survey
Dane County Regional Planning Commission
Dane County Department of Public Works
Southeastern Wisconsin Regional Planning Commission
City of Middleton
City of Madison
Madison Metropolitan Sewerage District
Madison Water Utility
Village of Oregon
Town of Schleswig
Bureau of Indian Affairs
Corps of Engineers, U.S. Army
Federal Energy Regulatory Commission Licensees

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Madison, Wisconsin 53706

PREFACE

This report was prepared by personnel of the Wisconsin district of the Water Resources Division of the U. S. Geological Survey under the supervision of W. B. Mann IV, District Chief, and J. E. Biesecker, Regional Hydrologist, Northeastern Region. It was done in cooperation with the State of Wisconsin and with other agencies.

This report is one of a series issued by State. General direction for the series is by Philip Cohen, Chief Hydrologist, U. S. Geological Survey.

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GAGING STATIONS IN DOWNSTREAM ORDER, FOR WHICH RECORDS ARE PUBLISHED

VII

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

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INTRODUCTION

Wisconsin water-resources data for the 1980 water year include records of streamflow at gaging stations, partial-record stations, and miscellaneous sites; reservoir storage; chemical, physical, and biological characteristics of surface and ground water; and water levels in observation wells. Records from several stations in bordering states also are included. Data collection is part of the National Water Data System operated in Wisconsin by the U.S. Geological Survey and cooperating State and Federal agencies.

Records of stream discharges and of water levels in lakes and reservoirs were published first in a series titled "Surface-Water Supply of the United States". Through 1960, these water-supply papers were published annually and then for every 5-year period for 1961-65 and 1966-70. Chemical-quality, water-temperature, and suspended-sediment data were published annually, from 1941 to 1970, in a series titled, "Quality of Surface Waters of the United States". Records of ground-water levels appeared, from 1935 to 1974, in an annual series titled "Ground-Water Levels in the United States".

With the 1961 water year, the Survey began releasing streamflow data on a State-by-State basis and continued to do so through water year 1974. Water-quality records from the 1964 water year on, and ground-water records since the 1971 water year, were released either in separate reports or with the streamflow records. These reports provided preliminary water data shortly after the end of the water year. Final data then were published in the water-supply series mentioned above. Beginning with the 1975 water year, streamflow, water-quality, and ground-water data for each State were published in a single report. These reports are identified by the two-letter abbreviation for the State, the last two digits of the water year, and the volume number of the report. This volume is identified as "U.S. Geological Survey Water-Data Report WI-80-1". For archiving and general distribution, the reports for water years 1971-74 also are identified as water-data reports and are for sale, in paper copy or in microfiche, by the National Technical Information Service, U.S. Department of Commerce, Springfield, VA 22161.

COOPERATION

The U.S. Geological Survey and the State of Wisconsin have worked under cooperative agreements since 1913 collecting streamflow data, since 1964 recording ground-water levels, and since 1955 collecting water-quality data. Agencies that worked cooperatively with the Survey during this year collecting data are:

Wisconsin Department of Natural Resources, C. D. Besadny, secretary.

Wisconsin Department of Transportation, Lowell B. Jackson, secretary, and W. A. Kline, chief bridge engineer.

The University of Wisconsin-Extension, Geological and Natural History Survey, M. E. Ostrom, state geologist and director.

Dane County Regional Planning Commission, Charles Montemayor,
executive director.

Southeastern Wisconsin Regional Planning Commission, K. W. Bauer,
executive director.

City of Middleton, Dan Ramsey, mayor.

City of Madison, A. E. Milke, city engineer.

Madison Metropolitan Sewerage District, James L. Nemke, chief
engineer and director.

Madison Water Utility, Gary Graham, manager

Village of Oregon, Earl E. Lawson, village president.

Town of Schleswig, Dennis Robichaud, chairman.

Sokaogon Chippewa (Mole Lake) Community, Raymond McGeshick, chairman.

The Corps of Engineers, U.S. Army, provided funding and assistance in the collection of records for 37 gaging stations and 9 water-quality stations. The National Park Service, U.S. Department of the Interior, funded the collection of records for 11 water-quality stations, which are published in this report. Bureau of Indian Affairs funded the collection of records for six water-quality stations.

The following organizations aided in collecting records:

Wisconsin Valley Improvement Co., Lake Superior District Power Co., Wisconsin-Michigan Power Co., Wisconsin Public Service Corp., Northern States Power Co., Dairyland Power Cooperative, Wisconsin Power and Light Co., Nekoosa Papers Inc., Wisconsin Electric Power Co., Wisconsin River Power Co., and Milwaukee County Park Commission.

Organizations that supplied data are acknowledged in station descriptions.

ACKNOWLEDGMENT

The water-resources data for Wisconsin were processed and prepared for publication under the supervision of Frederick C. Dreher, Hydrologic Data Section, by Roy E. Campbell (surface-water records), C. Albert Harr (water-quality records), Robert M. Erickson (ground-water-level records), and Patricia A. Stark. Most of the data were collected, computed, and processed from four area field offices. Technicians-in-charge of the field offices are:

Jack T. Freshwaters, Rice Lake, northwest
James W. George, Merrill, northeast
Josef Hable, Madison, southwest
Fredren E. Warner, Waukesha, southeast

The data were collected, computed, and processed by other personnel as follows:

G. J. Allord	S. J. Field	H. L. Hanson	R. D. McFarlane
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R. B. Bodoh	G. L. Goddard	J. A. Kammer	T. J. Popowski
P. F. Boetcher	D. J. Graczyk	K. R. Koenig	W. J. Rose
D. H. Conger	J. J. Hanig	S. A. March	T. A. Wittwer

SPECIAL NETWORKS AND PROGRAMS

Hydrologic bench-mark station provides hydrologic data for a basin likely to be governed solely by natural conditions. Data collected at a bench-mark station may be used to distinguish natural changes in undeveloped basins, from changes caused by man in basins similar in physiography, climate, and geology.

National stream-quality accounting network was designed by the U.S. Geological Survey to meet information needs of agencies or groups involved in national or regional water-quality planning and management. Both accounting and broad monitoring aspects have been incorporated in the network design. The network is divided according to the river-basin accounting units designated by the Office of Water Data Coordination in consultation with the Water Resources Council. Primary objectives of the network are: (1) to assess the areal variability of water-quality conditions nationwide on an annual basis; and (2) to assess long-term changes in stream quality.

Pesticide program is a network of water-quality stations on streams where samples are collected regularly to determine the concentration and distribution of commonly used insecticides, herbicides, and industrial chemicals within the watershed. Operation of the network is a Federal interagency activity.

Radiochemical program is a network of water-quality stations, representing major drainage basins in the conterminous United States, where samples are collected regularly for radioisotope analysis.

DOWNSTREAM ORDER AND STATION NUMBER

Hydrologic-station records are listed in Survey reports in downstream direction along streams. Each gaging, partial-record, and water-quality station is identified by an 8-digit number. Records in this report are in Part 4 (St. Lawrence River basin) and Part 5 (Upper Mississippi River basin).

NUMBERING SYSTEM FOR GROUND-WATER DATA SITES

The unique ground-water data-site number, based on latitude and longitude, indicates the geographic location of a well. Each site also is identified by a local number based on the cadastral-survey system of the U.S. Government. The number consists of an abbreviation of the county name, the township, range, and section, and a four-digit number assigned to the well.

EXPLANATION OF SURFACE-WATER RECORDS

COLLECTION AND COMPUTATION OF DATA

The basic data collected at gaging stations include stage and discharge measurements of streams, and stage, surface-area, and content measurements of lakes and reservoirs. In addition, factors affecting stage discharge or stage-capacity relationships, weather records, and other information supplement the basic data used to determine daily flow or volume of water in storage. Records of stage are obtained from direct readings on a nonrecording gage or from a continuous graph of the fluctuations in stage or a tape punched at selected intervals on a water-stage recorder. Measurements of discharge are made with a current meter using methods described in standard textbooks, in Water-Supply Paper 888, and in Techniques of Water Resources Investigations of the United States Geological Survey, book 3, chapter A6.

Rating tables of the discharge for any stage are prepared from stage-discharge relationship curves. Extended rating curves, based on step-backwater techniques, velocity-area studies, logarithmic plotting, and indirect measurements of peak discharge are used to estimate discharges greater than those measured. Daily mean discharges are computed from gage heights and rating tables, and the monthly and yearly means are computed using the daily figures. If the stage-discharge relationship varies due to changes in the physical features forming the control (such as aquatic growth, debris, or scour and fill), daily mean discharge is computed by a shifting-control method in which correction factors, based on individual discharge measurements and notes by observers, are used when the gage heights are applied to the rating tables.

At stream-gaging stations where backwater from reservoirs, tributary streams, or other sources affects the stage-discharge relationship, the slope method is used to compute discharge. At some stations where the stage-discharge relationship is affected by rapid changes in stage, the rate of change is used in computing discharge. When ice conditions at stream-gaging stations affect the stage-discharge relationship, gage-height records, winter discharge measurements, temperature and precipitation data, and comparable records of discharge for nearby stations are used to compute discharge.

At some gaging stations gage-height records are either faulty or nonexistent for some periods. For such periods the daily discharges are estimated based on the recorded range in stage, prior and subsequent records, discharge measurements, weather records, and comparison with records for nearby stations.

Included in this report are general descriptions of the stations and tabulations of data. A table showing daily, monthly, and yearly discharges is given for each gaging station on a stream or canal. A monthly summary table of stage and contents or a table showing the daily contents is given for gaging stations on lakes and reservoirs. Records cover the water year, which begins October 1 and ends September 30.

The description of the gaging station includes the location, drainage area, period of record, revisions in previously published records, the type and history of gages, general remarks, average discharge, and extremes of discharge or contents. River mileage is that determined and used by the Corps of Engineers or other agencies. Previously published records for current stations

are noted under "PERIOD OF RECORD". Revisions of streamflow records, for some stations, found in error on the basis of subsequent data or information are published in a paragraph headed "REVISED RECORDS". Listed therein are all the reports in which revisions have been published, together with the water years for which figures are revised. Notations following the year indicate how the revision affected discharge calculations: "(M)" means that only the instantaneous maximum discharge was revised; "(m)" that only the instantaneous minimum was revised; and "(P)" that only peak discharges were revised. If the drainage area has been revised, the report in which the revised figure was first published is given.

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

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

The average discharge for the period of record is given under "AVERAGE DISCHARGE". For stations having fewer than 5 complete years of record and where water development during the period of record has altered the significance of the figure, average discharge is not given. Under "EXTREMES" are listed, first, the extremes of discharge for the period of record; second, discharge information available outside the period of record; and last, discharge data for the current year. Unless otherwise qualified, maximum discharge is the instantaneous maximum corresponding to the stage recorded by a water-stage recorder, a crest-stage gage, or a nonrecording gage read at the time of the crest. If the maximum gage height did not occur on the same day as the maximum discharge, it is listed separately. Similarly, the minimum discharge is the instantaneous minimum corresponding to the minimum recorded stage. For some stations peak discharges are listed with "EXTREMES FOR THE CURRENT YEAR"; where this is done, all independent peaks above the selected base, including the annual maximum, are published in tabular form together with the time of occurrence and corresponding gage heights. The base discharge is selected so as to present about three peaks a year. Peak discharges are not published for canals, ditches, drains, or for any stream subject to substantial control by man. Minimum discharges for these stations appear in a separate paragraph following the table of peaks.

Skeleton rating tables are published for stations where they serve a useful purpose immediately following "EXTREMES".

The daily table for stream-gaging stations gives the daily mean discharges and is followed by monthly and yearly summaries. In the monthly summary the line headed "TOTAL" gives the sum of the daily figures; the line headed "MEAN" gives the average monthly flow in cubic feet per second. The lines headed "MAX" and "MIN" give the maximum and minimum daily discharges, respectively, for the month. The monthly discharge also is expressed in cubic feet per second per square mile (line headed "CFSM"), in inches (line headed "IN"), and in acre-feet

(line headed "AC-FT"). Discharge as cubic feet per second per square mile and as runoff in inches is omitted if there is extensive regulation or diversion, if the drainage area encompasses large noncontributing areas, or if average annual rainfall for the drainage basin is usually less than 20 inches. The annual summary shows appropriate daily discharges for the calendar and water years.

Footnotes to the daily-discharge table are introduced by the word "NOTE". They indicate periods for which discharge is computed or estimated by special methods because of the absence of gage-height records, because of backwater from various sources, or due to other unusual conditions. Periods of no gage-height record are footnoted if the period is continuous for a month or more or if the maximum annual discharge occurs during that time. Periods of backwater from sources other than ice, or of indefinite stage relation, are indicated only if they last for a month or more, thus affecting the accuracy of the discharge records at the gage site.

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

Data collected at partial-record stations are of the same variety as the information from continuous-record sites and are presented in two tables. The first is a table of discharge measurements from low-flow partial-record stations, and the second is a table of annual maximum stages and discharges from crest-stage stations. Occasionally, a short series of discharge measurements are made to investigate seepage gains or losses along a reach of stream or to determine the low-flow characteristics of an area. These miscellaneous measurements follow the tables for partial-record stations.

ACCURACY OF FIELD DATA AND COMPUTED RESULTS

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

The accuracy of the records is given under "REMARKS". "Excellent" means that about 95 percent of the daily discharges are accurate within 5 percent; those accurate within 10 percent are termed "good"; and "fair" indicates records accurate within 15 percent. "Poor" means that daily discharges have less than "fair" accuracy.

Discharge figures in this report are rounded to the nearest hundredth for discharges of less than 1 ft³/s; to the nearest tenth for discharges between 1.0 and 10 ft³/s; to the nearest whole number for discharges between 10 and 1,000 ft³/s; and to 3 significant figures for discharges above 1,000 ft³/s. The number of significant figures used is based on the magnitude of the discharge.

OTHER DATA AVAILABLE

For most gaging stations more detailed information is on file in the District Office. Also, most gaging-station records are available in computer-usable form, and many statistical analyses have been made.

EXPLANATION OF WATER-QUALITY RECORDS

COLLECTION AND EXAMINATION OF DATA

Surface-water samples usually are collected at or near gaging stations. The water-quality records appear after the discharge records for these stations.

The descriptive heading for water-quality records gives the period of record for all water-quality data, the period of record for characteristics and properties that are measured daily, general remarks, extremes for the period of daily record, and extremes for the current year.

For ground-water-quality records, the well number, depth of well, aquifer, date of sampling and other pertinent data are given in the table containing the chemical analyses. No descriptive statements are given.

WATER ANALYSIS

Methods for collecting and analyzing water samples are described in Techniques of Water-Resources Investigations of the United States Geological Survey.

One sample can define adequately the water quality at a given time if the mixture of materials throughout the stream cross section is homogeneous. However, their concentration at different locations in the cross section usually differ widely depending on the source of the material, the turbulence and mixing of the stream, and rate of water discharge. Most streams must be sampled through several vertical sections to obtain a representative sample.

The chemical-quality data published in this report represent water-quality conditions at the time of sampling. In the rare case where the reported pH value seems inconsistent with the alkalinity, the inconsistency may result from the uptake of carbon dioxide by the sample between measurement of pH in the field, or from precipitation of carbonates and determination of alkalinity in the laboratory.

For water-quality stations equipped with monitors, the records include daily maximum, minimum, and mean values for each characteristic and property measured hourly. Hourly values may be obtained from the District Office.

WATER TEMPERATURE

Water temperature is measured at water-quality stations and at most water-discharge stations when discharge measurements are made. At stations where daily water-temperature measurements are taken manually the measurements are taken at about the same time each day. At stations where recording instruments are used, daily maximum, minimum, and mean water temperatures are published.

SEDIMENT

Suspended-sediment concentrations are determined from samples collected with depth-integrating samplers at several verticals in the cross section, or a single sample may be taken at a fixed point manually or with pumping samplers and a coefficient applied to it to determine the mean concentration throughout the cross section.

During periods of rapidly changing flow or concentration, sediment samples may be collected more frequently. The published suspended-sediment discharges for these periods were computed by the subdivided-day method (time-discharge weighted average). For periods when no samples were collected, daily sediment discharges were estimated on the basis of water discharge, suspended-sediment concentrations observed immediately before and after the periods, and suspended-sediment discharge for other periods of similar discharge. The accuracy of sediment records, discussed under "REMARKS", is based on completeness of the record, the number of samples collected, and the range in stage over which samples are collected. Suspended-sediment discharges of less than 0.005 tons/day are reported as 0.

At some stations, samples were collected periodically and may represent conditions only at the time of observation. However, they are useful in determining seasonal relationships between water quality and streamflow, and in predicting long-term sediment discharge characteristics of a stream.

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

EXPLANATION OF GROUND-WATER LEVEL RECORDS

COLLECTION OF THE DATA

Ground-water-level data for 71 observation wells are published in this report. These wells are part of a network of 203 observation wells measured in Wisconsin. Of the 71 wells, 30 are measured by U.S. Geological Survey personnel, 34 by State or County personnel, and 7 by interested area residents.

These data represent water-table and artesian conditions in the principal aquifers of the State. Precipitation is the major climatic factor affecting ground-water levels. Spring and fall are the seasons when the water table is the highest. In spring ground-water recharge results from snowmelt and rain and in fall from rain. Winter precipitation is tied up as snow, and frost in the ground allows little infiltration.

An exception to these conditions is in the deep sandstone aquifer in southeastern Wisconsin where heavy municipal and industrial pumping is causing a continual decline in the water level. Water in this aquifer is under artesian pressure where confined by the overlying Maquoketa Shale.

Water levels in several artesian wells in the State are sensitive to major earthquakes. Response to worldwide earthquakes is observed on graphs from water-stage recorders as an instantaneous rise and fall in water level and generally occur within an hour of the initial shock.

Water-level records for 58 wells are obtained from direct measurements with a steel tape; records for 13 are from the graph on a water-stage recorder. Water-level measurements in this report are referenced to the land-surface datum (lsd)--a datum plane approximately at land surface at each well. The altitude of the lsd above mean sea level and the height of the measuring point (MP) above or below the lsd is given in each well description.

All taped measurements are listed. For wells with recorders, lows are listed for every fifth day and at the end of the month (eom). Normally, water levels are reported to a hundredth of a foot. The absolute value of the depth to water may be in error by a few tenths of a foot, but the error in determining the net change in water level between successive measurements is normally only a hundredth or a few hundredths of a foot.

NOTEWORTHY HYDROLOGIC EVENTS OF 1980

STREAMFLOW

The 1980 water year in Wisconsin will be remembered as the year when a developing drought in early summer changed to a near record wet period for August and September. Streamflow and lake levels tended to be in the normal range in fall and winter. Spring runoff was generally below normal, and dry conditions developed in April to an extent conducive to forest fires. Streamflow in much of the State continued below normal through early summer with exceptions in some basins due to locally heavy June and July storms. Then the rains of August and September (as much as 9 inches above normal for the 2-month period) caused above normal to record high streamflows, raised lake levels, and filled reservoirs.

Runoff for the year ranged from 70 to 180 percent of a long-term average (fig. 1). Monthly and annual flow for this year is compared to median discharges for a 30-year base period (fig. 2).

The September flow of the Jump River at Sheldon (fig. 2) was the fourth highest in the 65 years of continuous record, being only slightly less than the monthly flows of 1926 and 1959, but considerably less than the record September of 1941, when record floods ravaged most of the Chippewa River basin.

The September flow of the Trempealeau River at Dodge was the greatest for that month for the period of record, 1934-80.

The Fox River at Wilmot had the second highest flows for both August and September since 1940. Only those of August 1952 and September 1972 exceeded the 1980 monthly flows.

There were several significant 1980 flood peaks measured at long-term stations in Wisconsin. On June 7, the Big Eau Pleine River near Stratford peaked at 28,900 ft³/s, a discharge expected to be equaled or exceeded once in 75 years. On September 21, the Black River at Neillsville peaked at about 28,000 ft³/s and on September 23, the Black River near Galesville peaked at about 46,000 ft³/s. These peaks equaled or exceeded discharges expected to occur once in 17 years.

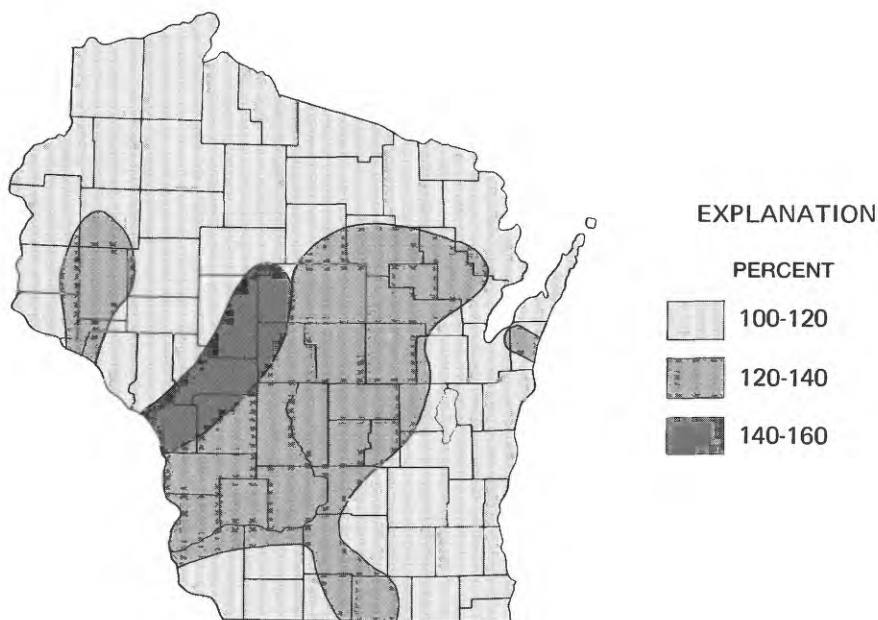


Figure 1. 1980 runoff as percent of long-term average runoff.

WATER QUALITY

Trend analysis of data for NASQAN stations indicate statistically significant decreasing and increasing concentrations of several constituents as follows:

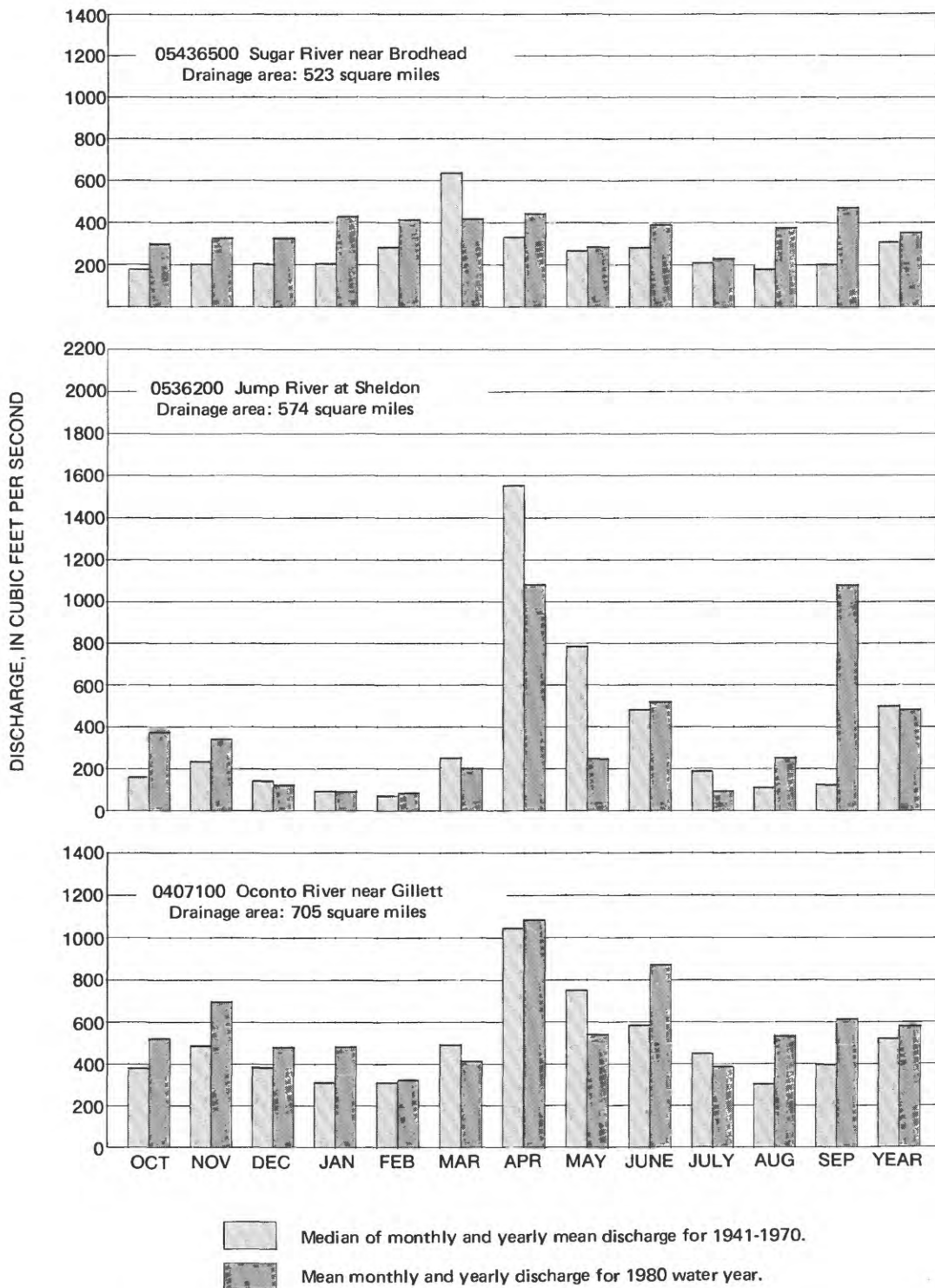


Figure 2. Comparison of discharge at representative gaging stations during 1980 water year with median discharge for 1941-70.

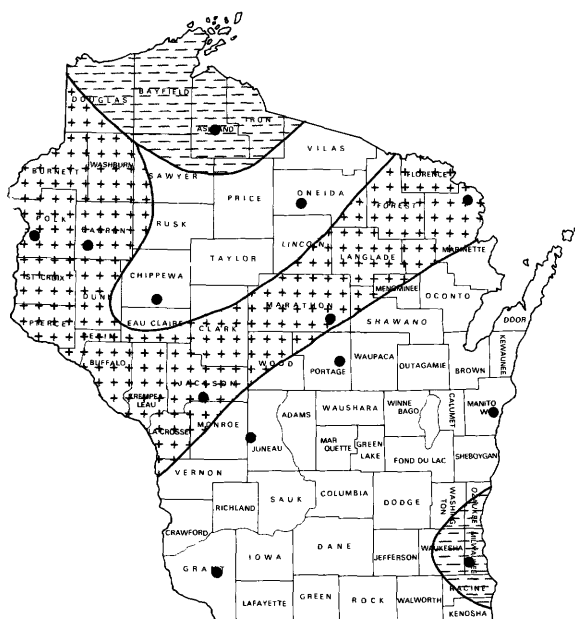
<u>Station</u>	<u>Decreasing</u>	<u>Increasing</u>
Nemadji River near South Superior	Fluoride Organic carbon Suspended sediment	Total cadmium Dissolved copper Total lead
Fox River at Wrightstown	Dissolved lead	pH
Milwaukee River at Milwaukee	Dissolved arsenic Total arsenic Fluoride Dissolved selenium Total selenium	Specific conductance Dissolved chromium Total chromium
St. Croix River at St. Croix Falls	-----	Dissolved manganese
Chippewa River at Durand	Total selenium	-----
Wisconsin River at Muscoda	Fluoride Dissolved silica	Total arsenic Dissolved phosphorus

Suspended-sediment discharge of the Grant River at Burton has decreased from 969 tons per square mile in Water Year 1978 to 204 tons per square mile in Water Year 1980. Estimated suspended-sediment discharge of the Chippewa River at Durand and the Black River near Galesville was nearly double that of previous years as the result of 100-year floods.

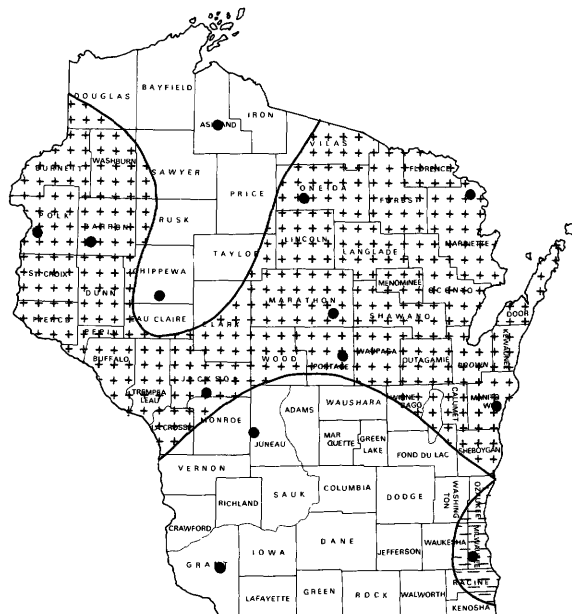
GROUND-WATER LEVELS

The seasonal level of the water table reflects natural recharge and discharge and indirectly reflects long-term precipitation trends. Water tables were at or above normal in most of the State through February 1980. Because of below average snowfall and spring precipitation, water tables in half the State dropped below normal and remained low throughout the summer.

Figure 3 shows how the 1980 water levels relate seasonally to normal levels. Based on water-level measurements in 13 key wells, the 1979-80 levels are averaged by seasons and compared to the seasonal long-term means. The 12-month period from September through August was used. During the fall (September-November), water levels were above normal in the northwest and in a band across the north-central part of the State. The rest of the State had normal levels except a small area in the northwest and southeast corners, where levels were low. During the winter, levels rose to above normal over most of the northern and central parts of the State. The rest of the State had normal levels except in the extreme southeast where they were low. During the spring, levels dropped below normal in the extreme northwest and over the entire southern half of the State. Levels that had been high in the north returned to normal. Only a narrow band across north-central Wisconsin retained high levels. During the summer, levels remained much the same as in the spring except in the east-central area, where they returned to normal.



FALL



WINTER

EXPLANATION

WATER- TABLE LEVELS

+++ Above normal *Water levels are more than one-half standard deviation above the long term mean*

□ Normal *Water levels are within one-half standard deviation of the long-term mean*

--- Below normal *Water levels are more than one-half standard deviation below the long-term mean*

• OBSERVATION WELL

SPRING

SUMMER

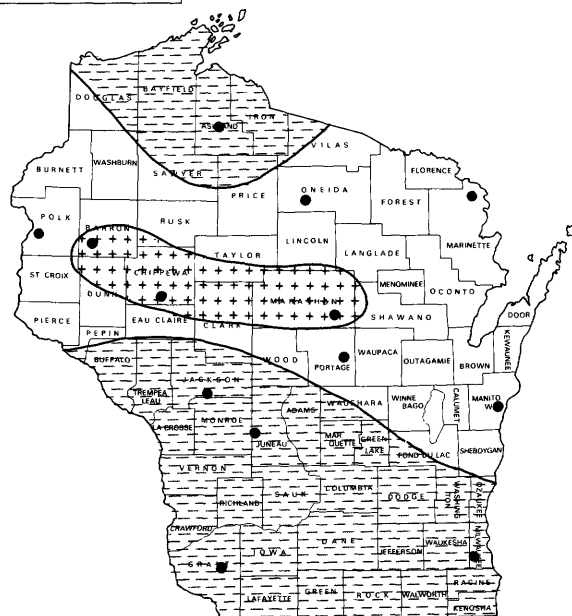
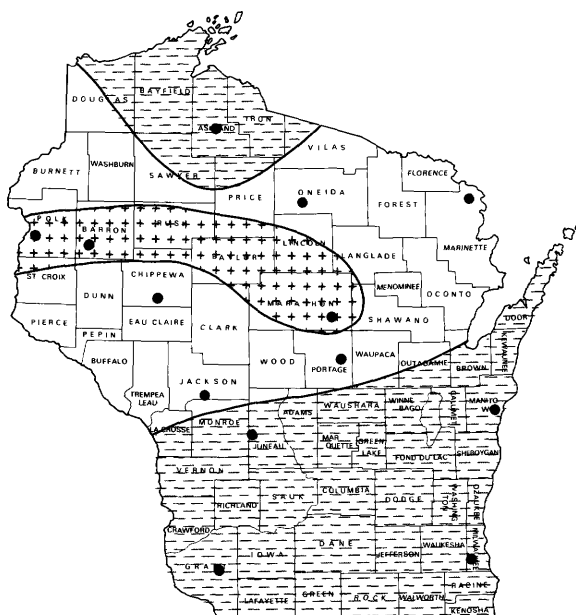


Figure 3. Relation of seasonal water-table levels to long-term means.

ST. LAWRENCE RIVER BASIN RECORDS

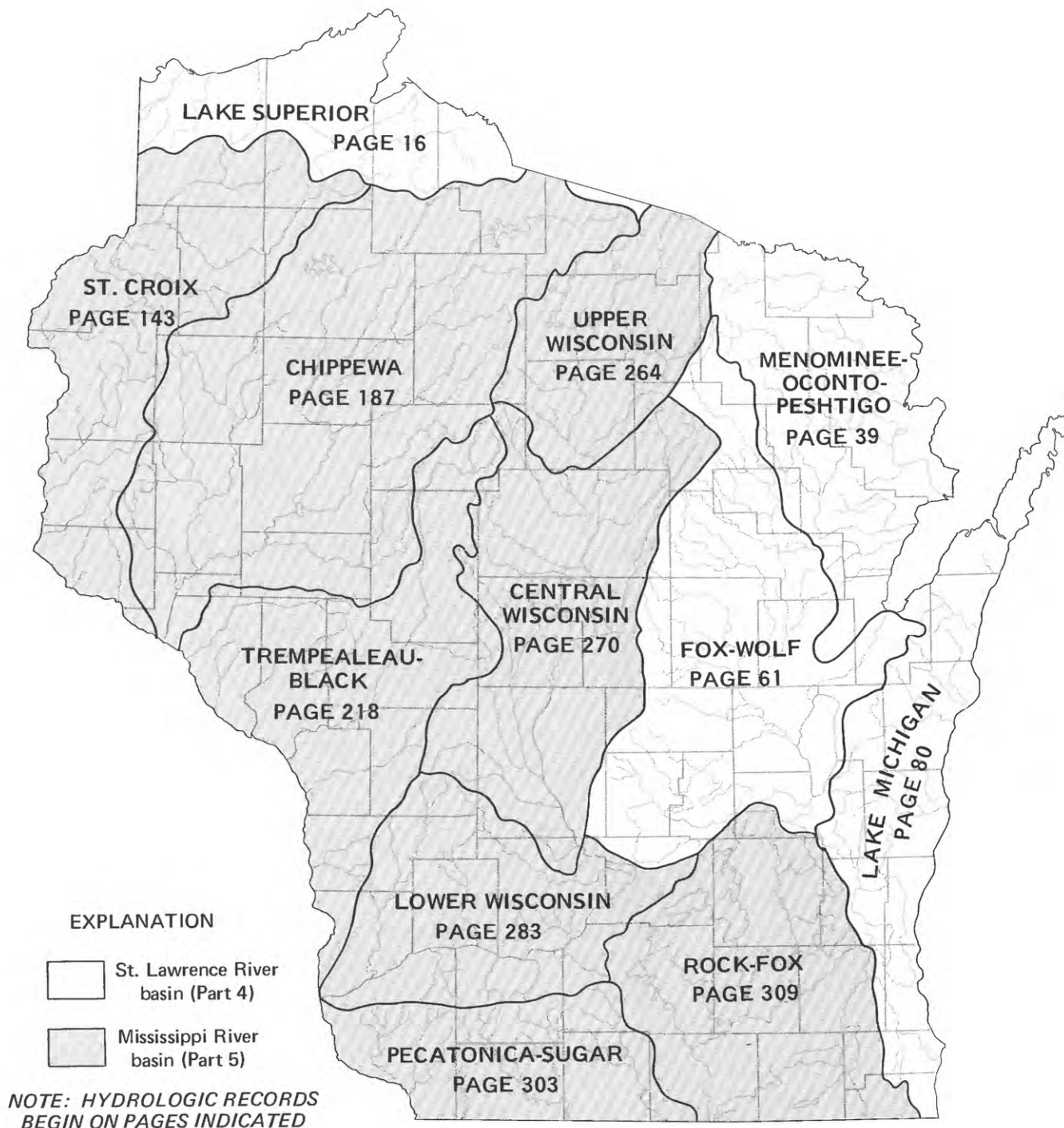
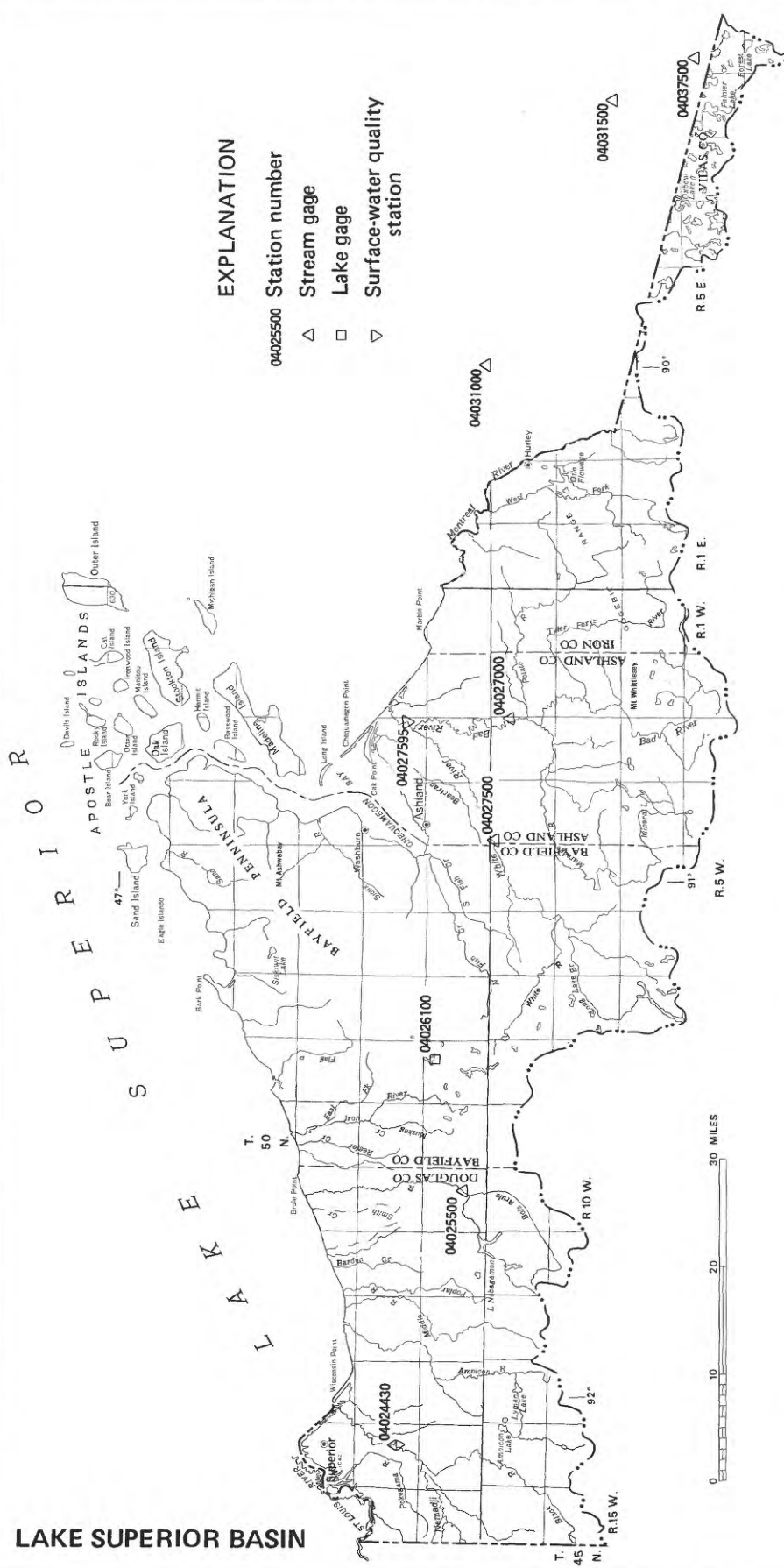


Figure 4. Major surface-water drainage basins and index of hydrologic records.

LAKE SUPERIOR BASIN



STREAMS TRIBUTARY TO LAKE SUPERIOR

04024430 NEMADJI RIVER NEAR SOUTH SUPERIOR, WI
(NATIONAL STREAM-QUALITY ACCOUNTING NETWORK STATION)

LOCATION.--Lat 46°38'00", long 92°05'38", in SW 1/4 sec.14, T.48 N., R.14 W., Douglas County, Hydrologic Unit 04010301, on right bank at downstream side of bridge on County Trunk Highway C, 2.0 mi (3.2 km) south of South Superior and 7.8 mi (12.6 km) downstream from Black River.

DRAINAGE AREA.--422 mi² (1,093 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--December 1973 to current year.

REVISED RECORDS.--WRD WI-75-1: 1974(M).

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 601.13 ft (183.224 m) National Geodetic Vertical Datum of 1929.

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

AVERAGE DISCHARGE.--6 years, 344 ft³/s (9.74 m³/s), 11.07 in/yr (281 mm/yr),

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 10,700 ft³/s (303 m³/s) May 10, 1979, gage height, 22.83 ft (6.959 m); minimum daily, 16 ft³/s (0.45 m³/s) Dec. 8, 1976.

EXTREMES OUTSIDE THE PERIOD OF RECORD.--A flood of Aug. 17, 1972, may have exceeded floods at this location since then.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 3,620 ft³/s (103 m³/s) Sept. 4, gage height, 18.65 ft (5.685 m), no other peak above base of 2,000 ft³/s (56.6 m³/s); minimum discharge, 42 ft³/s (1.19 m³/s) Aug. 2, 3, gage height, 3.39 ft (1.033 m).

RATING TABLES (gage height, in feet, and discharge, in cubic feet per second).
(Stage-discharge relation affected by ice Nov. 8 to Apr. 14.)

Oct. 1 to May 13

May 14 to Sept. 30

3.7	39	3.3	33
4.0	75	4.0	109
5.0	195	6.0	361
7.0	510	9.0	882
10.0	1,080	13.0	1,780
11.0	1,310	16.0	2,580
		19.0	3,800

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DAY	MEAN VALUES											
	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	54	959	90	56	56	58	1000	196	94	66	44	102
2	58	740	80	56	56	58	1100	184	190	63	42	339
3	70	526	70	56	56	58	1200	170	232	57	43	1670
4	73	422	66	56	56	58	1100	157	174	57	43	3390
5	68	355	64	56	56	58	1100	152	138	59	44	1560
6	63	306	62	56	56	58	1300	147	130	70	43	735
7	66	265	60	56	58	58	1200	136	146	63	44	514
8	68	220	58	58	58	58	1200	125	216	59	50	389
9	65	210	56	58	58	58	1100	117	201	52	54	369
10	61	200	56	58	58	58	960	113	182	48	52	402
11	60	190	56	58	58	56	900	135	146	50	69	303
12	57	180	56	60	60	56	840	171	121	48	77	250
13	56	180	54	60	60	56	760	162	132	45	84	250
14	55	170	52	60	60	56	640	151	144	51	78	300
15	54	170	52	62	60	56	653	140	130	85	71	390
16	86	170	52	62	60	56	577	129	115	77	57	350
17	55	160	52	62	60	56	572	118	98	75	53	300
18	56	170	52	62	60	56	641	112	98	98	55	280
19	179	170	52	64	60	56	634	107	150	348	55	260
20	289	170	52	64	62	58	616	103	194	300	69	250
21	238	160	52	62	62	60	547	98	144	422	690	250
22	258	150	52	62	64	60	488	93	120	270	484	250
23	991	150	52	62	64	62	429	92	103	182	281	240
24	675	150	50	60	64	66	368	86	92	134	217	270
25	462	140	50	60	64	70	332	80	84	105	191	450
26	362	140	50	60	62	70	300	76	73	86	178	420
27	306	130	52	58	62	72	279	72	68	73	159	360
28	280	130	54	58	60	90	256	70	68	63	131	300
29	256	120	54	58	60	150	231	68	69	56	112	260
30	229	100	54	58	---	500	209	71	66	51	102	240
31	236	---	54	58	---	820	---	82	---	48	97	---
TOTAL	5886	7303	1766	1836	1730	3162	21532	3713	3918	3261	3769	15443
MEAN	190	243	57.0	59.2	59.7	102	718	120	131	105	122	515
MAX	991	959	90	64	64	820	1300	196	232	422	690	3390
MIN	54	100	50	56	56	56	209	68	66	45	42	102
CFSM	.45	.58	.14	.14	.14	.24	1.70	.28	.31	.25	.29	1.22
IN.	.52	.64	.16	.16	.15	.28	1.90	.33	.35	.29	.33	1.36
CAL YR 1979	TOTAL	185049	MEAN 507	MAX 7630	MIN 42	CFSM 1.20	IN 16.31					
WTR YR 1980	TOTAL	73319	MEAN 200	MAX 3390	MIN 42	CFSM .47	IN 6.46					

STREAMS TRIBUTARY TO LAKE SUPERIOR

04024430 NEMADJI RIVER NEAR SOUTH SUPERIOR, WI--CONTINUED
(NATIONAL STREAM QUALITY ACCOUNTING NETWORK STATION)

WATER-QUALITY RECORDS

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

WATER-QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH FIELD (UNITS)	TEMPER- ATURE, WATER (DEG C)	TUR- BID- ITY (NTU)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	STREP- TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)
OCT , 1979										
22...	1600	247	183	7.8	7.0	25	10.7	92	<1	470
NOV										
28...	1030	130	218	7.2	.0	2.0	13.2	95	K8	37
DEC										
18...	1530	51	296	7.4	.0	8.0	12.0	86	K5	139
JAN , 1980										
10...	1600	58	192	6.8	.5	.60	10.4	75	K3	43
FEB										
12...	1120	58	275	7.3	.0	2.8	10.8	78	K5	K4
MAR										
19...	1300	56	280	7.2	.0	.70	11.1	80	K6	K10
APR										
09...	1000	980	106	6.9	.0	5.5	13.2	95	K31	110
MAY										
13...	1500	157	203	7.2	12.0	24	10.1	98	K12	K18
JUN										
10...	1345	155	172	7.0	17.5	14	8.9	97	60	640
JUL										
08...	1130	56	235	7.6	21.0	32	7.4	86	130	540
AUG										
05...	1230	45	260	7.7	22.5	24	8.5	101	140	170
SEP										
09...	1745	394	170	7.1	18.0	8.9	7.6	84	280	670

DATE	HARD- NESS (MG/L AS CACO3)	HARD- NESS, NONCAR- BONATE (MG/L CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	PERCENT SODIUM	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LITY (MG/L AS CACO3)	SULFATE DIS- SOLVED (MG/L AS SO4)
OCT , 1979										
22...	82	12	21	7.2	3.9	13	.2	1.6	70	10
NOV										
28...	83	6	22	6.7	3.0	10	.1	.9	77	5.6
DEC										
18...	130	8	33	11	5.7	13	.2	1.1	120	15
JAN , 1980										
10...	130	8	33	11	6.2	14	.2	1.3	120	17
FEB										
12...	80	3	22	6.0	3.4	8	.2	.8	77	3.5
MAR										
19...	120	3	31	11	6.4	10	.3	1.0	120	12
APR										
09...	44	6	12	3.5	1.8	8	.1	1.9	38	8.8
MAY										
13...	100	14	26	8.8	4.2	8	.2	1.0	87	13
JUN										
10...	97	14	25	8.4	4.7	9	.2	1.2	83	11
JUL										
08...	110	5	30	9.7	5.2	9	.2	1.4	110	11
AUG										
05...	130	10	34	11	6.0	9	.2	1.5	120	12
SEP										
09...	90	17	24	7.3	3.1	7	.1	1.2	73	8.3

K RESULTS BASED ON COLONY COUNT OUTSIDE THE ACCEPTABLE RANGE (NON-IDEAL COLONY COUNT).

STREAMS TRIBUTARY TO LAKE SUPERIOR

04024430 NEMADJI RIVER NEAR SOUTH SUPERIOR, WI--CONTINUED

WATER-QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	CHLORIDE, DIS-SOLVED (MG/L AS CL)	FLUORIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L)	SOLIDS, SUM OF CONSTITUENTS, DIS-SOLVED (MG/L)	SOLIDS, DIS-SOLVED (TONS PER AC-FT)	SOLIDS, DIS-SOLVED (TONS PER DAY)	NITROGEN, NO2+NO3 TOTAL (MG/L AS N)	NITROGEN, NO2+NO3 DIS-SOLVED (MG/L AS N)	NITROGEN, AMMONIA TOTAL (MG/L AS N)
OCT , 1979										
22...	3.9	.1	11	130	102	.18	86.7	.03	.06	.030
NOV										
28...	2.9	.0	12	110	101	.15	38.6	.18	.19	.020
DEC										
18...	4.5	.1	16	184	159	.25	25.3	.24	.20	.030
JAN , 1980										
10...	4.4	.1	16	167	163	.23	26.2	.31	.31	.170
FEB										
12...	2.4	.1	16	118	102	.16	18.5	.16	.16	.040
MAR										
19...	4.7	.1	15	165	155	.22	25.1	.30	.31	.040
APR										
09...	2.5	.0	7.3	99	62	.13	262	.25	.26	.110
MAY										
13...	3.0	.1	7.3	143	116	.19	60.6	.00	.04	.020
JUN										
10...	3.9	.1	9.2	155	114	.21	64.9	.06	.06	.050
JUL										
08...	4.0	.1	8.7	157	136	.21	23.7	.06	.02	.010
AUG										
05...	4.7	.2	9.3	179	151	.24	21.7	.03	.02	.010
SEP										
09...	4.0	.1	13	157	105	.21	167	.07	.07	.060

DATE	NITROGEN, AMMONIA DIS-SOLVED (MG/L AS N)	NITROGEN, ORGANIC TOTAL (MG/L AS N)	NITROGEN, ORGANIC DIS-SOLVED (MG/L AS N)	NITROGEN, AMMONIA + ORGANIC TOTAL (MG/L AS N)	NITROGEN, NH4 + ORG. SUSP. TOTAL (MG/L AS N)	NITROGEN, AMMONIA + ORGANIC DIS. TOTAL (MG/L AS N)	NITROGEN, DIS-SOLVED (MG/L AS N)	NITROGEN, TOTAL (MG/L AS N)	PHOSPHORUS, TOTAL (MG/L AS P)	PHOSPHORUS, DIS-SOLVED (MG/L AS P)
OCT , 1979										
22...	.020	.51	.87	.47	.00	.91	1.0	.56	.060	.020
NOV										
28...	.000	.48	.54	.50	.00	.54	.73	.68	.030	.010
DEC										
18...	.010	.57	.50	.60	.09	.51	.71	.84	.020	.010
JAN , 1980										
10...	.090	.82	.41	.99	.49	.50	.81	1.3	.040	.020
FEB										
12...	.050	.33	.10	.37	.22	.15	.31	.53	.020	.010
MAR										
19...	.060	.14	.13	.18	.00	.19	.50	.48	.020	.010
APR										
09...	.070	.82	.69	.93	.17	.76	1.0	1.2	.080	.030
MAY										
13...	.000	.41	.49	.43	.00	.49	.53	.43	.050	.020
JUN										
10...	.010	.72	.41	.77	.35	.42	.48	.83	.090	.020
JUL										
08...	.010	.49	.33	.50	.16	.34	.36	.56	.050	.010
AUG										
05...	.000	.39	.19	.40	.21	.19	.21	.43	.050	.010
SEP										
09...	.070	.88	.67	.94	.20	.74	.81	1.0	.110	.020

DATE	SILVER, TOTAL RECOVERABLE (UG/L AS AG)	CARBON, ORGANIC TOTAL (MG/L AS C)	CARBON, ORGANIC DIS-SOLVED (MG/L AS C)	CARBON, ORGANIC SUSPENDED (MG/L AS C)	PHYTOPLANKTON, TOTAL (CELLS PER ML)	PERI-PHYTON BIOMASS ASH WEIGHT G/SQ M	PERI-PHYTON BIOMASS DRY WEIGHT G/SQ M	CHLOR-A PERI-PHYTON CHROMO- GRAPHIC FLUOROM (MG/M2)	CHLOR-B PERI-PHYTON CHROMO- GRAPHIC FLUOROM (MG/M2)	BIOMASS CHLORO- PHYLL RATIO PERI-PHYTON (UNITS)
OCT , 1979										
22...	0	--	16	1.0	--	--	--	--	--	--
NOV										
28...	0	--	6.9	.1	2500	--	--	--	--	--
DEC										
18...	0	9.1	--	--	--	--	--	--	--	--
JAN , 1980										
10...	--	5.5	--	--	--	--	--	--	--	--
FEB										
12...	0	--	3.5	.4	--	--	--	--	--	--
MAR										
19...	--	4.5	--	--	0	--	--	--	--	--
APR										
09...	--	.0	--	--	--	--	--	--	--	--
MAY										
13...	0	--	13	.4	360	--	--	--	--	--
JUN										
10...	0	12	--	--	1800	.63	.71	.08	.00	988
JUL										
08...	--	9.4	--	--	3500	--	--	--	--	--
AUG										
05...	0	--	7.1	.6	2800	1.6	1.9	1.1	.62	214
SEP										
09...	0	30	--	--	650	--	--	--	--	--

		STREAM- FLOW, INSTAN- TANEOUS (CFS)	ARSENIC TOTAL (UG/L AS AS)	ARSENIC SUS- PENDED TOTAL (UG/L AS AS)	ARSENIC DIS- SOLVED (UG/L AS AS)	BARIUM, TOTAL RECOV- ERABLE (UG/L AS BA)	BARIUM, SUS- PENDED RECOV- ERABLE (UG/L AS BA)	BARIUM, DIS- SOLVED (UG/L AS BA)	CADMIUM TOTAL RECOV- ERABLE (UG/L AS CD)	CADMIUM SUS- PENDED RECOV- ERABLE (UG/L AS CD)	CADMIUM DIS- SOLVED (UG/L AS CD)	
OCT , 1979												
22...	1600	247	1	0	1	100	70	30	3	--	4	
NOV												
28...	1030	130	1	1	0	0	--	20	0	--	5	
FEB , 1980												
12...	1120	58	1	0	1	100	50	50	0	0	0	
MAY												
13...	1500	157	2	1	1	<50	--	40	1	0	1	
AUG												
05...	1230	45	2	0	2	<50	--	70	0	0	0	
		CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR)	CHRO- MIUM, SUS- PENDED RECOV. (UG/L AS CR)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR)	COBALT, TOTAL RECOV- ERABLE (UG/L AS CO)	COBALT, SUS- PENDED RECOV- ERABLE (UG/L AS CO)	COBALT, DIS- SOLVED (UG/L AS CO)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU)	COPPER, SUS- PENDED RECOV- ERABLE (UG/L AS CU)	COPPER, DIS- SOLVED (UG/L AS CU)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	IRON, SUS- PENDED RECOV- ERABLE (UG/L AS FE)
OCT , 1979												
22...	10	0	<10	0	0	0	6	0	6	2000	1500	
NOV												
28...	10	--	20	0	--	1	3	--	7	720	310	
FEB , 1980												
12...	10	0	10	0	0	0	3	1	2	620	350	
MAY												
13...	<10	--	<10	0	0	0	6	1	5	1400	1100	
AUG												
05...	20	10	10	0	0	0	5	--	9	1400	1400	
		IRON, DIS- SOLVED (UG/L AS FE)	LEAD, TOTAL RECOV- ERABLE (UG/L AS PB)	LEAD, SUS- PENDED RECOV- ERABLE (UG/L AS PB)	LEAD, DIS- SOLVED (UG/L AS PB)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)	MANGA- NESE, SUS- PENDED RECOV. (UG/L AS MN)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	MERCURY TOTAL RECOV- ERABLE (UG/L AS HG)	MERCURY SUS- PENDED RECOV- ERABLE (UG/L AS HG)	MERCURY DIS- SOLVED (UG/L AS HG)	NICKEL, TOTAL RECOV- ERABLE (UG/L AS NI)
OCT , 1979												
22...	520	13	2	11	60	50	10	.1	.0	.1	.1	3
NOV												
28...	410	1	0	1	40	10	30	.2	.0	.2	.1	1
FEB , 1980												
12...	270	8	8	0	30	10	20	.2	.1	.1	.1	1
MAY												
13...	340	20	5	15	50	30	20	.2	.0	.2	.1	1
AUG												
05...	40	20	5	15	10	--	20	.3	.0	.3	.4	4
		NICKEL, SUS- PENDED RECOV- ERABLE (UG/L AS NI)	NICKEL, DIS- SOLVED (UG/L AS NI)	SELE- NIUM, TOTAL (UG/L AS SE)	SELE- NIUM, SUS- PENDED TOTAL (UG/L AS SE)	SELE- NIUM, DIS- SOLVED (UG/L AS SE)	SILVER, TOTAL RECOV- ERABLE (UG/L AS AG)	SILVER, SUS- PENDED RECOV- ERABLE (UG/L AS AG)	SILVER, DIS- SOLVED (UG/L AS AG)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN)	ZINC, SUS- PENDED RECOV- ERABLE (UG/L AS ZN)	ZINC, DIS- SOLVED (UG/L AS ZN)
OCT , 1979												
22...	2	1	0	0	0	0	0	0	20	10	10	
NOV												
28...	0	1	0	0	0	0	0	0	20	20	0	
FEB , 1980												

STREAMS TRIBUTARY TO LAKE SUPERIOR

04024430 NEMADJI RIVER NEAR SOUTH SUPERIOR, WI--CONTINUED

QUALITATIVE AND ASSOCIATED QUANTITATIVE BIOLOGICAL DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

PHYTOPLANKTON

Date	Time	Organism	Count (cells/ml)	Percent of total	Diversity index	Sampling method
Nov. 28, 1979	1030	CHLOROPHYTA				Grab sample
		Chlorophyceae				
		<i>Ankistrodesmus</i>	25	1		
		<i>Chlorella</i>	320	13		
		CHRYSOPHYTA				
		Bacillariophyceae				
		<i>Asterionella</i>	140	6		
		<i>Diatoma</i>	13	1		
		<i>Navicula</i>	38	2		
		<i>Thalassiosira</i>	1,000	41		
		CYANOPHYTA				
		Cyanophyceae				
		<i>Oscillatoria</i>	920	37		
		EUGLENOPHYTA				
		Euglenophyceae				
		<i>Eutreptia</i>	13	1		
		TOTAL	2,500		1.9	
Mar. 19, 1980	1300	No Organisms				
May 13, 1980	1500	CHLOROPHYTA				Grab sample
		Chlorophyceae				
		<i>Chlamydomonas</i>	14	4		
		CHRYSOPHYTA				
		Bacillariophyceae				
		<i>Cyclotella</i>	14	4		
		<i>Cymbella</i>	29	8		
		<i>Diatoma</i>	29	8		
		<i>Navicula</i>	14	4		
		<i>Nitzschia</i>	170	48		
		<i>Surirella</i>	14	4		
		<i>Synedra</i>	29	8		
		Chrysophyceae				
		<i>Chrysococcus</i>	29	8		
		CRYPTOPHYTA				
		Cryptophyceae				
		<i>Cryptomonas</i>	14	4		
		TOTAL	360		2.6	
June 10, 1980	1345	CHLOROPHYTA				Grab sample
		Chlorophyceae				
		<i>Ankistrodesmus</i>	170	9		
		<i>Chlamydomonas</i>	69	4		
		<i>Dictyosphaerium</i>	230	13		
		<i>Scenedesmus</i>	110	6		
		<i>Selenastrum</i>	55	3		
		<i>Tetraedron</i>	14	1		
		<i>Treubaria</i>	14	1		
		CHRYSOPHYTA				
		Bacillariophyceae				
		<i>Achnanthes</i>	28	1		
		<i>Asterionella</i>	55	3		
		<i>Cyclotella</i>	250	13		
		<i>Cymatopleura</i>	14	1		
		<i>Cymbella</i>	28	1		
		<i>Diatoma</i>	14	1		
		<i>Gomphonema</i>	14	1		
		<i>Navicula</i>	83	4		
		<i>Nitzschia</i>	220	12		
		<i>Surirella</i>	14	1		
		<i>Synedra</i>	69	4		
		CRYPTOPHYTA				
		Cryptophyceae				
		<i>Chroomonas</i>	14	1		
		CYANOPHYTA				
		Cyanophyceae				
		<i>Anabaena</i>	110	6		
		<i>Anacystis</i>	110	6		
		<i>Raphidiopsis</i>	140	7		
		EUGLENOPHYTA				
		Euglenophyceae				
		<i>Euglena</i>	14	1		
		<i>Trachelomonas</i>	14	1		
		TOTAL	1,800		4.0	

STREAMS TRIBUTARY TO LAKE SUPERIOR
04024430 NEMADJI RIVER NEAR SOUTH SUPERIOR, WI--CONTINUED

QUALITATIVE AND ASSOCIATED QUANTITATIVE BIOLOGICAL DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

PHYTOPLANKTON

Date	Time	Organism	Count (cells/ml)	Percent of total	Diversity index	Sampling method
July 8, 1980	1130	CHLOROPHYTA				Grab sample
		Chlorophyceae				
		<i>Ankistrodesmus</i>	220	6		
		<i>Chlamydomonas</i>	64	2		
		<i>Coelastrum</i>	210	6		
		<i>Oocystis</i>		0		
		<i>Scenedesmus</i>	150	4		
		<i>Tetrastrum</i>	100	3		
		CHRYSOPHYTA				
		Bacillariophyceae				
		<i>Cyclotella</i>	39	1		
		<i>Gomphonema</i>		0		
		<i>Melosira</i>	100	3		
		<i>Navicula</i>		0		
		<i>Nitzschia</i>	39	1		
		<i>Synedra</i>	39	1		
		CRYPTOPHYTA				
		Cryptophyceae				
		<i>Chroomonas</i>	52	1		
		<i>Cryptomonas</i>	39	1		
		CYANOPHYTA				
		Cyanophyceae				
		<i>Anacystis</i>	2,200	63		
		<i>Phormidium</i>	190	6		
		TOTAL	3,500		2.2	
Aug. 5, 1980	1230	CHLOROPHYTA				Grab sample
		Chlorophyceae				
		<i>Ankistrodesmus</i>	190	7		
		<i>Chlamydomonas</i>	84	3		
		<i>Dictyosphaerium</i>	67	2		
		<i>Golenkia</i>	50	2		
		<i>Scenedesmus</i>	67	2		
		<i>Tetraedron</i>	17	1		
		CHRYSOPHYTA				
		Bacillariophyceae				
		<i>Cyclotella</i>	270	10		
		<i>Melosira</i>	67	2		
		<i>Navicula</i>	50	2		
		<i>Nitzschia</i>	340	12		
		<i>Synedra</i>	34	1		
		CRYPTOPHYTA				
		Cryptophyceae				
		<i>Chroomonas</i>	100	4		
		<i>Cryptomonas</i>	150	5		
		CYANOPHYTA				
		Cyanophyceae				
		<i>Agmenellum</i>	67	2		
		<i>Anacystis</i>	1,200	43		
		EUGLENOPHYTA				
		Euglenophyceae				
		<i>Euglena</i>	67	2		
		TOTAL	2,800		3.0	
Sept. 9, 1980	1745	CHLOROPHYTA				Grab sample
		Chlorophyceae				
		<i>Chodatella</i>	41	6		
		<i>Scenedesmus</i>	28	4		
		CHRYSOPHYTA				
		Bacillariophyceae				
		<i>Cymbella</i>	14	2		
		<i>Meridion</i>	14	2		
		<i>Navicula</i>	83	13		
		<i>Nitzschia</i>	28	4		
		<i>Synedra</i>	14	2		
		CYANOPHYTA				
		Cyanophyceae				
		<i>Oscillatoria</i>	410	64		
		EUGLENOPHYTA				
		Euglenophyceae				
		<i>Trachelomonas</i>	14	2		
		TOTAL	650		1.9	

STREAMS TRIBUTARY TO LAKE SUPERIOR

04024430 NEMADJI RIVER NEAR SOUTH SUPERIOR, WI--CONTINUED

WATER-QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	TEMPER- ATURE, WATER (DEG C)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	SEDI- MENT, SUS- PENDE (MG/L)	SEDI- MENT DIS- CHARGE, SUS- PENDE (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
OCT , 1979							
22...	1600	247	7.0	183	25	17	97
NOV							
28...	1030	130	.0	218	--	--	--
DEC							
18...	1530	51	.0	296	--	--	--
JAN , 1980							
10...	1600	58	.5	192	13	2.0	83
FEB							
12...	1120	58	.0	275	7	1.1	94
MAR							
19...	1300	56	.0	280	5	.76	94
APR							
09...	1000	980	.0	106	69	183	92
MAY							
13...	1500	157	12.0	203	53	22	43
JUN							
10...	1345	155	17.5	172	54	23	89
JUL							
08...	1130	56	21.0	235	45	6.8	98
AUG							
05...	1230	45	22.5	260	27	3.3	100
SEP							
09...	1745	394	18.0	170	164	174	94

STREAMS TRIBUTARY TO LAKE SUPERIOR

04025500 BOIS BRULE RIVER AT BRULE, WI

LOCATION.--Lat 46°32'16", long 91°35'43", in NW 1/4 SW 1/4 sec.23, T.47 N., R.10 W., Douglas county, Hydrologic Unit 04010301, on right bank, 1.4 mi (2.3 km) southwest of Brule Post Office, 1.4 mi (2.3 km) downstream from Nebagamon Creek, and 1.7 mi (2.7 km) upstream from Little Bois Brule River.

DRAINAGE AREA.--120 mi² (311 km²).

PERIOD OF RECORD.--October 1942 to current year. Prior to January 1943 monthly discharge only, published in WSP 1307.

REVISED RECORDS.--WRD WI-71-1: Drainage area. WSP 1337: 1943(M), 1944, 1945-50(M).

GAGE.--Water-stage recorder. Datum of gage is 948.49 ft (289.100 m) National Geodetic Vertical Datum of 1929. Prior to October 1964, nonrecording gage at same site and datum, supplemented by water-stage recorder part of 1959-62.

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

AVERAGE DISCHARGE.--38 years, 171 ft³/s (4.843 m³/s), 19.35 in/yr (491 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,520 ft³/s (43.0 m³/s) June 5, 1944, gage height, 5.2 ft (1.58 m), from graph based on gage readings and from rating curve extended above 750 ft³/s (21.2 m³/s); minimum observed, 67 ft³/s (1.90 m³/s) Mar. 13, 1943.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 296 ft³/s (8.38 m³/s) Apr. 8, gage height, 2.39 ft (0.728 m), no peak above base of 300 ft³/s (8.50 m³/s); maximum gage height, 3.50 ft. (1.067 m) Feb. 2, backwater from ice; minimum discharge, 112 ft³/s (3.17 m³/s) July 13, gage height 1.41 ft (0.430 m).

RATING TABLE (gage height, in feet, and discharge, in cubic feet per second).
(Stage-discharge relation affected by ice Dec. 1 to Mar. 5.)

1.4 111 3.0 443
2.0 214

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DAY	OCT	NOV	DEC	JAN	FEB	MEAN VALUES		APR	MAY	JUN	JUL	AUG	SEP
						MAR							
1	133	218	150	130	120	120		157	184	143	124	117	121
2	136	209	150	130	120	120		165	180	162	119	119	121
3	135	201	150	130	120	120		173	175	152	119	117	183
4	133	193	150	130	120	120		173	170	141	117	120	233
5	129	185	140	130	130	120		197	166	136	116	119	192
6	127	179	140	130	130	125		269	163	140	117	117	171
7	128	175	140	130	130	130		274	160	144	116	118	152
8	127	172	140	130	130	132		284	158	144	115	125	138
9	126	168	140	130	130	129		241	156	137	115	121	139
10	126	168	140	130	130	129		229	154	132	114	119	176
11	131	165	140	120	140	131		219	164	129	114	141	171
12	130	158	140	120	140	131		221	161	129	115	135	171
13	128	157	140	120	140	131		215	155	130	113	129	193
14	129	156	140	120	140	131		210	152	134	137	124	189
15	131	159	140	120	140	131		217	149	133	130	121	180
16	139	159	140	130	130	133		225	146	128	129	118	172
17	136	160	140	130	130	135		238	144	127	122	119	162
18	135	160	140	130	130	132		252	143	131	176	121	160
19	174	162	140	130	130	134		258	141	140	174	119	154
20	172	167	140	130	120	136		269	139	140	186	123	154
21	166	166	130	130	120	135		260	136	130	172	134	152
22	184	164	130	130	120	136		254	134	130	157	127	150
23	237	165	130	130	120	135		247	134	130	145	122	147
24	234	162	130	130	120	134		234	132	126	132	127	146
25	222	160	130	130	120	134		225	129	124	126	135	163
26	211	157	130	130	120	136		218	128	124	124	130	158
27	200	156	130	120	120	140		211	125	120	123	124	145
28	193	156	130	120	120	141		204	125	130	120	123	138
29	184	154	130	120	120	144		197	125	140	120	118	131
30	178	152	130	120	---	148		190	129	130	119	124	127
31	186	---	130	120	---	153		---	132	---	120	124	---
TOTAL	4900	5063	4270	3930	3680	4106		6726	4589	4036	4026	3830	4789
MEAN	158	169	138	127	127	132		224	148	135	130	124	160
MAX	237	218	150	130	140	153		284	184	162	186	141	233
MIN	126	152	130	120	120	120		157	125	120	113	117	121
CFSM	1.32	1.41	1.15	1.06	1.06	1.10		1.87	1.23	1.13	1.08	1.03	1.33
IN.	1.52	1.57	1.32	1.22	1.14	1.27		2.09	1.42	1.25	1.25	1.19	1.48

CAL YR 1979 TOTAL 70161 MEAN 192 MAX 855 MIN 120 CFSM 1.60 IN 21.75
WTR YR 1980 TOTAL 53945 MEAN 147 MAX 284 MIN 113 CFSM 1.23 IN 16.72

STREAMS TRIBUTARY TO LAKE SUPERIOR

04026100 LONG LAKE NEAR IRON RIVER, WI

LOCATION.--Lat 46°34'54", long 91°20'18", in SW 1/4 sec.2, T.47 N., R.8 W., Bayfield County, Hydrologic Unit 04010301, at residence of Robert Wick, east side of lake, 3.6 mi (5.8 km) northeast of Iron River.

DRAINAGE AREA.--1.28 mi² (3.32 km²). Area of Long Lake, 184 acres (745,000 km²).

PERIOD OF RECORD.--October 1964 to current year (fragmentary).

GAGE.--Nonrecording gage. Altitude of gage is 1,096 ft (334 m), from topographic map.

REMARKS.--Lake has no surface outlet. Lake ice covered from Nov. 8 to Apr. 28.

EXTREMES FOR PERIOD OF RECORD.--Maximum gage height observed, 4.60 ft (1.402 m) June 15, 1974; minimum observed, 1.39 ft (0.424 m) Aug. 28, 1968.

EXTREMES FOR CURRENT YEAR.--Maximum gage height observed, 2.97 ft (0.905 m) Apr. 15, 19; minimum observed, 2.02 ft (0.616 m) Aug. 16.

DAY	GAGE HEIGHT (FEET ABOVE DATUM), WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980											
	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	---	---	---	---	---	---
2	---	---	---	---	---	---	---	---	---	---	2.18	---
3	---	2.66	---	---	---	---	---	2.85	---	---	---	---
4	---	---	---	---	---	---	---	---	---	---	---	---
5	---	---	---	---	---	---	---	---	---	2.20	---	---
6	2.42	---	---	---	---	---	---	---	---	---	---	2.18
7	---	---	---	---	---	---	---	---	2.52	---	---	---
8	---	---	---	---	---	---	---	---	---	2.19	---	---
9	---	---	---	---	---	---	---	---	---	---	2.10	---
10	---	---	---	---	---	---	---	2.77	---	---	---	2.18
11	---	---	---	---	---	---	---	---	2.46	---	---	---
12	---	---	---	---	2.84	---	---	---	---	2.12	---	---
13	2.40	---	---	---	---	---	---	---	---	---	---	2.24
14	---	---	---	---	---	---	---	2.65	2.44	---	---	---
15	---	---	---	---	---	---	2.97	---	---	---	---	---
16	---	---	---	---	---	---	---	---	---	---	2.02	---
17	---	---	---	---	---	---	---	2.60	---	---	---	---
18	---	---	---	---	---	---	---	---	---	---	---	---
19	---	---	---	---	---	2.82	2.97	---	---	2.28	---	---
20	2.50	---	---	---	---	---	---	---	---	---	---	2.18
21	---	---	---	---	---	---	---	---	2.34	---	---	---
22	---	---	---	---	---	---	---	---	---	---	---	---
23	2.64	---	---	---	---	---	---	---	---	---	2.06	---
24	---	---	---	---	---	---	---	2.48	---	---	---	---
25	---	---	---	---	---	---	---	---	---	---	---	---
26	---	---	---	---	---	---	2.93	---	---	2.24	---	---
27	2.60	2.68	---	---	---	---	---	---	---	---	---	2.16
28	---	---	---	---	---	---	---	---	2.28	---	---	---
29	---	---	---	---	---	---	---	---	---	---	---	---
30	---	---	---	---	---	---	---	---	2.28	---	2.10	---
31	---	---	---	---	---	---	---	2.46	---	---	---	---

STREAMS TRIBUTARY TO LAKE SUPERIOR

04027000 BAD RIVER NEAR ODANAH, WI

LOCATION.--Lat 46°29'15", long 90°41'45", in SE 1/4 sec.2, T.46 N., R.3 W., Ashland County, Hydrologic Unit 04010302, Bad River Indian Reservation, on left bank just downstream from Elm Hoist bridge, 5.0 mi (8.0 km) downstream from Potato River, 8.5 mi (13.7 km) south of Odanah, and 23 mi (37 km) from mouth.

DRAINAGE AREA.--611 mi² (1,582 km²).

PERIOD OF RECORD.--July 1914 to December 1922 (monthly discharge only for some periods published in WSP 1307), May 1948 to current year.

REVISED RECORDS.--WSP 1207: Drainage area. WSP 1337: 1922.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 668.30 ft (203.698 m) National Geodetic Vertical Datum of 1929. May 17, 1948, to Nov. 6, 1959, and Oct. 19, 1960, to Nov. 23, 1961, water-stage recorder. Nov. 7, 1959, to Oct. 18, 1960, and Nov. 24, 1961, to July 12, 1962, nonrecording gage. Prior to Nov. 11, 1922, water-stage recorder at site 2 mi (3 km) downstream at different datum.

REMARKS.--Records good except those for winter period and April to July, which are fair.

AVERAGE DISCHARGE.--40 years (1914-22, 1948-80), 611 ft³/s (17.30 m³/s), 13.58 in/yr (345 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 27,700 ft³/s (784 m³/s) Apr. 24, 1960, gage height, 21.7 ft (6.61 m) from floodmarks and from rating curve extended above 12,000 ft³/s (340 m³/s) and a comparison with contracted-opening measurement of peak flow 45,600 ft³/s (1,290 m³/s) at Odanah, drainage area approximately 970 mi² (2,510 km²); minimum, 34 ft³/s (0.96 m³/s) Nov. 8, 1976, result of freezeup.

EXTREMES OUTSIDE THE PERIOD OF RECORD.--Flood of June 24, 1946, reached a stage of at least 22.2 ft (6.77 m), top of downstream bridge submerged, information from Indian Service.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 3,000 ft³/s (85.0 m³/s) and maximum (*):

DATE	TIME	DISCHARGE (ft ³ /s) (m ³ /s)	GAGE HEIGHT (ft) (m)	DATE	TIME	DISCHARGE (ft ³ /s) (m ³ /s)	GAGE HEIGHT (ft) (m)
Apr. 8	1400	*5,580 158	*9.78 2.981	Apr. 20	0600	3,810 108	8.00 2.438

minimum daily discharge, 86 ft³/s (2.44 m³/s) July 9.

RATING TABLE (gage height, in feet, and discharge, in cubic feet per second).
(Stage-discharge relation affected by ice Nov. 9-13, Nov. 24 to Apr. 5.)

2.2	81	4.0	780
2.5	162	6.0	2,100
3.0	323	10.0	5,800

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DAY	MEAN VALUES											
	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	120	1150	360	180	160	160	1300	492	305	105	160	245
2	136	1140	330	180	160	160	1600	451	615	119	150	280
3	150	966	310	180	160	160	1900	416	638	113	140	401
4	152	815	290	180	160	160	1800	421	492	119	130	1280
5	148	704	270	180	160	160	2200	399	370	108	120	1340
6	147	624	260	170	160	160	2460	312	319	94	120	1010
7	167	554	250	170	160	160	3490	270	309	105	121	745
8	192	502	240	170	150	160	5330	259	301	94	128	554
9	193	440	230	170	150	160	4060	280	291	86	133	485
10	233	420	220	160	150	160	2680	270	256	94	131	435
11	270	400	220	160	150	160	2250	273	230	122	143	350
12	270	380	220	160	150	170	2240	305	214	122	163	301
13	277	360	210	160	150	170	1760	287	190	113	163	385
14	271	360	210	160	150	170	1370	298	190	113	164	793
15	265	357	210	160	150	170	1340	273	179	143	159	731
16	267	355	210	160	150	170	1480	259	173	154	145	587
17	264	364	200	160	150	170	1850	239	162	173	129	472
18	250	416	200	160	150	180	2800	223	148	300	120	398
19	248	537	200	160	150	190	3620	214	162	460	119	357
20	300	542	200	160	150	250	3670	205	184	515	148	724
21	329	525	200	160	150	540	2910	196	176	506	488	1310
22	563	501	200	160	150	520	2290	193	170	460	724	1620
23	2130	441	190	160	150	480	1740	176	159	369	564	1260
24	2030	440	190	160	150	450	1360	168	146	293	425	938
25	1550	440	190	160	150	430	1150	157	135	310	504	772
26	1150	430	190	160	150	480	984	151	116	320	508	713
27	943	430	190	160	150	700	862	148	108	310	434	624
28	955	420	190	160	150	840	701	146	103	260	359	529
29	1070	410	190	160	150	1100	581	148	103	210	299	450
30	1070	390	180	160	---	1200	533	190	111	180	266	406
31	999	---	180	160	---	1200	---	287	---	170	252	---
TOTAL	17109	15813	6930	5100	4420	11340	62311	8106	7055	6640	7609	20495
MEAN	552	527	224	165	152	366	2077	261	235	214	245	683
MAX	2130	1150	360	180	160	1200	5330	492	638	515	724	1620
MIN	120	355	180	160	150	160	533	146	103	86	119	1.12
CFSM	.90	.86	.37	.27	.25	.60	3.40	.43	.39	.35	.40	1.25
IN.	1.04	.96	.42	.31	.27	.69	3.79	.49	.43	.40	.46	1.25
CAL YR 1979	TOTAL	272535	MEAN	747	MAX	8080	MIN	100	CFSM	1.22	IN	16.59
WTR YR 1980	TOTAL	172928	MEAN	472	MAX	5330	MIN	86	CFSM	.77	IN	10.53

STREAMS TRIBUTARY TO LAKE SUPERIOR

04027500 WHITE RIVER NEAR ASHLAND, WI

LOCATION.--Lat 46°29'50", long 90°54'15", in NE 1/4 sec.6, T.46 N., R.4 W., Ashland County, Hydrologic Unit 04010302, at downstream end of powerplant of Lake Superior District Power Co., 0.3 mi (0.5 km) downstream from bridge on State Highway 112 over dam, and 4.5 mi (7.2 km) south of Ashland city limits.

DRAINAGE AREA.--279 mi² (723 km²).

PERIOD OF RECORD.--May 1948 to current year.

REVISED RECORDS.--WDR WI-71-1: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 660.15 ft (201.214 m) National Geodetic Vertical Datum of 1929 (Lake Superior District Power Co. bench mark). Prior to May 20, 1976, nonrecording gage at same site and datum.

REMARKS.--Records good. Diurnal fluctuation caused by hydroelectric plant at gage.

AVERAGE DISCHARGE.--32 years, 282 ft³/s (7.986 m³/s), 13.73 in/yr (349 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 6,270 ft³/s (178 m³/s) July 1, 1953, gage height, 7.90 ft (2.408 m) from rating curve extended above 3,000 ft³/s (85.0 m³/s); minimum, 3.1 ft³/s (0.089 m³/s) Apr. 28-30, 1949, gage height, 0.09 ft (0.027 m).

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,220 ft³/s (34.6 m³/s) Mar. 30, gage height, 3.31 ft (1.009 m); minimum daily, 102 ft³/s (2.89 m³/s) Dec. 14.

RATING TABLE (gage height, in feet, and discharge, in cubic feet per second).

						1.0	84			2.0	393		
						1.5	207			2.5	650		
DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980													
						MEAN VALUES							
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	
1	155	271	185	213	177	149	583	223	226	165	144	165	
2	184	298	141	195	180	171	543	202	290	156	144	190	
3	178	288	103	186	174	182	491	191	339	137	144	316	
4	194	264	195	171	174	184	432	202	272	148	145	559	
5	191	259	274	136	173	182	460	183	223	153	157	363	
6	182	237	252	154	184	173	492	185	202	164	149	373	
7	192	219	230	160	176	164	588	184	225	157	148	362	
8	192	223	182	132	183	176	623	186	198	157	150	330	
9	181	214	154	131	176	182	515	177	198	145	170	254	
10	184	180	236	175	186	175	439	190	173	142	158	218	
11	181	174	238	195	184	203	386	193	174	148	165	194	
12	180	245	183	216	186	123	481	203	167	146	184	188	
13	196	228	158	198	185	149	440	199	164	145	173	191	
14	180	214	102	202	189	191	379	200	176	149	165	238	
15	185	213	142	233	166	181	357	193	186	177	165	227	
16	193	213	170	218	181	183	371	198	166	166	161	212	
17	188	211	167	209	172	196	376	187	166	169	149	201	
18	183	214	170	211	174	201	393	191	171	262	144	190	
19	189	218	181	216	182	202	397	200	182	261	156	186	
20	226	236	208	200	182	237	384	194	185	296	167	231	
21	214	239	212	167	192	257	355	195	184	275	158	290	
22	242	225	210	182	185	235	340	202	163	232	187	338	
23	226	234	209	181	190	223	306	215	156	190	176	317	
24	383	229	220	147	195	210	268	201	157	183	157	242	
25	364	223	218	167	189	201	248	210	147	191	160	225	
26	321	225	217	192	172	233	245	221	150	200	203	225	
27	290	234	204	187	130	324	224	204	140	180	192	270	
28	284	227	190	189	164	334	220	185	167	154	162	201	
29	275	210	176	188	182	460	215	193	174	155	164	210	
30	263	199	160	176	---	536	207	184	160	156	164	105	
31	265	---	212	183	---	574	---	211	---	150	177	---	
TOTAL	6861	6864	5899	5710	5183	7191	11758	6102	5681	5509	5038	7611	
MEAN	221	229	190	184	179	232	392	197	189	178	163	254	
MAX	383	298	274	233	195	574	623	223	339	296	203	559	
MIN	155	174	102	131	130	123	207	177	140	137	144	105	
CFSM	.79	.82	.68	.66	.64	.83	1.41	.71	.68	.64	.58	.91	
IN.	.91	.92	.79	.76	.69	.96	1.57	.81	.76	.73	.67	1.01	
CAL YR 1979	TOTAL	101560	MEAN 278	MAX 1400	MIN 61	CFSM 1.00	IN 13.54						
WTR YR 1980	TOTAL	79407	MEAN 217	MAX 623	MIN 102	CFSM .78	IN 10.59						

STREAMS TRIBUTARY TO LAKE SUPERIOR

04027595 BAD RIVER AT ODANAH, WI
(NATIONAL STREAM-QUALITY ACCOUNTING NETWORK STATION)

LOCATION.--Lat 46°36'37", long 90°41'12", in SE 1/4 SE 1/4 NW 1/4 Sec.25, T.48 N., R.3 W., Ashland County,
Hydrologic Unit 04010302, Bad River Indian Reservation, at bridge on U.S. Highway 2 at Odanah.

DRAINAGE AREA.--970 mi² (2,512 km²).

WATER-QUALITY RECORDS

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

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: July 1978 to current year.

WATER TEMPERATURES: July 1978 to current year.

INSTRUMENTATION.--Water-quality monitor since July 12, 1978.

REMARKS.--Water-quality monitor inoperative part of year.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Maximum observed, 613 micromhos July 19, 1978; minimum observed, 54 micromhos Apr. 13, 1980.

WATER TEMPERATURES: Maximum, 28.0°C July 15, 16, 1980; minimum, 0.0°C on many days during winter periods.

EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum observed, 199 micromhos July 12, 13; minimum observed, 54 micromhos Apr. 13.

WATER TEMPERATURES: Maximum, 28.0°C July 15, 16; minimum, 0.0°C on many days during winter period.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH FIELD (UNITS)	TEMPER- ATURE, WATER (DEG C)	TUR- BID- ITY (NTU)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED SATUR- ATION	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	STREP- TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)
OCT , 1979										
24...	1200	2360	115	7.1	4.0	40	11.9	95	20	K5
NOV										
27...	1300	655	136	7.1	.5	4.0	13.1	95	K21	57
DEC										
18...	1145	367	178	7.2	.0	4.0	13.3	96	K11	K14
JAN , 1980										
09...	1605	302	178	6.9	.0	1.5	11.6	83	K7	K12
FEB										
11...	1500	336	175	6.9	.5	6.8	11.5	83	K6	K6
MAR										
18...	1430	366	185	7.3	.5	.50	11.4	83	33	E52
APR										
08...	1700	4080	77	6.5	1.0	62	12.5	92	K56	670
MAY										
14...	1715	486	145	7.2	14.0	5.0	9.2	93	K8	26
JUN										
11...	1515	429	145	7.0	19.5	2.3	9.1	103	K8	K17
JUL										
07...	1630	345	182	7.3	22.5	15	7.8	93	43	53
AUG										
06...	0830	608	180	7.3	21.5	15	7.3	86	33	140
SEP										
10...	1620	728	115	6.8	19.0	2.4	8.3	93	150	440

DATE	HARD- NESS (MG/L AS CAC03)	HARD- NESS, NONCAR- BONATE (MG/L AS CAC03)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	PERCENT SODIUM	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LITY (MG/L AS CAC03)	SULFATE DIS- SOLVED (MG/L AS SO4)
OCT , 1979										
24...	48	8	13	3.7	2.5	10	.2	1.4	40	6.1
NOV										
27...	58	0	16	4.4	2.5	12	.1	.7	59	5.8
DEC										
18...	78	7	21	6.1	3.4	12	.2	.8	71	5.9
JAN , 1980										
09...	84	8	23	6.5	3.7	12	.2	.9	76	7.1
FEB										
11...	130	10	34	11	6.1	9	.2	1.1	120	13
MAR										
18...	81	3	22	6.3	3.9	9	.2	.9	78	5.1
APR										
08...	28	5	7.8	2.0	1.7	11	.1	1.5	23	7.0
MAY										
14...	71	9	19	5.6	3.5	10	.2	.8	62	4.4
JUN										
11...	70	8	19	5.5	3.5	10	.2	.8	62	3.1
JUL										
07...	89	3	24	7.0	3.9	9	.2	1.0	86	3.0
AUG										
06...	88	0	24	6.8	3.4	8	.2	.9	91	1.2
SEP										
10...	68	19	19	5.0	2.5	7	.1	1.1	49	5.4

K RESULTS BASED ON COLONY COUNT OUTSIDE THE ACCEPTABLE RANGE (NON-IDEAL COLONY COUNT).

E ESTIMATED.

STREAMS TRIBUTARY TO LAKE SUPERIOR

04027595 BAD RIVER AT ODANAH, WI--CONTINUED

WATER-QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, RESIDUE AT 180 DEG. C SOLVED (MG/L)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)	SOLIDS, DIS- SOLVED (TONS PER DAY)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N)
OCT , 1979										
24...	3.3	.1	10	90	65	.12	573	.12	.12	.010
NOV										
27...	2.4	.0	12	87	95	.12	154	.10	.10	.010
DEC										
18...	2.4	.1	14	118	97	.16	117	.15	.14	.010
JAN , 1980										
09...	2.6	.1	16	117	107	.16	95.4	.36	.30	.080
FEB										
11...	4.5	.1	17	172	161	.23	156	.22	.21	.060
MAR										
18...	2.7	.1	14	115	103	.16	114	.20	.22	.060
APR										
08...	2.3	.1	7.8	70	45	.10	771	.25	.25	.080
MAY										
14...	2.4	.1	8.8	100	83	.14	131	.00	.05	.040
JUN										
11...	2.5	.1	10	112	82	.15	130	.05	.07	.080
JUL										
07...	2.4	.1	11	57	104	.08	53.1	.00	.00	.000
AUG										
06...	2.1	.1	11	118	104	.16	194	.02	.02	.020
SEP										
10...	2.6	.1	13	120	78	.16	236	.04	.04	.040

DATE	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N)	NITRO- GEN, ORGANIC DIS- SOLVED (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO- GEN,NH4 + ORG. SUSP. TOTAL (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC DIS. (MG/L AS N)	NITRO- GEN, DIS- SOLVED (MG/L AS N)	NITRO- GEN, TOTAL (MG/L AS N)	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHORUS, DIS- SOLVED (MG/L AS P)
OCT , 1979										
24...	.030	.72	.71	.73	.00	.74	.86	.85	.110	.020
NOV										
27...	.000	.90	.45	.91	.46	.45	.55	1.0	.020	.010
DEC										
18...	.010	.31	.48	.32	.00	.49	.63	.47	.010	.010
JAN , 1980										
09...	.070	.43	.52	.51	.00	.59	.89	.87	.020	.030
FEB										
11...	.060	.11	.13	.17	.00	.19	.40	.39	.020	.010
MAR										
18...	.060	.24	.13	.30	.11	.19	.41	.50	.030	.030
APR										
08...	.020	2.4	.72	2.5	1.8	.74	.99	2.8	.150	.040
MAY										
14...	.020	.22	.17	.26	.07	.19	.24	.26	.030	.010
JUN										
11...	.050	.28	.50	.36	.00	.55	.62	.41	.040	.020
JUL										
07...	.000	.32	.27	.32	.05	.27	.27	.32	.050	.010
AUG										
06...	.000	.26	.09	.28	.19	.09	.11	.30	.050	.020
SEP										
10...	.040	.62	.51	.66	.11	.55	.59	.70	.030	.020

DATE	SILVER, TOTAL RECOV- ERABLE (UG/L AS AG)	CARBON, ORGANIC TOTAL (MG/L AS C)	CARBON, ORGANIC DIS- SOLVED (MG/L AS C)	CARBON, ORGANIC SUS- PENDE (MG/L AS C)	PHYTO- PLANK- TON, TOTAL (CELLS PER ML)	PERI- PHYTON BIOMASS ASH WEIGHT G/SQ M	PERI- PHYTON BIOMASS DRY WEIGHT G/SQ M	CHLOR-A PERI- PHYTON CHROMO- GRAPHIC FLUOROM (MG/M2)	CHLOR-B PERI- PHYTON CHROMO- GRAPHIC FLUOROM (MG/M2)	BIOMASS CHLORO- PHYLL RATIO PERI- PHYTON (UNITS)
OCT , 1979										
24...	0	--	16	1.3	--	--	--	--	--	--
NOV										
27...	0	--	8.4	.1	330	--	--	--	--	--
DEC										
18...	0	6.5	--	--	--	--	--	--	--	--
JAN , 1980										
09...	--	6.8	--	--	--	--	--	--	--	--
FEB										
11...	0	--	4.8	.4	--	--	--	--	--	--
MAR										
18...	0	4.7	--	--	13	--	--	--	--	--
APR										
08...	--	16	--	--	--	--	--	--	--	--
MAY										
14...	0	--	8.6	.3	1300	--	--	--	--	--
JUN										
11...	0	8.1	--	--	1600	1.3	1.8	.22	.00	2500
JUL										
07...	--	3.5	--	--	4500	1.8	1.8	.34	.02	.00
AUG										
06...	--	--	5.4	.5	980	.71	.79	.20	.03	390
SEP										
10...	0	23	--	--	4100	3.8	4.8	.26	.04	3923

STREAMS TRIBUTARY TO LAKE SUPERIOR
04027595 BAD RIVER AT ODANAH, WI--CONTINUED

WATER-QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	TIME	STREAM- FLOW, INSTAN- TANBOUS (CFS)	ARSENIC TOTAL (UG/L AS AS)	ARSENIC SUS- PENDE TOTAL (UG/L AS AS)	ARSENIC DIS- SOLVED (UG/L AS AS)	BARIUM, TOTAL RECOV- ERABLE (UG/L AS BA)	BARIUM, SUS- PENDE RECOV- ERABLE (UG/L AS BA)	BARIUM, DIS- SOLVED (UG/L AS BA)	CADMIUM TOTAL RECOV- ERABLE (UG/L AS CD)	CADMIUM SUS- PENDE RECOV- ERABLE (UG/L AS CD)	CADMIUM DIS- SOLVED (UG/L AS CD)
OCT , 1979											
24...	1200	2360	1	0	1	100	60	40	2	2	0
NOV											
27...	1300	655	1	0	1	0	--	30	1	--	2
FEB , 1980											
11...	1500	336	1	0	1	200	130	70	0	--	1
MAY											
14...	1715	486	2	0	2	<50	--	50	0	0	0
AUG											
06...	0830	608	2	0	2	100	40	60	0	--	1

DATE	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR)	CHRO- MIUM, SUS- PENDE RECOV- ERABLE (UG/L AS CR)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR)	COBALT, TOTAL RECOV- ERABLE (UG/L AS CO)	COBALT, SUS- PENDE RECOV- ERABLE (UG/L AS CO)	COBALT, DIS- SOLVED (UG/L AS CO)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU)	COPPER, SUS- PENDE RECOV- ERABLE (UG/L AS CU)	COPPER, DIS- SOLVED (UG/L AS CU)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	IRON, SUS- PENDE RECOV- ERABLE (UG/L AS FE)
OCT , 1979											
24...	10	0	<10	1	1	0	7	1	6	2800	2500
NOV											
27...	10	--	20	0	--	2	5	1	4	600	280
FEB , 1980											
11...	10	0	<10	0	0	0	3	2	1	1100	540
MAY											
14...	30	20	10	0	0	0	5	1	4	590	320
AUG											
06...	30	10	20	0	0	0	1	--	5	820	730

DATE	IRON, DIS- SOLVED (UG/L AS FE)	LEAD, TOTAL RECOV- ERABLE (UG/L AS PB)	LEAD, SUS- PENDE RECOV- ERABLE (UG/L AS PB)	LEAD, DIS- SOLVED (UG/L AS PB)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)	MANGA- NESE, SUS- PENDE RECOV- ERABLE (UG/L AS MN)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	MERCURY TOTAL RECOV- ERABLE (UG/L AS HG)	MERCURY SUS- PENDE RECOV- ERABLE (UG/L AS HG)	MERCURY DIS- SOLVED (UG/L AS HG)	NICKEL, TOTAL RECOV- ERABLE (UG/L AS NI)
OCT , 1979											
24...	300	19	--	21	110	80	30	.1	.0	.1	4
NOV											
27...	320	5	--	17	30	20	10	.2	.1	.1	3
FEB , 1980											
11...	560	5	--	21	40	10	30	.1	.0	.1	2
MAY											
14...	270	3	2	1	30	10	20	.2	.0	.2	1
AUG											
06...	90	2	2	0	40	30	10	.2	.0	.2	2

DATE	NICKEL, SUS- PENDE RECOV- ERABLE (UG/L AS NI)	NICKEL, DIS- SOLVED (UG/L AS NI)	SELE- NIUM, TOTAL RECOV- ERABLE (UG/L AS SE)	SELE- NIUM, SUS- PENDE RECOV- ERABLE (UG/L AS SE)	SELE- NIUM, DIS- SOLVED (UG/L AS SE)	SILVER, TOTAL RECOV- ERABLE (UG/L AS AG)	SILVER, SUS- PENDE RECOV- ERABLE (UG/L AS AG)	SILVER, DIS- SOLVED (UG/L AS AG)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN)	ZINC, SUS- PENDE RECOV- ERABLE (UG/L AS ZN)	ZINC, DIS- SOLVED (UG/L AS ZN)
OCT , 1979											
24...	2	2	0	0	0	0	0	0	10	1	9
NOV											
27...	2	1	0	0	0	0	0	0	20	10	10
FEB , 1980											
11...	2	0	0	0	0	0	0	0	90	80	10
MAY											
14...	--	42	0	0	0	0	0	0	20	--	30
AUG											
06...	2	0	0	0	0	--	--	--	10	--	20

STREAMS TRIBUTARY TO LAKE SUPERIOR
04027595 BAD RIVER AT ODANAH, WI--CONTINUED

QUALITATIVE AND ASSOCIATED QUANTITATIVE BIOLOGICAL DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

PHYTOPLANKTON

Date	Time	Organism	Count (cells/ml)	Percent of total	Diversity index	Sampling method
Nov. 27, 1979	1300	CHRYSOPHYTA				Grab sample
		Bacillariophyceae				
		<i>Cyclotella</i>	10	3		
		<i>Diatoma</i>	10	3		
		<i>Nitzschia</i>	10	3		
		<i>Synedra</i>	5	2		
		CYANOPHYTA				
		Cyanophyceae				
		<i>Raphidiopsis</i>	30	9		
		<i>Schizothrix</i>	260	80		
		TOTAL	330		1.1	
Mar. 18, 1980	1430	CHRYSOPHYTA				Grab sample
		Bacillariophyceae				
		<i>Cyclotella</i>	13	100		
		TOTAL	13		0.0	
May 14, 1980	1715	CHLOROPHYTA				Grab sample
		Chlorophyceae				
		<i>Chlamydomonas</i>	86	7		
		<i>Dictyosphaerium</i>	120	9		
		CHRYSOPHYTA				
		Bacillariophyceae				
		<i>Cyclotella</i>	260	20		
		<i>Navicula</i>	43	3		
		<i>Nitzschia</i>	360	28		
		<i>Surirella</i>	14	1		
		<i>Synedra</i>	14	1		
		CYANOPHYTA				
		Cyanophyceae				
		<i>Anacystis</i>	170	13		
		<i>Oscillatoria</i>	220	17		
		TOTAL	1,300		2.7	
June 11, 1980	1515	CHLOROPHYTA				Grab sample
		Chlorophyceae				
		<i>Ankistrodesmus</i>	97	6		
		<i>Chlamydomonas</i>	190	12		
		<i>Crucigenia</i>	55	3		
		<i>Dictyosphaerium</i>	300	19		
		<i>Elakatothrix</i>	28	2		
		<i>Kirohneriella</i>	14	1		
		<i>Scenedesmus</i>	140	9		
		<i>Schwoederia</i>	28	2		
		CHRYSOPHYTA				
		Bacillariophyceae				
		<i>Cyclotella</i>	220	14		
		<i>Nitzschia</i>	150	9		
		<i>Synedra</i>	14	1		
		CYANOPHYTA				
		Cyanophyceae				
		<i>Anacystis</i>	360	22		
		EUGLENOPHYTA				
		Euglenophyceae				
		<i>Trachelomonas</i>	14	1		
		TOTAL	1,600		3.1	
July 7, 1980	1630	CHLOROPHYTA				Grab sample
		Chlorophyceae				
		<i>Ankistrodesmus</i>	180	4		
		<i>Chlamydomonas</i>	100	2		
		<i>Dictyosphaerium</i>	1,000	22		
		<i>Micractinium</i>	25	1		
		<i>Oocystis</i>	25	1		
		<i>Scenedesmus</i>	350	8		
		<i>Tetradron</i>	25	1		
		<i>Treubaria</i>	25	1		
		<i>Westella</i>	400	9		
		CHRYSOPHYTA				
		Bacillariophyceae				
		<i>Cyclotella</i>	150	3		
		<i>Melosira</i>	300	7		
		<i>Nitzschia</i>	76	2		
		CRYPTOPHYTA				
		Cryptophyceae				
		<i>Chroomonas</i>	25	1		
		<i>Cryptomonas</i>	76	2		
		CYANOPHYTA				
		Cyanophyceae				
		<i>Anacystis</i>	1,700	39		
		TOTAL	4,500		2.7	

STREAMS TRIBUTARY TO LAKE SUPERIOR
04027595 BAD RIVER AT ODANAH, WI--CONTINUED

QUALITATIVE AND ASSOCIATED QUANTITATIVE BIOLOGICAL DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

PHYTOPLANKTON

Date	Time	Organism	Count (cells/ml)	Percent of total	Diversity index	Sampling method
Aug. 6, 1980	0830	CHLOROPHYTA				Grab sample
		Chlorophyceae				
		<i>Ankistrodesmus</i>	77	8		
		<i>Chlamydomonas</i>	39	4		
		<i>Dictyosphaerium</i>	150	16		
		<i>Kirchneriella</i>	100	11		
		<i>Scenedesmus</i>	77	8		
		CHRYSOPHYTA				
		Bacillariophyceae				
		<i>Cyclotella</i>	270	28		
		<i>Navicula</i>	13	1		
		<i>Nitzschia</i>	210	21		
		CRYPTOPHYTA				
		Cryptophyta				
		<i>Cryptomonas</i>	39	4		
		TOTAL	980		2.8	
Sept. 10, 1980	1620	CHLOROPHYTA				Grab sample
		Chlorophyceae				
		<i>Ankistrodesmus</i>	120	3		
		<i>Chlamydomonas</i>	69	2		
		<i>Closterium</i>		0		
		<i>Dictyosphaerium</i>	69	2		
		<i>Kirchneriella</i>	28	1		
		CHRYSOPHYTA				
		Bacillariophyceae				
		<i>Achnanthes</i>		0		
		<i>Cyclotella</i>	410	10		
		<i>Cymbella</i>		0		
		<i>Diatoma</i>		0		
		<i>Fragilaria</i>		0		
		<i>Gomphonema</i>		0		
		<i>Melosira</i>	28	1		
		<i>Navicula</i>	120	3		
		<i>Nitzschia</i>	96	2		
		CRYPTOPHYTA				
		Cryptophyceae				
		<i>Chroomonas</i>		0		
		CYANOPHYTA				
		Cyanophyceae				
		<i>Agmenellum</i>	880	22		
		<i>Anabaena</i>	1,000	25		
		<i>Anacystis</i>	180	4		
		<i>Aphanizomenon</i>	550	13		
		<i>Oscillatoria</i>	400	10		
		EUGLENOPHYTA				
		Euglenophyceae				
		<i>Euglena</i>		0		
		<i>Trachelomonas</i>		0		
		TOTAL	4,100		3.2	

WATER-QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	TEMPER- ATURE, WATER (DEG C)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	SEDI- MENT, SUS- PENDED (MG/L)	SEDI- MENT DIS- CHARGE, SUS- PENDED (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
OCT , 1979							
24...	1200	2360	4.0	115	97	618	98
NOV							
27...	1300	655	.5	136	9	16	20
DEC							
18...	1145	367	.0	178	3	3.0	0
JAN , 1980							
09...	1605	302	.0	178	2	1.6	93
FEB							
11...	1500	336	.5	175	4	3.6	85
MAR							
18...	1430	366	.5	185	2	2.0	100
APR							
08...	1700	4080	1.0	77	675	7440	79
MAY							
14...	1715	486	14.0	145	6	7.9	100
JUN							
11...	1515	429	19.5	145	13	15	98
JUL							
07...	1630	345	22.5	182	11	10	90
AUG							
06...	0830	608	21.5	180	23	38	81
SEP							
10...	1620	728	19.0	115	23	45	85

STREAMS TRIBUTARY TO LAKE SUPERIOR
04027595 BAD RIVER AT ODANAH, WI--CONTINUED

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DAY	MAX	MIN OCTOBER	MEAN	MAX	MIN NOVEMBER	MEAN	MAX	MIN DECEMBER	MEAN	MAX	MIN JANUARY	MEAN
1	184	176	181	92	87	90	131	125	128			
2	185	176	180	93	90	92	131	128	129			
3	184	179	181	92	90	91	130	127	129			
4	184	180	181	93	90	91	130	125	127			
5	182	178	180	96	92	94	142	128	137			
6	180	178	179	102	96	99	139	136	138			
7	178	175	176	105	102	103	136	129	133			
8	177	173	175	108	104	107	133	129	131			
9	174	171	173	108	108	108	135	131	132			
10	173	170	171	117	108	113	134	132	133			
11	169	160	165	123	116	118	138	134	137			
12	162	157	161	124	120	122	140	136	138			
13	156	151	153	127	124	125	140	136	138			
14	152	147	148	128	122	125	144	139	142			
15	148	146	147	127	122	125	144	139	142			
16	148	146	148	128	123	125	146	143	145			
17	153	148	151	129	124	126	---	---	---			
18	153	150	152	142	125	128	---	---	---			
19	150	145	147	129	121	125	---	---	---			
20	148	139	143	199	124	138	---	---	---			
21	151	146	149	145	120	123	---	---	---			
22	147	138	144	146	113	119	---	---	---			
23	138	102	122	113	108	110	---	---	---			
24	101	89	94	110	108	109	---	---	---			
25	89	87	88	111	110	111	---	---	---			
26	90	88	89	111	111	111	---	---	---			
27	94	89	91	121	111	114	---	---	---			
28	97	93	95	127	117	123	---	---	---			
29	99	92	96	133	124	127	---	---	---			
30	93	86	90	131	124	127	---	---	---			
31	90	86	88	---	---	---	---	---	---			
MONTH	185	86	143	199	87	114	146	125	135			

DAY	MAX	MIN FEBRUARY	MEAN	MAX	MIN MARCH	MEAN	MAX	MIN APRIL	MEAN	MAX	MIN MAY	MEAN
1							---	---	---	145	141	143
2							---	---	---	149	144	146
3							---	---	---	150	146	149
4							---	---	---	154	148	150
5							---	---	---	151	148	150
6							---	---	---	164	147	150
7							---	---	---	149	144	146
8							83	79	81	---	---	---
9							92	83	87	---	---	---
10							93	88	91	---	---	---
11							87	75	81	---	---	---
12							74	58	63	---	---	---
13							58	54	56	---	---	---
14							71	57	62	146	143	145
15							74	61	65	147	142	145
16							92	79	88	149	146	148
17							94	75	88	153	149	152
18							80	73	76	162	152	157
19							86	81	83	164	159	161
20							92	86	89	169	163	166
21							97	88	93	176	167	170
22							102	93	99	177	171	173
23							107	99	104	183	174	178
24							113	105	110	184	178	181
25							119	111	117	186	181	182
26							125	119	122	189	182	185
27							130	124	127	189	184	186
28							137	131	133	190	185	187
29							139	135	137	193	188	190
30							143	138	141	194	190	191
31							---	---	---	190	189	190
MONTH							143	54	95	194	141	165

STREAMS TRIBUTARY TO LAKE SUPERIOR
04027595 BAD RIVER AT ODANAH, WI--CONTINUED

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DAY	MAX	MIN JUNE	MEAN	MAX	MIN JULY	MEAN	MAX	MIN AUGUST	MEAN	MAX	MIN SEPTEMBER	MEAN
1	190	181	185	192	186	189	180	175	177	162	151	156
2	180	157	171	191	186	188	186	177	181	159	154	156
3	156	140	149	191	186	189	188	180	184	161	152	157
4	139	131	135	191	187	190	190	184	187	161	129	146
5	133	128	131	193	190	191	188	184	186	131	101	113
6	142	131	135	---	---	---	193	187	190	100	96	98
7	144	138	142	196	191	193	193	188	191	106	96	101
8	151	144	147	197	191	194	195	189	192	116	105	110
9	151	147	149	196	192	194	193	191	192	122	112	117
10	154	148	150	198	194	196	193	190	192	130	122	125
11	157	150	153	197	193	195	193	190	191	135	129	133
12	162	153	156	199	193	196	190	187	188	144	135	139
13	165	158	161	199	196	198	190	188	189	147	144	145
14	167	162	163	198	194	196	186	183	185	148	135	140
15	170	165	167	197	193	195	185	181	183	136	120	126
16	170	166	168	198	193	197	184	178	181	123	114	118
17	172	167	169	196	191	194	183	180	182	124	117	119
18	172	168	169	191	185	189	186	182	183	131	123	125
19	172	168	170	186	174	181	187	184	186	136	129	131
20	173	169	171	172	160	163	189	186	188	137	125	133
21	171	168	170	161	146	154	190	186	188	138	116	129
22	170	165	167	148	142	146	187	139	166	113	98	108
23	170	162	165	142	138	140	138	115	124	99	93	95
24	174	165	168	144	138	141	124	118	122	98	93	96
25	177	171	173	150	141	145	125	121	123	104	95	100
26	183	175	179	151	143	148	141	122	132	109	101	106
27	185	178	182	153	148	150	142	129	135	115	106	111
28	187	181	183	158	151	154	138	131	134	119	113	116
29	190	185	188	162	153	157	142	134	137	123	116	119
30	190	186	188	170	162	165	149	140	143	126	121	124
31	---	---	---	176	169	172	153	145	149	---	---	---
MONTH	190	128	163	199	138	177	195	115	170	162	93	123

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DAY	MAX	MIN OCTOBER	MEAN	MAX	MIN NOVEMBER	MEAN	MAX	MIN DECEMBER	MEAN	MAX	MIN JANUARY	MEAN
1	15.5	15.0	15.0	8.0	7.5	8.0	.5	.5	.5			
2	15.0	14.5	14.5	7.5	6.0	6.5	.5	.5	.5			
3	14.5	13.5	14.0	5.5	5.0	5.0	.5	.5	.5			
4	13.5	12.5	13.0	4.5	3.5	4.0	.5	.5	.5			
5	12.5	12.0	12.0	4.0	3.5	4.0	.5	.5	.5			
6	12.0	11.5	11.5	4.0	3.5	3.5	1.0	.5	.5			
7	11.5	10.5	11.0	3.0	2.5	3.0	.5	.5	.5			
8	11.0	10.5	10.5	---	---	---	.5	.5	.5			
9	10.0	10.0	10.0	---	---	---	.5	.5	.5			
10	10.0	9.0	9.5	---	---	---	1.0	.5	.5			
11	9.0	8.5	9.0	---	---	---	.5	.5	.5			
12	8.5	7.5	8.0	---	---	---	.5	.5	.5			
13	7.5	6.5	7.0	---	---	---	.5	.5	.5			
14	6.5	6.0	6.0	---	---	---	.5	.5	.5			
15	7.0	5.5	6.0	.5	.5	.5	.5	.5	.5			
16	8.0	7.0	7.5	---	---	---	.5	.5	.5			
17	9.0	8.0	8.5	---	---	---	---	---	---			
18	9.0	8.5	8.5	---	---	---	---	---	---			
19	9.5	8.5	9.0	---	---	---	---	---	---			
20	11.0	9.5	10.5	---	---	---	---	---	---			
21	11.5	11.0	11.0	---	---	---	---	---	---			
22	11.5	10.0	10.5	---	---	---	---	---	---			
23	10.0	6.0	8.0	---	---	---	---	---	---			
24	5.5	4.5	5.0	---	---	---	---	---	---			
25	4.5	4.0	4.0	---	---	---	---	---	---			
26	4.0	3.5	3.5	---	---	---	---	---	---			
27	4.0	3.5	3.5	1.5	1.0	.5	---	---	---			
28	5.5	4.0	5.0	1.0	.5	.5	---	---	---			
29	6.0	5.0	5.5	.5	.5	.5	---	---	---			
30	6.0	5.0	5.5	.5	.5	.5	---	---	---			
31	8.0	6.0	7.0	---	---	---	---	---	---			
MONTH	15.5	3.5	8.5	8.0	.5	3.0	1.0	.5	.5			

STREAMS TRIBUTARY TO LAKE SUPERIOR
04027595 BAD RIVER AT ODANAH, WI--CONTINUED

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980												
DAY	MAX	MIN FEBRUARY	MEAN	MAX	MIN MARCH	MEAN	MAX	MIN APRIL	MEAN	MAX	MIN MAY	MEAN
1							---	---	---	13.5	11.5	12.5
2							---	---	---	12.0	10.5	11.0
3							---	---	---	12.0	11.5	11.5
4							---	---	---	12.0	10.5	11.0
5							---	---	---	13.5	11.5	12.0
6							---	---	---	---	---	---
7							---	---	---	14.5	12.5	13.5
8							---	---	---	15.0	13.0	14.0
9							4.5	3.0	4.0	---	---	---
10							5.5	4.0	4.5	---	---	---
							7.5	5.0	5.5	---	---	---
11							8.5	7.5	7.5	---	---	---
12							9.5	7.5	8.5	---	---	---
13							---	---	---	---	---	---
14							10.5	9.0	9.5	---	---	---
15							11.0	10.0	10.5	14.5	14.5	14.5
							13.5	11.5	12.0	14.5	12.5	13.5
16							---	---	---	---	---	---
17							14.0	13.0	13.5	15.5	13.5	14.5
18							13.5	10.5	11.5	15.5	14.0	15.0
19							10.5	9.5	10.0	17.0	15.0	16.0
20							10.0	9.5	10.0	18.5	16.5	17.5
							10.5	9.0	10.0	19.5	17.5	18.5
21							---	---	---	---	---	---
22							11.0	10.5	10.5	21.0	19.0	20.0
23							11.5	11.0	11.5	22.5	20.5	21.5
24							13.5	12.0	12.0	23.5	22.0	22.5
25							14.5	13.5	13.5	23.5	22.5	23.0
							17.0	14.5	15.0	23.5	21.5	22.5
26							---	---	---	---	---	---
27							18.0	15.5	16.5	22.0	20.5	21.0
28							19.0	16.5	17.5	21.0	19.5	20.5
29							19.5	18.0	18.5	21.0	19.5	20.0
30							19.5	17.0	18.0	21.5	20.0	20.5
31							17.0	13.5	14.5	21.5	20.0	20.5
							---	---	---	20.5	19.0	19.5
MONTH							19.5	3.0	11.5	23.5	10.5	17.0

DAY	MAX	MIN JUNE	MEAN	MAX	MIN JULY	MEAN	MAX	MIN AUGUST	MEAN	MAX	MIN SEPTEMBER	MEAN
1	20.0	19.0	20.0	23.0	21.5	22.0	26.0	25.0	25.5	21.0	19.5	20.0
2	18.5	17.0	17.5	23.5	22.0	22.5	25.5	25.0	25.5	20.5	19.0	19.5
3	18.0	16.5	17.5	24.5	22.5	23.0	25.5	24.5	25.0	20.0	19.5	19.5
4	19.0	18.0	18.5	25.0	23.5	24.0	25.5	24.0	24.5	19.0	18.5	19.0
5	20.0	18.5	19.5	24.5	24.0	24.5	24.0	23.0	23.5	19.0	18.0	18.5
6	22.0	18.5	20.0	---	---	---	23.5	22.0	23.0	19.5	18.0	18.5
7	21.0	20.0	20.5	24.5	23.5	24.5	24.5	23.0	23.5	20.0	18.0	19.0
8	19.5	17.5	18.5	25.5	24.0	24.5	25.0	24.0	24.5	20.5	19.0	19.5
9	20.5	18.0	19.0	25.5	24.0	25.0	25.0	24.0	24.5	21.0	20.0	20.5
10	20.0	18.0	19.0	26.5	25.0	25.5	24.5	23.5	24.0	20.0	18.5	19.5
11	20.5	18.0	19.0	26.5	25.5	26.0	24.0	23.0	23.5	19.0	18.5	18.5
12	20.5	19.0	20.0	26.5	25.0	26.0	23.5	22.5	23.0	18.5	17.5	18.0
13	21.0	20.0	20.0	26.5	25.0	25.5	23.5	22.0	23.0	18.0	17.5	17.5
14	20.5	19.0	20.0	26.0	25.0	25.5	23.5	22.0	22.5	17.5	16.0	16.5
15	19.0	18.0	18.5	28.0	26.0	26.5	22.5	21.0	21.5	16.0	15.0	15.0
16	19.5	17.5	18.0	28.0	26.5	27.0	21.5	20.0	20.5	15.0	14.5	14.5
17	20.5	18.0	19.0	26.5	25.5	26.0	20.5	19.5	20.0	14.5	13.5	14.0
18	21.0	19.5	20.0	27.5	25.5	26.5	20.5	19.5	19.5	14.5	13.5	14.0
19	19.5	18.0	18.5	27.0	24.5	25.5	22.0	19.5	21.0	13.5	13.0	13.0
20	21.0	18.5	19.5	25.5	23.5	24.5	22.0	21.5	22.0	13.5	12.5	13.0
21	21.5	19.5	20.5	23.5	22.5	23.0	22.5	21.5	22.0	13.5	13.0	13.0
22	21.5	20.0	20.5	23.5	22.0	23.0	22.5	21.0	21.5	13.5	12.5	13.0
23	23.0	21.0	22.0	24.0	22.5	23.5	22.0	21.0	21.5	13.0	12.0	12.5
24	25.0	23.0	24.0	25.5	22.5	24.0	21.5	20.5	21.0	13.5	12.0	12.5
25	26.0	25.0	25.5	26.0	24.0	25.0	21.5	20.5	21.0	13.0	12.5	12.5
26	26.5	26.0	26.0	25.0	23.0	24.0	21.0	20.5	21.0	12.0	11.0	11.5
27	26.0	23.0	24.5	24.0	22.0	22.5	21.0	20.0	20.5	11.5	10.5	11.0
28	23.5	22.0	23.0	24.5	22.0	23.0	21.0	20.0	20.5	11.0	10.5	11.0
29	22.5	21.5	22.0	24.0	22.5	23.5	22.0	20.0	20.5	12.0	10.5	11.5
30	22.0	21.0	21.5	25.0	23.5	24.0	22.5	21.0	21.5	13.0	12.0	12.5
31	---	---	---	25.0	24.5	25.0	22.0	20.5	21.0	---	---	---
MONTH	26.5	16.5	20.5	28.0	21.5	24.5	26.0	19.5	22.5	21.0	10.5	15.5

STREAMS TRIBUTARY TO LAKE SUPERIOR

04031000 BLACK RIVER NEAR BESSEMER, MI

LOCATION.--Lat 46°30'41", long 90°04'28", in NE 1/4 SE 1/4 sec.32, T.48 N., R.46 W., Gogebic County, Hydrologic Unit 04020101, on right bank 450 ft (137 m) downstream from bridge on county highway, 500 ft (152 m) downstream from Powder Mill Creek, and 2.5 mi (4.0 km) northwest of Bessemer.

DRAINAGE AREA.--200 mi² (518 km²).

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

REVISED RECORDS.--WSP 1911: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 1,154.3 ft (351.83 m) National Geodetic Vertical Datum of 1929 (levels by registered surveyor).

REMARKS.--Records good except those for the winter period, which are fair. Prior to 1967, flow included some ground water pumped from mines at Bessemer. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--26 years, 234 ft³/s (6.627 m³/s), 15.89 in/yr (404 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 14,800 ft³/s (419 m³/s) Apr. 24, 1960, gage height, 14.27 ft (4.349 m), from floodmark, from rating curve extended above 5,300 ft³/s (150 m³/s) on basis of slope-area measurement of peak flow; minimum daily, 6.8 ft³/s (0.19 m³/s) Sept. 25, Oct. 1-3, 1976; minimum gage height, 0.36 ft (0.110 m) Sept. 9, 1970.

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

DATE	TIME	DISCHARGE (ft ³ /s) (m ³ /s)	GAGE HEIGHT (ft) (m)	DATE	TIME	DISCHARGE (ft ³ /s) (m ³ /s)	GAGE HEIGHT (ft) (m)
Apr. 8	0100	2,710 76.7	6.84 2.085	Apr. 20	0300	*2,760 78.2	*6.92 2.109

minimum discharge, 20 ft³/s (0.57 m³/s) July 10, 12, 13, 14; minimum gage height, 0.57 ft (0.174 m) July 13, 14.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980												
DAY	MEAN VALUES											
	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	28	550	125	66	73	64	300	247	53	28	53	184
2	35	481	120	65	72	64	350	223	73	26	49	176
3	35	414	120	65	70	64	450	196	67	25	43	235
4	37	354	115	66	69	64	638	175	59	24	47	561
5	39	309	115	66	68	65	874	156	54	27	52	470
6	48	269	110	67	67	66	1200	141	54	25	46	334
7	63	226	105	68	65	66	1900	127	50	24	50	257
8	60	206	105	70	65	67	2400	120	47	22	52	221
9	120	195	100	70	65	68	1620	112	47	22	49	766
10	172	180	100	73	64	69	1260	108	44	21	44	441
11	166	170	97	77	64	69	1060	128	40	23	62	282
12	170	160	95	83	63	70	928	116	36	22	64	222
13	175	150	95	90	63	70	757	110	38	21	61	350
14	166	145	94	100	63	70	642	99	45	35	152	493
15	177	140	92	115	64	72	638	92	42	33	147	419
16	175	130	90	120	64	75	618	84	37	33	105	343
17	157	135	90	120	65	78	955	79	34	43	87	265
18	144	128	87	120	65	83	1700	71	36	64	77	249
19	208	159	85	120	65	90	2380	66	35	105	73	239
20	226	208	85	115	66	100	2570	60	33	190	234	504
21	206	192	83	115	66	98	2060	56	33	219	1230	912
22	509	184	82	110	66	95	1670	50	40	191	944	851
23	1110	177	80	105	66	92	1250	47	34	153	645	635
24	932	170	78	100	66	90	914	43	30	118	613	533
25	748	152	78	97	65	92	726	38	28	136	704	464
26	602	155	77	93	65	98	594	37	27	120	545	405
27	516	145	75	90	65	110	481	36	27	101	410	326
28	610	140	73	87	65	125	390	35	29	89	311	261
29	562	135	72	84	64	150	334	33	31	89	242	220
30	484	130	70	80	---	180	295	43	29	79	213	186
31	436	---	67	77	---	240	---	66	---	66	195	---
TOTAL	9116	6289	2860	2774	1908	2804	31954	2994	1232	2174	7599	11804
MEAN	294	210	92.3	89.5	65.8	90.5	1065	96.6	41.1	70.1	245	393
MAX	1110	550	125	120	73	240	2570	247	73	219	1230	912
MIN	28	128	67	65	63	64	295	33	27	21	43	176
CFSM	1.47	1.05	.46	.45	.33	.45	5.33	.48	.21	.35	1.23	1.97
IN.	1.70	1.17	.53	.52	.35	.52	5.94	.56	.23	.40	1.41	2.20
CAL YR 1979	TOTAL	92045	MEAN 252	MAX 3540	MIN 21	CFSM 1.26	IN 17.12					
WTR YR 1980	TOTAL	83508	MEAN 228	MAX 2570	MIN 21	CFSM 1.14	IN 15.53					

STREAMS TRIBUTARY TO LAKE SUPERIOR

04031500 PRESQUE ISLE RIVER AT MARENISCO, MI

LOCATION.--Lat 46°22'20", long 89°41'32", in SE 1/4 NW 1/4 sec.21, T.46 N., R.43 W., Gogebic County, Hydrologic Unit 04020101, on left bank 0.3 mi (0.5 km) upstream from highway bridge in Marenisco, and 1.5 mi (2.4 km) downstream from confluence of East and West Branches.

DRAINAGE AREA.--171 mi² (443 km²).

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

REVISED RECORDS.--WSP 1707: 1954. WSP 1911: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 1,489.30 ft (453.939 m) National Geodetic Vertical Datum of 1929 (levels by Michigan Department of Natural Resources). Prior to May 27, 1949, nonrecording gage at site 0.3 mi (0.5 km) downstream at different datum.

REMARKS.--Records good except those for winter period and those for period of no gage-height record, Feb. 5 to Mar. 19, which are fair. Occasional regulation for lake or pond level control at several locations in the headwaters. Since 1959, occasional regulation by Presque Isle Flooding Reservoir, usable capacity, about 3,000 acre-ft (3.7 hm³), 2.5 mi (4.0 km) upstream. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--35 years, 177 ft³/s (5.013 m³/s), 14.06 in/yr (357 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 3,520 ft³/s (99.7 m³/s) Apr. 25, 1960, gage height, 11.25 ft (3.429 m); minimum observed, 13 ft³/s (0.37 m³/s) Sept. 30, 1948, gage height, 2.25 ft (0.686 m), site and datum then in use.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 852 ft³/s (24.1 m³/s) Aug. 22, gage height, 6.93 ft (2.112 m); minimum, 40 ft³/s (1.13 m³/s) July 10, gage height, 3.32 ft (1.012 m).

DAY	DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980											
	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	55	333	115	96	98	83	150	212	438	57	85	183
2	59	321	105	95	98	82	165	183	360	53	76	187
3	62	282	120	93	98	80	175	179	284	50	70	217
4	63	252	130	92	100	80	190	169	213	47	69	307
5	62	231	140	90	100	78	226	157	170	49	77	304
6	67	215	130	90	100	78	286	150	154	50	70	264
7	80	198	125	90	100	78	438	142	140	50	73	218
8	81	192	120	90	98	78	593	139	142	47	75	190
9	89	211	120	92	95	78	629	136	126	44	72	266
10	97	182	115	94	95	78	588	130	118	42	71	234
11	97	165	115	95	95	78	513	141	103	48	80	189
12	101	155	115	97	94	78	459	128	94	47	79	168
13	104	145	110	100	93	78	396	111	89	47	73	221
14	103	139	110	100	93	78	345	109	95	68	102	320
15	111	139	105	105	92	78	314	107	91	77	94	316
16	117	135	105	110	92	80	296	104	86	74	80	273
17	100	138	100	115	92	80	317	100	79	75	73	231
18	94	137	100	115	92	82	417	96	75	103	66	200
19	101	150	105	120	92	84	539	97	75	156	75	180
20	115	155	105	115	90	86	641	96	71	208	159	205
21	140	158	105	115	90	90	658	92	71	237	707	333
22	256	160	110	110	90	90	614	86	77	233	818	433
23	513	163	110	110	90	90	526	81	77	194	611	420
24	615	159	105	105	90	88	452	78	70	154	521	379
25	563	155	105	105	90	88	395	74	62	137	533	333
26	470	155	105	105	88	90	344	72	57	124	468	297
27	390	150	100	105	86	95	310	78	53	106	395	251
28	366	145	100	100	86	100	275	89	58	92	310	220
29	350	140	98	100	85	110	247	370	58	104	245	201
30	322	125	96	100	---	120	238	508	59	104	209	183
31	298	---	96	98	---	140	---	505	---	95	184	---
TOTAL	6041	5385	3420	3147	2702	2696	11736	4719	3645	2972	6620	7723
MEAN	195	180	110	102	93.2	87.0	391	152	122	95.9	214	257
MAX	615	333	140	120	100	140	658	508	438	237	818	433
MIN	55	125	96	90	85	78	150	72	53	42	66	168
CFSM	1.14	1.05	.64	.60	.55	.51	2.29	.89	.71	.56	1.25	1.50
IN.	1.31	1.17	.74	.68	.59	.59	2.55	1.03	.79	.65	1.44	1.68
CAL YR 1979	TOTAL	73799	MEAN 202	MAX	1590	MIN 37	CFSM 1.18	IN 16.05				
WTR YR 1980	TOTAL	60806	MEAN 166	MAX	818	MIN 42	CFSM .97	IN 13.23				

STREAMS TRIBUTARY TO LAKE SUPERIOR

04037500 CISCO BRANCH ONTONAGON RIVER AT CISCO LAKE OUTLET, MI

LOCATION.--Lat 46°15'12", long 89°27'05", in NE 1/4 sec.32, T.45 N., R.41 W., Gogebic County, Hydrologic Unit 04020102, on left bank 80 ft (24 m) downstream from Cisco Lake Dam, 2.5 mi (4.0 km) upstream from Langford Creek, 5.0 mi (8.0 km) upstream from U.S. Highway 2, and 13 mi (21 km) west of Watersmeet.

DRAINAGE AREA.--50.7 mi² (131.3 km²).

PERIOD OF RECORD.--October 1944 to current year.

REVISED RECORDS.--WSP 1911: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 1,672.69 ft (509.836 m) National Geodetic Vertical Datum of 1929. Prior to Oct. 1, 1968, nonrecording gage at same site and at datum 4.00 ft (1.219 m) higher.

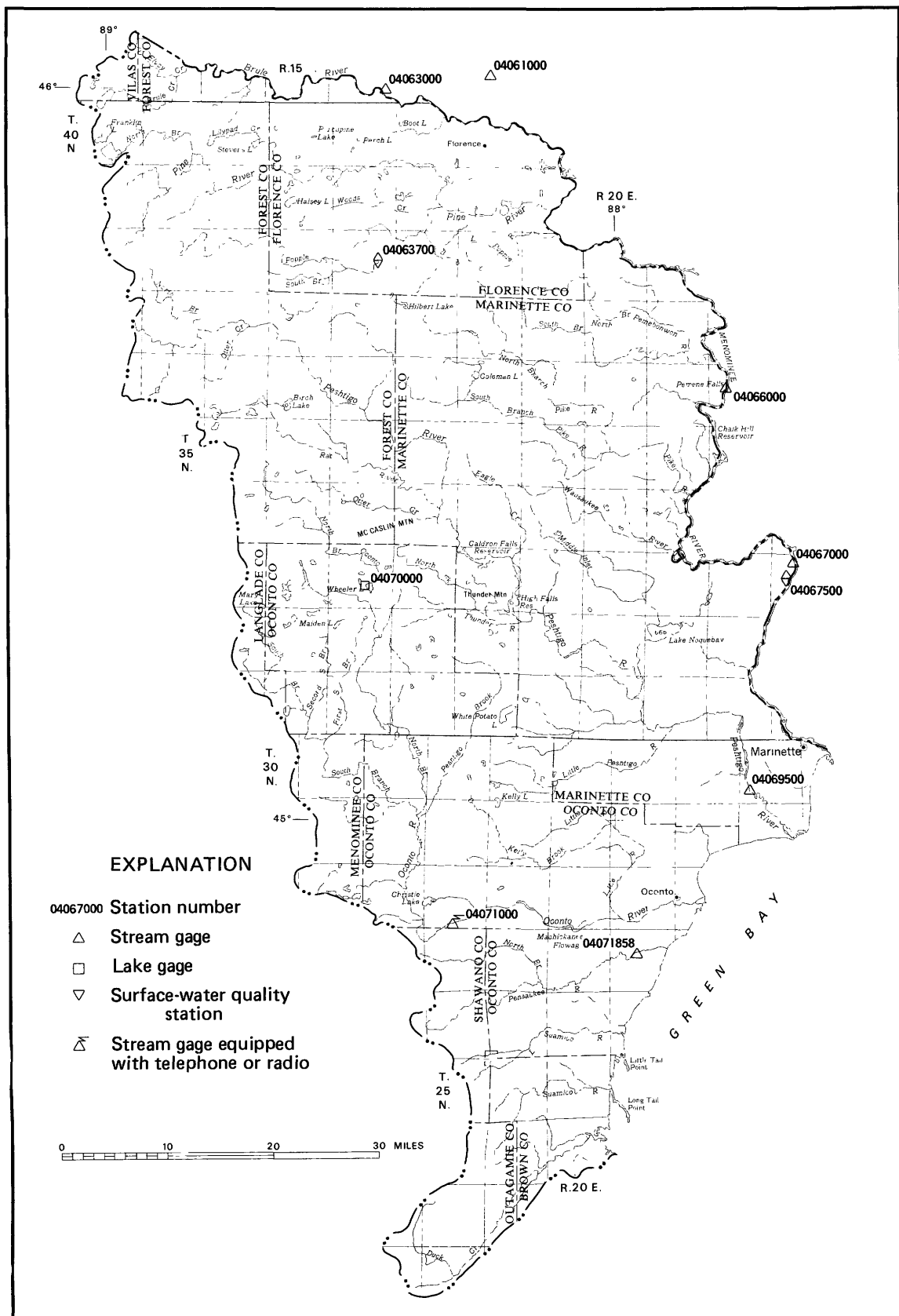
REMARKS.--Records good except those below 1.0 ft³/s (0.028 m³/s), which are fair: Flow completely regulated by Cisco Lake, usable capacity, 15,600 acre-ft (19.2 hm³). Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--36 years, 46.8 ft³/s (1.325 m³/s), 12.54 in/yr (319 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 288 ft³/s (8.16 m³/s) May 1-4, 1951, gage height, 6.10 ft (1.859 m), present datum; minimum daily, 0.09 ft³/s (0.003 m³/s) June 4-23, 1977.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 171 ft³/s (4.84 m³/s) Sept. 22, gage height, 5.62 ft (1.713 m); minimum daily, 0.15 ft³/s (0.004 m³/s) June 23, 24.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980													
DAY	OCT	NOV	DEC	JAN	FEB	MEAN VALUES		APR	MAY	JUN	JUL	AUG	SEP
1	.73	122	85	37	38	42	51	3.1	.28	.28	.23	42	29
2	17	118	84	38	37	41	42	2.7	.28	.28	.23	25	28
3	60	115	60	38	37	40	42	2.5	.28	.28	.22	13	59
4	87	114	30	38	38	39	42	2.3	.28	.28	.22	14	76
5	106	111	31	37	37	39	42	2.2	.28	.28	.25	14	60
6	120	108	31	39	37	39	44	2.1	.28	.28	.40	7.2	20
7	124	108	33	41	37	39	54	1.9	.28	.28	.28	2.1	3.3
8	119	104	34	53	30	39	70	1.7	.28	.28	.28	2.2	3.2
9	133	104	35	66	24	39	78	1.5	.28	.28	.28	2.3	3.0
10	141	102	50	65	25	39	78	.97	.28	.28	.25	2.3	3.0
11	136	100	63	66	25	39	78	.81	.28	.28	.25	18	3.2
12	114	97	62	65	25	39	78	.70	.25	.25	.25	47	19
13	117	95	62	65	26	39	78	.58	.25	.25	.25	59	80
14	127	94	60	64	26	39	78	.58	.25	.25	.28	59	115
15	122	92	60	64	26	39	77	.58	.25	.28	.28	57	114
16	118	91	59	65	27	39	77	.53	.25	.25	.31	56	89
17	113	89	59	67	27	39	76	.45	.25	.25	.34	56	75
18	111	88	46	67	27	39	76	.48	.22	.22	.31	26	57
19	110	88	37	66	28	35	76	.47	.20	.20	.31	2.3	44
20	109	89	37	66	33	32	77	.37	.20	.20	.37	2.3	28
21	106	89	38	65	44	32	77	.32	.20	.20	.40	2.2	21
22	114	90	37	65	44	31	66	.29	.20	.20	.55	2.1	104
23	123	90	37	65	43	32	33	.29	.15	.15	.55	2.2	166
24	129	90	38	64	43	31	23	.29	.15	1.0	1.0	3.1	164
25	128	88	38	57	43	31	23	.29	.16	.16	.25	56	130
26	127	88	38	42	42	31	16	.29	.24	.24	.43	96	110
27	125	88	38	37	42	32	5.1	.28	.26	.26	.42	94	107
28	120	87	38	38	42	54	4.4	.28	.22	.22	.41	91	105
29	120	86	38	38	42	61	3.9	.28	.16	.16	.44	60	71
30	118	86	38	38	---	55	3.5	.28	.23	.23	.44	28	27
31	121	---	37	38	---	54	---	.28	---	---	.43	28	---
TOTAL	3415.73	2911	1433	1654	995	1219	1568.9	29.69	7.17	290.09	969.3	1913.7	
MEAN	110	97.0	46.2	53.4	34.3	39.3	52.3	.96	.24	9.36	31.3	63.8	
MAX	141	122	85	67	44	61	78	3.1	.28	.44	.96	166	
MIN	.73	86	30	37	24	31	3.5	.28	.15	.22	2.1	3.0	
CAL YR 1979	TOTAL	20921.49	MEAN	57.3	MAX	185	MIN	.58					
WTR YR 1980	TOTAL	16406.58	MEAN	44.8	MAX	166	MIN	.15					



MENOMINEE-OCONTO-PESHTIGO RIVER BASIN

STREAMS TRIBUTARY TO LAKE MICHIGAN

04061000 BRULE RIVER NEAR FLORENCE, WI

LOCATION.--Lat 45°57'31", long 88°15'57", in SE 1/4 SE 1/4 sec.11, T.41 N., R.32 W., Michigan Meridian, Iron County, Hydrologic Unit 04030106, on left bank 40 ft (12 m) upstream from highway bridge, 1.0 mi (1.6 km) upstream from Paint River, 2.5 mi (4.0 km) north of Florence, and 5.0 mi (8.0 km) upstream from confluence with Michigamme River.

DRAINAGE AREA.--389 mi² (1,008 km²).

PERIOD OF RECORD.--January 1914 to February 1916, June 1944 to current year.

REVISED RECORDS.--WSP 1387: 1914-16. WSP 1911: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 1,200.55 ft (365.928 m) National Geodetic Vertical Datum of 1929 (levels by Owen Ayres Associates). Prior to Aug. 29, 1944, nonrecording gage at bridge 40 ft (12 m) downstream at same datum.

REMARKS.--Records good except those for the winter period, which are fair. Discharge includes some mine pumpage prior to August, 1977. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--37 years (water years 1915, 1945-80), 358 ft³/s (10.14 m³/s), 12.50 in/yr (318 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 4,700 ft³/s (133 m³/s) July 2, 1953, gage height, 6.57 ft (2.003 m); maximum gage height, 8.27 ft (2.521 m) Dec. 26, 1969, backwater from ice; minimum discharge, 118 ft³/s (3.34 m³/s) Dec. 2, 1963 (discharge measurement); minimum gage height, 1.79 ft (0.546 m) July 24, 1964.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,430 ft³/s (40.5 m³/s) Sept. 23, gage height, 3.83 ft (1.167 m); maximum gage height, 7.53 ft (2.295 m) Nov. 11, backwater from ice; minimum discharge, 197 ft³/s (5.58 m³/s) July 10, gage height, 1.93 ft (0.588 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DAY	MEAN VALUES											
	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	289	564	280	275	265	265	370	378	470	256	274	523
2	308	597	270	270	265	260	380	369	417	243	254	471
3	313	527	310	270	265	260	390	352	365	246	240	414
4	316	469	360	265	270	260	406	342	322	228	246	511
5	315	442	410	265	270	255	436	339	300	238	277	461
6	306	471	380	260	275	255	548	329	325	235	255	384
7	302	459	360	260	275	255	726	323	355	234	288	339
8	298	431	340	265	275	255	913	319	467	223	348	312
9	308	407	330	270	275	255	1190	314	437	213	340	491
10	313	400	320	275	275	260	1140	313	373	206	303	438
11	316	390	310	280	275	260	897	370	328	219	292	377
12	314	385	300	285	275	265	732	370	298	252	270	343
13	312	380	300	290	275	270	650	392	289	297	260	422
14	307	375	295	300	275	275	572	327	290	333	252	609
15	302	370	295	310	270	280	528	309	286	391	253	581
16	298	360	290	315	265	290	495	298	268	316	240	495
17	295	355	285	320	265	300	478	286	255	285	234	439
18	292	350	280	320	270	310	512	285	256	266	234	406
19	304	348	280	320	275	320	557	278	286	303	237	382
20	352	351	280	320	280	320	584	278	289	426	294	374
21	375	369	275	310	280	320	573	280	273	548	331	866
22	693	376	275	310	280	320	555	266	260	542	303	1330
23	1120	379	275	305	285	320	530	260	247	450	268	1370
24	1050	375	275	300	285	325	491	255	237	351	279	1020
25	813	353	275	295	280	330	456	250	229	328	509	812
26	630	364	280	290	275	330	433	246	268	333	587	717
27	546	388	280	285	275	335	419	243	290	300	694	632
28	532	369	280	280	275	340	402	261	282	277	680	556
29	514	370	280	275	270	345	391	254	274	322	547	502
30	482	320	280	270	---	350	388	266	267	323	467	464
31	460	---	275	265	---	360	---	355	---	305	419	---
TOTAL	13375	12094	9325	8920	7940	9145	17142	9507	9303	9489	10475	17041
MEAN	431	403	301	288	274	295	571	307	310	306	338	568
MAX	1120	597	410	320	285	360	1190	392	470	548	694	1370
MIN	289	320	270	260	265	255	370	243	229	206	234	312
CFSM	1.11	1.04	.77	.74	.70	.76	1.47	.79	.80	.79	.87	1.46
IN.	1.28	1.16	.89	.85	.76	.87	1.64	.91	.89	.91	1.00	1.63

CAL YR 1979 TOTAL 159925 MEAN 438 MAX 2450 MIN 205 CFMS 1.13 IN 15.29
WTR YR 1980 TOTAL 133756 MEAN 365 MAX 1370 MIN 206 CFMS .94 IN 12.79

STREAMS TRIBUTARY TO LAKE MICHIGAN
04063000 MENOMINEE RIVER NEAR FLORENCE, WI

LOCATION.--Lat 45°57'04", long 88°11'13", in NE 1/4 sec.16, T.41 N., R.31 W., Michigan Meridian, Iron County, Hydrologic Unit 04030108, on left bank 0.5 mi (0.8 km) downstream from confluence of Brule and Michigamme Rivers, 3.5 mi (5.6 km) northeast of Florence, and at mile 117 (188 km).

DRAINAGE AREA.--1,780 mi² (4,610 km²).

PERIOD OF RECORD.--January 1914 to current year. Published as "at Twin Falls near Iron Mountain, MI" 1914-57. Records published for both sites July 1950 to September 1957.

REVISED RECORDS.--WSP 1707: 1953(M). WSP 1911: Drainage area of former site.

GAGE.--Water-stage recorder. Datum of gage is 1,119.23 ft (341.141 m) National Geodetic Vertical Datum of 1929 (levels by Owen Ayres Associates). Prior to July 1950, headwater and tailwater gages and generation data entered hourly in daily log sheets by company employees at the Twin Falls Powerplant of Wisconsin Electric Power Co., 10.4 mi (16.7 km) downstream.

REMARKS.--Records excellent. Prior to July 1950, discharge determined from powerplant records computed on basis of load-discharge rating of hydroelectric units and rating for tailwater gage during periods of spill. Rating developed by Geological Survey. Flow regulated by powerplants, Michigamme Reservoir, capacity, 119,950 acre-ft (148 hm³), and Peavy Pond, capacity, 33,860 acre-ft (41.7 km³), on Michigamme River, and by many smaller reservoirs above station. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--66 years, 1,798 ft³/s (50.92 m³/s).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 19,500 ft³/s (552 m³/s) Apr. 26, 1960, gage height, 14.15 ft (4.313 m); minimum, 38 ft³/s (1.08 m³/s) Aug. 21, 1962, Sept. 26, 1975; minimum gage height, 1.18 ft (0.360 m) Aug. 21, 1962, Nov. 4, 1965; minimum daily discharge, 57 ft³/s (1.61 m³/s) Sept. 26, 1975.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 5,840 ft³/s (165 m³/s) Sept. 23, 24, gage height, 7.38 ft (2.249 m); minimum, 226 ft³/s (6.40 m³/s) Jan. 4, gage height, 1.94 ft (0.591 m); minimum daily, 561 ft³/s (15.9 m³/s) May 25.

DAY	DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980											
	OCT	NOV	DEC	JAN	FEB	MEAN VALUES		MAY	JUN	JUL	AUG	SEP
						MAR	APR					
1	1210	4160	2000	1790	2040	1140	785	1810	1800	1260	1700	1450
2	1370	4320	1900	1850	1980	1160	1530	1780	2640	1300	1440	1750
3	1330	4250	1890	1790	2060	1560	1570	1750	3800	1290	1490	1790
4	1280	3900	1890	1940	2030	1560	1530	1730	3370	652	1490	1640
5	1220	3240	1760	1860	1880	1700	1630	1820	2530	759	1180	1960
6	723	3240	2250	1780	1970	1790	1550	1940	2180	657	1440	1790
7	840	3190	1830	1810	1900	1670	1540	1920	1170	1210	1290	1340
8	1330	2690	2180	1980	1440	927	1520	1820	1580	1450	1630	1660
9	1230	2860	2130	1850	1320	1090	2850	1930	2450	1130	772	2210
10	1250	2830	1830	1870	1230	1460	3360	1600	2420	1070	847	2600
11	1370	2610	1980	1900	1510	1530	2780	1690	2650	1080	1350	2710
12	1200	2670	2350	1810	1910	1490	2270	1540	2400	689	1150	2350
13	681	2340	2280	1750	1890	1400	2210	1310	2360	766	1340	2530
14	771	2060	2340	1710	1850	1470	2140	1730	2130	1430	1560	2850
15	1560	2080	2260	1770	1790	1340	1700	1410	1790	1660	1570	3210
16	1590	2190	2160	1930	1470	1270	1740	1270	1610	1810	1300	2710
17	1080	2240	2440	2130	1400	1560	1660	1280	1720	1990	1140	2290
18	1450	2010	1790	2090	1600	1390	1690	1140	1770	1980	1180	1990
19	1320	2230	2010	2020	1970	1730	1280	1320	1770	1830	1250	1530
20	927	1550	1990	1770	1910	1500	2270	1490	1800	1810	1200	1290
21	846	1880	1940	1950	1870	1480	2170	1270	1220	2200	1230	3220
22	2020	1930	1850	2010	1880	999	2940	1330	1380	2320	1590	5230
23	4120	1970	1670	2080	1880	852	2810	1330	1480	2510	863	5740
24	4800	2140	1760	2060	1600	1010	1860	1020	1350	2290	986	5420
25	4650	2180	1720	1980	1900	974	1970	561	1290	1950	1490	4660
26	4170	2000	1800	1830	1700	966	1800	773	1600	1880	1030	3340
27	3540	2450	1920	1820	1810	1020	1770	1300	1420	1790	2220	3100
28	3560	2310	2010	1890	1660	805	1830	1100	974	1830	2260	3150
29	3450	2350	2180	1970	1740	936	1750	1110	759	1760	2450	3120
30	2950	2000	1900	2030	---	773	1810	1090	1640	1760	2130	3040
31	3010	---	1840	1950	---	792	---	1140	---	2040	1960	---
TOTAL	60848	77870	61850	58970	51190	39344	58315	44304	57053	48153	44528	81670
MEAN	1963	2596	1995	1902	1765	1269	1944	1429	1902	1553	1436	2722
MAX	4800	4320	2440	2130	2060	1790	3360	1940	3800	2510	2450	5740
MIN	681	1550	1670	1710	1230	773	785	561	759	652	772	1290
CAL YR 1979	TOTAL	879752	MEAN	2410	MAX	9000	MIN	681				
WTR YR 1980	TOTAL	684095	MEAN	1869	MAX	5740	MIN	561				

STREAMS TRIBUTARY TO LAKE MICHIGAN

04063700 POPPLE RIVER NEAR FENCE, WI
(HYDROLOGIC BENCHMARK STATION)

LOCATION.--Lat 45°45'49", long 88°27'47", in NW 1/4 sec.23, T.38 N., R.16 E., Florence County, Hydrologic Unit 04030108, on left bank 20 ft (6 m) upstream from bridge on U. S. Forest Service Road 2159, 1.8 mi (2.9 km) downstream from Mud Creek, 2.6 mi (4.2 km) northwest of Fence, and 11.5 mi (18.5 km) upstream from mouth.

DRAINAGE AREA.--139 mi² (360 km²), revised.

WATER-DISCHARGE RECORDS

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

REVISED RECORDS.--WRD WI-76-1: 1972(M).

GAGE.--Water-stage recorder. Datum of gage is 1,406.16 ft (428.598 m) National Geodetic Vertical Datum of 1929. Prior to June 18, 1964, nonrecording gage at same site and datum.

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

AVERAGE DISCHARGE.--17 years, 124 ft³/s (3.512 m³/s) 12.11 in/yr (308 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,640 ft³/s (46.4 m³/s) Apr. 25, 1979, gage height, 4.52 ft (1.378 m); minimum, 5.9 ft³/s (0.167 m³/s) Oct. 28, 1976, gage height, 0.75 ft (0.229 m), result of temporary storage from beaver dam.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 300 ft³/s (8.5 m³/s) and maximum (*):

DATE	TIME	DISCHARGE (ft ³ /s) (m ³ /s)	GAGE HEIGHT (ft) (m)	DATE	TIME	DISCHARGE (ft ³ /s) (m ³ /s)	GAGE HEIGHT (ft) (m)
Oct. 24	1500	*555	15.7	Sept. 3	2300	419	11.9
Apr. 9	1800	510	14.4	Sept. 26	0100	550	15.6
						2.72	0.829
						3.00	0.914

minimum daily discharge, 32 ft³/s (0.906 m³/s) Mar. 11, occurred during a period of ice effect.

RATING TABLE (gage height, in feet, and discharge, in cubic feet per second).
(Stage-discharge relation affected by ice Nov. 29 to Dec. 2, Dec. 12-14, 16-17, Jan. 2-13, Jan. 15 to Feb. 21, and Feb. 21 to Mar. 15.)

1.2	30	1.9	145
1.3	39	2.4	295
1.5	65	3.0	550

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DAY	OCT	NOV	DEC	MEAN VALUES								AUG	SEP
				JAN	FEB	MAR	APR	MAY	JUN	JUL			
1	57	252	120	60	41	34	110	183	138	146	76	348	
2	64	252	110	58	44	34	120	177	142	121	71	372	
3	68	248	100	56	43	36	126	167	137	95	64	391	
4	78	234	96	54	41	40	122	158	120	76	58	417	
5	76	209	96	54	40	39	141	151	109	66	68	407	
6	72	202	96	54	39	38	167	137	144	59	74	381	
7	69	187	94	52	39	42	237	128	177	54	76	346	
8	66	174	94	52	38	42	352	123	189	62	92	310	
9	68	181	94	52	39	38	484	117	191	54	99	308	
10	68	187	91	52	40	35	503	111	175	43	95	295	
11	67	174	90	54	39	32	492	122	151	42	104	265	
12	68	125	88	60	38	39	467	126	130	56	133	236	
13	69	116	86	62	38	50	429	122	111	81	143	235	
14	68	114	82	65	38	52	371	116	97	97	139	263	
15	71	112	78	76	39	50	318	108	102	91	128	282	
16	73	133	70	92	42	50	269	102	110	81	115	272	
17	71	108	64	100	44	50	234	96	109	74	111	245	
18	66	117	63	98	45	49	225	93	97	70	100	226	
19	65	115	63	94	47	55	239	90	110	88	96	209	
20	71	127	64	86	50	66	290	85	131	166	124	203	
21	129	138	66	80	52	67	278	83	126	224	128	316	
22	285	145	68	74	50	62	294	77	117	235	117	395	
23	474	149	73	68	48	61	292	70	104	220	100	492	
24	542	149	77	64	45	58	283	63	85	197	93	529	
25	523	140	68	58	44	58	268	58	72	174	118	538	
26	445	149	75	54	42	64	250	53	123	146	185	550	
27	384	154	76	50	41	71	228	55	208	120	248	534	
28	341	147	72	43	40	68	209	68	227	101	283	491	
29	304	140	64	41	36	76	193	73	200	104	285	438	
30	273	130	63	38	---	85	188	82	169	89	275	376	
31	249	---	61	39	---	100	---	124	---	83	266	---	
TOTAL	5324	4808	2502	1940	1222	1641	8179	3318	4101	3315	4064	10670	
MEAN	172	160	80.7	62.6	42.1	52.9	273	107	137	107	131	356	
MAX	542	252	120	100	52	100	503	183	227	235	285	550	
MIN	57	108	61	38	36	32	110	53	72	42	58	203	
CFSM	1.24	1.15	.58	.45	.30	.38	1.96	.77	.99	.77	.94	2.56	
IN.	1.42	1.29	.67	.52	.33	.44	2.19	.89	1.10	.89	1.09	2.86	
CAL YR 1979	TOTAL	68056	MEAN 186	MAX 1610	MIN 41	CFSM 1.34	IN 18.21						
WTR YR 1980	TOTAL	51084	MEAN 140	MAX 550	MIN 32	CFSM 1.01	IN 13.67						

STREAMS TRIBUTARY TO LAKE MICHIGAN
04063700 POPPLE RIVER NEAR FENCE, WI--CONTINUED
(HYDROLOGIC BENCH-MARK STATION)

WATER-QUALITY RECORDS

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

PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: June 1964 to current year.

INSTRUMENTATION.--Temperature recorder since June 1, 1964.

REMARKS.--Temperature recorder inoperative part of year.

EXTREMES FOR PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: Maximum, 29.0°C July 1, 2, 1970; minimum, 0.0°C on many days during winter periods.

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURES: Maximum observed, 26.0°C July 12, 13; minimum observed, 0.0°C on many days during winter period.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH FIELD (UNITS)	TEMPER- ATURE, WATER (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION)	COLI- FORM, TOTAL, IMMED. (COLS. PER 100 ML)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	STREP- TOCOCCHI FECAL, KF AGAR (COLS. PER 100 ML)	HARD- NESS (MG/L AS CACO3)
OCT , 1979											
24...	1620	555	110	8.7	3.0	10.6	82	E67	84	320	48
NOV											
21...	0815	135	155	7.9	2.0	--	--	460	20	K4	75
DEC											
07...	0845	94	170	7.7	.0	12.0	86	--	K7	K3	79
JAN , 1980											
10...	0930	52	220	7.5	.0	10.4	75	<1	K16	K1	120
FEB											
06...	0915	39	250	7.9	.0	10.3	74	K14	K16	<1	120
MAR											
12...	0930	34	275	7.7	.0	11.2	81	K2	K22	<1	120
APR											
17...	0915	233	100	7.6	3.0	13.1	102	--	--	--	37
MAY											
15...	0815	108	120	7.5	8.0	10.3	91	130	38	K7	60
JUN											
25...	0930	72	140	7.8	24.0	6.1	75	25	45	150	69
JUL											
24...	1500	194	125	7.3	21.0	7.9	92	K5	29	79	63
AUG											
21...	0745	130	130	7.1	20.0	6.6	76	E4	83	190	70
SEP											
25...	0800	535	70	6.3	10.0	8.6	80	770	28	55	39

DATE	HARD- NESS, NONCAR- BONATE (MG/L AS CAC03)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	PERCENT SODIUM	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LINITY (MG/L AS CAC03)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)
OCT , 1979											
24...	14	10	5.5	1.1	5	.1	1.1	34	6.8	2.4	.1
NOV											
21...	5	17	7.8	1.3	6	.1	.7	70	7.0	1.6	.0
DEC											
07...	10	17	8.8	1.4	7	.1	.7	69	5.3	1.7	.0
JAN , 1980											
10...	6	25	13	1.8	6	.1	.9	110	8.3	1.7	.1
FEB											
06...	6	25	13	2.0	6	.1	1.0	110	8.6	2.7	.1
MAR											
12...	0	25	13	2.4	4	.1	1.1	120	8.7	2.9	.1
APR											
17...	4	8.3	4.0	.9	5	.1	1.2	33	6.5	1.3	.0
MAY											
15...	10	13	6.8	1.3	4	.1	.6	50	5.0	1.4	.1
JUN											
25...	3	15	7.7	1.4	4	.1	.5	66	5.0	4.6	.1
JUL											
24...	13	14	6.7	1.1	4	.1	.5	50	4.7	2.2	.1
AUG											
21...	8	16	7.4	1.1	3	.1	.4	62	5.0	1.7	.1
SEP											
25...	18	8.6	4.3	.9	5	.1	.7	21	6.7	2.1	.1

K RESULTS BASED ON COLONY COUNT OUTSIDE THE ACCEPTABLE RANGE (NON-IDEAL COLONY COUNT).

E ESTIMATED.

STREAMS TRIBUTARY TO LAKE MICHIGAN
04063700 POPPLE RIVER NEAR FENCE, WI--CONTINUED

WATER-QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	SILICA, DIS- SOLVED (MG/L AS SI02)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)	SOLIDS, DIS- SOLVED (TONS PER DAY)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHORUS, ORTHOPH OSPHATE DISSOL. (MG/L AS P)
OCT , 1979									
24...	8.7	94	59	.13	141	.05	.54	.030	--
NOV									
21...	11	98	89	.13	35.7	.09	.10	.010	.000
DEC									
07...	12	109	89	.15	27.7	.11	.09	.020	.000
JAN , 1980									
10...	15	133	133	.18	18.7	.21	.16	.070	.000
FEB									
06...	15	143	134	.19	15.1	.12	.14	.020	.000
MAR									
12...	14	144	141	.20	13.2	.22	.28	.020	.020
APR									
17...	5.8	46	--	.06	28.9	.08	.08	.030	.000
MAY									
15...	4.0	100	63	.14	29.2	.00	.08	.010	.000
JUN									
25...	5.1	140	79	.19	27.2	.16	.02	.020	.010
JUL									
24...	9.3	146	69	.20	76.5	.03	.03	.030	.010
AUG									
21...	10	114	80	.16	40.0	.09	.07	.030	.000
SEP									
25...	9.0	114	46	.16	165	.89	.32	.030	.000

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	ARSENIC TOTAL (UG/L AS AS)	SUS- PENDE TOTAL (UG/L AS AS)	ARSENIC DIS- SOLVED (UG/L AS AS)	TOTAL RECOV- ERABLE (UG/L AS BA)	BARIUM, PENDE RECOV- ERABLE (UG/L AS BA)	BARIUM, DIS- SOLVED (UG/L AS BA)	LITHIUM, DIS- SOLVED (UG/L AS BE)	TOTAL RECOV- ERABLE (UG/L AS CD)	CADMIUM DIS- SOLVED (UG/L AS CD)
APR , 1980											
17...	0915	233	--	--	1	<50	<30	20	<1	0	3
AUG											
21...	0745	130	1	0	1	<50	--	10	2	0	2

DATE	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR)	CHRO- MIUM, SUS- PENDE RECOV. (UG/L AS CR)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR)	COBALT, DIS- SOLVED (UG/L AS CO)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU)	COPPER, DIS- SOLVED (UG/L AS CU)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	IRON, SUS- PENDE RECOV- ERABLE (UG/L AS FE)	IRON, DIS- SOLVED (UG/L AS FE)	LEAD, TOTAL RECOV- ERABLE (UG/L AS PB)	LEAD, SUS- PENDE RECOV- ERABLE (UG/L AS PB)
APR , 1980											
17...	10	3	7	<3	1	<10	410	160	250	1	1
AUG											
21...	10	5	5	<3	2	<10	700	150	550	2	--

DATE	LEAD, DIS- SOLVED (UG/L AS PB)	LITHIUM DIS- SOLVED (UG/L AS LI)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)	MANGA- NESE, SUS- PENDE RECOV. (UG/L AS MN)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	MERCURY TOTAL RECOV- ERABLE (UG/L AS HG)	MERCURY DIS- SOLVED (UG/L AS HG)	MOLYB- DENUM, DIS- SOLVED (UG/L AS MO)	SELE- NIUM, TOTAL (UG/L AS SE)	SELE- NIUM, SUS- PENDE TOTAL (UG/L AS SE)
APR , 1980										
17...	0	<4	80	50	31	--	.1	<10	--	--
AUG										
21...	<10	<4	100	50	52	<.1	<.1	<10	0	0

DATE	SELE- NIUM, DIS- SOLVED (UG/L AS SE)	SILVER, TOTAL RECOV- ERABLE (UG/L AS AG)	SILVER, SUS- PENDE RECOV- ERABLE (UG/L AS AG)	SILVER, DIS- SOLVED (UG/L AS AG)	STRON- TIUM, DIS- SOLVED (UG/L AS SR)	VANA- DIUM, DIS- SOLVED (UG/L AS V)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN)	ZINC, SUS- PENDE RECOV- ERABLE (UG/L AS ZN)	ZINC, DIS- SOLVED (UG/L AS ZN)	CYANIDE TOTAL (MG/L AS CN)
APR , 1980										
17...	0	0	0	0	12	<6.0	20	20	<4	.00
AUG										
21...	0	0	0	0	21	<6.0	10	2	8	.00

STREAMS TRIBUTARY TO LAKE MICHIGAN

04063700 POPPLE RIVER NEAR FENCE, WI--CONTINUED

WATER-QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	GROSS ALPHA, DIS- SOLVED (UG/L AS U-NAT)	GROSS ALPHA, SUSP. TOTAL (UG/L AS U-NAT)	GROSS ALPHA, DIS- SOLVED (PCI/L AS U-NAT)	GROSS ALPHA, SUSP. TOTAL (PCI/L AS U-NAT)	GROSS BETA, DIS- SOLVED (PCI/L AS CS-137)	GROSS BETA, SUSP. TOTAL (PCI/L AS CS-137)	GROSS BETA, DIS- SOLVED (PCI/L AS YT-90)	GROSS BETA, SUSP. TOTAL (PCI/L AS YT-90)	RADIUM 226, DIS- SOLVED, RADON METHOD (PCI/L)	URANIUM DIS- SOLVED, EXTRAC- TION (UG/L)
SEP , 1980 25...	0800	535	<1.4	<.4	<1.0	<.3	2.7	<.4	2.6	<.4	.06	.13
DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	PCB, TOTAL (UG/L)	NAPH- THA- LENES, POLY- CHLOR. TOTAL (UG/L)		ALDRIN, TOTAL (UG/L)	CHLOR- DANE, TOTAL (UG/L)	DDD, TOTAL (UG/L)	DDE, TOTAL (UG/L)	DDT, TOTAL (UG/L)	DI- AZINON, TOTAL (UG/L)	
SEP , 1980 25...	0800	535	.0	.00	.00	.00	.0	.00	.00	.00	.00	
DATE	DI- ELDRIN TOTAL (UG/L)	ENDO- SULFAN, TOTAL (UG/L)	ENDRIN, TOTAL (UG/L)	ETHION, TOTAL (UG/L)	HEPTA- CHLOR, TOTAL (UG/L)	HEPTA- CHLOR EPOXIDE TOTAL (UG/L)	LINDANE TOTAL (UG/L)	MALA- THION, TOTAL (UG/L)	METH- OXY- CHLOR, TOTAL (UG/L)	METHYL PARA- THION, TOTAL (UG/L)		
SEP , 1980 25...	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00		
DATE	METHYL TRI- THION, TOTAL (UG/L)	MIREX, TOTAL (UG/L)	PARA- THION, TOTAL (UG/L)	PER- THANE TOTAL (UG/L)	TOX- APHENE, TOTAL (UG/L)	TOTAL TRI- THION (UG/L)	2,4-D, TOTAL (UG/L)	2,4,5-T TOTAL (UG/L)	SILVEX, TOTAL (UG/L)			
SEP , 1980 25...	.00	.00	.00	.00	0	.00	.00	.00	.00			
DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	TEMPER- ATURE, WATER (DEG C)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	SEDI- MENT, SUS- PENDE (MG/L)	SEDI- MENT DIS- CHARGE, SUS- PENDE (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM					
OCT , 1979 24...	1620	555	3.0	110	1	1.5	100					
NOV 21...	0815	135	2.0	155	14	5.1	79					
DEC 07...	0845	94	.0	170	1	.25	100					
JAN , 1980 10...	0930	52	.0	220	1	.14	80					
FEB 06...	0915	39	.0	250	13	1.4	63					
MAR 12...	0930	34	.0	275	1	.09	100					
APR 17...	0915	233	3.0	100	4	2.5	39					
MAY 15...	0815	108	8.0	120	11	3.2	67					
JUN 25...	0930	72	24.0	140	9	1.7	72					
JUL 24...	1500	194	21.0	125	2	1.0	100					
AUG 21...	0745	130	20.0	130	2	.70	100					
SEP 25...	0800	535	10.0	70	5	7.2	83					

STREAMS TRIBUTARY TO LAKE MICHIGAN
04063700 POPPLE RIVER NEAR FENCE, WI--CONTINUED

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DAY	MAX OCTOBER	MIN OCTOBER	MAX NOVEMBER	MIN NOVEMBER	MAX DECEMBER	MIN DECEMBER	MAX JANUARY	MIN JANUARY	MAX FEBRUARY	MIN FEBRUARY	MAX MARCH	MIN MARCH
1	16.5	14.5	1.0		.0	.0	.0	.0	.0	.0	.0	.0
2	14.5	14.0	1.0		.0	.0	.0	.0	.0	.0	.0	.0
3	14.5	14.0	1.0		.0	.0	.0	.0	.0	.0	.0	.0
4	---	---	1.0		.0	.0	.0	.0	.0	.0	.0	.0
5	---	---	1.0		.0	.0	.0	.0	.0	.0	.0	.0
6	---	---	1.0		.0	.0	.0	.0	.0	.0	.0	.0
7	---	---	1.0		.0	.0	.0	.0	.0	.0	.0	.0
8	---	---	1.0		.0	.0	.0	.0	.0	.0	.0	.0
9	---	---	1.0		.0	.0	.0	.0	.0	.0	.0	.0
10	---	---	1.0		.0	.0	.0	.0	.0	.0	.0	.0
11	---	---	1.0		.0	.0	.0	.0	.0	.0	.0	.0
12	---	---	1.0		.0	.0	.0	.0	.0	.0	.0	.0
13	---	---	1.0		.0	.0	.0	.0	.0	.0	.0	.0
14	---	---	1.0		.0	.0	.0	.0	.0	.0	.0	.0
15	---	---	1.0		.0	.0	.0	.0	.0	.0	.0	.0
16	---	---	1.0		.0	.0	.0	.0	.0	.0	.0	.0
17	---	---	1.0		.0	.0	.0	.0	.0	.0	.0	.0
18	---	---	1.0		.0	.0	.0	.0	.0	.0	.0	.0
19	---	---	1.0		.0	.0	.0	.0	.0	.0	.0	.0
20	---	---	1.0		.0	.0	.0	.0	.0	.0	.0	.0
21	---	---	1.0		.0	.0	.0	.0	.0	.0	.0	.0
22	---	---	1.0		.0	.0	.0	.0	.0	.0	.0	.0
23	---	---	1.0		.0	.0	.0	.0	.0	.0	.0	.0
24	---	---	1.0		.0	.0	.0	.0	.0	.0	.0	.0
25	---	---	1.0		.0	.0	.0	.0	.0	.0	.5	---
26	---	---	1.0		.0	.0	.0	.0	.0	.0	---	---
27	---	---	1.0		.0	.0	.0	.0	.0	.0	---	---
28	---	---	1.0		.0	.0	.0	.0	.0	.0	---	---
29	---	---	1.0		.0	.0	.0	.0	.0	.0	---	---
30	---	---	1.0		.0	.0	.0	.0	---	---	---	---
31	---	---	---		.0	.0	.0	.0	---	---	---	---
MONTH	16.5	14.0	1.0		.0	.0	.0	.0	.0	.0	.5	.0

DAY	MAX APRIL	MIN APRIL	MAX MAY	MIN MAY	MAX JUNE	MIN JUNE	MAX JULY	MIN JULY	MAX AUGUST	MIN AUGUST	MAX SEPTEMBER	MIN SEPTEMBER
1			---	---	---	---	19.5	17.0	20.5	18.0	---	---
2			---	---	---	---	20.5	16.5	20.5	18.5	---	---
3			---	---	---	---	21.5	17.0	20.0	18.0	---	---
4			---	---	---	---	21.5	19.0	20.0	18.0	13.0	---
5			---	---	---	---	21.0	19.0	20.0	17.0	---	---
6			---	---	---	---	20.0	16.0	21.0	18.0	---	---
7			---	---	---	---	24.0	19.0	22.0	20.0	---	---
8			---	---	---	---	23.5	20.5	22.0	21.0	---	---
9			---	---	---	---	24.5	21.0	21.5	19.0	---	---
10			---	---	---	---	25.5	22.0	20.5	19.0	---	---
11			---	---	---	---	26.0	23.0	20.5	18.5	---	---
12			---	---	---	---	25.0	20.0	21.5	20.0	---	---
13			---	---	---	---	21.5	19.5	21.5	21.5	---	---
14			---	---	---	---	21.5	19.5	21.5	21.5	---	---
15			15.0	12.0	---	---	24.5	20.5	21.5	21.0	---	---
16			16.5	13.5	---	---	24.0	21.5	21.0	19.5	---	---
17			16.5	15.0	---	---	23.5	20.0	19.5	18.5	---	---
18			---	---	---	---	23.0	19.5	19.0	18.0	---	---
19			---	---	---	---	22.0	18.5	20.0	18.0	---	---
20			---	---	---	---	22.0	18.5	21.0	20.0	---	---
21			---	---	---	---	19.5	18.0	22.0	21.0	---	---
22			---	---	---	---	19.0	18.0	22.0	20.0	---	---
23			---	---	---	---	19.0	17.0	20.0	18.0	---	---
24			---	---	25.0	23.0	20.0	18.0	20.0	18.0	---	---
25			---	---	25.5	21.0	20.0	19.0	20.5	18.0	---	---
26			---	---	25.0	21.5	19.5	17.0	20.5	20.0	---	---
27			---	---	23.0	16.5	20.5	16.5	21.5	20.5	---	---
28			---	---	18.5	15.5	20.5	18.0	22.0	21.5	---	---
29			---	---	18.0	16.5	20.0	17.0	22.0	21.5	---	---
30			---	---	18.0	15.5	20.0	18.0	22.0	21.5	---	---
31			---	---	---	---	20.0	18.0	22.0	22.0	---	---
MONTH			16.5	12.0	25.5	15.5	26.0	16.0	22.0	17.0	13.0	

STREAMS TRIBUTARY TO LAKE MICHIGAN

04066000 MENOMINEE RIVER NEAR PEMBINE, WI

LOCATION.--Lat 45°35'56", long 87°46'32", in SW 1/4, sec.16, T. 37 N., R.28 W., Michigan Meridian, Menominee County, MI Hydrologic Unit 04030108, on left bank 0.6 mi (1.0 km) upstream from Pemene Creek, 4.0 mi (6.4 km) west of Nathan, MI, 10.9 mi (17.5 km) southeast of Pembine, and at mile 65.8 (105.9 km).

DRAINAGE AREA.--3,110 mi² (8,050 km²), revised.

PERIOD OF RECORD.--October 1949 to current year. Monthly discharge only for some periods, published in WSP 1307.

REVISED RECORDS.--WSP 1277: 1952.

GAGE.--Water-stage recorder. Altitude of gage is 770 ft (235 m), from river-profile map. Prior to Oct. 28, 1972, at site 0.5 mi (0.8 km) downstream at datum 15 ft (4.6 m) lower.

REMARKS.--Records good except those for winter periods, which are fair. Flow regulated by powerplants and by Michigamme Reservoir, capacity, 119,950 acre-ft (148 hm³), and Peavy Pond, capacity, 33,860 acre-ft (41.7 hm³), on the Michigamme River, and by many smaller reservoirs above station.

AVERAGE DISCHARGE.--31 years, 2,975 ft³/s (84.25 m³/s).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 26,900 ft³/s (762 m³/s) May 8, 1960, gage height, 13.90 ft (4.237 m); minimum, 694 ft³/s (19.7 m³/s) Sept. 3, 1969, gage height, 1.66 ft (0.506 m).

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 9,670 ft³/s (274 m³/s) Sept. 23, gage height, 12.26 ft (3.737 m); minimum daily, 1,050 ft³/s (29.7 m³/s) July 6, 7.

RATING TABLE (gage height, in feet, and discharge, in cubic feet per second).
(Stage-discharge relation affected by ice Nov. 29 to Dec. 3, Dec. 8-19, Dec. 25 to Mar. 25.)

7.0	1,050	10.0	5,090
8.0	2,110	11.0	6,960
9.0	3,460	13.0	11,430

DAY	DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980											
	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1600	5480	2600	2200	2400	1700	2000	3470	2290	1870	2510	3170
2	2120	6410	2300	2300	2200	1600	2290	3340	2660	1980	2420	3800
3	1890	6240	2600	2300	2200	1600	2820	3240	4770	1940	1950	3630
4	1930	6000	2820	2300	2200	1700	3460	3180	4620	1830	1960	3600
5	1820	5410	2690	2200	2300	1800	3430	3150	3990	1440	2520	3880
6	1690	5290	3060	1900	2200	1800	3240	3200	3340	1050	2600	3550
7	1450	4720	3050	1800	2100	1900	3560	3320	3650	1050	2200	3130
8	1420	4730	2800	1900	2000	1700	4450	3010	2710	1660	2100	2880
9	1830	4290	3000	2100	1900	1600	6680	2740	2730	1650	2300	3920
10	2120	4760	2900	2400	1800	1600	8020	2870	3690	1640	2000	4160
11	1850	4050	2600	2200	1800	1700	7750	3000	3680	1440	1800	4260
12	2170	3740	2500	2100	1900	1700	5910	2830	3550	1440	1600	3520
13	1780	3500	3000	2100	2200	1700	5820	2890	3350	1290	1800	3770
14	1530	3230	3000	2300	2200	1800	4990	2700	3530	1390	1800	4810
15	2390	3160	2900	2300	2000	1900	4430	2470	2730	2240	2000	4950
16	2110	3330	2700	2700	1800	1800	3820	2440	2450	2350	1900	4790
17	2100	3020	2400	3100	1600	1600	3520	2240	2160	2380	2000	3890
18	2060	3170	2700	3100	1800	1700	3380	1790	2230	2720	1800	3810
19	2040	3360	3000	2900	2000	2000	3530	2310	2330	2590	1900	3480
20	1950	2680	2780	2800	2100	2400	3880	2270	2740	2780	1800	2860
21	1540	2660	2880	2800	2100	2300	3900	2180	2500	3230	1750	3970
22	1980	3350	2830	2900	2000	1900	4900	2260	2330	4010	1740	8040
23	5370	3370	2530	2600	1900	1800	4920	2270	2230	3580	1720	9530
24	7690	3470	2600	2600	1800	1700	4060	1520	2040	3450	1450	9130
25	7900	3470	2600	2500	1800	1700	3950	1330	2060	3410	2060	8640
26	7750	3440	2600	2500	1900	1730	3680	1770	1890	2780	2600	6430
27	6230	3670	2400	2300	2000	1740	3590	1470	1960	2570	2970	5920
28	6170	3620	2400	2300	1900	1470	3290	1520	1670	2430	4710	5680
29	5750	3400	2400	2300	1800	1790	3480	1420	1890	2590	4260	5000
30	5450	3000	2400	2300	---	1710	3480	1700	1890	2660	4360	5260
31	4710	---	2400	2500	---	2010	---	2020	---	2570	4110	---
TOTAL	98390	120020	83440	74600	57900	55150	126240	75920	83660	70010	72690	143460
MEAN	3174	4001	2692	2406	1997	1779	4208	2449	2789	2258	2345	4782
MAX	7900	6410	3060	3100	2400	2400	8020	3470	4770	4010	4710	9530
MIN	1420	2660	2300	1800	1600	1470	2000	1330	1670	1050	1450	2860
CAL YR 1979 TOTAL	1392750	MEAN	3816	MAX	17100	MIN	1400					
WTR YR 1980 TOTAL	1061480	MEAN	2900	MAX	9530	MIN	1050					

NOTE.--No gage-height record Feb. 18 to Mar. 20.

STREAMS TRIBUTARY TO LAKE MICHIGAN
04067000 MENOMINEE RIVER BELOW KOSS, MI

LOCATION.--Lat 45°21'16", long 87°38'55", in sec.9, T.34 N., R.27 W., Michigan Meridian, Menominee County, Hydrologic Unit 04030108, on left bank at powerplant of Wisconsin Public Service Corp., 0.5 mi (0.8 km) upstream from Little Cedar River, 3.6 mi (5.8 km) southeast of Koss, and at mile 24.7 (39.7 km).

DRAINAGE AREA.--3,730 mi² (9,660 km²), revised.

PERIOD OF RECORD.--July 1907 to March 1909 (published as "at Koss"), July 1913 to September 1980 (discontinued).

GAGE.--Headwater and tailwater gages and generation data entered hourly in daily log sheet by company employees. Prior to June 1913, chain gage on railroad bridge 4 mi (6.4 km) upstream.

REMARKS.--Daily discharges computed on basis of average daily load and load-discharge rating of combined hydroelectric units. Flow regulated by powerplants, and by Michigamme Reservoir, capacity, 119,950 acre-ft (148 hm³), and Peavy Pond, capacity, 33,860 acre-ft (41.7 hm³) on Michigamme River, and by many smaller reservoirs above station.

COOPERATION.--Records of daily discharge furnished by Wisconsin Public Service Corp. since 1913.

AVERAGE DISCHARGE.--68 years (water years 1908, 1914-80), 3,153 ft³/s (89.29 m³/s).

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 33,000 ft³/s (935 m³/s) May 10, 1960; minimum daily, 162 ft³/s (4.59 m³/s) Sept. 15, 1931.

EXTREMES FOR CURRENT YEAR.--Maximum daily discharge, 10,700 ft³/s (303 m³/s) Apr. 12; minimum daily, 1,020 ft³/s (28.9 m³/s) July 8.

DAY	DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980											
	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1800	5310	3830	2740	2820	2060	2670	4150	3200	2210	2330	4460
2	2080	6620	2290	2440	2670	1800	3180	4150	3050	1910	2370	3070
3	2290	7220	1970	2840	2500	1720	3790	3930	4130	2140	2120	3930
4	2010	6760	2930	2460	2400	1760	3310	3770	5120	1890	2250	3830
5	2100	6810	3370	2540	2560	1930	3980	3330	4910	1840	2610	3860
6	1950	6150	3750	2420	2590	2140	4260	3410	4270	1530	2990	3820
7	1760	5990	2870	1460	2400	1950	4140	3070	4340	1340	2350	3400
8	1930	5500	2730	1520	2420	2230	4690	3160	4330	1020	2420	2930
9	1840	4900	2650	1970	2250	1800	7460	3180	3780	1630	2560	3420
10	1890	5270	3260	2330	1720	1720	9690	2740	3050	1800	2160	4870
11	2120	5110	3420	2670	1950	1720	10300	3280	4300	1250	2010	4680
12	2060	4800	3860	2420	1990	1950	10700	3240	4260	1570	1870	4660
13	2200	4040	2480	2310	2120	1840	7450	3190	3960	1530	2040	3530
14	1700	3180	2860	2520	2440	1950	6720	3260	3490	1550	2120	4260
15	1950	3490	3180	2800	2500	2100	5780	2820	3510	1890	2250	5520
16	2820	3240	3070	3050	2310	2010	5250	2760	3010	2270	2120	5390
17	2080	3670	2940	3220	1930	2010	4410	2350	2630	2440	2230	5330
18	2120	3120	2520	4010	1870	1550	3840	2650	2560	2440	2060	3680
19	2230	3330	3240	3750	2040	2290	3710	2100	2760	2650	2080	3910
20	1890	3430	3540	3570	2520	2780	3820	2740	3120	2820	1910	3420
21	1890	2930	2850	3200	2480	2840	4890	2460	3250	3050	1870	3310
22	2230	3430	3010	3140	2540	2780	5050	2460	2620	3720	1910	5700
23	4340	4040	2990	3050	2500	2060	6160	2370	2650	4650	1890	8250
24	6690	3720	2670	2630	2310	1930	5380	2270	2440	3300	1590	9460
25	8450	4030	2650	2950	2290	1870	4910	1460	2270	3240	1840	9330
26	8940	4520	2840	2690	2100	1890	4710	1340	2160	3530	2590	8800
27	8750	4730	2610	2840	2330	2100	3890	2230	2230	2710	3090	6830
28	7080	5120	3100	2540	2440	2120	3820	1890	1930	2120	4180	6300
29	6860	4390	2740	2630	2330	1930	3790	1700	2140	2610	5250	6410
30	6510	3220	2990	2560	---	1970	4200	1890	2370	2370	5210	5040
31	4950	---	2970	2610	---	2330	---	2100	---	2880	4670	---
TOTAL	107510	138070	92180	83900	67320	63130	155950	85450	97840	71900	78940	151400
MEAN	3468	4602	2974	2706	2321	2036	5198	2756	3261	2319	2546	5047
MAX	8940	7220	3860	4010	2820	2840	10700	4150	5120	4650	5250	9460
MIN	1700	2930	1970	1480	1720	1550	2670	1340	1930	1020	1590	2930
CAL YR 1979	TOTAL	1664770	MEAN	4561	MAX	23800	MIN	1570				
WTR YR 1980	TOTAL	1193590	MEAN	3261	MAX	10700	MIN	1020				

STREAMS TRIBUTARY TO LAKE MICHIGAN

04067500 MENOMINEE RIVER NEAR MC ALLISTER, WI
(NATIONAL STREAM-QUALITY ACCOUNTING NETWORK STATION)

LOCATION.--Lat 45 19'33", long 87 39'48", in SW 1/4 SE 1/4 sec.17, T.33 N., R.23 E., Marinette County, Hydrologic Unit 04030108, on right bank 85 ft (26 m) downstream from bridge on County Highway JJ, 2.9 mi (4.7 km) downstream from Grand Rapids Dam, 2.6 mi (4.2 km) east of McAllister, 1.9 mi (3.1 km) downstream from Little Cedar River, and at mile 22.6 (36.4 km).

DRAINAGE AREA.--3,930 mi² (10,200 km²), revised.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--March 1945 to September 1961; October 1961 to September 1979, miscellaneous measurements and peaks only; October 1979 to September 1980.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 622.20 ft (189.647 m) National Geodetic Vertical Datum of 1929 (Michigan Department of Transportation reference mark). Prior to May 15, 1945, nonrecording gage 1,400 ft (427 m) downstream at same datum; May 16, 1945, to September 1961, water-stage recorder 1,000 ft (305 m) downstream at same datum; October 1961 to September 1979, crest-stage gage 1,100 ft (335 m) downstream at same datum.

REMARKS.--Records good except those for winter period and period of no gage-height record, Oct. 1 to Nov. 15, which are fair. Flow regulated by powerplants, by Michigamme Reservoir, capacity, 119,950 acre-ft (148 hm³), and Peavy Pond, capacity, 33,860 acre-ft (41.7 hm³) on the Michigamme River, and by many smaller reservoirs above station.

AVERAGE DISCHARGE.--17 years (water years 1946-61, 1980), 3,402 ft³/s (96.34 m³/s).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 32,500 ft³/s (920 m³/s) May 9, 1960, gage height, 20.0 ft (6.096 m), from graph based on gage readings; minimum observed, 538 ft³/s (15.2 m³/s) Oct. 6, 1946, gage height, 7.29 ft (2.222 m).

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 12,500 ft³/s (354 m³/s) Apr. 11, gage height, 14.65 ft (4.465 m); minimum daily 1,350 ft³/s (38.232 m³/s) July 8.

RATING TABLE (gage height, in feet, and discharge, in cubic feet per second).
(Stage-discharge relation affected by ice Nov. 30, Dec. 2-4, 7-9, 13-21, 23, 24, Dec. 26 to Jan. 2, and Jan. 4 to Mar. 30.)

8.6	1,290	11.0	4,700
9.0	1,770	12.0	6,400
9.5	2,430	13.0	8,400
10.0	3,150	14.0	10,800
		15.0	13,600

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DAY	MEAN VALUES											
	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2000	6000	4330	3000	3200	2300	3010	4580	3050	2560	2930	4900
2	2100	7600	2800	2800	3000	2000	3520	4540	3420	2400	2890	3670
3	2600	8200	2400	3080	2800	1900	4300	4440	4230	2340	2670	4310
4	2300	7600	3400	2800	2700	2000	3930	4330	5030	2360	2440	4280
5	2500	7800	3600	2800	2900	2100	4390	4050	5110	2090	3090	4260
6	2200	7000	4040	2700	2900	2400	4740	4080	4490	2040	3550	4240
7	2000	6800	3600	1800	2700	2200	4720	3900	4590	1630	3080	4150
8	2200	6200	3400	1800	2700	2500	5290	3940	4670	1350	2940	3290
9	2100	5600	3100	2200	2600	2000	8410	3960	4380	1590	3030	3800
10	2200	6000	3590	2600	2000	1900	11600	3510	3440	2110	2820	5180
11	2400	5800	4220	3000	2200	1900	12300	3680	4400	1790	2570	4990
12	2400	5400	3810	2800	2200	2200	11400	3840	4310	1600	2200	4950
13	2500	4800	3000	2700	2400	2100	8440	3720	4190	1950	2440	4250
14	2000	3700	3600	2800	2700	2200	7480	3810	3960	1500	2290	4520
15	2200	3900	3800	3100	2800	2300	6520	3520	3820	1970	2710	5990
16	3100	3740	3600	3400	2600	2300	5690	3260	3600	2630	2400	5820
17	2400	3900	3500	3600	2200	2300	5110	2890	3130	2600	2540	5730
18	2400	3660	2900	4500	2100	1900	4670	3200	2880	2830	2350	4420
19	2600	3620	2600	4200	2300	2300	4550	2340	3250	2990	2420	4390
20	2200	3780	4000	4000	2800	3100	4500	3120	3540	3040	2280	4180
21	2200	3390	3400	3600	2800	3100	5320	2850	3900	3430	2150	4100
22	2400	3720	3360	3500	2800	3100	5380	2870	3090	4230	2010	5990
23	5000	4280	3400	3400	2800	2300	6260	2800	3150	4700	2260	9270
24	7800	4200	3100	3000	2600	2200	5770	2570	2830	3810	1980	10800
25	9600	4350	3290	3300	2400	2100	5430	2310	2850	3710	1610	10500
26	10000	4640	3100	3000	2400	2100	4910	1360	2520	3910	2660	9670
27	9800	4770	3200	3200	2600	2400	4360	2250	2600	3580	3510	7690
28	8000	5190	2900	2900	2600	2400	4450	2350	2290	2440	4680	6770
29	7800	4860	2900	2900	2600	2200	4410	1970	2400	2940	5650	6590
30	7400	4000	2900	2900	---	2200	4560	2000	2660	2890	5500	5550
31	6800	---	3000	2900	---	2480	---	2250	---	3110	5030	---
TOTAL	123200	154500	103840	94280	75400	70480	175420	100290	107780	82120	90680	168250
MEAN	3974	5150	3350	3041	2600	2274	5847	3235	3593	2649	2925	5608
MAX	10000	8200	4330	4500	3200	3100	12300	4580	5110	4700	5650	10800
MIN	2000	3390	2400	1800	2000	1900	3010	1360	2290	1350	1610	3290
WTR YR 1980	TOTAL	1346240	MEAN	3678	MAX	12300	MIN	1350				

STREAMS TRIBUTARY TO LAKE MICHIGAN

04067500 MENOMINEE RIVER NEAR MCALLISTER, WI--CONTINUED
(NATIONAL STREAM-QUALITY ACCOUNTING NETWORK STATION)

WATER-QUALITY RECORDS

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

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: June 1979 to current year.

WATER TEMPERATURES: June 1979 to current year.

EXTREMES FOR PERIOD OF DAILY RECORD--

SPECIFIC CONDUCTANCE: Maximum daily, 250 micromhos Mar. 12, 1980; minimum daily, 105 micromhos June 4, 1980.

WATER TEMPERATURES: Maximum daily, 26.0°C July 11, 1980; minimum daily, 0.0°C on many days during winter periods.

EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum daily, 250 micromhos Mar. 12; minimum daily, 105 micromhos June 4.

WATER TEMPERATURES: Maximum daily, 26.0°C July 11; minimum daily, 0.0°C on many days during winter period.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH FIELD (UNITS)	TEMPER- ATURE, WATER (DEG C)	TUR- BID- ITY (NTU)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	STREP- TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)
OCT , 1979										
24...	1245	5440	260	7.0	8.0	3.0	10.4	92	51	72
NOV										
20...	1400	3840	180	8.3	3.5	1.0	10.5	83	21	K5
DEC										
06...	1300	4400	170	8.1	.5	1.0	13.6	99	K4	K7
JAN , 1980										
09...	1330	2600	220	7.8	.0	.20	13.6	98	K10	K1
FEB										
05...	1315	3000	250	7.2	.0	.90	12.2	88	25	K5
MAR										
11...	1330	1800	190	7.9	.0	.25	13.3	96	K11	K5
APR										
16...	1330	5340	200	8.2	4.0	.40	14.0	112	--	--
MAY										
14...	1330	5540	210	7.8	12.0	1.3	9.4	91	K7	K4
JUN										
24...	1330	2670	180	8.0	23.0	1.5	7.3	88	K14	40
JUL										
24...	0915	3480	220	7.4	23.5	2.1	7.6	93	K9	28
AUG										
20...	1410	2500	260	8.1	23.0	1.0	7.9	95	K19	K14
SEP										
24...	1300	10400	250	7.4	13.0	.75	10.0	99	350	220

DATE	HARD- NESS (MG/L AS CACO3)	HARD- NESS, NONCAR- BONATE (MG/L CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	PERCENT SODIUM	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LITY (MG/L AS CACO3)	SULFATE DIS- SOLVED (MG/L AS SO4)
OCT , 1979										
24...	110	15	26	12	2.3	7	.1	1.0	99	11
NOV										
20...	94	0	22	9.6	2.4	5	.1	1.2	147	11
DEC										
06...	100	17	23	11	2.7	9	.1	1.2	86	11
JAN , 1980										
09...	110	12	24	11	2.7	9	.1	1.2	93	14
FEB										
05...	110	15	26	12	2.9	5	.1	1.2	99	16
MAR										
11...	110	12	25	12	4.7	8	.2	1.9	100	15
APR										
16...	92	18	21	9.6	1.8	4	.1	1.3	74	8.9
MAY										
14...	93	10	21	9.9	2.3	5	.1	.9	83	9.6
JUN										
24...	92	4	21	9.5	3.0	7	.1	1.3	88	8.9
JUL										
24...	96	11	22	10	2.7	6	.1	1.0	85	11
AUG										
20...	110	18	25	12	2.4	4	.1	.8	94	10
SEP										
24...	87	14	20	9.0	1.9	4	.1	1.1	73	9.7

K RESULTS BASED ON COLONY COUNT OUTSIDE THE ACCEPTABLE RANGE (NON-IDEAL COLONY COUNT).

STREAMS TRIBUTARY TO LAKE MICHIGAN

04067500 MENOMINEE RIVER NEAR MCALLISTER, WI--CONTINUED

WATER-QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)	SOLIDS, DIS- SOLVED (TONS PER DAY)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N)
OCT , 1979										
24...	3.2	.1	8.0	132	124	.18	1940	.07	.10	.010
NOV										
20...	3.1	.0	8.8	123	148	.17	1270	.16	.19	.050
DEC										
06...	3.2	.0	8.9	132	113	.18	1570	.18	.15	.040
JAN , 1980										
09...	3.0	.1	10	131	123	.18	920	.21	.21	.030
FEB										
05...	3.4	.1	11	143	134	.19	1160	.25	.34	.110
MAR										
11...	3.4	.1	11	141	134	.19	685	.29	.28	.050
APR										
16...	2.4	.1	7.0	106	97	.14	1530	.17	.04	.040
MAY										
14...	2.6	.1	5.4	128	102	.17	1920	.07	.12	.010
JUN										
24...	4.5	.1	5.9	146	108	.20	1050	.06	.19	.050
JUL										
24...	2.6	.1	7.0	147	108	.20	1380	.09	.03	.000
AUG										
20...	2.5	.1	8.5	131	118	.18	884	.09	.07	.020
SEP										
24...	2.5	.1	10	137	99	.19	3850	.14	.12	.020

DATE	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N)	NITRO- GEN, ORGANIC DIS- SOLVED (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO- GEN,NH4 + ORG. SUSP. TOTAL (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC DIS. (MG/L AS N)	NITRO- GEN, DIS- SOLVED (MG/L AS N)	NITRO- GEN, TOTAL (MG/L AS N)	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHORUS, DIS- SOLVED (MG/L AS P)
OCT , 1979										
24...	.010	.93	.31	.94	.62	.32	.42	1.0	.030	.010
NOV										
20...	.050	.48	.73	.53	--	.78	.97	.69	.020	.020
DEC										
06...	.010	.33	.33	.37	.03	.34	.49	.55	.020	.010
JAN , 1980										
09...	.030	.43	.38	.46	.05	.41	.62	.67	.030	.020
FEB										
05...	.340	.21	2.2	.32	.00	2.5	2.8	.57	.020	.020
MAR										
11...	.000	.20	.22	.25	.03	.22	.50	.54	.010	.010
APR										
16...	.010	.46	.66	.50	.00	.67	.71	.67	.030	.020
MAY										
14...	.020	.34	.97	.35	.00	.99	1.1	.42	.030	.000
JUN										
24...	.030	.38	.45	.43	.00	.48	.67	.49	.030	.020
JUL										
24...	.020	.33	.23	.33	.08	.25	.28	.42	.030	.020
AUG										
20...	.020	.30	.29	.32	.01	.31	.38	.41	.050	.030
SEP										
24...	.010	.68	.46	.70	.23	.47	.59	.84	.050	.030

DATE	SILVER, TOTAL RECOV- ERABLE (UG/L AS AG)	CARBON, ORGANIC TOTAL (MG/L AS C)	CARBON, ORGANIC DIS- SOLVED (MG/L AS C)	CARBON, ORGANIC SUS- PENDED (MG/L AS C)	PHYTO- PLANK- TON, TOTAL (CELLS PER ML)	PERI- PHYTON BIOMASS ASH WEIGHT G/SQ M	PERI- PHYTON BIOMASS TOTAL DRY WEIGHT G/SQ M	CHLOR-A PERI- PHYTON CHROMO- GRAPHIC FLUOROM (MG/M2)	CHLOR-B PERI- PHYTON CHROMO- GRAPHIC FLUOROM (MG/M2)	BIOMASS CHLORO- PHYLL RATIO PERI- PHYTON (UNITS)
OCT , 1979										
24...	0	--	7.8	.8	--	--	--	--	--	--
NOV										
20...	--	--	--	.3	300	--	--	--	--	--
DEC										
06...	0	9.1	--	--	--	--	--	--	--	--
JAN , 1980										
09...	--	7.6	--	--	--	--	--	--	--	--
FEB										
05...	0	--	11	.5	--	--	--	--	--	--
MAR										
11...	0	4.8	--	--	250	--	--	--	--	--
APR										
16...	--	8.7	--	--	--	--	--	--	--	--
MAY										
14...	0	--	14	--	2400	1.2	1.6	4.0	.36	101
JUN										
24...	0	--	--	--	3500	--	--	--	--	--
JUL										
24...	--	12	--	--	1900	--	--	--	--	--
AUG										
20...	0	--	--	3.3	650	--	--	--	--	--
SEP										
24...	0	15	--	--	160	--	--	--	--	--

STREAMS TRIBUTARY TO LAKE MICHIGAN
04067500 MENOMINEE RIVER NEAR MCALLISTER, WI--CONTINUED

WATER-QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	ARSENIC TOTAL (UG/L AS AS)	ARSENIC SUS- PENDE TOTAL (UG/L AS AS)	ARSENIC DIS- SOLVED (UG/L AS AS)	BARIUM, TOTAL RECOV- ERABLE (UG/L AS BA)	BARIUM, SUS- PENDE RECOV- ERABLE (UG/L AS BA)	BARIUM, DIS- SOLVED (UG/L AS BA)	CADMIUM TOTAL RECOV- ERABLE (UG/L AS CD)	CADMIUM SUS- PENDE RECOV- ERABLE (UG/L AS CD)	CADMIUM DIS- SOLVED (UG/L AS CD)
OCT , 1979											
24...	1245	5440	1	0	1	0	--	9	0	0	0
FEB , 1980											
05...	1315	3000	1	1	0	100	80	20	0	--	2
MAY											
14...	1330	5540	1	0	1	<50	--	30	0	--	3
AUG											
20...	1410	2500	1	0	1	100	100	0	0	0	0

	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR)	CHRO- MIUM, SUS- PENDE RECOV- ERABLE (UG/L AS CR)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR)	COBALT, TOTAL RECOV- ERABLE (UG/L AS CO)	COBALT, SUS- PENDE RECOV- ERABLE (UG/L AS CO)	COBALT, DIS- SOLVED (UG/L AS CO)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU)	COPPER, SUS- PENDE RECOV- ERABLE (UG/L AS CU)	COPPER, DIS- SOLVED (UG/L AS CU)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	IRON, SUS- PENDE RECOV- ERABLE (UG/L AS FE)
OCT , 1979											
24...	20	10	10	0	0	0	3	1	2	580	480
FEB , 1980											
05...	20	10	10	0	0	0	2	0	2	300	120
MAY											
14...	20	--	<10	0	0	0	3	1	2	280	170
AUG											
20...	10	--	<10	0	0	0	4	2	2	270	200

DATE	IRON, DIS- SOLVED (UG/L AS FE)	LEAD, TOTAL RECOV- ERABLE (UG/L AS PB)	LEAD, SUS- PENDE RECOV- ERABLE (UG/L AS PB)	LEAD, DIS- SOLVED (UG/L AS PB)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)	MANGA- NESE, SUS- PENDE RECOV- ERABLE (UG/L AS MN)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	MERCURY TOTAL RECOV- ERABLE (UG/L AS HG)	MERCURY SUS- PENDE RECOV- ERABLE (UG/L AS HG)	MERCURY DIS- SOLVED (UG/L AS HG)	NICKEL, TOTAL RECOV- ERABLE (UG/L AS NI)
OCT , 1979											
24...	100	0	0	0	140	120	20	<.1	<.0	<.1	1
FEB , 1980											
05...	180	0	0	0	20	12	8	.4	.0	.4	1
MAY											
14...	110	1	1	0	70	50	20	.1	.0	.1	0
AUG											
20...	70	3	2	1	70	60	10	<.1	--	<.1	5

DATE	NICKEL, SUS- PENDE RECOV- ERABLE (UG/L AS NI)	NICKEL, DIS- SOLVED (UG/L AS NI)	SELE- NIUM, TOTAL RECOV- ERABLE (UG/L AS SE)	SELE- NIUM, SUS- PENDE RECOV- ERABLE (UG/L AS SE)	SELE- NIUM, DIS- SOLVED (UG/L AS SE)	SILVER, TOTAL RECOV- ERABLE (UG/L AS AG)	SILVER, SUS- PENDE RECOV- ERABLE (UG/L AS AG)	SILVER, DIS- SOLVED (UG/L AS AG)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN)	ZINC, SUS- PENDE RECOV- ERABLE (UG/L AS ZN)	ZINC, DIS- SOLVED (UG/L AS ZN)
OCT , 1979											
24...	0	1	0	0	0	0	0	0	10	0	10
FEB , 1980											
05...	1	0	0	0	0	0	0	0	10	0	10
MAY											
14...	0	0	0	0	0	0	0	0	20	--	30
AUG											
20...	4	1	0	0	0	0	0	0	10	10	

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, RESIDUE AT 105 DEG. C, SUS- PENDE (MG/L)	PHOS- PHORUS, TOTAL (MG/L AS P)	CADMIUM TOTAL RECOV- ERABLE (UG/L AS CD)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU)	LEAD, TOTAL RECOV- ERABLE (UG/L AS PB)	NICKEL, TOTAL RECOV- ERABLE (UG/L AS NI)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN)
MAY , 1980											
07...	1300	2920	<2.0	--	4	<.020	--	9	5	<20	<20
14...	1400	2770	<2.0	--	4	.020	--	5	<3	<20	<20

STREAMS TRIBUTARY TO LAKE MICHIGAN
04067500 MENOMINEE RIVER NEAR MCALLISTER, WI--CONTINUED

QUALITATIVE AND ASSOCIATED QUANTITATIVE BIOLOGICAL DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

PHYTOPLANKTON

Date	Time	Organism	Count (cells/ml)	Percent of total	Diversity index	Sampling method
Nov. 20, 1979	1400	CHLOROPHYTA				Grab sample
		Chlorophyceae				
		<i>Ankistrodesmus</i>	5	2		
		<i>Chlorella</i>	15	5		
		CHRYSOPHYTA				
		Bacillariophyceae				
		<i>Cyclotella</i>	25	8		
		<i>Gomphonema</i>	15	5		
		<i>Navicula</i>	25	8		
		<i>Nitzschia</i>	15	5		
		<i>Synedra</i>	5	2		
		<i>Tabellaria</i>	5	2		
		CYANOPHYTA				
		Cyanophyceae				
		<i>Schizothrix</i>	190	63	2.0	
		TOTAL	300			
Mar. 11, 1980	1330	CHLOROPHYTA				Grab sample
		Chlorophyceae				
		<i>Ankistrodesmus</i>	86	35		
		CHRYSOPHYTA				
		Bacillariophyceae				
		<i>Cyclotella</i>	5	2		
		<i>Cymbella</i>	5	2		
		<i>Diatoma</i>	35	14		
		<i>Fragilaria</i>	20	8		
		<i>Gomphonema</i>	25	10		
		<i>Navicula</i>	15	6		
		<i>Nitzschia</i>	15	6		
		<i>Synedra</i>	15	6		
		CRYPTOPHYTA				
		Cryptophyceae				
		<i>Cryptomonas</i>	5	2		
		CYANOPHYTA				
		Cyanophyceae				
		<i>Schizothrix</i>	20	8	2.9	
		TOTAL	250			
May 14, 1980	1330	CHLOROPHYTA				Grab sample
		Chlorophyceae				
		<i>Ankistrodesmus</i>	78	3		
		<i>Chlamydomonas</i>	59	2		
		<i>Elaenatothrix</i>	78	3		
		<i>Scenedesmus</i>	350	14		
		CHRYSOPHYTA				
		Bacillariophyceae				
		<i>Cyclotella</i>	1,300	53		
		<i>Melosira</i>	20	1		
		<i>Navicula</i>	20	1		
		<i>Nitzschia</i>	98	4		
		<i>Synedra</i>	200	8		
		Chrysophyceae				
		<i>Chrysococcus</i>	20	1		
		Xanthophyceae				
		<i>Ophioctenium</i>	20	1		
		CYANOPHYTA				
		Cyanophyceae				
		<i>Anacystis</i>	200	8		
		EUGLENOPHYTA				
		Euglenophyceae				
		<i>Trachelomonas</i>	20	1	2.4	
		TOTAL	2,400			
June 24, 1980	1330	CHLOROPHYTA				Grab sample
		Chlorophyceae				
		<i>Ankistrodesmus</i>		0		
		<i>Chlamydomonas</i>	29	1		
		<i>Crucigenia</i>	630	18		
		<i>Micractinium</i>	270	8		
		<i>Scenedesmus</i>	290	8		
		<i>Selenastrum</i>		0		
		CHRYSOPHYTA				
		Bacillariophyceae				
		<i>Cyclotella</i>	190	5		
		<i>Melosira</i>	43	1		
		<i>Nitzschia</i>		0		
		CYANOPHYTA				
		Cyanophyceae				
		<i>Anacystis</i>	2,000	58	1.9	
		TOTAL	3,500			

STREAMS TRIBUTARY TO LAKE MICHIGAN
04067500 MENOMINEE RIVER NEAR MCALLISTER, WI--CONTINUED

QUALITATIVE AND ASSOCIATED QUANTITATIVE BIOLOGICAL DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

PHYTOPLANKTON

Date	Time	Organism	Count (cells/ml)	Percent of total	Diversity index	Sampling method
July 24, 1980	1100	CHLOROPHYTA				Grab sample
		Chlorophyceae				
		<i>Ankistrodesmus</i>	77	4		
		<i>Chlamydomonas</i>	39	2		
		<i>Coelastrum</i>	130	7		
		<i>Oocystis</i>	51	3		
		<i>Scenedesmus</i>	150	8		
		<i>Schroederia</i>	26	1		
		CHRYSOPHYTA				
		Bacillariophyceae				
		<i>Cocconeis</i>	13	1		
		<i>Cyclotella</i>	390	21		
		<i>Nauticula</i>	13	1		
		<i>Nitzschia</i>	51	3		
		CRYPTOPHYTA				
		Cryptophyceae				
		<i>Chroomonas</i>	64	3		
		<i>Cryptomonas</i>	26	1		
		CYANOPHYTA				
		Cyanophyceae				
		<i>Anacyetis</i>	51	3		
		<i>Oscillatoria</i>	770	42		
		TOTAL	1,900		2.7	
Aug. 20, 1980	1410	CHLOROPHYTA				Grab sample
		Chlorophyceae				
		<i>Ankistrodesmus</i>	52	8		
		<i>Chlamydomonas</i>	65	10		
		<i>Chodatella</i>	13	2		
		<i>Cosmarium</i>	13	2		
		<i>Scenedesmus</i>	26	4		
		<i>Tetrasdron</i>	13	2		
		CHRYSOPHYTA				
		Bacillariophyceae				
		<i>Cocconeis</i>	26	4		
		<i>Cyclotella</i>	100	16		
		<i>Nitzschia</i>	13	2		
		<i>Synedra</i>	13	2		
		CRYPTOPHYTA				
		Cryptophyceae				
		<i>Chroomonas</i>	39	6		
		CYANOPHYTA				
		Cyanophyceae				
		<i>Anacyetis</i>	65	10		
		<i>Oscillatoria</i>	210	32		
		TOTAL	650		3.1	
Sept. 24, 1980	1300	CHLOROPHYTA				Grab sample
		Chlorophyceae				
		<i>Dictyosphaerium</i>	13	8		
		<i>Scenedesmus</i>	52	33		
		CHRYSOPHYTA				
		Bacillariophyceae				
		<i>Cocconeis</i>	13	8		
		<i>Cyclotella</i>	26	17		
		<i>Gomphonema</i>	13	8		
		<i>Nitzschia</i>	13	8		
		CRYPTOPHYTA				
		Cryptophyceae				
		<i>Cryptomonas</i>	13	8		
		CYANOPHYTA				
		Cyanophyceae				
		<i>Anacyetis</i>	13	8		
		TOTAL	160		2.8	

STREAMS TRIBUTARY TO LAKE MICHIGAN
04067500 MENOMINEE RIVER NEAR MCALLISTER, WI--CONTINUED

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	TEMPER- ATURE, WATER (DEG C)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	SEDI- MENT, SUS- PENDE (MG/L)	SEDI- MENT DIS- CHARGE, SUS- PENDE (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER .062 MM
OCT , 1979							
24...	1245	5440	8.0	260	6	88	8
NOV							
20...	1400	3840	3.5	180	6	62	44
DEC							
06...	1300	4400	.5	170	1	12	100
JAN , 1980							
09...	1330	2600	.0	220	4	28	100
FEB							
05...	1315	3000	.0	250	9	73	65
MAR							
11...	1330	1800	.0	190	2	9.7	50
APR							
16...	1330	5340	4.0	200	9	130	30
MAY							
14...	1330	5540	12.0	210	9	135	74
JUN							
24...	1330	2670	23.0	180	10	72	77
JUL							
24...	0915	3480	23.5	220	6	56	100
AUG							
20...	1410	2500	23.0	260	1	6.7	100
SEP							
24...	1300	10400	13.0	250	22	618	56

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1		170	185	---	220	240	230	170	225	180	185	205
2		165	210	205	225	225	220	165	210	185	---	205
3		160	200	215	230	225	220	170	205	190	190	195
4		160	225	210	225	235	220	175	105	190	185	190
5		160	205	210	220	235	215	170	200	195	185	185
6		165	205	215	220	235	210	175	185	190	195	180
7		170	195	210	220	230	210	180	190	195	190	175
8		165	190	210	220	235	205	175	185	195	190	180
9		165	200	215	215	225	180	180	195	195	190	180
10		165	195	---	215	235	170	180	210	200	200	185
11		200	210	---	215	240	165	175	210	200	220	185
12		170	200	---	215	250	160	185	200	200	210	185
13		165	210	215	220	245	160	180	180	200	210	185
14		170	225	---	225	240	165	180	170	210	210	185
15		175	210	200	215	245	165	185	175	210	220	190
16		175	200	215	240	250	170	185	175	210	200	195
17		180	200	210	210	245	165	190	175	210	210	195
18		175	210	200	225	245	170	195	175	210	210	195
19		175	215	215	205	240	175	190	175	210	200	195
20		185	200	215	235	230	175	195	185	195	200	200
21		175	200	220	200	235	175	195	180	195	200	200
22		185	185	210	210	230	170	200	185	200	200	210
23		190	195	230	210	225	175	215	185	200	200	195
24		180	195	235	210	225	175	220	180	195	210	180
25		175	200	235	215	230	180	220	180	---	220	175
26		180	205	230	225	235	175	220	185	---	215	170
27		190	200	230	230	245	175	225	190	---	200	170
28		180	205	230	225	245	180	220	185	---	205	160
29		175	205	230	220	---	175	225	195	---	210	160
30		190	205	235	---	240	175	230	185	185	215	160
31		---	215	230	---	240	---	235	---	190	205	---

STREAMS TRIBUTARY TO LAKE MICHIGAN

04067500 MENOMINEE RIVER NEAR MCALLISTER, WI--CONTINUED

DAY	OCT	TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980										
		NOV	DEC	JAN	FEB	ONCE-DAILY MAR	APR	MAY	JUN	JUL	AUG	SEP
1		6.5	.5	.0	.0	.0	---	11.5	17.5	21.0	24.0	20.0
2		6.0	.5	.0	.0	.0	1.0	13.5	17.5	20.5	---	20.0
3		5.5	.5	.0	.0	.0	1.0	14.0	19.0	22.0	22.0	19.5
4		5.0	.5	.0	.0	.0	1.5	15.5	19.0	23.0	23.0	19.5
5		5.0	.5	.0	.0	.0	2.5	16.0	18.0	21.5	22.0	19.5
6		4.5	.5	.0	.0	.0	3.0	14.5	19.5	21.0	23.5	19.5
7		3.5	.5	.0	.0	.0	2.0	12.0	19.5	23.0	25.0	20.0
8		3.0	.5	.0	.0	.0	3.0	11.5	19.5	24.0	24.0	19.5
9		2.0	.5	.0	.0	.0	3.0	11.0	17.0	25.0	24.0	---
10		2.0	.5	.0	.0	.0	3.0	12.5	16.5	24.5	23.5	---
11		1.0	.5	.0	.0	.0	3.5	11.5	17.0	26.0	23.0	---
12		---	.5	.0	.0	.0	2.0	13.0	19.5	24.5	22.5	---
13		---	.5	.0	.0	.0	2.5	12.0	19.0	24.5	22.5	---
14		---	.5	.0	.0	.0	2.0	12.5	19.5	25.0	22.0	---
15		---	.5	.0	.0	.0	2.0	13.0	17.5	25.0	22.5	---
16		---	.5	.0	.0	.0	3.5	14.0	18.0	25.0	22.0	---
17		---	.0	.0	.0	.0	---	14.0	19.0	25.0	22.0	---
18		---	.0	.0	.0	.0	7.0	14.0	---	23.5	20.5	---
19		---	.0	.0	.0	.0	8.5	16.5	17.0	24.0	22.0	---
20		---	.0	.0	.0	.0	9.0	17.5	18.0	24.5	22.5	---
21		---	.0	.0	.0	.0	10.5	18.5	20.0	---	23.0	---
22		---	.0	.0	.0	.0	12.0	19.5	20.0	24.0	23.0	14.5
23		---	.0	.0	.0	.0	10.5	20.5	22.0	23.0	23.0	---
24		---	.0	.0	.0	.0	9.0	20.5	24.0	23.5	23.0	---
25		.5	.0	.0	.0	.0	10.0	20.5	24.0	---	22.0	---
26		.5	.0	.0	.0	.0	10.5	20.5	25.0	---	22.5	---
27		.5	.0	.0	.0	.0	9.0	20.0	22.5	---	22.0	---
28		.5	.0	.0	.0	.0	10.0	19.5	19.0	---	20.0	---
29		.5	.0	.0	.0	.0	10.5	19.0	21.0	---	20.0	---
30		.5	.0	.0	---	.0	11.0	19.5	20.5	23.0	20.0	---
31		---	.0	.0	---	.0	---	18.5	---	22.0	20.0	---

STREAMS TRIBUTARY TO LAKE MICHIGAN

04069500 PESHTIGO RIVER AT PESHTIGO, WI

LOCATION.--Lat 45°02'49", long 87°44'40", in NE 1/4 sec.30, T.30 N., R.23 E., Marinette County, Hydrologic Unit 04030105, on left bank 75 ft (23 m) downstream from Chicago and Northwestern Railway bridge, 0.5 mi (0.8 km) downstream from Wisconsin Public Service Corp. Powerplant at Peshtigo, and 11.5 mi (18.5 km) upstream from mouth.

DRAINAGE AREA.--1,080 mi² (2,797 km²), revised.

PERIOD OF RECORD.--June 1953 to current year.

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

GAGE.--Water-stage recorder. Datum of gage is 584.64 ft (178.198 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Records fair except those for winter periods, which are poor. Diurnal fluctuation caused by two powerplants upstream.

AVERAGE DISCHARGE.--27 years, 932 ft³/s (26.39 m³/s), 11.72 in/yr (298 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 9,790 ft³/s (277 m³/s) May 9, 1960, gage height, 11.59 ft (3.533 m), from rating curve extended above 5,000 ft³/s (142 m³/s) on basis of computation of peak flow through dam gates; minimum, 17 ft³/s (0.48 m³/s) Nov. 29, 1966, gage height, 1.00 ft (0.305 m); minimum daily, 84 ft³/s (2.38 m³/s) Aug. 5, 1957.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 4,780 ft³/s (135 m³/s) Apr. 10, gage height, 8.53 ft (2.600 m); minimum daily, 192 ft³/s (5.44 m³/s) Oct. 20.

RATING TABLES (gage height, in feet, and discharge, in cubic feet per second).
(Stage-discharge relation affected by ice Dec. 11-20, 24-30, Jan. 1 to Mar. 17.)

Oct. 1 to Apr. 9, Aug. 29 to Sept. 30

Apr. 10 to Aug. 28

1.4	168	5.0	2,050	1.7	314	5.0	2,170
2.0	404	7.0	3,480	2.0	460	7.0	3,500
3.0	880	9.0	5,300	3.0	976	9.0	5,300

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DAY	MEAN VALUES											
	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	352	1190	736	640	540	450	1100	1450	1320	1250	757	1300
2	589	1500	610	580	500	450	1160	1160	1530	1160	748	1320
3	641	1410	620	600	460	390	1100	1260	1530	862	658	1140
4	599	1110	697	560	420	440	1170	1100	1060	646	521	1150
5	517	1020	1000	600	440	440	1050	1130	889	628	1160	1090
6	624	1330	1000	560	450	470	1180	1170	1920	562	1680	1140
7	350	1480	957	420	440	440	1230	1050	2390	497	1530	1010
8	270	1340	850	540	430	490	1740	867	2690	710	1430	955
9	517	1310	556	580	440	470	3780	808	2620	609	1390	911
10	600	1220	631	500	390	540	4600	756	2200	518	998	770
11	615	971	800	520	400	600	4300	1000	1680	556	859	705
12	673	742	740	600	560	620	3600	1030	1330	540	1140	913
13	622	780	620	580	540	580	3700	1080	1220	334	1000	975
14	474	818	580	520	500	540	3330	1140	958	392	937	958
15	328	767	470	560	490	580	2580	1170	894	344	790	869
16	512	735	470	620	520	540	2200	1020	888	519	755	851
17	398	783	420	1300	470	500	1800	872	875	716	715	839
18	476	711	540	1500	410	654	1750	872	896	571	657	810
19	320	573	720	1300	500	970	1430	840	1160	533	651	765
20	192	838	620	1100	560	909	1490	867	1360	583	871	847
21	506	955	570	1000	580	930	1450	664	1400	593	872	832
22	520	1150	551	940	520	949	1590	724	1410	534	830	1020
23	1050	1340	646	840	520	963	1390	740	1440	775	620	1560
24	1580	1320	760	880	480	887	1490	742	1480	859	620	1460
25	2080	1120	860	640	450	956	1590	682	1040	750	512	1680
26	2090	1320	740	820	540	1150	1560	509	831	826	710	1680
27	2150	1410	720	620	520	953	1530	426	823	979	1140	1590
28	2190	1540	700	700	520	960	1540	586	995	556	1670	1450
29	2070	1340	580	640	560	1030	1430	523	1270	826	1730	1110
30	1780	1140	620	540	---	1240	1400	616	1170	676	1520	827
31	1450	---	583	520	---	1190	---	1070	---	747	1390	---
TOTAL	27135	33263	20967	22320	14150	22281	59260	27924	41269	20651	30861	32527
MEAN	875	1109	676	720	488	719	1975	901	1376	666	996	1084
MAX	2190	1540	1000	1500	580	1240	4600	1450	2690	1250	1730	1680
MIN	192	573	420	420	390	390	1050	426	823	334	512	705
CFSM	.81	1.03	.63	.67	.45	.67	1.83	.83	1.27	.62	.92	1.00
IN.	.93	1.15	.72	.77	.49	.77	2.04	.96	1.42	.71	1.06	1.12
CAL YR 1979	TOTAL	509734	MEAN	1397	MAX	5260	MIN 192	CFSM	1.29	IN	17.56	
WTR YR 1980	TOTAL	352608	MEAN	963	MAX	4600	MIN 192	CFSM	.89	IN	12.15	

STREAMS TRIBUTARY TO LAKE MICHIGAN

04070000 WHEELER LAKE NEAR LAKEWOOD, WI

LOCATION.--Lat 45°19'07", long 88°28'58", in NW 1/4 sec.27, T.33 N., R.16 E., Oconto County, Hydrologic Unit 04030104, on west shore of lake 2.3 mi (3.7 km) northeast of Lakewood.

DRAINAGE AREA.--2.27 mi² (5.88 km²), revised. Area of Wheeler Lake, 380 acres (1.54 km²).

PERIOD OF RECORD.--August 1936 to current year (fragmentary).

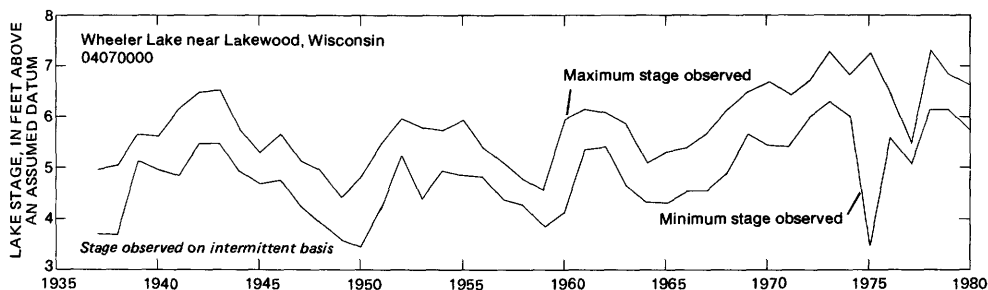
GAGE.--Nonrecording gage. Datum of gage is 90.00 ft (27.4 m) above datum assumed by Wisconsin Department of Natural Resources; gage readings have been reduced to elevations above this datum. Prior to Apr. 19, 1936, nonrecording gage was located on east shore of lake. Apr. 20, 1939, to Apr. 13, 1960, nonrecording gage was located on southwest shore of lake.

REMARKS.--Add 90 ft (27.4 m) to obtain elevation above datum assumed for this lake by Wisconsin Department of Natural Resources. Lake has no surface outlet. Lake was ice covered Dec. 1 to Apr. 20.

EXTREMES FOR PERIOD OF RECORD.--Maximum elevation observed, 7.31 ft (2.228 m) June 6, 1973; minimum observed, 3.45 ft (1.052 m) Feb. 5, 1950.

EXTREMES FOR CURRENT YEAR.--Maximum elevation observed, 6.61 ft (2.015 m) Jan. 19 (ice affected); minimum observed 5.70 ft (1.737 m) Sept. 20.

DAY	GAGE HEIGHT (FEET ABOVE DATUM), WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980											
	OCT	NOV	DEC	JAN	FEB	MEAN VALUES MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6.22	---	6.44	---	---	---	---	6.30	---	---	---	---
2	---	---	---	---	---	---	---	---	---	---	5.75	---
3	---	6.34	---	---	---	---	---	6.31	---	---	---	---
4	---	---	---	---	---	---	---	---	---	---	---	---
5	---	---	---	---	---	---	6.30	---	---	5.99	---	---
6	6.19	---	---	---	---	---	---	---	---	---	---	5.77
7	---	---	---	---	---	---	---	---	6.21	---	---	---
8	---	---	6.46	---	---	---	---	---	---	---	---	---
9	---	---	---	---	---	---	---	---	---	---	5.85	---
10	---	6.38	---	---	---	---	---	6.17	---	---	---	---
11	---	---	6.42	---	---	---	---	---	---	---	---	---
12	---	---	---	---	6.47	---	6.41	---	---	5.90	---	5.75
13	6.17	---	---	---	---	---	---	---	---	---	---	---
14	---	---	---	---	---	---	---	---	6.06	---	---	---
15	---	---	6.44	---	---	---	---	---	---	---	---	---
16	---	---	---	---	---	---	---	---	---	---	5.75	---
17	---	6.36	---	---	---	---	---	6.14	---	---	---	---
18	---	---	---	---	---	---	---	---	---	---	---	---
19	---	---	---	6.61	---	---	6.41	---	---	5.85	---	5.70
20	6.13	---	---	---	---	6.31	---	---	---	---	---	---
21	---	---	---	---	---	---	---	---	6.08	---	---	---
22	---	---	6.42	---	---	---	---	---	---	---	---	---
23	---	---	---	---	---	---	---	---	---	---	5.76	---
24	---	6.41	---	---	---	---	---	6.08	---	---	---	---
25	---	---	---	---	---	---	---	---	---	---	---	---
26	---	---	---	---	---	---	6.38	---	---	5.83	---	---
27	6.30	---	---	---	---	---	---	---	---	---	---	5.80
28	---	---	---	---	---	---	---	---	6.09	---	---	---
29	---	---	6.43	---	---	6.29	---	---	---	---	5.84	---
30	---	---	---	---	---	---	---	---	---	---	---	---
31	---	---	---	---	---	---	---	6.15	---	---	---	---



STREAMS TRIBUTARY TO LAKE MICHIGAN

O4071000 OCONTO RIVER NEAR GILLETT, WI

LOCATION.--Lat 44°51'53", long 88°18'00", in NW 1/4 sec.34, T.28 N., R.18 E., Oconto County, Hydrologic Unit 04030104, on left bank 300 ft (91 m) upstream from County Trunk Highway BB bridge, 2.0 mi (3.2 km) upstream from Christy Brook, 2.0 mi (3.2 km) south of Gillett, and at mile 29 (47 m).

DRAINAGE AREA.--705 mi² (1,826 km²).

PERIOD OF RECORD.--June 1906 to March 1909, October 1913 to current year. Monthly discharge only for some periods, published in WSP 1307.

REVISED RECORDS.--WSP 1207: 1922. WSP 1307: 1907-8(M), 1914-16(M), 1918-21(M), 1923-33(M), 1937-38(M), 1943(M). WDR WI-79-1: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 732.87 ft (223.379 m) National Geodetic Vertical Datum of 1929 (levels by Wisconsin Department of Transportation). See WSP 1727 for history of changes prior to Aug. 25, 1938.

REMARKS.--Records good except those for winter periods, which are fair. Gage-height telemeter at station.

AVERAGE DISCHARGE.--69 years (water years 1906-08, 1913-80), 582 ft³/s (16.48 m³/s), 11.21 in/yr (285 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 8,400 ft³/s (238 m³/s) Apr. 10, 1922, gage height, 11.2 ft (3.41 m) from floodmarks, caused by a failure of dam at Pulcifer 4 mi (6.4 km) above station; minimum, 93 ft³/s (2.63 m³/s) Nov. 26, 1941, gage height, 0.13 ft (0.040 m), flow retarded by anchor ice above station.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 1,500 ft³/s (42 m³/s) and maximum (*):

DATE	TIME	DISCHARGE (ft ³ /s) (m ³ /s)	GAGE HEIGHT (ft) (m)	DATE	TIME	DISCHARGE (ft ³ /s) (m ³ /s)	GAGE HEIGHT (ft) (m)
Apr. 11	0500	*2,270 64.3	*4.24 1.292	June 9	0200	1,740 49.3	3.48 1.061

minimum daily discharge, 310 ft³/s (8.78 m³/s) Mar. 3, 6-9.

RATING TABLE (gage height, in feet, and discharge, in cubic feet per second).
(Stage-discharge relation affected by ice Nov. 28 to Apr. 4.)

0.9	300	3.0	1,400
1.4	480	4.0	2,100
2.0	760	5.0	2,880

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DAY	MEAN VALUES											
	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	361	721	540	440	360	330	560	749	754	639	372	806
2	364	717	450	440	340	320	580	753	771	602	351	751
3	378	752	410	440	340	310	600	732	702	548	335	683
4	389	737	450	400	340	320	620	692	625	496	332	631
5	385	727	540	380	330	320	681	659	564	459	573	586
6	386	737	640	360	340	310	710	635	1150	407	751	552
7	388	757	640	340	320	310	761	605	1380	394	707	514
8	390	782	580	330	330	310	1110	576	1680	391	664	482
9	384	778	520	340	330	310	1740	552	1690	378	669	483
10	379	725	540	360	340	320	2100	540	1530	363	656	475
11	381	668	540	420	340	330	2260	561	1320	356	612	445
12	380	557	500	440	350	320	2140	596	1110	339	586	478
13	377	597	460	440	340	320	1860	631	881	333	580	597
14	375	617	340	430	340	320	1630	628	719	330	532	729
15	371	607	330	430	340	330	1450	613	644	321	484	705
16	374	592	350	640	340	380	1310	587	610	322	442	629
17	378	585	390	860	350	450	1190	555	593	326	409	574
18	377	577	410	840	350	470	1100	545	587	335	417	520
19	377	575	430	800	350	500	1020	570	706	329	434	483
20	380	580	440	760	340	540	975	591	869	337	462	482
21	424	597	480	680	360	540	943	562	958	349	536	534
22	465	659	480	600	360	540	919	519	1010	372	546	654
23	704	720	500	520	360	540	892	480	934	381	494	755
24	863	772	540	500	360	540	869	450	751	378	431	820
25	943	808	560	470	350	520	844	411	633	343	403	826
26	1010	855	540	440	350	520	816	397	544	366	406	742
27	1060	857	500	420	350	520	771	389	520	368	475	665
28	1020	800	470	420	330	540	735	385	571	347	686	596
29	890	760	450	400	330	540	728	379	641	363	843	545
30	747	700	450	390	---	560	734	405	674	389	908	518
31	684	---	440	360	---	560	---	604	---	394	893	---
TOTAL	16384	20946	14910	15090	9940	13040	32648	17351	26121	12055	16989	18260
MEAN	529	698	481	487	343	421	1088	560	871	389	548	609
MAX	1060	857	640	860	360	560	2260	753	1690	639	908	826
MIN	361	557	330	330	320	310	560	379	520	321	332	445
CFSM	.75	.99	.68	.69	.49	.60	1.54	.79	1.24	.55	.78	.86
IN.	.86	1.11	.79	.80	.52	.69	1.72	.92	1.38	.64	.90	.96

CAL YR 1979	TOTAL	283194	MEAN	776	MAX	2410	MIN	300	CFSM	1.10	IN	14.94
WTR YR 1980	TOTAL	213734	MEAN	584	MAX	2260	MIN	310	CFSM	.83	IN	11.28

STREAMS TRIBUTARY TO LAKE MICHIGAN
04071858 PENSAAKEE RIVER NEAR PENSAAKEE, WI

LOCATION.--Lat 44°49'08", long 87°57'12", in NW 1/4 NE 1/4 sec.16, T.27 N., R.21 E., Oconto County, Hydrologic Unit 04030103, on right bank 300 ft (90 m) downstream from bridge on town road, 2.8 mi (4.5 km) downstream from Brookside Creek, 2.6 mi (4.2 km) west of Pensaukee, 3.5 mi (5.6 km) upstream from mouth.

DRAINAGE AREA.--134 mi² (347 km²), revised.

PERIOD OF RECORD.--October 1972 to current year.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 583.69 ft (177.909 m) National Geodetic Vertical Datum of 1929 (Wisconsin Department of Transportation bench mark).

REMARKS.--Records good except those for winter period and those for the period of no gage-height record, which are fair.

AVERAGE DISCHARGE.--8 years, 91.9 ft³/s (2.603 m³/s), 9.31 in/yr (236 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 4,310 ft³/s (122 m³/s) May 31, 1979, gage height, 13.58 ft (4.139 m); minimum daily discharge, 1.0 ft³/s (0.028 m³/s) Aug. 31, 1977.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 800 ft³/s (22.7 m³/s) and maximum (*):

DATE	TIME	DISCHARGE (ft ³ /s) (m ³ /s)	GAGE HEIGHT (ft) (m)	DATE	TIME	DISCHARGE (ft ³ /s) (m ³ /s)	GAGE HEIGHT (ft) (m)
Apr. 9	2300	*3,110 88.1	*11.76 3.584	June 7	2200	1,130 32.0	7.71 2.350

minimum daily discharge, 8.5 ft³/s (0.24 m³/s) July 14-18.

RATING TABLE (gage height, in feet, and discharge, in cubic feet per second).
(Stage-discharge relation affected by ice Nov. 30 to Apr. 1.)

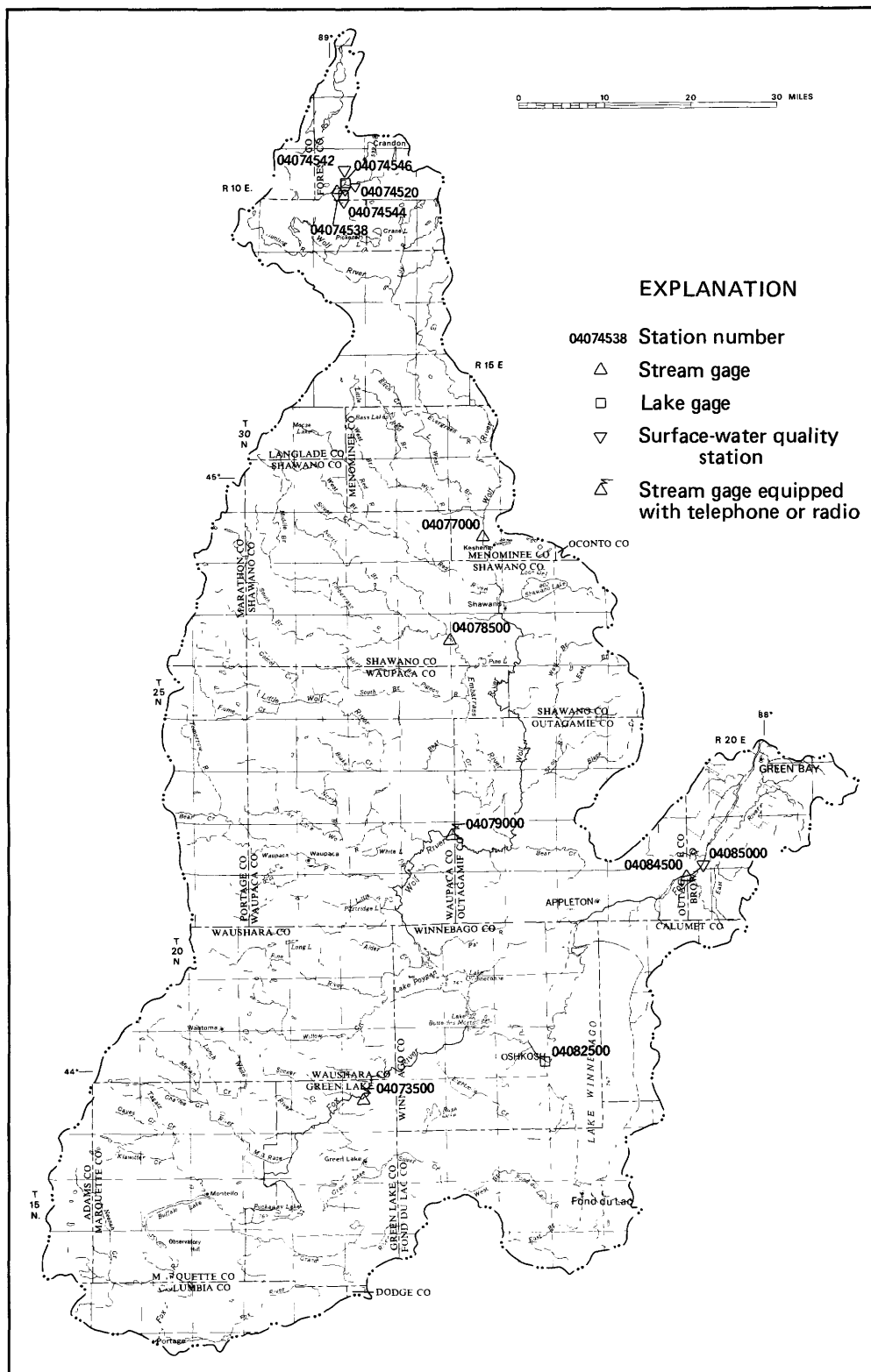
2.2	3.5	5.0	390
2.3	9.0	6.0	610
2.5	29	7.0	910
3.0	84	9.0	1,650
4.0	210	11.0	2,650

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DAY	OCT	NOV	DEC	JAN	FEB	MEAN VALUES		MAY	JUN	JUL	AUG	SEP
						MAR	APR					
1	10	82	80	25	19	18	160	94	36	31	14	48
2	10	106	50	23	18	17	137	82	31	28	11	78
3	10	89	23	20	17	15	128	70	27	24	11	82
4	12	74	26	20	17	16	120	60	22	21	11	66
5	13	63	28	19	17	15	143	47	20	19	23	52
6	14	63	30	19	17	15	155	43	602	16	57	41
7	14	71	35	19	16	15	167	41	970	14	52	33
8	14	72	31	17	16	16	532	38	1040	14	63	29
9	19	65	24	15	16	17	2500	35	635	12	81	28
10	15	59	29	16	16	20	2440	33	339	11	69	27
11	14	58	34	17	17	21	1010	38	198	11	57	27
12	15	59	39	20	18	21	500	47	127	9.9	52	31
13	15	52	35	25	18	21	364	52	91	9.2	45	94
14	15	47	31	27	18	25	269	50	68	8.5	37	158
15	15	48	28	30	18	44	218	46	54	8.5	31	150
16	15	53	26	190	19	62	196	44	44	8.5	26	119
17	14	56	25	260	19	90	166	39	37	8.5	23	93
18	15	61	24	220	17	140	158	39	33	8.5	24	73
19	16	60	23	140	17	170	153	46	43	9.2	27	62
20	18	61	26	110	20	200	143	60	61	10	36	55
21	20	67	28	90	23	180	134	54	52	13	47	56
22	40	126	29	70	25	140	125	39	45	13	50	75
23	116	200	31	60	27	130	115	25	38	13	45	86
24	226	166	32	44	29	120	105	23	33	13	37	78
25	189	128	39	37	31	110	102	22	28	10	32	65
26	141	153	35	30	29	160	95	20	25	17	32	55
27	108	346	32	25	24	270	88	18	22	26	34	47
28	92	363	29	25	22	350	82	16	34	21	50	42
29	80	220	27	23	21	310	84	16	40	19	59	38
30	70	120	26	22	---	280	84	20	34	16	51	34
31	64	---	27	21	---	260	---	30	---	16	45	---
TOTAL	1429	3188	982	1679	581	3268	10673	1287	4829	458.8	1232	1922
MEAN	46.1	106	31.7	54.2	20.0	105	356	41.5	161	14.8	39.7	64.1
MAX	226	363	80	260	31	350	2500	94	1040	31	81	158
MIN	10	47	23	15	16	15	82	16	20	8.5	11	27
CFSM	.34	.79	.24	.40	.15	.78	2.66	.31	1.20	.11	.30	.48
IN.	.40	.89	.27	.47	.16	.91	2.96	.36	1.34	.13	.34	.53

CAL YR 1979	TOTAL	58781.0	MEAN	161	MAX	3700	MIN	10	CFSM	1.20	IN	16.32
WTR YR 1980	TOTAL	31528.8	MEAN	86.1	MAX	2500	MIN	8.5	CFSM	.64	IN	8.75

NOTE.--No gage-height record Dec. 23 to Jan. 31, Apr. 29 to May 28.



FOX-WOLF RIVER BASIN

STREAMS TRIBUTARY TO LAKE MICHIGAN

04073500 FOX RIVER AT BERLIN, WI

LOCATION.--Lat 43°57'14"N, long 88°57'08"W, in NE 1/4 sec.16, T.17 N., R.13 E., Green Lake County, Hydrologic Unit 04030201, on left bank, 0.4 mi (0.6 km) downstream from government dam, 1.0 mi (1.6 km) south of Huron Street bridge in Berlin, 2.5 mi (4.0 km) upstream from Barnes Creek, and at mile 89.0 (km 143).

DRAINAGE AREA.--1,340 mi² (3,471 km²), revised.

PERIOD OF RECORD.--January 1898 to current year.

REVISED RECORDS.--WSP 1337: 1910.

GAGE.--Water-stage recorder. Datum of gage is 744.52 ft (226.930 m) above mean tide at New York City (by Corps of Engineers). Prior to Oct. 27, 1954, nonrecording gage at site 0.3 mi (0.5 km) upstream at same datum.

REMARKS.--Records good except those for periods of ice effect, which are fair. Usually less than about 5 ft³/s (0.14 m³/s) was diverted into the basin from the Wisconsin River at Portage Canal throughout the year. Gage-height telemeter at station.

AVERAGE DISCHARGE.--82 years, 1,096 ft³/s (31.04 m³/s), 11.11 in/yr (282 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 6,900 ft³/s (195 m³/s) Mar. 17, 18, 1946, gage height, 15.5 ft (4.724 m); minimum observed, 248 ft³/s (7.02 m³/s) Sept. 16, 1948, gage height, 6.1 ft (1.859 m).

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 2,380 ft³/s (67.4 m³/s) Sept. 22, gage height, 11.67 ft (3.557 m); minimum, 454 ft³/s (12.9 m³/s) July 19, gage height, 7.87 ft (2.399 m).

RATING TABLES (gage height, in feet, and discharge, in cubic feet per second).
(Shifting-control method used Sept. 12-30; stage-discharge relation affected by ice Dec. 1 to Mar. 19.)

	Oct. 1 to Mar. 21						Mar. 22 to Sept. 30					
	8.0	560	11.0	2,160	7.9	465	9.0	910				
	9.0	1,020			8.0	500	12.0	2,690				
DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980												
	MEAN VALUES											
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	596	1150	1400	1100	900	720	1350	1440	1020	1090	788	2300
2	601	1180	1300	1100	840	720	1350	1400	1020	1010	818	2290
3	662	1180	1200	1000	820	700	1350	1360	1020	942	812	2280
4	714	1150	1200	1000	800	700	1350	1310	1020	840	819	2270
5	717	1140	1300	1000	780	700	1390	1260	1090	812	797	2260
6	734	1130	1300	980	760	700	1450	1200	1300	755	777	2230
7	712	1090	1200	960	760	700	1520	1150	1470	740	825	2220
8	732	1120	1200	940	740	700	1640	1140	1610	660	1120	2200
9	736	1100	1100	920	740	700	1800	1110	1700	591	1310	2190
10	739	1040	1100	920	720	720	1900	1110	1760	577	1410	2160
11	777	990	1100	920	700	700	1970	1100	1790	562	1480	2150
12	759	1020	1000	920	700	700	2020	1060	1800	563	1550	2200
13	715	1050	1000	900	700	680	2040	1030	1800	537	1620	2240
14	707	1040	1100	900	700	720	2060	995	1830	538	1700	2270
15	737	1050	1000	900	680	800	2070	1000	1800	535	1750	2290
16	731	1050	1000	940	680	900	2050	1010	1760	536	1800	2310
17	733	1070	940	1300	680	1100	2030	982	1710	544	1850	2320
18	726	1070	960	1500	680	1400	2010	1010	1670	487	1890	2320
19	747	1080	1000	1600	680	1700	1980	1080	1740	473	1920	2320
20	778	1080	1000	1700	700	1820	1950	1110	1710	548	1960	2350
21	800	1090	1000	1700	700	1990	1920	1110	1680	665	2020	2370
22	807	1140	1000	1600	720	2060	1880	1090	1670	731	2040	2380
23	877	1200	1100	1600	740	1830	1830	1070	1640	745	2060	2370
24	975	1250	1200	1500	740	1510	1780	1040	1600	754	2080	2350
25	1040	1270	1300	1500	720	1290	1720	1000	1560	731	2130	2350
26	1060	1300	1400	1400	720	1250	1670	960	1510	702	2180	2340
27	1090	1340	1400	1300	720	1320	1620	944	1450	689	2200	2320
28	1100	1380	1300	1200	720	1380	1570	940	1360	706	2220	2290
29	1090	1400	1300	1100	720	1380	1520	953	1270	716	2230	2270
30	1080	1420	1200	1000	---	1380	1480	981	1170	706	2250	2250
31	1090	---	1200	940	---	1370	---	1020	---	721	2270	---
TOTAL	25362	34570	35800	36340	21260	34340	52270	33965	45530	21206	50676	68460
MEAN	818	1152	1155	1172	733	1108	1742	1096	1518	684	1635	2282
MAX	1100	1420	1400	1700	900	2060	2070	1440	1830	1090	2270	2380
MIN	596	990	940	900	680	680	1350	940	1020	473	777	2150
CFSM	.61	.86	.86	.88	.55	.83	1.30	.82	1.13	.51	1.22	1.70
IN.	.70	.96	.99	1.01	.59	.95	1.45	.94	1.26	.59	1.41	1.90
CAL YR 1979	TOTAL	537758	MEAN	1473	MAX	5660	MIN	581	CFSM	1.10	IN	14.93
WTR YR 1980	TOTAL	459779	MEAN	1256	MAX	2380	MIN	473	CFSM	.94	IN	12.76

STREAMS TRIBUTARY TO LAKE MICHIGAN

04074520 SWAMP CREEK NEAR CRANDON, WI

LOCATION.--Lat 45°29'52", long 88°54'40", in SW 1/4 SE 1/4 Sec. 19, T.35N., R.13E., Forest County, Hydrologic Unit 04030202, upstream of old logging trail crossing, 5.0 mi (8.0 km) south of Crandon.

DRAINAGE AREA.--39.28 mi² (101.7 km²).

PERIOD OF RECORD.--August 1977 to September 1978, Water Year 1980.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH FIELD (UNITS)	TEMPER- ATURE, WATER (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION)	NITRO- GEN, DIS- SOLVED (MG/L AS N)	HARD- NESS (MG/L AS CaCO3)	HARD- NESS, NONCAR- BONATE (MG/L CaCO3)	CALCIUM DIS- SOLVED (MG/L AS Ca)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)
AUG , 1980 11...	1400	20	190	7.6	20.5	7.4	86	.22	96	10	22	10
DATE	TIME	SODIUM, DIS- SOLVED (MG/L AS Na)	PERCENT SODIUM	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LINITY DIS- SOLVED (MG/L AS CaCO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L)
AUG , 1980 11...	2.2	5	.1	.7	86	4.4	2.3	.1	7.7	126	101	
DATE	TIME	SOLIDS, DIS- SOLVED (TONS PER AC-FT)	SOLIDS, DIS- SOLVED (TONS PER DAY)	NITRO- GEN, NITRATE TOTAL (MG/L AS N)	NITRO- GEN, NITRATE DIS- SOLVED (MG/L AS N)	NITRO- GEN, NITRITE TOTAL (MG/L AS N)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N)	
AUG , 1980 11...	.17	6.80	.03	.02	.000	.010	.03	.03	.030	.090	.27	
DATE	TIME	NITRO- GEN, ORGANIC DIS- SOLVED (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO- GEN,NH4 + ORG. SUSP. TOTAL (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC DIS. TOTAL (MG/L AS N)	NITRO- GEN, TOTAL (MG/L AS N)	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHORUS, DIS- SOLVED (MG/L AS P)	PHOS- PHORUS, ORTHOPH- OSPHATE TOTAL (MG/L AS P)	CARBON, ORGANIC DIS- SOLVED (MG/L AS C)	CARBON, ORGANIC SUS- PENDEED (MG/L AS C)	
AUG , 1980 11...	.10	.30	.11	.19	.33	.040	.020	.000	7.4	.8		
DATE	TIME	ALUM- INUM, TOTAL RECOV- ERABLE (UG/L AS AL)	ARSENIC TOTAL (UG/L AS AS)	BORON, TOTAL RECOV- ERABLE (UG/L AS B)	CADMIUM TOTAL RECOV- ERABLE (UG/L AS CD)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)					
AUG , 1980 11...	1400	20	100	2	60	1	380					
DATE	TIME	LEAD, TOTAL RECOV- ERABLE (UG/L AS Pb)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS Mn)	MERCURY TOTAL RECOV- ERABLE (UG/L AS Hg)	MOLYB- DENUM, TOTAL RECOV- ERABLE (UG/L AS Mo)	NICKEL, TOTAL RECOV- ERABLE (UG/L AS Ni)	SELE- NIUM, TOTAL (UG/L AS Se)	ZINC, TOTAL RECOV- ERABLE (UG/L AS Zn)				
AUG , 1980 11...	1	70	.2	1	2	0	20					

STREAMS TRIBUTARY TO LAKE MICHIGAN

04074538 SWAMP CREEK ABOVE RICE LAKE AT MOLE LAKE, WI

LOCATION.--Lat 45°29'18", long 88°57'49", in SW 1/4 NW 1/4 sec.26, T.35 N., R.12 E., Forest County, Hydrologic Unit 04030202, on right bank, approximately 200 ft (61 m) upstream from bridge on State Highway 55, on Mole Lake Indian Reservation.

DRAINAGE AREA.--46.2 mi² (119.7 km²).

WATER-DISCHARGE RECORDS

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

GAGE.--Water-stage recorder and concrete control. Datum of gage is 1,532.28 ft (467.039 m) National Geodetic Vertical Datum of 1929 (levels by Wisconsin Department of Transportation).

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

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 158 ft³/s (4.475 m³/s) Mar. 24, 1979, gage height, 3.47 ft (1.058 m); minimum, 6.8 ft³/s (0.19 m³/s) Aug. 25, 1977.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 111 ft³/s (3.144 m³/s) Apr. 9, gage height, 3.20 ft (0.975 m); minimum, 13 ft³/s (0.37 m³/s) Oct. 18, gage height, 2.07 ft (0.631 m).

RATING TABLE (gage height, in feet, and discharge, in cubic feet per second).
(Stage-discharge relation affected by ice Nov. 30 to Dec. 5, Dec. 13-20,
Jan. 5 to Feb. 19, Feb. 24-26, Mar. 1, 3-17.)

2.0	11	3.0	82
2.3	21	3.5	164
2.6	39		

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	15	57	20	23	19	17	32	33	49	31	24	47
2	17	45	20	22	18	17	33	32	42	29	24	47
3	17	36	22	21	18	17	35	32	37	26	25	40
4	16	34	24	19	18	17	32	30	27	24	26	41
5	16	32	26	19	18	17	36	30	35	23	32	39
6	15	39	27	19	19	17	46	29	61	33	30	34
7	18	37	28	18	18	17	59	29	62	29	29	29
8	20	33	27	18	18	17	78	28	64	23	36	26
9	19	29	28	18	18	17	107	26	52	23	40	25
10	17	27	28	18	18	18	91	25	42	23	34	24
11	17	22	28	20	19	17	70	32	35	23	30	22
12	17	27	25	20	19	17	61	32	30	24	27	21
13	18	26	24	20	19	17	53	35	28	23	24	26
14	16	25	23	21	18	17	46	35	28	21	22	31
15	15	25	23	23	18	17	42	34	35	20	21	28
16	15	22	22	27	18	17	40	31	32	21	19	28
17	15	25	21	30	18	18	40	28	28	25	18	27
18	14	26	21	32	18	19	43	28	31	25	17	24
19	15	28	21	30	19	20	46	28	45	27	16	22
20	19	32	22	28	20	22	47	27	50	31	17	25
21	23	33	24	27	21	22	46	25	41	35	21	68
22	48	36	24	26	22	20	47	26	34	31	22	95
23	86	36	25	25	21	20	44	25	31	26	21	77
24	74	35	26	24	20	21	40	23	29	21	23	56
25	49	33	25	23	19	20	37	22	27	21	31	45
26	38	35	25	22	19	22	34	20	26	20	36	41
27	33	40	23	21	20	23	32	22	27	19	49	34
28	37	35	22	21	19	22	33	39	48	18	47	31
29	37	32	23	19	18	24	34	42	45	25	39	28
30	34	22	22	19	---	27	34	54	37	25	37	28
31	33	---	22	19	---	31	---	60	---	24	37	---
TOTAL	823	964	741	692	547	604	1418	962	1158	769	874	1109
MEAN	26.5	32.1	23.9	22.3	18.9	19.5	47.3	31.0	38.6	24.8	28.2	37.0
MAX	86	57	28	32	22	31	107	60	64	35	49	95
MIN	14	22	20	18	18	17	32	20	26	18	16	21
CAL YR 1979	TOTAL	13861	MEAN 38.0	MAX 151	MIN 13							
WTR YR 1980	TOTAL	10661	MEAN 29.1	MAX 107	MIN 14							

STREAMS TRIBUTARY TO LAKE MICHIGAN

04074542 GLISKE CREEK NEAR MOLE LAKE, WI

LOCATION.--Lat 45°30'42", long 88°58'02", in SE 1/4 SE 1/4 Sec.15, T.35 N., R.12 E., Forest County, Hydrologic Unit 04030202, approximately 50 feet (15 m) upstream from Old Trail Crossing, 2.25 mi (3.62 km) northeast of Mole Lake.

DRAINAGE AREA.--2.43 mi² (6.29 km²).

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

WATER-QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH FIELD (UNITS)	TEMPER- ATURE, WATER (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION)	NITRO- GEN, DIS- SOLVED (MG/L AS N)	HARD- NESS (MG/L AS CACO3)	HARD- NESS, NONCAR- BONATE (MG/L CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)
AUG , 1980 12...	0830	3.0	280	7.5	13.5	7.7	76	.28	130	10	29	14
		SODIUM, DIS- SOLVED (MG/L AS NA)	PERCENT SODIUM	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LITY (MG/L CACO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L)
AUG , 1980 12...	2.3	4	.1	.7	120	5.6	3.9	.1	12	164	140	
		SOLIDS, DIS- SOLVED (TONS PER AC-FT)	SOLIDS, DIS- SOLVED (TONS PER DAY)	NITRO- GEN, NITRATE TOTAL (MG/L AS N)	NITRO- GEN, NITRATE TOTAL (MG/L AS N)	NITRO- GEN, NITRITE TOTAL (MG/L AS N)	NITRO- GEN, NITRITE TOTAL (MG/L AS N)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N)	
AUG , 1980 12...	.22	1.33	.11	.10	.000	.010	.11	.11	.000	.020	.15	
		NITRO- GEN, ORGANIC DIS- SOLVED (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO- GEN,NH4 + ORG. SUSP. TOTAL (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC DIS. TOTAL (MG/L AS N)	NITRO- GEN, TOTAL (MG/L AS N)	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHORUS, DIS- SOLVED (MG/L AS P)	PHOS- PHORUS, ORTHOPH OSPHATE TOTAL (MG/L AS P)	CARBON, ORGANIC DIS- SOLVED (MG/L AS C)	CARBON, ORGANIC SUS- PENDE (MG/L AS C)	
AUG , 1980 12...	.15	.15	.00	.17	.26	.020	.020	.010	6.5	.8		
				ALUM- INUM, RECOV- ERABLE (UG/L AS AL)	FLOW, INSTAN- TANEOUS (CFS)	ARSENIC TOTAL (UG/L AS AS)	BORON, RECOV- ERABLE (UG/L AS B)	CADMIUM RECOV- ERABLE (UG/L AS CD)	COPPER, RECOV- ERABLE (UG/L AS CU)	IRON, RECOV- ERABLE (UG/L AS FE)		
AUG , 1980 12...	0830			3.0	100	1	60	0	0	570		
		LEAD, TOTAL RECOV- ERABLE (UG/L AS PB)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)	MERCURY TOTAL RECOV- ERABLE (UG/L AS HG)	MOLYB- DENUM, TOTAL RECOV- ERABLE (UG/L AS MO)	NICKEL, TOTAL RECOV- ERABLE (UG/L AS NI)	SELE- NIUM, TOTAL RECOV- ERABLE (UG/L AS SE)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN)				
AUG , 1980 12...		2	30	.3	2	0	0	10				

STREAMS TRIBUTARY TO LAKE MICHIGAN

04074544 RICE LAKE AT MOLE LAKE, WI

LOCATION.--Lat 45°29'15", long 88°58'28", in NE 1/4 Sec.27, T.35 N., R.12 E., Forest County, Hydrologic Unit 04030202, Mole Lake Indian Reservation.

DRAINAGE AREA.--54.89 mi² (142.2 km²).

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

REMARKS.--Additional biological data are available in files of the District Office.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

		SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH FIELD (UNITS)	TEMPER- ATURE, WATER (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION)	NITRO- GEN, DIS- SOLVED (MG/L AS N)	HARD- NESS (MG/L AS CACO3)	HARD- NESS, NONCAR- BONATE (MG/L AS CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	
AUG , 1980 12...	1330	180	7.0	28.0	8.0	105	.38	94	13	21	10	
DATE	TIME	SODIUM, DIS- SOLVED (MG/L AS NA)	PERCENT SODIUM	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LINEITY SOLVED (MG/L AS CACO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, SUM OF CONSTITUENTS, DIS- SOLVED (MG/L)
AUG , 1980 12...	1.9	4	.1	.5	81	4.4	2.0	.1	8.7	125	97	
DATE	TIME	SOLIDS, DIS- SOLVED (TONS PER AC-FT)	NITRO- GEN, NITRATE TOTAL (MG/L AS N)	NITRO- GEN, NITRATE DIS- SOLVED (MG/L AS N)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N)	NITRO- GEN, ORGANIC DIS- SOLVED (MG/L AS N)	
AUG , 1980 12...	.17	.09	.00	.000	.000	.09	.00	.020	.000	.34	.38	
DATE	TIME	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO- GEN,NH4 + ORG. SUSP. TOTAL (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC DIS- SOLVED (MG/L AS N)	NITRO- GEN, TOTAL (MG/L AS N)	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHORUS, DIS- SOLVED (MG/L AS P)	PHOS- PHORUS, ORTHOPH- OSPHATE TOTAL (MG/L AS P)	CARBON, ORGANIC DIS- SOLVED (MG/L AS C)	CARBON, ORGANIC SUS- PENDE (MG/L AS C)		
AUG , 1980 12...	.36	.00	.38	.45	.030	.020	.000	9.0	.2			
DATE	TIME	ALUM- INUM, RECOV- ERABLE (UG/L AS AL)	ARSENIC TOTAL (UG/L AS AS)	BORON, RECOV- ERABLE (UG/L AS B)	CADMIUM RECOV- ERABLE (UG/L AS CD)	COPPER, RECOV- ERABLE (UG/L AS CU)	IRON, RECOV- ERABLE (UG/L AS FE)					
AUG , 1980 12...	1330	100	1	80	1	0	250					
DATE	TIME	LEAD, TOTAL RECOV- ERABLE (UG/L AS PB)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)	MERCURY TOTAL RECOV- ERABLE (UG/L AS HG)	MOLYB- DENUM, TOTAL RECOV- ERABLE (UG/L AS MO)	NICKEL, TOTAL RECOV- ERABLE (UG/L AS NI)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN)					
AUG , 1980 12...		0	20	.2	1	0	0	10				

STREAMS TRIBUTARY TO LAKE MICHIGAN

04074546 MOLE LAKE AT MOLE LAKE, WI

LOCATION.--Lat 45°28'47", long 88°58'25", in NW 1/4 Sec.34, T.35N.,R12.E., Forest County, Hydrologic Unit 04030202, at Mole Lake.

DRAINAGE AREA.--1.38 mi² (3.57 km²).

PERIOD OF RECORD.--August 1977 to September 1978, water year 1980.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	TIME	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH FIELD (UNITS)	TEMPER- ATURE, WATER (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED SATUR- ATION	NITRO- GEN, DIS- SOLVED (MG/L AS N)	HARD- NESS (MG/L AS CACO3)	HARD- NESS, NONCAR- BONATE (MG/L AS CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)
AUG , 1980 12...	1000	55	6.8	23.0	8.0	96	.45	14	0	.8	2.9
DATE	SODIUM, DIS- SOLVED (MG/L AS NA)	PERCENT SODIUM	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LINITY (MG/L AS CACO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L)
AUG , 1980 12...	1.2	15	.1	.8	20	1.5	.9	.1	.8	72	21
DATE	SOLIDS, DIS- SOLVED (TONS PER AC-FT)	NITRO- GEN, NITRATE TOTAL (MG/L AS N)	NITRO- GEN, NITRATE DIS- SOLVED (MG/L AS N)	NITRO- GEN, NITRITE TOTAL (MG/L AS N)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N)	NITRO- GEN, ORGANIC DIS- SOLVED (MG/L AS N)
AUG , 1980 12...	.10	.04	.00	.000	.000	.04	.00	.020	.010	.45	.44
DATE	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO- GEN,NH4 + ORG. SUSP. TOTAL (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC DIS. (MG/L AS N)	NITRO- GEN, TOTAL (MG/L AS N)	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHORUS, DIS- SOLVED (MG/L AS P)	PHOS- PHORUS, ORTHOPH- OSPHATE TOTAL (MG/L AS P)	CARBON, ORGANIC DIS- SOLVED (MG/L AS C)	CARBON, ORGANIC SUS- PENDEED (MG/L AS C)		
AUG , 1980 12...	.47	.02	.45	.51	.040	.010	.000	7.9	3.0		
DATE	ALUM- INUM, TOTAL ERABLE (UG/L AS AL)	TIME	BORON, TOTAL ERABLE (UG/L AS B)	CADMIUM TOTAL ERABLE (UG/L AS CD)	COPPER, TOTAL ERABLE (UG/L AS CU)	IRON, TOTAL ERABLE (UG/L AS FE)					
AUG , 1980 12...	1000	200	1	70	0	450					
DATE	LEAD, TOTAL RECOV- ERABLE (UG/L AS PB)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)	MERCURY TOTAL RECOV- ERABLE (UG/L AS HG)	MOLYB- DENUM, TOTAL RECOV- ERABLE (UG/L AS MO)	NICKEL, TOTAL RECOV- ERABLE (UG/L AS NI)	SELE- NIUM, TOTAL RECOV- ERABLE (UG/L AS SE)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN)				
AUG , 1980 12...	1	50	.2	1	0	0	10				

STREAMS TRIBUTARY TO LAKE MICHIGAN

04074548 SWAMP CREEK BELOW RICE LAKE AT MOLE LAKE, WI--CONTINUED

WATER-QUALITY RECORDS

PERIOD OF RECORD.--August 1977 to September 1978, water year 1980.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH FIELD (UNITS)	TEMPER- ATURE, WATER (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED (MG/L)	NITRO- GEN, DIS- SOLVED (MG/L AS N)	HARD- NESS (MG/L AS CACO3)	HARD- NESS, NONCAR- BONATE (MG/L CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)
AUG , 1980												
11...	1145	35	195	7.3	21.5	6.2	73	.73	100	14	22	11
		SODIUM, DIS- SOLVED (MG/L AS NA)	PERCENT SODIUM	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LINITY (MG/L AS CACO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, RESIDUE AT 180 DEG. C SOLVED (MG/L)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L)
AUG , 1980												
11...	1.9	4	.1	.5	86	3.5	2.3	.1	9.2	133	102	
		SOLIDS, DIS- SOLVED (TONS PER AC-FT)	SOLIDS, DIS- SOLVED (TONS PER DAY)	NITRO- GEN, NITRATE TOTAL (MG/L AS N)	NITRO- GEN, NITRATE DIS- SOLVED (MG/L AS N)	NITRO- GEN, NITRITE TOTAL (MG/L AS N)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N)
AUG , 1980												
11...	.18	12.6	.01	.05	.000	.000	.01	.05	.020	.140	.40	
		NITRO- GEN, ORGANIC DIS- SOLVED (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO- GEN,NH4 + ORG. SUSP. TOTAL (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC DIS. (MG/L AS N)	NITRO- GEN, TOTAL (MG/L AS N)	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHORUS, DIS- SOLVED (MG/L AS P)	PHOS- PHORUS, ORTHOPH- OSPHATE TOTAL (MG/L AS P)	CARBON, ORGANIC DIS- SOLVED (MG/L AS C)	CARBON, ORGANIC SUS- PENDEED (MG/L AS C)	
AUG , 1980												
11...	.54	.42	.00	.68	.43	.040	.040	.000	8.4	.4		
				ALUM- INUM, TOTAL RECOV- ERABLE (UG/L AS AL)	ARSENIC TOTAL (UG/L AS AS)	BORON, TOTAL RECOV- ERABLE (UG/L AS B)	CADMIUM TOTAL RECOV- ERABLE (UG/L AS CD)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)			
AUG , 1980												
11...	1145	35	200	1	70	0	0	310				
		LEAD, TOTAL RECOV- ERABLE (UG/L AS PB)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)	MERCURY TOTAL RECOV- ERABLE (UG/L AS HG)	MOLYB- DENUM, TOTAL RECOV- ERABLE (UG/L AS MO)	NICKEL, TOTAL RECOV- ERABLE (UG/L AS NI)	SELE- NIUM, TOTAL RECOV- ERABLE (UG/L AS SE)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN)				
AUG , 1980												
11...	0	30	.2	1	0	0	20					

STREAMS TRIBUTARY TO LAKE MICHIGAN

04077000 WOLF RIVER AT KESHENA FALLS, WI

LOCATION.--Lat 44°53'28", long 88°39'18", in E 1/2 sec.22, T.28 N., R.15 E., Menominee County, Hydrologic Unit 04030202, on right bank 500 ft (152 m) downstream from Keshena Falls, 1.7 mi (2.7 km) upstream from Keshena, 3.1 mi (5.0 km) downstream from West Branch Wolf River, and at mile 136.4 (219.5 km).

DRAINAGE AREA.--788 mi² (2.041 km²), revised.

PERIOD OF RECORD.--May 1907 to March 1909, October 1910 to current year. Monthly discharge only for some periods, published in WSP 1307. Published as "at Keshena" prior to April 1928.

REVISED RECORDS.--WSP 664: Drainage area (site at Keshena). WSP 1337: 1914-15(M), 1918-19(M), 1921, 1923(M), 1926(M), 1928(M), 1933.

GAGE.--Water-stage recorder. Datum of gage is 820.0 ft (249.936 m) National Geodetic Vertical Datum of 1929 (levels by Wisconsin Power and Light Co.). Prior to Mar. 23, 1928, nonrecording gage at bridge in Keshena 1.7 mi (2.7 km) downstream at datum 4.03 ft (1.23 m) lower.

REMARKS.--Records poor.

AVERAGE DISCHARGE.--71 years (1907-8, 1910-80), 761 ft³/s (21.55 m³/s), 13.11 in/yr (333 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge 5,200 ft³/s (147 m³/s) Mar. 15, 1973; maximum gage height, 13.86 ft (4.225 m) Mar. 15, 1973, backwater from ice; minimum discharge, 91 ft³/s (2.58 m³/s) Dec. 22, 1939, gage height, 4.67 ft (1.423 m), result of ice storage.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 1,500 ft³/s (42 m³/s) and maximum (*):

DATE	TIME	DISCHARGE (ft ³ /s) (m ³ /s)	GAGE HEIGHT (ft) (m)	DATE	TIME	DISCHARGE (ft ³ /s) (m ³ /s)	GAGE HEIGHT (ft) (m)
Oct. 24	0400	1,640 46.4	6.89 2.100	Apr. 9	1700	*2,710 76.7	7.92 2.414
Dec. 17	1200	Ice jam	*9.87 3.008	June 6	1400	1,910 54.1	7.17 2.185

minimum daily discharge, 400 ft³/s (11.3 m³/s) Mar. 6, 7.

RATING TABLE (gage height, in feet, and discharge, in cubic feet per second).
(Stage-discharge relation affected by ice Nov. 11-16, Nov. 30 to Apr. 2.)

5.3	377	6.5	1,290
5.5	488	7.0	1,740
6.0	842	8.0	2,800

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DAY	MEAN VALUES											
	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	501	1000	660	580	460	420	1100	905	900	789	464	1000
2	516	976	640	560	450	410	1200	856	787	720	442	960
3	529	893	640	540	450	420	1260	756	712	671	429	880
4	538	856	680	500	450	420	1140	705	675	633	465	800
5	572	932	820	480	440	420	1000	673	729	607	720	800
6	574	1100	860	460	430	400	921	647	1720	574	1000	700
7	566	1150	820	450	430	400	1120	634	1840	558	960	700
8	514	1080	740	460	440	410	1500	637	1690	545	920	660
9	495	954	720	480	450	420	2540	625	1450	518	880	620
10	494	848	720	520	460	430	2530	615	1250	498	840	580
11	502	720	740	560	460	430	1980	702	1100	489	800	640
12	534	760	600	580	450	420	1730	820	982	478	740	800
13	558	920	500	560	440	420	1590	761	863	471	680	1000
14	534	840	500	580	440	440	1470	771	723	456	620	940
15	521	760	500	800	450	520	1360	779	622	439	560	840
16	510	720	520	980	460	600	1250	740	590	442	520	780
17	507	688	540	1000	450	660	1170	704	569	456	470	700
18	507	677	580	980	450	680	1130	745	649	483	540	640
19	510	675	600	960	450	700	1080	792	977	482	600	580
20	521	704	620	920	470	720	1080	748	1130	485	760	660
21	585	772	640	840	480	720	1070	699	982	547	820	900
22	814	900	680	740	480	720	1070	662	830	590	720	1000
23	1400	963	700	680	480	700	1060	637	744	534	600	1200
24	1610	937	720	640	460	700	1040	604	682	494	540	1100
25	1420	896	700	600	460	700	1000	595	635	482	560	1000
26	1270	941	680	580	460	700	983	583	599	529	680	900
27	1190	984	640	560	430	700	967	563	597	526	940	820
28	1140	1020	620	540	430	720	927	538	776	494	1200	740
29	1100	872	600	520	420	760	910	531	920	525	1300	700
30	1040	760	580	500	---	860	918	584	879	515	1200	680
31	994	---	580	480	---	980	---	841	---	483	1100	---
TOTAL	23066	26298	20140	19630	13080	18000	38096	21452	27602	16513	23070	24320
MEAN	744	877	650	633	451	581	1270	692	920	533	744	811
MAX	1610	1150	860	1000	480	980	2540	905	1840	789	1300	1200
MIN	494	675	500	450	420	400	910	531	569	439	429	580
CFSM	.94	1.11	.83	.80	.57	.74	1.61	.88	1.17	.68	.94	1.03
IN.	1.09	1.24	.95	.93	.62	.85	1.80	1.01	1.30	.78	1.09	1.15

CAL YR 1979 TOTAL 349815 MEAN 958 MAX 2720 MIN 494 CFSM 1.22 IN 16.51
WTR YR 1980 TOTAL 271267 MEAN 741 MAX 2540 MIN 400 CFSM .94 IN 12.81

NOTE.--No gage-height record Aug. 5 to Sept. 30.

STREAMS TRIBUTARY TO LAKE MICHIGAN

04078500 EMBARRASS RIVER NEAR EMBARRASS, WI

LOCATION.--Lat 44°43'29", long 88°44'10", in SW 1/4 sec.18, T.26 N., R.15 E., Shawano County, Hydrologic Unit 04030202, on left bank 10 ft (3 m) downstream from bridge on county road, 1.3 mi (2.1 km) downstream from Mill Creek, and 4.0 mi (6.4 km) northwest of Embarrass.

DRAINAGE AREA.--384 mi² (995 km²), revised.

PERIOD OF RECORD.--June 1919 to current year.

REVISED RECORDS.--WSP 1337: 1920-26(M), 1928, 1929-30(M), 1933-34, 1936-37, 1938(M), 1940.

GAGE.--Water-stage recorder. Datum of gage is 803.95 ft (245.044 m) National Geodetic Vertical Datum of 1929. Prior to Aug. 23, 1938, nonrecording gage at same site and datum.

REMARKS.--Records good except those for winter periods, which are fair. Slight diurnal fluctuation caused by powerplants above station.

AVERAGE DISCHARGE.--61 years, 292 ft³/s (8.269 m³/s), 10.33 in/yr (262 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 7,080 ft³/s (200 m³/s) Apr. 12, 1965, gage height, 12.13 ft (3.697 m), affected by failure of dam near Pella, 9.2 mi (14.8 km) above station; minimum observed, 23 ft³/s (0.65 m³/s) Aug. 3, 6, 7, 1931.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 3,150 ft³/s (89.2 m³/s) June 7, gage height, 8.18 ft (2.493 m); minimum discharge, 82 ft³/s (2.32 m³/s) July 31.

RATING TABLE (gage height, in feet, and discharge, in cubic feet per second).
(Stage-discharge relation affected by ice Dec. 1 to Apr. 3.)

2.7	89	5.0	1,140
3.0	170	6.0	1,740
3.5	355	7.0	2,340
4.0	600	8.0	3,020

DAY	DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980											
	OCT	NOV	DEC	JAN	FEB	MEAN VALUES MAR	APR	MAY	JUN	JUL	AUG	SEP
1	156	327	240	150	140	120	370	386	407	428	112	525
2	166	411	190	140	130	120	500	375	428	311	117	472
3	187	444	170	140	130	110	520	357	360	257	118	444
4	197	393	190	140	130	110	483	334	268	215	121	359
5	192	336	200	140	130	120	479	307	252	203	182	312
6	183	334	200	140	130	120	550	295	1250	193	230	284
7	176	430	210	130	120	110	651	278	2830	181	201	255
8	173	463	190	120	120	110	1000	262	2860	174	340	226
9	172	417	180	120	120	110	2180	252	2160	162	473	258
10	171	335	190	130	120	120	2730	246	1450	158	401	371
11	169	269	200	140	120	130	2160	270	905	163	308	377
12	170	281	190	170	130	130	1550	318	629	164	315	449
13	170	283	180	180	130	130	1070	339	378	164	292	1050
14	169	259	150	180	130	140	747	331	318	162	239	1610
15	167	265	140	180	130	160	487	312	293	157	192	1320
16	167	265	150	270	130	200	459	301	271	154	178	917
17	167	266	170	500	130	220	444	278	243	150	171	641
18	167	274	180	480	130	230	446	282	239	158	181	464
19	170	286	190	450	140	240	477	329	409	152	200	406
20	172	305	200	420	140	260	510	363	675	153	291	356
21	231	341	200	380	140	290	535	351	696	215	712	572
22	389	443	200	350	140	270	544	296	571	154	864	998
23	809	537	220	300	140	270	540	255	394	147	698	1120
24	1060	575	230	270	140	240	524	233	297	140	430	1050
25	924	516	260	240	130	230	486	218	255	137	315	856
26	739	465	240	200	130	230	434	198	228	103	284	639
27	558	476	220	170	130	230	400	182	218	121	379	517
28	434	484	200	170	120	240	382	175	334	136	752	423
29	380	422	190	160	120	240	378	169	513	131	945	376
30	327	318	190	150	---	250	382	169	527	127	812	344
31	312	---	180	140	---	280	---	280	---	108	683	---
TOTAL	9624	11220	6040	6850	3770	5760	22418	8741	20658	5378	11536	17991
MEAN	310	374	195	221	130	186	747	282	689	173	372	600
MAX	1060	575	260	500	140	290	2730	386	2860	428	945	1610
MIN	156	250	151	120	110	110	370	169	218	103	112	226
CFSM	.81	.97	.51	.58	.34	.48	1.95	.73	1.79	.45	.97	1.56
IN.	.93	1.09	.59	.66	.37	.56	2.17	.85	2.00	.52	1.12	1.74
CAL YR 1979	TOTAL	159912	MEAN	438	MAX	2520	MIN	96	CFSM	1.14	IN	15.49
WTR YR 1980	TOTAL	129986	MEAN	355	MAX	2860	MIN	103	CFSM	.92	IN	12.59

STREAMS TRIBUTARY TO LAKE MICHIGAN

04079000 WOLF RIVER AT NEW LONDON, WI

LOCATION.--Lat 44°23'32", long 88°44'25", in NE 1/4 SE 1/4 sec.12, T.22 N., R.14 E., Waupaca County, Hydrologic Unit 04030202, on right bank 100 ft (30 m) downstream from Pearl Street bridge in New London, 0.2 mi (0.3 km) downstream from Embarrass River, and at mile 56.3 (90.6 km).

DRAINAGE AREA.--2,260 mi² (5,850 km²), revised.

PERIOD OF RECORD.--March 1896 to current year. Prior to October 1913 monthly discharges only, published in WSP 1307.

REVISED RECORDS.--WSP 1114: 1943(M). WSP 1337: 1931.

GAGE.--Water-stage recorder. Datum of gage is 747.94 ft (227.972 m) National Geodetic Vertical Datum of 1929 (levels by Corps of Engineers). Prior to Oct. 4, 1951, nonrecording gage.

REMARKS.--Records good except those for winter period, which are fair. Gage-height telemeter at station.

AVERAGE DISCHARGE.--84 years, 1,740 ft³/s (49.28 m³/s), 10.46 in/yr (266 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 15,500 ft³/s (439 m³/s) Apr. 13, 1922, gage height, 11.4 ft (3.47 m); maximum gage height, 11.83 ft (3.606 m) Apr. 3, 1979, backwater from ice; minimum daily, 150 ft³/s (4.25 m³/s) Mar. 1, 1900.

EXTREMES OUTSIDE OF PERIOD OF RECORD.--Flood of Apr. 16, 1888, reached a stage of 11.6 ft (3.54 m), from information by Corps of Engineers.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 6,420 ft³/s (182 m³/s) Apr. 15, gage height, 8.69 ft (2.649 m); minimum daily discharge, 843 ft³/s (23.9 m³/s) Aug. 4.

RATING TABLES (gage height, in feet, and discharge, in cubic feet per second).
(Stage-discharge relation affected by ice Dec. 3 to Mar. 31.)

Oct. 1 to Mar. 16			Mar. 17 to Sept. 30		
1.8	980		1.5	816	6.0 2,800
2.0	1,060		2.0	980	7.0 3,440
3.0	1,460		3.0	1,380	8.0 4,900
4.0	1,890		4.0	1,780	9.0 7,200
5.0	2,440		5.0	2,280	
6.0	3,050				

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980												
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	985	2810	2320	1500	1400	980	2550	2720	1360	1740	948	2360
2	993	2740	2100	1500	1300	960	2660	2660	1550	1780	923	2410
3	1010	2690	2000	1400	1100	940	2740	2590	1670	1740	874	2400
4	1030	2640	1900	1400	1100	940	2830	2510	1720	1630	843	2370
5	1050	2610	1800	1300	1100	940	2910	2420	1690	1570	903	2270
6												
7	1110	2580	1800	1300	1000	920	2900	2310	1990	1490	944	2130
8	1170	2520	1800	1300	1000	920	2880	2190	2510	1380	1140	1940
9	1200	2450	1700	1200	980	920	2980	2030	2890	1320	1400	1750
10	1220	2400	1700	1200	960	940	3210	1860	3080	1240	1600	1700
11	1210	2370	1700	1200	940	960	3470	1750	3250	1150	1690	1680
12												
13	1200	2300	1700	1200	940	940	3760	1680	3610	1090	1820	1700
14	1170	2250	1700	1200	940	940	4210	1640	4110	1050	1880	1970
15	1110	2190	1700	1200	940	960	5190	1630	4390	1030	1820	2400
16	1080	2070	1600	1200	940	980	5990	1680	4440	1010	1730	2610
17	1080	1940	1600	1200	920	1000	6400	1730	4320	1000	1640	2810
18												
19	1080	1870	1600	1200	900	1000	6300	1760	4030	1010	1510	2930
20	1070	1850	1500	1300	900	1200	5900	1760	3670	990	1410	3010
21	1090	1840	1400	1700	900	1500	5470	1760	3330	956	1320	3040
22	1140	1840	1400	2100	920	1800	4960	1750	3120	919	1240	3050
23	1170	1830	1400	2300	920	2000	4430	1720	2920	966	1290	3060
24												
25	1160	1840	1400	2400	920	2200	4000	1710	2750	995	1480	3060
26	1210	1910	1500	2300	920	2300	3740	1710	2660	1010	1690	3020
27	1530	2040	1500	2300	920	2500	3480	1640	2580	1050	1910	2980
28	1870	2180	1600	2300	940	2600	3330	1520	2510	1040	2000	2940
29	2140	2290	1600	2200	980	2500	3230	1410	2400	1030	2030	2920
30												
31	2350	2400	1700	2100	1000	2500	3140	1340	2230	957	1970	2930
32	2500	2480	1700	1900	1000	2600	3050	1280	1960	927	1850	2930
33	2610	2520	1700	1800	980	2600	2950	1240	1730	949	1790	2910
34	2710	2540	1700	1600	980	2600	2870	1190	1650	969	1880	2910
35	2780	2470	1600	1500	---	2500	2800	1170	1680	946	2050	2880
36	2810	---	1600	1400	---	2400	---	1230	---	950	2240	---
37												
TOTAL	45838	68460	52020	49700	28740	49040	114330	55590	81800	35884	47815	77070
MEAN	1479	2282	1678	1603	991	1582	3811	1793	2727	1158	1542	2569
MAX	2810	2810	2320	2400	1400	2600	6400	2720	4440	1780	2240	3060
MIN	985	1830	1400	1200	900	920	2550	1170	1360	919	843	1680
CFSM	.65	1.01	.74	.71	.44	.70	1.69	.79	1.21	.51	.68	1.14
IN.	.75	1.13	.86	.82	.47	.81	1.88	.92	1.35	.59	.79	1.27
38												
CAL YR 1979	TOTAL	976766	MEAN	2676	MAX	11000	MIN 985	CFSM 1.18	IN 16.08			
WTR YR 1980	TOTAL	706287	MEAN	1930	MAX	6400	MIN 843	CFSM .85	IN 11.63			

DRAINAGE AREA.--5,310 mi² (13,750 km²), revised, at lake outlet at Menasha Dam.

PERIOD OF RECORD.--October 1938 to current year in reports of Geological Survey. Records from 1882 to 1938 in files of Geological Survey and Corps of Engineers. A report on Fox River by Corps of Engineers, published as House Document No. 146, 67th Congress, 2nd session, contains semi-monthly records of inflow of Lake Winnebago for the period 1896-1917.

GAGE.--Water-stage recorder. Nonrecording gage read once daily October 1938 to October 1978. Datum of gage is 745.05 ft (227.091 m) mean tide at New York City (levels by Corps of Engineers). Datum of Deuchman gage is 745.00 ft (227.076 m) mean tide at New York City.

REMARKS.--Lake elevations controlled by dams at Menasha and Neenah, which are operated in the interest of navigation. Crests of both dams are at elevation 746.73 ft (227,603 m). Present limits of regulation are from 21 1/4 in. (540 mm) above the crest of Menasha dam to crest during navigation season, plus additional 18 in. (457 mm) below crest during winter. Oshkosh staff gage gives true level of lake, while Deuchman gage readings are affected by loss of head in the channel between lake and dam.

EXTREMES FOR PERIOD OF RECORD.--Maximum gage height observed, 5.33 ft (1.62 m) (Deuchman gage) Nov. 8, 1881, minimum observed, -2.00 ft (-0.61 m) (Deuchman gage) Nov. 28, 1891.

EXTREMES FOR CURRENT YEAR.--Maximum gage height, 3.77 ft (1.198 m) June 6; minimum, 0.47 ft (0.174 m) Mar. 12.

GAGE HEIGHT (FEET ABOVE DATUM), WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980													
DAY	MEAN VALUES												
	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	
1	2.44	2.49	2.61	1.94	1.47	.64	1.13	2.88	3.10	2.92	2.85	3.04	
2	2.37	2.62	2.59	1.92	1.44	.62	1.18	2.90	3.07	2.93	2.86	3.02	
3	2.32	2.64	2.54	1.89	1.40	.59	1.24	2.94	3.07	2.90	2.87	3.02	
4	2.33	2.65	2.53	1.87	1.37	.57	1.32	2.97	3.06	2.92	2.83	2.99	
5	2.32	2.67	2.47	1.85	1.33	.57	1.42	2.99	3.12	2.98	2.83	2.93	
6	2.30	2.70	2.47	1.82	1.30	.56	1.50	2.97	3.23	2.97	2.86	2.93	
7	2.32	2.69	2.41	1.81	1.27	.55	1.57	3.02	3.26	2.94	2.89	2.90	
8	2.30	2.67	2.42	1.77	1.23	.53	1.69	3.03	3.21	2.96	3.06	2.89	
9	2.31	2.73	2.39	1.73	1.20	.52	1.82	3.03	3.23	2.94	3.13	2.93	
10	2.31	2.70	2.39	1.69	1.17	.51	1.88	3.00	3.16	2.93	3.12	2.93	
11	2.29	2.69	2.33	1.68	1.13	.50	1.98	3.00	3.12	2.93	3.12	2.90	
12	2.24	2.67	2.34	1.66	1.10	.49	2.02	3.04	3.07	2.91	3.14	2.97	
13	2.32	2.67	2.29	1.61	1.07	.50	2.13	3.06	3.02	2.91	3.08	2.90	
14	2.29	2.67	2.28	1.59	1.04	.52	2.22	3.05	3.06	2.88	3.10	2.93	
15	2.30	2.68	2.25	1.56	1.01	.53	2.19	3.05	3.05	2.89	3.12	2.89	
16	2.30	2.66	2.21	1.63	.98	.54	2.26	3.05	2.98	2.88	3.08	2.84	
17	2.32	2.67	2.19	1.69	.96	.57	2.27	3.04	2.91	2.91	3.01	2.86	
18	2.31	2.66	2.14	1.71	.92	.60	2.35	3.06	2.98	2.85	3.00	2.79	
19	2.32	2.65	2.11	1.71	.89	.62	2.41	3.09	3.01	2.86	3.03	2.82	
20	2.34	2.66	2.08	1.72	.87	.64	2.51	3.09	3.00	2.91	3.07	2.82	
21	2.36	2.70	2.05	1.72	.85	.68	2.57	3.10	3.01	2.95	3.06	2.80	
22	2.43	2.70	2.03	1.70	.82	.72	2.61	3.10	3.02	2.95	3.09	2.86	
23	2.37	2.67	2.04	1.69	.80	.78	2.69	3.09	3.03	2.93	3.08	2.90	
24	2.51	2.68	2.07	1.67	.78	.83	2.72	3.09	3.01	2.88	3.04	2.85	
25	2.50	2.68	2.07	1.65	.75	.85	2.75	3.11	3.00	2.90	3.06	2.81	
26	2.52	2.67	2.05	1.64	.73	.87	2.78	3.08	3.02	2.91	3.12	2.83	
27	2.48	2.72	2.03	1.61	.71	.89	2.80	3.06	3.02	2.89	3.13	2.80	
28	2.55	2.66	2.02	1.59	.69	.92	2.83	3.06	2.95	2.86	3.11	2.81	
29	2.58	2.66	2.00	1.56	.66	.97	2.84	3.08	2.93	2.88	3.10	2.74	
30	2.60	2.64	1.98	1.53	---	1.02	2.87	3.07	2.97	2.86	3.06	2.74	
31	2.59	---	1.96	1.50	---	1.07	---	3.12	---	2.84	3.08	---	
MEAN	2.38	2.67	2.24	1.70	1.03	.67	2.15	3.04	3.06	2.91	3.03	2.88	
MAX	2.60	2.73	2.61	1.94	1.47	1.07	2.87	3.12	3.26	2.98	3.14	3.04	
MIN	2.24	2.49	1.96	1.50	.66	.49	1.13	2.88	2.91	2.84	2.83	2.74	
CAL YR 1979	MEAN	2.51	MAX 3.89	MIN .61									
WTR YR 1980	MEAN	2.32	MAX 3.26	MIN .49									

STREAMS TRIBUTARY TO LAKE MICHIGAN

04084500 FOX RIVER AT RAPIDE CROCHE DAM, NEAR WRIGHTSTOWN, WI

LOCATION.--Lat 44°19'03", long 88°11'50", in SE 1/4 sec.4, T.21 N., R.19 E., Outagamie County, Hydrologic Unit 04030204, at Rapide Croche Dam, 2.0 mi (3.2 km) upstream from Wrightstown, and 18 mi (29 km) upstream from mouth.

DRAINAGE AREA.--6,010 mi² (15,570 km²), revised.

PERIOD OF RECORD.--March 1896 to September 1917 (monthly discharge only), October 1917 to current year.

GAGE.--Recording headwater and tailwater gages and electric generation are read three times a day and used to compute the discharge records.

REMARKS.--Flow regulated by storage in Lake Winnebago (see sta. 04082500). Daily discharge determined from records of flow through turbines, head, gate openings, and lockages through navigation canal. Usually less than about 5 ft³/s (0.14 m³/s) is diverted into basin from Wisconsin River at Portage Canal throughout the year.

COOPERATION.--Figures of daily discharge furnished by Corps of Engineers. Records reviewed by Geological Survey.

AVERAGE DISCHARGE.--84 years, 4,163 ft³/s (117.9 m³/s).

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 24,000 ft³/s (680 m³/s) Apr. 18, 1952; minimum daily, 138 ft³/s (3.91 m³/s) Aug. 2, 1936.

EXTREMES FOR CURRENT YEAR.--Maximum daily discharge during year, 5,340 ft³/s (151 m³/s) Aug. 28; minimum daily, 1,010 ft³/s (28.6 m³/s) Mar. 13.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980												
DAY	MEAN VALUES											
	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1500	3400	4580	3740	4110	3300	1970	3910	3000	3100	1610	4390
2	1660	3090	2830	3860	4260	3280	1930	3450	2930	3220	1600	4220
3	1660	3190	2930	3800	4180	3290	2140	2410	2880	2680	1670	4020
4	1680	3110	4080	3680	4420	2880	2120	2400	2990	1610	1760	4680
5	1840	3190	4080	3750	4220	2900	2140	2570	3580	1940	1770	5000
6	1660	3040	4160	3900	4270	2920	2050	2520	4140	1660	1710	4580
7	1720	3490	4130	2800	4050	2380	2360	2580	3670	1700	2010	4100
8	1800	3600	2310	3130	3700	2870	3440	3120	3840	2110	2480	4460
9	1630	3760	3100	3690	3790	2930	3440	3000	3570	2120	2170	4470
10	1720	3570	4090	3980	3770	2710	3520	3120	3540	2080	2200	4510
11	1840	3280	4340	2370	3650	2220	3420	2530	3580	2170	2840	4530
12	1570	3990	3980	3200	3670	2120	3420	2720	3490	1690	3670	4490
13	1570	3760	2980	3270	3680	1010	3560	2680	3740	1680	4160	4600
14	1660	4090	3030	3500	3780	1400	3580	2820	3660	1730	4130	4180
15	1520	3240	3720	3680	3280	1630	4340	2840	3140	1680	3790	4390
16	1620	4060	2830	4180	3370	1960	4260	2850	3310	1830	3710	4380
17	1670	4140	3840	4440	3400	2010	4240	2780	3400	1700	3250	4400
18	1660	4000	3630	4110	3450	1740	4520	2790	3300	1890	3740	4320
19	1730	4150	4150	4210	3270	1840	4000	2850	3200	1780	3710	4300
20	1750	4060	4050	4220	4120	1840	3710	3070	3670	1790	3720	4270
21	1400	4110	4140	4260	3340	1800	3630	3020	3650	1830	3660	4140
22	1620	4390	3910	4290	3600	1820	3550	3010	3400	1670	3820	4200
23	1750	4170	3880	4000	3320	1900	3530	3100	3490	1740	3700	4040
24	1780	4210	3880	4410	3130	2790	3570	2920	3140	1770	3270	4010
25	1830	3800	3680	4630	3320	3430	3440	2770	3940	1900	3960	4170
26	1950	4220	3850	4520	3050	3480	3470	2750	3750	1710	4480	4060
27	2040	4070	3890	3600	3260	3720	3680	2700	4220	1290	5220	4190
28	1700	4050	4130	4390	3320	2870	3570	2890	3690	1800	5340	4380
29	1840	4050	3840	4260	3210	2380	3600	3170	3290	1570	4750	4050
30	2640	3990	3670	4340	---	2330	3830	3150	3150	1750	4770	3900
31	3330	---	4000	4140	---	2380	---	3080	---	1660	4180	---
TOTAL	55340	113270	115710	120350	105990	76130	100030	89570	104350	58850	102850	129430
MEAN	1785	3776	3733	3882	3655	2456	3334	2889	3478	1898	3318	4314
MAX	3330	4390	4580	4630	4420	3720	4520	3910	4220	3220	5340	5000
MIN	1400	3040	2310	2370	3050	1010	1930	2400	2880	1290	1600	3900
CAL YR 1979	TOTAL	2072870	MEAN	5679	MAX	18400	MIN	1400				
WTR YR 1980	TOTAL	1171870	MEAN	3202	MAX	5340	MIN	1010				

STREAMS TRIBUTARY TO LAKE MICHIGAN

04085000 FOX RIVER AT WRIGHTSTOWN, WI
(NATIONAL STREAM QUALITY ACCOUNTING NETWORK STATION)
(NATIONAL PESTICIDE MONITORING NETWORK STATION)

LOCATION.--Lat 44°19'36", long 88°09'54", in NE 1/4 NW 1/4 Sec.2, T.21 N., R.19 E., Brown County, Hydrologic Unit 04030204, at bridge on State Highway 96 at Wrightstown.

DRAINAGE AREA.--6,210 mi² (16,100 km²), approximately.

PERIOD OF RECORD.--Water years 1970, 1974 to current year.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: March 1975 to current year.

WATER TEMPERATURES: March 1975 to current year.

REMARKS.--Records of discharge are given for 04084500 Fox River at Rapide Croche Dam near Wrightstown. Partial records of once-daily specific conductance and water temperature for the current water year available in files of the District Office.

COOPERATION.--Pesticide samples were collected by the U.S. Geological Survey and were analyzed by Environmental Protection Agency. Supplemental water-quality samples were collected by Judith Summers and were analyzed by the Wisconsin State Laboratory of Hygiene.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Maximum daily, 700 micromhos July 28, 1979; minimum daily, 175 micromhos Aug. 29, 1975.

WATER TEMPERATURES: Maximum daily, 31.5°C July 21, 1977; minimum daily, 0.0°C on many days during winter periods.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	TIME	STREAM- FLOW (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH FIELD (UNITS)	TEMPER- ATURE, WATER (DEG C)	TUR- BID- ITY (NTU)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED (MG/L)	ATION	COLI- FORM, FECAL, (PER- CENT UM-MF (COLS./ 100 ML)	STREP- TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)
OCT , 1979											
23...	1500	1750	450	7.3	10.5	10	9.4	89	K47000	3100	
NOV											
20...	0945	4060	180	8.6	3.5	9.0	--	--	E900	K48	
DEC											
05...	1420	4080	400	8.1	1.0	6.0	13.4	99	1300	230	
JAN , 1980											
09...	0930	3690	400	8.5	.0	.30	15.0	108	E9300	130	
FEB											
05...	0900	4220	390	7.9	.0	1.2	14.4	104	4500	K10	
MAR											
11...	0900	2220	425	8.1	.0	.30	12.8	92	210	K30	
APR											
16...	0845	4260	480	8.1	3.0	2.0	13.2	102	--	--	
MAY											
07...	1800	2580	650	8.2	14.5	4.8	--	--	K600	K15	
JUN											
24...	0930	3140	380	8.4	22.0	15	5.8	69	E310	120	
JUL											
23...	1445	1740	410	8.9	27.5	8.5	10.5	138	300	K9	
AUG											
20...	0915	3720	370	8.8	23.0	18	7.6	92	K1700	700	
SEP											
24...	0745	4010	340	8.3	15.0	1.7	8.5	88	1700	580	
DATE		HARD- NESS (MG/L AS CACO3)	HARD- NESS, NONCAR- BONATE (MG/L CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	PERCENT SODIUM	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LINEITY (MG/L AS CACO3)	SULFATE DIS- SOLVED (MG/L AS SO4)
OCT , 1979											
23...	170	32	39	18	14	23	.5	2.6	140	31	
NOV											
20...	170	24	40	18	8.5	15	.3	2.4	150	24	
DEC											
05...	180	26	39	19	7.8	14	.3	2.3	150	23	
JAN , 1980											
09...	190	27	42	20	9.1	16	.3	2.3	160	26	
FEB											
05...	190	21	42	21	9.1	9	.3	2.9	170	26	
MAR											
11...	190	9	41	21	12	12	.4	2.5	180	29	
APR											
16...	180	27	38	20	9.8	11	.3	2.3	150	26	
MAY											
07...	180	32	40	20	14	14	.5	2.8	150	21	
JUN											
24...	160	12	35	18	9.2	11	.3	3.1	150	23	
JUL											
23...	160	31	33	19	15	17	.5	3.4	130	25	
AUG											
20...	160	19	34	18	10	12	.3	2.3	140	20	
SEP											
24...	150	14	32	18	7.7	10	.3	2.5	140	16	

K RESULTS BASED ON COLONY COUNT OUTSIDE THE ACCEPTABLE RANGE (NON-IDEAL COLONY COUNT).

E ESTIMATED.

STREAMS TRIBUTARY TO LAKE MICHIGAN
04085000 FOX RIVER AT WRIGHTSTOWN, WI--CONTINUED

WATER-QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	CHLORIDE, DIS- SOLVED (MG/L AS CL)	FLUORIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, RESIDUE AT 180 DEG. C SOLVED (MG/L)	SOLIDS, SUM OF CONSTITUENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)	SOLIDS, DIS- SOLVED (TONS PER DAY)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N)
OCT , 1979										
23...	18	.2	.1	234	208	.32	1110	.12	.15	.210
NOV										
20...	13	.0	.9	211	198	.29	2310	.13	.13	.200
DEC										
05...	13	.2	1.9	213	197	.29	2350	.17	.18	.180
JAN , 1980										
09...	14	.2	2.6	233	213	.32	2320	.15	.15	.100
FEB										
05...	13	.2	3.3	231	221	.31	2630	.14	.16	.100
MAR										
11...	15	.2	3.9	209	234	.28	1250	.24	.24	.090
APR										
16...	13	.2	4.1	220	205	.30	2530	.29	.35	.100
MAY										
07...	16	.2	.9	251	207	.34	1750	.29	.29	.410
JUN										
24...	13	.2	1.1	224	194	.30	1900	.22	.23	.170
JUL										
23...	20	.2	2.4	219	196	.30	1030	.01	.04	.060
AUG										
20...	14	.2	.5	202	183	.27	2030	.01	.02	.110
SEP										
24...	12	.2	.2	198	173	.27	2140	.06	.04	.220

DATE	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N)	NITRO- GEN, ORGANIC DIS- SOLVED (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO- GEN,NH4 + ORG. SUSP. TOTAL (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC DIS- SOLVED (MG/L AS N)	NITRO- GEN, DIS- SOLVED (MG/L AS N)	NITRO- GEN, TOTAL (MG/L AS N)	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHORUS, DIS- SOLVED (MG/L AS P)
OCT , 1979										
23...	.240	1.3	.86	1.5	.40	1.1	1.3	1.6	.230	.090
NOV										
20...	.150	1.0	.62	1.2	.43	.77	.90	1.3	.080	.050
DEC										
05...	.190	.92	.91	1.1	.00	1.1	1.3	1.3	.070	.040
JAN , 1980										
09...	.080	1.3	.62	1.4	.70	.70	.85	1.6	.080	.020
FEB										
05...	.110	.68	.54	.78	.13	.65	.81	.92	.100	.040
MAR										
11...	.050	.56	.60	.65	.00	.65	.89	.89	.060	.030
APR										
16...	.300	.73	.70	.83	.00	1.0	1.4	1.1	.070	.050
MAY										
07...	.330	.79	.37	1.2	.50	.70	.99	1.5	.150	.080
JUN										
24...	.100	.62	.55	.79	.14	.65	.88	1.0	.120	.050
JUL										
23...	.020	1.8	.41	1.9	1.5	.43	.47	1.9	.220	.090
AUG										
20...	.030	.99	.50	1.1	.57	.53	.55	1.1	.180	.070
SEP										
24...	.010	.29	.62	.51	.00	.63	.67	.57	.240	.090

DATE	SILVER, TOTAL RECOV- ERABLE (UG/L AS AG)	CARBON, ORGANIC TOTAL (MG/L AS C)	CARBON, ORGANIC DIS- SOLVED (MG/L AS C)	CARBON, ORGANIC SUS- PENDE (MG/L AS C)	PHYTO- PLANK- TON, TOTAL (CELLS PER ML)	PERI- PHYTON BIOMASS ASH WEIGHT G/SQ M	PERI- PHYTON BIOMASS TOTAL DRY WEIGHT G/SQ M	CHLOR-A PERI- PHYTON CHROMO- GRAPHIC FLUOROM (MG/M2)	CHLOR-B PERI- PHYTON CHROMO- GRAPHIC FLUOROM (MG/M2)	BIOMASS CHLORO- PHYLL RATIO PERI- PHYTON (UNITS)
OCT , 1979										
23...	0	--	9.8	1.5	--	.47	.55	3.4	.77	23.7
NOV										
20...	0	--	8.7	.6	6300	--	--	--	--	--
DEC										
05...	0	8.8	--	--	--	--	--	--	--	--
JAN , 1980										
09...	--	10	--	--	--	--	--	--	--	--
FEB										
05...	0	--	8.6	1.0	--	--	--	--	--	--
MAR										
11...	0	12	--	--	3500	--	--	--	--	--
APR										
16...	--	8.2	--	--	--	--	--	--	--	--
MAY										
07...	0	--	7.9	--	3800	8.7	8.9	1.6	.30	103
JUN										
24...	0	--	12	2.0	14000	1.9	2.8	.50	.10	1939
JUL										
23...	--	12	--	--	270000	--	--	--	--	--
AUG										
20...	0	--	--	.5	250000	--	--	--	--	--
SEP										
24...	0	11	--	--	--	2.0	2.5	.39	.05	1410

STREAMS TRIBUTARY TO LAKE MICHIGAN
04085000 FOX RIVER AT WRIGHTSTOWN, WI--CONTINUED

WATER-QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

			ARSENIC		ARSENIC		BARIUM		BARIUM		CADMIUM		CADMIUM					
			TOTAL		SUS- PENDE TOTAL		TOTAL		SUS- PENDE TOTAL		TOTAL		SUS- PENDE TOTAL					
			(UG/L AS AS)		(UG/L AS AS)		(UG/L AS BA)		(UG/L AS BA)		(UG/L AS CD)		(UG/L AS CD)					
DATE	TIME	STREAM- FLOW (CFS)																
OCT , 1979																		
23...	1500	1750	2		0		2		200		170		30	1	--	2		
NOV																		
20...	0945	4060	1		0		1		0		--		50	3	0	3		
FEB , 1980																		
05....	0900	4220	1		1		0		<50		<10		40	0	--	3		
MAY																		
07...	1800	2580	2		1		1		<50		--		30	1	--	6		
AUG																		
20...	0915	3720	2		1		1		<50		--		0	0	0	0		
			CHRO- MIUM, SUS- PENDE RECOV- ERABLE (UG/L AS CR)		CHRO- MIUM, DIS- SOLVED (UG/L AS CR)		COBALT, SUS- PENDE RECOV- ERABLE (UG/L AS CO)		COBALT, DIS- SOLVED (UG/L AS CO)		COPPER, SUS- PENDE RECOV- ERABLE (UG/L AS CU)		COPPER, DIS- SOLVED (UG/L AS CU)		IRON, SUS- PENDE RECOV- ERABLE (UG/L AS FE)			
OCT , 1979																		
23...	20	10	<10		0		--		1		6		3	3	420	380		
NOV																		
20...	10	--	20		0		--		2		8		3	5	330	290		
FEB , 1980																		
05....	20	10	<10		0		--		1		2		1	1	70	50		
MAY																		
07...	10	--	<10		0		0		0		7		0	7	300	240		
AUG																		
20...	20	10	10		0		0		0		3		1	2	610	580		
			LEAD, SUS- PENDE RECOV- ERABLE (UG/L AS PB)		LEAD, DIS- SOLVED (UG/L AS PB)		MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)		MANGA- NESE, SUS- PENDE RECOV- ERABLE (UG/L AS MN)		MERCURY TOTAL RECOV- ERABLE (UG/L AS HG)		MERCURY SUS- PENDE RECOV- ERABLE (UG/L AS HG)		NICKEL, TOTAL RECOV- ERABLE (UG/L AS NI)			
OCT , 1979																		
23...	40	6	5		1		50		40		10		.2	.1	<.1	2		
NOV																		
20...	40	5	5		0		40		30		10		22	.0	22	4		
FEB , 1980																		
05....	20	2	2		0		20		20		1		.1	.0	<.1	2		
MAY																		
07...	60	4	3		1		50		20		30		.2	.0	.2	1		
AUG																		
20...	30	4	4		0		80		80		0		<.1	--	<.1	1		
			SELE- NIUM, SUS- PENDE RECOV- ERABLE (UG/L AS SE)		SELE- NIUM, DIS- SOLVED (UG/L AS SE)		SILVER, TOTAL RECOV- ERABLE (UG/L AS AG)		SILVER, SUS- PENDE RECOV- ERABLE (UG/L AS AG)		ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN)		ZINC, SUS- PENDE RECOV- ERABLE (UG/L AS ZN)		ZINC, DIS- SOLVED (UG/L AS ZN)			
OCT , 1979																		
23...	2	0	0		0		0		0		0		20	10	10			
NOV																		
20...	3	1	0		0		0		0		0		40	10	30			
FEB , 1980																		
05....	2	0	0		0		0		0		0		60	--	70			
MAY																		
07...	0	1	0		0		0		0		0		20	0	20			
AUG																		
20...	0	1	0		0		0		0		0		20	10	10			
			CHLO- RIDE, DIS- SOLVED (MG/L AS CL)		SOLIDS, RESIDUE AT 105 DEG. C, SUS- PENDE (MG/L)		PHOS- PHORUS, TOTAL (MG/L AS P)		PHOS- PHORUS, ORTHOPH DISSOL. (MG/L AS P)		COPPER, TOTAL RECOV- ERABLE (UG/L AS CU)		LEAD, TOTAL RECOV- ERABLE (UG/L AS PB)		NICKEL, TOTAL RECOV- ERABLE (UG/L AS NI)		ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN)	
MAY , 1980																		
23...	1600	3100	--		--		--		--		--		4	6	<20	<20		
31...	1600	3080	14		36		.180		.048		--		4	6	<20	20		
JUN																		
28...	1630	3690	12		74		.140		.040		<1		6	10	<20	20		
30...	1700	3150	12		110		.240		.039		<1		5	11	<20	20		

STREAMS TRIBUTARY TO LAKE MICHIGAN

04085000 FOX RIVER AT WRIGHTSTOWN, WI--CONTINUED

WATER-QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	TIME	STREAM- FLOW (CFS)	PCB, TOTAL (UG/L)	ALDRIN, TOTAL (UG/L)	CHLOR- DANE, TOTAL (UG/L)	DDD, TOTAL (UG/L)	DDE, TOTAL (UG/L)	DDT, TOTAL (UG/L)
NOV , 1979								
20...	0945	4060	.0	.00	.0	.00	.00	.00
FEB , 1980								
05...	0900	4220	.0	.00	.0	.00	.00	.00

DATE	DI- AZINON, TOTAL (UG/L)	DI- ELDRIN, TOTAL (UG/L)	ENDRIN, TOTAL (UG/L)	ETHION, TOTAL (UG/L)	HEPTA- CHLOR, TOTAL (UG/L)	HEPTA- CHLOR EPOXIDE TOTAL (UG/L)	LINDANE TOTAL (UG/L)	MALA- THION, TOTAL (UG/L)	METH- OXY- CHLOR, TOTAL (UG/L)
NOV , 1979									
20...	.00	.00	.00	.00	.00	.00	.00	.00	.00
FEB , 1980									
05...	.00	.00	.00	.00	.00	.00	.00	.00	.00

DATE	METHYL PARA- THION, TOTAL (UG/L)	METHYL TRI- THION, TOTAL (UG/L)	PARA- THION, TOTAL (UG/L)	TOX- APHENE, TOTAL (UG/L)	TOTAL TRI- THION TOTAL (UG/L)	2,4-D, TOTAL (UG/L)	2,4,5-T TOTAL (UG/L)	SILVEX, TOTAL (UG/L)
NOV , 1979								
20...	.00	.00	.00	0	.00	.00	.00	.00
FEB , 1980								
05...	.00	.00	.00	0	.00	--	--	--

QUALITATIVE AND ASSOCIATED QUANTITATIVE BIOLOGICAL DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

PHYTOPLANKTON

Date	Time	Organism	Count (cells/ml)	Percent of total	Diversity index	Sampling method
Nov. 20, 1979	0945	CHLOROPHYTA				Grab sample
		Chlorophyceae				
		<i>Ankistrodesmus</i>	56	1		
		<i>Chlorella</i>	140	2		
		<i>Kirchneriella</i>		0		
		<i>Pediastrum</i>	140	2		
		<i>Scenedesmus</i>	340	5		
		<i>Schroederia</i>		0		
		<i>Staurastrum</i>		0		
		<i>Tetrastrum</i>	56	1		
		CHRYSOPHYTA				
		Bacillariophyceae				
		<i>Asterionella</i>	98	2		
		<i>Coscinodiscus</i>	70	1		
		<i>Cyclotella</i>	390	6		
		<i>Melosira</i>	1,400	22		
		<i>Navicula</i>	42	1		
		<i>Nitzschia</i>	150	2		
		<i>Synedra</i>		0		
		CYANOPHYTA				
		Cyanophyceae				
		<i>Anacystis</i>	2,600	41		
		<i>Oscillatoria</i>	450	7		
		<i>Raphidiopsis</i>	270	4		
		TOTAL	6,300		2.8	
Mar. 11, 1980	0900	CHLOROPHYTA				Grab sample
		Chlorophyceae				
		<i>Ankistrodesmus</i>	49	1		
		<i>Chlamydomonas</i>	73	2		
		<i>Micractinium</i>	240	7		
		<i>Scenedesmus</i>	49	1		
		<i>Schroederia</i>	24	1		
		<i>Tetrastrum</i>	200	6		
		CHRYSOPHYTA				
		Bacillariophyceae				
		<i>Asterionella</i>	420	12		
		<i>Cyclotella</i>	1,200	34		
		<i>Gomphonema</i>	49	1		
		<i>Melosira</i>	98	3		
		<i>Navicula</i>	73	2		
		<i>Stephanodiscus</i>	200	6		
		Chrysophyceae				
		<i>Chrysococcus</i>	24	1		
		<i>Dinobryon</i>	150	4		
		CRYPTOPHYTA				
		Cryptophyceae				
		<i>Chroomonas</i>	320	9		
		CYANOPHYTA				
		Cyanophyceae				
		<i>Oscillatoria</i>	390	11		
		TOTAL	3,500		3.2	

STREAMS TRIBUTARY TO LAKE MICHIGAN
04085000 FOX RIVER AT WRIGHTSTOWN, WI--CONTINUED

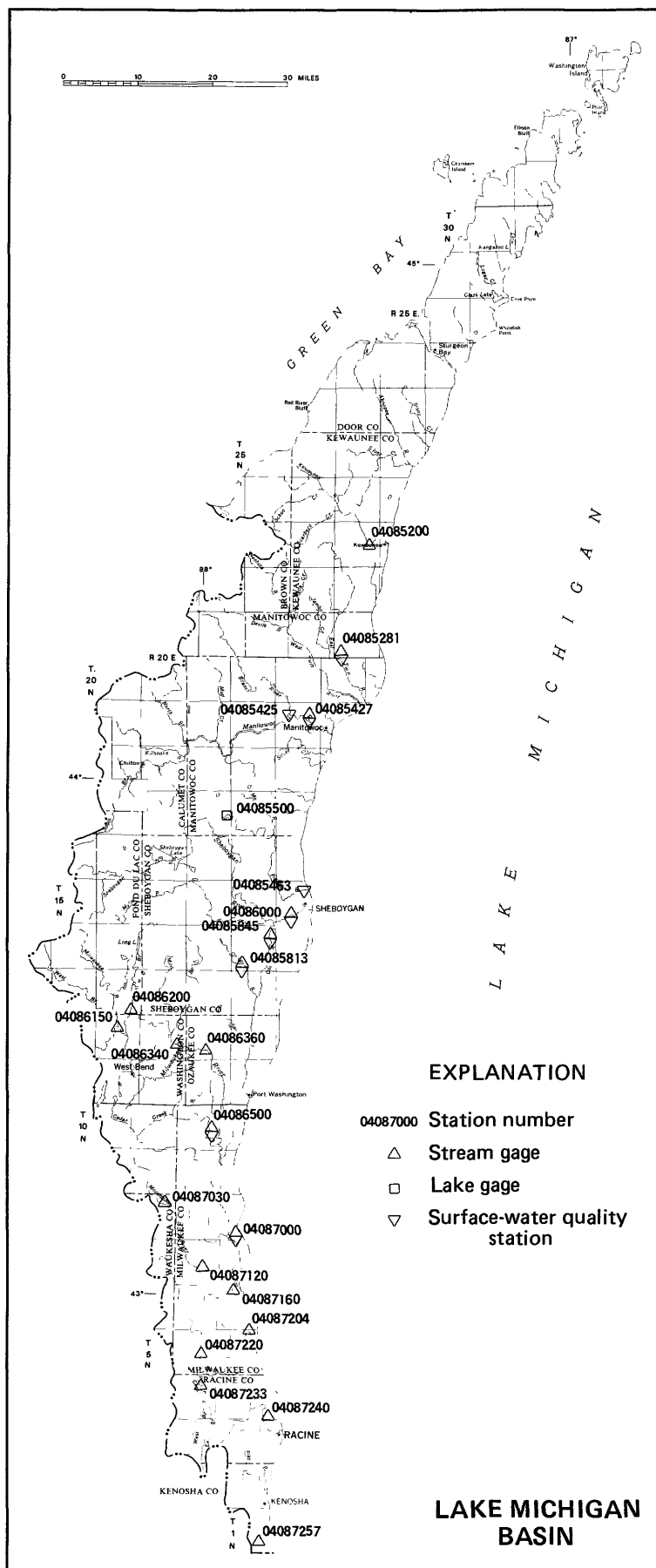
QUALITATIVE AND ASSOCIATED QUANTITATIVE BIOLOGICAL DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
PHYTOPLANKTON

Date	Time	Organism	Count (cells/ml)	Percent of total	Diversity index	Sampling method
May 7, 1980	1800	CHLOROPHYTA				Grab sample
		Chlorophyceae				
		Chlamydomonas	29	1		
		Elakatothrix	57	2		
		Scenedesmus	100	3		
		Schroederia	360	9		
		CHRYSOPHYTA				
		Bacillariophyceae				
		Asterionella	43	1		
		Cyclotella	43	1		
		Diatoma	29	1		
		Fragilaria	340	9		
		Gomphonema	72	2		
		Melosira	1,000	28		
		Navicula	86	2		
		Nitzschia	29	1		
		Stephanodiscus		0		
		Synedra	29	1		
		CYANOPHYTA				
		Cyanophyceae				
		Anacystis	990	26		
		Oscillatoria	420	11		
		Phormidium	100	3		
		TOTAL	3,800		3.0	
June 24, 1980	0930	CHLOROPHYTA				Grab sample
		Chlorophyceae				
		Chlamydomonas		0		
		Dictyosphaerium	130	1		
		Scenedesmus	270	2		
		Schroederia	200	1		
		Tetrastrum	130	1		
		CHRYSOPHYTA				
		Bacillariophyceae				
		Cocconeis		0		
		Cyclotella	800	6		
		Melosira	800	6		
		Navicula		0		
		Nitzschia		0		
		Stephanodiscus		0		
		CYANOPHYTA				
		Cyanophyceae				
		Anabaena	4,100	29		
		Anacystis	6,500	46		
		Oscillatoria	870	6		
		TOTAL	14,000		2.2	
July 23, 1980	1445	CHLOROPHYTA				Grab sample
		Chlorophyceae				
		Ankistrodesmus		0		
		Chlamydomonas		0		
		Coelastrum	2,400	1		
		Gloeoactinium		0		
		Kirchneriella		0		
		Micractinium	4,000	1		
		Pediastrum	12,000	4		
		Scenedesmus	2,800	1		
		Selenastrum		0		
		CHRYSOPHYTA				
		Bacillariophyceae				
		Cyclotella	2,000	1		
		Melosira	9,000	3		
		Nitzschia		0		
		CRYPTOPHYTA				
		Cryptophyceae				
		Cryptomonas		0		
		CYANOPHYTA				
		Cyanophyceae				
		Anabaena	200,000	73		
		Anacystis	23,000	8		
		Agmenellum	9,600	4		
		Gomphosphaeria	4,000	1		
		EUGLENOPHYTA				
		Euglenophyceae				
		Trachelomonas		0		
		TOTAL	270,000		1.7	
Aug. 20, 1980	0915	CHLOROPHYTA				Grab sample
		Chlorophyceae				
		Actinastrum	1,900	1		
		Chlamydomonas		0		
		Dictyosphaerium	8,200	3		
		Oocystis		0		
		CHRYSOPHYTA				
		Bacillariophyceae				
		Gomphonema		0		
		CYANOPHYTA				
		Cyanophyceae				
		Anabaena	5,300	2		
		Anabaenopsis	9,200	4		
		Anacystis	160,000	66		
		Lyngbya	58,000	23		
		TOTAL	250,000		1.5	

STREAMS TRIBUTARY TO LAKE MICHIGAN
04085000 FOX RIVER AT WRIGHTSTOWN, WI--CONTINUED

WATER-QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	TIME	STREAM- FLOW (CFS)	TEMPER- ATURE, WATER (DEG C)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	SEDI- MENT, SUS- PENDEDED (MG/L)	SEDI- MENT DIS- CHARGE, SUS- PENDEDED (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
OCT , 1979							
23...	1500	1750	10.5	450	19	90	95
NOV							
20...	0945	4060	3.5	180	11	121	72
DEC							
05...	1420	4080	1.0	400	8	88	100
JAN , 1980							
09...	0930	3690	.0	400	10	100	78
FEB							
05...	0900	4220	.0	390	6	68	60
MAR							
11...	0900	2220	.0	425	1	6.0	100
APR							
16...	0845	4260	3.0	480	12	138	83
MAY							
07...	1800	2580	14.5	650	66	460	62
JUN							
24...	0930	3140	22.0	380	31	263	91
JUL							
23...	1445	1740	27.5	410	25	117	100
AUG							
20...	0915	3720	23.0	370	33	331	79
SEP							
24...	0745	4010	15.0	340	39	422	86



STREAMS TRIBUTARY TO LAKE MICHIGAN

04085200 KEWAUNEE RIVER NEAR KEWAUNEE, WI

LOCATION.--Lat 44°27'30", long 87°33'23", in SW 1/4 sec.14, T.23 N., R.24 E., Kewaunee County, Hydrologic Unit 04030102, on left bank just downstream from bridge on County Trunk Highway F, 2.3 mi (3.7 km) west of Kewaunee, and about 7.0 mi (11.3 km) upstream from mouth.

DRAINAGE AREA.--127 mi² (329 km²).

PERIOD OF RECORD.--Annual maximum, water years 1958-65, and occasional low-flow measurements, water years 1963-64. September 1964 to current year. No winter records for years 1965 and 1966.

REVISED RECORDS.--WDR WI-79-1: Drainage area.

GAGE.--Water-stage recorder and crest-stage gage. Altitude of gage is about 590 ft (180 m), from topographic map. Apr. 3, 1957, to Sept. 2, 1964, crest-stage gage only at same site and datum.

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

AVERAGE DISCHARGE.--14 years, 80.1 ft³/s (2.27 m³/s), 8.57 in/yr (218 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 6,500 ft³/s (184 m³/s) Mar. 30, 1960, gage height, 16.03 ft (4.886 m); minimum recorded, 4.0 ft³/s (0.113 m³/s) Nov. 22, 1977, gage height, 8.06 ft (2.457 m), result of freezeup.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 800 ft³/s (23.0 m³/s) and maximum (*):

DATE	TIME	DISCHARGE (ft ³ /s) (m ³ /s)	GAGE HEIGHT (ft) (m)	DATE	TIME	DISCHARGE (ft ³ /s) (m ³ /s)	GAGE HEIGHT (ft) (m)
Jan. 17	0500	Unknown	12.69 3.868	Apr. 9	1515	*2,140 60.6	*12.82 3.908
Mar. 17	1430	1,450 41.1	12.07 3.679				

minimum daily discharge, 10.0 ft³/s (0.283 m³/s) Jan. 12-14, and possibly lower during winter.

RATING TABLE (gage height, in feet, and discharge, in cubic feet per second).
(Stage-discharge relation affected by ice Dec. 12-20, Dec. 28 to Jan. 18, Jan. 23 to Mar. 17.)

8.2	8.5	10.0	308
8.4	18	11.0	715
8.7	42	12.0	1,390
9.1	94	13.0	2,330
9.5	170		

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DAY	MEAN VALUES											
	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	15	20	36	21	25	14	73	110	22	17	12	35
2	15	20	32	18	24	14	66	100	22	16	11	34
3	16	20	29	17	24	15	63	94	21	15	11	34
4	16	20	28	15	23	15	68	88	19	14	11	33
5	17	19	28	14	22	16	73	84	21	14	14	32
6	17	22	28	13	22	16	74	78	73	14	16	30
7	16	23	29	13	21	16	87	74	106	14	16	25
8	16	23	32	12	21	17	366	65	156	13	20	22
9	17	23	33	11	20	17	1620	58	122	13	24	21
10	17	23	29	11	20	17	887	52	74	12	19	20
11	17	21	29	11	19	16	352	46	50	12	19	19
12	17	20	26	10	19	16	231	40	38	11	18	25
13	15	21	25	10	18	15	198	38	32	11	17	39
14	15	22	23	10	18	15	155	39	28	11	16	64
15	15	22	22	18	17	16	135	37	26	12	14	49
16	15	23	21	45	17	50	212	34	24	13	13	46
17	16	23	22	220	16	200	242	33	22	14	15	42
18	16	24	23	370	16	385	224	37	21	14	16	35
19	17	24	24	296	15	342	173	41	30	13	21	30
20	17	24	25	211	15	323	133	37	36	19	31	28
21	16	25	26	178	17	199	110	32	31	24	50	29
22	19	36	27	93	19	160	94	29	26	20	40	29
23	32	46	34	50	20	92	81	27	23	17	35	31
24	38	43	56	45	21	60	76	25	21	15	27	31
25	31	38	97	40	20	73	73	24	20	14	28	29
26	26	48	81	36	19	86	68	22	18	14	28	28
27	24	73	58	32	18	155	64	21	17	14	26	26
28	22	73	44	30	17	140	70	21	21	13	28	24
29	21	54	33	29	16	114	82	21	19	13	34	23
30	20	42	29	27	---	100	98	22	18	13	30	22
31	20	---	24	26	---	85	---	24	---	13	36	---
TOTAL	591	915	1053	1932	559	2799	6248	1453	1157	442	696	935
MEAN	19.1	30.5	34.0	62.3	19.3	90.3	208	46.9	38.6	14.3	22.5	31.2
MAX	38	73	97	370	25	385	1620	110	156	24	50	64
MIN	15	19	21	10	15	14	63	21	17	11	11	19
CFSM	.15	.24	.27	.49	.15	.71	1.64	.37	.30	.11	.18	.25
IN.	.17	.27	.31	.57	.16	.82	1.83	.43	.34	.13	.20	.27
CAL YR 1979	TOTAL	37824	MEAN	104	MAX	3000	MIN	13	CFSM	.82	IN	11.08
WTR YR 1980	TOTAL	18780	MEAN	51.3	MAX	1620	MIN	10	CFSM	.40	IN	5.50

STREAMS TRIBUTARY TO LAKE MICHIGAN

04085281 EAST TWIN RIVER AT MISHICOT, WI

LOCATION.--Lat 44°14'16", long 87°38'11", in NW 1/4 NW 1/4 sec.4, T.20 N., R.24 E., Manitowoc County, Hydrologic Unit 04030101, on right bank 500 ft (152 m) downstream from bridge on State Highway 147, at Mishicot, 0.8 mi (1.3 km) upstream from Johnson Creek, and 9.8 mi (15.8 km) upstream from mouth.

DRAINAGE AREA.--110 mi² (285 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--July 1972 to current year.

REVISED RECORDS.--WDR WI-79-1: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 584.72 ft (178.223 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Records good except those for winter periods and those for period of no gage-height record, Oct. 10-24, which are fair. Occasional regulation caused by recreation dam 0.3 mi (0.5 km) upstream.

AVERAGE DISCHARGE.--8 years, 74.8 ft³/s (2.118 m³/s), 9.23 in/yr (234 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 3,210 ft³/s (90.9 m³/s) Mar. 31, 1979, gage height, 13.75 ft (4.191 m); minimum, 1.7 ft³/s (0.048 m³/s) July 20, 1979, gage height, 3.69 ft (1.125 m).

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,660 ft³/s (40.7 m³/s) Aug. 21, gage height, 11.55 ft (3.520 m), no other peak above base of 500 ft³/s (14.2 m³/s); minimum discharge, 4.4 ft³/s (0.125 m³/s) Aug. 6, gage height, 3.79 ft (1.155 m).

RATING TABLE (gage height, in feet, and discharge, in cubic feet per second).
(Stage-discharge relation affected by ice Dec. 11-20, Dec. 28 to Mar. 23.)

3.75	4.4	5.5	137
3.8	6.1	6.0	195
3.9	10	8.0	480
4.0	15	9.0	679
4.0	26	10.0	967
4.2	46	11.0	1,370
4.5	86	12.0	1,930

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DAY	OCT	NOV	DEC	JAN	MEAN VALUES		APR	MAY	JUN	JUL	AUG	SEP
					FEB	MAR						
1	11	20	24	21	22	11	52	80	32	23	7.7	43
2	17	20	20	19	21	10	50	73	27	20	7.3	42
3	16	20	19	17	20	10	52	64	24	16	7.3	42
4	12	19	19	16	20	9.8	62	57	21	14	6.5	37
5	12	19	20	14	20	9.8	77	51	24	16	6.9	31
6	13	21	22	13	19	9.6	80	45	56	14	5.4	26
7	13	24	23	12	19	9.6	86	40	95	13	9.3	23
8	18	26	23	11	18	9.6	216	37	165	12	18	21
9	17	23	27	10	18	9.6	420	35	129	11	17	23
10	18	22	23	10	18	9.8	442	34	86	9.7	16	21
11	20	18	23	9.8	17	9.8	345	34	58	8.9	15	19
12	17	19	22	9.6	17	10	225	34	44	8.9	16	30
13	16	19	20	9.2	16	10	172	32	34	8.5	16	56
14	16	19	18	9.6	16	11	140	33	30	8.1	14	55
15	16	20	18	15	15	12	121	33	27	8.1	12	47
16	15	21	17	30	15	14	160	31	24	9.7	10	39
17	16	21	16	100	14	40	187	28	22	8.9	10	35
18	17	21	15	210	14	72	193	32	20	8.1	12	31
19	19	21	16	170	13	114	164	37	27	8.1	12	28
20	20	22	17	120	13	86	139	36	35	15	413	29
21	19	23	18	80	14	73	119	32	32	17	1330	35
22	20	32	20	62	15	59	83	27	26	16	574	44
23	25	37	27	47	16	49	89	24	23	13	251	47
24	33	34	39	38	17	40	81	23	19	11	118	40
25	30	29	63	33	16	38	74	21	18	11	89	39
26	26	36	77	29	15	49	70	20	16	11	80	32
27	23	44	63	28	13	57	65	18	14	11	68	29
28	21	41	50	26	11	57	62	17	37	9.7	59	26
29	20	32	38	25	11	58	73	19	37	8.1	55	24
30	20	28	29	24	---	57	78	21	30	7.7	49	24
31	20	---	24	22	---	54	---	30	---	7.7	43	---
TOTAL	576	751	850	1240.2	473	1068.6	4177	1098	1232	364.2	3347.4	1018
MEAN	18.6	25.0	27.4	40.0	16.3	34.5	139	35.4	41.1	11.7	108	33.9
MAX	33	44	77	210	22	114	442	80	165	23	1330	56
MIN	11	18	15	9.2	11	9.6	50	17	14	7.7	5.4	19
CFSM	.17	.23	.25	.36	.15	.31	1.26	.32	.37	.11	.98	.31
IN.	.19	.25	.29	.42	.16	.36	1.41	.37	.42	.12	1.13	.34
CAL YR 1979	TOTAL	33763.0	MEAN	92.5	MAX	2850	MIN	11	CFSM	.84	IN	11.42
WTR YR 1980	TOTAL	16195.4	MEAN	44.2	MAX	1330	MIN	5.4	CFSM	.40	IN	5.48

04085281 EAST TWIN RIVER AT MISHICOT, WI--CONTINUED

WATER-QUALITY RECORDS

PERIOD OF RECORD.--October 1979 to September 1980.

COOPERATION.--Water-quality samples were collected by the Wisconsin Department of Natural Resources - Southeastern District and were analyzed by the Wisconsin State Laboratory of Hygiene.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	TEMPER- ATURE, WATER (DEG C)
OCT , 1979				
24...	1015	30	580	6.5
NOV				
28...	1000	40	580	1.5
JAN , 1980				
09...	0920	10	--	.0
FEB				
20...	0945	13	640	.5
MAY				
13...	0930	33	575	12.5
JUN				
10...	1500	81	700	15.5
24...	0930	18	570	22.0
AUG				
05...	1010	7.6	845	11.0
SEP				
17...	0940	37	675	14.0

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, RESIDUE AT 105 DEG. C, SUS- PENDED (MG/L)	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- ORTHOPH- OSPHATE DISSOL. (MG/L AS P)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU)	LEAD, TOTAL RECOV- ERABLE (UG/L AS PB)	NICKEL, TOTAL RECOV- ERABLE (UG/L AS NI)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN)
MAY , 1980											
07...	1000	40	14	4.7	8	.080	.028	6	8	<20	<20
30...	1545	20	10	5.8	7	.080	.036	4	8	<20	<20
31...	1345	32	11	6.2	10	.080	.040	5	11	<20	<20
JUN											
02...	1515	27	12	8.1	6	.080	.037	9	13	<20	<20
03...	1100	24	13	8.2	6	.080	.040	5	5	<20	<20
04...	1530	20	13	7.0	5	.080	.039	<3	5	<20	<20
05...	1400	26	12	6.3	14	.120	.053	4	21	<20	<20
06...	1045	54	15	7.8	19	.180	.080	3	8	--	<20
08...	1430	150	9.0	9.6	26	.180	.077	4	3	--	<20
09...	1600	126	8.0	10	9	.100	.042	3	<3	--	<20
10...	1500	81	10	10	6	.090	.038	--	<3	--	<20
29...	1745	34	12	8.1	6	.100	.044	--	9	--	--
30...	1600	27	12	8.7	4	.090	.042	--	31	--	--
JUL											
01...	1545	22	12	8.7	5	.090	.044	--	9	--	--
06...	1445	13	15	.8	5	.100	.061	--	6	--	--
07...	1600	12	14	7.8	6	.100	.052	--	8	--	--
16...	1530	10	15	11	2	.120	.075	--	10	--	--
17...	1245	8.9	14	12	4	.120	.072	--	8	--	--
20...	1530	16	14	12	5	.120	.065	--	8	--	--
21...	1315	16	14	11	5	.120	.070	--	11	--	--
22...	1100	16	14	11	4	.100	.067	--	8	--	--
AUG											
03...	2300	7.7	15	8.1	0	.080	.049	--	5	--	--
05...	1630	8.1	15	7.7	0	.080	.043	--	4	--	--
08...	1700	19	14	7.5	5	.100	.059	--	<3	--	--
11...	1530	16	14	9.6	8	.120	.054	--	5	--	--
12...	1500	16	14	10	4	.100	.055	--	<3	--	--
20...	1600	474	4.0	5.6	164	.540	.096	--	7	--	--
21...	1145	1345	<2.0	5.7	20	.230	.105	--	3	--	--
22...	1530	497	4.0	10	6	.110	.058	--	<3	--	--
23...	1745	185	7.0	12	6	.120	.075	--	<3	--	--
25...	1600	88	9.0	13	8	.120	.070	--	6	--	--
SEP											
08...	0830	20	14	8.0	7	.120	.065	--	4	--	--
12...	1230	29	14	7.0	6	.060	.028	--	<3	--	--
13...	1715	58	12	10	4	.100	.059	--	<3	--	--
15...	1415	45	14	13	5	.080	.045	--	<3	--	--
21...	1330	34	14	10	7	.080	.042	--	<3	--	--
22...	1500	45	14	10	4	.080	.043	--	<3	--	--
23...	0945	48	13	11	4	.060	.033	--	<3	--	--

STREAMS TRIBUTARY TO LAKE MICHIGAN

04085425 BRANCH RIVER NEAR BRANCH, WI

LOCATION.--Lat 44°08'05", long 87°45'55", in SE1/4 NE1/4 Sec. 8, T.19E., Manitowoc County. Hydrologic Unit 04030101, at bridge on North Union Road 0.8 mi (1.3 km) south of Branch.

DRAINAGE AREA.--106 mi²6275 (274 km²6275).

PERIOD OF RECORD.--March to September 1980.

COOPERATION.--Water-quality samples were collected by the Wisconsin Department of Natural Resources - Southeastern District and were analyzed by the Wisconsin State Laboratory of Hygiene.

WATER-QUALITY DATA, MARCH TO SEPTEMBER 1980

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	TEMPER- ATURE, WATER (DEG C)							
APR , 1980											
08...	1415	171	420	6.5							
09...	1300	267	415	4.0							
22...	1030	86	630	16.0							
MAY											
12...	1625	24	660	14.0							
JUN											
10...	1200	--	640	14.5							
23...	1715	16	600	25.0							
JUL											
08...	1415	171	420	4.5							
AUG											
04...	1440	8.3	720	12.5							
SEP											
16...	1630	29	620	16.5							
DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, RESIDUE AT 105 DEG. C, SUS- PENDED (MG/L)	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- ORTHOPH- OSPHATE DISSOL. (MG/L AS P)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU)	LEAD, TOTAL RECOV- ERABLE (UG/L AS PB)	NICKEL, TOTAL RECOV- ERABLE (UG/L AS NI)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN)
MAY , 1980											
07...	1430	36	18	2.3	4	.060	.012	5	7	<20	<20
30...	1500	14	14	7.0	5	.070	.021	4	9	<20	<20
31...	1300	16	13	8.3	7	.080	.028	6	8	<20	<20
JUN											
02...	--	24	15	8.0	4	.090	.018	<3	6	<20	<20
03...	1215	22	17	6.8	4	.060	.022	6	9	20	<20
04...	1430	19	18	5.6	6	.070	.022	<3	4	<20	<20
05...	1315	32	16	5.4	16	.100	.036	<3	18	<20	<20
06...	1130	48	18	8.0	19	.210	.103	3	5	--	<20
08...	1515	80	14	10	10	.120	.052	4	3	--	<20
09...	1500	86	18	9.9	12	.120	.052	4	4	--	<20
10...	1201	89	12	11	11	.160	.076	--	<3	--	<20
29...	1700	47	13	6.2	20	.200	.004	--	6	--	--
30...	1445	33	15	8.2	14	.120	.005	--	6	--	--
JUL											
01...	1500	24	14	9.6	9	.100	.021	--	6	--	--
06...	1530	24	12	10	6	.110	.059	--	6	--	--
07...	1500	22	14	8.7	6	.100	.043	--	6	--	--
16...	1430	9.9	16	13	4	.100	.062	--	6	--	--
17...	1200	9.5	15	14	6	.120	.064	--	6	--	--
20...	1500	23	16	12	10	.140	.071	--	8	--	--
21...	1045	20	14	14	8	.120	.071	--	6	--	--
22...	0930	19	15	13	8	.100	.058	--	<3	--	--
AUG											
03...	0015	9.2	16	11	0	.080	.034	--	4	--	--
05...	1600	9.2	16	11	4	.060	.024	--	4	--	--
08...	1615	19	16	11	8	.080	.053	--	<3	--	--
09...	0745	14	15	5.9	4	.120	.075	--	4	--	--
11...	1445	22	19	11	6	.090	.049	--	<3	--	--
12...	1430	21	18	12	2	.080	.043	--	<3	--	--
20...	1515	64	18	11	0	.440	.186	--	3	--	--
21...	1045	76	17	13	25	.170	.078	--	3	--	--
22...	1500	44	17	13	7	.150	.085	--	3	--	--
25...	1515	23	18	13	7	.110	.071	--	3	--	--
SEP											
08...	1400	9.2	20	--	9	.060	.027	--	<3	--	--
11...	1130	7.6	20	11	2	.100	.042	--	<3	--	--
13...	1615	40	16	12	8	.100	.060	--	<3	--	--
15...	1330	11	14	13	0	.090	.056	--	<3	--	--
21...	1430	--	20	12	6	.120	.064	--	<3	--	--
22...	1615	--	23	13	7	.160	.081	--	<3	--	--

STREAMS TRIBUTARY TO LAKE MICHIGAN

04085427 MANITOWOC RIVER AT MANITOWOC, WI
(NATIONAL STREAM-QUALITY ACCOUNTING NETWORK STATION)

LOCATION.--Lat 44°06'26", long 87°42'55", in NE 1/4 NW 1/4 sec.23, T.19 N., R.23 E., Manitowoc County, Hydrologic Unit 04030101, on right bank 300 ft (91 m) upstream from bridge on County Trunk Highway JJ, just west of the Manitowoc city limits and 6.6 mi (10.6 km) upstream from mouth.

DRAINAGE AREA.--526 mi² (1,362 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--July 1972 to current year.

REVISED RECORDS.--WDR WI-79-1: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 610.12 ft (185.965 m) National Geodetic Vertical Datum of 1929.

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

AVERAGE DISCHARGE.--8 years, 316 ft³/s (8.949 m³/s), 8.16 in/yr (207 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 8,280 ft³/s (234 m³/s) Mar. 31, 1979, gage height, 13.24 ft (4.036 m) from floodmarks; minimum discharge, 10 ft³/s (0.283 m³/s) Nov. 7, 1976, gage height, 3.69 ft (1.125 m), result of freezeup.

EXTREMES FOR CURRENT YEAR.--Maximum discharge 930 ft³/s (26.3 m³/s) Apr. 11, gage height, 6.71 ft (2.045 m), no other peak above base of 800 ft³/s (22.7 m³/s); minimum discharge, 19 ft³/s (0.538 m³/s) Oct. 1, 2, gage height, 3.81 ft (1.161 m).

RATING TABLE (gage height, in feet, and discharge, in cubic feet per second).
(Stage-discharge relation affected by ice Dec. 1 to Apr. 2.)

3.8	16	5.0	232
4.0	32	6.0	590
4.2	56	7.0	1,080
4.6	128		

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DAY	OCT	NOV	DEC	JAN	FEB	MEAN VALUES MAR	APR	MAY	JUN	JUL	AUG	SEP
1	19	40	60	72	100	58	380	327	52	138	50	106
2	19	35	58	66	98	54	380	307	53	122	49	92
3	19	47	58	60	94	52	376	280	52	111	48	96
4	19	51	60	54	90	50	387	264	51	105	45	90
5	19	48	64	50	86	49	414	247	87	135	46	84
6	19	44	70	47	82	48	405	221	188	136	44	80
7	20	42	74	45	78	48	407	198	237	125	48	74
8	21	44	80	44	74	48	578	193	273	113	71	69
9	22	47	100	44	72	47	800	178	301	103	68	74
10	23	47	130	43	68	47	850	160	313	95	68	66
11	22	41	170	41	66	48	889	146	316	94	75	65
12	24	40	170	41	66	48	840	136	301	90	81	91
13	27	39	140	40	64	50	809	124	279	85	85	113
14	26	39	110	41	62	54	811	119	264	81	89	114
15	22	39	90	50	62	68	832	118	242	79	90	113
16	20	40	80	120	60	90	814	113	223	76	90	115
17	25	42	68	350	60	120	763	104	206	74	91	117
18	27	45	60	450	58	190	728	105	187	69	92	117
19	29	47	58	380	58	360	699	109	204	68	90	112
20	32	47	60	320	58	540	664	109	197	95	180	113
21	43	51	64	260	60	540	621	103	193	84	164	118
22	58	58	72	230	62	520	583	99	180	77	144	164
23	52	58	80	200	64	420	537	89	170	72	120	177
24	45	62	94	190	66	390	493	78	157	67	104	179
25	48	65	120	170	66	390	465	68	145	64	109	174
26	48	79	150	160	66	440	422	58	137	63	121	175
27	46	82	140	150	64	460	381	52	123	62	116	179
28	42	88	120	140	62	470	345	47	196	57	111	184
29	39	81	100	130	60	460	333	46	170	57	111	177
30	42	66	90	120	---	450	332	50	150	52	111	170
31	42	---	80	110	---	400	---	50	---	51	107	---
TOTAL	959	1554	2870	4218	2026	7009	17338	4298	5647	2700	2818	3608
MEAN	30.9	51.8	92.6	136	69.9	226	578	139	188	87.1	90.9	120
MAX	58	88	170	450	100	540	889	327	316	138	180	184
MIN	19	35	58	40	58	47	332	46	51	51	44	65
CFSM	.06	.10	.18	.26	.13	.43	1.10	.26	.36	.17	.17	.23
IN.	.07	.11	.20	.30	.14	.50	1.23	.30	.40	.19	.20	.26
CAL YR 1979	TOTAL	168989	MEAN 463	MAX 8000	MIN 16	CFSM .88	IN 11.95					
WTR YR 1980	TOTAL	55045	MEAN 150	MAX 889	MIN 19	CFSM .29	IN 3.89					

STREAMS TRIBUTARY TO LAKE MICHIGAN

04085427 MANITOWOC RIVER AT MANITOWOC, WI--CONTINUED
(NATIONAL STREAM-QUALITY ACCOUNTING NETWORK STATION)

WATER-QUALITY RECORDS

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

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: July 1979 to current year.

WATER TEMPERATURES: July 1979 to current year.

COOPERATION--Supplemental water-quality samples were collected by the Wisconsin Department of Natural Resources - Southeastern District and were analyzed by the Wisconsin State Laboratory of Hygiene.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Maximum daily, 960 micromhos Jan. 13, 1980; minimum daily, 325 micromhos Mar. 18, 1980.

WATER TEMPERATURES: Maximum daily, 27.0°C July 13, 14, 1979, July 16, 17, 23-26, 28, 31, Aug. 1, 2, 4, 5, 7, 9, 10, 1980; minimum daily, 0.0°C on many days during winter periods.

EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum daily, 960 micromhos Jan. 13, minimum daily, 325 micromhos Mar. 18.

WATER TEMPERATURES: Maximum daily, 27.0°C July 16, 17, 23-26, 28, 31, Aug. 1, 2, 4, 5, 7, 9, 10; minimum daily, 0.0°C on many days during winter months.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH FIELD (UNITS)	TEMPER- ATURE, WATER (DEG C)	TUR- BID- ITY (NTU)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED SATUR- ATION	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	STREP- TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)
OCT , 1979										
23...	1000	52	700	7.4	9.0	20	8.7	79	300	560
NOV										
19...	1430	48	685	8.8	6.5	2.0	--	--	K12	32
DEC										
06...	0845	74	780	7.9	.0	2.0	12.4	89	K6	K13
JAN , 1980										
08...	1500	44	850	8.2	.0	.80	13.9	100	E1	K5
FEB										
04...	1430	90	950	7.9	.0	3.6	12.6	91	K9	K19
MAR										
10...	1315	47	800	8.1	.0	.25	12.2	88	K4	K10
APR										
15...	1430	845	500	8.3	4.5	.50	14.8	119	--	--
MAY										
07...	1100	200	720	8.3	12.5	3.6	--	--	20	89
JUN										
23...	1330	173	550	8.5	22.0	1.0	--	--	87	37
JUL										
23...	1130	79	660	8.0	23.0	230	4.7	57	K1900	K700
AUG										
19...	1330	97	600	8.5	23.0	9.8	8.9	107	45	40
SEP										
23...	1315	187	680	8.1	14.5	1.0	10.9	111	560	260

DATE	HARD- NESS (MG/L AS CAC03)	HARD- NESS, NONCAR- BONATE (MG/L CAC03)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	PERCENT SODIUM	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LINIT (MG/L AS CAC03)	SULFATE DIS- SOLVED (MG/L AS SO4)
OCT , 1979										
23...	310	48	59	39	18	20	.4	4.4	260	37
NOV										
19...	330	58	62	42	25	25	.6	4.8	270	49
DEC										
06...	390	69	80	46	20	17	.4	5.2	320	63
JAN , 1980										
08...	430	78	89	50	23	18	.5	5.9	350	82
FEB										
04...	370	70	79	42	22	11	.5	12	300	82
MAR										
10...	370	53	77	44	32	16	.7	5.1	320	50
APR										
15...	220	63	48	25	10	9	.3	6.4	160	51
MAY										
07...	350	95	76	40	17	9	.4	5.2	260	75
JUN										
23...	270	0	58	30	13	9	.3	3.5	270	38
JUL										
23...	310	20	63	37	18	11	.4	3.9	290	21
AUG										
19...	320	50	67	37	18	11	.4	4.4	270	38
SEP										
23...	340	36	72	38	17	10	.4	5.9	300	44

K RESULTS BASED ON COLONY COUNT OUTSIDE THE ACCEPTABLE RANGE (NON-IDEAL COLONY COUNT).

E ESTIMATED.

STREAMS TRIBUTARY TO LAKE MICHIGAN
04085427 MANITOWOC RIVER AT MANITOWOC, WI--CONTINUED

WATER-QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	CHLORIDE, DIS- SOLVED (MG/L AS CL)	FLUORIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SiO ₂)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, SUM OF CONSTITUENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)	SOLIDS, DIS- SOLVED (TONS PER DAY)	NITRO- GEN, NO ₂ +NO ₃ TOTAL (MG/L AS N)	NITRO- GEN, NO ₂ +NO ₃ DIS- SOLVED (MG/L AS N)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N)
OCT , 1979										
23...	34	.2	4.1	378	355	.51	53.1	.57	.63	.070
NOV										
19...	48	.2	.3	445	395	.61	57.7	.23	.27	.300
DEC										
06...	41	.1	5.0	494	458	.67	98.7	1.3	1.2	.040
JAN , 1980										
08...	45	.2	5.2	537	519	.73	63.8	1.8	1.9	.060
FEB										
04...	41	.2	14	524	481	.71	127	1.7	1.8	.990
MAR										
10...	52	.2	12	486	474	.66	61.7	2.2	2.2	.890
APR										
15...	22	.1	7.6	346	271	.47	789	1.0	1.1	.410
MAY										
07...	33	.2	.4	490	403	.67	265	.00	.01	.040
JUN										
23...	25	.2	6.0	417	336	.57	195	.07	.07	.090
JUL										
23...	30	.2	8.2	429	357	.58	91.5	.18	.23	.030
AUG										
19...	36	.2	11	411	375	.56	108	.21	.21	.040
SEP										
23...	33	.2	11	462	404	.63	233	.62	.64	.040

DATE	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N)	NITRO- GEN, ORGANIC DIS- SOLVED (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO- GEN,NH ₄ + ORG. SUSP. TOTAL (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC DIS. (MG/L AS N)	NITRO- GEN, DIS- SOLVED (MG/L AS N)	NITRO- GEN, TOTAL (MG/L AS N)	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHORUS, DIS- SOLVED (MG/L AS P)
OCT , 1979										
23...	.060	1.3	.89	1.4	.45	.95	1.6	2.0	.100	.050
NOV										
19...	.260	1.0	1.2	1.3	.00	1.5	1.8	1.5	.080	.060
DEC										
06...	.010	1.2	1.3	1.2	.00	1.3	2.5	2.5	.040	.010
JAN , 1980										
08...	.220	1.3	2.4	1.3	.00	2.6	4.5	3.1	.030	.040
FEB										
04...	1.100	1.4	2.6	2.4	.00	3.7	5.5	4.1	.460	.490
MAR										
10...	.940	.41	2.1	1.3	.00	3.0	5.2	3.5	.120	.130
APR										
15...	.440	.99	1.1	1.4	.00	1.5	2.6	2.4	.190	.130
MAY										
07...	.030	1.6	1.4	1.6	.20	1.4	1.4	1.6	.190	.110
JUN										
23...	.030	1.4	1.4	1.5	.10	1.4	1.5	1.6	.320	.230
JUL										
23...	.030	2.0	.92	2.0	1.1	.95	1.2	2.2	.800	.370
AUG										
19...	.030	1.5	.73	1.5	.74	.76	.97	1.7	.300	.230
SEP										
23...	.040	1.1	.94	1.1	.12	.98	1.6	1.7	.180	.140

DATE	SILVER, TOTAL RECOV- ERABLE (UG/L AS AG)	CARBON, ORGANIC TOTAL (MG/L AS C)	CARBON, ORGANIC DIS- SOLVED (MG/L AS C)	CARBON, ORGANIC SUS- PENDED (MG/L AS C)	PHYTO- PLANK- TON, TOTAL (CELLS PER ML)	PERI- PHYTON BIOMASS ASH WEIGHT G/SQ M	PERI- PHYTON BIOMASS TOTAL WEIGHT G/SQ M	CHLOR-A PERI- PHYTON CHROMO- GRAPHIC FLUOROM (MG/M2)	CHLOR-B PERI- PHYTON CHROMO- GRAPHIC FLUOROM (MG/M2)	BIOMASS CHLORO- PHYLL RATIO PERI- PHYTON (UNITS)
OCT , 1979										
23...	0	--	7.3	.6	--	26	28	36	3.1	49.6
NOV										
19...	0	--	11	1.2	22000	--	--	--	--	--
DEC										
06...	0	9.3	--	--	--	--	--	--	--	--
JAN , 1980										
08...	--	11	--	--	--	--	--	--	--	--
FEB										
04...	0	--	16	.5	--	--	--	--	--	--
MAR										
10...	0	5.7	--	--	410	--	--	--	--	--
APR										
15...	--	20	--	--	--	--	--	--	--	--
MAY										
07...	0	--	--	--	35000	45	45	22	.00	13.3
JUN										
23...	0	--	--	--	4500	1.7	2.4	5.8	1.8	122
JUL										
23...	--	29	--	--	10000	--	--	--	--	--
AUG										
19...	0	--	16	1.2	3000	--	--	--	--	--
SEP										
23...	0	19	--	--	1800	33	36	30	2.4	119

STREAMS TRIBUTARY TO LAKE MICHIGAN
04085427 MANITOWOC RIVER AT MANITOWOC, WI--CONTINUED

WATER-QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	SILICA, DIS- SOLVED (MG/L SI02)	SOLIDS, RESIDUE AT 105 DEG. C, SUS- PENDED (MG/L)	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- ORTHOPH OSPHATE DISSOL. (MG/L AS P)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU)	LEAD, TOTAL RECOV- ERABLE (UG/L AS PB)	NICKEL, TOTAL RECOV- ERABLE (UG/L AS NI)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN)
MAY , 1980											
07...	0800	200	29	.5	17	.240	.083	10	7	<20	<20
30...	1300	53	30	3.0	15	.260	.172	6	7	<20	<20
31...	1200	49	28	3.4	18	.260	.187	34	40	<20	<20
JUN											
02...	1430	53	36	2.8	8	.300	.210	<3	<3	<20	<20
03...	1300	52	38	1.8	10	.290	.220	8	8	<20	<20
04...	1330	50	38	1.3	8	.290	.210	4	5	<20	<20
05...	1230	99	31	2.5	37	.360	.210	18	5	<20	<20
06...	1200	195	30	4.2	72	.380	.177	4	5	--	20
08...	1530	288	36	6.2	54	.350	.190	4	6	--	<20
09...	1430	310	30	5.6	--	.320	.186	3	4	--	<20
10...	1630	319	31	6.3	42	.260	.141	--	<3	--	<20
12...	1600	306	18	--	35	.290	.160	--	<3	--	<20
29...	1830	171	24	6.1	50	.460	.250	--	270	--	--
30...	1430	157	25	5.5	36	.440	.250	--	6	--	--
JUL											
01...	1430	137	26	5.5	21	.420	.270	--	<3	--	--
06...	1600	142	26	5.7	38	.430	.300	--	6	--	--
07...	1500	128	27	5.7	26	.420	.300	--	<3	--	--
16...	1430	81	31	--	28	.600	.470	--	1	--	--
17...	1130	76	30	10	35	.650	.470	--	7	--	--
20...	1430	111	27	8.6	73	.750	.380	--	13	--	--
21...	1000	86	27	9.8	49	.580	.410	--	3	--	--
22...	0930	81	36	9.7	44	.540	.410	--	<3	--	--
AUG											
03...	2200	53	34	6.8	17	.430	.330	--	3	--	--
05...	1500	50	36	6.2	7	.400	.330	--	4	--	--
08...	1530	88	31	7.2	27	.360	.280	--	3	--	--
09...	0700	74	32	7.5	41	.420	.300	--	<3	--	--
11...	1400	88	33	7.7	36	.400	.290	--	<3	--	--
12...	1130	89	32	8.2	17	.370	.290	--	<3	--	--
20...	1400	223	24	9.2	176	.570	.220	--	5	--	--
21...	0930	530	28	12	86	.400	.200	--	3	--	--
22...	1400	164	25	12	54	.320	.195	--	3	--	--
23...	1630	438	22	12	28	.310	.210	--	<3	--	--
25...	1430	120	24	11	43	.340	.220	--	3	--	--
26...	1430	137	27	14	26	.330	.220	--	3	--	--
SEP											
08...	1300	71	27	--	9	.210	.160	--	3	--	--
12...	1100	118	25	5.0	99	.310	.130	--	<3	--	--
13...	1400	109	28	7.0	20	.200	.142	--	<3	--	--
15...	1230	118	30	8.0	9	.180	.135	--	<3	--	--
21...	1200	118	16	8.0	17	.160	.093	--	<3	--	--

QUALITATIVE AND ASSOCIATED QUANTITATIVE BIOLOGICAL DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

PHYTOPLANKTON

Date	Time	Organism	Count (cells/ml)	Percent of total	Diversity index	Sampling method
Nov. 19, 1979						
		CHLOROPHYTA				Grab sample
		Chlorophyceae				
		Chlamydomonas	450	2		
		Scenedesmus	1,800	8		
		CHRYSOPHYTA				
		Bacillariophyceae				
		Cyclotella	17,000	76		
		Navicula	150	1		
		Nitzschia	2,100	10		
		Synedra	150	1		
		CYANOPHYTA				
		Cyanophyceae				
		Anacystis	600	3		
		TOTAL	22,000		1.3	
Mar. 10, 1980						
		CHLOROPHYTA				Grab sample
		Chlorophyceae				
		Ankistrodesmus	15	4		
		Chlorella	71	17		
		Kirchneriella	5	1		
		Scenedesmus	45	11		
		Tetradron	5	1		
		CHRYSOPHYTA				
		Bacillariophyceae				
		Nitzschia	30	7		
		Thalassiosira	200	49		
		Chrysophyceae				
		Ochromonas	40	10		
		TOTAL	410		2.2	

STREAMS TRIBUTARY TO LAKE MICHIGAN
04085427 MANITOWOC RIVER AT MANITOWOC, WI--CONTINUED

QUALITATIVE AND ASSOCIATED QUANTITATIVE BIOLOGICAL DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

PHYTOPLANKTON

Date	Time	Organism	Count (cells/ml)	Percent of total	Diversity index	Sampling method
May 7, 1980	1100	CHLOROPHYTA				Grab sample
		Chlorophyceae				
		<i>Ankistrodesmus</i>	6,400	18		
		<i>Chlamydomonas</i>	4,600	13		
		<i>Kirchneriella</i>	1,500	4		
		<i>Oocystis</i>	510	1		
		<i>Pteromonas</i>	260	1		
		<i>Scenedesmus</i>	5,900	17		
		<i>Tetradon</i>	260	1		
		CHRYSOPHYTA				
		Bacillariophyceae				
		<i>Cyclotella</i>	10,000	29		
		<i>Navicula</i>	260	1		
		<i>Nitzschia</i>	1,300	4		
		Chrysophyceae				
		<i>Chrysococcus</i>	260	1		
		CRYPTOPHYTA				
		Cryptophyceae				
		<i>Cryptomonas</i>	1,300	4		
		CYANOPHYTA				
		Cyanophyceae				
		<i>Gomphosphaeria</i>	2,600	7		
		TOTAL	35,000		2.9	
June 23, 1980	1330	CHLOROPHYTA				Grab sample
		Chlorophyceae				
		<i>Ankistrodesmus</i>	180	4		
		<i>Chlamydomonas</i>	130	3		
		<i>Coelastrum</i>	950	10		
		<i>Kirchneriella</i>	100	2		
		<i>Oocystaceae</i>	660	14		
		<i>Scenedesmus</i>	1,200	26		
		<i>Selenastrum</i>	380	8		
		<i>Tetrastrum</i>	100	2		
		CHRYSOPHYTA				
		Bacillariophyceae				
		<i>Cocconeis</i>	130	3		
		<i>Cyclotella</i>	200	4		
		<i>Melosira</i>	50	1		
		<i>Navicula</i>	150	3		
		<i>Nitzschia</i>	180	4		
		<i>Rhoicosphenia</i>	50	1		
		<i>Synedra</i>	25	1		
		CRYPTOPHYTA				
		Cryptophyceae				
		<i>Chroomonas</i>	50	1		
		<i>Cryptomonas</i>	50	1		
		CYANOPHYTA				
		Cyanophyceae				
		<i>Anacystis</i>	480	10		
		EUGLENOPHYTA				
		Euglenophyceae				
		<i>Euglena</i>	25	1		
		TOTAL	4,600		2.8	
July 23, 1980	1130	CHLOROPHYTA				Grab sample
		Chlorophyceae				
		<i>Ankistrodesmus</i>	300	3		
		<i>Chlorella</i>	59	1		
		<i>Crucigenia</i>	950	9		
		<i>Kirchneriella</i>	59	1		
		<i>Pediastrum</i>	950	9		
		<i>Scenedesmus</i>	2,100	21		
		<i>Tetrastrum</i>	710	7		
		CHRYSOPHYTA				
		Bacillariophyceae				
		<i>Cocconeis</i>	120	1		
		<i>Cyclotella</i>	710	7		
		<i>Navicula</i>	710	7		
		<i>Nitzschia</i>	410	4		
		<i>Synedra</i>	59	1		
		Xanthophyceae				
		<i>Ophioctium</i>	59	1		
		CRYPTOPHYTA				
		Cryptophyceae				
		<i>Cryptomonas</i>	59	1		
		CYANOPHYTA				
		Cyanophyceae				
		<i>Anacystis</i>	2,800	28		
		EUGLENOPHYTA				
		Euglenophyceae				
		<i>Trachelomonas</i>	120	1		
		TOTAL	10,000		3.1	

STREAMS TRIBUTARY TO LAKE MICHIGAN
04085427 MANITOWOC RIVER AT MANITOWOC, WI--CONTINUED

QUALITATIVE AND ASSOCIATED QUANTITATIVE BIOLOGICAL DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

PHYTOPLANKTON						
Date	Time	Organism	Count (cells/ml)	Percent of total	Diversity index	Sampling method
Aug. 19, 1980	1330	CHLOROPHYTA				Grab sample
		Chlorophyceae				
		Actinastrum	100	3		
		Ankistrodesmus	65	2		
		Chlamydomonas	52	2		
		Kirchneriella	26	1		
		Scenedesmus	1,400	48		
		Selenastrum	300	10		
		Tetraedron		0		
		CHRYSOPHYTA				
		Bacillariophyceae				
		Cyclotella	120	4		
		Cymbella	26	1		
		Navicula	160	5		
		Nitzschia	480	6		
		CRYPTOPHYTA				
		Cryptophyceae				
		Chroomonas		0		
		Cryptomonas	52	2		
		CYANOPHYTA				
		Cyanophyceae				
		Anacystis	140	5		
		EUGLENOPHYTA				
		Euglenophyceae				
		Euglena	26	1		
		Trachelomonas	26	1		
		TOTAL	3,000		2.6	
Sept. 23, 1980	1315	CHLOROPHYTA				Grab sample
		Chlorophyceae				
		Ankistrodesmus	65	4		
		Chlamydomonas	52	3		
		Scenedesmus	590	33		
		Selenastrum	52	3		
		Tetraedron	13	1		
		CHRYSOPHYTA				
		Bacillariophyceae				
		Cyclotella	26	1		
		Navicula	350	19		
		Nitzschia	160	9		
		Rhoicosphenia	13	1		
		Synedra	13	1		
		CRYPTOPHYTA				
		Cryptophyceae				
		Cryptomonas	26	1		
		CYANOPHYTA				
		Cyanophyceae				
		Anacystis	300	16		
		Oscillatoria	170	9		
		TOTAL	1,800		2.8	

WATER-QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	TEMPER- ATURE, WATER (DEG C)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	SEDI- MENT, SUS- PENDED (MG/L)	SEDI- MENT DIS- CHARGE, SUS- PENDED (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
OCT , 1979							
23...	1000	52	9.0	700	52	7.3	95
23...	1625	51	9.0	615	--	--	--
NOV							
19...	1430	48	6.5	685	6	.78	96
27...	1555	86	1.5	660	--	--	--
DEC							
06...	0845	74	.0	780	7	1.4	61
JAN , 1980							
08...	1500	44	.0	850	1	.12	100
FEB							
04...	1430	90	.0	950	15	3.6	79
MAR							
10...	1315	47	.0	800	1	.13	100
APR							
15...	1430	845	4.5	500	19	43	78
MAY							
07...	1100	200	12.5	720	82	44	83
12...	1420	133	13.5	730	--	--	--
JUN							
23...	1330	173	22.0	550	53	25	62
23...	1515	169	25.5	620	--	--	--
JUL							
23...	1130	79	23.0	660	538	115	99
AUG							
04...	1510	47	14.5	900	--	--	--
19...	1330	97	23.0	600	30	7.9	96
SEP							
16...	1450	122	16.5	700	--	--	--
23...	1315	187	14.5	680	73	37	75

STREAMS TRIBUTARY TO LAKE MICHIGAN

04085427 MANITOWOC RIVER AT MANITOWOC, WI--CONTINUED

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	620	700	770	770	695	885	410	665	670	610	640	615
2	620	720	800	790	825	890	405	655	665	605	650	610
3	620	750	770	790	810	920	435	655	---	605	640	610
4	620	750	760	790	810	930	425	660	685	---	630	640
5	630	690	820	820	835	885	480	665	685	---	630	650
6	630	715	780	810	835	835	470	675	635	605	650	630
7	635	735	790	810	840	855	485	700	635	600	640	645
8	630	735	770	880	830	845	485	700	625	600	---	645
9	640	730	760	950	830	855	485	670	625	590	600	625
10	645	720	720	870	750	830	480	700	645	600	600	605
11	655	700	750	840	775	830	485	720	635	600	600	645
12	655	710	780	950	790	825	490	710	605	605	610	610
13	660	690	840	960	800	825	495	705	560	615	620	640
14	660	670	790	890	770	825	490	690	530	610	650	630
15	670	755	810	950	775	725	490	675	565	640	655	650
16	670	690	880	420	770	385	510	700	575	625	675	---
17	670	695	810	390	810	380	490	720	620	610	670	670
18	660	715	920	360	815	325	540	700	625	610	640	705
19	630	715	820	370	860	410	530	695	615	590	600	710
20	635	680	820	460	840	475	530	695	630	590	555	715
21	635	670	850	480	835	435	540	720	---	600	560	695
22	645	685	750	500	835	435	560	720	620	610	555	690
23	645	685	750	500	800	430	570	730	605	605	595	710
24	660	680	750	480	825	395	590	730	640	605	580	725
25	700	700	800	500	820	400	590	720	640	655	600	---
26	700	690	820	585	910	400	630	740	650	650	600	---
27	700	710	710	565	865	405	625	730	650	640	600	---
28	680	730	770	615	840	405	635	720	620	645	---	---
29	690	675	750	645	910	410	635	675	615	645	---	---
30	685	585	800	730	---	405	645	685	605	650	640	---
31	700	---	775	760	---	425	---	710	---	655	620	---

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	16.5	9.0	1.0	1.5	.5	.0	2.0	13.5	20.0	23.0	27.0	23.0
2	17.0	8.5	.5	1.5	.5	.0	2.0	14.5	21.0	23.5	27.0	23.5
3	14.5	8.5	.5	1.0	1.0	.5	3.0	16.0	---	24.0	26.5	23.0
4	14.0	8.0	.5	1.0	1.0	.5	4.0	18.0	20.0	---	27.0	23.5
5	13.0	8.0	1.0	.5	1.0	.0	5.5	20.0	20.0	---	27.0	24.0
6	13.5	7.5	1.5	.5	.5	.0	6.0	18.0	20.5	24.0	26.5	24.5
7	12.0	6.0	.5	.0	.5	.0	6.5	17.5	20.0	24.0	27.0	25.0
8	11.0	5.0	.0	.5	.5	.0	7.0	14.5	20.0	25.0	---	23.0
9	10.0	4.5	.5	.0	.0	.0	5.5	12.5	19.0	25.5	27.0	23.5
10	10.0	4.0	1.0	.0	.0	.0	6.0	12.0	18.0	26.0	27.0	23.0
11	9.5	3.5	1.5	.5	.5	.0	6.0	13.5	18.0	25.5	26.0	22.5
12	9.0	3.0	1.0	1.0	.5	.0	6.5	16.0	18.0	26.0	24.0	23.0
13	8.0	3.0	.5	1.0	.5	.5	6.5	14.0	18.5	25.5	22.0	22.0
14	7.5	3.5	.5	1.5	1.0	.5	6.0	16.0	18.0	25.0	23.0	22.5
15	7.0	3.5	.0	1.5	.5	.5	6.0	17.0	18.0	26.0	23.0	23.0
16	7.0	4.0	1.0	2.0	.5	.5	6.0	15.5	19.0	27.0	22.5	---
17	7.5	4.5	.0	1.5	.0	.5	6.5	16.0	20.0	27.0	23.0	22.5
18	8.0	4.0	.0	1.5	.0	.5	7.0	15.0	21.0	26.5	23.0	22.0
19	10.0	4.0	.0	1.0	.0	1.0	10.0	15.0	21.0	26.0	24.0	21.5
20	12.0	4.5	1.0	1.0	.0	1.0	11.0	18.0	21.0	26.0	24.0	21.0
21	12.0	4.0	1.0	1.0	.5	1.0	14.0	20.0	---	26.0	24.5	21.0
22	14.0	4.5	.5	1.0	.5	1.0	17.5	21.5	22.0	26.5	24.0	20.0
23	14.0	4.5	1.5	.5	.5	1.0	16.0	22.0	24.0	27.0	25.0	18.0
24	13.5	5.0	1.0	.5	.0	1.0	17.0	23.0	25.0	27.0	24.5	16.5
25	13.0	4.5	1.5	.5	.5	1.0	16.0	24.0	21.0	27.0	23.5	---
26	12.5	4.5	1.5	.5	.5	1.0	14.0	23.0	26.5	27.0	23.0	---
27	12.0	4.0	2.0	.0	.5	1.0	12.0	23.5	24.0	26.5	24.0	---
28	11.0	4.0	2.0	.0	.5	1.0	11.0	24.5	22.0	27.0	---	---
29	10.5	3.0	2.0	.0	.5	1.5	11.0	23.0	21.0	26.5	---	---
30	10.0	2.0	1.5	.5	---	1.5	12.0	22.5	22.0	26.0	23.0	---
31	9.0	---	1.0	.5	---	2.0	---	22.0	---	27.0	23.0	---

STREAMS TRIBUTARY TO LAKE MICHIGAN

04085463 PIGEON RIVER AT EVERGREEN PARK AT SHEBOYGAN, WI

LOCATION.--Lat 43°46'43", long 87°44'56", in SW1/4 SE1/4 Sec. 9, T.15N., R.23E., Sheboygan County, Hydrologic Unit 04030101, at footbridge in park 0.2 mi (0.3 km) upstream from bridge on Calumet Drive in Sheboygan.

DRAINAGE AREA.--Undetermined.

PERIOD OF RECORD.--October 1979 to September 1980.

COOPERATION.--Water-quality samples were collected by the Wisconsin Department of Natural Resources - Southeastern District and were analyzed by the Wisconsin State Laboratory of Hygiene.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	TEMPER- ATURE, WATER (DEG C)	DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	TEMPER- ATURE, WATER (DEG C)
OCT , 1979					APR , 1980				
29...	1255	30	470	9.0	23...	1247	59	500	15.0
NOV					MAY				
26...	1250	42	455	3.0	12...	1130	12	740	10.0
DEC					14...	1440	35	430	11.0
20...	1215	19	490	.5	JUN				
JAN , 1980					23...	1220	25	620	22.0
14...	1325	20	525	.0	30...	1220	12	550	14.5
FEB					AUG				
13...	1210	14	515	.0	04...	1135	5.2	920	12.0
MAR					SEP				
19...	1005	116	320	.0	10...	1155	29	600	9.5
APR					16...	1205	36	830	16.0
08...	1130	258	550	4.5	22...	1110	69	390	16.0
09...	1100	382	510	4.0					
22...	1400	45	730	19.0					

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	SILICA, DIS- SOLVED (MG/L AS SI02)	SOLIDS, RESIDUE AT 105 DEG. C, SUS- PENDED (MG/L)	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHORUS, ORTHOPH OSPATE DISSOL. (MG/L AS P)	CADMIUM TOTAL RECOV- ERABLE (UG/L AS CD)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU)	LEAD, TOTAL RECOV- ERABLE (UG/L AS PB)	NICKEL, TOTAL RECOV- ERABLE (UG/L AS NI)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN)
MAY , 1980												
07...	1900	16	36	.6	2	.260	.197	0	<3	<3	--	<20
13...	1800	19	40	.6	1	.260	.210	0	<3	<3	--	<20
14...	1200	18	40	.7	0	.260	.210	0	<3	<3	--	<20
19...	1300	23	38	1.5	4	.300	.250	--	<3	<3	<20	<20
29...	1130	11	40	1.9	5	.430	.370	<0	--	<3	<20	<20
30...	1500	16	51	3.8	167	.350	.183	--	5	43	<20	30
JUN												
02...	1100	24	34	8.2	8	.260	.186	--	<3	3	<20	<20
05...	1225	28	24	4.6	2030	2.200	.185	--	70	540	100	190
05...	1300	26	38	6.6	32	.260	.119	--	<3	6	<20	<20
06...	1400	174	30	8.7	92	.480	.240	--	5	5	--	<20
09...	--	255	20	13	49	.320	--	--	--	<3	--	<20
JUL												
12...	1230	6.4	--	9.5	16	.380	.310	--	--	<3	--	--
15...	0330	7.9	43	--	20	.480	.370	--	--	<3	--	--
20...	0330	49	33	9.9	77	.580	.340	--	--	<3	--	--
21...	0730	47	31	12	83	.520	.310	--	--	<3	--	--
22...	0230	40	37	14	59	.480	.290	--	--	<3	--	--
25...	0300	9.9	42	16	28	.400	.300	--	--	<3	--	--
31...	0230	6.7	35	12	13	.380	.280	0	6	<3	--	--
AUG												
04...	0600	5.2	40	11	20	.420	.310	--	--	<3	--	--
05...	0230	9.3	40	10	26	.400	.290	--	--	<3	--	--
08...	--	59	31	8.8	180	.680	.300	--	--	7	--	--
10...	1630	98	22	15	104	.520	.250	--	--	3	--	--
11...	0330	70	29	15	72	.420	.220	--	--	<3	--	--
12...	--	38	29	15	55	.400	.210	--	--	3	--	--
16...	0400	16	38	15	30	.330	.220	--	--	<3	--	--
20...	0430	12	37	12	58	.390	.220	--	--	3	--	--
25...	0300	21	34	12	79	.370	.181	--	--	5	--	--
28...	0130	49	38	14	81	.420	.200	--	--	6	--	--
SEP												
12...	0330	17	42	9.0	30	.310	.149	--	--	<3	--	--
17...	0400	39	42	15	44	.340	.201	--	--	<3	--	--

STREAMS TRIBUTARY TO LAKE MICHIGAN

04085500 CEDAR LAKE NEAR KIEL, WI

LOCATION.--Lat 43°55'35", long 87°56'23", in SW 1/4 sec.5, T.17 N., R.21 E., Manitowoc County, Hydrologic Unit 04030101, on north shore of Cedar Lake at public beach, 0.8 mi (1.3 km) southeast of Louis Corners, and 5.1 mi (8.2 km) northeast of Kiel.

DRAINAGE AREA.--1.43 mi² (3.70 km²).

PERIOD OF RECORD.--August 1936 to September 1942; April 1945 to April 1974 (fragmentary); May 1974 to current year.

REVISED RECORDS.--WDR WI-76-1: 1976.

GAGE.--Water-stage recorder. Altitude of gage is 895 ft (273 m), from topographic map. Prior to May 8, 1974, nonrecording gage at site 500 ft (152 m) southwest and at altitude 5 ft (1.5 m) lower.

REMARKS.--Add 90 ft (27 m) to obtain elevation above datum assumed for this lake by Wisconsin Department of Natural Resources.

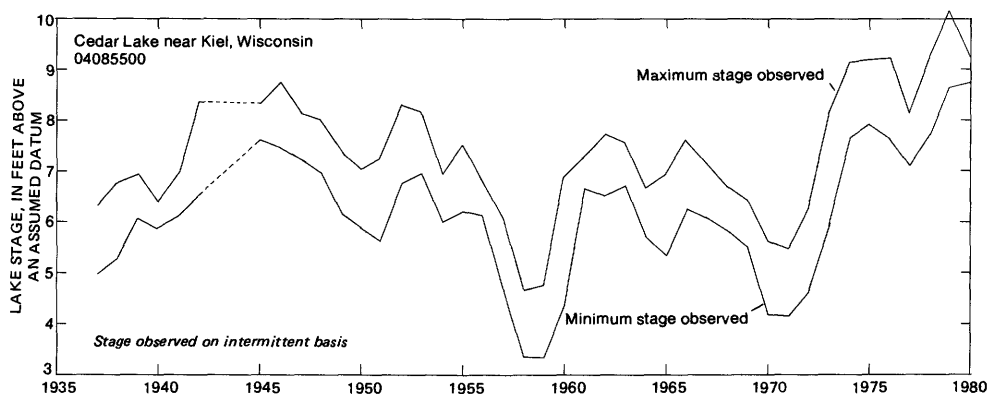
EXTREMES FOR PERIOD OF RECORD.--Maximum elevation observed, 100.13 ft (30.520 m) May 19, 1979; minimum observed, 93.34 ft (28.450 m) Oct. 4, Nov. 1, 1958, Jan. 17, 1959.

EXTREMES OUTSIDE OF PERIOD OF RECORD.--An elevation of 100.37 ft (30.592 m) was observed May 20, 1929, by Wisconsin Department of Natural Resources.

EXTREMES FOR CURRENT YEAR.--Maximum elevation observed, 99.27 ft (30.257 m) June 7; minimum, 98.72 ft (30.090 m) July 19.

DAY	GAGE HEIGHT (FEET ABOVE DATUM), WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980											
	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	8.94	8.86	8.83	8.90	8.90	8.85	8.90	9.10	9.01	9.00	8.87	8.84
2	8.92	8.84	8.82	8.90	8.89	8.85	8.90	9.09	9.02	8.97	8.86	8.83
3	8.91	8.83	8.81	8.89	8.89	8.84	8.90	9.07	9.02	8.99	8.86	8.81
4	8.90	8.82	8.81	8.88	8.88	8.83	8.95	9.06	9.03	8.91	8.85	8.80
5	8.88	8.82	8.82	8.88	8.89	8.84	8.96	9.05	9.15	8.93	8.84	8.76
6	8.88	8.82	8.82	8.88	8.93	8.84	8.96	9.06	9.18	8.94	8.81	8.77
7	8.87	8.82	8.82	8.89	8.93	8.83	8.99	9.05	9.23	8.93	8.83	8.76
8	8.86	8.82	8.82	8.89	8.93	8.83	9.05	9.03	9.21	8.90	9.04	8.75
9	8.86	8.81	8.81	8.89	8.92	8.83	9.11	9.03	9.15	8.92	9.03	8.80
10	8.85	8.80	8.81	8.88	8.92	8.83	9.12	9.03	9.03	8.92	9.01	8.78
11	8.85	8.79	8.81	8.88	8.92	8.82	9.13	9.03	9.08	8.88	8.95	8.77
12	8.84	8.78	8.82	8.88	8.91	8.81	9.14	9.02	9.11	8.89	8.89	8.79
13	8.82	8.79	8.81	8.87	8.90	8.80	9.13	9.03	9.12	8.88	8.80	8.80
14	8.80	8.79	8.81	8.86	8.90	8.82	9.12	9.05	9.10	8.85	8.76	8.79
15	8.80	8.80	8.79	8.86	8.90	8.82	9.15	9.06	9.12	8.76	8.75	8.78
16	8.80	8.82	8.80	8.90	8.91	8.82	9.15	9.04	9.11	8.78	8.73	8.80
17	8.79	8.81	8.79	8.95	8.91	8.83	9.15	9.00	9.05	8.76	8.73	8.80
18	8.78	8.80	8.78	8.95	8.89	8.84	9.15	9.02	9.03	8.73	8.73	8.79
19	8.81	8.79	8.78	8.95	8.89	8.85	9.15	9.01	9.12	8.72	8.73	8.78
20	8.82	8.78	8.78	8.95	8.89	8.87	9.14	9.00	9.13	8.90	8.81	8.81
21	8.84	8.81	8.78	8.95	8.89	8.88	9.12	9.04	9.10	9.03	8.81	8.82
22	8.85	8.83	8.78	8.94	8.89	8.87	9.12	9.06	9.13	9.01	8.81	8.86
23	8.90	8.82	8.82	8.94	8.89	8.88	9.12	9.03	9.14	8.96	8.79	8.85
24	8.89	8.81	8.87	8.94	8.89	8.89	9.09	9.03	9.10	8.92	8.76	8.85
25	8.88	8.80	8.92	8.94	8.88	8.89	9.09	9.00	9.10	8.93	8.82	8.86
26	8.87	8.82	8.92	8.94	8.87	8.89	9.03	9.00	9.10	8.94	8.83	8.85
27	8.87	8.88	8.90	8.93	8.87	8.89	9.08	9.01	9.02	8.92	8.81	8.84
28	8.87	8.86	8.90	8.92	8.86	8.89	9.07	9.02	9.10	8.90	8.82	8.83
29	8.86	8.85	8.90	8.91	8.86	8.90	9.08	9.01	9.04	8.90	8.85	8.82
30	8.86	8.83	8.90	8.90	---	8.90	9.09	9.03	9.02	8.88	8.82	8.81
31	8.85	---	8.90	8.90	---	8.90	---	9.04	---	8.89	8.82	---
MEAN	8.86	8.82	8.83	8.91	8.90	8.85	9.07	9.04	9.10	8.90	8.83	8.81
MAX	8.94	8.88	8.92	8.95	8.93	8.90	9.15	9.10	9.23	9.03	9.04	8.86
MIN	8.78	8.78	8.78	8.86	8.86	8.80	8.90	9.00	9.01	8.72	8.73	8.75

WTR YR 1980 MEAN 8.91 MAX 9.23 MIN 8.72



STREAMS TRIBUTARY TO LAKE MICHIGAN
04085813 ONION RIVER AT HINGHAM, WI

LOCATION.--Lat 43°38'18", long 87°53'54", in SW 1/4 NW 1/4 sec.32, T.14 N., R.22 E., Sheboygan County, Hydrologic Unit 04040003, on right bank 150 ft (46 m) north of County Highway W, and 0.8 mi (1.3 km) east of Hingham.

DRAINAGE AREA.--37.2 mi² (96.3 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1978 to September 1980 (discontinued).

GAGE.--Water-stage recorder from Dec. 5, 1978. Altitude of gage is 750 ft (229 m), from topographic map.

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

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 407 ft³/s (11.5 m³/s) Sept. 22, gage height, 5.39 ft (1.643 m); minimum, 2.8 ft³/s (0.079 m³/s) Oct. 20 (regulation).

RATING TABLE (gage height, in feet, and discharge, in cubic feet per second).
(Stage-discharge relation affected by ice Dec. 15-19, Jan. 6 to Mar. 4, Mar. 6, 7, 9-11, 14-18.)

2.1	9.3	3.5	110
2.3	17.1	4.0	171
2.5	27.2	4.5	245
3.0	62	5.0	331

DAY	DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980											
	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	10	23	22	21	11	12	32	41	39	10	10	25
2	12	21	18	20	12	12	32	33	33	10	11	28
3	11	19	17	18	12	12	37	27	33	8.9	12	20
4	12	16	18	17	13	12	57	24	30	8.6	11	18
5	12	17	19	16	14	11	63	21	42	11	13	16
6	13	23	21	15	14	11	53	19	98	10	12	15
7	15	22	21	15	15	10	64	15	139	9.7	17	15
8	17	22	20	14	15	10	181	17	196	9.6	86	14
9	16	19	24	13	14	11	213	15	117	9.6	67	17
10	14	19	26	13	14	13	145	14	38	8.6	45	16
11	15	28	28	13	14	14	85	18	25	8.1	29	14
12	17	17	25	12	15	13	70	14	22	8.1	25	19
13	13	18	20	12	15	13	61	23	20	8.3	21	30
14	12	18	14	11	15	13	55	36	24	8.3	20	32
15	13	18	14	11	15	14	59	39	27	10	17	23
16	13	19	13	15	14	15	78	36	20	15	14	28
17	14	19	13	68	14	20	66	31	18	13	15	34
18	14	18	13	60	13	45	56	46	16	10	16	25
19	26	18	14	26	14	62	52	52	28	9.9	15	20
20	18	18	15	19	16	56	47	38	34	73	56	36
21	19	24	16	15	17	43	43	29	24	69	67	34
22	22	35	18	13	21	33	40	26	19	56	46	201
23	32	34	25	12	19	25	34	22	17	22	26	126
24	37	27	54	11	17	24	31	20	15	17	22	64
25	30	24	91	10	15	32	29	20	14	15	22	46
26	22	38	66	9.8	14	39	29	18	13	14	32	40
27	22	52	39	9.4	14	38	27	17	11	14	29	34
28	21	44	29	9.1	13	35	27	18	13	12	36	29
29	19	38	26	9.0	13	33	35	40	13	11	40	27
30	19	23	25	9.0	---	32	47	45	9.8	9.9	32	26
31	18	---	22	10	---	32	---	47	---	12	25	---
TOTAL	548	731	786	526.3	431	745	1848	861	1147.8	511.6	889	1072
MEAN	17.7	24.4	25.4	17.0	14.9	24.0	61.6	27.8	38.3	16.5	28.7	35.7
MAX	37	52	91	68	22	62	213	52	196	73	86	201
MIN	10	16	13	9.0	11	10	27	14	9.8	8.1	10	14
CFSM	.48	.66	.68	.46	.40	.65	1.66	.75	1.03	.44	.77	.96
IN.	.55	.73	.79	.53	.43	.74	1.85	.86	1.15	.51	.89	1.07
CAL YR 1979	TOTAL	11938.6	MEAN	32.7	MAX	379	MIN	9.6	CFSM	.88	IN	11.94
WTR YR 1980	TOTAL	10096.7	MEAN	27.6	MAX	213	MIN	8.1	CFSM	.74	IN	10.10

STREAMS TRIBUTARY TO LAKE MICHIGAN
04085813 ONION RIVER AT HINGHAM, WI--CONTINUED

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1979 to current year.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: April 1979 to current year.

WATER TEMPERATURES: April 1979 to current year.

SUSPENDED-SEDIMENT DISCHARGE: December 1978 to current year.

INSTRUMENTATION.--Water-quality monitor since April 1979. Sediment pumping sampler since December 1978.

REMARKS.--Sediment records are good. Records of alkalinity, chloride, dissolved solids, and nutrients for the 1979 water year have been revised based on the correlation coefficient for equal-width-increment and point samples and supersede these previously published.

EXTREMES FOR PERIOD OF RECORD.--

SPECIFIC CONDUCTANCE: Maximum, 718 micromhos Jan. 11, 1980; minimum, 249 micromhos Aug. 10, 1979.

WATER TEMPERATURES: Maximum, 30.0°C July 14, 15, 1979, June 30, July 16, 1980; minimum, 0.0°C on several days during winter periods.

SUSPENDED-SEDIMENT CONCENTRATIONS: Maximum daily mean, 370 mg/l June 29, 1979; minimum daily mean, 1 mg/l on several days during 1979. Maximum observed, 2,470 mg/l June 5, 1980; minimum observed, 1 mg/l on several days during 1979.

SUSPENDED-SEDIMENT DISCHARGE: Maximum daily, 388 tons (352 tonnes) Mar. 30, 1979; minimum daily, 0.03 ton (0.03 tonne) on several days during 1979.

EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum, 718 micromhos Jan. 11; minimum, 297 micromhos Mar. 17.

WATER TEMPERATURES: Maximum, 30.0°C June 30, July 16; minimum, 0.0°C on several days during winter periods.

SUSPENDED-SEDIMENT CONCENTRATIONS: Maximum daily mean, 359 mg/l June 5; minimum daily mean, 2 mg/l Mar. 7, 8. Maximum observed, 2,470 mg/l June 5; minimum observed, 2 mg/l Mar. 8.

SUSPENDED-SEDIMENT DISCHARGE: Maximum daily, 203 tons (184 tonnes) Sept. 22; minimum daily, 0.05 ton (0.05 tonne) Mar. 7, 8.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	ALKA- LITY (MG/L AS CACO3)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)	SOLIDS, DIS- SOLVED (TONS PER DAY)	NITRO- GEN, TOTAL (MG/L AS N)
DEC , 1978								
06...	1525	20	320	24	408	.55	22.0	--
FEB , 1979								
28...	1230	18	320	20	399	.54	19.4	1.2
MAR								
20...	1345	200	--	--	--	--	--	2.9
20...	1515	200	153	20	247	.34	148	--
23...	0545	322	144	17	230	.31	223	--
23...	0745	324	--	--	--	--	--	3.0
23...	1900	387	126	17	203	.28	236	--
24...	0230	428	--	--	--	--	--	3.1
30...	0230	162	--	--	--	--	--	2.6
30...	0330	189	171	20	278	.38	158	--
30...	1345	428	--	--	--	--	--	2.3
30...	1615	578	99	13	168	.23	292	--
30...	2345	526	--	--	--	--	--	1.9
31...	0215	495	99	11	159	.22	237	--
APR								
01...	0815	182	126	14	193	.26	105	--
01...	1045	170	--	--	--	--	--	2.1
MAY								
25...	1015	25	290	20	395	.54	27.7	1.3
JUN								
28...	0930	13	280	18	365	.50	12.8	.54
29...	0615	44	--	--	--	--	--	.78
29...	0900	52	144	16	257	.35	40.0	--
29...	1015	52	--	--	--	--	--	1.4
29...	1300	52	189	14	293	.40	45.6	--
29...	2015	45	--	--	--	--	--	1.1
30...	0615	49	--	--	--	--	--	1.6
30...	0900	49	171	23	312	.42	45.9	--
30...	1500	45	--	--	--	--	--	1.3
30...	1900	44	--	--	--	--	--	1.3
JUL								
01...	0915	44	--	--	--	--	--	1.3
01...	1300	46	194	15	284	.39	39.2	--
AUG								
08...	1445	13	230	16	301	.41	10.6	.16
09...	2215	133	--	--	--	--	--	.47
09...	2315	204	162	14	242	.33	148	--
10...	0015	255	--	--	--	--	--	.54
10...	0115	285	189	13	245	.33	209	--
10...	0315	264	126	11	188	.26	149	--
10...	0415	209	--	--	--	--	--	1.0
10...	0815	117	--	--	--	--	--	1.3
10...	1915	137	--	--	--	--	--	1.2
12...	1045	44	171	14	262	.36	34.6	--
12...	1115	43	--	--	--	--	--	.67
20...	0845	43	--	--	--	--	--	.00
20...	0930	46	243	23	329	.45	45.3	--
20...	1230	52	--	--	--	--	--	1.3
20...	1330	52	261	23	337	.46	52.5	--
20...	2330	48	261	20	335	.46	48.2	--
21...	0030	48	--	--	--	--	--	1.3
21...	1130	52	243	21	318	.43	49.6	--

STREAMS TRIBUTARY TO LAKE MICHIGAN
04085813 ONION RIVER AT HINGHAM, WI--CONTINUED

WATER-QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	NITRO- GEN, NITRITE TOTAL (MG/L AS N)	NITRO- GEN, NO ₂ -NO ₃ TOTAL (MG/L AS N)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO- GEN, TOTAL (MG/L AS N)	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHORUS, ORTHOPH OSPHATE TOTAL (MG/L AS P)
DEC , 1978								
06...	--	1.9	--	--	--	--	.060	--
FEB , 1979								
28...	.020	1.2	.120	.35	.47	1.7	.090	.070
MAR								
20...	.030	2.9	.170	1.0	1.2	4.1	.190	.120
20...	--	--	--	--	--	--	--	--
23...	--	--	--	--	--	--	--	--
23...	.030	3.0	.100	.80	.90	3.9	.160	.110
23...	--	--	--	--	--	--	--	--
24...	.030	3.1	.090	1.0	1.1	4.1	.200	.110
30...	.030	2.6	.100	1.1	1.2	3.8	.170	.060
30...	--	--	--	--	--	--	--	--
30...	.030	2.3	.150	2.1	2.3	4.7	.470	.150
30...	--	--	--	--	--	--	--	--
30...	.030	1.9	.150	1.2	1.4	3.2	.370	.150
31...	--	--	--	--	--	--	--	--
APR								
01...	--	--	--	--	--	--	--	--
01...	.020	2.1	.120	.71	.83	2.9	.140	.100
MAY								
25...	.030	1.3	.090	1.1	1.2	2.5	.210	.050
JUN								
28...	.050	.59	.200	1.5	1.7	2.3	.310	.110
29...	.080	.86	.250	3.1	3.4	4.3	.610	.140
29...	--	--	--	--	--	--	--	--
29...	.090	1.5	.150	1.7	1.9	3.4	.380	.140
29...	--	--	--	--	--	--	--	--
29...	.090	1.2	.120	1.4	1.5	2.7	.270	.100
30...	.090	1.7	.140	1.2	1.3	3.0	.270	.120
30...	--	--	--	--	--	--	--	--
30...	.090	1.4	.150	1.1	1.3	2.6	.230	.100
30...	.080	1.4	.120	1.1	1.2	2.6	.220	.090
JUL								
01...	.070	1.4	.140	1.3	1.4	2.8	.270	.100
01...	--	--	--	--	--	--	--	--
AUG								
08...	.010	.17	.140	.78	.92	1.1	.190	.060
09...	.050	.52	.210	3.2	3.4	4.0	.720	.190
09...	--	--	--	--	--	--	--	--
10...	.050	.59	.210	1.9	2.1	2.7	.510	.160
10...	--	--	--	--	--	--	--	--
10...	--	--	--	--	--	--	--	--
10...	.070	1.1	.140	2.4	2.5	3.6	.850	.220
10...	.140	1.4	.230	2.5	2.7	4.1	.810	.390
10...	.070	1.3	.160	1.2	1.4	2.7	.320	.130
12...	--	--	--	--	--	--	--	--
12...	.050	.72	.120	1.4	1.5	2.3	.320	.160
20...	.000	.00	.050	2.5	2.6	2.6	.530	.050
20...	--	--	--	--	--	--	--	--
20...	.010	1.3	.120	1.4	1.5	2.8	.340	.170
20...	--	--	--	--	--	--	--	--
20...	--	--	--	--	--	--	--	--
21...	.010	1.3	.100	1.3	1.4	2.6	.290	.140
21...	--	--	--	--	--	--	--	--

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	PH FIELD (UNITS)	OXYGEN, DIS- SOLVED (MG/L)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	STREP- TOCOCCI, FECAL, KF AGAR (COLS. PER 100 ML)
DEC , 1978						
05...	1620	20	8.0	13.2	--	--
06...	1915	20	--	--	430	230
JAN , 1979						
17...	1700	12	--	--	180	39
FEB						
27...	1600	18	8.1	11.4	--	--
28...	1230	18	--	--	113	57
MAR						
23...	1330	333	--	--	210	3300
MAY						
25...	1015	25	--	10.2	--	--
25...	1600	26	--	--	46	57
JUN						
28...	0930	13	8.3	6.3	--	--
28...	1700	13	--	--	250	310
AUG						
08...	1800	13	--	--	180	180
SEP						
14...	1355	13	--	7.5	--	--
14...	1600	13	--	--	E390	73

E ESTIMATED.

STREAMS TRIBUTARY TO LAKE MICHIGAN
04085813 ONION RIVER AT HINGHAM, WI--CONTINUED

WATER-QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	ALKA- LINITY (MG/L AS CAC03)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)	SOLIDS, DIS- SOLVED (TONS PER DAY)	NITRO- GEN, NITRATE TOTAL (MG/L AS N)	NITRO- GEN, NITRITE TOTAL (MG/L AS N)
NOV , 1979									
16...	0830	19	290	18	362	.49	18.6	1.5	.010
DEC									
14...	1100	14	290	21	360	.49	13.6	1.6	.000
JAN , 1980									
17...	0815	E68	--	--	--	--	--	1.8	.050
17...	0915	E68	148	20	258	.35	--	--	--
17...	1415	E68	--	--	--	--	--	1.7	.050
17...	1515	E68	126	19	237	.32	--	--	--
17...	2015	E68	--	--	--	--	--	1.4	.050
17...	2115	E68	122	18	232	.32	--	--	--
24...	1100	11	--	--	--	--	--	3.0	.030
24...	1130	11	306	25	400	.54	11.9	--	--
MAR									
17...	0945	E24	126	23	218	.30	--	--	--
17...	1045	E27	--	--	--	--	--	1.3	.050
17...	2145	E40	75	21	162	.22	--	--	--
17...	2245	E50	--	--	--	--	--	1.3	.050
18...	0345	E70	82	22	185	.25	--	--	--
18...	0445	E70	--	--	--	--	--	1.4	.040
18...	0845	57	108	15	167	.23	25.7	1.7	.040
27...	1200	39	230	21	325	.44	34.2	1.7	.030
APR									
08...	0730	143	180	21	294	.40	114	--	--
08...	0830	191	--	--	--	--	--	1.9	.040
08...	0930	333	189	21	301	.41	271	--	--
08...	1030	348	--	--	--	--	--	2.2	.040
08...	1130	348	171	20	296	.40	278	--	--
08...	1430	253	--	--	--	--	--	2.3	.050
08...	2000	112	--	--	--	--	--	2.2	.050
08...	2030	140	162	20	300	.41	113	--	--
08...	2130	174	--	--	--	--	--	2.2	.050
09...	0130	218	--	--	--	--	--	2.1	.050
09...	1930	195	--	--	--	--	--	2.4	.050
10...	1130	148	--	--	--	--	--	2.3	.050
MAY									
08...	1010	16	300	22	--	--	--	.39	.020
JUN									
05...	2300	60	--	--	--	--	--	.56	.040
05...	2400	60	243	15	--	--	--	--	--
06...	0500	95	--	--	--	--	--	.82	.050
06...	1700	99	--	--	--	--	--	1.2	.050
06...	2315	108	--	--	--	--	--	8.4	.220
07...	1300	164	225	14	--	--	--	--	--
07...	1400	166	--	--	--	--	--	1.0	.070
08...	0400	166	--	--	--	--	--	1.0	.050
08...	1100	225	207	14	--	--	--	--	--
08...	1200	232	--	--	--	--	--	.81	.050
09...	1600	84	--	--	--	--	--	.75	.050
10...	0500	46	171	9.9	--	--	--	--	--
10...	0600	46	--	--	--	--	--	--	--
12...	1315	22	220	29	--	--	--	.81	.020
JUL									
17...	1100	14	230	22	322	.44	12.2	--	--
20...	0700	65	171	14	259	.35	45.5	--	--
20...	0800	87	--	--	--	--	--	.76	.070
20...	1000	143	--	--	--	--	--	.45	.060
20...	1100	146	207	13	274	.37	108	--	--
20...	1500	84	153	13	223	.30	50.6	--	--
20...	1800	71	--	--	--	--	--	1.4	.060
22...	0700	60	--	--	--	--	--	.92	.080
22...	0800	45	171	14	271	.37	32.9	--	--
AUG									
08...	2045	67	126	13	190	.26	34.4	--	--
09...	1530	66	--	--	--	--	--	1.1	.080
09...	1615	66	189	15	266	.36	47.4	--	--
10...	1010	46	--	--	--	--	--	1.1	.050
15...	1010	17	310	23	414	.56	19.0	--	--
SEP									
22...	0430	163	117	12	176	.24	77.5	--	--
22...	0730	389	--	--	--	--	--	1.4	.080
22...	0830	407	108	11	174	.24	191	1.3	.120
22...	1330	199	--	--	--	--	--	1.2	.280
22...	1430	175	198	27	298	.41	141	--	--
22...	2130	153	--	--	--	--	--	1.5	.040
23...	1530	111	--	--	--	--	--	1.2	.030
23...	1630	109	--	--	--	--	--	--	.030
24...	1630	60	--	--	--	--	--	1.1	.030
24...	1730	48	207	17	286	.39	37.1	--	--
25...	1900	48	--	--	--	--	--	1.1	.030

E ESTIMATED.

STREAMS TRIBUTARY TO LAKE MICHIGAN

04085813 ONION RIVER AT HINGHAM, WI--CONTINUED

WATER-QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO- GEN, TOTAL (MG/L AS N)	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHORUS, DIS- SOLVED (MG/L AS P)	PHOS- PHORUS, ORTHOPH- OSPHATE TOTAL (MG/L AS P)
NOV , 1979								
16...	1.5	.060	.44	.50	2.0	.050	--	.060
DEC								
14...	1.6	.050	.54	.59	2.2	.050	--	.050
JAN , 1980								
17...	1.9	.080	2.2	2.3	4.2	.460	.230	--
17...	--	--	--	--	--	--	--	--
17...	1.8	.210	2.7	2.9	4.7	.510	.320	--
17...	--	--	--	--	--	--	--	--
17...	1.5	.230	2.1	2.3	3.8	.500	.320	--
17...	--	--	--	--	--	--	--	--
24...	3.0	.350	1.3	1.7	4.7	.210	.170	--
24...	--	--	--	--	--	--	--	--
MAR								
17...	--	--	--	--	--	--	--	--
17...	1.4	1.100	2.5	3.6	5.0	.580	--	.380
17...	--	--	--	--	--	--	--	--
17...	1.4	1.400	2.5	3.9	5.2	.630	--	.490
18...	--	--	--	--	--	--	--	--
18...	1.4	1.100	2.5	3.6	5.0	.590	--	.440
18...	1.7	.330	1.5	1.8	3.5	.400	--	.300
27...	1.7	.160	.58	.74	2.4	.140	--	.060
APR								
08...	--	--	--	--	--	--	--	--
08...	1.9	.130	2.3	2.4	4.3	.490	--	.130
08...	--	--	--	--	--	--	--	--
08...	2.2	.130	1.3	1.4	3.5	.360	--	.110
08...	--	--	--	--	--	--	--	--
08...	2.4	.140	1.1	1.2	3.6	.410	--	.100
08...	2.3	.140	1.3	1.4	3.7	.290	--	.090
08...	--	--	--	--	--	--	--	--
08...	2.3	.140	1.3	1.4	3.7	.500	--	.090
09...	2.2	.130	1.3	1.4	3.6	.250	--	.080
09...	2.5	.090	1.1	1.2	3.7	.200	--	.070
10...	2.4	.120	.88	1.0	3.4	.160	--	.060
MAY								
08...	.41	.310	1.5	1.8	2.2	.170	--	.020
JUN								
05...	.60	.020	1.5	1.5	2.2	.240	--	.040
05...	--	--	--	--	--	--	--	--
06...	.87	.070	1.7	1.8	2.7	.380	--	.110
06...	1.3	.070	1.1	1.2	2.4	.220	--	.060
06...	8.6	.210	3.0	3.2	12	.630	--	.220
07...	--	--	--	--	--	--	--	--
07...	1.1	.130	1.3	1.4	2.4	.220	--	.050
08...	1.1	.100	1.3	1.4	2.5	.240	--	.090
08...	--	--	--	--	--	--	--	--
08...	.86	.110	1.3	1.4	2.3	.280	--	.090
09...	.80	.090	1.3	1.4	2.2	.280	--	.120
10...	--	--	--	--	--	--	--	--
10...	.83	.090	1.3	1.4	2.2	.230	--	.080
12...	12	.140	2.1	2.2	14	.400	--	.180
JUL								
17...	--	--	--	--	--	.000	--	--
20...	--	--	--	--	--	--	--	--
20...	.83	.140	3.1	3.2	4.0	.900	--	.180
20...	.51	.120	1.8	1.9	2.4	.380	--	.120
20...	--	--	--	--	--	--	--	--
20...	--	--	--	--	--	--	--	--
20...	1.5	.070	1.1	1.2	2.7	.420	--	.180
22...	1.0	.110	1.5	1.6	2.6	.320	--	.120
22...	--	--	--	--	--	--	--	--
AUG								
08...	1.2	.290	.91	1.2	2.3	.480	--	.480
08...	--	--	--	--	--	--	--	--
09...	1.2	.230	1.4	1.6	2.8	.400	--	.320
09...	--	--	--	--	--	--	--	--
10...	1.2	.040	1.1	1.1	2.3	.270	--	.140
15...	--	--	--	--	--	--	--	--
SEP								
22...	--	--	--	--	--	--	--	--
22...	1.5	.140	1.8	1.9	3.4	.860	--	.330
22...	1.4	.220	3.0	3.2	4.5	.990	--	.440
22...	1.5	.180	2.5	2.7	4.2	.350	--	.010
22...	--	--	--	--	--	--	--	--
22...	1.5	.080	1.1	1.2	2.7	.380	--	.140
23...	1.2	.070	1.1	1.2	2.3	.330	--	.170
23...	--	.060	--	--	--	--	--	--
24...	1.1	.050	1.1	1.2	2.3	.230	--	.140
24...	--	--	--	--	--	--	--	--
24...	--	--	--	--	--	--	--	--
25...	1.1	.080	.63	.71	1.8	.190	--	.120

STREAMS TRIBUTARY TO LAKE MICHIGAN
04085813 ONION RIVER AT HINGHAM, WI--CONTINUED

WATER-QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	PH FIELD (UNITS)	TEMPER- ATURE, WATER (DEG C)	TUR- BID- ITY (MG/L AS SIO2)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	STREP- TOCOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)
NOV , 1979									
15...	1030	17	8.4	4.5	--	13.0	105	--	--
16...	1245	19	--	--	--	--	--	70	40
DEC									
13...	1600	20	8.3	3.0	--	13.6	105	--	--
14...	1600	14	--	--	--	--	--	120	K11
JAN , 1980									
24...	1100	11	7.5	.5	--	10.1	73	--	--
24...	1730	11	--	--	--	--	--	K4	25
26...	1510	11	--	--	5	--	--	--	--
FEB									
02...	1510	12	--	--	14	--	--	--	--
28...	0750	13	6.9	--	--	--	--	--	--
28...	0855	13	--	--	--	--	--	--	--
28...	1345	13	--	--	--	--	--	97	120
MAR									
26...	1520	28	--	--	15	--	--	--	--
27...	1630	38	--	--	--	--	--	73	470
MAY									
07...	1145	15	--	12.5	--	11.1	109	--	--
08...	1010	16	8.2	11.0	--	--	--	--	--
08...	1430	17	--	--	--	--	--	K15	48
12...	1740	14	--	--	38	--	--	--	--
JUN									
12...	1315	22	8.1	22.0	--	8.0	95	--	--
12...	1630	21	--	--	--	--	--	200	95
27...	1930	10	--	--	25	--	--	--	--
JUL									
12...	1845	8.3	--	--	30	--	--	--	--
16...	1540	16	8.2	27.5	--	7.2	95	--	--
17...	1610	13	--	--	--	--	--	930	270
AUG									
02...	1600	11	--	--	30	--	--	--	--
14...	1430	20	8.1	24.0	--	8.1	100	--	--
15...	1010	17	--	22.0	--	--	--	--	--
15...	1330	17	--	--	--	--	--	550	48

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	CARBON, ORGANIC DIS- SOLVED (MG/L AS C)	CARBON, ORGANIC SUS- PENDED (MG/L AS C)	PERI- PHYTON BIOMASS ASH WEIGHT G/SQ M	PERI- PHYTON BIOMASS TOTAL DRY WEIGHT G/SQ M	CHLOR-A PERI- PHYTON CHROMO- GRAPHIC FLUOROM (MG/M2)	CHLOR-B PERI- PHYTON CHROMO- GRAPHIC FLUOROM (MG/M2)	BIOMASS CHLORO- PHYLL RATIO PERI- PHYTON (UNITS)
DEC , 1979									
25...	1500	92	--	.6	--	--	--	--	--
JUL , 1980									
17...	1100	14	--	--	9.9	15	36	5.1	132
22...	1325	37	13	2.8	--	--	--	--	--
AUG									
15...	1010	17	--	--	11	13	15	1.5	159

K RESULTS BASED ON COLONY COUNT OUTSIDE THE ACCEPTABLE RANGE (NON-IDEAL COLONY COUNT).

STREAMS TRIBUTARY TO LAKE MICHIGAN
04085813 ONION RIVER AT HINGHAM, WI--CONTINUED

WATER-QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

		STREAM- FLOW, INSTAN- TANEOUS (CFS)	ARSENIC TOTAL IN BOT- TOM MA- TERIAL (UG/G AS AS)	CADMIUM RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CD)	CHRO- MIUM, RECOV. FM BOT- TOM MA- TERIAL (UG/G)	COPPER, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CU)	LEAD, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS PB)	MERCURY RECOV. FM BOT- TOM MA- TERIAL (UG/G AS HG)	NICKEL, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS NI)	ZINC, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS ZN)			
AUG , 1980													
15...		1010	17	0	<10	<10	<10	10	.00	10	9		
DATE		TIME	PCB, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	ALDRIN, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	CHLOR- DANE, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	DDD, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	DDE, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	DDT, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	DI- AZINON, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	DI- ELDRIN, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	ENDRIN, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)		
AUG , 1980													
15...		1010	17	0	.0	0	.0	.0	.0	.0	.0		
DATE		TIME	ETHION, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	HEPTA- CHLOR, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	HEPTA- CHLOR EPOXIDE TOT. IN BOT- TOM MA- TERIAL (UG/KG)	LINDANE TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	MALA- THION, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	METH- OXY- CHLOR, TOT. IN BOT- TOM MA- TERIAL (UG/KG)	METHYL PARA- THION, TOT. IN BOT- TOM MA- TERIAL (UG/KG)	METHYL TRI- THION, TOT. IN BOT- TOM MA- TERIAL (UG/KG)	PARA- THION, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	TOXA- PHENE, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	TRI- THION, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)
AUG , 1980													
15...		.0	.0	.0	.0	.0	.0	.0	.0	.0	0	.0	.0
DATE		TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SEDI- MENT, SUS- PENDE (MG/L)	SED. SUSP. FALL DIAM. % FINER THAN .002 MM	SED. SUSP. FALL DIAM. % FINER THAN .004 MM	SED. SUSP. FALL DIAM. % FINER THAN .008 MM	SED. SUSP. FALL DIAM. % FINER THAN .016 MM	SED. SUSP. FALL DIAM. % FINER THAN .031 MM	SED. SUSP. FALL DIAM. % FINER THAN .062 MM	SED. SUSP. FALL DIAM. % FINER THAN .125 MM	SED. SUSP. FALL DIAM. % FINER THAN .250 MM	SED. SUSP. FALL DIAM. % FINER THAN .250 MM
JUN , 1980													
05...		1325	60	2470	52	71	86	96	98	100	--	--	--
JUL													
22...		1300	37	115	59	80	90	96	98	98	99	100	100

STREAMS TRIBUTARY TO LAKE MICHIGAN
04085813 ONION RIVER AT HINGHAM, WI--CONTINUED

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DAY	MAX	MIN OCTOBER	MEAN	MAX	MIN NOVEMBER	MEAN	MAX	MIN DECEMBER	MEAN	MAX	MIN JANUARY	MEAN
1	484	469	476	575	562	568	681	651	665	652	646	651
2	493	480	487	562	552	559	700	677	692	653	643	648
3	493	489	491	563	550	557	711	700	705	654	647	650
4	500	490	494	563	558	561	715	696	710	657	651	655
5	510	497	503	569	561	565	704	670	686	661	652	657
6	514	508	511	567	554	558	677	645	657	662	653	659
7	517	511	514	559	554	555	651	633	640	684	663	674
8	520	509	515	555	548	554	636	620	627	677	661	668
9	522	520	521	558	553	554	633	617	625	712	661	687
10	527	521	523	558	553	554	633	620	628	717	694	702
11	521	517	519	569	552	560	623	614	618	718	660	686
12	526	509	518	583	570	575	623	606	615	673	651	661
13	520	514	518	586	568	578	626	590	608	677	655	669
14	527	518	523	573	565	568	622	600	613	685	625	648
15	532	519	525	642	563	610	632	610	618	632	620	625
16	530	524	527	639	620	628	645	633	637	624	448	542
17	529	524	528	627	595	605	655	624	644	458	385	420
18	536	527	532	608	592	600	691	653	666	422	387	400
19	543	530	538	614	600	606	707	672	687	485	425	454
20	574	537	549	611	600	606	673	652	659	546	479	511
21	556	551	555	608	590	600	659	646	651	600	545	576
22	551	542	548	614	595	602	647	613	631	628	598	619
23	544	529	532	620	598	613	614	580	597	648	610	633
24	538	528	533	627	614	619	586	537	566	660	588	625
25	543	539	541	639	620	627	549	521	540	612	578	600
26	544	533	539	633	611	626	535	513	523	600	563	581
27	551	542	547	639	627	633	575	533	552	633	591	611
28	560	545	554	630	603	615	608	573	592	629	617	622
29	581	555	572	623	603	610	631	609	623	636	609	622
30	582	574	578	654	623	644	641	629	636	646	627	636
31	582	553	574	---	---	---	651	642	646	649	638	646
MONTH	582	469	529	654	548	590	715	513	631	718	385	614

DAY	MAX	MIN FEBRUARY	MEAN	MAX	MIN MARCH	MEAN	MAX	MIN APRIL	MEAN	MAX	MIN MAY	MEAN
1	645	629	635	670	625	642	570	542	559	690	683	686
2	648	625	633	670	616	647	569	537	554	698	678	688
3	643	608	624	662	619	643	566	523	546	705	690	695
4	615	593	606	635	604	621	571	545	561	706	694	701
5	634	603	613	619	515	579	576	548	565	710	692	701
6	625	602	614	607	510	566	580	549	566	702	691	698
7	605	586	596	641	569	590	596	566	582	705	666	688
8	596	571	582	628	478	562	608	489	563	689	667	677
9	577	552	566	625	478	558	572	543	555	684	630	657
10	580	561	569	619	504	567	593	549	569	645	613	631
11	589	577	584	597	510	555	618	596	607	631	579	608
12	589	555	581	613	559	582	646	622	633	598	570	586
13	---	---	---	628	572	593	657	644	652	585	559	573
14	---	---	---	659	604	618	664	651	659	602	576	586
15	---	---	---	625	597	613	662	646	655	624	594	611
16	---	---	---	607	419	559	666	655	660	644	616	630
17	---	---	---	469	297	370	670	662	666	646	627	638
18	---	---	---	334	301	321	682	663	671	642	631	638
19	---	---	---	373	327	357	693	677	686	660	641	650
20	---	---	---	385	361	372	697	688	691	666	651	658
21	---	---	---	404	363	390	698	686	692	671	655	659
22	---	---	---	445	395	420	705	693	698	670	656	659
23	---	---	---	482	439	457	706	694	699	661	647	652
24	---	---	---	515	480	491	698	692	693	654	638	646
25	---	---	---	528	474	503	696	690	692	643	625	636
26	---	---	---	625	474	611	697	691	693	627	608	620
27	594	574	585	620	580	594	698	689	694	620	601	607
28	622	572	598	581	530	552	690	687	688	606	587	597
29	635	588	615	562	534	549	688	683	684	595	580	588
30	---	---	---	579	555	570	689	681	683	586	564	575
31	---	---	---	573	541	564	---	---	---	575	552	563
MONTH	648	552	600	670	297	536	706	489	637	710	552	639

STREAMS TRIBUTARY TO LAKE MICHIGAN
04085813 ONION RIVER AT HINGHAM, WI--CONTINUED

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980												
DAY	MAX	MIN JUNE	MEAN	MAX	MIN JULY	MEAN	MAX	MIN AUGUST	MEAN	MAX	MIN SEPTEMBER	MEAN
1	574	545	553	469	453	458	433	420	427	587	578	583
2	621	552	587	457	446	451	441	430	436	592	552	583
3	642	620	629	466	444	453	440	434	437	596	590	593
4	628	598	612	453	449	450	444	429	440	597	585	594
5	628	587	614	---	---	---	454	428	442	602	565	585
6	614	586	595	---	---	---	482	458	472	575	563	569
7	598	565	583	---	---	---	476	448	459	583	565	574
8	558	480	532	---	---	---	458	333	391	597	581	589
9	479	466	471	---	---	---	513	387	475	601	583	593
10	528	481	502	---	---	---	506	488	494	594	581	586
11	554	499	525	---	---	---	518	497	502	592	576	583
12	603	494	560	---	---	---	559	517	535	590	561	576
13	583	555	571	---	---	---	585	560	575	570	568	569
14	604	565	585	---	---	---	612	589	600	572	564	567
15	593	577	583	---	---	---	625	602	615	565	563	564
16	584	568	575	559	524	534	630	611	618	572	551	564
17	567	533	554	511	496	505	627	616	621	568	547	556
18	539	508	523	510	494	501	621	534	592	586	554	568
19	508	490	501	493	485	489	572	519	550	606	588	597
20	529	495	506	484	321	392	555	414	503	605	592	598
21	528	492	515	432	355	405	503	406	462	591	579	584
22	516	495	508	415	395	405	510	497	503	592	311	436
23	533	505	519	446	414	428	522	504	510	465	441	454
24	526	498	509	464	437	452	542	513	524	523	467	492
25	514	493	506	492	462	477	549	525	541	553	511	529
26	525	499	511	507	490	501	560	542	554	560	554	557
27	498	490	495	517	500	510	568	558	563	---	---	---
28	495	479	488	534	510	521	560	532	550	---	---	---
29	485	474	478	530	444	495	558	515	536	---	---	---
30	479	457	469	464	441	452	569	553	563	---	---	---
31	---	---	---	468	417	445	579	570	575	---	---	---
MONTH	642	457	539	559	321	466	630	333	518	606	311	563

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980												
DAY	MAX	MIN OCTOBER	MEAN	MAX	MIN NOVEMBER	MEAN	MAX	MIN DECEMBER	MEAN	MAX	MIN JANUARY	MEAN
1	20.0	15.5	17.5	11.0	7.5	9.5	2.0	1.0	1.5	2.0	1.5	2.0
2	16.5	14.5	15.5	8.0	6.0	7.0	2.5	.5	1.5	2.0	1.5	1.5
3	15.0	13.0	14.0	6.5	4.0	5.5	2.5	1.0	2.0	2.0	1.0	1.5
4	13.5	11.0	12.5	6.0	3.5	4.5	3.0	1.5	2.5	2.5	1.0	1.5
5	13.0	10.5	11.5	6.5	5.0	5.5	3.5	2.5	2.5	2.5	1.0	1.5
6	12.5	10.5	11.5	6.0	4.5	5.5	3.5	2.0	2.5	1.5	.5	1.0
7	12.0	9.5	10.5	5.0	3.0	4.0	3.5	1.5	2.5	.5	.5	.5
8	11.0	10.0	10.5	4.5	2.5	3.5	2.5	1.0	2.0	.5	.5	.5
9	10.0	8.0	9.0	3.5	1.5	2.5	3.5	2.0	2.5	.5	.5	.5
10	10.0	7.5	8.5	2.5	.0	1.5	4.0	2.0	3.0	1.0	.5	.5
11	9.5	8.5	9.0	2.5	.5	1.5	4.0	2.5	3.0	1.0	.5	.5
12	8.5	5.5	7.5	4.0	2.0	3.0	3.0	2.0	2.5	.5	.5	.5
13	7.5	4.5	6.0	5.0	3.0	3.5	3.0	1.0	2.0	1.0	.5	1.0
14	7.5	4.5	6.0	5.5	3.0	4.0	3.0	.5	1.5	2.5	.5	1.5
15	9.5	5.5	7.5	5.0	3.5	4.5	4.0	2.0	2.5	2.0	1.5	2.0
16	10.5	8.0	9.0	6.0	3.0	4.5	2.5	.0	1.0	2.0	1.0	1.5
17	10.5	9.0	10.0	6.5	4.0	5.0	.5	.0	.5	1.0	1.0	1.0
18	10.5	9.0	10.0	8.5	4.5	6.5	2.5	.5	1.5	1.0	.5	1.0
19	13.0	10.5	12.0	9.5	7.5	8.5	2.5	1.0	1.5	1.0	.5	.5
20	18.0	12.5	15.0	9.0	7.5	8.5	3.0	2.0	2.0	1.5	.5	1.0
21	19.5	16.0	18.0	8.0	7.5	7.5	2.5	1.5	2.0	2.0	.5	1.5
22	18.0	16.5	17.0	7.5	7.0	7.5	2.0	2.0	2.0	2.0	.5	1.0
23	15.5	8.0	11.5	7.0	5.0	6.0	2.0	2.0	2.0	.5	.5	.5
24	8.0	6.5	7.5	5.5	3.5	4.5	2.0	1.5	2.0	1.0	.5	1.0
25	6.5	4.5	5.5	5.0	3.5	4.0	1.5	1.0	1.5	1.5	.5	1.0
26	7.0	3.5	5.5	4.5	3.5	4.0	1.0	1.0	1.0	1.0	.5	.5
27	7.5	6.0	6.5	3.5	2.5	3.0	1.5	.5	1.0	1.0	.5	.5
28	9.5	6.0	7.5	2.5	.5	1.5	2.0	.5	1.5	1.0	.5	.5
29	9.5	7.0	8.0	2.0	.5	1.0	2.5	1.0	1.5	1.0	.5	.5
30	10.0	7.5	8.5	1.5	.5	1.0	3.0	1.0	1.5	1.0	.5	.5
31	11.5	8.5	10.0	---	---	---	3.0	1.0	2.0	1.0	.5	.5
MONTH	20.0	3.5	10.5	11.0	.0	4.5	4.0	.0	2.0	2.5	.5	1.0

STREAMS TRIBUTARY TO LAKE MICHIGAN
04085813 ONION RIVER AT HINGHAM, WI--CONTINUED

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DAY	MAX	MIN FEBRUARY	MEAN	MAX	MIN MARCH	MEAN	MAX	MIN APRIL	MEAN	MAX	MIN MAY	MEAN
1	1.0	.5	.5	.5	.0	.5	6.0	2.0	4.0	16.5	10.5	13.0
2	1.0	.5	.5	1.0	.0	.5	7.5	3.0	5.0	20.0	13.5	16.5
3	1.0	.5	.5	1.0	.0	.5	4.5	2.0	3.5	22.5	15.0	18.0
4	1.0	.5	.5	2.5	.5	1.0	4.5	1.5	3.0	22.5	16.0	19.0
5	1.0	.5	1.0	2.5	.0	.5	6.0	3.5	5.0	22.0	16.5	18.5
6	1.0	.5	1.0	.5	.0	.0	6.5	5.5	6.0	19.0	13.5	16.0
7	1.0	.5	.5	.5	.0	.5	6.5	5.5	6.0	13.5	9.5	11.5
8	1.0	.5	1.0	2.0	.0	.5	7.5	5.0	6.0	10.5	8.5	9.5
9	1.0	.5	.5	1.5	.0	.5	6.0	3.0	4.5	12.5	7.5	9.5
10	1.0	.5	.5	2.5	.0	1.0	5.0	2.5	4.0	12.0	9.0	10.0
11	1.0	.5	.5	.5	.0	.0	7.0	3.5	5.5	16.0	9.5	12.5
12	.5	.5	.5	1.0	.0	.5	6.5	5.0	6.0	18.0	11.5	14.0
13	---	---	---	1.0	.0	.5	6.5	4.5	5.5	14.0	11.0	12.5
14	---	---	---	2.0	.0	.5	4.5	1.0	2.5	13.5	10.0	11.5
15	---	---	---	2.0	.0	.5	4.5	.5	3.0	16.5	10.5	13.0
16	---	---	---	2.5	.5	1.0	6.5	2.5	5.0	15.0	12.0	13.5
17	---	---	---	.5	.0	.5	7.5	5.5	6.0	13.5	12.0	12.5
18	---	---	---	2.0	.0	.5	12.0	6.5	9.0	12.5	12.0	12.0
19	---	---	---	2.0	.5	1.0	14.5	10.0	12.0	15.5	11.5	14.0
20	---	---	---	1.5	.5	1.0	16.5	12.0	14.0	20.0	15.0	18.0
21	---	---	---	2.5	.5	1.0	17.5	13.5	15.5	23.5	17.0	20.0
22	---	---	---	2.5	.0	1.0	20.5	14.5	17.5	24.5	18.5	21.0
23	---	---	---	.5	.0	.5	17.5	13.0	15.5	24.0	19.0	21.5
24	---	---	---	1.0	.0	.5	12.5	8.0	10.0	25.0	20.5	22.5
25	---	---	---	1.5	.0	.5	10.0	7.5	8.5	25.5	20.5	22.5
26	---	---	---	3.5	.0	1.0	10.5	7.5	8.5	23.5	18.5	20.5
27	1.5	.0	.5	1.5	.5	1.0	11.5	8.5	9.5	24.5	17.5	20.5
28	2.0	.0	.5	1.5	.5	1.0	9.0	8.0	8.5	24.0	19.0	20.5
29	.5	.0	1.0	3.0	1.0	1.5	9.5	8.0	8.5	22.5	20.0	21.0
30	---	---	---	3.5	1.0	2.0	11.5	9.0	10.0	23.0	19.5	21.0
31	---	---	---	5.0	1.5	3.0	---	---	---	23.0	18.5	20.5
MONTH	2.0	.0	.5	5.0	.0	1.0	20.5	.5	7.5	25.5	7.5	16.5

DAY	MAX	MIN JUNE	MEAN	MAX	MIN JULY	MEAN	MAX	MIN AUGUST	MEAN	MAX	MIN SEPTEMBER	MEAN
1	20.0	17.0	18.0	25.5	19.0	22.0	27.5	23.0	25.0	22.0	20.5	21.5
2	21.0	17.0	18.0	25.5	20.5	22.5	25.0	23.0	24.0	23.0	20.0	21.5
3	22.5	17.0	19.5	27.5	20.0	23.5	26.0	22.0	24.0	23.5	20.0	21.5
4	21.5	18.5	20.0	23.0	22.5	23.0	25.0	22.5	23.5	23.5	20.5	22.0
5	18.5	16.0	17.5	---	---	---	26.5	22.0	24.0	23.5	19.0	21.0
6	19.5	16.5	18.0	---	---	---	26.5	22.5	24.0	24.0	19.5	21.5
7	21.0	17.5	19.5	---	---	---	24.0	22.5	23.0	23.5	20.0	22.0
8	18.5	15.5	17.0	---	---	---	24.0	21.0	22.5	25.0	21.0	23.0
9	17.5	14.5	15.5	---	---	---	23.0	22.0	22.5	24.0	20.5	22.5
10	18.0	14.0	16.0	---	---	---	22.0	20.5	21.5	22.5	18.5	20.5
11	21.0	14.5	17.5	---	---	---	22.0	20.5	21.0	19.5	17.5	18.5
12	22.5	17.0	19.5	---	---	---	24.5	19.0	21.0	18.5	17.5	18.0
13	24.5	19.0	21.5	---	---	---	22.0	20.0	21.0	22.0	18.0	20.0
14	26.0	21.0	23.0	---	---	---	24.5	20.5	22.5	20.5	17.0	19.0
15	23.0	16.5	20.0	---	---	---	24.0	21.0	22.5	17.0	16.0	16.5
16	21.0	15.5	17.5	30.0	25.5	27.0	21.5	19.0	20.5	16.5	14.5	15.5
17	23.0	16.0	19.0	28.0	23.5	25.5	19.0	18.0	18.5	16.5	13.0	14.5
18	20.5	17.5	19.0	26.0	23.5	24.5	24.0	18.0	20.5	16.5	14.0	15.0
19	17.5	15.5	16.5	29.0	23.5	25.5	25.5	20.5	23.0	17.0	14.0	15.5
20	20.5	14.5	18.0	26.0	23.0	24.5	25.0	22.5	24.0	19.5	16.5	17.5
21	24.0	18.0	20.5	24.5	24.0	24.0	25.5	23.0	24.0	19.0	17.5	18.5
22	25.0	20.0	22.0	24.5	22.5	23.5	26.0	22.5	24.0	17.5	15.5	16.5
23	25.5	21.0	23.0	24.5	21.5	23.0	24.5	22.0	23.0	15.5	13.5	14.5
24	26.5	22.0	24.0	25.0	21.0	23.0	24.5	21.5	23.0	15.0	12.5	14.0
25	29.5	23.0	26.0	24.0	22.0	22.5	23.0	21.5	22.0	15.0	13.0	13.5
26	30.0	25.0	27.0	22.0	19.0	20.5	23.5	21.0	22.5	13.0	12.5	12.5
27	25.0	22.0	23.5	24.0	18.0	21.0	23.5	20.5	22.0	---	---	---
28	26.0	20.5	23.5	26.5	19.5	22.5	21.0	20.0	20.5	---	---	---
29	23.5	20.5	22.0	27.0	22.0	24.0	22.5	20.5	21.5	---	---	---
30	25.0	19.0	21.0	23.5	22.0	22.5	23.0	21.0	22.0	---	---	---
31	---	---	---	26.5	21.5	23.5	21.5	21.0	21.0	---	---	---
MONTH	30.0	14.0	20.0	30.0	18.0	23.5	27.5	18.0	22.5	25.0	12.5	18.5

STREAMS TRIBUTARY TO LAKE MICHIGAN
04085813 ONION RIVER AT HINGHAM, WI--CONTINUED

SUSPENDED-SEDIMENT, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DAY	MEAN CONCENTRATION (MG/L)	LOADS (T/DAY)	MEAN CONCENTRATION (MG/L)	LOADS (T/DAY)	MEAN CONCENTRATION (MG/L)	LOADS (T/DAY)	MEAN CONCENTRATION (MG/L)	LOADS (T/DAY)	MEAN CONCENTRATION (MG/L)	LOADS (T/DAY)	MEAN CONCENTRATION (MG/L)	LOADS (T/DAY)
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	92	2.5	96	5.8	26	1.5	25	1.4	32	.95	6	.19
2	86	2.7	91	5.0	13	.64	24	1.2	32	1.1	5	.16
3	81	2.4	85	4.3	11	.48	23	1.1	28	.91	4	.13
4	76	2.4	79	3.4	12	.59	21	.97	23	.81	4	.13
5	71	2.3	74	3.4	14	.69	20	.86	19	.72	3	.09
6	66	2.4	69	4.2	15	.85	20	.81	16	.60	3	.09
7	62	2.6	64	3.9	17	1.0	20	.81	13	.53	2	.05
8	58	2.6	60	3.4	19	1.0	20	.76	11	.45	2	.05
9	54	2.4	52	2.7	---	5.0	19	.67	9	.34	2	.06
10	50	2.0	45	2.2	---	6.0	19	.67	8	.30	3	.10
11	47	2.0	39	3.0	---	8.0	19	.67	8	.30	4	.15
12	44	2.0	33	1.5	---	4.0	19	.62	7	.28	5	.18
13	41	1.5	29	1.4	14	.70	19	.62	6	.24	6	.21
14	39	1.2	25	1.2	12	.45	19	.56	6	.24	8	.28
15	39	1.4	27	1.3	10	.46	19	.56	5	.20	10	.38
16	40	1.4	---	1.2	11	.38	60	3.6	5	.19	36	1.8
17	41	1.5	---	1.2	12	.42	74	14	5	.19	59	2.9
18	42	1.6	---	1.1	13	.46	29	4.7	5	.18	21	2.7
19	43	3.0	---	1.1	14	.53	27	1.9	6	.23	10	1.7
20	44	2.1	---	1.1	16	.63	25	1.3	6	.26	7	1.0
21	43	2.2	144	9.3	17	.72	24	.97	6	.28	8	.92
22	41	2.5	145	14	19	.90	22	.77	7	.40	8	.72
23	139	12	146	14	31	2.1	21	.68	8	.41	8	.54
24	124	13	147	11	123	22	20	.59	8	.37	9	.58
25	74	6.2	149	9.4	192	47	23	.62	8	.32	38	3.7
26	31	1.9	244	25	123	22	25	.66	9	.34	43	5.4
27	---	1.9	308	43	81	8.6	27	.69	9	.34	24	2.5
28	---	1.8	193	24	52	4.0	28	.69	9	.32	13	1.2
29	---	1.8	120	14	34	2.4	29	.70	9	.32	7	.61
30	---	1.7	49	3.1	29	1.9	30	.73	---	---	6	.52
31	---	1.6	---	---	27	1.6	31	.84	---	---	6	.52
TOTAL	---	88.6	---	219.2	---	147.00	---	45.72	---	12.12	---	29.56

DAY	MEAN CONCENTRATION (MG/L)	LOADS (T/DAY)	MEAN CONCENTRATION (MG/L)	LOADS (T/DAY)	MEAN CONCENTRATION (MG/L)	LOADS (T/DAY)	MEAN CONCENTRATION (MG/L)	LOADS (T/DAY)	MEAN CONCENTRATION (MG/L)	LOADS (T/DAY)	MEAN CONCENTRATION (MG/L)	LOADS (T/DAY)
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	6	.52	84	9.3	126	13	63	1.8	56	1.5	73	4.9
2	6	.52	74	6.7	119	11	69	1.8	54	1.6	74	5.6
3	17	1.8	66	4.9	112	9.8	75	1.8	53	1.7	75	3.9
4	98	17	59	3.8	105	8.5	82	1.9	53	1.5	76	3.8
5	60	10	70	3.9	359	51	89	2.6	52	1.8	78	3.3
6	12	1.8	96	5.0	130	34	86	2.3	51	1.6	79	3.2
7	26	5.9	135	5.4	109	42	80	2.1	50	2.3	76	3.1
8	217	122	146	6.6	107	56	74	1.9	212	55	72	2.7
9	75	44	144	5.9	96	30	68	1.8	124	23	69	3.1
10	24	9.6	143	5.6	81	8.5	63	1.5	89	11	66	2.8
11	17	3.9	142	6.8	85	5.6	58	1.3	89	6.9	62	2.5
12	18	3.4	141	5.3	108	6.4	55	1.2	93	6.4	66	3.4
13	18	2.9	168	11	104	5.5	64	1.4	99	5.7	92	7.4
14	18	2.6	186	18	121	7.9	82	1.8	106	5.6	88	7.6
15	24	4.1	172	18	118	8.7	105	2.8	113	5.2	67	4.1
16	32	6.6	158	15	89	4.8	131	5.1	121	4.7	74	6.2
17	26	4.6	146	12	71	3.5	121	4.2	122	4.9	89	8.2
18	34	5.1	171	21	57	2.4	104	2.8	121	5.1	71	4.7
19	43	6.0	196	27	90	7.2	90	2.4	121	5.0	56	3.1
20	55	7.0	189	20	92	8.4	283	57	163	25	91	9.2
21	70	8.0	182	14	68	4.4	143	27	105	20	70	6.4
22	89	9.6	175	12	61	3.1	104	12	80	9.7	309	203
23	111	10	169	9.7	58	2.6	94	5.6	122	8.3	92	32
24	105	8.8	163	8.8	55	2.2	85	3.8	129	7.4	56	10
25	92	7.2	157	8.4	52	2.0	77	3.1	121	7.1	50	6.3
26	80	6.2	141	6.9	49	1.7	69	2.7	113	9.8	54	5.9
27	69	5.0	104	4.7	47	1.3	63	2.4	105	8.4	54	5.0
28	63	4.6	88	4.3	49	1.7	61	2.0	233	26	55	4.3
29	78	7.5	110	12	53	1.9	60	1.8	100	11	55	4.0
30	94	12	109	13	58	1.5	58	1.6	71	6.2	56	3.9
31	---	---	115	15	---	---	57	1.8	72	4.9	---	---
TOTAL	---	338.24	---	320.0	---	346.6	---	163.3	---	294.3	---	373.6

STREAMS TRIBUTARY TO LAKE MICHIGAN

04085845 ONION RIVER NEAR SHEBOYGAN FALLS, WI

LOCATION.--Lat 43°41'48", long 87°49'15", in SE 1/4 NE 1/4 sec.11, T.14 N., R.22 E., Sheboygan County, Hydrologic Unit 04040003, on left bank, at the village of Ourtown, 2.3 mi (3.7 km) south of Sheboygan Falls.

DRAINAGE AREA.--91.8 mi² (238 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1978 to September 1980 (discontinued).

GAGE.--Water-stage recorder. Altitude of gage is 660 ft (201 m), from topographic map.

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

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 774 ft³/s (21.9 m³/s) Sept. 24, gage height, 6.37 ft (1.942 m); minimum daily, 12 ft³/s (0.340 m³/s) July 14.

RATING TABLE (gage height, in feet, and discharge, in cubic feet per second).
(Stage-discharge relation affected by ice Dec. 1-6, Dec. 12 to Mar. 25.)

3.2	7.5	5.0	249
3.4	15	5.5	401
3.6	26	6.0	598
4.0	63	6.5	843
4.5	138	7.0	1,140

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980												
DAY	OCT	NOV	DEC	JAN	FEB	MEAN VALUES MAR	APR	MAY	JUN	JUL	AUG	SEP
1	15	22	24	31	32	31	50	58	38	16	17	48
2	15	24	22	28	34	27	49	52	34	16	16	46
3	16	22	21	27	35	24	53	45	32	16	17	43
4	15	21	21	25	36	22	146	39	31	16	18	33
5	16	19	21	24	36	25	247	35	36	15	18	31
6	17	20	21	23	35	26	155	33	137	17	20	27
7	17	25	22	22	34	18	137	30	179	17	20	25
8	19	25	24	21	32	18	267	27	199	16	130	24
9	21	23	35	20	28	19	428	28	193	14	306	25
10	20	21	25	19	26	19	411	26	144	14	188	28
11	19	20	22	18	25	18	272	27	65	14	111	26
12	18	21	20	18	25	16	171	27	49	13	90	25
13	20	20	18	17	25	17	134	28	41	13	75	36
14	17	20	17	17	24	18	109	40	39	12	58	43
15	16	20	16	17	23	20	111	48	44	14	46	41
16	18	21	15	60	22	25	193	47	43	22	38	36
17	18	22	15	170	20	35	159	42	33	29	34	81
18	18	21	15	160	19	50	125	46	29	22	35	65
19	19	21	15	150	20	210	104	59	31	17	35	47
20	30	21	16	100	23	200	90	56	47	111	85	64
21	21	22	16	80	30	100	78	44	44	212	137	116
22	20	32	17	66	40	70	70	37	33	110	100	464
23	25	40	20	56	60	52	62	33	29	57	63	675
24	33	34	25	50	56	43	54	31	24	36	44	686
25	37	28	150	45	52	45	50	29	22	28	38	427
26	30	34	130	42	54	56	47	27	21	25	46	227
27	24	60	60	38	50	82	44	25	19	26	50	145
28	24	58	45	36	37	86	43	24	19	23	50	111
29	24	40	40	33	33	71	46	26	21	20	73	92
30	21	26	35	31	---	76	54	39	20	17	64	77
31	21	---	33	31	---	59	---	41	---	16	51	---
TOTAL	644	803	976	1488	1019	1578	3959	1149	1696	994	2073	3814
MEAN	20.8	26.8	31.5	48.0	35.1	50.9	132	37.1	56.5	32.1	66.9	127
MAX	37	60	150	170	86	210	428	59	199	212	306	686
MIN	15	19	15	17	19	16	43	24	19	12	16	24
CFSM	.22	.29	.34	.51	.37	.54	1.40	.39	.60	.34	.71	1.35
IN.	.25	.32	.39	.59	.40	.62	1.57	.45	.67	.39	.82	1.51
CAL YR 1979	TOTAL	32562	MEAN	89.2	MAX	1840	MIN	12	CFSM	.95	IN	12.87
WTR YR 1980	TOTAL	20193	MEAN	55.2	MAX	686	MIN	12	CFSM	.59	IN	7.98

STREAMS TRIBUTARY TO LAKE MICHIGAN

04085845 ONION RIVER NEAR SHEBOYGAN FALLS, WI--CONTINUED

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1979 to current year.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: April 1979 to current year.

WATER TEMPERATURES: April 1979 to current year.

SUSPENDED-SEDIMENT DISCHARGE: October 1978 to current year.

INSTRUMENTATION.--Water-quality monitor since April 1979. Sediment pumping sampler since December 1978.

REMARKS.--Sediment records are good. Records of alkalinity, chloride, dissolved solids, and nutrients for the 1979 water year have been revised based on the correlation coefficient for equal-width-increment and point samples and supersede these previously published.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Maximum, 895 micromhos Jan. 10, 1980; minimum, 390 micromhos Aug. 10, 1979.

WATER TEMPERATURES: Maximum, 31.5°C July 10, 1980; minimum, 0.5°C on several days during winter periods.

SUSPENDED-SEDIMENT CONCENTRATIONS: Maximum daily mean, 553 mg/l Sept. 22, 1980; minimum daily mean, 1 mg/l on several days during 1979. Maximum observed, 970 mg/l June 7, 1980.

SUSPENDED-SEDIMENT DISCHARGE: Maximum daily, 843 tons (765 tonnes) Sept. 22, 1980; minimum daily, 0.05 ton (0.05 tonne) on several days during 1979.

EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum, 895 micromhos Jan. 10; minimum, 417 micromhos Sept. 22.

WATER TEMPERATURES: Maximum, 31.5°C July 10; minimum, 0.5°C on several days during winter periods.

SUSPENDED-SEDIMENT CONCENTRATIONS: Maximum daily mean, 553 mg/l Sept. 22; minimum daily mean, 2 mg/l Mar. 1. Maximum observed, 970 mg/l June 7; minimum observed 2 mg/l Mar. 1.

SUSPENDED-SEDIMENT DISCHARGE: Maximum daily, 843 tons (765 tonnes) Sept. 22; minimum daily, 0.20 ton (0.18 tonne) Mar. 1, 2.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	ALKA- LITY (MG/L AS CAO3)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	SOLIDS, RESIDUE AT 180 DEG. C SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)	SOLIDS, DIS- SOLVED (TONS PER DAY)	NITRO- GEN, NITRATE TOTAL (MG/L AS N)
DEC , 1978								
06...	1505	34	360	48	534	.73	49.0	--
FEB , 1979								
28...	1145	32	320	31	446	.61	38.5	1.3
MAR								
20...	1030	360	--	--	--	--	--	3.3
20...	1200	360	123	21	233	.32	276	--
23...	0845	1660	82	16	182	.25	995	--
23...	1045	1780	--	--	--	--	--	3.1
24...	0430	2200	213	32	353	.48	2560	--
24...	0700	2010	--	--	--	--	--	2.8
30...	0045	442	--	--	--	--	--	3.3
30...	0300	498	139	21	251	.34	411	--
31...	0830	1850	77	11	147	.20	894	--
31...	1100	1940	--	--	--	--	--	1.9
31...	2100	1710	80	11	147	.20	826	--
31...	2330	1630	--	--	--	--	--	2.1
APR								
02...	2030	517	115	15	198	.27	338	--
02...	2300	483	--	--	--	--	--	2.8
MAY								
25...	0945	45	290	30	451	.61	54.8	1.1
JUN								
28...	1130	16	280	25	380	.52	16.4	.08
29...	1830	70	--	--	--	--	--	3.5
29...	2000	74	220	25	376	.51	68.3	--
30...	0330	113	--	--	--	--	--	6.4
30...	0500	113	209	25	418	.57	116	--
30...	1230	96	--	--	--	--	--	7.3
30...	1400	92	209	31	438	.60	98.9	--
JUL								
01...	1230	71	--	--	--	--	--	4.4
01...	1400	71	253	25	411	.56	71.7	--
AUG								
08...	1430	20	240	29	376	.51	20.3	.40
10...	0345	69	187	23	312	.42	52.9	--
10...	0645	97	--	--	--	--	--	2.4
10...	2315	314	--	--	--	--	--	3.7
11...	0045	320	143	17	274	.37	215	--
11...	1400	305	--	--	--	--	--	3.4
11...	1830	284	187	21	345	.47	241	--
12...	0800	203	--	--	--	--	--	2.5
12...	0930	200	187	21	337	.46	165	--
20...	1830	63	308	35	469	.64	72.5	--
20...	2000	70	--	--	--	--	--	1.8
21...	0630	137	209	36	463	.63	156	--
22...	0030	116	--	--	--	--	--	3.0
22...	1830	86	--	--	--	--	--	2.3
22...	2000	85	308	34	473	.64	98.7	--
25...	1515	135	264	29	439	.60	145	--
25...	1645	129	--	--	--	--	--	2.8
29...	0815	62	--	--	--	--	--	1.8
29...	0945	61	319	34	476	.65	71.3	--

STREAMS TRIBUTARY TO LAKE MICHIGAN
04085845 ONION RIVER NEAR SHEBOYGAN FALLS, WI--CONTINUED

WATER-QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	NITRO- GEN, NITRITE TOTAL (MG/L AS N)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO- GEN, TOTAL (MG/L AS N)	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- ORTHOPH- OSPHATE TOTAL (MG/L AS P)
DEC , 1978								
06...	--	2.4	--	--	--	--	.240	--
FEB , 1979								
28...	.020	1.3	.250	.30	.55	1.9	.210	.190
MAR								
20...	.070	3.4	.250	1.3	1.6	5.1	.250	.170
20...	--	--	--	--	--	--	--	--
23...	--	--	--	--	--	--	--	--
23...	.040	3.1	.180	1.0	1.2	4.3	.230	.130
24...	--	--	--	--	--	--	--	--
24...	.110	2.9	.280	1.0	1.3	4.2	.210	.140
30...	.050	3.4	.220	.88	1.1	4.5	.160	.090
30...	--	--	--	--	--	--	--	--
31...	--	--	--	--	--	--	--	--
31...	.030	1.9	.200	1.2	1.4	3.3	.340	.150
31...	--	--	--	--	--	--	--	--
31...	.030	2.1	.200	.90	1.1	3.2	.270	.150
APR								
02...	--	--	--	--	--	--	--	--
02...	.020	2.8	.130	.97	1.1	3.9	.160	.100
MAY								
25...	.020	1.1	.060	1.5	1.6	2.7	.190	.040
JUN								
28...	.010	.09	.230	2.4	2.6	2.7	.440	.150
29...	.060	3.6	.120	3.8	3.9	7.5	.660	.200
29...	--	--	--	--	--	--	--	--
30...	.130	6.5	.220	3.2	3.4	9.9	.620	.230
30...	--	--	--	--	--	--	--	--
30...	.180	7.5	.220	3.3	3.5	11	.650	.240
30...	--	--	--	--	--	--	--	--
JUL								
01...	.200	4.6	.180	2.6	2.8	7.4	.500	.180
01...	--	--	--	--	--	--	--	--
AUG								
08...	.030	.43	.110	.88	.99	1.4	.400	.150
10...	--	--	--	--	--	--	--	--
10...	.080	2.5	.220	3.1	3.3	5.8	.740	.310
10...	.150	3.9	.130	3.2	3.3	7.2	.810	.310
11...	--	--	--	--	--	--	--	--
11...	.170	3.6	.140	2.8	2.9	6.5	.590	.240
11...	--	--	--	--	--	--	--	--
12...	.100	2.6	.180	2.2	2.4	5.1	.510	.240
12...	--	--	--	--	--	--	--	--
20...	--	--	--	--	--	--	--	--
20...	.010	1.8	.130	2.4	2.5	4.3	.620	.200
21...	--	--	--	--	--	--	--	--
22...	.010	3.0	.130	2.5	2.6	5.6	.480	.180
22...	.009	2.3	.100	2.4	2.5	4.8	.470	.150
22...	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--
25...	.070	2.9	.090	2.4	2.5	5.4	.500	.240
29...	.040	1.8	.080	2.0	2.1	3.9	.420	.150
29...	--	--	--	--	--	--	--	--

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	PH FIELD (UNITS)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION)	COLI- FORM, FECAL, UM-MF (COLS./ 100 ML)	STREP- TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)
DEC , 1978							
06...	1030	35	--	12.0	--	--	--
06...	1915	34	--	--	--	70	62
JAN , 1979							
17...	1105	13	7.9	3.0	--	--	--
17...	1720	13	--	--	--	25	20
FEB							
26...	0930	29	--	4.0	--	--	--
28...	1145	32	7.4	4.0	29	170	240
MAR							
23...	1330	1750	--	--	--	120	3100
APR							
10...	--	153	8.1	12.0	--	--	--
MAY							
25...	0930	46	--	11.0	--	--	--
25...	1510	42	--	--	--	59	49
JUN							
28...	1130	16	8.6	9.2	107	--	--
28...	1630	16	--	--	--	250	84
AUG							
08...	1815	19	--	--	--	180	200
SEP							
14...	1500	18	--	10.3	--	--	--
14...	1600	18	--	--	--	870	200

K RESULTS BASED ON COLONY COUNT OUTSIDE THE ACCEPTABLE RANGE (NON-IDEAL COLONY COUNT).

STREAMS TRIBUTARY TO LAKE MICHIGAN

04085845 ONION RIVER NEAR SHEBOYGAN FALLS, WI--CONTINUED

WATER-QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	ALKA- LITY (MG/L AS CACO ₃)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)	SOLIDS, DIS- SOLVED (TONS PER DAY)	NITRO- GEN, NITRATE TOTAL (MG/L AS N)	NITRO- GEN, NITRITE TOTAL (MG/L AS N)
NOV , 1979									
16...	0755	21	330	76	520	.71	29.5	1.3	.020
DEC									
14...	1000	3.9	320	30	421	.57	4.43	1.2	.000
JAN , 1980									
16...	2345	E150	--	--	--	--	--	3.1	.070
17...	0115	E140	155	40	322	.44	--	--	--
17...	1000	E150	--	--	--	--	--	.46	.010
17...	1430	E190	139	23	261	.35	--	--	--
18...	0230	E170	141	35	289	.39	--	--	--
18...	0700	E160	--	--	--	--	--	4.2	.090
19...	1730	E150	--	--	--	--	--	4.0	.070
19...	1900	E120	175	27	305	.41	--	--	--
24...	1315	E50	302	41	487	.66	--	2.3	.020
MAR									
18...	1230	E62	--	--	--	--	--	2.0	.080
18...	1400	E58	132	35	278	.38	--	--	--
19...	0200	E241	--	--	--	--	--	1.6	.060
19...	1230	E273	110	28	238	.32	--	--	--
19...	1400	E249	--	--	--	--	--	1.6	.060
20...	0330	E221	110	26	245	.33	--	--	--
20...	2300	E147	121	26	248	.34	--	--	--
21...	0030	E123	--	--	--	--	--	1.7	.060
27...	1100	90	220	27	348	.47	84.6	1.6	.020
APR									
05...	0215	257	--	--	--	--	--	3.2	.090
05...	0815	270	--	--	--	--	--	7.2	.100
05...	1715	238	--	--	--	--	--	7.5	.110
08...	1115	238	209	39	477	.65	307	--	--
08...	1245	268	--	--	--	--	--	6.8	.090
09...	0215	387	176	32	429	.58	448	--	--
09...	0345	394	--	--	--	--	--	6.5	.080
09...	1845	455	187	33	447	.61	549	--	--
09...	2015	455	--	--	--	--	--	7.2	.090
10...	0815	429	--	--	--	--	--	6.5	.080
10...	1000	422	187	32	433	.59	493	--	--
MAY									
08...	0915	27	290	32	--	--	--	.01	.020
JUN									
05...	2345	54	--	--	--	--	--	1.9	.070
06...	0045	60	275	29	--	--	--	--	--
06...	0945	127	--	--	--	--	--	8.6	.260
06...	1245	141	--	--	--	--	--	2.4	.110
06...	2145	188	209	31	--	--	--	--	--
07...	0515	167	--	--	--	--	--	.74	.220
08...	0515	211	242	33	--	--	--	--	--
08...	0645	211	--	--	--	--	--	9.3	.190
09...	0345	180	--	--	--	--	--	4.6	.130
09...	1545	200	--	--	--	--	--	2.8	.110
10...	1115	151	220	22	--	--	--	--	--
10...	1245	136	--	--	--	--	--	9.5	.280
12...	1230	50	210	21	--	--	--	1.2	.100
JUL									
17...	1030	30	66	9.0	280	.38	22.7	.70	.030
20...	0930	73	--	--	--	--	--	4.5	.110
20...	1100	86	198	24	350	.48	81.3	--	--
21...	0030	249	--	--	--	--	--	6.6	.220
21...	0500	254	165	23	333	.45	228	--	--
21...	1230	219	--	--	--	--	--	5.3	.190
21...	1700	180	187	26	361	.49	175	--	--
22...	1100	112	--	--	--	--	--	4.2	.140
22...	1230	108	242	26	405	.55	118	--	--
AUG									
08...	1015	85	--	--	--	--	--	2.1	.110
08...	1145	104	198	25	298	.41	83.7	--	--
09...	0700	313	--	--	--	--	--	3.1	.130
09...	0830	320	165	21	301	.41	260	--	--
10...	0230	241	220	29	394	.54	256	--	--
10...	1000	188	--	--	--	--	--	3.9	.170
11...	1445	105	264	31	429	.58	122	--	--
11...	1615	102	--	--	--	--	--	3.1	.140
15...	0900	41	320	48	511	.70	56.6	.41	.030
29...	1015	79	--	--	--	--	--	.59	.100
SEP									
17...	1015	39	--	--	--	--	--	2.8	.100
17...	1315	101	--	--	--	--	--	2.5	.090
18...	0415	74	--	--	--	--	--	2.9	.110
20...	1915	93	--	--	--	--	--	2.2	.090
21...	0115	127	--	--	--	--	--	.90	1.000
21...	0245	130	308	57	520	.71	183	--	--
22...	0215	98	--	--	--	--	--	3.3	.210
22...	0645	246	220	34	386	.52	256	--	--
22...	0815	329	--	--	--	--	--	3.0	.120
22...	2345	555	--	--	--	--	--	2.9	.090
23...	2215	764	143	15	255	.35	526	--	--
23...	2345	769	--	--	--	--	--	2.7	.110
24...	1445	671	--	--	--	--	--	2.8	.130
26...	1330	139	--	--	--	--	--	3.0	.110
28...	0730	117	--	--	--	--	--	4.0	.100
29...	1630	89	--	--	--	--	--	3.2	.120
30...	1330	75	297	39	503	.68	102	--	--
30...	1500	75	--	--	--	--	--	3.1	.140

E ESTIMATED.

STREAMS TRIBUTARY TO LAKE MICHIGAN

04085845 ONION RIVER NEAR SHEBOYGAN FALLS, WI--CONTINUED

WATER-QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO- GEN, TOTAL (MG/L AS N)	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHORUS, DIS- SOLVED (MG/L AS P)	PHOS- PHORUS, ORTHOPH- OSPHATE TOTAL (MG/L AS P)
NOV , 1979								
16...	1.3	.150	.82	.97	2.3	.460	--	.360
DEC								
14...	1.2	.080	.51	.59	1.8	.130	--	.090
JAN , 1980								
16...	3.2	.440	3.6	4.0	7.2	1.100	.420	--
17...	--	--	--	--	--	--	--	--
17...	.47	.000	4.5	4.5	5.0	1.000	.030	--
17...	--	--	--	--	--	--	--	--
18...	--	--	--	--	--	--	--	--
18...	4.3	.300	.00	.30	4.6	.720	.440	--
19...	4.1	.470	2.3	2.8	6.9	.520	.470	--
19...	--	--	--	--	--	--	--	--
24...	2.3	.150	.70	.85	3.1	.090	.080	--
MAR								
18...	2.1	1.400	2.6	4.0	6.1	.740	--	.540
18...	--	--	--	--	--	--	--	--
19...	1.7	1.100	1.2	2.3	4.0	.610	--	.420
19...	--	--	--	--	--	--	--	--
19...	1.7	1.200	2.3	3.5	5.2	.640	--	.420
20...	--	--	--	--	--	--	--	--
20...	--	--	--	--	--	--	--	--
21...	1.8	.700	2.1	2.8	4.5	.450	--	.300
27...	1.6	.220	.57	.79	2.4	.220	--	.160
APR								
05...	3.3	.110	3.0	3.1	6.4	.520	--	.150
05...	7.3	.310	1.9	2.2	9.5	.730	--	.220
05...	7.6	.190	2.1	2.3	9.9	.400	--	.150
08...	--	--	--	--	--	--	--	--
08...	6.9	.170	1.9	2.1	9.0	.370	--	.140
09...	--	--	--	--	--	--	--	--
09...	6.6	.150	2.4	2.6	9.2	.590	--	.170
09...	--	--	--	--	--	--	--	--
09...	7.3	.140	2.3	2.4	9.7	.410	--	.130
10...	6.6	.110	2.1	2.2	8.8	.300	--	.110
10...	--	--	--	--	--	--	--	--
MAY								
08...	.03	.360	1.7	2.1	2.1	.400	--	.030
JUN								
05...	2.0	.100	2.4	2.5	4.5	.550	--	.190
06...	--	--	--	--	--	--	--	--
06...	8.9	.220	4.2	4.4	13	.940	--	.280
06...	2.5	.120	2.7	2.8	5.3	.580	--	.240
06...	--	--	--	--	--	--	--	--
07...	.96	.210	3.1	3.3	4.3	.570	--	.220
08...	--	--	--	--	--	--	--	--
08...	9.5	.180	3.0	3.2	13	.630	--	.210
09...	4.7	.120	2.8	2.9	7.6	.550	--	.180
09...	2.9	.130	3.1	3.2	6.1	.590	--	.210
10...	--	--	--	--	--	--	--	--
10...	9.8	.220	3.5	3.7	13	.850	--	.240
12...	1.3	.160	1.4	1.6	2.9	.270	--	.110
JUL								
17...	.73	.020	2.2	2.2	2.9	.610	--	.160
20...	4.6	.240	3.4	3.6	8.3	.890	--	.360
20...	--	--	--	--	--	--	--	--
21...	6.8	.220	3.8	4.0	10	1.100	--	.350
21...	--	--	--	--	--	--	--	--
21...	5.5	.170	2.7	2.9	8.4	.620	--	.250
21...	--	--	--	--	--	--	--	--
22...	4.3	.140	2.8	2.9	7.2	.580	--	.200
22...	--	--	--	--	--	--	--	--
AUG								
08...	2.2	.320	2.9	3.2	5.4	.910	--	.550
08...	--	--	--	--	--	--	--	--
09...	3.2	.230	2.7	2.9	6.1	.730	--	.470
09...	--	--	--	--	--	--	--	--
10...	--	--	--	--	--	--	--	--
10...	4.1	.150	2.2	2.4	6.5	.550	--	.340
11...	--	--	--	--	--	--	--	--
11...	3.2	.150	2.1	2.3	5.5	.530	--	.290
15...	.44	.090	1.7	1.8	2.2	.390	--	.180
29...	.69	.030	1.8	1.8	2.5	.600	--	.290
SEP								
17...	2.9	.180	1.9	2.1	5.0	.630	--	.340
17...	2.6	.190	1.8	2.0	4.6	.590	--	.300
18...	3.0	.000	2.4	2.4	5.4	.510	--	.180
20...	2.3	.070	2.4	2.5	4.8	.610	--	.360
21...	1.9	.360	4.0	4.4	6.3	1.300	--	.900
21...	--	--	--	--	--	--	--	--
22...	3.5	.170	1.7	1.9	5.4	.440	--	.230
22...	--	--	--	--	--	--	--	--
22...	3.1	.140	4.1	4.2	7.3	1.100	--	.320
22...	3.0	.140	2.3	2.4	5.4	.910	--	.470
23...	--	--	--	--	--	--	--	--
23...	2.8	.120	1.6	1.7	4.4	.660	--	.400
24...	2.9	.120	1.8	1.9	4.7	.590	--	.370
26...	3.1	.110	1.4	1.5	4.6	.410	--	.260
28...	4.1	.130	1.9	2.0	6.1	.410	--	.220
29...	3.3	.090	1.9	2.0	5.3	.360	--	.180
30...	--	--	--	--	--	--	--	--
30...	3.2	.110	1.7	1.8	5.0	.370	--	.190

STREAMS TRIBUTARY TO LAKE MICHIGAN

04085845 ONION RIVER NEAR SHEBOYGAN FALLS, WI--CONTINUED

WATER-QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	PH FIELD (UNITS)	TEMPER- ATURE, WATER (DEG C)	TUR- BID- ITY (MG/L AS SIO2)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	STREP- TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)
NOV , 1979									
15...	1350	20	8.6	3.5	--	15.0	118	--	--
16...	1230	15	--	--	--	--	--	K12	K20
DEC									
14...	1000	3.9	--	.5	--	12.6	91	--	--
14...	1600	E10	--	--	--	--	--	41	K12
14...	1630	E12	8.4	--	--	--	--	--	--
JAN , 1980									
24...	1230	E50	7.4	.5	--	7.0	51	--	--
24...	1730	E50	--	--	--	--	--	110	91
26...	1530	E42	--	--	25	--	--	--	--
FEB									
02...	1530	E34	--	--	15	--	--	--	--
28...	0755	E37	7.9	1.5	--	5.9	44	--	--
28...	1345	E37	--	--	--	--	--	420	820
MAR									
01...	1610	E31	--	--	4	--	--	--	--
27...	1100	90	6.5	.5	--	19.2	139	--	--
27...	1630	86	--	--	--	--	--	130	470
MAY									
07...	1455	27	--	11.0	--	15.6	149	--	--
08...	0915	27	8.3	9.5	--	--	--	--	--
08...	1430	27	--	--	--	--	--	58	79
12...	1750	26	--	--	40	--	--	--	--
JUN									
12...	1145	51	8.0	20.0	--	6.7	77	--	--
12...	1630	44	--	--	--	--	--	1700	230
27...	1950	18	--	--	80	--	--	--	--
JUL									
12...	1920	13	--	--	40	--	--	--	--
17...	0845	31	8.0	23.5	--	6.6	80	--	--
17...	1540	27	--	--	--	--	--	1800	1600
AUG									
14...	1110	48	--	--	50	--	--	--	--
14...	1155	48	7.8	21.5	--	7.5	88	--	--
15...	1400	39	--	--	--	--	--	K13000	2600

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	CARBON, ORGANIC DIS- SOLVED (MG/L AS C)	CARBON, ORGANIC SUS- PENDED (MG/L AS C)	PERI- PHYTON BIOMASS ASH WEIGHT G/SQ M	PERI- PHYTON BIOMASS TOTAL DRY WEIGHT G/SQ M	CHLOR-A PERI- PHYTON CHROMO- GRAPHIC FLUOROM (MG/M2)	CHLOR-B PERI- PHYTON CHROMO- GRAPHIC FLUOROM (MG/M2)	BIOMASS CHLORO- PHYLL RATIO PERI- PHYTON (UNITS)
DEC , 1979									
25...	1530	E150	--	4.0	--	--	--	--	--
JUL , 1980									
17...	0900	31	--	--	5.5	7.9	.02	.00	70500
22...	1600	101	12	2.3	--	--	--	--	--
AUG									
15...	0900	41	--	--	3.4	3.9	.16	.00	2938

K RESULTS BASED ON COLONY COUNT OUTSIDE THE ACCEPTABLE RANGE (NON-IDEAL COLONY COUNT).

E ESTIMATED.

STREAMS TRIBUTARY TO LAKE MICHIGAN

04085845 ONION RIVER NEAR SHEBOYGAN FALLS, WI--CONTINUED

WATER-QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

		STREAM- FLOW, INSTAN- TANEOUS (CFS)	ARSENIC TOTAL IN BOT- TOM MA- TIERIAL (UG/G AS AS)	CADMIUM RECOV. FM BOT- TOM MA- TIERIAL (UG/G AS CD)	CHRO- MIUM, RECOV. FM BOT- TOM MA- TIERIAL (UG/G)	COPPER, RECOV. FM BOT- TOM MA- TIERIAL (UG/G AS CU)	LEAD, RECOV. FM BOT- TOM MA- TIERIAL (UG/G AS PB)	MERCURY RECOV. FM BOT- TOM MA- TIERIAL (UG/G AS HG)	NICKEL, RECOV. FM BOT- TOM MA- TIERIAL (UG/G AS NI)	ZINC, RECOV. FM BOT- TOM MA- TIERIAL (UG/G AS ZN)		
AUG , 1980 15...	0900	41	0	<10	<10	<10	50	.00	10	40		
		STREAM- FLOW, INSTAN- TANEOUS (CFS)	PCB, TOTAL IN BOT- TOM MA- TIERIAL (UG/KG)	ALDRIN, TOTAL IN BOT- TOM MA- TIERIAL (UG/KG)	CHLOR- DANE, TOTAL IN BOT- TOM MA- TIERIAL (UG/KG)	DDD, TOTAL IN BOT- TOM MA- TIERIAL (UG/KG)	DDE, TOTAL IN BOT- TOM MA- TIERIAL (UG/KG)	DDT, TOTAL IN BOT- TOM MA- TIERIAL (UG/KG)	DI- AZINON, TOTAL IN BOT- TOM MA- TIERIAL (UG/KG)	DI- ELDRIN, TOTAL IN BOT- TOM MA- TIERIAL (UG/KG)	ENDRIN, TOTAL IN BOT- TOM MA- TIERIAL (UG/KG)	
DATE	TIME											
AUG , 1980 15...	0900	41	1	.0	0	.0	.0	.0	.0	.0	.0	
		ETHION, TOTAL IN BOT- TOM MA- TIERIAL (UG/KG)	HEPTA- CHLOR, TOTAL IN BOT- TOM MA- TIERIAL (UG/KG)	HEPTA- CHLOR EPOXIDE TOT. IN BOT. IN TOM MA- BOTTOM MATL. (UG/KG)	LINDANE TOTAL IN BOT- TOM MA- TIERIAL (UG/KG)	MALA- THON, TOTAL IN BOT- TOM MA- TIERIAL (UG/KG)	METH- OXY- CHLOR, TOT. IN BOT. IN TOM MA- BOTTOM MATL. (UG/KG)	METHYL PARA- THON, TOT. IN BOT. IN TOM MA- BOTTOM MATL. (UG/KG)	METHYL TRI- THON, TOT. IN BOT. IN TOM MA- BOTTOM MATL. (UG/KG)	PARA- THON, TOTAL IN BOT- TOM MA- TIERIAL (UG/KG)	TOXA- PHENE, TOTAL IN BOT- TOM MA- TIERIAL (UG/KG)	TRI- THON, TOTAL IN BOT- TOM MA- TIERIAL (UG/KG)
DATE	TIME											
AUG , 1980 15...	.0	.0	.0	.0	.0	.0	.0	.0	.0	0	.0	
		STREAM- FLOW, INSTAN- TANEOUS (CFS)	SED. SUSP. FALL DIAM. % FINER THAN (MG/L)	SED. SUSP. FALL DIAM. % FINER THAN (MG/L)	SED. SUSP. FALL DIAM. % FINER THAN (MG/L)	SED. SUSP. FALL DIAM. % FINER THAN (MG/L)	SED. SUSP. FALL DIAM. % FINER THAN (MG/L)	SED. SUSP. FALL DIAM. % FINER THAN (MG/L)	SED. SUSP. FALL DIAM. % FINER THAN (MG/L)	SED. SUSP. FALL DIAM. % FINER THAN (MG/L)	SED. SUSP. FALL DIAM. % FINER THAN (MG/L)	SED. SUSP. FALL DIAM. % FINER THAN (MG/L)
DATE	TIME											
JUL , 1980 22...	1440	104	284	47	65	80	93	98	98	99	100	

STREAMS TRIBUTARY TO LAKE MICHIGAN

04085845 ONION RIVER NEAR SHEBOYGAN FALLS, WI--CONTINUED

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DAY	MAX	MIN OCTOBER	MEAN	MAX	MIN NOVEMBER	MEAN	MAX	MIN DECEMBER	MEAN	MAX	MIN JANUARY	MEAN
1	776	737	756	798	706	741	717	702	709	709	690	700
2	738	715	730	830	803	820	732	720	728	707	699	702
3	716	701	711	812	785	804	746	735	743	734	703	717
4	702	691	697	802	775	787	761	741	750	730	715	723
5	692	669	683	819	807	813	744	698	719	742	722	729
6	670	650	662	821	808	812	705	653	687	742	734	739
7	658	648	653	810	779	791	690	649	677	804	730	762
8	650	631	642	807	780	795	715	655	690	861	805	831
9	654	632	644	785	762	771	744	710	725	873	853	863
10	655	643	648	806	775	790	759	689	724	895	825	875
11	650	644	647	818	807	813	704	664	685	817	739	765
12	648	648	648	---	---	---	701	651	685	789	747	767
13	650	643	646	---	---	---	707	648	667	821	797	809
14	641	632	637	---	---	---	723	609	678	823	751	784
15	640	630	635	865	830	859	679	648	668	708	682	700
16	647	641	644	841	815	827	691	660	678	681	444	660
17	658	645	650	838	823	827	722	695	707	702	577	611
18	677	659	668	841	810	823	780	726	754	589	563	573
19	683	648	670	818	798	808	790	718	750	588	572	578
20	646	630	637	811	768	788	715	649	676	639	598	619
21	681	641	656	785	754	767	673	653	663	689	650	675
22	694	679	686	822	764	780	655	628	639	718	695	710
23	695	671	680	830	687	726	628	602	614	764	726	747
24	735	672	705	713	682	697	599	538	561	812	775	792
25	705	640	654	689	673	686	590	520	552	814	804	809
26	675	647	659	676	658	667	596	549	575	807	794	799
27	708	676	693	721	679	701	646	607	620	809	794	803
28	736	709	725	697	670	678	663	625	639	815	808	812
29	749	733	739	677	670	672	678	644	662	827	815	822
30	769	750	758	718	680	702	705	667	687	833	825	828
31	751	701	721	---	---	---	721	683	699	832	821	825
MONTH	776	630	677	865	658	768	790	520	678	895	444	746

DAY	MAX	MIN FEBRUARY	MEAN	MAX	MIN MARCH	MEAN	MAX	MIN APRIL	MEAN	MAX	MIN MAY	MEAN
1	822	813	817	699	682	690	569	545	562	742	736	738
2	814	810	811	721	699	714	570	557	562	741	728	734
3	815	808	812	733	713	726	569	559	564	736	733	734
4	826	816	823	720	710	717	595	545	570	744	731	737
5	827	814	820	708	699	704	568	517	540	745	736	741
6	811	793	801	696	685	693	591	572	584	743	722	735
7	790	770	780	683	680	681	633	595	620	750	696	735
8	769	749	758	689	678	683	639	562	612	741	682	712
9	748	742	744	690	682	685	572	544	557	741	666	706
10	749	742	745	688	675	682	582	567	572	713	652	684
11	745	735	740	683	672	677	620	586	602	694	649	669
12	734	724	731	684	671	680	651	622	637	669	649	660
13	723	719	722	710	682	693	693	650	665	652	628	640
14	722	716	720	704	690	696	704	692	698	652	633	645
15	717	711	715	687	670	678	731	696	708	697	649	666
16	710	708	709	669	638	659	732	654	688	706	675	695
17	721	706	714	635	549	590	724	706	716	675	649	661
18	727	714	721	570	520	531	750	729	742	672	641	655
19	729	724	727	543	489	512	756	752	755	697	675	685
20	722	711	717	516	494	502	750	746	748	744	687	708
21	710	690	704	523	516	520	747	743	746	756	744	750
22	687	642	666	538	511	523	749	741	745	752	744	746
23	639	606	621	558	535	544	746	736	743	740	733	737
24	602	588	593	580	556	570	738	732	735	744	740	742
25	601	584	591	595	557	582	736	730	734	748	729	742
26	625	602	612	687	512	604	738	735	736	748	729	742
27	646	625	636	616	570	593	745	736	740	755	740	746
28	664	644	652	584	530	558	741	735	738	751	740	746
29	684	662	674	562	525	544	736	730	733	744	715	731
30	---	---	---	533	512	522	744	741	743	718	690	705
31	---	---	---	543	522	533	---	---	---	687	656	668
MONTH	827	584	720	733	489	622	756	517	670	756	628	710

STREAMS TRIBUTARY TO LAKE MICHIGAN
04085845 ONION RIVER NEAR SHEBOYGAN FALLS, WI--CONTINUED

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DAY	MAX	MIN JUNE	MEAN	MAX	MIN JULY	MEAN	MAX	MIN AUGUST	MEAN	MAX	MIN SEPTEMBER	MEAN
1	674	662	669	724	697	715	577	557	565	808	789	800
2	665	656	661	712	639	682	596	567	587	798	755	779
3	674	656	664	690	590	641	597	581	589	795	733	754
4	671	665	668	627	603	616	590	580	585	855	784	817
5	674	645	659	713	621	684	607	580	595	832	792	817
6	650	632	642	709	682	698	592	573	584	843	801	826
7	677	624	657	774	709	741	647	587	617	853	821	838
8	671	653	661	755	671	695	615	513	561	868	799	824
9	650	540	611	732	706	723	534	487	502	879	831	863
10	621	525	563	756	725	741	611	537	579	846	800	821
11	642	624	632	744	721	734	650	612	627	847	797	822
12	624	616	620	741	679	718	707	654	683	825	794	806
13	714	643	672	675	647	665	727	708	715	844	814	829
14	733	710	722	647	638	643	751	724	737	831	727	774
15	726	707	720	641	602	627	779	752	765	728	704	711
16	726	707	716	602	578	586	787	772	778	711	677	699
17	722	695	709	638	570	585	796	780	789	734	687	709
18	722	707	716	652	605	622	797	774	785	788	723	756
19	711	680	690	628	609	619	786	763	773	793	785	790
20	692	632	672	610	454	512	794	552	694	790	767	777
21	638	596	619	535	453	498	637	555	601	779	722	750
22	613	581	596	585	536	569	650	618	633	768	417	520
23	626	573	597	601	575	589	728	648	684	448	423	436
24	645	607	636	616	602	608	805	756	787	491	451	472
25	654	617	639	611	603	607	814	787	802	551	495	519
26	689	645	676	612	601	605	862	815	836	624	557	594
27	723	685	709	619	605	611	825	773	806	665	627	650
28	739	667	709	647	620	636	782	755	769	696	665	682
29	787	667	711	651	636	646	767	710	743	713	697	706
30	813	724	765	640	610	631	772	741	758	729	710	721
31	---	---	---	611	559	596	807	773	794	---	---	---
MONTH	813	525	666	774	453	640	862	487	688	879	417	729

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

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

STREAMS TRIBUTARY TO LAKE MICHIGAN

04085845 ONION RIVER NEAR SHEBOYGAN FALLS, WI--CONTINUED

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DAY	MAX	MIN FEBRUARY	MEAN	MAX	MIN MARCH	MEAN	MAX	MIN APRIL	MEAN	MAX	MIN MAY	MEAN
1	1.0	1.0	1.0	1.0	1.0	1.0	7.5	1.0	4.5	17.5	10.5	13.5
2	1.0	1.0	1.0	1.0	1.0	1.0	10.5	5.0	7.5	20.5	12.5	16.0
3	1.0	1.0	1.0	1.0	1.0	1.0	7.5	4.0	5.5	21.5	13.5	17.5
4	1.0	1.0	1.0	1.0	1.0	1.0	6.0	1.5	4.0	23.0	15.5	19.0
5	1.0	1.0	1.0	1.0	1.0	1.0	7.0	4.5	6.0	22.5	16.5	19.0
6	1.0	1.0	1.0	1.0	1.0	1.0	7.5	6.0	6.5	19.5	14.0	16.0
7	1.0	1.0	1.0	1.0	1.0	1.0	6.5	5.5	6.0	14.0	9.5	10.5
8	1.0	1.0	1.0	1.0	1.0	1.0	6.5	5.5	6.0	10.5	8.0	9.0
9	1.0	1.0	1.0	1.0	1.0	1.0	6.5	4.5	6.0	13.5	6.5	10.0
10	1.0	1.0	1.0	1.0	1.0	1.0	5.0	4.0	4.5	11.5	8.5	10.5
11	1.0	1.0	1.0	1.0	1.0	1.0	6.5	4.5	5.5	17.5	9.0	13.0
12	1.0	1.0	1.0	1.0	1.0	1.0	6.5	5.0	6.0	19.0	11.0	15.0
13	1.0	1.0	1.0	1.0	1.0	1.0	6.0	4.0	5.0	15.0	10.0	12.0
14	1.0	1.0	1.0	1.0	1.0	1.0	4.0	1.0	2.5	13.0	9.0	11.0
15	1.0	1.0	1.0	1.0	1.0	1.0	5.0	.5	3.0	17.0	10.0	13.5
16	1.0	1.0	1.0	1.0	1.0	1.0	6.0	3.0	4.5	16.0	11.5	14.0
17	1.0	1.0	1.0	1.0	1.0	1.0	7.0	4.5	5.5	13.0	11.5	12.0
18	1.0	1.0	1.0	1.0	1.0	1.0	11.5	6.0	8.5	12.5	11.0	12.0
19	1.0	1.0	1.0	1.0	1.0	1.0	14.0	9.0	11.5	19.5	11.0	15.0
20	1.0	1.0	1.0	1.0	1.0	1.0	16.0	10.5	13.0	22.5	14.5	18.5
21	1.0	1.0	1.0	1.0	1.0	1.0	17.0	11.5	14.0	24.0	16.5	20.5
22	1.0	1.0	1.0	1.0	1.0	1.0	20.0	12.0	16.0	25.5	18.0	22.0
23	1.0	1.0	1.0	1.0	1.0	1.0	17.0	12.5	14.5	25.0	18.0	22.0
24	1.0	1.0	1.0	1.0	1.0	1.0	12.5	7.5	9.0	25.5	19.5	22.5
25	1.0	1.0	1.0	1.0	1.0	1.0	9.5	6.5	7.5	25.0	19.5	21.5
26	1.0	1.0	1.0	1.0	.5	1.0	10.5	6.5	8.5	24.0	16.0	20.0
27	1.0	1.0	1.0	.5	.5	.5	12.0	8.5	9.5	24.5	16.5	20.5
28	1.0	1.0	1.0	.5	.5	.5	8.5	7.5	8.0	23.0	18.0	20.5
29	1.0	1.0	1.0	1.0	.5	.5	10.0	7.5	8.5	22.0	18.0	19.5
30	---	---	---	1.0	.5	.5	12.5	8.5	10.5	22.5	17.5	20.0
31	---	---	---	4.0	.5	1.5	---	---	---	24.5	18.0	21.0
MONTH	1.0	1.0	1.0	4.0	.5	1.0	20.0	.5	7.5	25.5	6.5	16.5

DAY	MAX	MIN JUNE	MEAN	MAX	MIN JULY	MEAN	MAX	MIN AUGUST	MEAN	MAX	MIN SEPTEMBER	MEAN
1	19.5	16.5	18.0	26.0	18.5	22.0	29.0	21.5	25.0	22.0	19.5	20.5
2	22.0	15.5	18.5	26.5	19.5	23.0	25.0	21.5	23.0	23.5	19.5	21.5
3	24.5	16.5	20.5	27.5	19.0	23.5	28.0	20.5	26.0	23.5	18.5	21.0
4	23.0	17.5	20.5	29.0	22.0	25.0	25.0	21.5	23.0	23.5	19.5	21.5
5	19.5	15.0	16.5	27.0	22.0	24.0	28.5	21.5	24.5	23.5	17.5	20.5
6	18.5	15.5	17.0	26.0	19.0	22.5	26.5	22.0	24.0	24.0	18.0	21.0
7	19.5	16.5	18.0	26.5	20.5	23.5	24.0	21.5	22.5	23.5	19.0	21.5
8	19.0	16.5	17.5	28.5	22.0	25.0	23.5	20.5	22.0	25.0	19.5	22.5
9	18.0	16.0	17.0	28.5	21.5	24.5	22.0	21.0	21.5	23.5	19.5	22.0
10	18.0	14.5	16.0	31.5	21.5	26.0	21.0	20.0	20.5	21.5	16.5	19.0
11	21.5	13.5	17.5	28.5	24.0	26.0	21.0	19.5	20.0	19.0	16.0	17.5
12	18.5	16.5	17.5	27.5	23.0	24.5	23.0	18.0	20.5	18.0	16.5	17.0
13	24.5	18.5	21.5	30.5	22.0	25.5	21.5	19.0	20.5	22.0	17.0	19.5
14	27.5	20.5	23.5	27.0	23.0	25.0	23.5	19.0	21.5	20.0	16.5	18.5
15	22.5	16.0	18.5	28.5	24.0	26.0	24.0	19.5	21.5	17.0	15.5	16.5
16	21.5	13.5	17.5	29.5	23.0	26.0	20.5	18.5	19.5	16.0	14.0	15.0
17	24.0	15.0	19.5	29.0	23.0	25.5	18.5	17.5	18.0	15.5	12.5	14.0
18	20.5	16.5	19.0	25.5	22.0	23.5	24.5	17.0	21.0	16.5	13.0	14.5
19	18.0	14.5	16.0	31.0	22.0	26.0	26.5	20.0	23.0	17.0	13.0	15.0
20	22.0	13.5	18.0	25.0	21.5	23.0	23.5	21.5	22.5	19.5	16.0	17.5
21	24.5	18.0	21.0	23.5	22.5	23.0	25.0	22.0	23.0	18.5	16.5	17.5
22	26.0	20.0	23.0	24.0	21.5	22.5	24.5	21.0	23.0	16.5	15.0	15.5
23	27.5	21.0	24.0	25.5	20.5	22.5	25.0	20.0	22.5	15.0	13.5	14.0
24	28.5	21.5	25.0	26.0	20.0	23.0	24.0	20.0	22.0	14.0	13.0	13.5
25	30.0	22.5	26.0	24.0	21.0	22.0	22.0	20.0	21.0	14.0	13.0	13.5
26	31.0	24.0	27.0	21.5	17.5	19.5	24.5	19.5	22.0	13.5	12.0	12.5
27	24.0	21.0	22.0	24.0	17.0	20.5	22.0	19.5	21.0	14.5	12.0	13.0
28	27.5	19.5	23.5	26.0	17.5	22.0	21.0	19.0	20.0	14.0	12.5	13.0
29	23.5	21.0	22.5	28.0	21.5	24.5	22.5	19.5	21.0	16.5	12.5	14.5
30	25.0	18.5	21.5	23.0	20.5	22.0	23.0	20.5	21.5	16.5	14.0	15.5
31	---	---	---	26.5	20.5	23.5	21.0	20.0	20.5	---	---	---
MONTH	31.0	13.5	20.0	31.5	17.0	23.5	29.0	17.0	22.0	25.0	12.0	17.5

STREAMS TRIBUTARY TO LAKE MICHIGAN
04085845 ONION RIVER NEAR SHEBOYGAN FALLS, WI--CONTINUED

SUSPENDED-SEDIMENT, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DAY	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
	MEAN CONCENTRATION (MG/L)	LOADS (T/DAY)	MEAN CONCENTRATION (MG/L)	LOADS (T/DAY)	MEAN CONCENTRATION (MG/L)	LOADS (T/DAY)	MEAN CONCENTRATION (MG/L)	LOADS (T/DAY)	MEAN CONCENTRATION (MG/L)	LOADS (T/DAY)	MEAN CONCENTRATION (MG/L)	LOADS (T/DAY)
1	36	1.5	44	2.6	111	7.2	22	1.8	112	9.7	2	.20
2	37	1.5	39	2.5	102	6.1	24	1.8	125	12	3	.20
3	39	1.7	32	1.9	100	5.7	26	1.9	110	10	4	.30
4	40	1.6	27	1.5	98	5.6	29	2.0	90	8.7	5	.30
5	41	1.8	22	1.2	97	5.5	32	2.1	74	7.2	7	.50
6	43	1.9	18	.99	95	5.4	33	2.0	61	5.8	9	.60
7	40	1.9	15	1.0	94	5.6	33	2.0	50	4.6	12	.60
8	37	1.9	13	.84	92	6.0	34	1.9	41	3.5	16	.80
9	35	2.0	13	.78	89	8.4	34	1.8	34	2.6	16	.80
10	33	1.8	13	.75	86	5.7	35	1.8	29	2.0	15	.80
11	31	1.6	14	.77	82	4.9	36	1.7	25	1.7	14	.70
12	29	1.4	15	.85	79	4.3	36	1.7	21	1.4	13	.60
13	27	1.4	16	.86	76	3.7	37	1.7	18	1.2	12	.60
14	25	1.2	17	.94	72	3.3	38	1.7	16	1.0	12	.60
15	25	1.1	17	.96	67	2.9	39	1.8	14	.90	11	.60
16	26	1.3	29	1.7	62	2.5	63	11	14	.80	15	1.0
17	26	1.3	62	3.7	57	2.3	137	63	15	.80	53	5.1
18	27	1.3	65	3.8	52	2.1	71	30	16	.80	58	7.9
19	27	1.4	54	3.1	48	1.9	27	11	17	.90	47	28
20	54	4.8	45	2.5	44	1.9	17	4.7	30	1.9	25	14
21	46	2.7	38	2.3	41	1.8	20	4.2	31	2.5	12	3.3
22	40	2.2	31	2.7	38	1.7	29	5.1	30	3.2	10	1.9
23	37	2.5	26	2.8	41	2.2	44	6.7	27	4.4	10	1.4
24	35	3.1	22	2.1	72	5.2	49	6.6	18	2.7	10	1.2
25	32	3.2	31	2.3	174	73	50	6.1	11	1.5	10	1.2
26	30	2.4	56	5.3	79	29	52	5.9	7	1.0	9	1.5
27	31	2.0	154	25	45	7.5	58	6.0	6	.80	10	2.2
28	33	2.1	147	23	29	3.6	66	6.4	4	.40	20	4.6
29	36	2.3	134	14	19	2.1	76	6.8	3	.30	37	7.1
30	38	2.2	122	8.6	18	1.7	86	7.2	---	---	41	8.4
31	41	2.4	---	---	20	1.8	98	8.2	---	---	40	6.5
TOTAL	---	61.5	---	121.34	---	220.6	---	216.6	---	94.30	---	103.50

DAY	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
	MEAN CONCENTRATION (MG/L)	LOADS (T/DAY)	MEAN CONCENTRATION (MG/L)	LOADS (T/DAY)	MEAN CONCENTRATION (MG/L)	LOADS (T/DAY)	MEAN CONCENTRATION (MG/L)	LOADS (T/DAY)	MEAN CONCENTRATION (MG/L)	LOADS (T/DAY)	MEAN CONCENTRATION (MG/L)	LOADS (T/DAY)
1	40	5.3	72	11	130	13	139	6.1	128	5.8	94	12
2	39	5.2	79	11	132	12	141	6.0	127	5.5	96	12
3	40	5.7	88	10	134	12	142	6.2	127	5.9	97	11
4	79	35	---	9.0	136	11	144	6.1	127	6.1	99	8.9
5	167	115	---	8.6	164	17	145	5.9	127	6.1	100	8.3
6	44	19	---	8.0	437	167	136	6.2	127	6.8	101	7.4
7	35	13	---	7.8	435	210	124	5.7	127	6.7	93	6.3
8	168	143	105	7.6	362	195	112	4.7	347	140	82	5.3
9	185	211	109	8.0	270	141	102	3.9	257	213	73	4.9
10	76	86	113	8.0	285	108	98	3.7	204	104	64	4.9
11	50	36	117	8.5	274	48	---	3.6	201	60	57	3.9
12	54	25	123	8.9	236	31	---	3.4	166	39	50	3.4
13	49	18	145	11	222	24	---	3.2	187	36	45	4.3
14	45	13	197	22	212	22	---	3.1	140	20	44	5.1
15	41	12	182	23	202	23	226	8.3	105	11	44	4.9
16	38	20	136	17	192	22	257	15	81	7.5	44	4.3
17	41	17	105	12	182	16	188	15	75	6.1	102	24
18	47	16	99	12	173	13	135	7.9	76	6.3	114	20
19	54	15	136	22	171	14	107	5.0	77	6.4	101	13
20	61	15	136	21	247	31	463	180	238	67	96	17
21	70	15	108	13	204	24	392	232	133	49	102	32
22	81	15	103	10	184	16	333	99	141	38	553	843
23	91	15	99	8.9	173	13	307	48	139	24	264	472
24	83	12	94	8.0	163	11	247	24	134	16	136	256
25	70	9.5	90	7.0	154	9.4	214	16	131	13	116	133
26	60	7.5	88	6.4	145	8.4	185	13	127	16	98	61
27	51	6.1	91	6.2	137	6.9	163	11	124	17	94	37
28	53	6.2	94	6.3	135	6.9	154	9.7	106	14	88	26
29	59	7.2	90	6.3	136	7.6	147	7.8	92	18	75	19
30	65	9.5	98	10	138	7.4	141	6.7	91	16	87	18
31	---	---	120	13	---	---	134	5.8	93	13	---	---
TOTAL	---	928.2	---	341.5	---	1240.6	---	772.0	---	993.2	---	2077.9

STREAMS TRIBUTARY TO LAKE MICHIGAN

04086000 SHEBOYGAN RIVER AT SHEBOYGAN, WI

LOCATION.--Lat 43°44'25", long 87°45'35", in SE 1/4 NE 1/4 sec.29, T.15 N., R.23 E., Sheboygan County, Hydrologic Unit 04030101, on left bank 400 ft (122 m) upstream from bridge on State Highway 141, near west city limits of Sheboygan, and 4.2 mi (5.8 km) upstream from mouth.

DRAINAGE AREA.--418 mi² (1,083 km²).

PERIOD OF RECORD.--June 1916 to September 1924 (published as "near Sheboygan"), October 1950 to current year. Monthly discharge only for some periods, published in WSP 1307, 1727.

REVISED RECORDS.--WSP 1307: 1917(M), 1919(M), 1921(M), 1923(M). WDR WI-79-1: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 584.00 ft (178.00 m) National Geodetic Vertical Datum of 1929. June 1916 to June 1924, nonrecording gage at site 0.7 mi (1.1 km) downstream at different datum. November 1950 to June 1951, nonrecording gage at site 0.3 mi (0.5 km) downstream at datum 3.15 ft (0.960 m) lower.

REMARKS.--Records good except those for winter and missing record periods, which are fair. Diurnal fluctuation caused by numerous powerplants above station.

AVERAGE DISCHARGE.--38 years (1916-24, 1950-80), 241 ft³/s (6.825 m³/s), 7.83 in/yr (199 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 7,680 ft³/s (217 m³/s) Mar. 22, 1975, gage height, 11.64 ft (3.548 m); minimum observed, about 1 ft³/s (0.028 m³/s) Aug. 27, 1922, gage height, 1.48 ft (0.451 m) datum then in use, caused by shutdown of powerplants.

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

DATE	TIME	DISCHARGE (ft ³ /s)	(m ³ /s)	GAGE HEIGHT (ft)	(m)	DATE	TIME	DISCHARGE (ft ³ /s)	(m ³ /s)	GAGE HEIGHT (ft)	(m)
Apr. 9	1100	1,570	44.5	5.85	1.783	Sept. 22	1545	1,710	48.4	6.09	1.856
June 8	--	*2,540	71.9	*7.22	2.201						

minimum discharge, 45 ft³/s (1.274 m³/s) Oct. 1, gage height, 1.76 ft (0.536 m).

RATING TABLE (gage height, in feet, and discharge, in cubic feet per second).
(Stage-discharge relation affected by ice Nov. 29 to Dec. 20, Dec. 29 to Mar. 18.)

1.7	36	4.0	620
2.0	74	6.0	1,660
2.5	163	8.0	3,200
3.0	280		

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	48	84	130	180	100	64	261	293	158	140	82	317
2	50	88	110	160	100	64	276	282	157	130	84	306
3	52	80	100	140	98	66	309	268	144	120	84	281
4	52	72	110	120	96	68	463	250	180	110	84	247
5	56	66	140	110	94	68	663	210	320	94	82	229
6	52	76	130	100	90	70	568	149	600	100	80	194
7	54	88	110	84	88	70	579	118	1200	120	100	180
8	58	82	96	80	86	70	1060	103	2000	110	580	133
9	64	78	110	72	84	72	1530	107	940	94	1300	99
10	64	74	120	66	84	72	1370	121	600	86	760	150
11	60	72	130	62	80	70	1090	133	350	78	500	170
12	62	72	100	58	78	68	903	135	240	74	400	250
13	68	70	90	56	78	66	791	147	180	66	300	150
14	62	76	94	54	76	68	734	173	190	64	240	160
15	54	72	120	80	76	70	719	192	200	70	210	190
16	56	74	96	200	72	74	853	181	190	90	190	230
17	60	78	84	360	72	180	765	167	160	130	170	297
18	60	76	90	340	70	350	659	220	140	96	170	277
19	72	74	100	250	70	430	531	232	190	72	180	236
20	100	74	110	210	76	582	487	220	300	500	350	250
21	78	92	115	190	84	514	448	196	280	1000	560	359
22	70	120	115	180	88	474	371	181	240	600	380	1170
23	110	160	136	170	94	421	275	159	205	300	300	1340
24	135	120	237	160	96	328	223	145	200	230	230	1240
25	128	120	515	150	92	280	333	135	190	190	190	947
26	110	210	482	140	86	275	304	121	177	150	210	722
27	90	256	352	130	80	324	304	110	168	170	230	553
28	84	220	285	120	74	322	299	112	220	140	220	476
29	84	190	260	120	66	307	319	130	200	120	406	419
30	78	160	230	110	---	252	301	147	170	100	324	385
31	78	---	200	110	---	248	---	164	---	80	334	---
TOTAL	2249	3174	5097	4362	2428	6387	17788	5301	10489	5424	9330	11957
MEAN	72.5	106	164	141	83.7	206	593	171	350	175	301	399
MAX	135	256	515	360	100	582	1530	293	2000	1000	1300	1340
MIN	48	66	84	54	66	64	223	103	140	64	80	99
CFSM	.17	.25	.39	.34	.20	.49	1.42	.41	.84	.42	.72	1.96
IN.	.20	.28	.45	.39	.22	.57	1.58	.47	.93	.48	.83	1.06
CAL YR 1979	TOTAL	134748	MEAN	369	MAX	5670	MIN	34	CFSM	.88	IN	11.99
WTR YR 1980	TOTAL	83986	MEAN	229	MAX	2000	MIN	48	CFSM	.55	IN	7.47

STREAMS TRIBUTARY TO LAKE MICHIGAN

04086000 SHEBOYGAN RIVER AT SHEBOYGAN, WI--CONTINUED

WATER-QUALITY RECORDS

PERIOD OF RECORD.--October 1979 to September 1980.

COOPERATION.--Water-quality samples were collected by the Wisconsin Department of Natural Resources - Southeastern District and were analyzed by the Wisconsin State Laboratory of Hygiene.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	TEMPER- ATURE, WATER (DEG C)
OCT , 1979				
23...	1215	108	635	12.0
NOV				
27...	1220	254	695	1.0
JAN , 1980				
08...	1255	79	680	.0
FEB				
19...	1150	70	720	.0
MAY				
12...	1015	134	640	13.0
JUN				
23...	1035	212	585	22.5
AUG				
04...	1015	84	820	12.0
SEP				
16...	1050	230	615	17.0

STREAMS TRIBUTARY TO LAKE MICHIGAN

04086000 SHEBOYGAN RIVER AT SHEBOYGAN, WI--CONTINUED

WATER-QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	TIME	STREAM- FLOW (CFS)	STREAM- FLOW, INSTAN- TANEOUS (CFS)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, RESIDUE AT 105 DEG. C, SUS- PENDED (MG/L)	PHOS- PHORUS, TOTAL (MG/L AS P)
MAY , 1980							
06...	1500	--	141	26	.3	24	.190
07...	2100	--	352	28	.2	19	.180
08...	1130	--	101	28	.4	17	.180
13...	2100	--	177	26	.2	23	.190
14...	1100	--	171	27	.3	23	.180
19...	1200	--	233	30	2.1	37	.230
29...	1000	--	131	32	3.6	60	.300
30...	1300	--	147	29	4.3	50	.280
JUN							
02...	1400	--	179	27	2.2	70	.330
05...	1500	320	--	31	3.8	190	.420
06...	1600	--	600	25	4.6	214	.460
09...	1600	940	--	17	10	216	.420
JUL							
12...	1230	74	--	30	5.7	45	.290
15...	1530	70	--	33	--	39	.270
20...	--	500	--	16	--	260	.600
21...	0800	1000	--	24	9.9	182	.550
22...	1500	600	--	25	8.8	126	.420
25...	1430	190	--	32	8.3	59	.310
31...	1500	80	--	31	3.9	60	.280
AUG							
04...	0630	84	--	33	1.5	43	.260
05...	1500	82	--	30	2.2	56	.300
10...	1700	760	--	26	10	177	.550
11...	1600	500	--	26	10	120	.460
12...	--	800	--	25	11	74	.360
16...	1530	190	--	29	9.4	74	.360
18...	1400	580	--	24	6.5	234	.580
20...	1700	350	--	18	11	148	.410
25...	1530	190	--	22	13	74	.360
28...	1300	220	--	24	14	66	.360
SEP							
12...	1500	--	275	32	9.0	22	.260
17...	1530	--	275	24	15	42	.280

DATE	PHOS- PHORUS, ORTHOPH OSPHATE DISSOL. (MG/L AS P)	CADMIUM TOTAL RECOV- ERABLE (UG/L AS CD)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU)	LEAD, TOTAL RECOV- ERABLE (UG/L AS PB)	NICKEL, TOTAL RECOV- ERABLE (UG/L AS NI)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN)
MAY , 1980						
06...	.018	--	4	3	<20	<20
07...	.020	0	<3	<3	--	<20
08...	.019	0	<3	<3	--	<20
13...	.023	0	<3	3	--	<20
14...	.011	0	4	6	--	<20
19...	.051	--	<3	3	<20	<20
29...	.123	--	4	6	<20	<20
30...	.103	--	3	6	<20	<20
JUN						
02...	.071	--	--	6	<20	<20
05...	.068	--	54	80	22	120
06...	.104	--	12	15	--	30
09...	.138	--	--	9	--	30
JUL						
12...	.112	--	--	12	--	--
15...	.101	--	--	7	--	--
20...	.104	--	--	9	--	--
21...	.188	--	--	6	--	--
22...	.153	--	--	6	--	--
25...	.118	--	--	<3	<20	--
31...	.065	0	10	5	--	--
AUG						
04...	.056	--	--	<3	--	--
05...	.063	--	--	4	--	--
10...	.210	--	--	6	--	--
11...	.171	--	--	3	--	--
12...	.143	--	--	5	--	--
16...	.124	--	--	3	--	--
18...	.186	--	--	9	--	--
20...	.152	--	--	8	--	--
25...	.166	--	--	11	--	--
28...	.175	--	--	6	--	--
SEP						
12...	.153	--	--	<3	--	--
17...	.162	--	--	<3	--	--

STREAMS TRIBUTARY TO LAKE MICHIGAN

04086150 MILWAUKEE RIVER AT KEWASKUM, WI

LOCATION.--Lat 43°31'02", long 88°13'24", in SE 1/4 SE 1/4 sec.9, T.12 N., R.19 E., Washington County, Hydrologic Unit 04040003, on left bank at small dam in Kewaskum, 50 ft (15 m) above unnamed tributary and 2.6 mi (4.2 km) above East Branch Milwaukee River.

DRAINAGE AREA.--138 mi² (357 km²).

PERIOD OF RECORD.--April 1968 to current year.

REVISED RECORDS.--WDR WI-77-1: Drainage area.

GAGE.--Water-stage recorder. Altitude of gage is 930 ft (283 m), from topographic map. Prior to Aug. 21, 1973, nonrecording gage at same site and datum.

REMARKS.--Records good except those for the winter period, which are fair. Occasional affect from small dam 50 ft (15.2 m) upstream when clearing ice or debris from dam piers.

AVERAGE DISCHARGE.--12 years, 94.0 ft³/s (2.662 m³/s), 9.25 in/yr (235 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 3,040 ft³/s (86.1 m³/s) Mar. 22, 1975, gage height, 9.15 ft (2.789 m); minimum observed, 1.1 ft³/s (0.031 m³/s) Aug. 25-28, 1970, gage height, 1.64 ft (0.500 m).

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

DATE	TIME	DISCHARGE (ft ³ /s) (m ³ /s)	GAGE HEIGHT (ft) (m)	DATE	TIME	DISCHARGE (ft ³ /s) (m ³ /s)	GAGE HEIGHT (ft) (m)
Apr. 8	1615	498	14.1	Sept. 22	0900	*820	23.2
Aug. 8	1730	376	10.6				*6.40 1.951

minimum discharge, 12 ft³/s (0.34 m³/s) July 13, gage height, 2.08 ft (0.634 m).

RATING TABLES (gage height, in feet, and discharge, in cubic feet per second).
(Stage-discharge relation affected by ice Dec. 4-20, Jan. 6 to Mar. 15.)

Oct. 1 to Dec. 9		Dec. 10 to June 6		June 7 to Sept. 30	
2.3	16	2.2	19	2.0	7.5
2.4	25	2.5	45	2.3	28
2.7	57	3.0	104	3.0	92
3.0	100	4.0	270	4.0	223
3.5	175	5.0	500	5.0	410
4.0	275			6.0	680

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DAY	OCT	NOV	DEC	JAN	MEAN VALUES		APR	MAY	JUN	JUL	AUG	SEP
					FEB	MAR						
1	20	85	102	82	19	25	116	134	42	25	43	85
2	24	78	99	68	19	23	121	130	42	24	42	33
3	25	70	91	61	19	22	145	121	45	23	41	87
4	25	66	58	59	19	21	216	111	41	22	37	76
5	25	61	54	55	20	20	239	100	67	27	39	68
6	26	66	52	51	20	19	237	89	216	24	34	62
7	25	65	50	46	20	19	267	79	235	20	55	66
8	27	64	49	41	21	19	439	74	220	19	275	65
9	28	59	48	39	22	20	475	70	192	17	286	107
10	28	53	48	38	22	20	461	66	185	16	218	105
11	30	47	46	38	23	21	426	67	165	15	218	80
12	28	40	45	39	23	21	380	64	120	14	232	115
13	27	39	45	39	24	22	318	74	90	13	215	173
14	27	38	40	40	24	23	268	92	82	13	186	167
15	27	40	36	44	25	25	243	94	61	23	452	141
16	27	44	35	130	26	74	248	89	54	54	127	150
17	28	50	34	160	27	212	226	79	49	44	112	179
18	26	52	34	150	29	270	215	87	44	28	98	154
19	43	52	34	130	30	210	197	95	53	24	91	134
20	50	49	35	130	34	220	179	92	48	158	85	189
21	48	71	37	96	38	170	177	83	43	185	89	186
22	61	106	44	74	44	110	167	73	40	118	82	590
23	106	112	80	56	48	92	155	60	37	112	72	524
24	110	107	177	47	44	76	145	48	34	123	66	403
25	110	102	261	40	39	64	137	43	31	114	54	376
26	110	130	218	33	35	78	129	40	29	104	55	361
27	106	146	211	26	31	94	122	37	27	84	56	313
28	99	138	190	22	28	98	117	32	31	67	70	268
29	87	122	155	20	26	103	123	44	27	58	82	213
30	85	105	118	19	---	107	132	48	26	51	81	178
31	82	---	96	19	---	111	---	48	---	48	82	---
TOTAL	1570	2257	2622	1892	799	2409	6820	2363	2376	1667	3375	5708
MEAN	50.6	75.2	84.6	61.0	27.6	77.7	227	76.2	79.2	53.8	109	190
MAX	110	146	261	160	48	270	475	134	235	185	286	590
MIN	20	38	34	19	19	19	116	32	26	13	34	62
CFSM	.37	.55	.61	.44	.20	.56	1.65	.55	.57	.39	.79	1.38
IN.	.42	.61	.71	.51	.22	.65	1.84	.64	.64	.45	.91	1.54
CAL YR 1979	TOTAL	59120	MEAN	162	MAX	1480	MIN	20	CFSM	1.17	IN	15.94
WTR YR 1980	TOTAL	33858	MEAN	92.5	MAX	590	MIN	13	CFSM	.67	IN	9.13

STREAMS TRIBUTARY TO LAKE MICHIGAN

04086200 EAST BRANCH MILWAUKEE RIVER AT NEW FANE, WI

LOCATION.--Lat 43°33'01", long 88°11'18", in center of sec.35, T.13 N., R.19 E., Fond du Lac County, Hydrologic Unit 104040003, on right bank 150 ft (46 m) downstream of bridge on County Trunk Highway S, 0.4 mi (0.6 km) southwest of New Fane, 0.5 mi (0.8 km) downstream from recreation dam (formerly a mill dam), and 6.0 mi (9.6 km) upstream from mouth.

DRAINAGE AREA.--54.1 mi² (140 km²).

PERIOD OF RECORD.--April 1968 to current year.

REVISED RECORDS.--WDR WI-71-1(M). WDR WI-77-1: Drainage area.

GAGE.--Water-stage recorder. Temporary nonrecording gage 0.4 mi (0.6 km) upstream at different datum Jan. 21, 1972, to Aug. 2, 1973. Altitude of gage is 950 ft (290 m), from topographic map. Prior to Jan. 21, 1972, water-stage recorder at site 200 ft (61 m) upstream at same datum.

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

AVERAGE DISCHARGE.--12 years, 32.8 ft³/s (0.929 m³/s), 8.23 in/yr (209 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 743 ft³/s (21.0 m³/s) Mar. 24, 1975, gage height, 5.44 ft (1.658 m); maximum gage height, 5.93 ft (1.807 m) Mar. 5, 1974 (backwater from ice); minimum daily, 0.76 ft³/s (0.022 m³/s) Sept. 16, 1971.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 137 ft³/s (3.88 m³/s) Apr. 11, gage height, 4.62 ft (1.408 m), no peak above base of 160 ft³/s (4.53 m³/s); maximum gage height, 4.98 ft (1.518 m) Jan. 19, backwater from ice; minimum daily discharge, 7.3 ft³/s (0.207 m³/s) July 14.

RATING TABLES (gage height, in feet, and discharge, in cubic feet per second).
(Stage-discharge relation affected by ice Dec. 1-4, 11-24, Dec. 31 to Mar. 22.)

	Oct. 1 to Mar. 22					Mar. 23 to Sept. 30						
	3.6	14	4.0	34		3.5	6.8	4.5	48			
	3.8	21	4.3	75		3.7	17	4.3	75			
						3.9	29	4.6	133			
DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980												
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	15	31	38	29	11	15	38	47	24	13	15	39
2	16	29	34	27	11	15	39	44	23	12	17	41
3	16	27	30	26	11	15	45	41	25	11	19	39
4	16	25	28	25	11	14	58	38	24	11	18	35
5	16	24	26	24	12	15	65	35	26	11	18	30
6	16	27	26	23	12	15	67	32	54	11	16	25
7	17	28	25	21	12	15	75	29	65	10	18	24
8	17	26	27	18	12	15	98	28	65	10	45	23
9	18	25	25	18	13	15	112	26	63	9.6	59	27
10	18	24	24	18	13	16	122	25	59	9.2	61	29
11	18	22	23	19	13	17	127	24	53	8.8	60	26
12	18	22	22	19	13	18	129	23	43	9.1	58	29
13	17	22	21	20	14	18	125	26	29	8.4	56	39
14	17	22	20	21	14	20	116	34	36	7.4	52	42
15	17	22	19	22	14	25	108	35	38	8.5	45	42
16	17	23	18	24	14	31	102	36	35	18	39	42
17	17	23	17	28	14	39	95	31	30	18	34	43
18	17	22	18	36	15	60	87	35	26	13	29	41
19	20	23	19	45	15	52	78	38	31	11	27	36
20	23	23	19	39	15	42	71	37	32	34	26	38
21	22	28	20	33	19	35	65	34	28	53	28	41
22	25	39	20	27	26	19	60	31	25	51	27	73
23	39	40	20	22	24	28	56	27	23	45	25	91
24	45	36	44	18	22	27	54	24	17	37	23	97
25	40	33	70	16	21	26	50	23	15	28	22	95
26	35	43	70	14	18	26	46	21	18	25	24	91
27	32	54	62	14	17	30	44	19	18	22	23	85
28	32	53	56	13	16	31	42	19	19	19	27	76
29	30	47	46	13	16	34	45	22	18	18	36	68
30	28	43	41	12	---	34	49	23	13	16	38	61
31	27	---	34	12	---	36	---	24	---	16	40	---
TOTAL	701	906	962	696	438	798	2268	931	975	574.0	1025	1468
MEAN	22.6	30.2	31.0	22.5	15.1	25.7	75.6	30.0	32.5	18.5	33.1	48.9
MAX	45	54	70	45	26	60	129	47	65	53	61	97
MIN	15	22	17	12	11	14	38	19	13	7.4	15	23
CFSM	.42	.56	.57	.42	.28	.48	1.40	.56	.60	.34	.61	.90
IN.	.48	.62	.66	.48	.30	.55	1.56	.64	.67	.39	.70	1.01
CAL YR 1979	TOTAL	19181.0	MEAN	52.6	MAX	344	MIN	14	CFSM	.97	IN	13.19
WTR YR 1980	TOTAL	11742.0	MEAN	32.1	MAX	129	MIN	7.4	CFSM	.59	IN	8.07

STREAMS TRIBUTARY TO LAKE MICHIGAN

04086340 NORTH BRANCH MILWAUKEE RIVER NEAR FILLMORE, WI

LOCATION.--Lat 43°28'58", long 88°03'39", in NW 1/4 sec.25, T.12 N., R.20 E., Washington County, Hydrologic Unit 04040003, on right bank downstream from County Trunk Highway M, 1.1 mi (1.8 km) south of Fillmore and 2.0 mi (3.2 km) upstream from mouth.

DRAINAGE AREA.--148 mi² (383 km²).

PERIOD OF RECORD.--April 1968 to current year.

REVISED RECORDS.--WDR WI: 1971(M); WDR WI -77-1: Drainage area.

GAGE.--Water-stage recorder. Altitude of gage is 800 ft (240 m) from topographic map.

REMARKS.--Records good except those for winter period and periods of no gage-height record, May 29 to June 3, June 10-30, which are fair.

AVERAGE DISCHARGE.--12 years, 97.8 ft³/s (2.770 m³/s), 8.97 in/yr (228 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 3,100 ft³/s (87.8 m³/s) Mar. 22, 1975, gage height, 8.21 ft (2.502 m); minimum, 3.0 ft³/s (0.085 m³/s) Aug. 17, 18, 1970, gage height, 0.19 ft (0.058 m).

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

DATE	TIME	DISCHARGE (ft ³ /s) (m ³ /s)	GAGE HEIGHT (ft) (m)	DATE	TIME	DISCHARGE (ft ³ /s) (m ³ /s)	GAGE HEIGHT (ft) (m)
Apr. 10	1000	428 12.1	4.82 1.469	Sept. 23	0100	*875 24.8	*5.97 1.820

minimum daily, 22 ft³/s (0.62 m³/s) July 11.

RATING TABLE (gage height, in feet, and discharge, in cubic feet per second).
(Shifting-control method used May 10 to June 5; stage-discharge relation affected by ice Dec. 1-23, Jan. 3 to Mar. 23.)

0.8	19	3.0	156
1.0	26	4.0	276
1.5	50	5.0	470
2.0	78	6.0	890

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DAY	MEAN VALUES											
	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	32	85	140	112	31	42	121	122	56	31	31	65
2	33	84	110	87	31	40	124	122	50	27	31	64
3	34	81	98	74	32	39	136	116	56	28	35	64
4	35	77	76	66	33	38	176	104	60	25	33	61
5	36	74	72	58	33	37	204	90	81	31	35	54
6	37	77	74	54	34	37	209	77	175	31	35	46
7	39	82	76	50	35	36	224	70	205	29	41	42
8	44	81	76	48	36	36	276	64	211	27	142	45
9	47	80	76	46	36	36	380	62	190	25	228	54
10	46	77	72	45	36	37	422	60	158	25	233	70
11	47	71	72	45	37	38	402	60	150	22	240	56
12	48	66	72	46	37	39	366	59	130	25	218	63
13	46	66	72	48	38	41	319	55	110	26	178	97
14	44	65	72	50	38	43	271	93	90	23	137	94
15	43	65	68	52	39	47	244	93	80	25	104	86
16	43	66	64	62	40	62	242	93	86	45	81	83
17	43	67	58	78	41	78	229	89	64	62	76	116
18	44	68	54	100	42	100	217	92	58	44	65	117
19	48	68	50	110	44	140	205	98	52	36	56	107
20	59	67	46	100	44	130	193	97	58	81	70	146
21	62	78	48	90	46	120	180	91	56	128	76	175
22	68	112	54	72	50	120	166	81	52	149	72	554
23	104	127	66	56	54	110	151	69	49	141	57	775
24	119	131	122	52	60	116	138	60	47	118	39	570
25	127	129	209	46	64	136	125	53	42	88	38	509
26	124	142	228	42	62	132	112	47	39	71	47	447
27	116	161	238	38	54	118	107	43	36	65	48	378
28	106	172	217	35	45	116	101	43	40	49	48	301
29	95	173	192	33	43	118	105	47	37	42	62	234
30	87	160	162	32	---	118	118	56	33	38	67	169
31	82	---	136	32	---	118	---	64	---	39	65	---
TOTAL	1938	2852	3170	1859	1215	2418	6263	2380	2551	1596	2688	5642
MEAN	62.5	95.1	102	60.0	41.9	78.0	209	76.8	85.0	51.5	86.7	188
MAX	127	173	238	112	64	140	422	122	211	149	240	775
MIN	32	65	46	32	31	36	101	43	33	22	31	42
CFSM	.42	.64	.69	.41	.28	.53	1.41	.52	.57	.35	.59	1.27
IN.	.49	.72	.80	.47	.31	.61	1.57	.60	.64	.40	.68	1.42
CAL YR 1979	TOTAL	51020	MEAN	140	MAX	983	MIN	31	CFSM	.95	IN	12.82
WTR YR 1980	TOTAL	34572	MEAN	94.5	MAX	775	MIN	22	CFSM	.64	IN	8.69

STREAMS TRIBUTARY TO LAKE MICHIGAN

04086360 MILWAUKEE RIVER AT WAUBEKA, WI

LOCATION.--Lat 43°28'22", long 87°59'23", in SE 1/4 sec.28, T.12 N., R.21 E., Ozaukee County, Hydrologic Unit 04040003, on right bank 100 ft (30 m) downstream from bridge on County Trunk Highway I, 800 ft (240 m) downstream from recreation pond dam at Waubeka, and 2.4 mi (3.9 km) downstream from North Branch Milwaukee River.

DRAINAGE AREA.--432 mi² (1,119 km²).

PERIOD OF RECORD.--March 1968 to current year.

REVISED RECORDS.--WDR WI-77-1: Drainage area.

GAGE.--Water-stage recorder. Altitude of gage is 770 ft (234 m), from topographic map. Prior to Aug. 1, 1968, nonrecording gage at same site and datum.

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

AVERAGE DISCHARGE.--12 years, 303 ft³/s (8.581 m³/s), 9.52 in/yr (242 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 6,990 ft³/s (198 m³/s) Mar. 23, 1975, gage height, 11.35 ft (3.459 m); minimum, 19 ft³/s (0.54 m³/s) Aug. 18, 1970, gage height, 1.90 ft (0.579 m).

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

DATE	TIME	DISCHARGE (ft ³ /s) (m ³ /s)	GAGE HEIGHT (ft) (m)	DATE	TIME	DISCHARGE (ft ³ /s) (m ³ /s)	GAGE HEIGHT (ft) (m)
Apr. 10	0430	1,180 33.4	5.65 1.722	Sept.22	2400	*2,580 73.1	*7.65 2.332

minimum discharge, 29 ft³/s (0.82 m³/s) Aug. 1, gage height, 2.02 ft (0.616 m), from regulation of dam upstream; minimum daily, 71 ft³/s (2.01 m³/s), July 11.

RATING TABLE (gage height, in feet, and discharge, in cubic feet per second).
(Stage-discharge relation affected by ice Dec. 2-22, Jan. 5 to Mar. 27.)

2.4	70	4.0	480
2.6	100	5.0	880
3.0	175	6.0	1,380
3.5	310	7.0	2,060

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DAY	MEAN VALUES											
	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	94	193	371	328	78	110	331	377	169	86	94	203
2	96	279	331	271	78	110	343	363	145	78	99	208
3	97	176	260	238	76	110	374	352	155	85	116	188
4	99	238	200	200	74	100	551	330	169	83	120	200
5	102	208	190	190	76	100	628	299	188	91	143	181
6	103	210	180	180	78	100	635	227	536	106	125	163
7	105	215	170	170	78	100	668	226	695	94	133	155
8	108	215	190	170	80	110	826	216	680	88	499	159
9	116	213	180	160	80	110	1080	208	586	81	747	195
10	118	208	180	160	82	110	1170	186	532	77	735	268
11	122	200	170	150	82	110	1120	201	435	71	635	231
12	122	193	160	150	84	110	1060	177	400	76	610	217
13	122	190	150	150	86	120	974	194	315	74	543	292
14	120	145	140	150	88	130	829	248	233	74	495	357
15	114	139	140	150	90	140	755	260	221	73	427	350
16	118	140	130	200	92	150	762	262	236	102	309	332
17	116	145	130	260	96	200	695	256	181	159	340	413
18	116	176	130	320	98	280	681	274	155	137	279	427
19	127	173	130	300	100	390	618	255	167	116	193	384
20	153	171	140	260	110	380	566	260	178	149	203	456
21	157	198	150	220	120	350	540	252	165	346	268	613
22	169	294	170	180	140	310	510	233	157	439	198	1930
23	306	312	198	150	160	450	476	208	149	343	176	2020
24	288	334	315	130	180	420	416	193	141	306	159	1460
25	274	325	660	110	170	330	374	159	120	277	149	1260
26	274	346	619	100	150	280	366	155	110	271	149	1150
27	274	374	594	96	130	270	352	127	100	241	133	1040
28	274	390	598	90	120	301	341	122	120	195	141	862
29	262	393	547	86	120	316	345	143	100	157	169	728
30	254	365	458	82	---	318	321	157	94	151	185	587
31	249	---	365	80	---	322	---	185	---	123	203	---
TOTAL	5049	7158	8346	5481	2996	6737	18707	7105	7632	4749	8775	17029
MEAN	163	239	269	177	103	217	624	229	254	153	283	568
MAX	306	393	660	328	180	450	1170	377	695	439	747	2020
MIN	94	139	130	80	74	100	321	122	94	71	94	155
CFSM	.38	.55	.62	.41	.24	.50	1.44	.53	.59	.35	.66	1.32
IN.	.43	.62	.72	.47	.26	.58	1.61	.61	.66	.41	.76	1.47
CAL YR 1979	TOTAL	158170	MEAN 433	MAX 3570	MIN 56	CFSM 1.00	IN 13.62					
WTR YR 1980	TOTAL	99764	MEAN 273	MAX 2020	MIN 71	CFSM .63	IN 8.59					

STREAMS TRIBUTARY TO LAKE MICHIGAN

04086500 CEDAR CREEK NEAR CEDARBURG, WI

LOCATION.--Lat 43°19'23", long 87°58'43", in SE 1/4 SW 1/4 sec.14, T.10 N., R.21 E., Ozaukee County, Hydrologic Unit 04040003, on left bank 40 ft (12 m) upstream from bridge on State Highway 66, 1.9 mi (3.1 km) north of Cedarburg and 6.6 mi (10.6 km) upstream from mouth.

DRAINAGE AREA.--120 mi² (311 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--August 1930 to September 1970. July 1973 to current year.

REVISED RECORDS.--WSP 1307: 1932-34(M), 1937(M), 1939(M), 1945(M), 1948-49(M). WDR WI-77-1: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 795.33 ft (242.42 m) National Geodetic Vertical Datum of 1929 (levels by Corps of Engineers). Nonrecording gage and crest-stage gage August 1930 to September 1970 at same site and datum.

REMARKS.--Records good, except for the winter period and periods of estimated record, which are fair.

AVERAGE DISCHARGE.--47 years, 67.4 ft³/s (1.909 m³/s), 7.63 in/yr (194 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge observed, about 3,600 ft³/s (102 m³/s) Mar. 30, 1960, gage height, 12.25 ft (3.734 m), from graph based on gage readings, backwater from ice; minimum observed, 0.20 ft³/s (0.006 m³/s) Aug. 9-12, 1936.

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

DATE	TIME	DISCHARGE (ft ³ /s) (m ³ /s)	GAGE HEIGHT (ft) (m)	DATE	TIME	DISCHARGE (ft ³ /s) (m ³ /s)	GAGE HEIGHT (ft) (m)
Dec. 25	1200	726 20.6	7.57 2.307	Sept. 23	1830	*845 23.9	*7.81 2.380

minimum daily discharge, 14 ft³/s (0.396 m³/s) July 4, 25, may have been less during winter months.

RATING TABLE (gage height, in feet, and discharge, in cubic feet per second).
(Stage-discharge relation affected by ice Dec. 1-22, Dec. 27 to Mar. 30.)

5.1	10	6.0	137
5.2	17	6.5	280
5.4	35	7.0	470
5.7	77	8.0	940

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	17	35	50	56	21	28	61	81	48	18	16	37
2	19	42	46	48	20	27	60	74	46	17	17	36
3	21	43	45	41	20	26	63	66	54	15	22	32
4	22	40	43	36	20	26	166	58	54	14	26	28
5	22	38	41	33	20	26	224	53	71	21	46	23
6	21	41	40	30	21	25	174	47	269	31	51	22
7	21	46	39	27	21	26	153	46	336	24	45	24
8	19	46	37	26	22	27	240	43	347	19	273	30
9	20	43	36	27	23	28	366	43	240	18	333	38
10	22	42	34	28	24	28	385	47	126	16	273	67
11	21	38	33	29	24	29	322	43	82	17	166	43
12	19	41	31	30	25	30	246	41	64	16	130	48
13	20	38	31	32	26	32	192	45	54	16	97	97
14	19	37	30	33	27	37	153	55	45	16	74	90
15	21	37	29	35	28	45	156	54	35	16	64	66
16	24	38	28	45	29	54	233	54	33	20	60	63
17	24	38	27	52	28	80	206	55	34	25	61	163
18	23	38	29	70	28	120	163	60	31	21	69	168
19	24	38	32	80	27	110	137	67	29	17	58	113
20	32	40	34	68	28	100	119	61	27	18	54	121
21	30	45	37	56	34	90	107	58	27	22	54	209
22	27	77	40	46	45	86	95	47	27	21	61	466
23	38	88	50	38	42	80	86	40	23	18	51	766
24	43	76	90	33	39	78	81	35	21	16	38	795
25	38	63	326	29	37	74	81	33	20	14	36	631
26	35	66	233	27	34	70	76	31	20	16	37	462
27	33	99	150	25	32	68	71	29	17	29	29	325
28	32	88	86	24	30	66	67	29	19	27	38	206
29	32	74	78	23	29	64	74	41	21	21	40	144
30	31	54	70	22	---	62	82	48	18	18	36	113
31	30	---	62	21	---	62	---	64	---	17	35	---
TOTAL	800	1529	1937	1170	804	1704	4639	1548	2238	594	2390	5427
MEAN	25.8	51.0	62.5	37.7	27.7	55.0	155	49.9	74.6	19.2	77.1	181
MAX	43	99	326	80	45	120	385	81	347	31	333	795
MIN	17	35	27	21	20	25	60	29	17	14	16	22
CFSM	.22	.43	.52	.31	.23	.46	1.29	.42	.62	.16	.64	1.51
IN.	.25	.47	.60	.36	.25	.53	1.44	.48	.69	.18	.74	1.68
CAL YR 1979	TOTAL	37247	MEAN	102	MAX	1200	MIN 17	CFSM .85	IN 11.55			
WTR YR 1980	TOTAL	24780	MEAN	67.7	MAX	795	MIN 14	CFSM .56	IN 7.68			

STREAMS TRIBUTARY TO LAKE MICHIGAN

04086500 CEDAR CREEK NEAR CEDARBURG, WI--CONTINUED

WATER-QUALITY RECORDS

PERIOD OF RECORD.--October 1979 to September 1980.

COOPERATION.--Water-quality were collected by the Wisconsin Department on Natural Resources - Southeastern District and were analyzed by the Wisconsin State Laboratory of Hygiene.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	TEMPER- ATURE, WATER (DEG C)
OCT , 1979				
22...	1150	24	690	12.5
DEC				
03...	1500	45	750	.0
JAN , 1980				
15...	1145	35	640	.0
31...	1115	21	360	.0
FEB				
15...	1155	28	640	.0
JUL				
02...	1305	17	820	12.0
AUG				
13...	1215	92	1060	7.5
SEP				
11...	1230	44	675	18.5

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, RESIDUE AT 105 DEG. C, SUS- PENDE (MG/L)	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHORUS, ORTHOPH OSPHATE DISSOL. (MG/L AS P)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU)	LEAD, TOTAL RECOV- ERABLE (UG/L AS PB)	NICKEL, TOTAL RECOV- ERABLE (UG/L AS NI)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN)
MAY , 1980											
06...	1026	58	29	2.0	28	.220	.077	4	4	<20	<20
18...	1310	62	28	4.8	32	.220	.102	4	14	<20	20
19...	1115	84	30	6.0	77	.280	.098	5	20	<20	<20
29...	1200	38	35	8.0	41	.460	.260	5	18	<20	<20
30...	1430	43	29	10	64	.420	.184	<3	3	<20	<20
31...	1130	64	28	11	70	.400	.157	4	15	<20	<20
JUN											
01...	1845	42	25	10	27	.380	.230	<3	<3	<20	<20
03...	1245	54	30	10	49	.350	.170	4	12	<20	<20
05...	1500	86	26	--	140	--	--	7	15	20	30
06...	0945	265	23	8.5	208	.560	.119	10	24	--	35
07...	1345	336	21	11	138	.410	.122	7	16	--	30
08...	1035	346	20	11	146	.430	.105	12	24	--	30
09...	1435	211	32	13	92	.260	.086	--	12	--	20
JUL											
05...	1238	18	34	4.2	16	.360	.260	--	13	--	--
06...	1235	27	41	4.6	19	1.400	.240	--	12	--	--
26...	1725	15	34	7.4	25	.380	.250	--	8	--	--
27...	1715	31	36	9.1	22	.460	.310	--	9	--	--
28...	1710	23	30	9.5	14	.280	.169	--	<3	--	--
AUG											
05...	1815	54	30	6.8	40	.340	.186	--	7	--	--
06...	1505	45	27	8.4	21	.260	.144	--	<3	--	--
08...	1855	326	26	11	114	.540	.220	--	3	--	--
09...	1250	333	23	13	90	.410	.152	--	5	--	--
10...	1130	277	25	15	102	.360	.125	--	5	--	--
11...	1735	148	31	14	69	.300	.110	--	11	--	--
12...	1900	124	31	14	60	.290	.094	--	6	--	--
27...	1645	28	32	8.0	8	.190	.133	--	<3	--	--
SEP											
09...	1650	41	29	6.0	10	.200	.131	--	<3	--	--
10...	1600	72	30	--	33	.240	--	--	<3	--	--
12...	1535	50	34	11	24	.220	.105	--	<3	--	--
13...	1745	105	32	11	63	.300	.115	--	<3	--	--
14...	1415	87	36	13	48	.220	--	--	<3	--	--
15...	0950	67	35	13	29	.220	.121	--	<3	--	--
16...	1930	74	31	13	29	.220	.113	--	<3	--	--
20...	1125	106	30	13	50	.220	.077	--	6	--	--
21...	1915	218	30	14	79	.300	.094	--	<3	--	--
22...	1720	569	16	10	108	.460	.178	--	<3	--	--
23...	1425	815	12	9.0	68	.320	.126	--	<3	--	--

STREAMS TRIBUTARY TO LAKE MICHIGAN

04087000 MILWAUKEE RIVER AT MILWAUKEE, WI
(NATIONAL STREAM-QUALITY ACCOUNTING NETWORK STATION)

LOCATION.--Lat 43°06'00", long 87°54'32", in NE 1/4 sec.5, T.7 N., R.22 E., Milwaukee County, Hydrologic Unit 04040003, on left bank near northeast limits of Milwaukee in Estabrook Park, 2,000 ft (600 m) downstream from Port Washington Road bridge and 6.6 mi (10.6 km) upstream from mouth.

DRAINAGE AREA.--696 mi² (1,803 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--April 1914 to current year. Published as "near Milwaukee" prior to 1936.

REVISED RECORDS.--WSP 564: 1918(M). WSP 924: 1940. WSP 1207: 1936(M). WSP 1337: 1915-17(M), 1918, 1919-21(M), 1922, 1923(M), 1924, 1925-33(M). WDR WI-79-1: Drainage area.

GAGE.--Datum of gage is 607.23 ft (185.084 m) National Geodetic Vertical Datum of 1929 (levels by Corps of Engineers). Prior to Apr. 6, 1929, nonrecording gage near present site at different datum. Apr. 6, 1929, to Jan. 8, 1934, nonrecording gage at bridge 0.5 mi (0.8 km) upstream at different datum.

REMARKS.--Records good except those for winter periods, which are poor. Occasional regulation caused by recreation dam approximately 1,200 ft (366 m) upstream.

AVERAGE DISCHARGE.--66 years, 404 ft³/s (11.44 m³/s), 7.88 in/yr (200 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 15,100 ft³/s (428 m³/s) Mar. 20, 1918, Aug. 6, 1924, gage height, 9.00 ft (2.743 m) datum then in use, from floodmark for 1918, from graph based on gage reading for 1924, no flow Sept. 8, 1943.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 2,000 ft³/s (56.6 m³/s) and maximum (*):

DATE	TIME	DISCHARGE (ft ³ /s) (m ³ /s)	GAGE HEIGHT (ft) (m)	DATE	TIME	DISCHARGE (ft ³ /s) (m ³ /s)	GAGE HEIGHT (ft) (m)
Oct. 29	0945	*3,600 102	5.26 1.603	Aug. 8	0800	2,800 79.3	4.77 1.454
June 7	1030	2,710 76.7	4.73 1.442	Sept. 12	1145	2,260 64.0	4.38 1.335
Aug. 4	2215	3,580 101	*5.28 1.609	Sept. 23	1230	3,500 99.1	5.23 1.594

minimum discharge, 26 ft³/s (0.736 m³/s) May 13, gage height, 1.63 ft (0.497 m), result of regulation.

RATING TABLES (gage height, in feet, and discharge, in cubic feet per second).
(Stage-discharge relation affected by ice Jan. 7 to Mar. 14.)

Oct. 1 to Nov. 20				Nov. 21 to Sept. 30			
2.0	105	2.5	345	1.8	68	3.0	764
2.2	190	3.0	700	2.0	138	4.0	1,780
				2.5	398	5.0	3,140

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	132	292	378	453	150	190	443	508	312	182	178	304
2	129	254	374	446	140	160	460	537	278	116	205	297
3	136	315	338	371	120	170	519	506	275	94	146	302
4	128	240	423	300	110	180	700	476	248	103	531	281
5	124	271	383	270	110	190	930	450	517	318	947	276
6	128	303	351	258	110	180	956	412	817	152	349	255
7	126	281	363	170	130	190	979	352	1200	147	703	315
8	128	280	233	240	140	190	1260	350	1150	144	1110	247
9	132	278	267	280	140	200	1580	342	991	152	1280	424
10	141	273	333	290	130	200	1780	339	803	120	1190	311
11	152	258	329	300	140	190	1710	321	667	114	1200	382
12	147	255	298	240	140	190	1600	338	552	123	944	640
13	143	262	291	220	140	180	1420	209	498	104	835	392
14	139	253	242	220	150	190	1320	245	492	108	704	479
15	138	219	308	220	160	215	1230	417	332	121	630	500
16	142	200	291	390	140	251	1200	408	307	245	567	606
17	147	257	286	470	120	371	1130	454	318	155	508	625
18	149	221	267	630	130	705	1020	423	282	200	491	683
19	227	239	308	740	140	648	918	447	251	180	516	641
20	257	247	281	690	170	680	854	404	253	170	360	787
21	191	495	229	640	250	725	771	392	256	208	378	812
22	307	411	246	530	400	687	722	364	237	387	407	1780
23	250	445	284	490	380	635	676	325	229	454	337	3070
24	339	444	777	310	330	505	630	290	209	367	296	2740
25	324	446	836	270	290	444	569	267	199	335	273	2180
26	307	614	954	230	250	418	533	227	184	640	262	1810
27	303	530	856	200	220	424	516	213	159	350	264	1560
28	304	536	733	180	210	403	519	197	207	295	264	1320
29	544	525	702	170	200	426	570	216	145	253	253	1050
30	294	459	620	150	---	438	535	267	164	221	269	898
31	297	---	546	140	---	439	---	281	---	202	293	---
TOTAL	6405	10103	13127	10508	5240	11014	28050	10977	12532	6760	16690	25967
MEAN	207	337	423	339	181	355	935	354	418	218	538	866
MAX	544	614	954	740	400	725	1780	537	1200	640	1280	3070
MIN	124	200	229	140	110	160	443	197	145	94	146	247
CFSM	.30	.48	.61	.49	.26	.51	1.34	.51	.60	.31	.77	1.24
IN.	.34	.54	.70	.56	.28	.59	1.50	.59	.67	.36	.89	1.39
CAL YR 1979	TOTAL	239505	MEAN	656	MAX	5290	MIN	82	CFSM	.94	IN	12.80
WTR YR 1980	TOTAL	157373	MEAN	430	MAX	3070	MIN	94	CFSM	.62	IN	8.41

STREAMS TRIBUTARY TO LAKE MICHIGAN

04087000 MILWAUKEE RIVER AT MILWAUKEE, WI--CONTINUED
(NATIONAL STREAM QUALITY ACCOUNTING NETWORK STATION)

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1964-65, 1967-69, 1971, 1973 to current year.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: July 1973 to current year.

WATER TEMPERATURES: July 1973 to current year.

INSTRUMENTATION.--Water-quality monitor since July 20, 1973.

REMARKS.--Water-quality monitor inoperative part of the year. Partial records of daily specific conductance and water temperatures for water years 1973-75, 1980, and daily specific conductance for 1979 water year available in files of District Office.

COOPERATION.--Supplemental water-quality samples were collected by the Wisconsin Department of Natural Resources - Southeastern District and were analyzed by the Wisconsin State Laboratory of Hygiene.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE (WATER YEARS 1976-79); Maximum, 1,300 micromhos Feb. 11, 1976; minimum, 237 micromhos July 17, 1977.

WATER TEMPERATURES (WATER YEARS 1976-79); Maximum, 36.0°C June 8, 9, 1978; minimum, 0.0°C on many days during winter periods.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH FIELD (UNITS)	TEMPER- ATURE, WATER (DEG C)	TUR- BID- ITY (NTU)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, SOLVED (PER- CENT SATUR- ATION)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	STREP- TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)
OCT , 1979										
23...	1700	230	740	7.4	16.5	15	7.0	74	K170000	33000
NOV										
19...	0930	245	720	8.6	7.0	3.0	--	--	130	67
DEC										
05...	1030	403	750	7.9	.5	3.0	13.0	94	170	58
JAN , 1980										
08...	1045	160	825	8.1	.0	1.0	13.4	96	150	59
FEB										
04...	1000	100	1000	7.9	.0	1.0	12.6	91	K63	K8
MAR										
10...	1000	190	950	8.0	.0	.30	12.9	93	210	K41
APR										
15...	1030	1230	650	8.3	4.5	.50	14.6	118	--	--
MAY										
13...	0930	320	700	8.4	15.0	6.5	10.3	106	290	250
JUN										
23...	0930	224	570	8.7	16.0	.50	--	--	67	K49
JUL										
22...	1500	372	705	8.6	27.0	6.8	4.8	62	340	220
AUG										
19...	0915	1080	600	8.3	22.0	10	7.3	87	1500	470
SEP										
23...	0915	3030	380	7.6	15.5	14	8.7	91	37000	135000

DATE	HARD- NESS (MG/L AS CACO3)	HARD- NESS, NONCAR- BONATE (MG/L CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	PERCENT SODIUM	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LITY (MG/L AS CACO3)	SULFATE DIS- SOLVED (MG/L AS SO4)
OCT , 1979										
23...	290	37	59	34	27	28	.7	3.2	250	36
NOV										
19...	330	56	68	38	23	22	.6	3.1	270	43
DEC										
05...	360	54	78	41	21	19	.5	3.5	310	48
JAN , 1980										
08...	380	62	82	43	29	23	.6	3.8	320	53
FEB										
04...	390	48	83	44	58	24	1.3	5.2	340	50
MAR										
10...	340	56	72	38	75	32	1.8	4.0	280	44
APR										
15...	270	58	58	30	30	19	.8	3.2	210	39
MAY										
13...	300	39	62	35	28	17	.7	2.4	260	39
JUN										
23...	270	15	54	34	25	16	.7	2.3	260	32
JUL										
22...	250	25	46	34	32	21	.9	3.0	230	28
AUG										
19...	310	46	68	33	17	11	.4	2.9	260	33
SEP										
23...	180	26	39	19	8.4	9	.3	4.6	150	20

K RESULTS BASED ON COLONY COUNT OUTSIDE THE ACCEPTABLE RANGE (NON-IDEAL COLONY COUNT).

STREAMS TRIBUTARY TO LAKE MICHIGAN
04087000 MILWAUKEE RIVER AT MILWAUKEE, WI--CONTINUED

WATER-QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)	SOLIDS, DIS- SOLVED (TONS PER DAY)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N)
OCT , 1979										
23...	47	.2	.8	381	360	.52	237	.56	.60	.100
NOV										
19...	43	.2	1.5	429	386	.58	284	.87	.87	.060
DEC										
05...	43	.2	9.2	456	435	.62	496	1.1	1.1	.220
JAN , 1980										
08...	55	.2	10	497	476	.68	215	1.6	1.7	.420
FEB										
04...	96	.2	12	582	562	.79	157	2.0	2.0	.580
MAR										
10...	120	.2	10	545	540	.74	280	2.0	2.0	.740
APR										
15...	51	.1	6.2	395	349	.54	1310	1.0	1.1	.090
MAY										
13...	51	.2	.0	424	374	.58	366	.05	.04	.180
JUN										
23...	43	.2	1.8	415	349	.56	251	.00	.10	.300
JUL										
22...	53	.2	3.4	389	338	.53	391	.01	.02	.000
AUG										
19...	34	.2	17	420	365	.57	1230	.85	.84	.100
SEP										
23...	16	.2	9.9	247	212	.34	2020	1.2	1.1	.080

DATE	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N)	NITRO- GEN, ORGANIC DIS- SOLVED (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO- GEN,NH4 + ORG. SUSP. TOTAL (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC DIS- SOLVED (MG/L AS N)	NITRO- GEN, DIS- SOLVED (MG/L AS N)	NITRO- GEN, TOTAL (MG/L AS N)	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHORUS, DIS- SOLVED (MG/L AS P)
OCT , 1979										
23...	.130	.76	.40	.86	.33	.53	1.1	1.4	.120	.070
NOV										
19...	.030	.76	.63	.82	.16	.66	1.5	1.7	.050	.020
DEC										
05...	.220	1.2	.88	1.4	.30	1.1	2.2	2.5	.100	.070
JAN , 1980										
08...	.460	1.3	2.3	1.7	.00	2.8	4.5	3.3	.120	.150
FEB										
04...	.640	.72	1.2	1.3	.00	1.8	3.8	3.3	.410	.390
MAR										
10...	.700	.96	.90	1.7	.10	1.6	3.6	3.7	.130	.120
APR										
15...	.090	.89	.82	1.0	.00	.91	2.0	1.7	.100	.070
MAY										
13...	.000	1.2	.64	1.4	.76	.64	.68	1.5	.160	.050
JUN										
23...	.070	1.3	1.6	1.6	.00	1.7	1.9	1.6	.140	.170
JUL										
22...	.020	.98	.39	.98	.57	.41	.43	.99	.290	.090
AUG										
19...	.040	1.2	.80	1.3	.46	.84	1.7	2.2	.170	.130
SEP										
23...	.110	.81	.67	.89	.11	.78	1.9	2.1	.570	.140

DATE	SILVER, TOTAL RECOV- ERABLE (UG/L AS AG)	CARBON, ORGANIC TOTAL (MG/L AS C)	CARBON, ORGANIC DIS- SOLVED (MG/L AS C)	CARBON, ORGANIC SUS- PENDE (MG/L AS C)	PHYTO- PLANK- TON, TOTAL (CELLS PER ML)	PERI- PHYTON BIOMASS ASH WEIGHT G/SQ M	PERI- PHYTON BIOMASS DRY WEIGHT G/SQ M	CHLOR-A PERI- PHYTON CHROMO- GRAPHIC FLUOROM (MG/M2)	CHLOR-B PERI- PHYTON CHROMO- GRAPHIC FLUOROM (MG/M2)	BIOMASS CHLORO- PHYLL RATIO PERI- PHYTON (UNITS)
OCT , 1979										
23...	0	--	6.1	.8	--	2.4	3.1	20	7.6	31.0
NOV										
19...	0	--	11	.4	490	--	--	--	--	--
DEC										
05...	0	10	--	--	--	--	--	--	--	--
JAN , 1980										
08...	--	9.5	--	--	--	--	--	--	--	--
FEB										
04...	0	--	7.9	.5	--	--	--	--	--	--
MAR										
10...	1	5.9	--	--	150	--	--	--	--	--
APR										
15...	--	15	--	--	--	--	--	--	--	--
MAY										
13...	0	--	11	2.4	79000	6.4	7.5	4.0	.11	274
JUN										
23...	3	14	--	--	42000	16	20	43	11	88.4
JUL										
22...	--	14	--	--	78000	--	--	--	--	--
AUG										
19...	0	--	14	1.2	13000	--	--	--	--	--
SEP										
23...	1	21	--	--	7100	--	--	--	--	--

STREAMS TRIBUTARY TO LAKE MICHIGAN
04087000 MILWAUKEE RIVER AT MILWAUKEE, WI--CONTINUED

WATER-QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, RESIDUE AT 105 DEG. C, SUS- PENDED (MG/L)	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHORUS, ORTHOPH OSPHATE DISSOL. (MG/L AS P)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU)	LEAD, TOTAL RECOV- ERABLE (UG/L AS PB)	NICKEL, TOTAL RECOV- ERABLE (UG/L AS NI)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN)
MAY , 1980											
06...	1130	423	39	<.2	22	.160	.028	10	22	<20	<20
18...	1415	404	38	<.2	41	.200	.010	10	45	<20	20
19...	1220	450	38	<.2	16	.140	.007	12	26	<20	<20
29...	1315	259	48	4.9	14	.200	.057	5	22	<20	<20
30...	1510	331	53	5.7	18	.320	.098	4	6	<20	<20
31...	1240	286	48	5.7	13	.190	.085	8	25	<20	<20
JUN											
03...	1350	249	43	5.7	15	.180	.073	8	21	<20	<20
05...	1615	683	34	3.5	72	.210	.010	14	84	20	60
06...	1035	667	40	4.4	40	.190	.062	7	27	--	20
07...	1450	628	30	6.2	64	.240	.077	7	28	--	30
08...	1125	1190	30	9.3	26	.220	.105	4	14	--	20
09...	1530	975	26	11	24	.200	.103	--	25	--	<20
JUL											
05...	1340	275	--	3.2	26	.200	.048	--	23	--	--
06...	1340	142	46	2.2	24	.240	.060	--	15	--	--
26...	1645	644	24	6.6	28	.180	.039	--	16	--	--
27...	1645	337	38	11	29	.220	.040	--	15	--	--
28...	1630	291	36	11	28	.200	.020	--	8	--	--
AUG											
05...	1900	525	44	9.3	48	.280	.097	--	13	--	--
06...	1545	325	51	9.1	33	.340	.152	--	3	--	--
07...	1800	707	34	7.8	57	.240	.066	--	15	--	--
08...	1210	1300	44	11	45	.360	.197	--	4	--	--
08...	1810	1240	43	9.6	57	.470	.140	--	9	--	--
10...	1045	1190	45	13	29	.310	.177	--	5	--	--
11...	1640	1420	36	13	41	.440	.158	--	8	--	--
12...	1815	876	38	14	18	.370	.188	--	3	--	--
27...	1600	264	41	11	18	.200	.017	--	7	--	--
SEP											
09...	1730	319	35	8.0	27	.210	.074	--	8	--	--
12...	1445	832	24	4.0	88	.260	.052	--	31	--	--
13...	1700	391	40	8.0	24	.230	.094	--	5	--	--
14...	1330	483	38	10	28	.180	.081	--	4	--	--
16...	1845	1010	35	12	32	.240	.119	--	7	--	--
21...	1830	947	36	14	29	.250	.131	--	<3	--	--
22...	1635	1790	36	12	52	.320	.127	--	12	--	--
23...	1505	3140	17	9.0	234	.620	.125	--	17	--	--
24...	1540	2610	16	11	78	.340	.131	--	8	--	--
25...	1105	2250	17	12	55	.280	.126	--	7	--	--
26...	1530	1700	19	14	49	.180	.110	--	4	--	--

QUALITATIVE AND ASSOCIATED QUANTITATIVE BIOLOGICAL DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

PHYTOPLANKTON

Date	Time	Organism	Count (cells/ml)	Percent of total	Diversity index	Sampling method
Nov. 11, 1979						
		CHLOROPHYTA				Grab sample
		Chlorophyceae				
		Chlamydomonas	39	8		
		Pediastrum	39	8		
		Scenedesmus	26	5		
		CHRYSOPHYTA				
		Bacillariophyceae				
		Cyclotella	52	11		
		Gomphonema	13	3		
		Navicula	64	13		
		Nitzschia	220	45		
		Synedra	13	3		
		CYANOPHYTA				
		Cyanophyceae				
		Anaerostis	26	5		
		TOTAL	490		2.5	
Mar. 10, 1980						
		CHLOROPHYTA				Grab sample
		Chlorophyceae				
		Chlamydomonas	25	17		
		CHRYSOPHYTA				
		Bacillariophyceae				
		Cyclotella	15	10		
		Gomphonema	15	10		
		Navicula	20	14		
		Opephora	10	7		
		Synedra	10	7		
		CYANOPHYTA				
		Cyanophyceae				
		Oscillatoria	50	34		
		TOTAL	150		2.6	

STREAMS TRIBUTARY TO LAKE MICHIGAN
04087000 MILWAUKEE RIVER AT MILWAUKEE, WI--CONTINUED

QUALITATIVE AND ASSOCIATED QUANTITATIVE BIOLOGICAL DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

PHYTOPLANKTON						
Date	Time	Organism	Count (cells/ml)	Percent of total	Diversity index	Sampling method
May 13, 1980	0930	CHLOROPHYTA				Grab sample
		Chlorophyceae				
		<i>Ankistrodesmus</i>	1,200	2		
		<i>Chlamydomonas</i>	3,700	5		
		<i>Crucigenia</i>	2,500	3		
		<i>Kirchneriella</i>	5,000	6		
		<i>Microactinium</i>	620	1		
		<i>Scenedesmus</i>	3,700	5		
		CHRYSOPHYTA				
		Bacillariophyceae				
		<i>Cyclotella</i>	49,000	62		
		<i>Nitzschia</i>	8,100	10		
		<i>Synedra</i>	1,900	2		
		Chrysophyceae				
		<i>Chrysococcus</i>	1,900	2		
		CRYPTOPHYTA				
		Cryptophyceae				
		<i>Chroomonas</i>	1,200	2		
		TOTAL	79,000		2.1	
June 23, 1980	0930	CHLOROPHYTA				Grab sample
		Chlorophyceae				
		<i>Actinastrum</i>	950	2		
		<i>Ankistrodesmus</i>	710	2		
		<i>Chlamydomonas</i>	2,800	7		
		<i>Chodatella</i>	240	1		
		<i>Dictyosphaerium</i>	1,900	5		
		<i>Golenkinia</i>	240	1		
		<i>Kirchneriella</i>	950	2		
		<i>Oocystis</i>	470	1		
		<i>Scenedesmus</i>	2,400	6		
		<i>Treubaria</i>	240	1		
		CHRYSOPHYTA				
		Bacillariophyceae				
		<i>Cyclotella</i>	17,000	40		
		<i>Nitzschia</i>	240	1		
		CRYPTOPHYTA				
		Cryptophyceae				
		<i>Chroomonas</i>	240	1		
		<i>Cryptomonas</i>	710	2		
		CYANOPHYTA				
		Cyanophyceae				
		<i>Anacystis</i>	12,000	29		
		EUGLENOPHYTA				
		Euglenophyceae				
		<i>Euglena</i>	240	1		
		<i>Trachelomonas</i>	470	1		
		TOTAL	42,000		2.6	
July 22, 1980	1500	CHLOROPHYTA				Grab sample
		Chlorophyceae				
		<i>Actinastrum</i>	15,000	19		
		<i>Ankistrodesmus</i>	1,700	2		
		<i>Chlamydomonas</i>		0		
		<i>Chlorella</i>	560	1		
		<i>Chlorococcum</i>		0		
		<i>Chodatella</i>		0		
		<i>Closteriopsis</i>		0		
		<i>Coelastrum</i>	10,000	13		
		<i>Pediastrum</i>	8,400	11		
		<i>Scenedesmus</i>	17,000	22		
		<i>Tetradron</i>	560	1		
		<i>Tetrastrum</i>	1,100	1		
		CHRYSOPHYTA				
		Bacillariophyceae				
		<i>Cyclotella</i>	16,000	21		
		<i>Melosira</i>	1,400	2		
		<i>Navicula</i>		0		
		<i>Nitzschia</i>	2,500	3		
		CRYPTOPHYTA				
		Cryptophyceae				
		<i>Cryptomonas</i>		0		
		CYANOPHYTA				
		Cyanophyceae				
		<i>Anacystis</i>	2,000	3		
		EUGLENOPHYTA				
		Euglenophyceae				
		<i>Euglena</i>	560	1		
		TOTAL	78,000		3.1	

STREAMS TRIBUTARY TO LAKE MICHIGAN
04087000 MILWAUKEE RIVER AT MILWAUKEE, WI--CONTINUED

QUALITATIVE AND ASSOCIATED QUANTITATIVE BIOLOGICAL DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

PHYTOPLANKTON

Date	Time	Organism	Count (cells/ml)	Percent of total	Diversity index	Sampling method
Aug. 8, 1980	0915	CHLOROPHYTA				Grab sample
		Chlorophyceae				
		Ankistrodesmus	70	1		
		Chlamydomonas	1,300	10		
		Coelastrum	420	3		
		Microactinium	280	2		
		Oocystis	140	1		
		Scenedesmus	3,800	29		
		Schroederia	70	1		
		Selenastrum	420	3		
		CHRYSOPHYTA				
		Bacillariophyceae				
		Cyclotella	4,300	33		
		Fragilaria	560	4		
		Navicula	70	1		
		Nitzschia	490	4		
		CRYPTOPHYTA				
		Cryptophyceae				
		Chroomonas	70	1		
		Cryptomonas	140	1		
		CYANOPHYTA				
		Cyanophyceae				
		Anacystis	990	8		
		TOTAL	13,000		2.8	
Sept. 23, 1980	0915	CHLOROPHYTA				Grab sample
		Chlorophyceae				
		Ankistrodesmus	130	2		
		Chodatella	44	1		
		Dictyosphaerium	44	1		
		CHRYSOPHYTA				
		Bacillariophyceae				
		Achnanthes	44	1		
		Amphora	44	1		
		Cocconeis	87	1		
		Cyclotella	3,000	42		
		Fragilaria	440	6		
		Gomphonema	87	1		
		Melosira	390	6		
		Navicula	440	6		
		Nitzschia	740	10		
		Rhoicosphenia	610	9		
		Synedra	87	1		
		CYANOPHYTA				
		Cyanophyceae				
		Oscillatoria	830	12		
		EUGLENOPHYTA				
		Euglenophyceae				
		Trachelomonas	87	1		
		TOTAL	7,100		2.9	

WATER-QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	TEMPER- ATURE, WATER (DEG C)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	SEDI- MENT, SUS- PENDED (MG/L)	SEDI- MENT DIS- CHARGE, SUS- PENDED (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
OCT , 1979							
22...	1335	240	16.5	725	--	--	--
23...	1700	230	16.5	740	20	25	100
NOV							
19...	0930	245	7.0	720	21	14	88
DEC							
05...	1030	403	.5	750	12	13	100
JAN , 1980							
08...	1045	160	.0	825	10	4.3	64
31...	1445	143	.0	595	--	--	--
FEB							
04...	1000	100	.0	1000	8	2.2	53
15...	1430	157	.0	790	--	--	--
MAR							
10...	1000	190	.0	950	1	.51	100
APR							
15...	1030	1230	4.5	650	14	46	75
MAY							
05...	1025	431	15.0	740	--	--	--
13...	0930	320	15.0	700	70	60	80
JUN							
23...	0930	224	16.0	570	71	43	86
JUL							
22...	1147	367	25.5	635	--	--	--
22...	1500	372	27.0	705	30	30	96
AUG							
19...	0915	1080	22.0	600	--	--	--
SEP							
04...	1347	259	23.0	620	--	--	--
23...	0915	3030	15.5	380	282	2310	93

STREAMS TRIBUTARY TO LAKE MICHIGAN

04087030 MEMOMONEE RIVER AT MEMOMONEE FALLS, WI

LOCATION.--Lat 43°10'22", long 88°06'14", in SE 1/4 NE 1/4 sec.10, T.8 N., R.20 E., Waukesha County, Hydrologic Unit 04040003, on right bank, 150 ft (46 m) upstream from Pilgrim Road (County Trunk Highway YY) bridge in Menomonee Falls, at mile 21.1 (33.9 km).

DRAINAGE AREA.--34.7 mi² (89.9 km²).

PERIOD OF RECORD.--November 1974 to September 1977, July 1979 to current year.

REVISED RECORDS.--WDR WI-77-1: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 753.50 ft (229.67 m) National Geodetic Vertical Datum of 1929 (University of Wisconsin bench mark).

REMARKS.--Records good except those for ice periods, which are poor. Occasional regulation caused by dam in Menomonee Falls, about 1.0 mi (1.6 km) upstream.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 527 ft³/s (14.9 m³/s) Mar. 22, 1975, gage height, 5.59 ft (1.704 m); maximum gage height, 5.99 ft (1.826 m) Feb. 16, 1976, backwater from ice; minimum discharge, 1.2 ft³/s (0.034 m³/s) Sept. 13, Oct. 2, 1976, gage height, 2.54 ft (0.774 m).

EXTREMES FOR CURRENT PERIOD.--July to September 1979: Maximum recorded discharge, 207 ft³/s (5.86 m³/s) Aug. 9, gage height, 4.40 ft (1.341 m); minimum, 2.9 ft³/s (0.082 m³/s) Sept. 19, 20, 22, gage height, 2.67 ft (0.814 m).

Water year 1980: Maximum discharge, 412 ft³/s (11.7 m³/s) Aug. 4, gage height, 5.25 ft (1.600 m); minimum, 3.4 ft³/s (0.096 m³/s) Oct. 4, 5, June 13, but may have been less during period of no gage-height record, Oct. 8-23.

RATING TABLE (gage height, in feet, and discharge, in cubic feet per second).
(Stage-discharge relation affected by ice Nov. 30 to Dec. 22 and Jan. 1 to Mar. 17.)

July 10 to Mar. 17				Mar. 18 to Sept. 30			
2.6	1.9	3.2	26	2.7	2.7	3.3	30
2.7	3.5	3.5	55	2.8	4.6	3.6	60
2.8	5.8	4.0	131	2.9	7.5	4.0	111
3.0	13			3.1	16	4.5	204

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DAY	MEAN VALUES											
	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1										---	5.0	6.4
2										---	3.9	5.4
3										---	6.0	4.7
4										---	5.4	4.6
5										---	8.1	4.8
6										---	5.5	4.8
7										---	5.2	4.1
8										---	5.3	3.8
9										---	16	3.7
10										5.9	22	3.6
11										5.2	11	3.8
12										4.9	7.8	3.9
13										5.1	8.6	3.7
14										5.0	6.0	3.7
15										4.5	5.0	3.7
16										3.9	4.7	3.6
17										4.3	8.0	3.4
18										4.3	6.6	3.4
19										3.6	6.0	3.3
20										3.5	50	3.0
21										3.6	14	3.2
22										7.0	41	3.5
23										4.7	30	3.6
24										9.5	16	3.0
25										6.7	10	3.3
26										5.3	7.6	3.7
27										5.3	17	3.7
28										4.4	11	3.5
29										4.3	15	3.4
30										9.8	9.0	3.4
31										7.0	7.6	---
TOTAL										---	374.3	115.7
MEAN										---	12.1	3.86
MAX										---	50	6.4
MIN										---	3.9	3.0
CFSM										---	.35	.11
IN.										---	.40	.12

NOTE.--No gage-height record Aug. 13 to Sept. 9, 1979.

STREAMS TRIBUTARY TO LAKE MICHIGAN
04087030 MENOMONEE RIVER AT MENOMONEE FALLS, WI--CONTINUED

DAY	DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980											
	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.6	8.3	8.2	14	6.4	8.2	15	23	8.9	6.2	4.6	9.1
2	4.1	6.8	8.0	12	5.6	7.0	16	20	9.2	6.1	7.1	8.7
3	3.9	6.7	7.6	11	5.6	7.6	20	18	9.8	6.0	4.9	7.9
4	3.4	6.2	8.2	10	6.0	9.0	54	16	8.1	6.0	52	7.3
5	3.4	6.2	8.6	10	6.4	9.0	50	15	34	21	55	6.8
6	3.6	9.6	8.6	9.2	6.6	9.0	40	14	77	8.4	30	6.5
7	4.1	7.7	9.2	5.4	7.0	9.0	44	13	92	6.7	85	12
8	4.7	7.1	7.6	8.0	7.6	14	81	12	87	6.2	139	9.2
9	5.0	6.8	7.2	6.4	7.4	13	95	12	55	7.2	122	31
10	3.8	6.9	7.2	8.0	6.6	12	85	12	30	5.9	84	23
11	4.2	6.3	8.0	32	6.2	17	66	11	23	5.4	58	15
12	4.0	6.4	8.6	13	6.6	15	62	11	18	7.3	49	27
13	3.9	6.7	7.4	11	6.2	12	51	15	13	4.9	38	32
14	3.6	6.5	7.0	12	6.6	23	47	15	12	4.5	27	25
15	3.9	6.5	7.2	12	7.2	40	54	15	10	5.6	21	19
16	4.5	6.7	6.2	74	6.0	60	67	13	9.3	18	18	28
17	3.8	6.9	5.0	64	4.8	30	54	16	8.4	6.7	20	40
18	3.9	6.8	6.4	34	5.8	87	46	22	7.7	4.9	19	32
19	16	6.7	7.6	20	6.2	17	39	28	6.0	4.2	23	24
20	17	6.6	8.4	14	11	18	34	21	6.8	5.2	22	53
21	4.5	21	7.6	13	39	17	31	16	6.3	4.6	21	55
22	17	21	10	13	84	14	28	13	5.7	4.4	19	107
23	8.8	16	16	7.2	52	13	25	11	5.7	4.3	13	121
24	7.5	13	56	11	41	14	22	9.8	5.5	4.0	11	99
25	6.7	12	79	11	28	12	21	8.6	5.6	4.0	9.6	74
26	6.2	25	49	8.2	20	11	19	7.4	5.5	20	9.4	58
27	5.9	22	33	6.8	14	12	18	6.7	5.4	7.3	9.4	46
28	5.7	17	25	6.2	12	13	18	6.6	12	5.3	12	37
29	5.7	14	21	6.2	8.6	13	24	8.0	6.7	5.2	9.5	31
30	5.3	10	18	6.2	---	14	24	12	6.2	5.1	9.2	28
31	6.8	---	16	6.8	---	17	---	9.1	---	4.7	8.8	---
TOTAL	184.5	309.4	482.8	475.6	430.4	566.8	1250	430.2	589.8	215.3	1010.5	1072.5
MEAN	5.95	10.3	15.6	15.3	14.8	18.3	41.7	13.9	19.7	6.95	32.6	35.8
MAX	17	25	79	74	84	87	95	28	92	21	139	121
MIN	3.4	6.2	5.0	5.4	4.8	7.0	15	6.6	5.4	4.0	4.6	6.5
CFSM	.17	.30	.45	.44	.43	.53	1.20	.40	.57	.20	.94	1.03
IN.	.20	.33	.52	.51	.46	.61	1.34	.46	.63	.23	1.08	1.15
WTR YR 1980	TOTAL	7017.8	MEAN	19.2	MAX	139	MIN	3.4	CFSM	.55	IN	7.52

STREAMS TRIBUTARY TO LAKE MICHIGAN

04087120 MENOMONEE RIVER AT WAUWATOSA, WI

LOCATION.--Lat 43°02'44", long 87°59'59", in NE 1/4 NW 1/4 sec.27, T.7 N., R.21 E., Milwaukee County, Hydrologic Unit 04040003, on left bank near upstream side of 70th Street bridge in Wauwatosa, 800 ft (244 m) downstream from Honey Creek, and at mile 6.2 (10.0 km).

DRAINAGE AREA.--123 mi² (319 km²).

PERIOD OF RECORD.--October 1961 to current year.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 630.86 ft (192.286 m) National Geodetic Vertical Datum of 1929. Prior to Nov. 1, 1974, nonrecording gage at present site and datum.

REMARKS.--Records good except for winter periods, which are fair. Low flow affected by three sewage treatment plants upstream.

AVERAGE DISCHARGE.--19 years, 89.0 ft³/s (2,520 m³/s) 9.83 in/yr (250 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 13,500 ft³/s (382 m³/s) Apr. 21, 1973, gage height, 13.92 ft (4.24 m) from rating curve extended above 6,000 ft³/s (170 m³/s) on basis of slope-area measurement of peak flow; minimum daily, 2.8 ft³/s (0.079 m³/s) Jan. 18, 1964.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 1,000 ft³/s (28.32 m³/s) and maximum (*):

DATE	TIME	DISCHARGE (ft ³ /s) (m ³ /s)	GAGE HEIGHT (ft) (m)	DATE	TIME	DISCHARGE (ft ³ /s) (m ³ /s)	GAGE HEIGHT (ft) (m)
Dec. 24	1835	1,440 40.78	4.63 1.411	Aug. 8	0735	1,510 42.76	4.75 1.448
Feb. 21	2240	1,180 33.42	4.20 1.280	Aug. 19	0850	2,530 71.65	6.17 1.881
June 5	1310	1,650 46.73	4.96 1.512	Sept. 9	0520	*3,150 89.21	*6.92 2.109
June 6	0205	2,140 60.60	5.65 1.722	Sept. 12	1140	1,560 44.18	4.83 1.472
June 7	0940	2,710 76.75	6.40 1.951	Sept. 22	0645	1,170 33.13	4.18 1.274
Aug. 4	2210	2,890 81.84	6.63 2.021				

minimum discharge, 11 ft³/s (0.312 m³/s) Dec. 14, gage height, 0.89 ft (0.271 m).

RATING TABLES (gage height, in feet, and discharge, in cubic feet per second).
(Stage-discharge relation affected by ice Dec. 17, 18, Jan. 7-13, Jan. 23 to Feb. 19, Feb. 29 to Mar. 5.)

Oct. 1 to Dec. 23

Dec. 24 to Sept. 30

1.0	14	1.8	100	0.9	14	2.4	260
1.1	18	2.1	133	1.2	30	3.0	500
1.5	55	2.5	280	1.5	59	4.0	1,060
				1.9	125		

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	23	30	24	37	21	26	43	61	65	21	22	54
2	22	19	23	36	18	23	42	55	63	20	109	32
3	15	17	22	34	18	25	73	50	88	19	32	30
4	19	16	24	32	19	29	139	45	31	18	300	26
5	14	16	25	30	21	29	124	44	327	174	1000	28
6	14	48	25	29	22	28	95	43	627	34	234	24
7	14	24	27	16	23	27	145	41	607	25	598	93
8	14	19	22	25	24	38	340	40	279	22	821	33
9	15	19	21	20	23	35	380	40	163	70	505	465
10	15	21	21	26	21	39	268	41	107	27	282	89
11	17	17	24	110	20	42	200	38	73	23	350	53
12	16	17	24	40	21	37	215	37	58	27	261	387
13	14	21	21	36	20	37	144	86	48	20	159	203
14	14	19	19	33	21	39	182	52	83	19	116	98
15	14	18	20	32	23	65	286	56	40	41	88	67
16	15	18	18	248	19	130	243	41	34	160	92	212
17	15	17	14	215	16	175	167	94	32	34	122	248
18	16	17	19	106	18	71	132	105	30	25	72	110
19	84	17	23	61	21	67	111	96	51	21	341	75
20	93	17	24	46	51	65	95	58	29	19	105	378
21	23	231	22	47	187	60	83	47	27	20	119	181
22	79	125	45	39	370	48	77	40	25	20	66	581
23	54	50	63	24	188	53	69	36	25	19	49	355
24	25	36	566	35	144	51	62	32	25	18	40	231
25	19	36	361	36	94	43	57	29	24	21	37	187
26	17	188	148	26	64	38	55	26	25	380	36	132
27	16	67	92	22	52	37	54	26	24	66	34	103
28	16	48	66	20	36	37	68	106	92	28	42	83
29	16	39	54	20	28	38	117	36	36	38	34	70
30	16	30	47	20	---	38	71	52	28	43	32	62
31	21	---	41	22	---	39	---	37	---	26	42	---
TOTAL	765	1257	1945	1523	1603	1500	4137	1590	3166	1498	6140	4690
MEAN	24.7	41.9	62.7	49.1	55.3	48.4	138	51.3	106	48.3	198	156
MAX	93	231	566	248	370	175	380	106	627	380	1000	581
MIN	14	16	14	16	16	23	42	26	24	18	22	24
CFSM	.20	.34	.51	.40	.45	.39	1.12	.42	.86	.39	1.61	1.27
IN.	.23	.38	.59	.46	.48	.45	1.25	.48	.96	.45	1.86	1.42
CAL YR 1979	TOTAL	42144	MEAN	115	MAX	1810	MIN	13	CFSM	.94	IN	12.75
WTR YR 1980	TOTAL	29814	MEAN	81.5	MAX	1000	MIN	14	CFSM	.66	IN	9.02

STREAMS TRIBUTARY TO LAKE MICHIGAN

04087160 KINNICKINNIC RIVER AT MILWAUKEE, WI

LOCATION.--Lat 42°59'88", long 87°55'13", in SE 1/4 NW 1/4 sec.8, T.6 N., R.22 E., Milwaukee County, Hydrologic Unit 04040003, on left bank 50 ft (15 m) upstream from bridge on 7th Street, 0.3 mi (0.5 km) west of intersection of Chicago and Northwestern Railroad and Interstate Highway 94.

DRAINAGE AREA.--20.4 mi² (52.8 km²).

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

GAGE.--Water-stage recorder. Altitude of gage is 600 ft (183 m), from topographic map.

REMARKS.--Records fair.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 4,790 ft³/s (136 m³/s) July 18, 1977, gage height, 17.76 ft (5.413 m); minimum, 3.2 ft³/s (0.09 m³/s) Feb. 5, 1978, gage height, 9.76 ft (2.975 m), result of freezeup.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 3,580 ft³/s (101 m³/s) June 5, gage height, 16.78 ft (5.115 m); minimum, 3.8 ft³/s (0.11 m³/s) Jan. 7, gage height, 9.79 ft (2.984 m).

RATING TABLE (gage height, in feet, and discharge, in cubic feet per second).
(Stage-discharge relation affected by ice Dec. 17-20, Jan. 7, 8, 27-30, and Feb. 11, 17, 18.)

9.8	4.0	11.5	130
10.0	10	12.0	235
10.5	35	13.0	605
11.0	72		

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980												
DAY	MEAN VALUES											
	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	24	17	8.2	9.0	8.6	10	15	12	40	8.8	14	30
2	11	7.4	6.5	10	8.5	9.8	18	11	49	8.8	61	12
3	11	5.9	7.7	10	7.8	11	43	9.7	58	8.1	15	12
4	11	4.9	8.2	10	11	11	54	9.1	11	7.7	278	11
5	11	6.2	8.9	9.7	7.7	13	21	9.9	459	59	96	13
6	10	21	8.5	8.8	8.5	10	28	11	285	6.6	24	8.6
7	9.0	8.1	10	7.2	8.8	9.2	57	9.8	411	12	237	34
8	11	7.5	7.9	7.8	8.7	18	113	9.7	29	13	130	7.5
9	12	8.0	6.2	11	8.3	13	81	9.7	19	41	30	127
10	13	9.4	7.7	14	8.2	25	28	10	16	12	24	7.1
11	15	5.9	12	7.6	8.2	14	26	7.6	15	11	140	6.7
12	13	6.7	11	34	8.1	9.7	32	7.8	15	14	23	96
13	11	8.8	10	13	8.2	11	14	29	13	8.2	23	17
14	9.2	6.6	9.5	15	8.6	22	58	11	16	10	15	7.7
15	11	6.8	8.5	12	9.9	48	83	20	11	9.1	14	5.5
16	12	6.1	10	8.6	6.5	70	30	15	9.9	113	25	75
17	12	4.8	9.0	30	7.0	36	20	49	9.3	16	45	29
18	12	4.8	8.6	13	7.4	16	16	39	11	12	17	7.1
19	38	7.5	9.0	9.6	7.9	18	13	21	22	11	140	5.9
20	45	7.2	9.6	9.3	18	17	11	10	13	9.1	20	83
21	11	150	11	8.5	60	17	12	8.5	12	11	21	8.3
22	84	38	25	8.8	135	16	13	9.1	14	8.5	13	42
23	15	9.8	23	11	45	21	12	8.6	14	7.9	9.8	9.0
24	10	7.5	47.6	8.3	25	16	12	7.6	13	7.8	8.0	11
25	9.8	15	69	8.5	14	15	11	7.5	18	14	8.8	18
26	8.3	82	17	8.4	11	15	10	6.6	19	175	9.8	9.3
27	6.6	13	12	7.2	10	14	12	7.5	13	18	8.8	8.2
28	7.3	11	10	7.0	11	15	18	41	52	13	8.8	8.2
29	9.5	9.7	9.7	7.0	11	14	45	20	9.8	33	11	9.5
30	9.2	8.9	9.2	7.2	---	13	15	26	8.3	32	9.3	10
31	26	---	8.7	7.9	---	14	---	15	---	17	16	---
TOTAL	497.9	505.5	847.6	485.2	497.9	561.7	921	468.7	1685.3	809.5	1495.3	728.6
MEAN	16.1	16.9	27.3	15.7	17.2	18.1	30.7	15.1	56.2	26.1	48.2	24.3
MAX	84	150	47.6	86	135	70	113	49	459	175	278	127
MIN	6.6	4.8	6.2	7.0	6.5	9.2	10	6.6	8.3	6.6	8.0	5.5
CFSM	.79	.83	1.34	.77	.84	.89	1.51	.74	2.76	1.28	2.36	1.19
IN.	.91	.92	1.55	.88	.91	1.02	1.68	.85	3.07	1.48	2.73	1.33
CAL YR 1979	TOTAL	9499.5	MEAN	26.0	MAX	543	MIN	4.8	CFSM	1.28	IN	17.32
WTR YR 1980	TOTAL	9504.2	MEAN	26.0	MAX	476	MIN	4.8	CFSM	1.28	IN	17.33

STREAMS TRIBUTARY TO LAKE MICHIGAN

04087204 OAK CREEK AT SOUTH MILWAUKEE, WI

LOCATION.--Lat 42°55'30", long 87°52'12", in NW 1/4 sec.2, T.5 N., R.22 E., Milwaukee County, Hydrologic Unit 04040002, on left bank 25 ft (8.0 m) downstream from 15th Avenue bridge in South Milwaukee and 2.8 mi (4.5 km) upstream from mouth.

DRAINAGE AREA.--25.0 mi² (64.8 km²).

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

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 631.40 ft (192.451 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Records good except those for winter period, which are fair. Low flows may occasionally be affected by construction and activity at gravel pit upstream.

AVERAGE DISCHARGE.--17 years, 21.4 ft³/s (0.606 m³/s) 11.62 in/yr (295 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,020 ft³/s (28.9 m³/s) Sept. 13, 1978, gage height, 8.19 ft (2.496 m); maximum gage height, 8.23 ft (2.508 m) Sept. 18, 1972; no flow Jan. 8-13, 15-18, 27-31, Feb. 6-8, 1977.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 250 ft³/s (7.08 m³/s) and maximum (*):

DATE	TIME	DISCHARGE (ft ³ /s) (m ³ /s)	GAGE HEIGHT (ft) (m)	DATE	TIME	DISCHARGE (ft ³ /s) (m ³ /s)	GAGE HEIGHT (ft) (m)
Dec. 25	0100	269	7.62	5.48	1.670	June 7	0915
June 6	0130	416	11.8	6.29	1.917	*541	15.3
						*6.77	2.063

minimum daily, 0.84 ft³/s (0.024 m³/s) Oct. 10.

REVISIONS.--Average discharge for the water year 1979 has been revised to 16 years, 21.6 ft³/s (0.612 m³/s), superseding figure published in WDR WI-79-1.

RATING TABLE (gage height, in feet, and discharge, in cubic feet per second).
(Shifting-control method used June 10-21; stage-discharge relation affected by ice Dec. 16-18, Jan. 2-9, Jan. 21 to Feb. 19, and Feb. 29 to Mar. 8.)

2.20	0.75	3.0	32
2.25	1.0	4.0	106
2.30	1.6	5.0	206
2.40	7.1	6.0	358

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DAY	OCT	NOV	DEC	JAN	FEB	MEAN VALUES MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.1	7.1	4.8	12	3.0	7.0	16	18	12	11	6.7	11
2	4.6	7.7	4.2	10	2.8	6.6	16	17	14	9.5	19	11
3	5.0	6.6	2.8	9.2	2.6	6.2	25	15	20	8.2	16	6.8
4	2.4	5.0	3.1	8.8	2.4	6.0	65	14	14	7.4	13	4.9
5	1.5	3.8	5.8	8.4	2.3	5.8	37	13	134	7.8	45	3.5
6	1.2	7.0	6.4	8.0	2.1	5.6	25	12	327	6.9	18	2.6
7	1.0	6.4	6.7	4.6	2.0	5.2	47	11	349	6.7	50	10
8	1.0	6.9	5.2	4.4	1.9	5.2	110	11	150	5.5	77	11
9	.87	6.3	4.6	4.3	1.8	8.7	104	10	52	16	34	25
10	.84	5.9	4.6	9.1	1.7	14	86	10	32	14	17	18
11	.89	5.0	4.8	35	1.6	18	42	10	25	8.5	32	9.2
12	.88	5.0	4.8	23	1.6	15	57	11	22	7.0	41	23
13	.95	5.2	4.1	17	1.6	12	34	12	20	5.9	18	34
14	.96	4.8	3.6	12	1.6	12	43	12	19	4.7	17	16
15	.98	4.7	2.6	12	1.6	25	142	13	18	13	14	11
16	.96	3.7	2.1	32	1.5	71	114	12	17	51	12	20
17	1.0	3.2	1.9	58	1.6	93	46	18	16	19	16	57
18	.89	2.9	1.7	23	2.4	30	31	26	15	10	14	21
19	5.1	2.3	1.4	17	3.0	28	25	19	15	7.3	37	14
20	15	1.6	1.5	15	7.1	25	22	16	15	5.8	32	28
21	14	30	1.8	13	17	22	20	13	14	5.2	17	24
22	12	27	4.5	11	107	18	18	11	13	5.1	13	16
23	16	17	9.3	10	68	17	17	9.8	13	3.9	10	15
24	10	11	96	8.6	39	18	16	9.0	13	2.9	8.5	12
25	6.6	10	177	7.4	25	16	15	8.2	12	3.4	7.7	11
26	5.5	34	42	6.4	22	14	14	7.3	12	24	7.8	11
27	4.6	20	23	5.6	15	14	14	6.9	12	28	6.6	9.9
28	3.9	12	18	4.8	12	14	16	11	18	12	6.1	8.7
29	3.4	9.3	17	4.2	8.0	15	26	11	15	8.5	5.8	8.3
30	2.3	7.0	15	3.6	---	15	22	8.7	12	8.5	5.3	8.0
31	4.6	---	13	3.3	---	16	---	7.3	---	8.7	5.7	---
TOTAL	132.02	278.4	493.3	400.7	359.2	578.3	1265	383.2	1420	335.4	622.2	460.9
MEAN	4.26	9.28	15.9	12.9	12.4	18.7	42.2	12.4	47.3	10.8	20.1	15.4
MAX	16	34	177	58	107	93	142	26	349	51	77	57
MIN	.84	1.6	1.4	3.3	1.5	5.2	14	6.9	12	2.9	5.3	2.6
CFSM	.17	.37	.64	.52	.50	.75	1.69	.50	1.89	.43	.80	.62
IN.	.20	.41	.73	.60	.53	.86	1.88	.57	2.11	.50	.93	.69
CAL YR 1979 TOTAL	9875.96			MEAN 27.1	MAX 590	MIN .84	CFSM 1.08	IN 14.69				
WTR YR 1980 TOTAL	6728.62			MEAN 18.4	MAX 349	MIN .84	CFSM 1.74	IN 10.01				

STREAMS TRIBUTARY TO LAKE MICHIGAN

04087220 ROOT RIVER NEAR FRANKLIN, WI

LOCATION.--Lat 42°52'25", long 87°59'45", in SE 1/4 sec.22, T.5 N., R.21 E., Milwaukee County, Hydrologic Unit 04040002, on right bank 400 ft (120 m) upstream from State Highway 100, 2.1 mi (3.4 km) upstream from Root River Canal, 2.4 mi (3.9 km) southeast of Franklin, 5.5 mi (8.8 km) southeast of Hales Corners, and about 24 mi (39 km) upstream from mouth.

DRAINAGE AREA.--49.3 mi² (127.7 km²).

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

GAGE.--Water-stage recorder. Datum of gage is 674.5 ft (205.6 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Records good except those for winter period, which are fair. Flow affected by urbanization in the drainage basin.

AVERAGE DISCHARGE.--17 years, 43.8 ft³/s (1.240 m³/s), 12.07 in/yr (306 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 3,700 ft³/s (105 m³/s) Apr. 21, 1973, gage height, 9.31 ft (2.838 m); minimum, 0.38 ft³/s (0.011 m³/s) Aug. 10, 1971, gage height, 1.45 ft (0.442 m).

EXTREMES OUTSIDE OF PERIOD OF RECORD.--Flood of Mar. 30, 1960, reached a stage of 9.57 ft (2.917 m), discharge, 5,130 ft³/s (145 m³/s), from rating curve extended above 2,000 ft³/s (56.6 m³/s) on basis of contracted-opening measurement of peak flow.

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

DATE	TIME	DISCHARGE (ft ³ /s) (m ³ /s)	GAGE HEIGHT (ft) (m)	DATE	TIME	DISCHARGE (ft ³ /s) (m ³ /s)	GAGE HEIGHT (ft) (m)
Dec. 25	1000	668 18.9	6.57 2.003	June 6	1800	*860 24.4	*6.98 2.128
Feb. 22	--	Unknown	Ice Jam	Aug. 20	0515	580 16.4	6.35 1.935
Mar. 16	--	Unknown	Ice Jam				

minimum discharge, 2.5 ft³/s (0.071 m³/s) Oct. 1, gage height, 1.79 ft (0.546 m).

RATING TABLE (gage height, in feet, and discharge, in cubic feet per second).
(Stage-discharge relation affected by ice Dec. 1-3, 8, 10, 14-21, Dec. 29 to Mar. 18.)

1.7	2.5	3.5	116
1.8	4.6	4.0	146
1.9	7.8	4.5	180
2.0	12	5.0	237
2.2	26	6.0	465
2.5	52	7.0	870
3.0	86		

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DAY	MEAN VALUES											
	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.3	13	11	16	6.8	9.8	19	27	15	7.4	7.1	19
2	8.5	10	8.6	14	6.0	9.2	19	22	20	6.7	22	16
3	5.7	7.1	8.4	13	6.0	8.6	27	20	58	5.7	22	10
4	4.6	5.7	8.1	12	6.4	8.0	58	17	19	5.1	8.9	8.9
5	4.1	5.7	8.1	11	7.0	7.6	48	16	146	11	112	7.8
6	3.7	6.7	8.1	10	7.4	7.2	34	14	777	9.7	22	7.1
7	3.5	11	7.8	10	7.8	7.0	69	13	607	5.7	100	13
8	3.7	8.1	7.6	9.6	8.2	6.8	146	13	381	5.1	210	16
9	4.4	6.7	6.7	7.0	8.6	11	163	12	97	12	87	149
10	3.7	6.7	7.2	8.4	8.4	16	156	13	52	12	28	107
11	3.7	7.1	6.7	44	8.2	26	79	13	39	6.7	54	25
12	5.1	6.0	7.8	20	8.6	16	99	12	31	5.4	117	64
13	3.9	6.0	6.7	15	8.2	12	62	16	24	5.1	37	164
14	3.7	6.7	6.6	13	8.0	15	58	21	19	4.9	34	49
15	4.1	7.8	6.2	15	7.6	37	168	17	19	12	21	31
16	6.7	6.4	5.8	45	7.4	74	200	16	17	69	16	33
17	5.1	6.0	5.0	120	6.8	100	90	14	14	27	33	171
18	5.7	6.4	4.8	36	7.2	80	64	56	13	8.9	22	58
19	13	6.0	5.0	23	7.4	66	50	44	12	6.7	168	35
20	28	6.0	5.4	18	13	50	41	25	13	5.7	361	103
21	18	52	5.8	18	30	42	35	18	9.3	5.4	80	85
22	13	52	6.0	16	120	30	30	14	8.1	7.1	39	68
23	30	27	19	11	110	28	26	13	7.8	6.0	25	82
24	12	14	118	12	68	33	23	11	8.1	5.4	18	37
25	8.5	11	539	9.4	37	22	22	9.7	7.4	4.1	16	30
26	6.7	57	114	8.0	23	19	20	8.9	7.1	27	14	28
27	6.7	40	49	7.6	15	19	19	7.8	6.7	60	13	21
28	6.7	19	35	6.8	13	19	22	16	17	10	11	18
29	6.4	13	26	6.8	12	19	49	39	11	11	11	17
30	6.7	12	23	6.8	---	19	37	14	7.1	11	9.7	25
31	6.0	---	20	7.4	---	19	---	12	---	12	9.7	---
TOTAL	244.9	442.1	1096.4	569.8	583.0	836.2	1933	564.4	2462.6	390.8	1728.4	1497.8
MEAN	7.90	14.7	35.4	18.4	20.1	27.0	64.4	18.2	82.1	12.6	55.8	49.9
MAX	30	57	539	120	100	100	200	56	777	69	361	171
MIN	3.3	5.7	4.8	6.8	6.0	6.8	19	7.8	6.7	4.1	7.1	7.1
CFSM	.16	.30	.72	.37	.41	.55	1.31	.37	1.67	.26	1.13	1.01
IN.	.18	.33	.83	.43	.44	.63	1.46	.43	1.86	.29	1.30	1.13
CAL YR 1979	TOTAL	21195.8	MEAN	58.1	MAX	1210	MIN	3.2	CFSM	1.18	IN	15.99
WTR YR 1980	TOTAL	12349.4	MEAN	33.7	MAX	777	MIN	3.3	CFSM	.68	IN	9.32

STREAMS TRIBUTARY TO LAKE MICHIGAN

04087233 ROOT RIVER CANAL NEAR FRANKLIN, WI

LOCATION.--Lat 42°48'55", long 87°59'40", in SE 1/4 sec.10, T.4 N., R.21 E., Racine County, Hydrologic Unit 04040002, on right bank 10 ft (3 m) downstream from highway bridge 3.5 mi (5.6 km) upstream from mouth, 5.5 mi (8.8 km) southeast of intersection U.S. 45 and State Highway 100 in Franklin, and 8.7 mi (14.0 km) southeast of Hales Corners.

DRAINAGE AREA.--57.0 mi² (147.6 km²), revised.

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

GAGE.--Water-stage recorder. Altitude of gage is 670 ft (204 m), from topographic map.

REMARKS.--Records good except for period of ice effect, which is fair.

AVERAGE DISCHARGE.--17 years, 44.8 ft³/s (1.269 m³/s), 10.67 in/yr (271 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,440 ft³/s (40.8 m³/s) Mar. 4, 1974, gage height, 9.88 ft (3.011 m); minimum daily, 0.40 ft³/s (0.011 m³/s) Dec. 19, 1963, result of freezeup.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 437 ft³/s (12.4 m³/s) Aug. 20, gage height, 7.71 ft (2.350 m), no peak above base of 500 ft³/s (14.2 m³/s); minimum daily discharge, 2.3 ft³/s (0.068 m³/s) Dec. 18.

RATING TABLE (gage height, in feet, and discharge, in cubic feet per second).
(Stage-discharge relation affected by ice Jan. 4 to Feb. 21 and Mar. 1-12.)

1.9	1.3	4.0	119
2.0	2.6	5.0	179
2.1	4.7	6.0	245
2.4	17	7.0	337
3.0	53	8.0	485

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980													
DAY	OCT	NOV	DEC	JAN	FEB	MEAN VALUES		APR	MAY	JUN	JUL	AUG	SEP
						MAR							
1	3.0	8.3	7.9	24	7.8	14		30	37	9.5	5.9	9.5	39
2	4.2	8.3	5.9	21	7.4	13		37	33	12	5.9	13	37
3	4.4	6.7	5.0	18	7.0	12		56	29	16	5.3	19	24
4	3.9	6.3	5.3	16	6.6	12		146	27	14	5.0	13	18
5	3.9	6.3	6.7	15	6.4	11		129	25	32	27	122	15
6	3.9	7.0	5.9	14	6.4	10		91	22	189	27	84	13
7	3.5	7.0	5.3	13	6.4	9.8		107	20	189	14	98	13
8	3.5	7.0	4.4	12	6.4	9.8		171	19	108	9.9	139	13
9	3.5	7.0	3.9	11	6.6	14		210	18	64	7.5	89	45
10	3.3	7.5	3.9	10	6.8	25		232	18	45	8.7	57	43
11	3.3	6.7	4.4	40	6.8	36		164	17	32	6.3	64	27
12	3.1	5.9	4.2	33	6.8	29		179	15	26	5.0	112	97
13	3.0	5.9	3.5	27	6.6	19		147	16	22	4.7	66	251
14	3.1	5.6	3.3	23	6.4	18		123	15	20	4.2	50	177
15	3.5	5.3	3.3	20	6.2	57		200	13	37	5.0	37	113
16	3.5	5.6	3.1	25	6.2	113		277	13	58	16	28	95
17	3.5	5.3	2.5	88	6.2	120		184	13	28	14	33	279
18	3.7	5.9	2.3	50	6.2	61		134	17	21	7.9	31	211
19	4.7	5.9	3.0	34	5.8	54		106	28	19	5.6	171	123
20	6.7	5.6	3.1	31	7.6	50		84	23	18	4.4	416	158
21	8.3	15	3.3	29	15	45		68	18	14	6.3	391	182
22	8.3	17	3.9	22	159	32		57	15	12	6.3	231	123
23	13	14	6.7	19	154	29		47	14	9.9	4.2	128	110
24	7.5	7.9	49	16	107	32		40	13	9.5	4.2	86	86
25	6.7	5.6	207	14	74	27		35	12	8.3	3.1	63	68
26	6.3	25	131	12	43	23		33	10	8.3	22	49	54
27	6.3	28	77	11	28	22		31	9.1	7.5	93	37	45
28	5.3	18	51	10	22	24		32	8.7	9.5	35	30	39
29	5.0	13	39	9.2	17	26		43	10	8.7	20	25	35
30	5.0	9.9	33	8.8	---	27		41	11	6.7	15	21	31
31	6.7	---	28	8.2	---	29		---	9.5	---	13	19	---
TOTAL	153.6	282.5	715.8	684.2	751.6	1003.6		3234	548.3	1053.9	411.4	2731.5	2564
MEAN	4.95	9.42	23.1	22.1	25.9	32.4		108	17.7	35.1	13.3	88.1	85.5
MAX	13	28	207	88	159	120		277	37	189	93	416	279
MIN	3.0	5.3	2.3	8.2	5.8	9.8		30	8.7	6.7	3.1	9.5	13
CFSM	.09	.17	.41	.39	.45	.57		1.90	.31	.62	.23	1.55	1.50
IN.	.10	.18	.47	.45	.49	.65		2.11	.36	.69	.27	1.78	1.67
CAL YR 1979	TOTAL	22533.6	MEAN	61.7	MAX	1020	MIN	2.3	CFSM	1.08	IN	14.71	
WTR YR 1980	TOTAL	14134.4	MEAN	38.6	MAX	416	MIN	2.3	CFSM	.68	IN	9.22	

STREAMS TRIBUTARY TO LAKE MICHIGAN

04087240 ROOT RIVER AT RACINE, WI

LOCATION.--Lat 42°45'05", long 87°49'25", in NE 1/4 sec.6, T.3 N., R.23 E., Racine County, Hydrologic Unit 04040002, on left bank 30 ft (9 m) downstream from State Highway 38 bridge in Racine, 350 ft (110 m) downstream from Horlick Dam, and 5.2 mi (8.4 km) upstream from mouth.

DRAINAGE AREA.--190 mi² (492 km²), revised.

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

GAGE.--Water-stage recorder. Altitude of gage is 610 ft (187 m), from topographic map. Prior to Feb. 5, 1964, nonrecording gage on bridge 30 ft (9 m) upstream.

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

AVERAGE DISCHARGE.--17 years, 148 ft³/s (4.191 m³/s), 10.58 in/yr (269 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 4,500 ft³/s (127 m³/s) Mar. 5, 1974, gage height, 8.54 ft (2.603 m); minimum, 0.90 ft³/s (0.025 m³/s) Jan. 17, 1977; minimum daily, 1.0 ft³/s (0.028 m³/s) July 17, 1977.

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

DATE	TIME	DISCHARGE (ft ³ /s) (m ³ /s)	GAGE HEIGHT (ft) (m)	DATE	TIME	DISCHARGE (ft ³ /s) (m ³ /s)	GAGE HEIGHT (ft) (m)
Dec. 26	1800	601 17.0	4.04 1.231	June 8	1330	*1,000 28.3	*4.58 1.396
Apr. 9	2315	647 18.3	4.11 1.253	Aug. 22	0800	594 16.8	4.03 1.228
Apr. 17	1130	710 20.1	4.20 1.280	Sept. 18	1700	510 14.4	3.90 1.189

minimum discharge, 5.6 ft³/s (0.159 m³/s) Oct. 1, gage height, 2.13 ft (0.649 m).

RATING TABLE (gage height, in feet, and discharge, in cubic feet per second).
(Stage-discharge relation affected by ice Jan. 8, 9.)

2.1	4.5	2.9	105
2.2	8.8	3.5	300
2.3	15	4.0	575
2.5	33	5.0	1,350
2.7	60		

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DAY	MEAN VALUES											SEP
	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	
1	7.1	12	34	96	26	53	104	135	36	21	36	56
2	10	12	29	85	24	44	111	114	36	18	33	71
3	7.9	12	30	68	21	40	142	103	51	16	44	68
4	13	9.8	27	61	20	38	300	97	81	16	56	49
5	14	11	27	59	19	36	375	91	96	17	69	40
6	12	11	27	50	19	35	279	83	391	30	219	34
7	9.2	10	27	39	19	31	266	78	671	46	146	32
8	8.3	10	24	37	18	30	431	73	966	26	266	34
9	7.8	11	23	35	18	29	568	72	758	20	322	60
10	7.6	12	24	34	19	40	646	70	384	19	206	197
11	7.1	12	22	54	19	77	622	73	194	27	142	157
12	19	12	22	105	19	101	527	74	148	21	234	129
13	29	12	21	109	19	77	467	74	116	18	259	336
14	18	12	17	76	18	51	359	77	95	16	159	443
15	16	12	17	62	17	65	487	89	77	15	120	323
16	19	12	18	69	17	205	660	85	89	34	84	227
17	13	9.2	16	193	17	389	696	88	102	96	70	394
18	11	8.2	15	287	17	405	546	91	71	53	86	493
19	11	9.1	14	179	16	354	335	146	60	28	209	420
20	12	9.4	13	113	16	253	253	133	55	20	419	300
21	17	15	13	90	20	211	208	97	46	18	537	391
22	26	62	15	80	93	168	180	73	38	16	583	345
23	24	95	17	60	274	131	152	57	33	16	433	253
24	25	60	60	50	336	121	129	50	29	17	210	221
25	28	40	396	53	322	119	115	44	29	13	145	165
26	22	44	556	45	201	98	103	38	26	27	114	136
27	18	118	518	37	123	88	95	33	23	112	89	116
28	15	97	243	35	86	86	94	32	24	143	73	96
29	13	59	169	32	73	85	111	37	27	63	63	85
30	12	45	134	28	---	89	158	60	29	45	55	76
31	12	---	106	26	---	96	---	39	---	41	48	---
TOTAL	464.0	853.7	2674	2347	1906	3645	9519	2406	4781	1068	5529	5747
MEAN	15.0	28.5	86.3	75.7	65.7	118	317	77.6	159	34.5	178	192
MAX	29	118	556	287	336	405	696	146	966	143	583	493
MIN	7.1	8.2	13	26	16	29	94	32	23	13	33	32
CFSM	.08	.15	.45	.40	.35	.62	1.67	.41	.84	.18	.94	1.01
IN.	.09	.17	.52	.46	.37	.71	1.86	.47	.94	.21	1.08	1.13
CAL YR 1979	TOTAL	79369.7	MEAN	217	MAX	3100	MIN	6.5	CFSM	1.14	IN	15.54
WTR YR 1980	TOTAL	40939.7	MEAN	112	MAX	966	MIN	7.1	CFSM	.59	IN	8.02

STREAMS TRIBUTARY TO LAKE MICHIGAN

04087257 PIKE RIVER NEAR RACINE, WI

LOCATION.--Lat 42°38'49", long 87°51'38", in SE 1/4 NE 1/4 sec.11, T.2 N., R.22 E., Kenosha County, Hydrologic Unit 04040002, on right bank just downstream from unnamed tributary, 1.7 mi (2.7 km) downstream from Pike Creek, 6.8 mi (10.9 km) southwest of Racine Post Office and 9.0 mi (14.5 km) upstream from mouth.

DRAINAGE AREA.--38.5 mi² (99.7 km), revised.

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

REVISED RECORDS.--WDR WI-76-1: 1975.

GAGE.--Water-stage recorder and crest-stage gage. Altitude of gage is 620 ft (189 m), from topographic map.

REMARKS.--Records good except those for winter periods, which are fair. Low flows considerably affected by effluent discharge in upper portion of basin, and by occasional regulation of small recreation dam 1.1 mi (1.8 km) upstream.

AVERAGE DISCHARGE.--9 years, 36.9 ft³/s (1.045 m³/s), 13.01 in/yr (330 mm/yr).

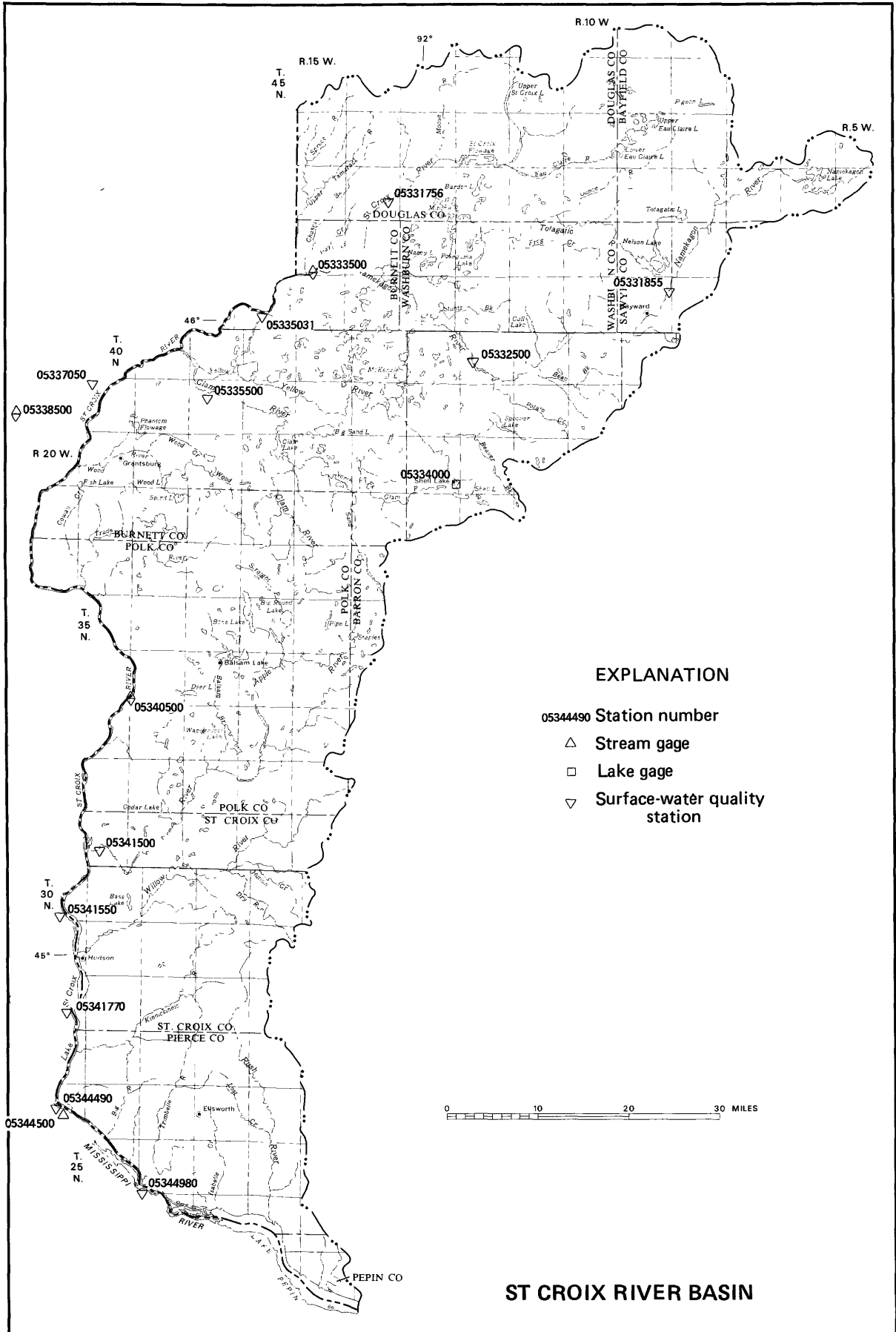
EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,480 ft³/s (41.9 m³/s) Mar. 4, 1976, gage height, 8.15 ft (2.484 m); minimum daily, 0.35 ft³/s (0.010 m³/s) Sept. 28, 1976.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 443 ft³/s (12.5 m³/s) Sept. 17, gage height, 5.04 ft (1.536 m), no peak above base of 600 ft³/s (17.0 m³/s); minimum daily discharge, 2.2 ft³/s (0.062 m³/s) Nov. 13, 14; minimum instantaneous discharge, 2.0 ft³/s (0.057 m³/s), gage height, 1.73 ft (0.527 m) July 22, 23.

RATING TABLES (gage height, in feet, and discharge, in cubic feet per second).
(Stage-discharge relation affected by ice Dec. 17-20, Jan. 3-12, Jan. 22 to Feb. 19, and Mar. 2-8.)

DAY	Oct. 1 to Feb. 21					Feb. 22 to Sept. 30						
	1.8	2.2	2.7	4.4		1.7	1.5	2.7	5.4			
	1.9	4.0	3.2	9.2		1.8	3.4	3.0	8.4			
	2.0	6.6	4.0	23.6		1.9	6.0	3.5	15.0			
	2.2	15				2.1	13	4.0	23.4			
						2.4	30	4.5	33.5			
DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980												
	MEAN VALUES											
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	17	8.8	5.2	13	6.0	11	36	18	9.9	9.6	10	63
2	6.8	8.9	4.0	12	5.8	9.4	37	16	13	6.3	13	39
3	3.0	9.9	4.4	10	5.6	8.8	59	21	20	5.7	27	25
4	5.9	8.5	5.2	9.0	5.6	8.6	132	17	18	5.7	18	15
5	6.0	7.7	5.4	8.2	5.6	7.8	87	20	81	4.8	42	11
6	3.9	18	5.6	7.6	5.6	7.4	59	17	207	22	22	13
7	2.7	7.8	5.2	7.2	5.6	7.0	110	14	93	17	35	20
8	3.9	2.6	4.7	6.4	5.6	7.0	161	11	52	8.2	44	9.4
9	5.8	3.0	3.8	5.8	5.8	9.0	172	12	36	10	36	55
10	7.1	4.7	4.0	5.4	6.0	23	160	13	31	18	28	27
11	6.1	11	5.4	22	6.0	30	101	13	24	8.3	24	19
12	5.9	8.4	4.9	17	6.0	18	124	12	20	2.8	37	111
13	5.8	2.2	4.4	15	5.8	13	87	14	19	3.5	31	246
14	5.8	2.3	4.2	13	5.6	13	85	14	17	5.0	28	135
15	4.3	4.1	3.9	11	5.4	33	197	13	27	6.3	21	80
16	4.0	7.3	3.4	20	5.4	66	170	12	20	18	12	99
17	6.0	6.8	2.9	38	5.4	78	103	12	15	15	16	323
18	11	5.9	2.8	24	5.6	39	76	14	12	13	21	151
19	10	5.8	3.0	18	6.4	36	60	26	19	7.9	232	94
20	12	5.8	3.3	15	17	33	49	19	13	3.2	165	127
21	14	22	4.2	14	4.4	31	42	12	6.9	19	98	113
22	3.4	20	4.4	12	14.4	24	38	14	7.6	13	59	107
23	9.5	16	6.2	11	6.4	21	32	14	7.6	3.7	46	143
24	11	9.0	5.9	10	3.8	23	28	14	8.0	7.9	31	87
25	11	5.6	12.3	9.2	2.9	22	25	13	8.2	12	26	62
26	10	24	4.7	8.6	2.7	19	23	12	8.6	7.0	16	49
27	9.9	15	3.1	8.0	1.8	18	21	12	12	8.9	14	41
28	8.2	6.2	2.3	7.4	1.6	18	22	12	15	3.4	16	35
29	7.7	14	1.9	7.0	1.3	20	27	12	13	2.2	16	26
30	8.8	6.3	1.7	6.6	---	21	25	20	12	1.7	15	28
31	14	---	1.5	6.2	---	29	---	20	---	1.5	15	---
TOTAL	240.5	277.6	434.5	377.6	518.8	704.0	2348	463	845.8	536.1	1214	2353.4
MEAN	7.76	9.25	14.0	12.2	17.9	22.7	78.3	14.9	28.2	17.3	39.2	78.4
MAX	17	24	123	38	144	78	197	26	207	89	232	323
MIN	2.7	2.2	2.8	5.4	5.4	7.0	21	11	6.9	2.8	10	9.4
CFSM	.20	.24	.36	.32	.47	.59	2.03	.39	.73	.45	1.02	2.04
IN.	.23	.27	.42	.36	.50	.68	2.27	.45	.82	.52	1.17	2.27
CAL YR 1979	TOTAL	17743.6	MEAN	48.6	MAX	869	MIN	2.2	CFSM	1.26	IN	17.14
WTR YR 1980	TOTAL	10313.3	MEAN	28.2	MAX	323	MIN	2.2	CFSM	.73	IN	9.96

MISSISSIPPI RIVER BASIN RECORDS



ST. CROIX RIVER BASIN

05331756 ST. CROIX RIVER NEAR DAIRYLAND, WI

LOCATION.--Lat 46°11'32", long 92°04'16", in NE 1/4 Sec.23, T.43 N., R.14 W., Douglas County, Hydrologic Unit 07030001, St. Croix National Scenic Riverway, at bridge on County Trunk Highway T 4.3 mi (6.9 km) southeast of Dairyland.

DRAINAGE AREA.--440 mi² (1140 km²), approximately.

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

WATER-QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

		STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH FIELD (UNITS)	TEMPER- ATURE, WATER (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	STREP- TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)	ALKA- LINITY (MG/L AS CAC03)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	NITRO- GEN NITRATE TOTAL (MG/L AS N)	
DATE	TIME												
APR , 1980													
09...	1330	757	75	6.6	1.0	12.8	94	K8	K20	--	1.0	--	
JUL													
08...	1400	148	103	7.3	26.0	8.7	112	K12	110	43	1.0	.01	
DATE		NITRO- GEN, NITRITE TOTAL (MG/L AS N)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO- GEN, TOTAL (MG/L AS N)	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHORUS, DIS- SOLVED TOTAL (MG/L AS P)	CARBON, ORGANIC TOTAL (MG/L AS C)	SEDI- MENT, SUS- PENDE (MG/L)	SEDI- MENT DIS- CHARGE, SUS- PENDE (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
APR , 1980													
09...	.000	--	--	--	.50	--	.060	.020	8.7	6	12	37	
JUL													
08...	.000	.01	.020	.33	.35	.36	.020	.010	3.4	3	1.2	99	

K RESULTS BASED ON COLONY COUNT OUTSIDE THE ACCEPTABLE RANGE (NON-IDEAL COLONY COUNT).

ST. CROIX RIVER BASIN

05331855 NAMEKAGON RIVER NEAR HAYWARD, WI

LOCATION.--Lat 46°03'06", long 91°25'53", in NE 1/4 NE 1/4 Sec.12, T.41 N., R.9 W., Sawyer County, Hydrologic Unit 07030002, St. Croix National Scenic Riverway, at bridge on town road 3.7 mi (6.0 km) northeast of Hayward.

DRAINAGE AREA.--190 mi² (490 km²), approximately.

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

WATER-QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPECIFIC CON- DUCTANCE (MICRO- MHOS)	PH FIELD (UNITS)	TEMPER- ATURE, WATER (DEG C)	COLOR (PLAT- INUM COBALT UNITS)	TUR- BID- ITY (NTU)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED	COLI- FORM, FECAL, O.7	
									(PER- CENT SATUR- ATION)	UM-MF (COLS./ 100 ML)	
FEB , 1980											
20...	1145	170	163	6.9	.4	5	.50	11.5	83	K11	
APR											
08...	1400	308	110	7.0	3.8	30	.50	11.6	91	K14	
JUL											
07...	1330	138	146	8.2	23.7	6	1.0	10.0	122	K12	
DATE	100 ML)	STREP- TOCOCCHI FECAL, KF AGAR (COLS. PER	HARD- NESS (MG/L AS CACO3)	HARD- NESS, NONCAR- BONATE (MG/L AS CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	PERCENT SODIUM	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LINITY (MG/L AS CACO3)
FEB , 1980											
20...	K10	71	1	20	5.1	2.3	7	.1	.6	70	
APR											
08...	32	47	6	13	3.6	1.8	8	.1	.8	41	
JUL											
07...	98	73	0	20	5.5	2.3	6	.1	.5	76	
DATE	AS SO4)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)	SOLIDS, DIS- SOLVED (TONS PER DAY)	NITRO- GEN, NITRATE TOTAL (MG/L AS N)	NITRO- GEN, NITRITE TOTAL (MG/L AS N)
FEB , 1980											
20...	3.6	1.9	.1	15	87	91	.12	39.9	.17	.010	
APR											
08...	4.7	1.9	.0	11	82	61	.11	68.2	.23	.000	
JUL											
07...	5.6	2.0	.1	13	89	95	.12	33.2	.01	.000	
DATE	AS N)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO- GEN, TOTAL (MG/L AS N)	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHORUS, DIS- SOLVED (MG/L AS P)	SEDI- MENT, SUS- PENDEDED (MG/L)	SEDI- MENT DIS- CHARGE, SUS- PENDEDED (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
FEB , 1980											
20...	.18	.020	.28	.30	.48	.020	.010	2	.92	67	
APR											
08...	.23	.060	.28	.34	.57	.020	.010	4	3.3	53	
JUL											
07...	.01	.040	.35	.39	.40	.010	.010	1	.37	99	

K RESULTS BASED ON COLONY COUNT OUTSIDE THE ACCEPTABLE RANGE (NON-IDEAL COLONY COUNT).

ST. CROIX RIVER BASIN

05331855 NEMAKEGON RIVER NEAR HAYWARD, WI--CONTINUED

WATER-QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	ARSENIC TOTAL (UG/L AS AS)	BERYL- LIUM, TOTAL RECOV- ERABLE (UG/L AS BE)	BORON, TOTAL RECOV- ERABLE (UG/L AS B)	CADMIUM TOTAL RECOV- ERABLE (UG/L AS CD)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR)
JUL , 1980							
07...	1330	138	1	0	20	0	10

DATE	COBALT, TOTAL RECOV- ERABLE (UG/L AS CO)	LEAD, TOTAL RECOV- ERABLE (UG/L AS PB)	MERCURY TOTAL RECOV- ERABLE (UG/L AS HG)	NICKEL, TOTAL RECOV- ERABLE (UG/L AS NI)	SELE- NIUM, TOTAL RECOV- ERABLE (UG/L AS SE)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN)	CYANIDE TOTAL (MG/L AS CN)
JUL , 1980							
07...	0	0	.3	100	0	10	.00

ST. CROIX RIVER BASIN

05332500 NAMEKAGON RIVER NEAR TREGO, WI

LOCATION.--Lat 45°56'53", long 91°53'17", in NW 1/4 SW 1/4 Sec.17, T.40 N., R.12 W., Washburn County, Hydrologic Unit 07030002, St. Croix National Scenic Riverway, at Northern States Power Company power plant 4.4 mi (7.1 km) northwest of Trego.

DRAINAGE AREA.--423 mi² (1,100 km²)

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

WATER-QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980										
DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH FIELD (UNITS)	TEMPER- ATURE, WATER (DEG C)	COLOR PLAT- INUM COBALT (UNITS)	TUR- BID- ITY (NTU)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED SATUR- ATION)	COLI- FORM, DIS- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)
FEB , 1980										
20...	1000	300	182	6.8	.8	5	.50	9.5	69	K15
APR										
08...	1220	617	140	7.2	4.5	15	1.5	10.6	85	K3
JUL										
07...	1130	249	156	7.1	23.0	8	.65	7.6	92	K2

DATE	STREP- TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)	HARD- NESS (MG/L AS CAC03)	HARD- NESS, NONCAR- BONATE (MG/L AS CAC03)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	PERCENT SODIUM	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LITY (MG/L AS CAC03)
FEB , 1980										
20...	K12	79	0	22	5.9	2.9	7	.1	.7	80
APR										
08...	K9	59	3	16	4.7	2.4	8	.1	.9	56
JUL										
07...	K390	76	0	21	5.8	2.6	7	.1	.6	78

DATE	SULFATE DIS- SOLVED (MG/L)	CHLO- RIDE, DIS- SOLVED (MG/L)	FLUO- RIDE, DIS- SOLVED (MG/L)	SILICA, DIS- SOLVED (MG/L AS)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED	SOLIDS, DIS- SOLVED (TONS PER	SOLIDS, DIS- SOLVED (TONS PER	NITRO- GEN, NITRATE TOTAL (MG/L)	NITRO- GEN, NITRITE TOTAL (MG/L)
FEB , 1980										
20...	3.4	2.4	.1	18	102	104	.14	82.6	.25	.010
APR										
08...	4.7	2.1	.1	13	101	78	.14	168	.25	.000
JUL										
07...	3.8	2.4	.1	13	96	96	.13	64.5	.01	.000

DATE	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO- GEN, AMMONIA (MG/L AS N)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO- GEN, TOTAL (MG/L AS N)	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHORUS, DIS- SOLVED (MG/L AS P)	SEDI- MENT, SUS- PENDED (MG/L)	SEDI- MENT DIS- CHARGE, SUS- PENDED (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
FEB , 1980										
20...	.26	.060	.21	.27	.53	.020	.020	2	1.6	83
APR										
08...	.25	.060	.31	.37	.62	.030	.010	2	3.3	93
JUL										
07...	.01	.060	.33	.39	.40	.020	.010	4	2.7	84

K RESULTS BASED ON COLONY COUNT OUTSIDE THE ACCEPTABLE RANGE (NON-IDEAL COLONY COUNT).

ST. CROIX RIVER BASIN

05332500 NAMEKAGON RIVER NEAR TREGO, WI--CONTINUED

WATER-QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	ARSENIC TOTAL (UG/L AS AS)	BERYL- LIUM, TOTAL RECOV- ERABLE (UG/L AS BE)	BORON, TOTAL RECOV- ERABLE (UG/L AS B)	CADMIUM TOTAL RECOV- ERABLE (UG/L AS CD)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR)
JUL , 1980							
07...	1130	249	1	0	20	0	10

DATE	COBALT, TOTAL RECOV- ERABLE (UG/L AS CO)	LEAD, TOTAL RECOV- ERABLE (UG/L AS PB)	MERCURY TOTAL RECOV- ERABLE (UG/L AS HG)	NICKEL, TOTAL RECOV- ERABLE (UG/L AS NI)	SELE- NIUM, TOTAL RECOV- ERABLE (UG/L AS SE)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN)	CYANIDE TOTAL (MG/L AS CN)
JUL , 1980							
07...	0	0	.2	0	0	20	.00

ST. CROIX RIVER BASIN

05333500 ST. CROIX RIVER NEAR DANBURY, WI

LOCATION.--Lat 46°04'28", long 92°14'50", in SW 1/4 sec.33, T.42 N., R.15 W., Burnett County, Hydrologic Unit 07030001, St. Croix National Scenic Waterway, on left bank at downstream side of bridge on State Highway 35, 3.5 mi (5.6 km) downstream from Namekagon River, 10 mi (16 km) northeast of Danbury, and at mile 129.2 (207.9 m).

DRAINAGE AREA.--1,588 mi² (4,113 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--March 1914 to current year. Prior to October 1933, published as "at Swiss".

REVISED RECORDS.--WSP 1208: Drainage area. WSP 1438: 1915(M), 1919-20, 1923-24(M), 1927(M), 1931(M), 1934, 1935-37(M). WSP 1628: 1918.

GAGE.--Water-stage recorder. Datum of gage is 882.21 ft (268.898 m) National Geodetic Vertical Datum of 1929. Prior to Apr. 23, 1937, nonrecording gage 40 ft (12 m) downstream at same datum. Apr. 23, 1937, to Jan. 5, 1939, nonrecording gage at present site and datum.

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

AVERAGE DISCHARGE.--66 years, 1,299 ft³/s (36.79 m³/s), 11.11 in/yr (282 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 10,200 ft³/s (289 m³/s) May 6, 1950, gage height, 8.22 ft (2.505 m); minimum observed, 393 ft³/s (11.1 m³/s) Aug. 6, 13, 1934, gage height, -0.20 ft (-0.061 m), site then in use.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 2,490 ft³/s (70.5 m³/s) Apr. 10, gage height 2.51 ft (0.765 m); maximum gage height, 3.74 ft (1.140 m) Dec. 5 (backwater from ice), no peak above base of 3,000 ft³/s (85.0 m³/s); minimum discharge, 550 ft³/s (15.6 m³/s) July 8, 13, gage height, 0.29 ft (0.088 m).

RATING TABLE (gage height, in feet, and discharge, in cubic feet per second).
(Stage-discharge relation affected by ice Nov. 13-16, Nov. 25 to Apr. 9.)

0.5	700	3.0	3,010
1.0	1,060	5.0	5,440
2.0	1,920	6.0	6,830

DAY	DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980											
	MEAN VALUES											
	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	786	1440	880	880	880	960	1400	1100	851	665	700	938
2	805	1480	840	860	880	940	1500	1100	1010	674	684	1010
3	881	1400	820	860	860	920	1600	1100	1000	694	652	1030
4	827	1380	800	860	860	920	1800	1100	919	695	665	1310
5	889	1310	780	860	860	900	1900	1100	923	646	643	1400
6	828	1330	780	860	860	900	2100	984	1020	623	653	1470
7	802	1280	800	840	860	900	2200	970	1040	600	765	1430
8	807	1190	820	840	860	880	2200	953	992	577	906	1330
9	862	1200	840	840	860	880	2300	852	896	583	859	1440
10	832	1100	860	840	860	880	2440	855	852	573	834	1340
11	848	1060	880	860	860	880	2310	955	824	573	789	1310
12	850	981	900	880	860	880	2230	999	815	577	782	1250
13	852	960	900	880	860	880	2110	982	822	554	762	1360
14	856	920	900	900	860	880	1860	978	854	565	771	1380
15	842	940	920	900	880	900	1840	948	857	587	744	1430
16	852	980	920	920	880	900	1650	857	821	620	764	1350
17	889	1050	920	940	900	900	1580	849	732	607	729	1300
18	873	1090	920	960	940	900	1490	910	841	644	675	1260
19	1020	1170	920	980	960	900	1400	951	954	672	702	1160
20	1130	1120	920	980	960	900	1400	962	884	833	817	1250
21	1130	1160	900	980	960	920	1300	1020	846	877	925	1220
22	1210	1190	880	980	960	960	1300	862	805	828	883	1330
23	1330	1180	880	980	960	1000	1300	796	784	783	845	1430
24	1460	1170	880	980	960	1000	1300	787	734	716	965	1340
25	1350	1100	880	960	960	1000	1200	797	690	1110	1070	1310
26	1320	1100	860	940	960	1100	1200	763	661	1250	1010	1410
27	1340	1100	860	940	960	1100	1200	762	676	946	1030	1340
28	1320	1000	860	920	960	1100	1200	754	691	801	1020	1190
29	1300	1000	880	920	960	1200	1200	771	668	735	974	1230
30	1260	920	880	900	---	1200	1100	817	678	738	921	1180
31	1280	---	880	900	---	1300	---	915	---	722	888	---
TOTAL	31631	34301	26960	28140	26240	29880	49610	28550	25140	22068	25427	38728
MEAN	1020	1143	870	908	905	964	1654	921	838	712	820	1291
MAX	1460	1480	920	980	960	1300	2440	1100	1040	1250	1070	1470
MIN	786	920	780	840	860	880	1100	754	661	554	643	938
CFSM	.64	.72	.55	.57	.57	.61	1.04	.58	.53	.45	.52	.81
IN.	.74	.80	.63	.66	.61	.70	1.16	.67	.59	.52	.60	.91
CAL YR 1979	TOTAL	521597	MEAN	1429	MAX	5860	MIN	753	CFSM	.90	IN	12.22
WTR YR 1980	TOTAL	366675	MEAN	1002	MAX	2440	MIN	554	CFSM	.63	IN	8.59

ST. CROIX RIVER BASIN

05333500 ST. CROIX RIVER NEAR DANBURY, WI--CONTINUED

WATER-QUALITY RECORDS

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

WATER-QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

		STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH FIELD (UNITS)	TEMPER- ATURE, WATER (DEG C)	COLOR (PLAT- INUM COBALT UNITS)	TUR- BID- ITY (NTU)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION)	COLI- FORM, FECAL, O.7, UM-MF (COLS./ 100 ML)
DATE	TIME									
FEB , 1980										
20...	1515	973	153	6.7	.0	5	1.5	9.4	68	K12
APR										
09...	1620	2300	82	7.0	.8	30	.50	12.7	92	K3
JUL										
08...	1545	607	124	7.7	26.0	9	1.6	9.9	127	K21
	STREP- TOCOCCEI FECAL, KF AGAR (COLS. PER 100 ML)	HARD- NESS (MG/L AS CACO3)	HARD- NESS, NONCAR- BONATE (MG/L CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	PERCENT SODIUM	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LITY (MG/L AS CACO3)
DATE	100 ML)									
FEB , 1980										
20...	K12	67	4	19	4.8	2.4	7	.1	.6	63
APR										
09...	K14	48	1	13	3.7	2.0	8	.1	.8	47
JUL										
08...	53	61	0	17	4.6	2.3	7	.1	.5	65
	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)	SOLIDS, DIS- SOLVED (TONS PER DAY)	NITRO- GEN, NITRATE TOTAL (MG/L AS N)	NITRO- GEN, NITRITE TOTAL (MG/L AS N)
DATE	AS SO4)									
FEB , 1980										
20...	3.3	1.8	.1	16	82	86	.11	215	.16	.010
APR										
09...	5.0	1.7	.1	12	82	67	.11	509	.20	.000
JUL										
08...	3.6	1.7	.1	9.9	78	79	.11	128	.01	.000
	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO- GEN, TOTAL (MG/L AS N)	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHORUS, DIS- SOLVED (MG/L AS P)	SEDI- MENT, SUS- PENDE (MG/L)	SEDI- MENT DIS- CHARGE, SUS- PENDE (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
DATE	AS N)	AS N)	AS N)	AS N)	AS N)	AS P)	AS P)			
FEB , 1980										
20...	.17	.040	.25	.29	.46	.020	.010	8	21	65
APR										
09...	.20	.050	.40	.45	.65	.040	.020	14	87	24
JUL										
08...	.01	.030	.26	.29	.30	.010	.000	1	1.6	99

K RESULTS BASED ON COLONY COUNT OUTSIDE THE ACCEPTABLE RANGE (NON-IDEAL COLONY COUNT).

ST. CROIX RIVER BASIN

05333500 ST. CROIX RIVER NEAR DANBURY, WI--CONTINUED

WATER-QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	ARSENIC TOTAL (UG/L AS AS)	BERYL- LIUM, TOTAL RECOV- ERABLE (UG/L AS BE)	BORON, TOTAL RECOV- ERABLE (UG/L AS B)	CADMIUM TOTAL RECOV- ERABLE (UG/L AS CD)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR)
JUL , 1980 08...	1545	607	1	0	20	0	10

DATE	COBALT, TOTAL RECOV- ERABLE (UG/L AS CO)	LEAD, TOTAL RECOV- ERABLE (UG/L AS PB)	MERCURY TOTAL RECOV- ERABLE (UG/L AS HG)	NICKEL, TOTAL RECOV- ERABLE (UG/L AS NI)	SELE- NIUM, TOTAL RECOV- ERABLE (UG/L AS SE)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN)	CYANIDE TOTAL (MG/L AS CN)
JUL , 1980 08...	0	0	.3	0	0	10	.00

ST. CROIX RIVER BASIN

05334000 SHELL LAKE AT SHELL LAKE, WI

LOCATION.--Lat 45°44'46", long 91°55'00", in NE 1/4 sec.25, T.38 N., R.13 W., Washburn County, Hydrologic Unit 07030001, 500 ft (150 m) east of Peterson Boat Factory in the village of Shell Lake.

DRAINAGE AREA.--26.0 mi² (67 km²), revised. Area of Shell Lake, 3,200 acres (13 km²).

PERIOD OF RECORD.--August 1936 to current year (fragmentary).

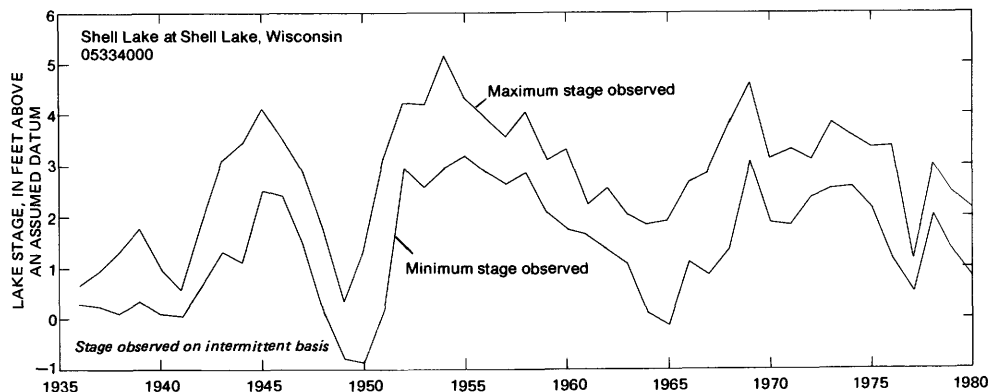
GAGE.--Nonrecording gage. Datum of gage is 1,215.88 ft (370.600 m) National Geodetic Vertical Datum of 1929. May 3, 1952, to Apr. 21, 1961, 2.3 mi (3.7 km) southeast of village of Shell Lake at same datum.

REMARKS.--Lake has no surface outlet. Lake ice covered from about Dec. 1 to Apr. 20.

EXTREMES FOR PERIOD OF RECORD.--Maximum gage height observed, 5.13 ft (1.564 m) July 17, 1954; minimum observed, -0.92 ft (-0.280 m) Nov. 28, 1949.

EXTREMES FOR CURRENT YEAR.--Maximum gage height observed, 2.10 ft (0.640 m) Sept. 27; minimum observed, 0.84 ft (0.256 m) July 19.

DAY	GAGE HEIGHT (FEET ABOVE DATUM), WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980											
	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	---	---	---	---	---	---
2	---	---	---	---	---	---	---	---	---	---	---	---
3	---	1.40	---	---	---	---	---	---	---	---	.90	---
4	---	---	---	---	---	---	---	---	---	---	---	---
5	---	---	1.26	---	---	---	---	1.28	---	.94	---	---
6	1.44	---	---	---	---	---	---	---	---	---	---	1.68
7	---	---	---	---	---	---	---	---	1.16	---	---	---
8	---	---	---	---	---	---	---	---	---	---	---	---
9	---	---	---	---	---	---	---	---	---	---	1.24	1.84
10	---	1.34	---	---	---	---	---	---	---	---	---	---
11	---	---	---	---	---	---	---	---	---	---	---	---
12	---	---	---	---	---	---	---	1.19	---	.88	---	---
13	1.34	---	---	---	---	---	---	---	1.12	---	---	1.96
14	---	---	---	---	---	---	---	---	1.08	---	---	---
15	---	---	---	---	---	---	---	---	---	---	---	---
16	---	---	---	---	---	---	---	---	---	---	1.14	---
17	---	1.30	---	---	---	---	---	1.18	---	---	---	---
18	---	---	---	---	---	---	---	---	---	---	---	---
19	---	---	---	---	---	---	---	---	---	.84	---	---
20	1.30	---	---	---	---	---	---	---	---	---	---	2.00
21	---	---	---	---	1.60	---	---	---	1.08	---	---	---
22	1.34	---	---	1.31	---	---	---	---	---	---	---	---
23	---	---	---	---	---	---	---	---	---	---	1.22	---
24	---	1.30	---	---	---	---	---	1.12	---	---	---	---
25	---	---	---	---	---	---	---	---	---	---	---	---
26	---	---	---	---	---	---	---	---	---	1.00	---	---
27	1.38	---	---	---	---	---	---	---	---	---	---	2.10
28	---	---	---	---	---	---	---	---	1.02	---	---	---
29	---	---	---	---	---	---	---	---	---	---	---	---
30	---	---	---	---	---	---	---	---	1.02	---	1.24	---
31	---	---	---	---	---	---	---	1.12	---	---	---	---



ST. CROIX RIVER BASIN

05335031 YELLOW RIVER AT DANBURY, WI

LOCATION.--Lat 46°00'44", long 92°21'27", in NW 1/4 NW 1/4 Sec.27, T.41 N., R.16 W., Burnett County, Hydrologic Unit 07030001, St. Croix National Scenic Riverway, at bridge on State Highway 35 0.7 mi (1.1 km) northeast of Danbury.

DRAINAGE AREA.--339 mi² (878 km²), approximately.

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

WATER-QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH FIELD (UNITS)	TEMPER- ATURE, WATER (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	STREP- TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)	ALKA- LITY (MG/L AS CAC03)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	NITRO- GEN, NITRATE TOTAL (MG/L AS N)	
APR , 1980													
10...	1000	326	202	7.5	2.0	12.4	94	K2	40	83	2.5	.34	
JUL													
09...	1130	249	178	8.0	--	--	--	150	K3500	76	2.2	.02	
DATE	TIME	NITRO- GEN, NITRITE TOTAL (MG/L AS N)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO- GEN, TOTAL (MG/L AS N)	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHORUS, DIS- SOLVED TOTAL (MG/L AS P)	CARBON, ORGANIC TOTAL (MG/L AS C)	SEDI- MENT, SUS- PENDED (MG/L)	SEDI- MENT DIS- CHARGE, SUS- PENDED (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
APR , 1980													
10...	.010	.35	.070	.22	.29	.64	.050	.010	3.1	1	.88	50	
JUL													
09...	.000	.02	.080	.75	.83	.85	.060	.010	4.5	3	2.0	68	

K RESULTS BASED ON COLONY COUNT OUTSIDE THE ACCEPTABLE RANGE (NON-IDEAL COLONY COUNT).

ST. CROIX RIVER BASIN

05335500 CLAM RIVER NEAR WEBSTER, WI

LOCATION.--Lat 45°52'50", long 92°29'15", in SW 1/4 NW 1/4 Sec.9, T.39 N., R.15 W., Burnett County, Hydrologic Unit 07030001, St. Croix National Scenic Riverway, at ice-house bridge 2.5 mi (4.0 km) downstream from Black Brook, and 6.0 mi (9.7 km) west of Webster.

DRAINAGE AREA.--364 mi² (943 km²), approximately.

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

WATER-QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH FIELD (UNITS)	TEMPER- ATURE, WATER (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	STREP- TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)	ALKA- LINITY (MG/L AS CACO3)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	NITRO- GEN, NITRATE TOTAL (MG/L AS N)	
APR , 1980													
10...	1200	362	153	7.4	2.0	12.3	93	K4	K19	65	2.0	.24	
JUL													
09...	0900	139	178	8.0	21.0	7.2	84	40	1300	93	1.6	.05	
DATE		NITRO- NITRITE TOTAL (MG/L AS N)	NITRO- NO2+NO3 TOTAL (MG/L AS N)	NITRO- AMMONIA TOTAL (MG/L AS N)	NITRO- ORGANIC TOTAL (MG/L AS N)	NITRO- GEN,AM- ORGANIC TOTAL (MG/L AS N)	NITRO- GEN, TOTAL (MG/L AS N)	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- DIS- SOLVED (MG/L AS P)	CARBON ORGANIC TOTAL (MG/L AS C)	SEDI- MENT, SUS- PENDEDED (MG/L)	SEDI- MENT CHARGE, SUS- PENDEDED (T/DAY)	SED. SUSP. DIAM. % FINER THAN .062 MM
APR , 1980													
10...	.010	.25	.070	.14	.21	.46	.060	.030	5.5	9	8.8	28	
JUL													
09...	.010	.06	.220	1.2	1.4	1.5	.090	.010	13	3	1.1	99	

K RESULTS BASED ON COLONY COUNT OUTSIDE THE ACCEPTABLE RANGE (NON-IDEAL COLONY COUNT).

ST. CROIX RIVER BASIN

05337050 KETTLE RIVER NEAR CLOVERDALE, MN

LOCATION.--Lat 45°54'13", long 92°43'47", in SW 1/4 SW 1/4 Sec.33, T.40 N., R.19 W., Pine County, Hydrologic Unit 07030003, St. Croix National Scenic Riverway, 200 ft (61 m) west of town road, 8.0 mi (12.9 km) south of Cloverdale, Minnesota and 9.0 mi (14.5 km) northwest of Grantsburg, Wisconsin.

DRAINAGE AREA.--1,025 mi² (2,655 km²), approximately.

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

WATER-QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH FIELD (UNITS)	TEMPER- ATURE, WATER (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	STREP- TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)	ALKA- LINEITY (MG/L AS CAC03)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	NITRO- GEN, NITRATE TOTAL (MG/L AS N)
APR , 1980												
10...	1500	2000	93	6.7	1.8	12.8	96	K11	63	33	2.5	.24
JUL												
09...	1350	118	184	7.5	26.5	9.0	115	23	730	83	6.2	.01
DATE		NITRO- GEN, NITRITE TOTAL (MG/L AS N)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO- GEN, TOTAL (MG/L AS N)	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHORUS, DIS- SOLVED (MG/L AS P)	CARBON, ORGANIC TOTAL (MG/L AS C)	SEDI- MENT, DIS- CHARGE, SUS- PENDEDD (MG/L)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
APR , 1980												
10...	.010	.25	.160	.50	.66	.91	.050	.030	12	2	11	99
JUL												
09...	.000	.01	.030	.34	.37	.38	.030	.000	7.1	2	.64	99

K RESULTS BASED ON COLONY COUNT OUTSIDE THE ACCEPTABLE RANGE (NON-IDEAL COLONY COUNT).

ST. CROIX RIVER BASIN

05338500 SNAKE RIVER NEAR PINE CITY, MN

LOCATION.--Lat 45°50'30", long 92°56'00", in SE 1/4 NW 1/4 sec.26, T.39 N., R.21 W., Pine County, Hydrologic Unit 07030004, on left bank, at site of former powerplant and dam, 0.5 mi (0.8 km) downstream from Cross Lake, and 1.5 mi (2.4 km) northeast of Pine City.

DRAINAGE AREA.--958 mi² (2,480 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--June 1913 to September 1917, July 1951 to current year.

GAGE.--Water-stage recorder. Datum of gage is 919.00 ft (280.111 m) National Geodetic Vertical Datum of 1929.

June 25, 1913, to Sept. 30, 1917, nonrecording gage at site 500 ft (152 m) downstream at different datum.

July 1 to Oct. 28, 1951, nonrecording gage at present site and datum.

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

AVERAGE DISCHARGE.--33 years (water years 1914-17, 1952-80), 596 ft³/s (16.88 m³/s), 8.45 in/yr (215 mm/yr); median of yearly mean discharges, 530 ft³/s (15.01 m³/s), 7.51 in/yr (191 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 14,300 ft³/s (405 m³/s) July 27, 1972, gage height, 10.38 ft (3.164 m); minimum, 5.5 ft³/s (0.16 m³/s) Oct. 1, 1964, gage height, 2.57 ft (0.783 m), result of dam rehabilitation 0.5 mi (0.8 km) upstream.

EXTREMES OUTSIDE OF PERIOD OF RECORD.--A discharge measurement of 12,500 ft³/s (354 m³/s) was made May 9, 1950.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,920 ft³/s (54.4 m³/s) Apr. 10, gage height, 5.07 ft (1.545 m); minimum, 40 ft³/s (1.13 m³/s) Aug. 6, gage height, 2.78 ft (0.847 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	112	404	275	136	118	109	1010	439	258	155	82	208
2	100	566	247	136	117	108	1160	411	318	142	75	203
3	112	800	234	136	116	107	1330	384	384	133	61	186
4	98	966	234	132	114	105	1650	358	417	122	60	290
5	91	1050	240	132	112	104	1860	329	470	114	65	254
6	89	1070	227	147	110	103	1810	294	501	98	55	254
7	82	1040	234	153	109	102	1760	252	505	110	123	275
8	88	948	208	153	109	101	1760	231	509	103	203	297
9	85	883	197	151	109	100	1860	215	480	96	217	290
10	75	763	197	146	109	99	1910	223	435	98	228	247
11	89	663	203	143	109	98	1900	243	395	79	224	234
12	94	619	203	140	109	98	1850	227	354	80	197	297
13	75	575	170	136	109	98	1740	229	345	68	183	357
14	76	517	159	133	109	99	1650	234	335	73	167	420
15	80	476	159	133	109	100	1550	229	314	78	138	517
16	86	436	152	132	109	101	1440	220	328	90	114	592
17	85	404	148	132	109	102	1340	217	320	69	128	575
18	89	380	145	131	109	104	1230	236	282	83	121	566
19	164	388	136	132	109	107	1150	223	285	79	125	500
20	173	388	132	134	109	117	1050	209	272	118	131	468
21	180	357	132	134	109	132	982	199	265	120	157	436
22	208	365	132	134	109	153	928	185	274	117	125	396
23	228	404	132	133	109	173	845	168	263	120	137	341
24	234	404	136	132	109	183	755	164	242	121	154	319
25	256	380	136	132	109	193	699	150	234	139	170	304
26	258	372	136	130	109	214	644	150	199	121	170	275
27	291	352	136	128	109	269	599	149	171	116	159	254
28	279	315	136	127	109	352	542	134	205	114	164	261
29	261	278	136	125	109	488	498	158	173	94	170	282
30	251	240	136	123	---	668	468	202	138	90	186	297
31	276	---	136	121	---	860	---	222	---	92	170	---
TOTAL	4665	16803	5384	4187	3194	5747	37970	7284	9671	3232	4459	10195
MEAN	150	560	174	135	110	185	1266	235	322	104	144	340
MAX	291	1070	275	153	118	860	1910	439	509	155	228	592
MIN	75	240	132	121	109	98	468	134	138	68	55	186
CFSM	.16	.59	.18	.14	.12	.19	1.32	.25	.34	.11	.15	.36
IN.	.18	.65	.21	.16	.12	.22	1.47	.28	.38	.13	.17	.40
AC-FT	9250	33330	10680	8300	6340	11400	75310	14450	19180	6410	8840	20220
CAL YR 1979	TOTAL	291098	MEAN 798	MAX 7230	MIN 75	CFSM .83	IN 11.30	AC-FT 577400				
WTR YR 1980	TOTAL	112791	MEAN 308	MAX 1910	MIN 55	CFSM .32	IN 4.38	AC-FT 223700				

ST. CROIX RIVER BASIN

05338500 SNAKE RIVER NEAR PINE CITY, MN--CONTINUED

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1963, 1965, 1967-68, 1975 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH FIELD (UNITS)	TEMPER- ATURE, WATER (DEG C)	COLOR (PLAT- INUM COBALT UNITS)	TUR- BID- ITY (NTU)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)
FEB , 1980										
21...	0945	109	317	6.9	1.0	40	2.0	10.6	78	K18
APR										
11...	0715	1900	160	6.8	2.0	60	1.5	11.9	90	K21
JUL										
09...	1610	97	196	8.4	29.3	35	4.5	7.9	107	200

DATE	TIME	STREP- TOCOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)	HARD- NESS (MG/L AS CACO3)	HARD- NESS, NONCAR- BONATE (MG/L AS CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	PERCENT SODIUM	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LINEITY (MG/L AS CACO3)
FEB , 1980											
21...	K16	140		2	37	12	5.0	7	.2	1.5	140
APR											
11...	120	52		9	13	4.8	2.3	8	.1	2.5	43
JUL											
09...	4600	110		6	26	9.8	4.6	9	.2	1.8	99

DATE	TIME	DIS- SOLVED (MG/L AS SO4)	CHLO- DIS- SOLVED (MG/L AS CL)	FLUO- DIS- SOLVED (MG/L AS F)	SILICA, SOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE DEG. C DIS- SOLVED (MG/L)	SOLIDS, SUM OF TUENTS, DIS- SOLVED (MG/L)	SOLIDS, SOLVED (TONS PER AC-FT)	SOLIDS, SOLVED (TONS PER DAY)	NITRO- TOTAL (MG/L AS N)	NITRO- NITRATE TOTAL (MG/L AS N)
FEB , 1980											
21...	4.1	4.8		.2	14	176	163	.24	51.8	.29	.010
APR											
11...	5.5	2.8		.1	7.3	100	64	.14	513	.24	.010
JUL											
09...	2.3	3.5		.1	2.3	133	110	.18	34.8	.03	.000

DATE	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO- GEN, TOTAL (MG/L AS N)	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHORUS, DIS- SOLVED (MG/L AS P)	SEDI- MENT, SUS- PENDE (MG/L)	SEDI- MENT DIS- CHARGE, SUS- PENDE (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
FEB , 1980										
21...	.30	.210	.61	.82	1.1	.050	.030	2	.59	67
APR										
11...	.25	.160	.59	.75	1.0	.080	.010	1	5.1	99
JUL										
09...	.03	.090	1.1	1.2	1.2	.060	.010	1	.26	99

K RESULTS BASED ON COLONY COUNT OUTSIDE THE ACCEPTABLE RANGE (NON-IDEAL COLONY COUNT).

ST. CROIX RIVER BASIN

05338500 SNAKE RIVER NEAR PINE CITY, MN--CONTINUED

WATER-QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	TIME	FLOW, INSTAN- TANEOUS (CFS)	ARSENIC TOTAL (UG/L AS AS)	BERYL- LIUM, RECOV- ERABLE (UG/L AS BE)	BORON, RECOV- ERABLE (UG/L AS B)	CADMIUM RECOV- ERABLE (UG/L AS CD)	CHRO- MIUM, RECOV- ERABLE (UG/L AS CR)
JUL , 1980 09...	1610	97	1	0	70	0	10

DATE	COBALT, TOTAL RECOV- ERABLE (UG/L AS CO)	LEAD, TOTAL RECOV- ERABLE (UG/L AS PB)	MERCURY TOTAL RECOV- ERABLE (UG/L AS HG)	NICKEL, TOTAL RECOV- ERABLE (UG/L AS NI)	SELE- NIUM, TOTAL RECOV- ERABLE (UG/L AS SE)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN)	CYANIDE TOTAL (MG/L AS CN)
JUL , 1980 09...	0	0	.3	0	0	10	.00

ST. CROIX RIVER BASIN

05340500 ST. CROIX RIVER AT ST. CROIX FALLS, WI
(NATIONAL STREAM QUALITY ACCOUNTING NETWORK STATION)

LOCATION.--Lat 45 24'25", long 92 38'49", in SW 1/4 NW 1/4 sec.30, T.34 N., R.18 W., Polk County, Hydrologic Unit 07030005, St. Croix National Scenic Riverway, on left bank, 1,500 ft (457 m) downstream from powerplant of Northern States Power Co., in St. Croix Falls, and at mile 52.2 (84.0 km).

DRAINAGE AREA.--5,930 mi² (15,360 km²), approximately.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--January 1902 to current year. Prior to January 1910, monthly discharge only, published in WSP 1308. Prior to October 1939, published as "near St. Croix Falls."

REVISED RECORDS.--WSP 1115: 1929.

GAGE.--Water-stage recorder. Datum of gage is 689.94 ft (210.294 m) National Geodetic Vertical Datum of 1929. Prior to July 1905, gage heights and discharge measurements were used by Loweth and Wolff, consulting engineers of St. Paul, Minn., to determine the flow. July 1905 to February 1940, records were computed from power generation at the St. Croix Falls Powerplant. February 1940 to Sept. 30, 1979, water-stage recorder at site 300 ft (91 m) downstream at same datum.

REMARKS.--Records are good. Diurnal fluctuation caused by St. Croix Falls Powerplant 1,500 ft (457 m) upstream.

AVERAGE DISCHARGE.--78 years, 4,194 ft³/s (118.8 m³/s), 9.60 in/yr (244 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 54,900 ft³/s (1,550 m³/s) May 8, 1950, gage height, 25.19 ft (7.678 m); minimum daily, 75 ft³/s (2.12 m³/s) July 17, 1910.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 13,400 ft³/s (379 m³/s) Apr. 7, gage height, 7.10 ft (2.164 m); minimum daily, 1,320 ft³/s (37.4 m³/s) July 15.

RATING TABLE (gage height, in feet, and discharge, in cubic feet per second).

				2.4 3.0	1,240 2,330			4.0 6.0	4,950 10,700				
DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980													
DAY	MEAN VALUES												
	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	
1	2190	3980	1940	2190	2210	2000	5840	3400	2540	1780	1730	2570	
2	2180	4470	1600	2370	1840	2060	6250	3080	2950	1770	1670	3140	
3	2130	5660	2360	2180	1850	1910	7270	3110	3050	1740	1590	2760	
4	2250	5680	2230	2160	1850	1730	9090	2790	3130	1670	1660	4030	
5	2600	5730	2670	2040	2000	1920	10300	2940	3470	1690	1470	5120	
6	2060	5450	3040	2210	2200	1860	10100	2710	4020	1720	1570	5630	
7	2180	5190	3250	2240	1790	1880	9370	2460	3760	1600	1730	5610	
8	2410	5060	2990	1900	1850	1830	9810	2500	3590	1550	3910	5980	
9	2000	4600	2850	1810	1880	1720	10300	2500	3760	1620	3030	5590	
10	2200	4090	2660	1870	2000	1850	10100	2420	3130	1440	2740	5450	
11	2150	3560	2590	2230	2010	1730	9540	2350	3110	1450	2630	4710	
12	2180	3500	2410	1860	1930	1820	9230	2410	2520	1460	2720	5650	
13	2190	3580	2250	2140	2090	1740	8370	2760	3470	1440	2450	6190	
14	1860	3760	1910	2250	2080	2080	7860	2600	2570	1380	2620	5650	
15	2030	3480	2240	2160	2060	1550	7640	2680	2470	1320	2160	6130	
16	2250	3400	1880	2280	1880	2110	7180	2650	2980	1590	2270	6030	
17	2030	3680	1900	2370	1980	1930	7030	2730	2720	1350	2550	5690	
18	2070	2880	1980	2460	2130	2200	5910	2440	2570	1550	2110	5930	
19	2620	3340	1980	2220	1960	2190	5760	2630	2680	1550	2560	5030	
20	2940	3490	2310	2330	2110	2640	5460	2420	2520	1710	1940	5000	
21	3030	3630	2420	2280	2060	3730	5300	2720	2600	2120	2140	4460	
22	3220	3530	2120	2310	2060	3100	5290	1900	2320	2030	1980	4880	
23	3520	3510	2300	2230	2150	2980	5490	2530	2340	2160	2320	4390	
24	4350	3660	2340	2260	2170	3050	4810	2120	2290	2130	2480	4330	
25	3920	3360	2260	2100	2060	2660	4460	1920	2330	2720	2650	4800	
26	3580	3590	2440	2200	1990	3120	4260	1700	2080	1790	2880	4930	
27	3560	3580	2340	2190	2130	3680	3920	1700	1720	2540	3000	4430	
28	3600	3030	2330	2190	2020	3630	3720	1700	1720	2880	2340	4330	
29	3640	2530	2320	2070	2090	4070	3830	1880	1720	2020	3020	4010	
30	3500	2070	2460	2210	---	4500	3550	2000	1890	1790	2730	4060	
31	4040	---	2340	2010	---	5560	---	2110	---	1700	2700	---	
TOTAL	84480	117070	72710	67320	58430	78830	207040	75860	82020	55260	73350	146510	
MEAN	2725	3902	2345	2172	2015	2543	6901	2447	2734	1783	2366	4884	
MAX	4350	5730	3250	2460	2210	5560	10300	3400	4020	2880	3910	6190	
MIN	1860	2070	1600	1810	1790	1550	3550	1700	1720	1320	1470	2570	
CFSM	.46	.66	.40	.37	.34	.43	1.16	.41	.46	.30	.40	.82	
IN.	.53	.73	.46	.42	.37	.49	1.30	.48	.51	.35	.46	.92	
CAL YR 1979	TOTAL	1971170	MEAN	5400	MAX	33900	MIN	1600	CFSM	.91	IN	12.37	
WTR YR 1980	TOTAL	1118880	MEAN	3057	MAX	10300	MIN	1320	CFSM	.52	IN	7.02	

ST. CROIX RIVER BASIN

05340500 ST. CROIX RIVER AT ST. CROIX FALLS, WI--CONTINUED
(NATIONAL STREAM QUALITY ACCOUNTING NETWORK STATION)

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1967-68, 1974 to current year.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: March 1975 to current year.

WATER TEMPERATURES: March 1975 to current year.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Maximum daily, 340 micromhos Feb. 23, 1977; minimum daily, 65 micromhos May 16, 17, 1979.

WATER TEMPERATURES: Maximum daily, 27.0°C July 11, 1976, Aug. 14, 1978; minimum daily, 0.0°C on many days during winter periods.

EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum daily, 325 micromhos Oct. 13; minimum daily, 115 micromhos Apr. 10.

WATER TEMPERATURES: Maximum daily, 26.5°C July 19; minimum daily, 0.0°C on several days during winter period.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH FIELD (UNITS)	TEMPER- ATURE, WATER (DEG C)	TUR- BID- ITY (NTU)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED SATUR- ATION)	COLI- FORM, SOLVED (PER- CENT 0.7 UM-MF (COLS./ 100 ML)	STREP- TOCOCCHI FECAL, KF AGAR (COLS. PER 100 ML)
OCT , 1979										
10...	1145	3240	192	7.1	9.5	2.0	10.5	96	K10	K2000
NOV										
29...	1100	6160	195	7.4	1.0	20	12.7	93	K13	K11
DEC										
19...	1510	1600	215	6.9	1.0	2.0	12.6	93	K9	K6
JAN , 1980										
08...	1300	1560	223	7.2	.0	.50	12.4	89	K5	30
FEB										
04...	1140	3770	220	7.0	.0	1.5	9.4	68	K12	K1
MAR										
20...	0945	4190	212	7.0	.0	.70	9.6	69	K11	210
APR										
11...	0945	9790	118	7.2	2.5	.50	12.3	95	K9	35
MAY										
12...	1230	1720	183	7.1	13.5	1.5	9.2	91	K7	25
JUN										
09...	1330	5400	166	7.4	19.0	.60	8.7	98	39	26
JUL										
10...	0930	1310	175	7.9	25.5	.90	8.5	106	29	200
AUG										
13...	1415	3060	165	7.3	23.0	2.4	7.9	95	200	140
SEP										
08...	1320	6250	140	6.9	20.5	.60	7.7	90	100	100

DATE	HARD- NESS (MG/L AS CACO3)	HARD- NESS, NONCAR- BONATE (MG/L CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	PERCENT SODIUM	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LINITY (MG/L AS CACO3)	SULFATE DIS- SOLVED (MG/L AS SO4)
OCT , 1979										
10...	90	6	24	7.3	3.1	7	.1	.9	84	3.9
NOV										
29...	99	24	26	8.2	3.8	11	.2	.9	75	13
DEC										
19...	98	6	26	8.1	3.8	11	.2	1.0	92	5.3
JAN , 1980										
08...	100	9	27	8.3	3.9	11	.2	1.2	93	6.2
FEB										
04...	60	11	14	6.1	3.1	9	.2	3.9	49	12
MAR										
20...	95	1	25	7.8	3.8	8	.2	1.1	94	3.7
APR										
11...	50	2	13	4.2	2.0	8	.1	1.7	48	5.6
MAY										
12...	80	6	21	6.8	3.3	8	.2	1.0	74	4.1
JUN										
09...	78	1	20	6.8	3.3	8	.2	.9	77	4.3
JUL										
10...	90	7	23	7.9	3.7	8	.2	.9	83	2.3
AUG										
13...	83	2	21	7.3	3.1	7	.1	1.0	81	3.7
SEP										
08...	75	17	20	6.1	2.7	7	.1	1.2	58	5.3

K RESULTS BASED ON COLONY COUNT OUTSIDE THE ACCEPTABLE RANGE (NON-IDEAL COLONY COUNT).

ST. CROIX RIVER BASIN

05340500 ST. CROIX RIVER AT ST. CROIX FALLS, WI--CONTINUED

WATER-QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	CHLORIDE, DIS- SOLVED (MG/L AS CL)	FLUORIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, RESIDUE AT 180 DEG. C SOLVED (MG/L)	SOLIDS, SUM OF CONSTITUENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)	SOLIDS, DIS- SOLVED (TONS PER DAY)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N)
OCT , 1979										
10...	3.7	.1	12	115	106	.16	1010	.08	.11	.080
NOV										
29...	3.6	.0	13	130	115	.18	2160	.11	.12	.010
DEC										
19...	3.3	.1	15	133	119	.18	575	.34	.30	.060
JAN , 1980										
08...	3.3	.1	16	130	124	.18	548	.50	.43	.050
FEB										
04...	5.7	.1	12	96	91	.13	977	.87	.87	.250
MAR										
20...	3.3	.1	17	133	120	.18	1510	.45	.46	.110
APR										
11...	2.4	.1	8.9	97	68	.13	2560	.30	.26	.110
MAY										
12...	2.9	.1	8.5	111	93	.15	515	.11	.13	.360
JUN										
09...	2.9	.1	8.3	122	93	.17	1780	.07	.06	.100
JUL										
10...	2.7	.1	10	105	101	.14	371	.00	.02	.050
AUG										
13...	2.6	.1	14	127	102	.17	1050	.04	.04	.040
SEP										
08...	2.5	.1	13	117	86	.16	1970	.13	.14	.050

DATE	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N)	NITRO- GEN, ORGANIC DIS- SOLVED (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO- GEN,NH4 + ORG. SUSP. TOTAL (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC DIS. (MG/L AS N)	NITRO- GEN, DIS- SOLVED (MG/L AS N)	NITRO- GEN, TOTAL (MG/L AS N)	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHORUS, DIS- SOLVED (MG/L AS P)
OCT , 1979										
10...	.070	.73	.33	.81	.41	.40	.51	.89	.020	.010
NOV										
29...	.000	.59	.45	.60	.15	.45	.57	.71	.030	.010
DEC										
19...	.010	.42	.32	.48	.15	.33	.63	.82	.020	.010
JAN , 1980										
08...	.030	.38	.54	.43	.00	.57	1.0	.93	.020	.020
FEB										
04...	.250	.41	.42	.66	.00	.67	1.5	1.5	.160	.120
MAR										
20...	.120	.22	.24	.33	.00	.36	.82	.78	.050	.040
APR										
11...	.060	.54	.43	.65	.16	.49	.75	.95	.060	.030
MAY										
12...	.010	.11	.31	.47	.15	.32	.45	.58	.040	.010
JUN										
09...	.020	.62	.64	.72	.06	.66	.72	.79	.060	.010
JUL										
10...	.030	.43	.42	.48	.03	.45	.47	.48	.040	.010
AUG										
13...	.030	.71	.36	.75	.36	.39	.43	.79	.060	.020
SEP										
08...	.000	.49	.48	.54	.06	.48	.62	.67	.030	.020

DATE	SILVER, TOTAL RECOV- ERABLE (UG/L AS AG)	CARBON, ORGANIC TOTAL (MG/L AS C)	CARBON, ORGANIC DIS- SOLVED (MG/L AS C)	CARBON, ORGANIC SUS- PENDEED (MG/L AS C)	PHYTO- PLANK- TON, TOTAL (CELLS PER ML)	PERI- PHYTON BIOMASS ASH WEIGHT G/SQ M	PERI- PHYTON BIOMASS TOTAL DRY WEIGHT G/SQ M	CHLOR-A PERI- PHYTON CHROMO- GRAPHIC FLUOROM (MG/M2)	CHLOR-B PERI- PHYTON CHROMO- GRAPHIC FLUOROM (MG/M2)	BIOMASS CHLORO- PHYLL RATIO PERI- PHYTON (UNITS)
OCT , 1979										
10...	0	--	5.9	.5	--	--	--	--	--	--
NOV										
29...	0	--	11	.4	110	--	--	--	--	--
DEC										
19...	0	5.9	--	--	--	--	--	--	--	--
JAN , 1980										
08...	--	4.7	--	--	--	--	--	--	--	--
FEB										
04...	0	--	5.0	.5	--	--	--	--	--	--
MAR										
20...	0	4.4	--	--	65	--	--	--	--	--
APR										
11...	--	9.0	--	--	--	--	--	--	--	--
MAY										
12...	0	--	11	.4	3600	--	--	--	--	--
JUN										
09...	0	9.2	--	--	25000	7.9	11	13	1.2	204
JUL										
10...	--	5.3	--	--	8500	8.4	8.4	11	2.1	.00
AUG										
13...	0	--	7.1	1.0	22000	6.6	9.8	8.6	2.6	366
SEP										
08...	0	19	--	--	7500	5.1	6.7	12	1.0	137

DATE	NICKEL, SUS- PENDED RECOV- ERABLE (UG/L AS NI)	NICKEL, DIS- SOLVED (UG/L AS NI)	SELE- NIUM, TOTAL (UG/L AS SE)	SELE- NIUM, SUS- PENDED TOTAL (UG/L AS SE)	SELE- NIUM, DIS- SOLVED (UG/L AS SE)	SILVER, TOTAL RECOV- ERABLE (UG/L AS AG)	SILVER, SUS- PENDED RECOV- ERABLE (UG/L AS AG)	SILVER, DIS- SOLVED (UG/L AS AG)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN)	ZINC, SUS- PENDED RECOV- ERABLE (UG/L AS ZN)	ZINC, DIS- SOLVED (UG/L AS ZN)
OCT , 1979											
10...	1	0	0	0	0	0	0	0	0	0	0
NOV 29...	3	0	0	0	0	0	0	0	10	4	6
FEB , 1980											
04...	2	0	0	0	0	0	0	0	20	--	30
MAY 12...	--	19	0	0	0	0	0	0	20	20	0
AUG 13...	2	0	0	0	0	0	0	0	10	0	10

ST. CROIX RIVER BASIN

05340500 ST. CROIX RIVER AT ST. CROIX FALLS, WI--CONTINUED

QUALITATIVE AND ASSOCIATED QUANTITATIVE BIOLOGICAL DATA, SEPTEMBER 1979 TO SEPTEMBER 1980

PHYTOPLANKTON

Date	Time	Organism	Count (cells/ml)	Percent of total	Diversity index	Sampling method
Sept. 13, 1979	1140	CHLOROPHYTA				Grab sample
		Chlorophyceae				
		<i>Ankistrodesmus</i>	340	1		
		<i>Chlamydomonas</i>		0		
		<i>Chlorella</i>	6,900	11		
		<i>Chlorococcum</i>	340	1		
		<i>Distyosphaerium</i>	3,200	5		
		<i>Kirchneriella</i>	2,000	3		
		<i>Pediastrum</i>	7,300	11		
		<i>Scenedesmus</i>	8,500	13		
		<i>Staurastrum</i>		0		
		<i>Tetraedron</i>		0		
		CHRYSOPHYTA				
		Bacillariophyceae				
		<i>Cocconeis</i>		0		
		<i>Cyclotella</i>	6,100	9		
		<i>Gomphonema</i>		0		
		<i>Navicula</i>	340	1		
		<i>Skeletonema</i>	340	1		
		<i>Synedra</i>		0		
		CYANOPHYTA				
		Cyanophyceae				
		<i>Amenellum</i>	29,000	45		
		TOTAL	65,000		2.5	
Nov. 29, 1979	1100	CHLOROPHYTA				Grab sample
		Chlorophyceae				
		<i>Scenedesmus</i>	20	19		
		CHRYSOPHYTA				
		Bacillariophyceae				
		<i>Cyclotella</i>	5	5		
		CYANOPHYTA				
		Cyanophyceae				
		<i>Schizothrix</i>	81	76		
		TOTAL	110		1.0	
Mar. 20, 1980	0945	CHRYSOPHYTA				Grab sample
		Bacillariophyceae				
		<i>Fragilaria</i>	52	80		
		<i>Navicula</i>	13	20		
		TOTAL	65		0.7	
May 12, 1980	1230	CHLOROPHYTA				Grab sample
		Chlorophyceae				
		<i>Ankistrodesmus</i>	290	8		
		<i>Chlamydomonas</i>	44	1		
		<i>Distyosphaerium</i>	350	10		
		<i>Kirchneriella</i>	22	1		
		<i>Oocystis</i>	270	7		
		<i>Scenedesmus</i>	490	13		
		<i>Tetraedron</i>	22	1		
		CHRYSOPHYTA				
		Bacillariophyceae				
		<i>Cocconeis</i>	22	1		
		<i>Cyclotella</i>	710	20		
		<i>Cymbella</i>	44	1		
		<i>Gyrosigma</i>	22	1		
		<i>Melosira</i>	180	5		
		<i>Navicula</i>	22	1		
		<i>Nitzschia</i>	240	7		
		<i>Synedra</i>	44	1		
		Chrysophyceae				
		<i>Chrysococcus</i>	290	8		
		CRYPTOPHYTA				
		Cryptophyceae				
		<i>Chroomonas</i>	200	6		
		<i>Cryptomonas</i>	22	1		
		CYANOPHYTA				
		Cyanophyceae				
		<i>Anacystis</i>	270	7		
		EUGLENOPHYTA				
		Euglenophyceae				
		<i>Lepocinclis</i>	22	1		
		<i>Trachelomonas</i>	44	1		
		TOTAL	3,600		3.6	

ST. CROIX RIVER BASIN

05340500 ST. CROIX RIVER AT ST. CROIX FALLS, WI--CONTINUED

QUALITATIVE AND ASSOCIATED QUANTITATIVE BIOLOGICAL DATA, SEPTEMBER 1979 TO SEPTEMBER 1980

PHYTOPLANKTON

Date	Time	Organism	Count (cells/ml)	Percent of total	Diversity index	Sampling method
June 9, 1980	1330	CHLOROPHYTA				Grab sample
		Chlorophyceae				
		<i>Ankistrodesmus</i>		0		
		<i>Chlamydomonas</i>	340	1		
		<i>Chlorella</i>		0		
		<i>Coelastrum</i>	340	1		
		<i>Dictyosphaerium</i>	670	3		
		<i>Scenedesmus</i>	470	2		
		<i>Schroederia</i>		0		
		<i>Selenastrum</i>	170	1		
		CHRYSOPHYTA				
		Bacillariophyceae				
		<i>Cyclotella</i>	1,100	5		
		<i>Melosira</i>	770	3		
		<i>Nitzschia</i>	130	1		
		<i>Synedra</i>		0		
		CRYPTOPHYTA				
		Cryptophyceae				
		<i>Chroomonas</i>		0		
		<i>Cryptomonas</i>		0		
		CYANOPHYTA				
		Cyanophyceae				
		<i>Anabaena</i>	8,700	35		
		<i>Anacystis</i>	5,800	23		
		<i>Aphanizomenon</i>	6,100	24		
		EUGLENOPHYTA				
		Euglenophyceae				
		<i>Trachelomonas</i>	130	1		
		TOTAL	25,000		2.5	
July 10, 1980	0930	CHLOROPHYTA				Grab sample
		Chlorophyceae				
		<i>Ankistrodesmus</i>	250	3		
		<i>Chlamydomonas</i>	200	2		
		<i>Crucigenia</i>	800	9		
		<i>Dictyosphaerium</i>	350	4		
		<i>Oocystis</i>	300	4		
		<i>Pediastrum</i>	250	3		
		<i>Scenedesmus</i>	500	6		
		<i>Schroederia</i>	50	1		
		CHRYSOPHYTA				
		Bacillariophyceae				
		<i>Cyclotella</i>	600	7		
		<i>Nitzschia</i>	400	5		
		CYANOPHYTA				
		Cyanophyceae				
		<i>Anacystis</i>	4,800	56		
		TOTAL	8,500		2.3	
		CHLOROPHYTA				
		Chlorophyceae				
		<i>Ankistrodesmus</i>	150	1		
		<i>Coelastrum</i>	663	3		
		<i>Golenkinia</i>		0		
		<i>Scenedesmus</i>	1,500	7		
		<i>Schroederia</i>		0		
		<i>Treubaria</i>		0		
		CHRYSOPHYTA				
		Bacillariophyceae				
		<i>Cyclotella</i>	440	2		
		<i>Nitzschia</i>	220	1		
		CRYPTOPHYTA				
		Cryptophyceae				
		<i>Chroomonas</i>	150	1		
		CYANOPHYTA				
		Cyanophyceae				
		<i>Anabaena</i>	1,000	5		
		<i>Anacystis</i>	14,000	65		
		<i>Aphanizomenon</i>	3,300	15		
		TOTAL	22,000		1.8	
Aug. 13, 1980	1415	CHLOROPHYTA				Grab sample
		Chlorophyceae				
		<i>Ankistrodesmus</i>	150	1		
		<i>Coelastrum</i>	663	3		
		<i>Golenkinia</i>		0		
		<i>Scenedesmus</i>	1,500	7		
		<i>Schroederia</i>		0		
		<i>Treubaria</i>		0		
		CHRYSOPHYTA				
		Bacillariophyceae				
		<i>Cyclotella</i>	440	2		
		<i>Nitzschia</i>	220	1		
		CRYPTOPHYTA				
		Cryptophyceae				
		<i>Chroomonas</i>	150	1		
		CYANOPHYTA				
		Cyanophyceae				
		<i>Anabaena</i>	1,000	5		
		<i>Anacystis</i>	14,000	65		
		<i>Aphanizomenon</i>	3,300	15		
		TOTAL	22,000		1.8	

ST. CROIX RIVER BASIN

05340500 ST. CROIX RIVER AT ST. CROIX FALLS, WI--CONTINUED

QUALITATIVE AND ASSOCIATED QUANTITATIVE BIOLOGICAL DATA, SEPTEMBER 1979 TO SEPTEMBER 1980

PHYTOPLANKTON

Date	Time	Organism	Count (cells/ml)	Percent of total	Diversity index	Sampling method
Sept. 8, 1980	1320	CHLOROPHYTA				Grab sample
		Chlorophyceae				
		<i>Ankistrodesmus</i>	60	1		
		<i>Chlamydomonas</i>	100	1		
		<i>Crucigenia</i>	160	2		
		<i>Elakatothrix</i>	81	1		
		<i>Golenkinia</i>		0		
		<i>Kirchneriella</i>	40	1		
		<i>Micractinium</i>	40	1		
		<i>Oocystis</i>		0		
		<i>Scenedesmus</i>	160	2		
		<i>Selenastrum</i>	480	6		
		<i>Tetradon</i>		0		
		<i>Tetrastrum</i>	240	3		
		<i>Westella</i>	81	1		
		CHRYSOPHYTA				
		Bacillariophyceae				
		<i>Cyclotella</i>	280	4		
		<i>Cymbella</i>		0		
		<i>Melosira</i>	280	4		
		<i>Navicula</i>	40	1		
		<i>Nitzschia</i>	60	1		
		CYANOPHYTA				
		Cyanophyceae				
		<i>Agmenellum</i>	160	2		
		<i>Anacyetis</i>	1,700	22		
		<i>Aphanizomenon</i>	1,400	18		
		<i>Oscillatoria</i>	2,000	27		
		EUGLENOPHYTA				
		Euglenophyceae				
		<i>Trachelomonas</i>	81	1		
		PYRRHOPHYTA				
		Dinophyceae				
		<i>Glenodinium</i>		0		
		TOTAL	7,500		3.2	

DATE	TIME	FLOW, INSTAN- TANEOUS (CFS)	TEMPER- ATURE, WATER (DEG C)	SPE- CIFIC DUCT- ANCE (MICRO- MHOS)	MENT, SUS- PENDE (MG/L)	SEDI- MENT CHARGE, SUS- PENDE (T/DAY)	SED. SUSP. DIAM. % FINER THAN .062 MM
OCT , 1979							
10...	1145	3240	9.5	192	--	--	--
NOV							
29...	1100	6160	1.0	195	6	100	87
DEC							
19...	1510	1600	1.0	215	2	8.6	100
JAN , 1980							
08...	1300	1560	.0	223	4	17	83
FEB							
04...	1140	3770	.0	220	2	20	77
MAR							
20...	0945	4190	.0	212	2	23	100
APR							
11...	0945	9790	2.5	118	12	317	100
MAY							
12...	1230	1720	13.5	183	4	19	65
JUN							
09...	1330	5400	19.0	166	12	175	94
JUL							
10...	0930	1310	25.5	175	6	21	88
AUG							
13...	1415	3060	23.0	165	2	17	100
SEP							
08...	1320	6250	20.5	140	13	219	73

ST. CROIX RIVER BASIN

05340500 ST. CROIX RIVER AT ST. CROIX FALLS, WI--CONTINUED

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	225	185	215	220	210	215	175	200	200	195	175	180
2	230	185	235	220	240	235	170	175	190	200	180	198
3	240	180	240	225	240	240	165	---	190	195	179	190
4	220	160	205	205	240	235	160	175	195	195	180	210
5	195	160	200	230	215	225	150	180	190	197	180	175
6	230	160	200	230	235	245	140	180	185	200	180	180
7	215	155	205	210	215	220	135	175	185	190	185	155
8	200	160	200	225	215	270	130	180	185	185	185	145
9	220	160	200	210	225	280	125	165	180	190	175	160
10	220	175	205	240	220	235	115	185	185	190	180	155
11	215	175	210	225	210	240	120	180	190	195	175	155
12	275	225	190	225	240	239	115	185	190	190	175	155
13	325	180	210	225	240	218	120	190	195	200	180	155
14	295	195	221	230	215	240	125	190	190	195	185	160
15	240	215	220	218	220	245	125	215	195	195	182	160
16	200	210	220	280	235	240	130	190	195	190	190	165
17	205	225	202	222	215	215	220	195	190	200	195	165
18	265	300	225	210	215	225	220	195	190	200	195	165
19	220	---	215	230	250	235	220	195	195	190	200	170
20	205	185	215	225	220	210	180	190	200	190	185	175
21	200	190	215	235	270	200	150	190	---	190	195	170
22	200	195	205	235	255	225	145	200	195	185	190	180
23	200	220	219	255	240	230	145	185	190	185	190	195
24	185	220	210	245	235	205	142	190	185	180	190	175
25	190	225	220	240	235	235	145	185	190	185	190	175
26	185	220	201	235	240	230	165	190	190	180	190	170
27	185	205	225	241	235	195	150	195	185	185	190	175
28	180	185	215	220	210	190	155	190	185	185	195	170
29	180	195	205	235	240	218	160	195	190	170	190	170
30	190	178	215	225	---	190	165	195	200	165	180	190
31	180	---	205	240	---	180	---	195	---	170	180	---

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	15.0	8.0	2.5	1.5	1.0	.0	1.5	12.5	19.5	19.5	23.0	22.0
2	14.5	7.0	3.0	.0	1.0	2.5	1.5	15.0	19.5	18.0	23.5	20.0
3	14.0	5.5	3.0	2.0	1.0	2.5	1.0	16.0	18.5	20.0	23.0	20.0
4	14.0	5.0	2.0	1.0	1.5	2.0	1.5	17.0	17.5	21.0	23.5	20.0
5	---	5.0	1.0	1.5	1.0	.0	1.0	17.0	19.0	22.0	22.5	19.5
6	10.5	4.0	1.0	1.5	1.0	1.5	3.0	17.0	19.0	24.0	21.5	19.0
7	10.0	3.0	1.5	.0	.5	1.0	3.5	15.5	19.0	22.5	22.0	19.5
8	10.0	2.0	1.0	1.0	.5	1.5	5.0	13.5	19.5	23.0	21.5	20.0
9	9.5	2.0	1.5	.0	1.5	3.0	3.0	12.5	19.0	23.5	22.0	20.5
10	9.5	2.0	2.0	1.5	1.0	1.0	2.5	12.5	17.0	24.0	21.5	19.0
11	8.5	1.5	1.5	.0	.5	1.0	3.5	14.0	17.0	25.0	20.5	18.0
12	8.0	1.5	.5	1.0	1.0	1.0	3.5	12.5	18.5	25.0	21.0	17.0
13	8.5	1.5	1.0	1.0	2.0	1.0	4.5	12.5	19.0	26.0	22.0	16.5
14	8.0	1.5	2.0	1.5	.0	1.5	5.0	13.0	19.0	26.5	21.0	16.0
15	9.0	2.0	2.0	1.5	.5	2.0	6.0	14.5	20.0	25.0	21.5	15.5
16	9.0	2.0	1.0	3.5	.5	3.0	7.0	13.0	19.0	25.0	20.5	15.0
17	9.5	2.5	.5	2.5	1.0	1.0	8.0	14.0	19.0	25.0	19.0	14.0
18	8.5	5.0	1.5	1.0	.5	1.0	10.0	13.5	20.0	25.0	17.5	14.0
19	10.0	---	1.0	1.5	2.0	3.0	11.5	13.5	19.0	24.5	18.0	13.0
20	10.5	4.5	1.0	2.0	1.0	1.5	12.0	15.0	18.5	24.0	21.0	14.0
21	10.5	5.0	2.0	1.5	3.0	1.0	13.0	17.0	18.5	23.0	22.0	14.0
22	10.0	4.5	1.0	1.5	3.0	1.5	15.5	19.0	20.5	22.5	22.5	13.0
23	8.5	4.0	2.0	1.5	3.0	2.0	15.0	20.0	21.0	21.5	22.0	12.0
24	7.0	4.0	4.0	1.5	1.5	1.0	13.5	21.5	23.0	22.0	21.5	12.5
25	6.5	4.0	1.5	1.0	1.0	2.0	13.0	22.0	23.0	22.5	21.0	12.5
26	6.5	4.0	1.0	1.0	1.0	2.0	12.0	22.0	23.5	22.5	20.0	12.0
27	6.5	4.5	2.0	1.0	1.0	1.0	12.5	21.5	24.0	23.0	20.5	11.0
28	6.5	1.0	1.5	1.0	.0	1.0	13.0	20.5	23.0	22.5	19.0	11.5
29	7.0	1.0	1.0	1.0	1.0	2.0	12.5	21.0	22.0	23.0	22.0	11.5
30	5.5	1.0	1.5	1.0	---	1.5	13.0	21.5	20.5	23.0	22.5	11.5
31	7.5	---	1.0	1.0	---	1.5	---	21.0	---	23.0	21.5	---

ST. CROIX RIVER BASIN

05341500 APPLE RIVER NEAR SOMERSET, WI

LOCATION.--Lat 45°09'30", long 92°43'00", in NE 1/4 SE 1/4 Sec.21, T.31 N., R.19 W., St. Croix County, Hydrologic Unit 07030005, St. Croix National Scenic Riverway, at Northern States Power Company power plant 3.1 mi (5.0 km) northwest of Somerset.

DRAINAGE AREA.--555 mi² (1,440 km²).

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

WATER-QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH FIELD (UNITS)	TEMPER- ATURE, WATER (DEG C)	COLOR (PLAT- INUM COBALT UNITS)	TUR- BID- ITY (NTU)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)
FEB , 1980										
21...	1400	280	300	7.5	.1	5	.70	12.2	88	220
APR										
11...	1145	654	202	7.5	4.5	15	.80	11.8	95	48
JUL										
10...	1200	455	244	7.4	23.8	4	2.0	7.2	88	90

DATE	100 ML)	STREP- TOCOCCI FECAL, KF AGAR (COLS. PER CAC03)	HARD- NESS (MG/L AS CAC03)	HARD- NESS, NONCAR- BONATE (MG/L AS CAC03)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)
FEB , 1980									
21...	130	140	7	35	12	3.9	6	.1	1.1
APR									
11...	45	92	2	23	8.4	3.1	7	.1	2.4
JUL									
10...	100	120	4	30	12	3.6	6	.1	1.0

DATE	ALKA- LINITY (MG/L AS CAC03)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)	SOLIDS, DIS- SOLVED (TONS PER DAY)
FEB , 1980									
21...	130	3.0	5.3	.2	17	157	156	.21	119
APR									
11...	90	5.1	4.7	.1	12	132	113	.18	233
JUL									
10...	120	2.9	4.4	.1	14	145	140	.20	178

DATE	NITRO- GEN, NITRATE TOTAL (MG/L AS N)	NITRO- GEN, NITRITE TOTAL (MG/L AS N)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO- GEN, TOTAL (MG/L AS N)	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHORUS, DIS- SOLVED (MG/L AS P)
FEB , 1980									
21...	.99	.010	1.0	.080	.29	.37	1.4	.040	.020
APR									
11...	.69	.010	.70	.130	.20	.33	1.0	.060	.040
JUL									
10...	.52	.010	.53	.050	.34	.39	.92	.060	.030

ST. CROIX RIVER BASIN

05341500 APPLE RIVER NEAR SOMERSET, WI--CONTINUED

WATER-QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	ARSENIC TOTAL (UG/L AS AS)	BERYL- LIUM, TOTAL RECOV- ERABLE (UG/L AS BE)	BORON, TOTAL RECOV- ERABLE (UG/L AS B)	CADMIUM TOTAL RECOV- ERABLE (UG/L AS CD)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR)
JUL , 1980							
10...	1200	455	1	0	40	0	10

DATE	COBALT, TOTAL RECOV- ERABLE (UG/L AS CO)	LEAD, TOTAL RECOV- ERABLE (UG/L AS PB)	MERCURY TOTAL RECOV- ERABLE (UG/L AS HG)	NICKEL, TOTAL RECOV- ERABLE (UG/L AS NI)	SELE- NIUM, TOTAL (UG/L AS SE)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN)	CYANIDE TOTAL (MG/L AS CN)
JUL , 1980							
10...	0	0	.2	0	0	10	.00

ST. CROIX RIVER BASIN

05341550 ST. CROIX RIVER AT STILLWATER, MN

LOCATION.--Lat 45°03'22", long 92°48'11", in NE 1/4 SE 1/4 Sec.28, T.30 N., R.20 W., Washington County, Hydrologic Unit 07030005, St. Croix National Scenic Riverway, on Interstate Bridge at Stillwater.

DRAINAGE AREA.--6,974 mi²(18,062 km²), approximately.

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

REMARKS.--Water discharge estimated on the basis of discharge for St. Croix River at St. Croix Falls 05340500 and Apple River near Somerset 05341500 adjusted for travel time.

COOPERATION.--Samples were collected by the Metropolitan Waste Control Commission, St. Paul, Minnesota and analyzed by the U.S. Geological Survey. Discharge data for Apple River at Somerset furnished by the Corps of Engineers.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

		DATE	TIME	STREAM- FLOW (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH FIELD (UNITS)	TEMPER- ATURE, WATER (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION)	FLUO- RIDE, TOTAL (MG/L AS F)
		NOV , 1979								
		15...	0815	4040	200	8.0	1.0	13.2	96	.0
		FEB , 1980								
		04...	0850	2160	240	7.9	.0	7.7	54	.0
		MAY								
		20...	0900	2760	195	8.0	18.0	9.6	103	.1
		AUG								
		08...	0910	2010	201	8.0	23.3	8.2	98	.2

ST. CROIX RIVER BASIN

05341770 ST. CROIX RIVER AT AFTON, MN

LOCATION.--Lat 44°54'00", long 92°46'45", in SW 1/4 NW 1/4 Sec.23, T.28 N., R.20 W., Washington County, Hydrologic Unit 07030005, St. Croix National Scenic Riverway, in the City of Afton 11.5 mi (18.5 km) upstream from mouth.

DRAINAGE AREA.--7,394 mi² (19,150 km²), approximately.

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

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: December 1976 to current year.

PH: December 1976 to current year.

WATER TEMPERATURES: December 1976 to current year.

DISSOLVED OXYGEN: December 1976 to current year.

INSTRUMENTATION.--Water-quality monitor since December 1976.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Maximum, 472 micromhos Mar. 16, 1977; minimum, 28 micromhos May 2, 3, 1978.

PH: Maximum, 9.1 units May 2, 3, 1980; minimum, 7.1 units Feb. 9, Mar. 27, 1977, Apr. 29, 1978, July 13-15, 20, 21, 1979.

WATER TEMPERATURES: Maximum, 28.0°C June 29, 1978; minimum observed, 0.5°C Jan. 22, 1978, Jan. 5, 1979, Jan. 27-31, Feb. 1, 1980.

DISSOLVED OXYGEN: Maximum, 16.8 mg/l May 1, 1980; minimum, 2.1 mg/l Sept. 17, 1978.

EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum observed, 221 micromhos Aug. 18; minimum, 97 micromhos Oct. 10.

PH: Maximum, 9.1 units May 2, 3; minimum, 7.2 units Apr. 12.

WATER TEMPERATURES: Maximum observed, 27.5°C June 19; minimum observed, 0.5°C Jan 27-31, Feb. 1.

DISSOLVED OXYGEN: Maximum, 16.8 mg/l May 1; minimum, 3.3 mg/l Aug. 13.

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DAY	MAX	MIN OCTOBER	MEAN	MAX	MIN NOVEMBER	MEAN	MAX	MIN DECEMBER	MEAN	MAX	MIN JANUARY	MEAN
1	---	---	---	201	187	194	---	---	---	---	---	---
2	---	---	---	204	196	198	---	---	---	---	---	---
3	---	---	---	201	159	194	---	---	---	---	---	---
4	197	107	181	185	143	154	---	---	---	---	---	---
5	201	196	197	201	150	188	---	---	---	---	---	---
6	198	196	197	201	144	180	---	---	---	---	---	---
7	198	197	198	199	144	181	---	---	---	---	---	---
8	200	198	199	170	156	162	---	---	---	---	---	---
9	199	197	198	194	144	178	---	---	---	---	---	---
10	199	97	142	193	190	191	---	---	---	---	---	---
11	179	133	159	196	187	193	---	---	---	---	---	---
12	165	127	144	194	189	192	---	---	---	---	---	---
13	163	122	134	197	191	193	---	---	---	---	---	---
14	151	117	130	198	192	194	203	191	196	---	---	---
15	202	121	160	193	188	190	197	190	193	---	---	---
16	201	121	195	199	185	192	196	190	192	---	---	---
17	203	198	200	191	184	186	195	191	192	---	---	---
18	206	197	201	195	184	187	197	191	194	---	---	---
19	210	192	198	189	181	184	195	194	194	---	---	---
20	197	189	193	190	182	184	200	194	196	---	---	---
21	194	190	192	196	183	187	200	195	197	---	---	---
22	192	188	190	190	184	186	196	193	195	---	---	---
23	201	188	195	186	183	185	200	195	197	---	---	---
24	198	196	197	191	182	185	203	195	197	---	---	---
25	201	102	155	185	183	184	209	196	200	---	---	---
26	168	139	149	184	181	182	210	199	203	---	---	---
27	165	151	158	186	182	183	211	203	207	---	---	---
28	178	142	164	184	180	182	211	203	208	---	---	---
29	181	155	169	183	180	182	210	200	205	---	---	---
30	210	175	189	184	181	182	211	199	205	---	---	---
31	209	184	201	---	---	---	207	199	203	---	---	---
MONTH	210	97	178	204	143	185	211	190	199	---	---	---

ST. CROIX RIVER BASIN

05341770 ST. CROIX RIVER AT AFTON, MN--CONTINUED

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DAY	MAX	MIN FEBRUARY	MEAN	MAX	MIN MARCH	MEAN	MAX	MIN APRIL	MEAN	MAX	MIN MAY	MEAN
1	208	197	202	203	197	199	132	130	131	146	136	141
2	202	192	197	205	198	202	132	129	131	148	139	144
3	205	193	199	208	198	202	130	129	130	149	142	145
4	200	194	197	207	199	202	165	127	147	148	143	145
5	202	195	197	208	198	202	167	161	164	148	142	145
6	201	194	197	203	195	200	169	160	163	146	136	141
7	201	195	198	204	197	200	160	157	159	152	137	140
8	199	194	197	201	195	198	159	156	158	141	136	138
9	205	195	199	200	193	196	158	152	156	143	135	138
10	203	196	199	202	194	198	153	148	150	145	136	139
11	205	195	199	202	194	198	150	145	148	140	135	137
12	204	197	200	198	194	196	147	143	145	140	136	137
13	202	195	198	197	191	194	144	140	142	139	136	138
14	198	195	196	195	191	193	141	138	140	139	136	137
15	212	196	201	195	190	192	140	136	139	143	137	139
16	204	199	201	193	189	190	140	136	137	146	139	143
17	205	200	202	189	187	188	139	134	136	144	138	140
18	209	202	205	191	186	187	139	134	136	141	138	140
19	206	201	202	188	184	187	137	133	135	144	139	141
20	204	200	202	188	185	186	138	133	135	148	140	144
21	204	201	202	186	140	158	139	134	136	149	145	146
22	202	200	201	141	140	140	140	135	137	152	145	147
23	202	200	201	143	140	141	139	136	137	152	145	148
24	205	201	203	143	137	141	139	135	137	156	148	151
25	206	202	204	143	140	141	143	135	138	156	151	153
26	211	201	205	144	138	140	143	138	140	---	---	---
27	205	201	202	139	136	138	145	138	141	---	---	---
28	206	201	203	137	126	129	143	136	139	---	---	---
29	203	198	201	135	124	129	144	137	139	---	---	---
30	---	---	---	135	131	133	144	137	140	---	---	---
31	---	---	---	134	131	132	---	---	---	---	---	---
MONTH	212	192	200	208	124	175	169	127	142	156	135	142

DAY	MAX	MIN JUNE	MEAN	MAX	MIN JULY	MEAN	MAX	MIN AUGUST	MEAN	MAX	MIN SEPTEMBER	MEAN
1	---	---	---	---	---	---	---	---	---	207	206	206
2	151	148	149	---	---	---	---	---	---	208	206	207
3	153	147	149	---	---	---	---	---	---	209	205	207
4	149	147	148	---	---	---	---	---	---	207	206	207
5	149	146	148	---	---	---	---	---	---	208	206	207
6	203	146	154	---	---	---	---	---	---	209	207	207
7	204	201	202	---	---	---	---	---	---	210	206	208
8	205	202	203	---	---	---	199	198	198	208	206	207
9	205	202	203	209	208	209	199	198	199	207	206	207
10	204	201	203	213	207	209	200	198	199	207	206	207
11	204	201	203	214	210	212	202	198	200	207	205	206
12	209	202	205	---	---	---	201	200	200	206	205	205
13	207	203	204	---	---	---	220	199	209	199	197	198
14	209	203	206	---	---	---	221	218	219	199	198	198
15	211	206	208	---	---	---	221	218	220	200	196	198
16	211	207	209	---	---	---	219	213	217	197	196	196
17	212	135	193	---	---	---	218	214	216	202	195	196
18	136	135	135	---	---	---	221	216	217	195	176	185
19	140	135	137	---	---	---	219	210	217	179	175	177
20	140	136	139	---	---	---	---	---	---	177	175	176
21	---	---	---	---	---	---	---	---	---	176	175	175
22	---	---	---	---	---	---	---	---	---	177	174	175
23	---	---	---	---	---	---	---	---	---	179	175	176
24	---	---	---	---	---	---	---	---	---	178	173	175
25	---	---	---	---	---	---	---	---	---	176	174	174
26	---	---	---	---	---	---	---	---	---	175	172	173
27	---	---	---	---	---	---	---	---	---	174	172	173
28	---	---	---	---	---	---	---	---	---	177	172	174
29	---	---	---	---	---	---	209	206	207	180	173	174
30	---	---	---	---	---	---	208	205	206	179	172	174
31	---	---	---	---	---	---	207	205	207	---	---	---
MONTH	212	135	179	214	207	210	221	198	209	210	172	192

ST. CROIX RIVER BASIN
05341770 ST. CROIX RIVER AT AFTON, MN--CONTINUED

PH (STANDARD UNITS), WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DAY	MAX	MIN OCTOBER	MEAN	MAX	MIN NOVEMBER	MEAN	MAX	MIN DECEMBER	MEAN	MAX	MIN JANUARY	MEAN
1	---	---	---	8.0	7.8	7.9	---	---	---	---	---	---
2	---	---	---	8.0	7.9	7.9	---	---	---	---	---	---
3	---	---	---	8.1	7.9	7.9	---	---	---	---	---	---
4	7.6	7.5	7.5	8.2	7.9	8.0	---	---	---	---	---	---
5	8.0	7.5	7.6	8.0	7.9	8.0	---	---	---	---	---	---
6	7.7	7.5	7.6	8.0	8.0	8.0	---	---	---	---	---	---
7	7.8	7.5	7.6	8.1	8.0	8.0	---	---	---	---	---	---
8	7.6	7.5	7.5	8.0	8.0	8.0	---	---	---	---	---	---
9	7.6	7.5	7.5	8.0	7.7	7.9	---	---	---	---	---	---
10	7.8	7.5	7.6	7.9	7.8	7.8	---	---	---	---	---	---
11	7.5	7.4	7.5	8.1	7.8	7.9	---	---	---	---	---	---
12	7.6	7.4	7.5	7.9	7.7	7.8	---	---	---	---	---	---
13	7.6	7.4	7.5	7.8	7.7	7.8	---	---	---	---	---	---
14	8.0	7.5	7.6	7.8	7.7	7.8	7.7	7.7	7.7	7.7	7.7	7.7
15	7.8	7.5	7.6	7.8	7.7	7.7	7.7	7.7	7.7	7.7	7.7	7.7
16	7.8	7.5	7.6	8.0	7.7	7.8	7.7	7.6	7.7	7.6	7.7	7.7
17	8.0	7.6	7.7	7.9	7.7	7.7	7.7	7.6	7.7	7.6	7.7	7.7
18	7.9	7.6	7.7	8.0	7.7	7.7	7.7	7.7	7.7	7.7	7.7	7.7
19	7.8	7.5	7.6	7.7	7.6	7.6	7.7	7.6	7.7	7.6	7.6	7.6
20	7.7	7.5	7.6	7.7	7.6	7.6	7.8	7.7	7.7	7.7	7.7	7.7
21	7.6	7.5	7.5	7.8	7.6	7.7	7.7	7.7	7.7	7.7	7.7	7.7
22	7.6	7.5	7.6	7.7	7.7	7.7	7.7	7.6	7.7	7.6	7.6	7.6
23	7.7	7.6	7.6	7.7	7.6	7.7	7.7	7.6	7.7	7.6	7.7	7.7
24	7.7	7.6	7.6	7.9	7.6	7.7	7.7	7.6	7.7	7.6	7.7	7.7
25	7.7	7.6	7.6	7.7	7.6	7.6	7.7	7.6	7.7	7.6	7.7	7.7
26	7.8	7.6	7.7	7.7	7.6	7.6	7.7	7.7	7.7	7.7	7.7	7.7
27	7.7	7.5	7.5	7.7	7.6	7.6	7.7	7.6	7.7	7.6	7.7	7.7
28	7.6	7.5	7.5	7.8	7.6	7.6	7.7	7.7	7.7	7.7	7.7	7.7
29	7.7	7.5	7.6	7.7	7.7	7.7	7.7	7.6	7.7	7.6	7.7	7.7
30	8.1	---	---	7.7	7.7	7.7	7.7	7.6	7.7	7.6	7.6	7.6
31	7.9	7.8	7.9	---	---	---	7.7	7.6	7.7	7.6	7.6	7.6
MONTH	8.1	7.4	7.6	8.2	7.6	7.8	7.8	7.6	7.7	7.6	7.7	7.7

DAY	MAX	MIN FEBRUARY	MEAN	MAX	MIN MARCH	MEAN	MAX	MIN APRIL	MEAN	MAX	MIN MAY	MEAN
1	7.7	7.6	7.7	7.7	7.7	7.7	7.3	7.2	7.3	8.9	8.3	8.7
2	7.7	7.7	7.7	7.8	7.7	7.8	7.3	7.2	7.3	9.1	8.6	9.0
3	7.7	7.7	7.7	7.8	7.8	7.8	7.3	7.3	7.3	9.1	8.9	9.0
4	7.7	7.7	7.7	7.8	7.8	7.8	7.3	7.3	7.3	9.0	8.9	9.0
5	7.7	7.6	7.7	7.8	7.7	7.8	7.4	7.3	7.3	9.0	8.8	8.9
6	7.7	7.6	7.6	7.8	7.7	7.8	7.5	7.3	7.4	8.8	8.2	8.6
7	7.6	7.6	7.6	7.8	7.8	7.8	7.4	7.4	7.4	8.6	8.4	8.5
8	7.6	7.6	7.6	7.8	7.7	7.7	7.4	7.4	7.4	8.6	8.2	8.4
9	7.7	7.6	7.6	7.8	7.7	7.7	7.5	7.4	7.4	8.5	8.2	8.3
10	7.7	7.6	7.6	7.8	7.7	7.7	7.4	7.4	7.4	8.3	7.9	8.1
11	7.7	7.6	7.6	7.8	7.7	7.7	7.4	7.4	7.4	8.3	7.9	8.0
12	7.7	7.6	7.6	7.8	7.7	7.8	7.5	7.4	7.4	8.7	8.2	8.4
13	7.6	7.6	7.6	7.8	7.7	7.8	7.5	7.4	7.4	8.7	8.3	8.5
14	7.6	7.6	7.6	7.8	7.7	7.8	7.5	7.4	7.5	8.6	8.2	8.4
15	7.8	7.6	7.7	7.9	7.7	7.8	7.5	7.4	7.5	8.7	8.3	8.5
16	7.7	7.7	7.7	7.8	7.7	7.8	7.5	7.5	7.5	8.8	8.5	8.7
17	7.7	7.7	7.7	7.8	7.7	7.7	7.6	7.4	7.5	8.6	8.2	8.4
18	7.8	7.7	7.8	7.8	7.7	7.8	7.6	7.5	7.5	8.6	8.3	8.4
19	7.8	7.7	7.7	7.8	7.7	7.7	7.7	7.5	7.5	8.6	8.3	8.4
20	7.7	7.7	7.7	7.8	7.7	7.8	8.5	7.7	8.0	8.4	7.8	8.1
21	7.8	7.7	7.7	7.8	7.7	7.7	8.2	7.6	7.7	8.1	7.9	8.0
22	7.7	7.7	7.7	7.8	7.7	7.7	8.4	7.6	8.0	8.1	7.8	8.0
23	7.7	7.7	7.7	7.8	7.7	7.8	8.5	8.1	8.3	8.2	7.9	8.0
24	7.7	7.7	7.7	7.8	7.7	7.8	8.4	8.0	8.2	8.2	8.0	8.0
25	7.7	7.6	7.7	7.8	7.7	7.8	8.3	8.0	8.1	8.1	7.7	8.0
26	7.7	7.6	7.7	8.0	7.8	7.8	8.3	8.0	8.2	---	---	---
27	7.7	7.6	7.6	7.8	7.4	7.6	8.5	8.0	8.2	---	---	---
28	7.7	7.6	7.6	7.4	7.3	7.4	8.6	8.0	8.3	---	---	---
29	7.7	7.6	7.7	7.4	7.3	7.3	8.6	8.2	8.3	---	---	---
30	---	---	---	7.3	7.3	7.3	8.7	8.2	8.4	---	---	---
31	---	---	---	7.3	7.3	7.3	---	---	---	---	---	---
MONTH	7.8	7.6	7.7	8.0	7.3	7.7	8.7	7.2	7.7	9.1	7.7	8.4

ST. CROIX RIVER BASIN

05341770 ST. CROIX RIVER AT AFTON, MN--CONTINUED

PH (STANDARD UNITS), WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DAY	MAX	MIN JUNE	MEAN	MAX	MIN JULY	MEAN	MAX	MIN AUGUST	MEAN	MAX	MIN SEPTEMBER	MEAN
1	---	---	---	---	---	---	---	---	---	7.9	7.6	7.7
2	8.2	7.9	8.1	---	---	---	---	---	---	8.0	7.5	7.7
3	8.1	7.7	7.8	---	---	---	---	---	---	8.1	7.6	7.8
4	8.1	7.8	7.9	---	---	---	---	---	---	8.0	7.4	7.6
5	8.3	8.0	8.2	---	---	---	---	---	---	7.7	7.3	7.5
6	8.4	8.1	8.2	---	---	---	---	---	---	7.9	7.6	7.7
7	8.4	8.1	8.2	---	---	---	---	---	---	7.9	7.4	7.7
8	8.1	7.8	8.0	---	---	---	8.0	8.0	8.0	8.0	7.4	7.7
9	8.4	7.9	8.2	8.4	8.3	8.3	8.0	7.9	8.0	7.9	7.6	7.8
10	8.6	8.2	8.4	8.3	8.2	8.3	7.9	7.8	7.9	8.1	7.5	7.8
11	8.5	8.3	8.4	8.3	8.1	8.2	7.8	7.6	7.7	7.6	7.3	7.4
12	8.4	8.1	8.2	---	---	---	7.8	7.6	7.7	7.3	7.3	7.3
13	8.4	8.1	8.3	---	---	---	8.3	7.5	7.9	7.7	7.6	7.6
14	8.4	8.1	8.3	---	---	---	8.7	8.2	8.5	7.7	7.5	7.6
15	8.3	8.1	8.2	---	---	---	9.0	8.5	8.7	7.9	7.4	7.6
16	8.2	7.9	8.1	---	---	---	8.8	8.5	8.6	7.5	7.4	7.4
17	8.2	5.6	7.5	---	---	---	8.6	8.2	8.4	7.8	7.3	7.4
18	6.0	1.0	4.0	---	---	---	8.5	8.1	8.3	7.8	7.3	7.6
19	1.2	1.2	1.2	---	---	---	8.4	8.0	8.2	8.1	7.7	7.8
20	1.2	1.2	1.2	---	---	---	---	---	---	7.8	7.7	7.7
21	---	---	---	---	---	---	---	---	---	7.8	7.7	7.8
22	---	---	---	---	---	---	---	---	---	7.8	7.6	7.7
23	---	---	---	---	---	---	---	---	---	8.0	7.8	7.9
24	---	---	---	---	---	---	---	---	---	7.9	7.7	7.8
25	---	---	---	---	---	---	---	---	---	7.8	7.7	7.8
26	---	---	---	---	---	---	---	---	---	8.2	7.7	7.8
27	---	---	---	---	---	---	---	---	---	7.9	7.7	7.8
28	---	---	---	---	---	---	---	---	---	8.2	7.8	7.9
29	---	---	---	---	---	---	7.9	---	---	8.2	7.7	7.8
30	---	---	---	---	---	---	7.9	7.5	7.7	8.1	7.7	7.9
31	---	---	---	---	---	---	7.9	7.7	7.8	---	---	---
MONTH	8.6	1.0	7.2	8.4	8.1	8.3	9.0	7.5	8.1	8.2	7.3	7.7

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DAY	MAX	MIN OCTOBER	MEAN	MAX	MIN NOVEMBER	MEAN	MAX	MIN DECEMBER	MEAN	MAX	MIN JANUARY	MEAN
1	---	---	---	10.0	9.5	9.5	---	---	---	---	---	---
2	---	---	---	9.5	9.5	9.5	---	---	---	---	---	---
3	---	---	---	9.5	9.5	9.5	---	---	---	---	---	---
4	19.0	17.0	19.0	9.5	9.0	9.0	---	---	---	---	---	---
5	19.0	18.0	19.0	9.5	9.0	9.0	---	---	---	---	---	---
6	19.0	18.5	18.5	9.0	9.0	9.0	---	---	---	---	---	---
7	19.0	18.5	18.5	9.0	8.5	8.5	---	---	---	---	---	---
8	18.5	18.5	18.5	8.5	8.5	8.5	---	---	---	---	---	---
9	18.5	18.0	18.0	8.5	6.0	7.0	---	---	---	---	---	---
10	18.0	17.5	18.0	6.5	6.0	6.0	---	---	---	---	---	---
11	18.0	14.5	16.5	6.0	5.5	6.0	---	---	---	---	---	---
12	14.5	14.5	14.5	6.0	5.5	6.0	---	---	---	---	---	---
13	14.5	14.0	14.0	6.0	5.5	6.0	---	---	---	---	---	---
14	14.5	14.0	14.0	6.0	5.5	5.5	1.0	---	---	1.0	1.0	1.0
15	14.5	14.0	14.5	5.5	4.5	5.0	1.0	1.0	1.0	1.0	1.0	1.0
16	15.0	14.0	14.5	5.0	4.5	4.5	1.0	1.0	1.0	1.0	1.0	1.0
17	14.5	14.0	14.0	4.5	4.0	4.5	1.5	1.0	1.0	1.0	1.0	1.0
18	14.0	14.0	14.0	5.5	4.5	4.5	1.0	1.0	1.0	1.0	1.0	1.0
19	14.5	14.0	14.0	5.0	4.0	4.5	1.5	1.0	1.0	1.0	1.0	1.0
20	14.5	14.0	14.5	4.5	4.0	4.0	1.0	1.0	1.0	1.0	1.0	1.0
21	14.0	13.5	14.0	4.0	4.0	4.0	1.0	1.0	1.0	1.0	1.0	1.0
22	13.5	13.0	13.5	4.0	4.0	4.0	1.0	1.0	1.0	1.0	1.0	1.0
23	13.5	13.0	13.0	4.0	3.5	4.0	1.0	1.0	1.0	1.0	1.0	1.0
24	13.5	13.0	13.0	4.0	3.5	4.0	1.0	1.0	1.0	1.0	1.0	1.0
25	13.0	13.0	13.0	4.0	3.5	4.0	1.0	1.0	1.0	1.0	1.0	1.0
26	13.0	12.0	12.5	4.0	3.5	4.0	1.0	1.0	1.0	1.0	1.0	1.0
27	13.0	12.5	12.5	3.5	3.5	3.5	1.0	.5	1.0	1.0	1.0	1.0
28	13.0	12.5	12.5	3.5	3.5	3.5	1.0	.5	1.0	1.0	1.0	1.0
29	13.0	12.5	12.5	3.5	3.5	3.5	1.0	.5	1.0	1.0	1.0	1.0
30	15.0	10.0	12.0	3.5	3.0	3.0	1.0	.5	1.0	1.0	1.0	1.0
31	10.5	10.0	10.0	---	---	---	1.0	.5	1.0	1.0	1.0	1.0
MONTH	19.0	10.0	14.5	10.0	3.0	6.0	1.5	.5	1.0	1.5	.5	1.0

ST. CROIX RIVER BASIN
05341770 ST. CROIX RIVER AT AFTON, MN--CONTINUED

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

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

DAY	MAX	MIN JUNE	MEAN	MAX	MIN JULY	MEAN	MAX	MIN AUGUST	MEAN	MAX	MIN SEPTEMBER	MEAN
1	---	---	---	---	---	---	---	---	---	22.5	22.0	22.0
2	20.5	19.5	20.0	---	---	---	---	---	---	22.5	22.0	22.0
3	20.0	19.5	20.0	---	---	---	---	---	---	23.0	22.0	22.0
4	20.5	20.0	20.0	---	---	---	---	---	---	22.0	22.0	22.0
5	21.5	20.5	20.5	---	---	---	---	---	---	22.5	21.5	22.0
6	21.0	20.0	20.5	---	---	---	---	---	---	22.5	22.0	22.0
7	21.0	20.0	20.5	---	---	---	---	---	---	22.5	22.0	22.0
8	20.5	20.0	20.5	---	---	---	25.0	24.0	24.0	22.5	22.0	22.0
9	21.0	20.0	20.5	27.0	26.0	26.5	24.5	24.0	24.0	22.0	22.0	22.0
10	21.5	20.5	21.0	26.5	26.0	26.0	24.5	24.0	24.0	22.5	21.5	22.0
11	21.0	20.5	21.0	27.0	25.5	26.0	24.5	24.0	24.0	21.5	21.5	21.5
12	21.0	20.0	20.5	---	---	---	24.5	23.5	24.0	21.5	21.5	21.5
13	21.5	20.5	21.0	---	---	---	24.0	23.5	24.0	21.0	21.0	21.0
14	23.0	21.0	22.0	---	---	---	24.5	23.5	24.0	21.0	20.5	21.0
15	23.0	22.0	22.5	---	---	---	24.5	24.0	24.5	21.0	20.0	20.5
16	23.0	22.0	22.5	---	---	---	24.0	23.0	23.5	20.5	20.5	20.5
17	22.5	21.5	22.0	---	---	---	23.5	23.0	23.0	20.5	19.5	20.0
18	24.5	20.0	22.0	---	---	---	24.0	23.0	23.5	19.5	19.5	19.5
19	27.5	23.5	25.5	---	---	---	24.0	23.5	23.5	20.0	18.5	19.5
20	25.5	22.0	23.5	---	---	---	---	---	---	19.5	19.0	19.5
21	---	---	---	---	---	---	---	---	---	19.0	19.0	19.0
22	---	---	---	---	---	---	---	---	---	19.0	18.5	19.0
23	---	---	---	---	---	---	---	---	---	19.5	18.5	19.0
24	---	---	---	---	---	---	---	---	---	19.0	18.0	18.5
25	---	---	---	---	---	---	---	---	---	18.5	18.0	18.5
26	---	---	---	---	---	---	---	---	---	18.0	16.0	17.0
27	---	---	---	---	---	---	---	---	---	16.5	16.0	16.5
28	---	---	---	---	---	---	---	---	---	16.5	16.0	16.0
29	---	---	---	---	---	---	23.0	22.5	22.5	16.5	16.0	16.0
30	---	---	---	---	---	---	22.5	22.0	22.5	17.0	16.0	16.5
31	---	---	---	---	---	---	22.5	22.0	22.0	---	---	---
MONTH	27.5	19.5	21.5	27.0	25.5	26.0	25.0	22.0	23.5	23.0	16.0	20.0

ST. CROIX RIVER BASIN

05341770 ST. CROIX RIVER AT APTON, MN--CONTINUED

OXYGEN, DISSOLVED (DO), MG/L, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DAY	MAX	MIN OCTOBER	MEAN	MAX	MIN NOVEMBER	MEAN	MAX	MIN DECEMBER	MEAN	MAX	MIN JANUARY	MEAN
1	---	---	---	9.1	7.7	8.1	---	---	---	---	---	---
2	---	---	---	8.1	7.7	7.9	---	---	---	---	---	---
3	---	---	---	8.8	7.8	8.1	---	---	---	---	---	---
4	7.5	6.7	7.0	9.5	8.0	8.6	---	---	---	---	---	---
5	9.2	6.6	7.3	8.4	8.0	8.2	---	---	---	---	---	---
6	7.4	6.5	6.8	8.7	8.3	8.4	---	---	---	---	---	---
7	8.0	6.4	6.9	9.6	8.2	8.9	---	---	---	---	---	---
8	6.8	6.3	6.5	8.7	8.2	8.5	---	---	---	---	---	---
9	7.4	6.1	6.7	10.2	8.2	9.4	---	---	---	---	---	---
10	8.4	6.6	7.2	11.0	9.9	10.3	---	---	---	---	---	---
11	7.5	6.5	6.9	11.8	10.2	10.9	---	---	---	---	---	---
12	8.0	6.8	7.2	11.2	10.1	10.6	---	---	---	---	---	---
13	8.3	7.1	7.7	11.2	10.5	10.8	---	---	---	---	---	---
14	10.2	7.6	8.2	11.6	11.1	11.4	13.4	12.5	13.0	---	---	---
15	10.0	7.4	8.6	11.3	10.4	10.8	13.2	12.7	12.9	---	---	---
16	9.8	8.0	8.8	12.5	10.6	11.5	13.1	12.4	12.7	---	---	---
17	10.7	8.7	9.6	12.4	11.1	11.5	13.0	12.2	12.6	---	---	---
18	10.4	8.8	9.6	12.6	10.9	11.6	13.4	12.7	13.0	---	---	---
19	9.7	7.6	8.5	11.4	11.1	11.3	13.2	12.3	12.7	---	---	---
20	8.6	7.4	7.9	11.5	10.8	11.2	13.6	12.6	13.0	---	---	---
21	7.8	7.3	7.6	11.7	11.2	11.4	13.2	12.5	12.9	---	---	---
22	7.8	7.4	7.7	11.9	11.6	11.8	13.1	12.1	12.4	---	---	---
23	7.9	7.3	7.6	11.9	11.4	11.7	13.0	12.2	12.6	---	---	---
24	8.1	7.3	7.6	13.0	11.4	11.7	12.7	12.4	12.5	---	---	---
25	8.1	7.4	7.7	11.7	11.3	11.5	12.3	12.0	12.2	---	---	---
26	9.8	8.0	9.0	12.0	11.2	11.5	12.2	11.9	12.0	---	---	---
27	9.0	7.8	8.3	11.7	11.2	11.4	12.2	11.8	11.9	---	---	---
28	8.6	8.0	8.3	12.3	11.2	11.6	12.1	11.4	11.8	---	---	---
29	9.4	8.0	8.5	11.9	11.4	11.6	11.4	11.1	11.3	---	---	---
30	8.7	.4	7.8	11.8	11.6	11.6	11.6	11.1	11.3	---	---	---
31	9.0	7.8	8.3	---	---	---	11.5	10.9	11.2	---	---	---
MONTH	10.7	.4	7.9	13.0	7.7	10.5	13.6	10.9	12.3	---	---	---

DAY	MAX	MIN FEBRUARY	MEAN	MAX	MIN MARCH	MEAN	MAX	MIN APRIL	MEAN	MAX	MIN MAY	MEAN
1	11.9	11.0	11.5	11.4	10.4	10.7	8.3	7.6	7.9	16.8	12.3	14.8
2	11.8	11.5	11.6	12.4	10.7	11.6	8.8	7.6	8.2	15.8	13.6	15.0
3	11.8	11.3	11.6	12.3	11.2	11.7	9.3	8.3	8.8	15.1	13.5	14.3
4	11.6	11.3	11.5	11.7	11.0	11.4	9.1	7.9	8.5	13.9	12.4	13.2
5	11.4	11.2	11.3	12.1	10.5	11.1	9.2	8.2	8.7	13.4	11.0	12.2
6	11.5	11.0	11.2	12.4	10.6	11.5	10.2	8.6	9.3	11.1	9.9	10.6
7	11.3	10.8	11.1	12.2	11.3	11.8	10.2	9.1	9.8	10.4	9.3	9.8
8	11.3	10.8	11.0	11.6	10.7	11.0	10.3	9.7	10.0	11.6	8.7	10.4
9	11.4	10.9	11.1	11.3	10.5	10.8	10.7	10.1	10.4	11.9	10.2	10.9
10	11.4	11.0	11.2	11.2	10.2	10.6	11.2	10.2	10.7	10.4	8.9	9.8
11	11.1	10.6	10.9	11.7	10.6	11.0	11.2	10.6	10.9	10.3	8.9	9.5
12	11.2	10.6	10.9	12.2	10.8	11.3	11.6	10.9	11.2	12.7	9.8	11.4
13	11.0	10.6	10.8	12.2	11.3	11.8	11.4	11.1	11.3	12.4	10.8	11.5
14	10.9	10.4	10.6	12.6	11.7	12.1	12.4	11.1	11.8	12.0	10.6	11.3
15	11.0	10.4	10.7	13.3	11.7	12.4	12.4	11.8	12.1	12.8	10.5	11.6
16	11.2	10.4	10.8	12.6	11.2	12.0	12.4	11.7	12.1	12.8	11.3	12.0
17	11.2	10.4	10.8	12.0	10.9	11.3	13.0	11.8	12.3	11.5	10.2	10.8
18	11.6	10.8	11.2	12.3	11.2	11.6	13.4	11.9	12.5	11.1	9.7	10.2
19	11.2	10.6	11.0	11.7	11.1	11.4	13.5	12.0	12.5	12.1	9.7	11.0
20	10.8	10.2	10.6	12.1	11.0	11.7	15.6	13.2	14.2	12.2	10.1	11.2
21	11.0	10.5	10.8	12.2	11.3	11.7	14.7	12.8	13.4	12.4	10.2	11.4
22	10.9	10.1	10.5	12.5	11.5	11.9	14.9	12.8	13.8	11.8	9.9	10.9
23	10.1	9.7	9.8	12.2	11.5	11.9	14.1	12.7	13.6	11.3	10.1	10.8
24	10.2	9.5	9.9	12.7	11.8	12.3	14.1	12.5	13.2	11.2	9.8	10.5
25	10.0	9.4	9.7	12.9	12.0	12.4	14.7	12.6	13.4	10.4	9.0	9.9
26	10.5	9.3	9.8	13.8	11.9	12.6	14.1	13.2	13.7	---	---	---
27	9.9	9.2	9.5	12.1	9.5	11.2	14.5	12.7	13.6	---	---	---
28	9.5	9.1	9.3	9.6	8.8	9.2	14.7	12.3	13.2	---	---	---
29	10.7	9.1	10.1	9.7	8.5	9.0	14.1	12.4	13.0	---	---	---
30	---	---	---	9.2	8.1	8.6	14.4	12.1	13.1	---	---	---
31	---	---	---	8.3	7.8	8.0	---	---	---	---	---	---
MONTH	11.9	9.1	10.7	13.8	7.8	11.2	15.6	7.6	11.6	16.8	8.7	11.4

ST. CROIX RIVER BASIN
05341770 ST. CROIX RIVER AT AFTON, MN--CONTINUED

OXYGEN, DISSOLVED (DO), MG/L, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980												
DAY	MAX	MIN JUNE	MEAN	MAX	MIN JULY	MEAN	MAX	MIN AUGUST	MEAN	MAX	MIN SEPTEMBER	MEAN
1	---	---	---	---	---	---	---	---	---	8.8	7.4	8.0
2	10.8	8.8	9.9	---	---	---	---	---	---	9.2	6.9	7.9
3	10.1	8.2	9.2	---	---	---	---	---	---	9.4	7.4	8.3
4	10.2	8.9	9.6	---	---	---	---	---	---	9.4	6.2	7.2
5	11.5	9.3	10.4	---	---	---	---	---	---	7.9	5.6	6.8
6	11.2	8.7	9.8	---	---	---	---	---	---	9.3	7.4	8.2
7	10.3	8.4	9.2	---	---	---	---	---	---	9.3	6.5	8.1
8	8.5	7.3	7.9	---	---	---	7.8	6.4	7.5	9.6	6.4	8.1
9	9.7	7.4	8.4	9.3	8.6	9.0	7.9	6.6	7.4	8.6	7.4	8.1
10	10.1	7.9	9.0	9.3	6.6	8.4	6.4	4.4	5.4	10.0	6.7	8.2
11	9.7	8.5	9.0	10.8	9.3	10.1	6.1	4.1	5.1	7.3	5.8	6.2
12	8.6	7.5	8.0	---	---	---	5.5	4.6	5.1	6.0	5.7	5.9
13	9.2	7.4	8.4	---	---	---	6.9	3.3	5.1	7.2	6.3	6.7
14	9.5	8.1	8.8	---	---	---	10.0	6.5	8.1	7.3	6.1	6.8
15	9.6	8.2	8.9	---	---	---	11.4	8.4	9.9	8.9	5.7	7.0
16	8.5	7.0	7.9	---	---	---	10.1	8.0	8.6	6.5	5.1	5.6
17	8.7	5.5	7.3	---	---	---	8.9	6.9	7.8	8.7	5.2	6.2
18	6.8	5.3	6.0	---	---	---	8.8	6.6	7.5	7.3	5.4	6.3
19	6.7	4.7	5.4	---	---	---	8.8	7.1	7.6	9.1	6.2	7.3
20	7.7	6.8	7.3	---	---	---	---	---	---	8.1	6.5	7.1
21	---	---	---	---	---	---	---	---	---	7.8	7.0	7.4
22	---	---	---	---	---	---	---	---	---	7.7	6.3	7.0
23	---	---	---	---	---	---	---	---	---	9.4	7.4	8.3
24	---	---	---	---	---	---	---	---	---	9.0	7.3	8.0
25	---	---	---	---	---	---	---	---	---	8.2	7.3	7.8
26	---	---	---	---	---	---	---	---	---	10.7	7.4	8.4
27	---	---	---	---	---	---	---	---	---	9.5	7.9	8.6
28	---	---	---	---	---	---	---	---	---	10.7	8.3	9.3
29	---	---	---	---	---	---	8.9	7.2	8.0	10.9	8.3	8.7
30	---	---	---	---	---	---	8.8	6.6	7.6	10.2	8.2	9.0
31	---	---	---	---	---	---	8.6	7.8	8.3	---	---	---
MONTH	11.5	4.7	8.4	10.8	6.6	9.2	11.4	3.3	7.3	10.9	5.1	7.6

ST. CROIX RIVER BASIN

0534490 ST. CROIX RIVER AT PRESCOTT, WI

LOCATION.--Lat 44°44'57", long 92°48'16", in SE 1/4 SE 1/4 Sec.9, T.27 N., R.23 W., Pierce County, Hydrologic Unit 07030005, St. Croix National Scenic Riverway, at bridge on U.S. Highway 10 and 1,000 ft (305 m) upstream from mouth.

DRAINAGE AREA.--7,500 mi² (19,400 km²), approximately.

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

REMARKS.--Discharge estimated on basis of discharge for 05340500 St. Croix River at St. Croix Falls and 05341500 Apple River near Somerset adjusted for time of travel.

COOPERATION.--Samples were collected by the Metropolitan Waste Control Commission, St. Paul, Minnesota and analyzed by U.S. Geological Survey. Discharge data for Apple River near Somerset furnished by Corps of Engineers.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

		DATE	TIME	STREAM- FLOW (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH FIELD (UNITS)	TEMPER- ATURE, WATER (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION)	FLUO- RIDE, TOTAL (MG/L AS F)					
		NOV , 1979													
		14...	0830	3850	225	8.0	6.0	10.0	83	.0					
		FEB , 1980													
		08...	0855	2150	260	7.7	.5	11.7	84	.0					
		MAY													
		08...	0900	2940	161	7.8	13.0	9.8	95	.8					
		AUG													
		05...	0930	1850	218	8.5	23.0	8.4	100	.1					
		DATE	AS AS	AS BA	AS BE	AS B)	AS CD)	AS CR)	AS CU)	AS FE)	AS PB)				
		NOV , 1979													
		14...	3	0	0	20	0	4	1	200	1				
		FEB , 1980													
		08...	1	<50	10	20	1	3	1	290	0				
		MAY													
		08...	2	<50	0	60	0	15	1	260	0				
		AUG													
		05...	2	<50	0	40	0	11	0	150	1				
		DATE	AS MN	AS HG)	AS MO)	AS NI)	AS SE)	AS AG)	AS ZN)	AS CN)					
		NOV , 1979													
		14...	150	.3	0	1	0	0	10	.00					
		FEB , 1980													
		08...	50	.2	0	2	0	0	10	.01					
		MAY													
		08...	50	<.1	1	1	0	0	10	--					
		AUG													
		05...	30	<.1	1	1	0	0	20	.00					
		DATE	TIME	STREAM- FLOW (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH FIELD (UNITS)	TEMPER- ATURE, WATER (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	ARSENIC DIS- SOLVED (UG/L AS AS)	BARIUM, DIS- SOLVED (UG/L AS BA)	BERYL- LIUM, DIS- SOLVED (UG/L AS BE)	BORON, DIS- SOLVED (UG/L AS B)	
		SEP , 1980													
		18...	0840	6020	198	7.7	18.0	6.5	70	.1	1	100	0	60	
		DATE	TIME	CADMIUM DIS- SOLVED (UG/L AS CD)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR)	CHRO- MIUM, HEXA- VALENT, DIS- SOLVED (UG/L AS CR)	COPPER, DIS- SOLVED (UG/L AS CU)	IRON, DIS- SOLVED (UG/L AS FE)	LEAD, DIS- SOLVED (UG/L AS PB)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	MERCURY DIS- SOLVED (UG/L AS HG)	NICKEL, DIS- SOLVED (UG/L AS NI)	SELE- NIUM, DIS- SOLVED (UG/L AS SE)	SILVER, DIS- SOLVED (UG/L AS AG)	ZINC, DIS- SOLVED (UG/L AS ZN)
		SEP , 1980													
		18...	0	0	0	2	10	0	0	<.1	0	0	0	0	0

MISSISSIPPI RIVER MAIN STEM

05344500 MISSISSIPPI RIVER AT PRESCOTT, WI

LOCATION.--Lat 44°44'45", long 92°48'00", in sec.9, T.26 N., R.20 W., Pierce County, Hydrologic Unit 07010206, on left bank at Prescott, 200 ft (61 m) downstream from St. Croix River, 300 ft (91 m) south of Chicago, Burlington & Quincy Railroad bridge, 800 ft (244 m) south of bridge on U.S. Highway 10, and at mile 811.4 (1,306 km) upstream from Ohio River.

DRAINAGE AREA.--44,800 mi² (116,000 km²), approximately.

PERIOD OF RECORD.--June 1928 to current year.

REVISED RECORDS.--WSP 1508: 1941. WDR MN-74: 1973.

GAGE.--Water-stage recorder. Datum of gage is 649.50 ft (197.968 m) National Geodetic Vertical Datum of 1929. Prior to Aug. 2, 1932, nonrecording gage at railroad bridge 300 ft (91 m) upstream at following datums: June 3, 1928, to Sept. 30, 1929, 19.27 ft (5.873 m) higher; Oct. 1, 1929, to Sept. 30, 1930, 17.68 ft (5.389 m) higher; Oct. 1, 1930, to Aug. 1, 1932, 19.28 ft (5.877 m) higher. Aug. 2, 1932, to Oct. 30, 1938, water-stage recorder at present site at datum 19.28 ft (5.877 m) higher; Nov. 1, 1938, to Sept. 7, 1971, water-stage recorder at present site at datum 50.00 ft (15.240 m) lower. Auxiliary water-stage recorder 10.7 mi (17.2 km) downstream from base gage.

REMARKS.--Records good. Some regulation by reservoirs, navigation dam, and powerplants at low and medium stages. Flood flow not materially affected by artificial storage.

AVERAGE DISCHARGE.--52 years, 16,300 ft³/s (461.6 m³/s), 4.94 in/yr (125 mm/yr); median of yearly mean discharges, 14,600 ft³/s (413.5 m³/s), 4.43 in/yr (113 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 228,000 ft³/s (6,460 m³/s) Apr. 18, 1965, gage height, 43.11 ft (13.140 m); minimum daily, 1,380 ft³/s (39.1 m³/s) July 13, 1940; minimum gage height, 15.08 ft (4.596 m) Aug. 29, 1934, present datum.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 43,100 ft³/s (1,220 m³/s) Apr. 11, maximum gage height, 29.78 ft (9.077 m) Apr. 12; minimum daily, 5,360 ft³/s (152 m³/s) Aug. 6-7; minimum gage height, 24.50 ft (7.468 m) Feb. 27.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980												
DAY	MEAN VALUES											
	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	11200	15400	16200	12600	9690	8810	25200	18400	8130	11900	6080	8730
2	11700	17200	13700	12200	9250	8770	27200	18100	9550	11400	5670	8690
3	11300	20700	12000	12100	9040	8670	28400	17100	13300	10500	5830	8780
4	11000	24200	12500	11800	8700	9210	29900	16300	14600	10100	5440	9380
5	10800	26100	12900	11000	8700	8980	32200	16400	19300	9780	5440	11000
6	10900	28600	13600	10900	9340	8710	35200	15300	23700	9080	5360	11800
7	10100	30200	15500	10800	9510	8590	36400	14800	24600	9440	5360	13700
8	9910	30200	16100	9000	8980	8840	37400	13500	27300	9710	5990	13300
9	10400	29900	14400	7660	9070	8830	39000	12600	27800	8590	8880	14100
10	9650	29500	13600	8600	9350	8960	42000	11800	28500	8070	9040	13100
11	9760	28600	14600	9330	9000	9130	43100	11200	27400	7530	8570	12600
12	10100	27200	15000	9240	9460	8780	41400	11900	27000	7480	8510	12100
13	9010	27000	14100	9270	9130	8870	41200	12200	27400	7180	8170	13900
14	9340	25200	12300	9490	9400	8760	39100	11500	27900	6870	7900	16300
15	8640	24000	11900	11200	9430	9180	38400	11700	27700	7120	8000	16900
16	8670	22900	12000	10800	9210	9310	36800	11300	26700	7750	7210	17900
17	9020	22700	11800	11200	9610	10000	35000	10800	25000	7340	6770	17400
18	8740	23100	10800	11100	8390	9130	32500	10300	21500	7200	7110	16600
19	8920	22000	11200	11500	9390	9560	30500	11600	20600	6490	6730	17100
20	9890	21400	12700	11000	9600	12100	29500	11200	19600	6740	7000	16300
21	9760	21100	13300	10400	9970	18500	26900	10700	18400	7140	7290	15800
22	10500	21700	13200	10500	9740	21800	25200	11000	17400	7160	7730	13300
23	11700	21300	13500	10400	10000	21000	24800	9440	16500	7510	8250	13300
24	12100	20900	13600	9460	9540	21400	24500	10200	15400	7350	8410	12600
25	12800	20300	12900	9590	9110	22000	23200	9190	15100	7600	8400	12700
26	13200	20300	12500	10500	9330	22100	22600	8870	14100	7660	8740	12800
27	12500	20800	13100	9450	8240	23100	22000	8310	13100	6820	9350	12200
28	12800	20300	13200	8630	9210	24500	20300	8660	12500	6740	9100	12300
29	14100	21100	13200	9820	9110	23500	19900	8090	11800	7510	8870	12400
30	14700	17700	12900	9510	---	24700	18600	8260	11600	7180	9300	12500
31	14500	---	12800	9560	---	25000	---	8120	---	6340	9590	---
TOTAL	337710	701600	411100	318610	268500	430790	928400	368840	593480	249280	234090	399580
MEAN	10890	22390	13260	10280	9259	13900	30950	11900	19780	8041	7551	13320
MAX	14700	30200	16200	12600	10000	25000	43100	18400	28500	11900	9590	17900
MIN	8640	15400	10800	7660	8240	8590	18600	8090	8130	6340	5360	8690
CFSM	.24	.52	.30	.23	.21	.31	.69	.27	.44	.18	.17	.30
IN.	.28	.58	.34	.26	.22	.36	.77	.31	.49	.21	.19	.33
CAL YR 1979	TOTAL	9790580	MEAN	26820	MAX	100000	MIN	6520	CFSM	.60	IN	8.13
WTR YR 1980	TOTAL	5241980	MEAN	14320	MAX	43100	MIN	5360	CFSM	.32	IN	4.35

MISSISSIPPI RIVER MAIN STEM

05344980 MISSISSIPPI RIVER AT LOCK AND DAM 3, NEAR RED WING, MN

LOCATION.--Lat 44°36'36", long 92°36'36", in SW 1/4 NW 1/4 Sec.10, T.113 N., R.15 W., Goodhue County, Hydrologic Unit 07040001, on right bank on downstream side of dam, 5 mi (8 km) northeast of Red Wing, and at mile 796.7 (1,282 km) upstream from Ohio River.

DRAINAGE AREA.--46,600 mi² (120,700 km²), approximately.

PERIOD OF RECORD.--Water years 1969 to current year.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: May 1976 to current year.

PH: May 1976 to current year.

WATER TEMPERATURES: August 1969 to current year.

DISSOLVED OXYGEN: May 1976 to current year.

INSTRUMENTATION.--Water-temperature recorder since August 1969, water-quality monitor since May 1976.

REMARKS.--Water-quality monitor inoperative part of year.

COOPERATION.--Discharge data furnished by Corps of Engineers.

EXTREMES FOR PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: Maximum, 30.5°C July 19, 1977; minimum, 0.0°C on several days during winter periods.

EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum observed, 562 micromhos Dec. 21; minimum observed, 307 micromhos Mar. 26.

PH: Maximum observed, 8.8 units May 2, 3, 4; minimum observed, 7.2 units Sept. 15.

WATER TEMPERATURES: Maximum observed, 29.0°C July 10, 15, 17, 11-13; minimum observed, 0.0°C Dec. 8, 11.

DISSOLVED OXYGEN: Maximum observed, 15.1 mg/l Oct. 16; minimum observed, 3.5 mg/l July 20.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	TIME	STREAM- FLOW (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH FIELD (UNITS)	TEMPER- ATURE, WATER (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED (MG/L)	FLUO- RIDE, TOTAL (MG/L AS F)
OCT , 1979								
22...	0955	12500	454	8.4	12.0	9.8	93	.2
DEC								
10...	0915	14600	441	7.8	1.5	13.2	97	--
FEB , 1980								
07...	1230	8700	498	7.7	.5	12.9	92	.2
APR								
04...	1000	28800	323	7.6	4.0	12.4	96	--
JUN								
05...	1030	26600	517	7.8	21.0	7.7	88	.7
AUG								
07...	0930	6400	465	8.2	25.5	8.6	106	--

DATE	ARSENIC TOTAL (UG/L AS AS)	BARIUM, TOTAL RECOV- ERABLE (UG/L AS BA)	BERYL- LIUM, TOTAL RECOV- ERABLE (UG/L AS BE)	BORON, TOTAL RECOV- ERABLE (UG/L AS B)	CADMIUM TOTAL RECOV- ERABLE (UG/L AS CD)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	LEAD, TOTAL RECOV- ERABLE (UG/L AS PB)
OCT , 1979									
22...	4	100	0	60	0	7	5	1100	4
DEC									
10...	4	100	20	--	0	3	3	440	0
FEB , 1980									
07...	1	100	0	50	0	12	4	320	0
APR									
04...	2	--	--	--	0	--	--	--	--
JUN									
05...	3	100	0	130	0	16	7	1600	7
AUG									
07...	3	100	0	90	0	10	2	830	3

DATE	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)	MERCURY TOTAL RECOV- ERABLE (UG/L AS HG)	MOLYB- DENUM, TOTAL RECOV- ERABLE (UG/L AS MO)	NICKEL, TOTAL RECOV- ERABLE (UG/L AS NI)	SELE- NIUM, TOTAL RECOV- ERABLE (UG/L AS SE)	SILVER, TOTAL RECOV- ERABLE (UG/L AS AG)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN)	CYANIDE TOTAL (MG/L AS CN)
OCT , 1979								
22...	160	.1	2	4	0	0	20	.00
DEC								
10...	90	<.1	0	5	0	0	70	.00
FEB , 1980								
07...	70	<.1	0	6	1	0	10	.01
APR								
04...	20	.1	--	--	0	--	--	.00
JUN								
05...	350	.2	4	5	1	0	50	.01
AUG								
07...	200	<.1	3	3	0	0	50	.00

MISSISSIPPI RIVER MAIN STEM

05344980 MISSISSIPPI RIVER AT LOCK AND DAM 3, NEAR RED WING, MN--CONTINUED

WATER-QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	TIME	STREAM- FLOW (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH FIELD (UNITS)	TEMPER- ATURE, WATER (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED SATUR- ATION	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	ARSENIC DIS- SOLVED (UG/L AS AS)	BARIUM, DIS- SOLVED (UG/L AS BA)	BERYL- LIUM, DIS- SOLVED (UG/L AS BE)	BORON, DIS- SOLVED (UG/L AS B)
SEP , 1980 18...	1015	15900	306	7.4	17.0	8.8	93	.2	2	200	0	70

DATE	CADMIUM DIS- SOLVED (UG/L AS CD)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR)	CHRO- MIUM, HEXA- VALENT, DIS- SOLVED (UG/L AS CR)	COPPER, DIS- SOLVED (UG/L AS CU)	IRON, DIS- SOLVED (UG/L AS FE)	LEAD, DIS- SOLVED (UG/L AS PB)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	MERCURY DIS- SOLVED (UG/L AS HG)	NICKEL, DIS- SOLVED (UG/L AS NI)	SELE- NIUM, DIS- SOLVED (UG/L AS SE)	SILVER, DIS- SOLVED (UG/L AS AG)
SEP , 1980 18...	0	1	0	3	10	0	0	<.1	2	0	0

RADIOCHEMICAL ANALYSES

DATE	TIME	STREAM- FLOW (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH FIELD (UNITS)	TEMPER- ATURE, WATER (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED SATUR- ATION	GROSS ALPHA, DIS- SOLVED (PCI/L AS U-NAT)
SEP , 1980 26...	1035	13600	360	8.0	17.0	8.0	84	<2.5
DATE	GROSS ALPHA, SUSP. TOTAL (PCI/L AS U-NAT)	GROSS ALPHA, DIS- SOLVED (UG/L AS U-NAT)	GROSS ALPHA, SUSP. TOTAL (UG/L AS U-NAT)	GROSS BETA, DIS- SOLVED (PCI/L AS CS-137)	GROSS BETA, SUSP. TOTAL (PCI/L AS CS-137)	GROSS BETA, DIS- SOLVED (PCI/L AS YT-90)	GROSS BETA, SUSP. TOTAL (PCI/L AS YT-90)	URANIUM NATURAL DIS- SOLVED (UG/L AS U)
SEP , 1980 26...	<.3	<3.7	<.5	3.5	.8	3.4	.7	1.2

MISSISSIPPI RIVER MAIN STEM

05344980 MISSISSIPPI RIVER AT LOCK AND DAM 3, NEAR RED WING, MN--CONTINUED

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DAY	MAX	MIN OCTOBER	MEAN	MAX	MIN NOVEMBER	MEAN	MAX	MIN DECEMBER	MEAN	MAX	MIN JANUARY	MEAN
1	531	518	525	505	467	493	453	412	432	504	496	500
2	529	519	523	506	492	500	465	436	450	494	479	486
3	522	505	515	494	485	489	478	414	436	479	476	477
4	503	484	494	496	489	494	452	400	435	478	474	476
5	484	444	460	489	480	485	504	455	481	478	466	470
6	472	455	468	502	487	497	---	---	---	478	467	469
7	473	467	471	503	491	499	---	---	---	491	480	485
8	473	459	468	499	493	496	---	---	---	518	489	505
9	463	457	459	503	497	500	---	---	---	506	455	480
10	468	463	464	518	502	510	---	---	---	454	445	449
11	482	467	475	528	518	523	---	---	---	452	446	449
12	480	461	472	532	478	508	---	---	---	465	451	456
13	463	456	460	492	464	479	509	498	504	500	467	486
14	455	425	434	507	483	492	505	499	502	496	479	488
15	466	435	449	489	472	480	508	503	506	478	470	475
16	459	438	453	482	470	477	512	499	504	469	453	460
17	448	438	443	491	480	485	556	514	542	454	445	448
18	444	439	441	493	480	490	547	541	544	455	444	450
19	446	440	443	483	454	466	546	510	526	460	446	455
20	460	438	452	449	434	441	521	505	510	446	441	443
21	458	451	455	458	435	444	562	526	551	442	441	442
22	454	433	441	461	456	459	555	518	532	448	441	444
23	432	422	425	459	451	455	518	514	516	465	440	452
24	426	422	424	454	443	448	519	514	515	465	448	453
25	427	424	426	445	440	443	514	511	513	447	427	434
26	432	427	430	---	---	---	519	515	517	432	427	429
27	434	429	431	---	---	---	517	514	516	470	432	453
28	439	430	434	---	---	---	518	516	517	475	470	472
29	441	436	439	466	455	459	518	514	517	470	458	464
30	453	441	446	472	407	447	513	509	511	458	452	454
31	465	453	459	---	---	---	511	505	508	---	---	---
MONTH	531	422	457	532	407	480	562	400	504	518	427	463

DAY	MAX	MIN FEBRUARY	MEAN	MAX	MIN MARCH	MEAN	MAX	MIN APRIL	MEAN	MAX	MIN MAY	MEAN
1	---	---	---	412	406	409	333	325	329	364	350	358
2	---	---	---	412	406	409	336	328	331	362	351	357
3	---	---	---	409	401	405	337	326	333	351	335	343
4	---	---	---	402	395	398	329	323	326	353	343	348
5	---	---	---	397	393	395	330	324	327	366	356	363
6	---	---	---	403	396	399	328	315	321	372	352	364
7	---	---	---	400	397	399	317	314	316	366	351	352
8	407	401	404	408	399	402	323	316	320	378	364	371
9	410	407	409	409	399	404	325	320	322	383	377	379
10	412	409	410	406	400	403	333	325	330	387	378	383
11	410	406	408	402	394	397	---	---	---	388	381	384
12	407	402	405	403	396	400	---	---	---	388	377	384
13	402	396	399	406	398	401	---	---	---	378	373	376
14	397	394	396	406	399	402	---	---	---	386	378	382
15	396	391	394	401	392	396	---	---	---	386	371	378
16	393	389	391	394	383	390	---	---	---	373	368	372
17	398	394	396	406	382	395	351	338	346	372	365	370
18	396	391	393	410	404	406	356	348	352	378	368	372
19	392	389	391	407	397	403	357	350	354	394	375	386
20	389	387	388	432	401	422	355	351	353	393	375	384
21	389	387	388	434	397	422	362	331	349	381	371	374
22	395	389	393	398	348	372	338	325	332	382	369	375
23	405	394	400	346	324	334	348	339	345	376	369	372
24	409	400	405	325	313	318	356	349	352	382	369	376
25	404	389	397	316	312	313	359	354	356	380	377	378
26	402	389	394	316	307	312	358	352	355	382	377	380
27	402	398	400	326	313	318	362	347	357	409	378	390
28	409	399	407	328	324	326	356	344	352	434	411	425
29	412	407	409	322	315	318	360	343	355	431	403	418
30	---	---	---	335	321	329	365	347	357	427	400	411
31	---	---	---	335	332	334	---	---	---	436	401	420
MONTH	412	387	399	434	307	378	365	314	340	436	335	378

MISSISSIPPI RIVER MAIN STEM

05344980 MISSISSIPPI RIVER AT LOCK AND DAM 3, NEAR RED WING, MN--CONTINUED

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DAY	MAX	MIN JUNE	MEAN	MAX	MIN JULY	MEAN	MAX	MIN AUGUST	MEAN	MAX	MIN SEPTEMBER	MEAN
1	410	390	397	477	465	470	408	401	405	418	413	415
2	444	393	420	476	466	468	406	400	403	425	417	420
3	470	442	454	477	472	475	400	386	392	427	419	424
4	477	469	474	476	466	471	399	390	394	421	413	417
5	472	453	460	472	455	464	407	399	404	426	417	421
6	456	425	444	453	441	448	411	404	408	418	393	405
7	425	398	413	459	441	448	409	404	406	396	389	392
8	434	416	427	468	444	455	408	383	396	397	388	393
9	451	424	435	484	460	472	417	376	400	395	380	390
10	463	450	456	472	442	456	390	361	361	380	373	375
11	466	455	461	456	438	446	393	377	377	383	377	380
12	468	460	464	447	420	430	415	401	401	395	372	379
13	480	467	473	443	419	430	427	410	410	396	389	392
14	486	478	482	459	443	448	423	415	418	391	380	386
15	496	481	488	458	437	446	419	409	414	382	379	381
16	509	496	502	454	440	447	414	409	411	384	378	381
17	507	494	502	511	449	481	418	410	413	378	358	370
18	532	492	517	512	435	472	427	413	419	361	323	340
19	540	525	533	442	420	429	436	409	418	331	325	329
20	540	517	531	434	418	426	412	409	411	335	330	334
21	524	517	520	447	416	432	414	408	411	332	328	329
22	524	513	518	451	439	446	412	407	410	331	314	323
23	517	506	512	442	429	435	420	411	415	314	308	311
24	523	505	509	441	420	432	438	420	427	314	308	311
25	518	507	514	434	416	426	448	432	442	326	313	316
26	521	499	515	451	429	440	435	423	431	331	323	327
27	522	492	499	434	387	409	428	419	423	334	328	331
28	497	484	490	428	381	398	423	419	421	332	327	329
29	514	496	509	404	387	394	422	420	421	339	313	333
30	512	463	486	408	386	397	425	413	420	341	327	338
31	---	---	---	410	405	407	416	407	412	---	---	---
MONTH	540	390	480	512	381	442	448	361	409	427	308	366

PH (STANDARD UNITS), WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DAY	MAX	MIN OCTOBER	MEAN	MAX	MIN NOVEMBER	MEAN	MAX	MIN DECEMBER	MEAN	MAX	MIN JANUARY	MEAN
1	8.1	7.9	8.0	8.0	7.9	8.0	8.1	8.0	8.1	7.9	7.8	7.8
2	8.0	7.9	8.0	8.0	8.0	8.0	8.1	8.0	8.0	7.9	7.8	7.9
3	8.1	7.9	8.0	8.0	8.0	8.0	8.0	7.9	7.9	7.9	7.8	7.9
4	8.0	8.0	8.0	8.0	8.0	8.0	8.0	7.9	8.0	7.9	7.8	7.8
5	8.0	7.9	8.0	8.0	7.9	7.9	8.0	8.0	8.0	7.9	7.9	7.9
6	8.0	7.9	8.0	8.0	7.9	8.0	8.0	7.9	7.9	7.9	7.8	7.8
7	8.1	8.0	8.0	8.0	7.9	7.9	7.9	7.9	7.9	7.9	7.9	7.9
8	8.1	8.0	8.1	8.0	7.9	7.9	7.9	7.9	7.9	7.9	7.9	7.9
9	8.2	8.1	8.1	7.9	7.9	7.9	7.9	7.9	7.9	7.9	7.9	7.9
10	8.2	8.1	8.1	8.0	7.9	7.9	8.0	7.8	7.9	7.9	7.8	7.8
11	8.3	8.1	8.2	8.0	7.9	7.9	8.0	7.9	7.9	7.8	7.8	7.8
12	8.3	8.2	8.2	7.9	7.9	7.9	8.0	7.9	7.9	7.8	7.8	7.8
13	8.3	8.2	8.2	8.0	7.9	7.9	8.0	7.9	7.9	7.8	7.8	7.8
14	8.3	8.1	8.2	8.0	7.9	8.0	7.9	7.9	7.9	7.8	7.8	7.8
15	8.4	8.2	8.3	8.0	8.0	8.0	7.9	7.9	7.9	7.8	7.8	7.8
16	8.6	8.3	8.4	8.0	8.0	8.0	8.0	7.9	7.9	7.8	7.7	7.8
17	---	---	---	8.0	8.0	8.0	7.9	7.9	7.9	7.8	7.7	7.7
18	---	---	---	8.0	8.0	8.0	7.9	7.9	7.9	7.7	7.7	7.7
19	---	---	---	8.0	7.9	7.9	8.0	7.9	8.0	7.8	7.7	7.8
20	---	---	---	8.0	7.9	8.0	8.0	8.0	8.0	7.8	7.7	7.7
21	---	---	---	8.0	8.0	8.0	8.0	8.0	8.0	7.7	7.7	7.7
22	---	---	---	8.0	8.0	8.0	8.0	7.9	7.9	7.8	7.7	7.8
23	---	---	---	8.0	8.0	8.0	7.9	7.9	7.9	7.8	7.8	7.8
24	---	---	---	8.0	8.0	8.0	7.9	7.9	7.9	7.8	7.8	7.8
25	8.0	7.9	8.0	8.0	8.0	8.0	7.9	7.9	7.9	7.8	7.8	7.8
26	8.0	7.9	8.0	8.0	7.9	7.9	7.9	7.9	7.9	7.8	7.8	7.8
27	8.0	7.9	7.9	8.0	8.0	8.0	7.9	7.9	7.9	7.8	7.8	7.8
28	7.9	7.9	7.9	8.1	8.0	8.0	7.9	7.9	7.9	7.8	7.7	7.8
29	7.9	7.8	7.9	8.1	8.0	8.1	7.9	7.8	7.9	7.8	7.7	7.8
30	7.9	7.9	7.9	8.1	8.0	8.1	7.9	7.8	7.9	7.8	7.7	7.8
31	7.9	7.9	7.9	---	---	---	7.9	7.8	7.9	7.8	7.7	7.7
MONTH	8.6	7.8	8.1	8.1	7.9	8.0	8.1	7.8	7.9	7.9	7.7	7.8

MISSISSIPPI RIVER MAIN STEM

05344980 MISSISSIPPI RIVER AT LOCK AND DAM 3, NEAR RED WING, MN--CONTINUED

PH (STANDARD UNITS), WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DAY	MAX	MIN FEBRUARY	MEAN	MAX	MIN MARCH	MEAN	MAX	MIN APRIL	MEAN	MAX	MIN MAY	MEAN
1	---	---	---	7.9	7.8	7.9	7.8	7.8	7.8	8.6	8.5	8.6
2	---	---	---	7.9	7.8	7.8	7.9	7.8	7.8	8.8	8.5	8.6
3	---	---	---	7.9	7.8	7.8	7.9	7.9	7.9	8.8	8.6	8.7
4	---	---	---	7.9	7.8	7.9	8.0	7.6	7.9	8.8	8.6	8.7
5	---	---	---	7.9	7.8	7.8	8.0	7.9	7.9	8.7	8.5	8.6
6	---	---	---	7.8	7.8	7.8	8.0	7.8	7.9	8.8	8.6	8.7
7	7.9	7.7	7.8	7.8	7.7	7.8	7.9	7.8	7.9	8.8	8.5	8.6
8	7.8	7.8	7.8	7.8	7.7	7.8	8.0	7.8	7.9	8.6	8.5	8.5
9	7.8	7.8	7.8	7.8	7.8	7.8	8.1	7.9	8.0	8.7	8.5	8.6
10	7.8	7.8	7.8	---	---	---	8.0	8.0	8.0	8.6	8.5	8.5
11	7.8	7.8	7.8	---	---	---	---	---	---	8.7	8.4	8.6
12	7.9	7.8	7.8	---	---	---	---	---	---	8.7	8.6	8.6
13	8.0	7.8	7.9	---	---	---	---	---	---	8.7	8.5	8.6
14	8.0	7.9	7.9	---	---	---	---	---	---	8.7	8.5	8.6
15	8.0	7.8	7.9	---	---	---	---	---	---	8.7	8.5	8.6
16	7.9	7.9	7.9	---	---	---	---	---	---	8.6	8.3	8.4
17	7.9	7.8	7.9	---	---	---	---	---	---	8.3	8.2	8.3
18	7.9	7.8	7.9	---	---	---	---	---	---	8.3	8.1	8.2
19	8.0	7.7	7.9	---	---	---	---	---	---	8.4	8.1	8.2
20	7.9	7.8	7.9	7.9	7.9	7.9	---	---	---	8.4	8.1	8.2
21	7.9	7.8	7.9	7.9	7.8	7.9	---	---	---	8.6	8.2	8.4
22	7.9	7.9	7.9	7.8	7.7	7.8	---	---	---	8.6	8.3	8.5
23	8.0	7.9	7.9	7.7	7.6	7.6	---	---	---	8.5	8.4	8.4
24	8.0	7.8	8.0	7.6	7.6	7.6	8.7	8.2	8.5	8.5	8.3	8.4
25	8.0	7.9	8.0	7.6	7.6	7.6	8.7	8.5	8.6	8.3	8.1	8.2
26	8.0	7.9	8.0	7.6	7.6	7.6	8.7	8.5	8.6	8.1	8.0	8.0
27	8.0	7.9	7.9	7.7	7.6	7.7	8.7	8.4	8.6	8.0	7.7	7.8
28	7.9	7.7	7.8	7.7	7.7	7.7	8.7	8.5	8.6	7.8	7.6	7.7
29	7.9	7.7	7.8	7.7	7.7	7.7	8.6	8.5	8.6	7.9	7.6	7.7
30	---	---	---	7.8	7.7	7.7	8.6	8.4	8.5	7.9	7.6	7.7
31	---	---	---	7.8	7.6	7.8	---	---	---	7.8	7.5	7.6
MONTH	8.0	7.7	7.9	7.9	7.6	7.8	8.7	7.6	8.2	8.8	7.5	8.4

DAY	MAX	MIN JUNE	MEAN	MAX	MIN JULY	MEAN	MAX	MIN AUGUST	MEAN	MAX	MIN SEPTEMBER	MEAN
1	7.8	7.5	7.6	8.2	8.0	8.1	8.2	8.0	8.1	8.0	7.8	7.8
2	7.7	7.6	7.6	8.4	8.1	8.2	8.2	7.9	8.1	8.0	7.8	7.8
3	7.8	7.6	7.6	8.2	8.1	8.1	8.0	7.8	7.9	7.9	7.7	7.8
4	7.6	7.6	7.6	8.4	8.1	8.2	7.8	7.6	7.7	8.1	8.0	8.0
5	7.8	7.6	7.6	8.2	8.1	8.2	7.7	7.5	7.6	8.1	8.0	8.0
6	7.6	7.5	7.5	8.2	8.1	8.1	8.1	7.4	7.8	8.1	8.0	8.1
7	7.6	7.5	7.5	8.4	8.1	8.2	8.0	7.9	7.9	8.1	7.9	8.0
8	7.6	7.5	7.6	8.3	8.1	8.2	8.0	7.8	7.9	8.1	8.0	8.0
9	7.6	7.6	7.6	8.4	8.0	8.2	7.9	7.7	7.8	8.3	8.0	8.1
10	7.6	7.6	7.6	8.5	8.1	8.3	7.7	7.6	7.7	8.2	7.8	8.0
11	7.7	7.6	7.6	8.3	8.1	8.2	7.7	7.5	7.6	7.8	7.6	7.7
12	7.6	7.6	7.6	8.3	8.1	8.2	7.5	7.4	7.4	7.6	7.5	7.6
13	7.6	7.5	7.6	8.3	8.1	8.1	7.9	7.4	7.7	7.5	7.4	7.5
14	7.6	7.6	7.6	8.2	8.0	8.1	8.0	7.7	7.9	7.4	7.3	7.3
15	7.7	7.6	7.6	8.2	8.0	8.1	8.0	7.8	7.9	7.5	7.2	7.3
16	7.7	7.7	7.7	8.2	8.0	8.1	7.9	7.8	7.8	7.5	7.4	7.5
17	7.7	7.7	7.7	8.3	8.0	8.2	7.9	7.7	7.8	7.5	7.4	7.5
18	8.1	7.7	7.9	8.2	8.0	8.1	7.8	7.7	7.7	7.5	7.4	7.4
19	8.2	8.1	8.1	8.1	8.0	8.0	8.2	7.7	7.9	7.5	7.4	7.5
20	8.2	8.1	8.2	8.3	8.0	8.1	8.1	7.9	8.0	7.5	7.4	7.5
21	8.2	8.1	8.1	8.4	8.1	8.2	8.1	7.9	8.0	7.5	7.4	7.4
22	8.2	8.1	8.2	8.2	8.0	8.1	8.1	7.9	8.0	7.4	7.3	7.3
23	8.3	8.1	8.2	8.4	8.0	8.2	8.0	8.0	8.0	7.3	7.3	7.3
24	8.3	8.2	8.2	8.3	8.0	8.1	8.0	7.9	8.0	7.5	7.2	7.4
25	8.4	8.1	8.2	8.2	8.0	8.1	8.2	7.9	8.0	7.5	7.4	7.4
26	8.4	8.2	8.3	8.2	7.9	8.1	8.1	7.9	8.0	7.5	7.5	7.5
27	8.3	8.1	8.2	8.2	7.9	8.0	8.0	7.8	7.9	7.6	7.4	7.5
28	8.2	8.1	8.2	8.3	7.8	8.1	7.9	7.9	7.9	7.5	7.4	7.4
29	8.2	8.1	8.1	8.3	8.0	8.1	8.0	7.8	7.9	7.5	7.4	7.4
30	8.2	8.0	8.1	8.3	7.9	8.1	8.0	7.9	7.9	7.5	7.4	7.4
31	---	---	---	8.3	8.1	8.2	7.9	7.8	7.8	---	---	---
MONTH	8.4	7.5	7.8	8.5	7.8	8.1	8.2	7.4	7.9	8.3	7.2	7.6

MISSISSIPPI RIVER MAIN STEM

05344980 MISSISSIPPI RIVER AT LOCK AND DAM 3, NEAR RED WING, MN--CONTINUED

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

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

DAY	MAX	MIN FEBRUARY	MEAN	MAX	MIN MARCH	MEAN	MAX	MIN APRIL	MEAN	MAX	MIN MAY	MEAN
1	---	---	---	1.0	1.0	1.0	5.0	3.5	4.0	23.5	14.5	17.0
2	---	---	---	1.0	1.0	1.0	6.0	4.0	4.5	18.5	15.5	16.5
3	---	---	---	1.5	1.0	1.0	5.5	4.0	5.0	20.0	16.5	18.0
4	---	---	---	1.5	1.0	1.0	5.5	3.5	4.5	22.5	17.5	19.5
5	---	---	---	1.0	1.0	1.0	7.0	4.5	5.5	20.5	18.5	19.0
6	---	---	---	1.0	1.0	1.0	7.0	5.5	6.0	18.5	17.0	18.0
7	1.0	.5	1.0	1.0	1.0	1.0	7.0	6.0	6.5	17.5	15.5	16.5
8	1.0	1.0	1.0	1.0	1.0	1.0	7.0	5.5	6.0	18.0	16.0	16.5
9	1.0	1.0	1.0	1.0	1.0	1.0	5.5	4.5	4.5	19.0	16.0	17.0
10	1.0	1.0	1.0	1.5	1.0	1.0	5.0	4.0	4.5	17.5	16.5	17.0
11	1.0	1.0	1.0	1.0	1.0	1.0	---	---	---	17.0	16.5	17.0
12	1.0	1.0	1.0	1.0	1.0	1.0	---	---	---	19.0	16.5	17.5
13	1.0	1.0	1.0	1.5	1.0	1.0	---	---	---	18.0	17.0	17.5
14	1.0	1.0	1.0	1.5	1.0	1.5	---	---	---	18.5	16.5	17.0
15	1.0	1.0	1.0	2.0	1.5	1.5	---	---	---	17.5	16.5	17.0
16	1.0	1.0	1.0	2.0	1.5	2.0	---	---	---	17.5	17.0	17.0
17	1.0	1.0	1.0	2.0	1.5	1.5	10.0	7.0	8.5	17.5	16.5	17.0
18	1.0	1.0	1.0	2.5	1.5	2.0	11.0	8.0	9.5	18.5	17.0	17.5
19	1.0	1.0	1.0	3.0	2.0	2.5	12.0	9.5	10.5	19.5	16.5	17.5
20	1.5	1.0	1.0	2.5	2.0	2.5	12.5	10.5	11.5	19.0	17.5	18.0
21	1.5	1.0	1.0	3.0	2.0	2.5	13.0	11.5	12.5	21.0	18.5	19.5
22	1.5	1.0	1.0	2.5	2.0	2.0	14.5	12.0	13.0	22.5	19.5	20.5
23	1.0	1.0	1.0	2.0	1.5	2.0	15.0	12.5	14.0	22.5	20.5	21.0
24	1.0	1.0	1.0	2.5	1.5	2.0	14.0	13.0	13.5	23.5	21.0	22.0
25	1.0	1.0	1.0	2.5	1.5	2.0	14.0	13.0	13.5	24.0	21.5	22.5
26	1.0	1.0	1.0	3.0	2.0	2.5	13.5	13.0	13.0	23.0	22.5	22.5
27	1.0	1.0	1.0	3.0	2.5	2.5	15.0	12.5	13.5	25.5	22.0	23.0
28	1.5	1.0	1.5	2.5	2.5	2.5	15.5	13.0	14.0	24.5	23.0	24.0
29	1.5	1.0	1.0	3.5	2.5	3.0	15.5	13.5	14.0	24.5	23.5	24.0
30	---	---	---	4.5	3.0	3.5	17.5	13.5	15.0	26.0	23.5	24.0
31	---	---	---	4.5	3.5	4.0	---	---	---	24.5	23.0	23.5
MONTH	1.5	.5	1.0	4.5	1.0	2.0	17.5	3.5	9.5	26.0	14.5	19.0

MISSISSIPPI RIVER MAIN STEM

05344980 MISSISSIPPI RIVER AT LOCK AND DAM 3, NEAR RED WING, MN--CONTINUED

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DAY	MAX	MIN JUNE	MEAN	MAX	MIN JULY	MEAN	MAX	MIN AUGUST	MEAN	MAX	MIN SEPTEMBER	MEAN
1	24.5	22.5	23.0	24.0	22.0	23.0	27.5	25.0	26.5	23.5	21.5	22.0
2	23.0	22.5	22.5	25.5	22.5	23.5	27.5	25.0	26.0	23.5	22.0	22.0
3	24.0	22.5	23.0	24.5	23.5	24.0	26.0	24.5	25.5	22.0	21.5	22.0
4	24.0	23.0	23.5	26.0	24.0	24.0	26.0	24.0	25.0	22.5	22.0	22.5
5	23.0	22.0	22.5	25.5	24.5	24.5	25.0	23.5	24.0	22.5	21.5	22.0
6	23.5	22.0	23.0	24.5	24.0	24.5	25.5	23.5	24.0	22.0	21.5	22.0
7	23.5	22.0	23.0	28.5	24.5	25.5	25.0	24.0	24.5	22.5	22.0	22.0
8	22.0	21.0	21.5	27.0	25.0	25.5	26.0	23.5	25.0	23.5	22.0	22.5
9	22.0	21.0	21.5	28.5	25.0	26.5	24.5	23.5	24.0	23.0	22.0	22.5
10	23.0	21.5	22.0	29.0	26.5	28.0	24.0	23.0	23.5	22.0	21.5	22.0
11	23.5	21.5	22.5	28.0	27.0	27.5	24.5	23.0	23.5	22.0	20.5	21.0
12	23.0	22.0	22.0	28.0	26.5	27.5	24.0	22.5	23.0	20.5	20.0	20.0
13	23.0	22.0	22.5	27.5	26.5	27.0	26.0	23.0	24.5	20.5	20.0	20.0
14	25.0	23.0	24.0	28.5	27.0	27.5	26.0	23.5	25.0	20.0	19.5	19.5
15	24.5	23.5	24.0	29.0	27.0	27.5	24.5	24.0	24.5	19.5	19.0	19.0
16	24.0	22.5	23.0	27.5	26.5	27.0	24.0	22.5	23.5	19.5	18.0	18.5
17	24.0	22.0	23.5	29.0	27.0	27.5	22.5	21.5	22.0	18.0	17.5	18.0
18	23.5	22.0	23.0	28.0	26.5	27.0	23.0	21.5	22.0	18.0	17.5	17.5
19	23.5	22.0	22.5	27.0	26.0	26.5	26.0	22.5	23.0	18.0	17.0	17.5
20	23.0	22.0	22.5	26.5	26.0	26.0	24.5	23.0	23.5	19.0	18.0	18.0
21	24.0	22.5	23.0	27.5	25.5	26.0	24.5	23.0	23.5	18.5	17.5	18.0
22	24.5	23.0	23.5	27.0	25.0	26.0	24.0	23.0	23.0	18.0	17.5	17.5
23	25.0	23.5	24.0	27.5	25.0	26.0	23.5	22.5	23.0	17.5	17.0	17.0
24	27.5	24.0	24.5	27.0	24.5	25.5	23.0	22.5	22.5	18.0	17.0	17.5
25	26.0	24.0	25.0	28.0	25.0	26.5	25.5	22.5	23.5	17.0	16.0	16.5
26	28.5	24.5	26.0	27.5	25.0	26.0	25.0	23.0	23.5	16.0	15.5	16.0
27	28.0	25.0	25.5	27.5	25.0	26.0	23.0	22.0	22.5	16.0	15.5	15.5
28	25.0	24.0	24.5	27.5	25.5	26.0	22.5	22.0	22.0	16.0	15.5	15.5
29	24.0	22.0	22.5	28.5	25.0	26.0	23.0	22.0	22.0	17.0	15.5	15.5
30	22.5	21.5	22.0	28.5	25.0	26.0	25.0	22.5	23.5	17.5	16.0	16.0
31	---	---	---	28.0	25.5	26.5	22.5	22.0	22.0	---	---	---
MONTH	28.5	21.0	23.0	29.0	22.0	26.0	27.5	21.5	23.5	23.5	15.5	19.0

OXYGEN, DISSOLVED (DO), MG/L, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DAY	MAX	MIN OCTOBER	MEAN	MAX	MIN NOVEMBER	MEAN	MAX	MIN DECEMBER	MEAN	MAX	MIN JANUARY	MEAN
1	7.1	5.8	6.3	9.4	8.7	9.1	13.2	12.5	12.8	13.2	12.9	13.0
2	8.5	5.5	6.6	9.7	9.2	9.4	---	---	---	13.3	13.0	13.2
3	9.8	8.0	8.9	9.9	9.2	9.5	---	---	---	13.2	13.0	13.1
4	9.1	8.3	8.8	9.9	9.2	9.6	---	---	---	13.4	13.0	13.3
5	9.8	7.6	8.6	9.9	9.2	9.5	---	---	---	13.2	12.9	13.1
6	9.9	8.8	9.3	10.5	9.9	10.3	---	---	---	13.1	12.7	12.9
7	10.6	9.2	9.8	11.4	10.1	10.9	---	---	---	13.1	12.6	12.8
8	10.9	9.4	10.1	11.8	11.5	11.7	---	---	---	13.7	12.8	13.3
9	10.8	9.3	10.0	11.7	11.4	11.5	---	---	---	13.5	12.9	13.2
10	10.4	9.5	10.0	11.9	11.5	11.7	---	---	---	13.2	12.9	13.0
11	11.4	9.5	10.4	12.1	11.9	12.0	---	---	---	13.2	12.9	13.0
12	11.4	10.0	10.6	---	---	---	---	---	---	13.2	12.9	13.0
13	11.8	9.5	10.5	---	---	---	13.0	12.7	12.8	13.3	12.8	13.1
14	11.2	9.5	10.4	---	---	---	13.0	12.5	12.7	12.9	12.6	12.8
15	12.5	10.1	11.2	13.4	12.8	13.1	12.7	12.5	12.6	12.8	12.6	12.7
16	15.1	11.5	13.0	12.9	12.3	12.5	12.9	12.5	12.7	13.1	12.7	12.9
17	14.4	12.6	13.6	12.6	12.2	12.4	13.5	12.9	13.2	13.1	12.7	12.9
18	14.0	11.1	12.3	12.8	12.0	12.5	14.0	13.6	13.8	12.9	12.6	12.8
19	11.4	9.9	10.6	12.4	11.8	12.0	14.3	13.3	13.8	13.0	12.6	12.8
20	10.9	9.5	10.1	12.2	11.5	11.7	14.4	14.0	14.2	13.0	12.7	12.8
21	10.3	9.1	9.5	12.4	11.7	12.0	14.7	14.3	14.5	13.0	12.7	12.9
22	9.8	7.7	8.2	12.2	11.9	12.1	14.3	13.8	14.0	13.2	12.8	13.0
23	8.7	7.8	8.2	12.0	11.7	11.8	14.1	13.8	13.9	13.3	12.8	13.0
24	9.2	8.3	8.8	11.9	11.6	11.8	14.0	13.8	13.9	13.2	12.7	12.9
25	9.4	8.6	9.0	12.1	11.8	11.9	14.2	14.0	14.1	12.6	11.9	12.2
26	9.3	8.5	8.9	13.0	10.4	11.9	14.2	14.0	14.1	12.1	11.8	12.0
27	8.6	8.1	8.4	14.2	12.8	13.4	14.1	13.3	13.6	12.5	12.0	12.3
28	8.5	8.0	8.3	15.1	12.5	13.3	13.5	13.2	13.4	12.5	12.3	12.4
29	8.8	8.1	8.4	13.4	12.7	13.0	13.5	13.3	13.4	12.3	12.2	12.2
30	8.7	8.3	8.5	13.4	12.5	13.0	13.4	13.2	13.3	12.5	12.2	12.3
31	9.1	7.9	8.6	---	---	---	13.2	12.9	13.1	13.1	11.7	12.0
MONTH	15.1	5.5	9.6	15.1	8.7	11.6	14.7	12.5	13.5	13.7	11.7	12.8

MISSISSIPPI RIVER MAIN STEM

05344980 MISSISSIPPI RIVER AT LOCK AND DAM 3, NEAR RED WING, MN--CONTINUED

OXYGEN, DISSOLVED (DO), MG/L, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DAY	MAX	MIN FEBRUARY	MEAN	MAX	MIN MARCH	MEAN	MAX	MIN APRIL	MEAN	MAX	MIN MAY	MEAN
1	---	---	---	12.0	11.4	11.7	---	---	---	---	---	---
2	---	---	---	11.8	11.3	11.6	---	---	---	---	---	---
3	---	---	---	11.8	11.2	11.5	---	---	---	---	---	---
4	---	---	---	11.6	11.2	11.4	---	---	---	---	---	---
5	---	---	---	12.2	11.2	11.8	---	---	---	---	---	---
6	---	---	---	12.1	11.6	11.8	---	---	---	---	---	---
7	---	---	---	11.7	11.0	11.5	---	---	---	---	---	---
8	10.8	10.6	10.7	11.7	11.0	11.4	---	---	---	---	---	---
9	10.8	10.5	10.7	11.5	11.2	11.3	---	---	---	---	---	---
10	10.7	10.5	10.6	11.5	10.8	11.2	---	---	---	---	---	---
11	10.6	10.4	10.5	11.7	11.0	11.2	---	---	---	---	---	---
12	10.5	10.4	10.4	11.7	10.9	11.4	---	---	---	---	---	---
13	10.6	9.6	10.1	11.7	11.3	11.5	---	---	---	---	---	---
14	9.8	9.5	9.6	11.4	11.0	11.2	---	---	---	---	---	---
15	9.8	9.1	9.5	11.8	10.9	11.3	---	---	---	---	---	---
16	9.5	9.1	9.3	11.8	11.0	11.5	---	---	---	---	---	---
17	9.5	9.1	9.3	11.9	11.1	11.6	12.7	10.5	11.4	---	---	---
18	9.4	9.1	9.3	11.9	11.4	11.7	12.2	10.5	11.4	---	---	---
19	9.3	8.8	9.0	---	---	---	11.7	9.8	10.8	---	---	---
20	9.2	8.8	9.0	---	---	---	12.0	9.3	10.6	---	---	---
21	9.2	8.7	9.0	---	---	---	11.4	9.0	10.2	---	---	---
22	9.3	9.1	9.2	---	---	---	11.2	8.6	9.6	---	---	---
23	10.6	9.6	10.1	---	---	---	---	---	---	---	---	---
24	11.1	10.7	11.0	---	---	---	---	---	---	---	---	---
25	11.3	11.0	11.2	---	---	---	---	---	---	---	---	---
26	11.4	11.1	11.2	---	---	---	---	---	---	---	---	---
27	11.6	11.4	11.6	---	---	---	---	---	---	---	---	---
28	11.6	11.3	11.4	---	---	---	---	---	---	---	---	---
29	11.9	11.4	11.7	---	---	---	---	---	---	---	---	---
30	---	---	---	---	---	---	---	---	---	---	---	---
31	---	---	---	---	---	---	---	---	---	---	---	---
MONTH	11.9	8.7	10.2	12.2	10.8	11.5	12.7	8.6	10.7	---	---	---

DAY	MAX	MIN JUNE	MEAN	MAX	MIN JULY	MEAN	MAX	MIN AUGUST	MEAN	MAX	MIN SEPTEMBER	MEAN
1	---	---	---	7.9	7.0	7.4	8.8	5.4	7.1	6.8	6.2	6.4
2	---	---	---	11.4	6.7	8.4	8.3	6.5	7.1	7.2	6.3	6.6
3	---	---	---	9.1	7.9	8.4	7.7	5.8	6.4	7.0	6.1	6.5
4	---	---	---	9.3	7.0	7.9	7.4	5.7	6.6	7.6	6.5	6.9
5	---	---	---	8.0	7.0	7.5	7.2	5.3	6.4	7.1	6.2	6.6
6	---	---	---	7.2	6.4	6.8	8.0	6.0	7.0	6.6	5.9	6.2
7	---	---	---	9.2	6.1	7.2	7.4	6.0	6.8	6.3	6.0	6.1
8	---	---	---	8.0	5.9	6.6	6.9	6.0	6.4	6.3	5.5	5.8
9	---	---	---	11.4	5.1	8.1	5.9	5.0	5.4	7.6	5.0	6.3
10	---	---	---	12.8	7.9	9.8	5.6	4.3	5.2	7.5	6.8	7.1
11	---	---	---	9.4	6.9	8.2	6.4	5.6	5.9	7.3	5.9	6.4
12	---	---	---	8.8	7.2	7.8	7.7	6.0	6.6	6.3	5.9	6.1
13	7.9	6.8	7.4	7.2	5.6	6.3	6.8	6.2	6.5	6.1	5.4	5.8
14	8.6	7.0	7.7	8.1	4.8	6.2	7.4	5.3	6.2	5.8	5.0	5.4
15	9.3	7.6	8.5	7.4	4.9	6.0	8.9	5.5	7.2	7.7	5.0	6.4
16	9.5	8.1	8.8	8.5	5.2	7.1	7.9	7.3	7.5	8.5	7.8	8.1
17	9.2	8.5	8.8	9.7	6.4	7.6	8.2	7.5	7.7	8.8	8.3	8.6
18	8.7	7.0	7.9	7.8	5.7	6.7	8.4	7.1	7.6	8.8	8.7	8.7
19	9.0	7.2	8.0	6.6	4.8	5.8	9.8	7.1	8.1	9.2	8.3	8.7
20	8.8	7.4	8.1	4.6	3.5	4.0	8.1	7.1	7.5	9.0	7.9	8.4
21	8.7	7.5	8.1	9.1	3.8	6.3	8.1	6.6	7.4	8.2	7.8	8.0
22	9.1	7.7	8.3	7.7	6.1	6.8	9.1	6.9	7.7	8.0	7.1	7.5
23	10.6	8.7	9.4	9.6	5.6	7.5	8.0	7.4	7.7	7.4	6.9	7.2
24	10.0	7.8	8.8	8.5	6.5	7.4	7.6	7.0	7.3	9.5	6.6	8.0
25	10.1	6.9	8.5	7.3	5.4	6.3	9.1	6.5	7.3	9.0	8.4	8.7
26	10.7	8.6	9.4	6.4	4.6	5.3	7.3	6.2	6.7	8.9	8.4	8.7
27	10.1	8.1	8.7	7.3	4.9	6.0	6.6	5.8	6.2	9.5	8.5	9.0
28	8.9	7.8	8.4	8.5	4.7	6.4	6.3	5.4	5.8	9.1	8.1	8.5
29	8.5	7.8	8.1	7.6	5.7	6.3	6.1	4.3	5.7	9.3	7.8	8.1
30	8.5	7.2	7.7	8.0	5.6	6.5	6.4	5.5	5.8	9.3	7.3	7.7
31	---	---	---	8.1	5.7	6.8	6.2	5.7	5.9	---	---	---
MONTH	10.7	6.8	8.4	12.8	3.5	7.0	9.8	4.3	6.7	9.5	5.0	7.3



CHIPPEWA RIVER BASIN

CHIPPEWA RIVER BASIN

05356000 CHIPPEWA RIVER AT BISHOPS BRIDGE, NEAR WINTER, WI

LOCATION.--Lat 45°50'57", long 91°04'44", in SW 1/4 NE 1/4 sec.23, T.39 N., R.6 W., Sawyer County, Hydrologic Unit 07050001, on right bank 15 ft (5 m) upstream from highway bridge on County Trunk Highway G, 3.2 mi (5.1 km) downstream from Lake Chippewa Dam, and 3.7 mi (6.0 km) northwest of Winter.

DRAINAGE AREA.--787 mi² (2,038 km²).

PERIOD OF RECORD.--February 1912 to current year. December to April 1913, monthly discharge only, published in WSP 1308.

REVISED RECORDS.--WSP 1208: Drainage area. WSP 1438: 1913(M), 1915-18(M), 1919, 1920-23(M), 1924, 1925(M), 1927(M), 1928, 1929-30(M), 1939(M).

GAGE.--Water-stage recorder. Datum of gage is 1,256.78 ft (383.067 m) National Geodetic Vertical Datum of 1929 (levels by Wilhelm Engineering Co.). See WSP 1708 or 1728 for history of changes prior to July 23, 1930.

REMARKS.--Records good. Flow regulated by Moose Lake and Lake Chippewa (see reservoir records at end of Chippewa River Basin).

AVERAGE DISCHARGE.--68 years, 712 ft³/s (20.16 m³/s).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 7,520 ft³/s (213 m³/s) Sept. 4, 5, 1941, gage height, 11.05 ft (3.368 m); minimum, 14 ft³/s (0.40 m³/s) Apr. 17-20, 1925, gage height, 3.25 ft (0.991 m).

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,720 ft³/s (48.7 m³/s) Sept. 21, gage height, 6.29 ft (1.917 m); minimum discharge, 84 ft³/s (2.38 m³/s) June 25, gage height 3.82 ft (1.164 m).

RATING TABLE (gage height, in feet, and discharge, in cubic feet per second).
(Shifting-control method used Oct. 1-31.)

3.9	118	5.0	640
4.0	150	6.0	1,450
4.5	360	7.0	2,470

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	MEAN VALUES											
	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	182	264	843	1310	1180	923	191	160	164	154	132	224
2	180	441	1040	1300	1180	920	198	160	165	152	131	219
3	179	502	1060	1300	1170	898	201	160	159	155	131	298
4	178	502	818	1300	1170	620	200	161	157	157	136	473
5	178	501	813	1300	1160	460	210	160	160	167	133	400
6	178	501	813	1290	1160	330	214	162	162	170	133	595
7	176	503	814	1290	1150	320	215	159	162	169	142	992
8	175	501	820	1290	1140	320	219	159	162	167	147	1290
9	175	561	812	1290	1140	320	206	159	159	166	132	1620
10	176	849	811	1280	1130	320	200	161	153	152	325	1610
11	176	849	997	1270	1130	320	201	160	153	146	161	1610
12	177	830	1400	1270	1120	301	205	158	153	146	155	1610
13	174	822	1390	1260	1110	301	201	158	155	147	154	1630
14	175	824	1390	1260	1110	302	198	158	153	146	153	1200
15	174	825	1380	1250	1100	302	198	157	152	146	152	756
16	175	828	1380	1250	1100	304	198	155	152	146	153	784
17	167	825	1380	1250	1090	303	191	156	153	144	155	806
18	167	827	1370	1240	1090	305	186	163	156	147	153	802
19	171	830	1370	1240	1080	305	184	159	155	145	153	806
20	167	831	1360	1240	1070	236	183	157	153	155	197	845
21	166	829	1360	1230	1070	174	177	143	153	149	215	1460
22	179	829	1350	1230	1060	174	169	142	153	146	173	1660
23	177	829	1350	1220	1050	174	164	142	153	145	165	1300
24	170	829	1340	1220	1050	174	160	143	153	146	173	956
25	157	825	1340	1210	1040	175	162	143	148	153	173	889
26	121	828	1340	1210	1040	176	161	144	153	133	172	886
27	121	825	1330	1210	1020	177	161	147	158	130	175	883
28	120	826	1330	1200	970	174	159	147	156	131	168	883
29	120	825	1330	1190	943	176	160	151	155	129	166	884
30	119	826	1320	1190	---	179	159	162	153	130	195	880
31	125	---	1310	1190	---	188	---	161	---	129	220	---
TOTAL	5075	21687	36761	38780	31823	10351	5631	4807	4673	4598	5123	29251
MEAN	164	723	1186	1251	1097	334	188	155	156	148	165	975
MAX	182	849	1400	1310	1180	923	219	163	165	170	325	1660
MIN	119	264	811	1190	943	174	159	142	148	129	131	219
CAL YR 1979	TOTAL	256682	MEAN	703	MAX	2450	MIN	119				
WTR YR 1980	TOTAL	198560	MEAN	543	MAX	1660	MIN	119				

CHIPPEWA RIVER BASIN

05356500 CHIPPEWA RIVER NEAR BRUCE, WI

LOCATION.--Lat 45°27'08", long 91°15'39", in SE 1/4 sec.5, T.34 N., R.7 W., Rusk County, Hydrologic Unit 07050001, on right bank 1.0 mi (1.6 km) east of Bruce and 1.0 mi (1.6 km) downstream from Thornapple River.

DRAINAGE AREA.--1,630 mi² (4,220 km²), approximately.

PERIOD OF RECORD.--December 1913 to current year.

REVISED RECORDS.--WSP 875: 1936-38. WSP 1278: Drainage area. WSP 1308: 1922, 1937(M). WSP 1508: 1914-26(M), 1927, 1928-31(M), 1932, 1933(M), 1934-36, 1938.

GAGE.--Water-stage recorder. Datum of gage is 1,059.62 ft (322.972 m) National Geodetic Vertical Datum of 1929. Prior to May 28, 1935, nonrecording gage at railroad bridge 0.8 mi (1.3 km) upstream at datum 2.30 ft (0.701 m) higher.

REMARKS.--Records good except those for winter period, which are fair. Flow from 48 percent of the drainage area regulated by Moose Lake and Lake Chippewa (see reservoir records at end of Chippewa River Basin).

AVERAGE DISCHARGE.--66 years, 1,457 ft³/s (41.26 m³/s).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 25,800 ft³/s (731 m³/s) Sept. 1, 1941, gage height, 20.46 ft (6.236 m), from floodmarks, from rating curve extended above 20,000 ft³/s (566 m³/s); minimum, 155 ft³/s (4.39 m³/s) June 10, 1932, gage height, 0.9 ft (0.274 m), site and datum then in use.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 9,430 ft³/s (267 m³/s) Sept. 5, gage height, 10.09 ft (3.075 m); minimum, 299 ft³/s (8.47 m³/s) July 19, gage height, 1.36 ft (0.414 m).

RATING TABLE (gage height, in feet, and discharge, in cubic feet per second).
(Stage-discharge relation affected by ice Nov. 25 to Mar. 31.)

1.3	260	6.0	4,300
2.0	740	9.0	7,920
4.0	2,320	10.0	9,300

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DAY	MEAN VALUES											
	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	419	684	1000	1900	1500	1300	4030	583	461	413	367	1730
2	449	833	1200	1900	1400	1300	4340	545	706	384	356	2060
3	458	943	1300	1800	1400	1300	5030	549	717	363	322	2170
4	449	930	1300	1800	1400	1300	5180	529	621	332	348	6110
5	457	890	1200	1800	1400	1300	5400	499	647	347	392	8980
6	448	880	1200	1800	1400	1000	4100	478	875	347	367	6320
7	439	863	1200	1800	1400	800	3360	484	903	351	546	3800
8	429	841	1200	1800	1400	600	3100	474	853	351	1220	3020
9	391	822	1200	1800	1400	720	3010	450	740	343	1560	3390
10	386	845	1200	1800	1400	720	2690	457	620	348	1090	3770
11	408	1150	1200	1700	1400	600	2460	480	536	321	916	3290
12	416	1290	1500	1700	1400	720	2270	478	492	370	799	3210
13	422	1280	1700	1700	1400	740	2120	470	462	361	730	3250
14	416	1130	1800	1700	1400	760	1790	479	441	356	638	3160
15	412	1100	1800	1700	1400	760	1550	436	426	342	592	2370
16	417	1090	1900	1600	1400	760	1270	437	430	327	544	2000
17	405	1080	1700	1600	1400	760	1210	439	408	337	499	1820
18	397	1080	1900	1600	1400	940	1160	553	407	343	481	1720
19	494	1120	1900	1600	1400	1000	1120	678	506	314	465	1680
20	573	1200	1900	1600	1300	1000	1060	622	523	400	473	1760
21	567	1240	1900	1600	1300	1000	983	569	484	485	779	3040
22	671	1270	1900	1600	1400	940	951	504	476	468	871	4960
23	1110	1260	1900	1500	1400	900	895	441	466	429	671	4320
24	1120	1270	1900	1500	1300	880	831	390	426	419	665	3090
25	846	1200	1900	1500	1300	900	744	390	383	753	1040	2280
26	769	1200	1900	1500	1300	960	678	390	368	845	1220	2150
27	700	1100	1900	1500	1400	1100	685	379	403	594	2190	1930
28	639	1100	1900	1400	1300	1400	643	368	490	471	2910	1820
29	617	1100	1900	1400	1300	1800	641	353	520	430	2030	1650
30	620	1100	1900	1400	---	2200	614	384	500	390	1520	1590
31	587	---	1900	1500	---	2800	---	421	---	364	1460	---
TOTAL	16931	31891	50200	51100	40000	33260	63915	14709	16290	12698	28061	92440
MEAN	546	1063	1619	1648	1379	1073	2131	474	543	410	905	3081
MAX	1120	1290	1900	1900	1500	2800	5400	678	903	845	2910	8980
MIN	386	684	1000	1400	1300	600	614	353	368	314	322	1590
CFSM	.34	.65	.99	1.01	.85	.66	1.31	.29	.33	.25	.56	1.89
IN.	.39	.73	1.15	1.17	.91	.76	1.46	.34	.37	.29	.64	2.11
CAL YR 1979	TOTAL	599809	MEAN	1643	MAX	7420	MIN	372	CFSM	1.01	IN	13.69
WTR YR 1980	TOTAL	451495	MEAN	1234	MAX	8980	MIN	314	CFSM	.76	IN	10.30

CHIPPEWA RIVER BASIN

05360500 FLAMBEAU RIVER NEAR BRUCE, WI

LOCATION.--Lat 45°22'21", long 91°12'34", in Lot 7 of NW 1/4 sec.2, T.33 N., R.7 W., Rusk County, Hydrologic Unit 07050002, on right bank 2.5 mi (4.0 km) downstream from Thornapple Powerplant, 6.0 mi (9.7 km) upstream from mouth, and 7.0 mi (11.3 km) southeast of Bruce.

DRAINAGE AREA.--1,900 mi² (4,921 km²).

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

GAGE.--Water-stage recorder. Datum of gage is 1,056.34 ft (321.972 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Records good except those for winter period and period of no gage-height record, Nov. 16 to Jan. 18, which are fair. Flow regulated by several powerplants above station and by Rest Lake and Flambeau Flowage Reservoirs (see reservoir records at end of Chippewa River Basin).

AVERAGE DISCHARGE.--29 years, 1,820 ft³/s (51.54 m³/s).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 17,400 ft³/s (493 m³/s) May 1, 1954, gage height, 10.90 ft (3.322 m); minimum, about 100 ft³/s (2.83 m³/s) Aug. 7, 9, 1957, gage height, 2.06 ft (0.628 m).

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 8,610 ft³/s (244 m³/s) Sept. 4, gage height, 7.42 ft (2.262 m); minimum, 404 ft³/s (11.4 m³/s) July 8, 9, gage height, 2.39 ft (0.728 m).

RATING TABLE (gage height, in feet, and discharge, in cubic feet per second).
(Stage-discharge relation affected by ice Dec. 5 to Mar. 30.)

2.4	410	5.0	3,480
3.0	840	7.0	7,610
4.0	1,940		

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980												
DAY	MEAN VALUES											
	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	463	1540	1100	1000	1100	940	1540	1080	984	843	808	2690
2	704	1680	980	1000	1100	900	1520	1120	891	726	744	2860
3	676	1590	980	1000	1000	920	2420	1230	884	696	658	3540
4	1180	1790	1100	1000	1100	900	2830	960	1110	739	672	6370
5	714	1710	1200	940	1000	960	3200	842	1200	741	802	7260
6	698	1650	1300	920	960	980	3420	823	1270	697	700	6040
7	540	1620	1400	860	960	920	4270	908	1310	637	893	5400
8	655	1380	1300	840	960	940	4420	792	1020	430	1470	4070
9	754	1510	1200	780	980	920	4840	789	1260	487	2130	3370
10	738	1280	1100	660	940	940	4680	821	1180	622	2050	3640
11	727	1110	1200	820	960	920	4330	911	1120	604	1640	3160
12	745	1320	1300	760	980	940	3550	882	1210	628	1550	3110
13	955	1510	1200	900	960	920	3370	871	935	691	1240	2760
14	939	1390	980	880	960	900	3000	761	885	604	1080	3390
15	972	1540	1000	860	960	900	2840	886	890	521	1110	4640
16	831	1400	1000	1000	980	900	2420	758	825	632	1140	4310
17	569	1300	1100	960	980	900	1850	800	817	579	984	3610
18	576	1300	920	900	960	880	1770	1270	874	549	864	3080
19	804	1200	940	960	960	960	2150	998	821	600	814	2990
20	1100	1200	1000	1000	960	940	2190	1270	1080	946	1170	2810
21	1100	1300	1200	960	960	980	2410	1010	899	921	1120	3770
22	1450	1400	1100	1100	960	1100	1980	972	983	1180	1130	5470
23	2420	1400	1100	1100	940	1100	2200	891	1060	1160	1540	5310
24	2720	1400	1100	1000	940	1100	1830	894	850	1130	1400	5140
25	3000	1400	1100	1100	920	1100	1550	984	816	1360	1700	4490
26	2270	1400	1000	1100	960	1100	1770	1000	805	1060	2500	3580
27	2280	1400	1100	1000	980	1100	1670	856	729	934	2970	3260
28	1770	1400	1100	1100	940	1200	1260	780	939	876	3800	3010
29	1780	1300	1100	1100	940	1300	1360	557	708	793	3310	2990
30	1610	1200	1000	1100	---	1500	1400	790	683	732	3240	2780
31	1470	---	1000	1100	---	1600	---	980	---	807	2860	---
TOTAL	37210	42620	34200	29800	28300	31660	78040	28486	29038	23925	48089	118900
MEAN	1200	1421	1103	961	976	1021	2601	919	968	772	1551	3963
MAX	3000	1790	1400	1100	1100	1600	4840	1270	1310	1360	3800	7260
MIN	463	1110	920	660	920	880	1260	557	683	430	658	2690
CAL YR 1979	TOTAL	733364	MEAN	2009	MAX	11400	MIN	364				
WTR YR 1980	TOTAL	530268	MEAN	1449	MAX	7260	MIN	430				

CHIPPEWA RIVER BASIN

05362000 JUMP RIVER AT SHELTON, WI

LOCATION.--Lat 45°18'29", long 90°57'23", in sec.26, T.33 N., R.5 W., Rusk County, Hydrologic Unit 07050004, on right bank just downstream from highway bridge in Sheldon, 1,500 ft (460 m) upstream from Shoulder Creek and 11 mi (18 km) upstream from mouth.

DRAINAGE AREA.--574 mi² (1,487 km²).

PERIOD OF RECORD.--July 1915 to current year.

REVISED RECORDS.--WSP 975: 1938. WSP 1175: Drainage area. WSP 1438: 1916-17(M), 1919(M), 1920, 1921(M), 1922, 1923-26(M), 1927, 1928-31(M), 1932, 1933-37(M), 1945-46(M), 1948-50(M).

GAGE.--Water-stage recorder. Datum of gage is 1,092.75 ft (33.070 m) National Geodetic Vertical Datum of 1929. Prior to Feb. 9, 1939, and Sept. 1, 1941, to Apr. 1, 1953, Feb. 18, 1954, to Sept. 27, 1964, nonrecording gage at same site and datum. Apr. 2, 1953, to Feb. 18, 1954, nonrecording gage in creamery wellhouse 400 ft (122 m) upstream at same datum. Feb. 9, 1939, to Aug. 31, 1941, and from Sept. 27, 1964, water-stage recorder at present site and datum.

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

AVERAGE DISCHARGE.--65 years, 513 ft³/s (14.53 m³/s), 12.14 in/yr (308 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge observed, 46,000 ft³/s (1,300 m³/s) Aug. 31, 1941, gage height, 18.8 ft (5.73 m) from floodmark, from rating curve extended above 13,000 ft³/s (368 m³/s) on basis of contracted-opening measurement of peak flow; minimum observed, 11 ft³/s (0.31 m³/s) Dec. 18, 1943, gage height, 3.99 ft (1.216 m).

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 3,500 ft³/s (99.1 m³/s) and maximum (*):

DATE	TIME	DISCHARGE (ft ³ /s) (m ³ /s)	GAGE HEIGHT (ft) (m)	DATE	TIME	DISCHARGE (ft ³ /s) (m ³ /s)	GAGE HEIGHT (ft) (m)
Apr. 9	0400	5,330	151	9.25	2.819	Sept.22	1500
Sept. 5	0700	4,660	132	8.88	2.707	*5,380	152
						*9.28	2.829

minimum discharge, 40 ft³/s (1.13 m³/s) Oct. 1, gage height 3.25 ft (0.991 m).

RATING TABLE (gage height, in feet, and discharge, in cubic feet per second).
(Stage-discharge relation affected by ice Nov. 8-17, Nov. 27 to Apr. 4.)

3.3	46	6.0	1,230
3.7	126	7.0	2,130
4.2	272	9.0	4,880
5.0	600	10.0	6,900

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DAY	OCT	NOV	DEC	JAN	MEAN VALUES				APR	MAY	JUN	JUL	AUG	SEP
					FEB	MAR	APR	MAY						
1	48	419	280	74	88	72	1100	319	154	179	92	962		
2	52	454	260	72	86	70	1900	294	180	158	82	1130		
3	75	439	240	70	84	68	2100	268	173	143	74	1160		
4	102	398	230	70	82	66	2400	245	157	124	68	3079		
5	100	367	210	68	82	66	2660	225	174	110	66	4550		
6	96	368	200	68	80	66	3130	206	599	99	69	3620		
7	89	412	190	68	80	66	3510	189	1260	91	82	2270		
8	81	360	180	68	78	66	4420	174	2520	85	146	1300		
9	74	300	170	70	76	66	5270	164	2470	79	350	1590		
10	73	250	160	72	76	68	4610	156	1540	73	401	2030		
11	72	230	150	74	74	66	3570	175	917	67	315	1420		
12	72	230	140	74	74	68	2710	237	597	78	249	1280		
13	70	220	140	76	72	68	2060	246	441	73	212	1690		
14	70	220	130	76	72	70	1580	225	340	65	181	2430		
15	73	210	120	78	70	72	1290	208	272	61	151	1920		
16	74	200	120	80	70	74	1110	187	221	64	130	1370		
17	74	200	110	82	70	90	949	176	183	74	119	1040		
18	74	211	110	84	70	140	890	323	176	76	108	802		
19	85	241	100	86	70	200	878	701	216	73	103	640		
20	91	322	100	88	68	330	875	634	294	72	104	560		
21	123	390	98	92	68	310	838	482	277	69	238	2420		
22	319	529	96	96	70	290	766	373	288	76	390	5170		
23	1720	598	94	98	72	280	673	291	241	86	351	4650		
24	2090	601	92	100	74	270	593	228	192	89	303	3210		
25	1650	508	92	100	74	260	524	189	158	115	237	2030		
26	1150	496	90	100	76	300	477	159	136	101	241	1430		
27	823	480	88	100	78	380	435	136	133	119	331	1080		
28	637	440	86	96	76	430	403	122	159	121	732	839		
29	538	380	82	94	74	500	371	110	216	104	829	706		
30	464	320	78	92	---	620	349	115	216	100	750	621		
31	417	---	76	90	---	780	---	124	---	102	736	---		
TOTAL	11476	10793	4312	2556	2184	6272	52441	7681	14900	2926	8240	56990		
MEAN	370	360	139	82.5	75.3	202	1748	248	497	94.4	266	1900		
MAX	2090	601	280	100	88	780	5270	701	2520	179	829	5170		
MIN	48	200	76	68	68	66	349	110	133	61	66	560		
CFSM	.65	.63	.24	.14	.13	.35	3.05	.43	.87	.16	.46	3.31		
IN.	.74	.70	.28	.17	.14	.41	3.40	.50	.97	.19	.53	3.69		
CAL YR 1979	TOTAL	227288	MEAN 623	MAX 5310	MIN 42	CFSM 1.09	IN 14.73							
WTR YR 1980	TOTAL	180771	MEAN 494	MAX 5270	MIN 48	CFSM .86	IN 11.72							

CHIPPEWA RIVER BASIN

05365500 CHIPPEWA RIVER AT CHIPPEWA FALLS, WI

LOCATION.--Lat 44°55'37", long 91°24'33", in Lot 1, sec.12, T.28 N., R.9 W., Chippewa County, Hydrologic Unit 07050005, on right bank at Chippewa Falls, 1.0 mi (1.6 km) downstream from Duncan Creek.

DRAINAGE AREA.--5,600 mi² (14,500 km²), approximately.

PERIOD OF RECORD.--June 1888 to current year. Monthly discharge only for some periods, published in WSP 1308.

REVISED RECORDS.--WSP 785: 1934(M). WSP 1508: 1897, 1905, 1918(M), 1924(M).

GAGE.--Water-stage recorder. Datum of gage is 798.46 ft (243.371 m) National Geodetic Vertical Datum of 1929. Prior to January 1914, nonrecording gage, and January 1914 to June 19, 1932, water-stage recorder at site 1 mi (1.6 km) upstream at different datum. June 19, 1932, to current year, water-stage recorder at present site and datum.

REMARKS.--Records good. Considerable regulation by Moose Lake, Lake Chippewa, Rest Lake, Flambeau Flowage, and Lake Wissota Reservoirs (see reservoir records at end of Chippewa River Basin). Diurnal fluctuation caused by hydroelectric plant 1.1 mi (1.8 km) upstream.

AVERAGE DISCHARGE.--92 years, 5,100 ft³/s (144.4 m³/s).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 102,000 ft³/s (2,890 m³/s) Sept. 1, 1941, gage height, 24.8 ft (7.56 m); minimum, 22 ft³/s (0.623 m³/s) Apr. 2, 1934, gage height, 0.63 ft (0.192 m); minimum daily, 40 ft³/s (1.13 m³/s) Feb. 4, 1917.

EXTREMES OUTSIDE OF PERIOD OF RECORD.--A stage of 26.94 ft (8.211 m) occurred Sept. 10, 1884, site and datum in use June 1932.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 33,000 ft³/s (935 m³/s) June 5, gage height, 14.01 ft (4.270 m); minimum daily, 266 ft³/s (7.53 m³/s) Aug. 2.

RATING TABLE (gage height, in feet, and discharge, in cubic feet per second).

1.3	253	5.0	4,440
1.6	368	8.0	11,200
2.0	583	11.0	20,700
3.0	1,440	12.0	24,500

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DAY	MEAN VALUES											
	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1020	3930	1280	2300	3710	1320	5120	3640	1940	2990	1820	6310
2	1710	4130	1130	3060	876	1300	6360	3020	2970	3610	266	6460
3	1760	3050	3950	3510	1230	3980	9590	1580	2950	412	618	8570
4	1560	4080	3180	3060	2000	4150	9630	1380	2310	850	2200	13200
5	2350	4580	3020	2240	2190	3950	9750	3120	6980	4340	1530	23600
6	1200	3810	3670	2930	2820	3760	9830	2030	16900	2470	1500	22600
7	569	4300	4850	3290	2520	3950	9990	1290	18300	2920	4610	17400
8	2020	5000	2480	3020	3510	2560	16300	1930	12300	624	12300	12100
9	1410	3890	2660	3000	2070	2000	21800	2430	13000	1760	12300	10200
10	2110	2820	3500	3880	2000	3300	21200	1860	10300	2210	8140	9620
11	1570	2020	4240	1380	4000	3070	16800	1220	3940	1930	5630	12100
12	2100	4330	2610	750	3180	2510	17300	1770	5450	796	4610	12400
13	914	3880	1970	691	3530	2810	12600	2820	4110	792	3230	10600
14	829	2630	3080	4040	3470	2960	9920	1820	2220	2960	3240	13600
15	2670	4140	2230	3870	3450	1410	9950	2550	918	2230	2970	13900
16	1320	3820	2780	4600	854	1380	7370	1750	3130	3320	1570	12700
17	2230	3110	3110	4920	439	2810	8210	1680	2400	2270	2010	10000
18	1460	2910	3340	4240	3210	2960	7210	2760	2350	873	2530	8590
19	3090	4010	3020	1170	3710	6400	4330	5190	2720	560	2260	7050
20	964	3710	3270	824	3050	7220	5570	3980	3000	586	2080	7090
21	1980	3700	3700	4070	3590	8660	7890	3670	1050	2070	1590	16500
22	5360	6220	2720	4620	3470	9280	5790	2800	2390	2670	3050	22000
23	9050	5240	3530	4070	646	5200	5090	2560	2980	2320	3480	22400
24	10200	5580	3510	3960	879	5200	5170	1320	2630	1960	2960	18700
25	9910	4880	2270	2610	4360	4280	5280	2060	2600	3200	3550	13100
26	8690	4540	3550	991	3740	3280	4640	1670	1940	1710	5180	10300
27	4390	5040	3590	919	4380	4440	1990	2360	3310	1090	5590	8820
28	5980	4470	3800	3370	4460	3790	3490	2290	4940	2750	7830	8760
29	4360	4420	2700	3860	4020	1830	4060	2030	4530	2510	8420	8510
30	4460	4010	1750	3460	---	1910	3140	2300	4500	1880	8440	7910
31	5300	---	3410	3680	---	3830	---	776	---	1370	6580	---
TOTAL	102536	122250	93900	92385	81364	115500	265370	71656	149058	62033	132084	375090
MEAN	3308	4075	3029	2980	2806	3726	8846	2311	4969	2001	4261	12500
MAX	10200	6220	4850	4920	4460	9280	21800	5190	18300	4340	12300	23600
MIN	569	2020	1130	691	439	1300	1990	776	918	412	266	6310
CAL YR 1979	TOTAL	2136377	MEAN	5853	MAX	29200	MIN	472				
WTR YR 1980	TOTAL	1663226	MEAN	4544	MAX	23600	MIN	266				

CHIPPEWA RIVER BASIN

05367055 CHIPPEWA RIVER NEAR CARYVILLE, WI

LOCATION.--Lat 44°45'38", long 91°40'30", in NE 1/4 SE 1/4 Sec.2, T.26 N., R.11 W., Dunn County, Hydrologic Unit 07050005, at bridge on County Trunk Highway 11, 0.7 mi (1.1 km) north of Caryville.

DRAINAGE AREA.--6,750 mi² (17,500 km²), approximately.

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

WATER-QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	TEMPER- ATURE, WATER (DEG C)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)
MAR , 1980				
25...	1210	6590	3.5	118
APR				
07...	1130	12800	4.0	110
11...	0940	19500	4.5	120
12...	1230	20300	4.5	120
JUN				
07...	1620	29800	18.5	74
SEP				
24...	1835	29000	--	78

PARTICLE-SIZE DISTRIBUTION OF SUSPENDED SEDIMENT

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SEDI- MENT, SUS- PENDED (MG/L)	SEDI- MENT DIS- CHARGE, SUS- PENDED (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM	SED. SUSP. SIEVE DIAM. % FINER THAN .125 MM	SED. SUSP. SIEVE DIAM. % FINER THAN .250 MM	SED. SUSP. SIEVE DIAM. % FINER THAN .500 MM	SED. SUSP. SIEVE DIAM. % FINER THAN 1.00 MM
MAR , 1980									
25...	1210	6590	11	196	75	82	88	99	100
APR									
07...	1130	12800	22	760	42	57	78	99	100
11...	0940	19500	25	1320	40	52	73	99	100
12...	1230	20300	34	1860	32	40	55	94	100
JUN									
07...	1620	29800	390	31400	81	90	96	100	--
SEP									
24...	1835	29000	34	2660	50	57	70	91	100

PARTICLE-SIZE DISTRIBUTION OF SURFACE BED MATERIAL

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	BED MAT. SIEVE DIAM. % FINER THAN .062 MM	BED MAT. SIEVE DIAM. % FINER THAN .125 MM	BED MAT. SIEVE DIAM. % FINER THAN .250 MM	BED MAT. SIEVE DIAM. % FINER THAN .500 MM	BED MAT. SIEVE DIAM. % FINER THAN 1.00 MM
MAR , 1980							
25...	1210	6590	--	5	12	24	33
APR							
07...	1130	12800	--	2	8	23	35
11...	0940	19500	1	3	13	60	72
12...	1230	20300	--	--	3	66	80
JUN							
07...	1620	29800	--	1	5	14	23
SEP							
24...	1835	29000	--	1	3	23	37

DATE	BED MAT. SIEVE DIAM. % FINER THAN 2.00 MM	BED MAT. SIEVE DIAM. % FINER THAN 4.00 MM	BED MAT. SIEVE DIAM. % FINER THAN 8.00 MM	BED MAT. SIEVE DIAM. % FINER THAN 16.0 MM	BED MAT. SIEVE DIAM. % FINER THAN 32.0 MM	BED MAT. SIEVE DIAM. % FINER THAN 64.0 MM
MAR , 1980						
25...	36	39	44	57	84	100
APR						
07...	41	48	61	85	92	100
11...	76	79	83	98	100	--
12...	82	83	86	96	100	--
JUN						
07...	28	38	54	79	100	--
SEP						
24...	46	53	63	83	93	100

CHIPPEWA RIVER BASIN

05366300 BRIDGE CREEK AT AUGUSTA, WI

LOCATION.--Lat 45°40'54", long 91°07'10", in NE 1/4 NW 1/4 sec.4, T.25 N., R.6 W., Eau Claire County, Hydrologic Unit 07050006, on right bank approximately 150 ft (46 m) upstream of County Highway G bridge.

DRAINAGE AREA.--34.5 mi² (89 km²).

PERIOD OF RECORD.--October 1979 to September 1980 (discontinued).

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is referenced to an outside staff gage. No reference to established benchmarks exists.

REMARKS.--The station was established to collect streamflow data for one year in conjunction with a study of Bridge Creek. Records from late January thru early March are considered fair to poor due to equipment failure, ice backwater, and no actual measurements.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,320 ft³/s (37.3 m³/s) Sept. 21, gage height, 12.34 ft (3.95 m); minimum daily discharge, 4.2 ft³/s (0.107 m³/s) Mar. 8, ice affected.

DAY	DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980											
	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	27	47	17	12	5.3	4.4	48	21	51	15	7.2	69
2	36	41	15	12	5.3	4.4	37	21	73	14	7.2	42
3	20	32	15	12	5.3	4.4	40	20	50	12	7.4	29
4	13	26	15	11	5.2	4.4	39	19	34	11	7.5	65
5	13	43	15	11	5.2	4.4	118	19	117	11	8.0	66
6	13	112	17	11	5.2	4.3	112	18	236	9.8	7.5	36
7	13	95	19	11	5.1	4.3	92	17	211	8.9	32	24
8	13	56	22	11	5.1	4.2	121	17	176	7.5	582	20
9	13	37	16	11	5.0	4.2	141	16	92	7.5	436	37
10	13	27	16	11	5.0	4.3	95	16	52	7.4	135	41
11	15	23	18	19	5.0	4.5	71	22	39	7.3	56	28
12	14	24	21	17	5.0	4.4	93	21	32	7.3	40	789
13	13	24	13	14	4.9	4.2	75	21	29	7.2	20	541
14	14	22	12	13	4.9	4.2	55	27	26	7.4	17	161
15	13	22	12	20	4.9	4.5	51	21	21	7.5	15	82
16	12	24	12	103	4.9	74	49	19	19	8.5	13	58
17	12	28	12	160	4.9	223	46	17	20	7.9	20	43
18	12	28	13	132	4.8	240	51	58	18	7.7	26	34
19	26	28	13	80	4.8	301	55	82	36	7.6	22	40
20	31	27	12	46	4.8	243	53	50	30	7.5	26	147
21	23	29	12	32	6.0	156	51	26	22	7.4	54	1010
22	165	59	13	24	17	74	51	17	20	7.3	42	496
23	341	65	25	18	14	22	62	16	18	7.4	21	155
24	198	49	28	15	9.0	19	54	15	17	7.2	17	82
25	91	37	18	11	6.7	34	46	15	16	7.4	16	73
26	53	34	15	8.0	5.0	74	39	15	16	8.4	21	72
27	41	33	14	6.3	4.7	77	35	16	15	7.7	62	62
28	36	27	13	5.9	4.6	56	30	16	17	7.4	66	55
29	32	25	13	5.6	4.5	48	26	19	16	7.4	43	49
30	28	27	14	5.5	---	56	24	46	16	7.3	65	45
31	32	---	12	5.4	---	57	---	72	---	7.4	91	---
TOTAL	1376	1151	482	853.7	172.1	1819.1	1860	795	1535	262.3	1982.8	4451
MEAN	44.4	38.4	15.5	27.5	5.93	58.7	62.0	25.6	51.2	8.46	64.0	148
MAX	341	112	28	160	17	301	141	82	236	15	582	1010
MIN	12	22	12	5.4	4.5	4.2	24	15	15	7.2	7.2	20
WTR YR 1980	TOTAL	16740.0	MEAN	45.7	MAX	1010	MIN	4.2				

CHIPPEWA RIVER BASIN

05368000 HAY RIVER AT WHEELER, WI

LOCATION.--Lat 45°02'52", long 91°54'39", in SW 1/4 sec.25, T.30 N., R.13 W., Dunn County, Hydrologic Unit 07050007, on right bank 25 ft (7.6 m) downstream from highway bridge in Wheeler, 1.8 mi (2.9 km) upstream from Otter Creek, and 2.4 mi (3.9 km) downstream from South Fork Hay River.

DRAINAGE AREA.--426 mi² (1,103 km²).

PERIOD OF RECORD.--October 1950 to current year.

REVISED RECORDS.--WSP 1338: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 889.30 ft (271.059 m) National Geodetic Vertical Datum of 1929. Prior to Mar. 25, 1951, nonrecording gage.

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

AVERAGE DISCHARGE.--30 years, 298 ft³/s (8.440 m³/s), 9.50 in/yr (241 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 13,600 ft³/s (385 m³/s) Mar. 31, 1967, gage height, 15.04 ft (4.584 m), from rating curve extended above 9,000 ft³/s (255 m³/s); minimum, 55 ft³/s (1.56 m³/s) Mar. 13, 1954, gage height, 2.32 (0.707 m), result of freezeup.

EXTREMES OUTSIDE OF PERIOD OF RECORD.--Maximum stage since 1915, 16.6 ft (5.06 m) April 1934, from floodmarks.

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

DATE	TIME	DISCHARGE (ft ³ /s) (m ³ /s)	GAGE HEIGHT (ft) (m)	DATE	TIME	DISCHARGE (ft ³ /s) (m ³ /s)	GAGE HEIGHT (ft) (m)
Mar. 21	2400	1,620 45.9	7.40 2.256	June 7	1300	2,590 73.3	9.80 2.987
Mar. 28	0200	1,570 44.5	7.30 2.225	Aug. 9	1200	*3,060 86.7	*10.55 3.216
Mar. 31	1700	1,780 50.4	7.72 2.353	Sept.22	1300	1,500 42.5	7.56 2.304

minimum discharge, 183 ft³/s (5.18 m³/s) Aug. 1, 3, gage height, 3.04 ft (0.927 m).

RATING TABLE (gage height, in feet, and discharge, in cubic feet per second).
(Shifting-control method used June 7-9, Aug. 8-10, Aug. 22 to Sept. 3, Sept. 7-11, 15-19, 22, 25-30; stage-discharge relation affected by ice Nov. 30 to Dec. 25, Dec. 31 to Mar. 12.)

2.9	173	8.0	1,920
4.0	400	10.0	3,400
6.0	1,010		

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DAY	MEAN VALUES											
	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	238	317	220	220	200	220	1490	302	265	305	187	334
2	259	313	220	220	200	220	1040	296	550	290	195	313
3	252	294	220	220	200	220	914	291	443	273	188	327
4	246	281	220	210	200	220	757	285	344	263	191	682
5	241	275	210	210	200	220	744	279	383	348	213	865
6	238	274	210	210	200	220	727	271	1490	315	195	707
7	233	270	210	210	200	220	733	262	2300	267	450	570
8	231	265	210	210	200	220	744	256	1460	255	1480	428
9	230	260	210	210	200	220	725	251	883	245	2710	400
10	228	259	210	210	210	210	593	249	612	238	1820	379
11	231	256	200	210	210	210	529	256	505	232	992	345
12	231	255	200	210	210	210	668	251	449	235	683	562
13	227	247	200	210	210	217	718	247	418	227	552	911
14	227	248	210	220	210	215	575	243	392	222	472	679
15	228	249	210	220	210	218	487	240	367	220	430	482
16	229	248	210	220	210	222	450	233	343	251	395	417
17	227	252	210	220	210	221	426	230	328	239	376	382
18	228	250	210	220	210	220	413	266	323	222	360	354
19	253	253	220	220	220	284	401	286	347	218	342	338
20	276	259	220	200	220	761	391	262	330	223	330	560
21	264	266	220	200	220	1350	378	246	314	231	331	1440
22	284	292	220	200	210	1360	366	233	304	236	309	1640
23	437	301	230	200	210	779	354	226	299	219	293	1150
24	436	292	230	200	210	530	349	221	288	210	284	715
25	348	276	230	200	210	477	335	218	274	210	273	554
26	311	268	236	200	210	707	325	213	266	206	269	492
27	295	266	234	200	210	1370	325	211	318	201	283	454
28	288	258	231	200	210	1400	318	210	722	197	287	421
29	281	255	227	200	210	1100	312	256	544	195	283	405
30	276	230	219	200	---	1420	307	288	337	192	328	395
31	276	---	220	200	---	1710	---	288	---	191	407	---
TOTAL	8249	8029	6727	6480	6030	17171	16894	7866	16198	7376	15908	17701
MEAN	266	268	217	209	208	554	563	254	540	238	513	590
MAX	437	317	236	220	220	1710	1490	302	2300	348	2710	1640
MIN	227	230	200	200	200	210	307	210	265	191	187	313
CFSM	.62	.63	.51	.49	.49	1.30	1.32	.60	1.27	.56	1.20	1.39
IN.	.72	.70	.59	.57	.53	1.50	1.48	.69	1.41	.64	1.39	1.55

CAL YR 1979	TOTAL	138986	MEAN 381	MAX 3470	MIN 170	CFSM .89	IN 12.14
WTR YR 1980	TOTAL	134629	MEAN 368	MAX 2710	MIN 187	CFSM .86	IN 11.76

CHIPPEWA RIVER BASIN

05369000 RED CEDAR RIVER AT MENOMONIE, WI

LOCATION.--Lat 44°53'02", long 91°55'57", in NW 1/4 sec.26, T.28 N., R.13 W., Dunn County, Hydrologic Unit 07050007, on right bank at Menomonie, 900 ft (274 m) downstream from powerplant of Northern States Power Co., and 1,000 ft (305 m) downstream from Wilson Creek.

DRAINAGE AREA.--1,760 mi² (4,560 km²), approximately

PERIOD OF RECORD.--June 1907 to September 1908, May 1913 to current year. Monthly discharge only for some periods, published in WSP 1308.

REVISED RECORDS.--WSP 805: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 780 ft (237.7 m) National Geodetic Vertical Datum of 1929 (Northern States Power Co. bench mark). Prior to Sept. 3, 1908, nonrecording gage at site 1 mi (1.6 km) downstream at different datum. May 9, 1913, to Sept. 30, 1923, water-stage recorder at same site at datum 0.42 ft (0.128 m) lower than present datum.

REMARKS.--Records good. Flow regulated by powerplants at Menomonie and Cedar Falls.

AVERAGE DISCHARGE.--68 years, 1,251 ft³/s (35.43 m³/s).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 40,000 ft³/s (1,133 m³/s) Apr. 4, 1934, gage height, 16.0 ft (4.88 m), from floodmarks, from rating curve extended above 27,000 ft³/s (765 m³/s) on basis of computed flow over Cedar Falls Dam 6 mi (10 km) upstream; minimum, 21 ft³/s (0.59 m³/s) Dec. 9, 1928, gage height, 0.65 ft (0.198 m).

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 8,400 ft³/s (238 m³/s) June 7, gage height, 5.65 ft (1.722 m); minimum, 273 ft³/s (7.73 m³/s) July 16, gage height, 1.27 ft (0.387 m); minimum daily, 450 ft³/s (12.7 m³/s) Apr. 25.

RATING TABLE (gage height, in feet, and discharge, in cubic feet per second).

1.5	415	3.0	2,340
2.0	865	4.0	4,190
2.5	1,540	5.0	6,600

DAY	DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980											
	OCT	NOV	DEC	JAN	FEB	MEAN VALUES MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1200	1660	968	1060	1020	823	4520	1230	989	986	781	1640
2	1340	1640	748	1110	823	924	4450	1080	1370	1080	887	1450
3	1550	1650	848	1070	880	903	3880	975	1640	881	801	840
4	1490	1640	985	1060	890	981	3060	1170	1190	885	963	1090
5	1580	1300	1250	975	846	905	2750	972	2750	1330	931	2340
6	1570	1410	1360	948	981	885	2600	1080	4060	1140	928	2580
7	1510	1500	1370	592	884	809	2850	862	5880	1090	2210	2660
8	1630	1040	1100	643	908	907	2820	1050	5030	824	5400	2690
9	1050	1220	1130	759	865	868	3200	934	3430	916	4810	3000
10	663	1120	1260	998	968	977	2820	946	2340	868	4920	2500
11	514	1020	1270	862	983	825	2630	958	1680	851	3320	2410
12	509	1390	855	898	896	829	2710	1020	1360	847	2500	3160
13	494	1350	944	939	902	946	2930	974	1350	882	1700	3120
14	504	1100	938	1060	1000	946	2270	997	1200	841	1330	2930
15	825	1300	973	1040	871	883	2220	922	1160	746	1330	2670
16	975	1200	974	1190	934	963	1810	921	1070	1250	1330	2220
17	984	1280	753	1240	936	1060	1540	968	1070	969	1050	2210
18	1080	1390	914	1330	938	1170	1720	1100	1170	735	1340	1820
19	1160	1500	999	1220	966	1970	2300	1250	1250	943	1210	1940
20	1430	1410	1110	1120	936	2950	2240	1110	1210	673	1100	2720
21	1570	1480	1150	1090	1030	3490	2130	1030	1080	962	1150	3860
22	1850	1560	1110	1100	978	3500	827	905	1090	852	1200	3530
23	2240	1450	1340	987	1010	2980	497	884	1010	839	1170	4010
24	2010	1450	1100	1090	1070	2350	483	792	1070	789	1060	3470
25	2260	1410	1110	924	932	2180	450	809	999	865	1070	3020
26	1660	1290	1120	933	892	2360	1050	823	918	704	1130	2150
27	1450	1390	1100	927	928	3360	1130	845	974	740	1110	2400
28	1520	1400	1140	889	976	3860	1010	742	2050	895	1380	2190
29	1310	1310	1150	885	880	3630	1170	832	1900	930	1370	2470
30	1350	1180	882	913	---	4000	1140	1220	1440	700	1740	2610
31	1360	---	1130	1000	---	4190	---	913	---	875	1720	---
TOTAL	40638	41040	33081	30852	27123	57424	65207	30314	53730	27888	52941	75700
MEAN	1311	1368	1067	995	935	1852	2174	978	1791	900	1708	2523
MAX	2260	1660	1370	1330	1070	4190	4520	1250	5880	1330	5400	4010
MIN	494	1020	748	592	823	809	450	742	918	673	781	840
CAL YR 1979	TOTAL	581769	MEAN	1594	MAX	7880	MIN	465				
WTR YR 1980	TOTAL	535938	MEAN	1464	MAX	5880	MIN	450				

CHIPPEWA RIVER BASIN

05369500 CHIPPEWA RIVER AT DURAND, WI
(NATIONAL STREAM-QUALITY ACCOUNTING NETWORK STATION)

LOCATION.--Lat 44°37'40", long 91°58'10", in SW 1/4 sec.21, T.25 N., R.13 W., Pepin County, Hydrologic Unit 07050005, on left bank in Durand, 75 ft (23 m) downstream from bridge on U.S. Highway 10, and 9.5 mi (15.3 km) downstream from Red Cedar River.

DRAINAGE AREA.--9,010 mi² (23,340 km²), approximately.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--July 1928 to current year.

REVISED RECORDS.--WSP 785: 1930, 1934(M). WSP 875: 1930 (monthly and yearly runoff). WSP 925: 1938. WSP 1508: 1929(M), 1932.

GAGE.--Water-stage recorder. Datum of gage is 694.59 ft (211.711 m) National Geodetic Vertical Datum of 1929. Prior to Dec. 9, 1930, nonrecording gage at bridge 400 ft (122 m) downstream at same datum.

REMARKS.--Records good except those for winter period, which are fair. Flow regulated by powerplants, Moose Lake, Lake Chippewa, Rest Lake, Flambeau Flowage, and Lake Wissota on Chippewa and Flambeau Rivers (see reservoir records at end of Chippewa River basin). Gage-height telemeter at station.

AVERAGE DISCHARGE.--52 years, 7,538 ft³/s (213.5 m³/s).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 123,000 ft³/s (3,483 m³/s) Apr. 2, 1967, gage height, 16.93 ft (5.160 m); minimum observed, 1,020 ft³/s (28.9 m³/s) Nov. 24, 1950, gage height, 0.12 ft (0.037 m).

EXTREMES OUTSIDE OF PERIOD OF RECORD.--A stage of 18.4 ft (5.61 m), from flood marks (levels by Corps of Engineers) occurred Sept. 12, 1884, and has not been exceeded since.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 41,300 ft³/s (1,170 m³/s) Sept 24, gage height, 11.52 ft (3.511 m); maximum gage height, 11.83 ft (3.606 m) Mar. 21 (backwater from ice); minimum discharge, 2,330 ft³/s (66.0 m³/s) Oct. 15, gage height, 0.82 ft (0.250 m).

RATING TABLES (gage height, in feet, and discharge, in cubic feet per second).
(Shifting-control method used Oct. 1-20, May 1; stage-discharge relation affected by ice Nov. 30 to Apr. 2.)

Oct. 1 to May 1

May 2 to Sept. 30

0.7	2,460	5.0	12,700	1.0	2,650	6.0	15,100
2.0	4,790	7.0	19,700	2.0	4,360	8.0	22,400
3.0	7,070	10.0	34,300	4.0	9,150	10.0	31,800
						12.0	45,000

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2980	8750	5800	4900	5400	6000	10000	5860	3240	7160	2940	10000
2	3150	7880	4200	4400	5400	5200	12000	5210	4340	5710	3650	9820
3	4190	7720	3200	4800	4500	3800	14400	5510	6100	5710	2810	10600
4	4020	7180	5000	5200	3000	5000	15000	4470	6040	3370	2880	12600
5	4340	6060	5000	5000	4000	6000	14800	4200	5720	3920	3380	17800
6	4630	7740	5200	4000	4200	5800	15000	4810	16800	5710	3320	25500
7	3760	7850	5800	4500	4400	5800	16000	4500	25700	5290	4690	24300
8	3410	7280	6200	4800	4200	6000	17600	4020	35500	5170	11300	19100
9	4060	9360	5000	4500	5000	5200	24700	4100	34400	3470	21600	16500
10	3190	7900	4600	5200	4500	4500	29400	4360	27500	3670	21000	13200
11	3480	6760	5200	6200	4500	4700	26100	4310	16800	3800	19900	13100
12	3250	5110	6000	4500	6000	4900	23700	3670	10800	4060	13400	14100
13	3230	7480	4700	3500	5800	5000	23500	3720	9120	2980	10800	19800
14	2670	6920	3500	3200	5800	5000	17500	5420	7700	2820	9050	18600
15	2520	6300	4400	5600	6000	5200	16000	3910	5820	4050	7400	21500
16	3730	6580	4200	5800	5600	5600	14000	4300	4470	4840	6750	20800
17	3520	7660	4300	6200	4000	5800	12400	4100	5710	5410	4980	17600
18	3930	6240	5200	7000	3400	6400	11800	4300	5340	4240	4970	13900
19	3760	6210	5800	6400	4000	8000	11900	5800	5550	3140	5320	12400
20	5020	6970	5600	4500	5600	9600	9060	7220	5290	2990	5150	12100
21	4090	7030	5800	3600	5400	11000	11300	6130	5400	3010	4970	17500
22	5240	8020	6000	5000	5600	11000	11500	5960	4010	3550	5180	26100
23	10100	8630	5400	6600	5600	10000	8660	4880	4530	4070	5160	34900
24	14600	8760	6000	6000	4200	9600	8090	4810	5300	3990	5680	39600
25	17200	9550	5400	5000	3600	9400	7870	3390	4870	3940	5750	28500
26	16500	8450	4900	4500	5600	9000	8060	4120	4950	4270	6020	20300
27	12300	7990	5600	3000	5600	9000	7730	3530	3990	3560	7840	15400
28	9940	8190	5800	2900	5800	10000	5590	4200	5650	3080	8180	14100
29	9350	8100	5800	5000	6000	10000	6680	4230	8120	4660	10500	13900
30	8310	7000	4800	5600	---	9400	6390	4820	6700	3760	11600	13500
31	8190	---	4000	5400	---	9600	---	4270	---	3570	11000	---
TOTAL	188660	224770	158400	152800	142700	221500	416730	144130	295460	128970	247170	547120
MEAN	6086	7492	5110	4929	4921	7145	13890	4649	9849	4160	7973	18240
MAX	17200	9550	6200	7000	6000	11000	29400	7220	35500	7160	21600	39600
MIN	2520	5110	3200	2900	3000	3800	5590	3390	3240	2820	2810	9820
CAL YR 1979	TOTAL	3362140	MEAN	9211	MAX	33500	MIN	2520				
WTR YR 1980	TOTAL	2868410	MEAN	7837	MAX	39600	MIN	2520				

CHIPPEWA RIVER BASIN

05369500 CHIPPEWA RIVER AT DURAND, WI--CONTINUED
(NATIONAL STREAM QUALITY ACCOUNTING NETWORK STATION)
(NATIONAL PESTICIDE MONITORING NETWORK STATION)
(NATIONAL RADIOCHEMICAL SURVEILLANCE STATION)

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1964-65, 1967, 1973 to current year.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: March 1975 to current year.

WATER TEMPERATURES: March 1975 to current year.

SUSPENDED-SEDIMENT DISCHARGE: May 1974 to September 1979 (discontinued).

COOPERATION.--Pesticide samples were collected by the U.S. Geological Survey and were analyzed by Environmental Protection Agency.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE (WATER YEARS 1975, 1977, 1978): Maximum daily, 470 micromhos Jan. 10, 1980; minimum daily, 75 micromhos Sept. 15, 1978. minimum observed, 60 micromhos Apr. 23, 1979.

WATER TEMPERATURES: Maximum daily, 31.0°C July 19, 1977; minimum daily, 0.0°C on many days during winter periods.

EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum daily, 470 micromhos Jan. 10; minimum daily, 92 micromhos Sept. 16.

WATER TEMPERATURES: Maximum daily 30.0°C July 14, 15; minimum daily, 0.0°C on many days during winter period.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH FIELD (UNITS)	TEMPER- ATURE WATER (DEG C)	TUR- BID- ITY (NTU)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED SATUR- ATION	COLI- FORM, TOCOCCHI FECAL, UM-MF (COLS./ 100 ML)	STREP- TOCOCCHI FECAL, KF AGAR (COLS. PER 100 ML)
OCT , 1979										
08...	1300	3270	192	8.2	13.0	2.0	14.1	140	K1800	K2000
NOV										
14...	1400	8130	154	7.4	2.5	3.0	12.3	95	K4000	1300
DEC										
14...	1100	3500	203	7.0	.5	2.0	11.7	85	680	230
JAN , 1980										
17...	1200	6200	160	6.9	.0	.50	11.7	84	K17000	K2400
FEB										
06...	1530	4200	164	6.6	.0	1.2	10.3	74	110	75
MAR										
12...	1330	5380	174	6.7	.0	.35	11.2	81	400	180
26...	0845	8450	173	6.6	2.0	.20	9.7	73	290	K3900
MAY										
07...	1200	4790	125	8.0	12.5	2.6	10.7	105	55	130
JUN										
04...	1550	5600	123	7.1	22.5	3.0	9.1	108	1200	350
JUL										
16...	1615	4830	116	8.2	27.5	26	11.6	153	K4000	K2100
AUG										
13...	0900	11900	102	6.3	22.0	5.0	6.6	79	K3300	980
SEP										
03...	1400	10900	117	7.0	21.5	1.4	8.5	100	K4000	540

DATE	HARD- NESS (MG/L AS CACO3)	HARD- NESS, NONCAR- BONATE (MG/L CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	PERCENT SODIUM	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LINITY (MG/L AS CACO3)	SULFATE DIS- SOLVED (MG/L AS SO4)
OCT , 1979										
08...	79	9	19	7.6	4.2	16	.2	1.3	70	6.5
NOV										
14...	54	7	14	4.7	3.8	18	.2	1.6	47	7.8
DEC										
14...	91	17	22	8.8	4.1	14	.2	1.3	74	9.6
JAN , 1980										
17...	68	13	17	6.2	5.0	20	.3	1.2	55	9.0
FEB										
06...	65	10	16	6.0	4.1	12	.2	1.4	55	9.6
MAR										
12...	68	10	17	6.2	4.8	13	.3	1.1	58	8.3
26...	60	12	15	5.5	4.0	12	.2	5.4	48	7.4
MAY										
07...	57	11	14	5.4	3.3	11	.2	1.8	46	5.6
JUN										
04...	49	13	12	4.6	3.5	13	.2	1.3	36	6.7
JUL										
16...	49	8	12	4.5	3.4	13	.2	1.9	41	6.3
AUG										
13...	40	0	10	3.7	2.3	10	.2	2.6	40	4.3
SEP										
03...	58	11	15	5.1	3.0	10	.2	1.5	47	4.9

K RESULTS BASED ON COLONY COUNT OUTSIDE THE ACCEPTABLE RANGE (NON-IDEAL COLONY COUNT).

CHIPPEWA RIVER BASIN

05369500 CHIPPEWA RIVER AT DURAND, WI--CONTINUED

WATER-QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, SUM OF CONSTITUENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)	SOLIDS, DIS- SOLVED (TONS PER DAY)	NITRO- GEN, NO2+NO3 DIS- SOLVED TOTAL (MG/L AS N)	NITRO- GEN, NO2+NO3 DIS- SOLVED TOTAL (MG/L AS N)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N)
OCT , 1979										
08...	5.3	.1	8.4	106	97	.14	936	.46	.53	.090
NOV										
14...	5.0	.1	9.3	89	77	.12	1950	.45	.46	.140
DEC										
14...	5.9	.1	13	132	113	.18	1250	.89	.86	.090
JAN , 1980										
17...	6.7	.1	13	109	95	.15	1830	.79	.78	.100
FEB										
06...	5.4	.1	14	105	94	.14	1190	.96	.94	.170
MAR										
12...	5.5	.1	14	94	95	.13	1370	1.0	.81	.120
26...	6.0	.1	11	113	83	.15	2580	.69	.02	.960
MAY										
07...	5.2	.1	7.0	95	72	.13	1230	.30	.31	.070
JUN										
04...	4.4	.1	5.5	84	62	.11	1270	.45	.42	.050
JUL										
16...	5.0	.1	5.8	74	64	.10	965	.06	.10	.130
AUG										
13...	3.4	.1	7.0	85	59	.12	2730	.42	.27	.040
SEP										
03...	4.0	.2	10	92	74	.13	2710	.41	.37	.010

DATE	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N)	NITRO- GEN, ORGANIC DIS- SOLVED (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO- GEN,NH4 + ORG. SUSP. TOTAL (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC DIS- SOLVED (MG/L AS N)	NITRO- GEN, DIS- SOLVED (MG/L AS N)	NITRO- GEN, TOTAL (MG/L AS N)	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHORUS, DIS- SOLVED (MG/L AS P)
OCT , 1979										
08...	.040	.13	.18	.22	.00	.22	.75	.68	.080	.040
NOV										
14...	.120	.74	.56	.88	.20	.68	1.1	1.3	.090	.050
DEC										
14...	.070	.40	.38	.49	.04	.45	1.3	1.4	.070	.050
JAN , 1980										
17...	.110	.90	.88	1.0	.01	.99	1.8	1.8	.060	.050
FEB										
06...	.180	.40	.40	.57	.00	.58	1.5	1.5	.080	.070
MAR										
12...	.110	.49	.25	.61	.25	.36	1.2	1.6	.080	.050
26...	.090	.94	1.6	1.9	.20	1.7	1.7	2.6	.350	.190
MAY										
07...	.010	.74	.44	.81	.36	.45	.76	1.1	.090	.030
JUN										
04...	.100	.53	.52	.58	.00	.62	1.0	1.0	.020	.060
JUL										
16...	.000	1.3	.54	1.4	.86	.54	.64	1.5	.210	.040
AUG										
13...	.020	.25	.41	.29	.00	.43	.70	.71	.230	.080
SEP										
03...	.030	.62	.57	.63	.03	.60	.97	1.0	.110	.070

DATE	SILVER, TOTAL RECOVERABLE (UG/L AS AG)	CARBON, ORGANIC TOTAL (MG/L AS C)	CARBON, ORGANIC DIS- SOLVED (MG/L AS C)	CARBON, ORGANIC SUS- PENDED (MG/L AS C)	PHYTO- TON, PLANK- TON, TOTAL (CELLS PER ML)	PERI- PHYTON BIOMASS ASH WEIGHT G/SQ M	PERI- PHYTON BIOMASS TOTAL DRY WEIGHT G/SQ M	CHLOR-A PERI- PHYTON CHROMO- GRAPHIC FLUOROM (MG/M2)	CHLOR-B PERI- PHYTON CHROMO- GRAPHIC FLUOROM (MG/M2)	BIOMASS CHLORO- PHYLL RATIO PERI- PHYTON (UNITS)
OCT , 1979										
08...	0	--	5.8	1.1	--	--	--	--	--	--
NOV										
14...	0	--	7.8	.4	2000	--	--	--	--	--
DEC										
14...	0	6.3	--	--	--	--	--	--	--	--
JAN , 1980										
17...	--	8.8	--	--	--	--	--	--	--	--
FEB										
06...	0	--	6.7	.4	--	--	--	--	--	--
MAR										
12...	0	6.1	--	--	25000	--	--	--	--	--
26...	--	12	--	--	--	--	--	--	--	--
MAY										
07...	0	--	6.4	--	42000	--	--	--	--	--
JUN										
04...	0	9.5	--	--	6400	--	--	--	--	--
JUL										
16...	--	10	--	--	150000	2.2	3.7	.42	.09	3643
AUG										
13...	0	--	9.6	.9	29000	1.7	4.5	.15	.00	18930
SEP										
03...	0	10	--	--	23000	8.7	11	.18	.01	10780

CHIPPEWA RIVER BASIN

05369500 CHIPPEWA RIVER AT DURAND, WI--CONTINUED

WATER-QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	ARSENIC TOTAL (UG/L AS AS)	ARSENIC SUS- PENDE TOTAL (UG/L AS AS)	ARSENIC DIS- SOLVED (UG/L AS AS)	BARIIUM, TOTAL RECOV- ERABLE (UG/L AS BA)	BARIIUM, SUS- PENDE RECOV- ERABLE (UG/L AS BA)	BARIIUM, DIS- SOLVED (UG/L AS BA)	CADMIUM TOTAL RECOV- ERABLE (UG/L AS CD)	CADMIUM SUS- PENDE RECOV- ERABLE (UG/L AS CD)	CADMIUM DIS- SOLVED (UG/L AS CD)
OCT , 1979											
08...	1300	3270	1	0	1	300	280	20	0	0	0
NOV											
14...	1400	8130	1	0	1	30	0	30	3	1	2
FEB , 1980											
06...	1530	4200	0	0	0	<50	<30	20	1	--	3
MAY											
07...	1200	4790	1	0	1	<50	<40	10	0	--	3
AUG											
13...	0900	11900	1	1	0	100	0	100	2	2	0

DATE	TIME	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR)	CHRO- MIUM, SUS- PENDE RECOV- ERABLE (UG/L AS CR)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR)	COBALT, TOTAL RECOV- ERABLE (UG/L AS CO)	COBALT, SUS- PENDE RECOV- ERABLE (UG/L AS CO)	COBALT, DIS- SOLVED (UG/L AS CO)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU)	COPPER, SUS- PENDE RECOV- ERABLE (UG/L AS CU)	COPPER, DIS- SOLVED (UG/L AS CU)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	IRON, SUS- PENDE RECOV- ERABLE (UG/L AS FE)
OCT , 1979												
08...	20	0	20	0	0	0	5	2	3	400	330	
NOV												
14...	20	0	20	2	1	1	5	0	5	700	420	
FEB , 1980												
06...	10	0	<10	0	0	0	3	0	3	470	180	
MAY												
07...	<10	--	<10	0	0	0	7	1	6	500	310	
AUG												
13...	10	0	10	5	5	0	7	1	6	1100	880	

DATE	TIME	IRON, DIS- SOLVED (UG/L AS FE)	LEAD, TOTAL RECOV- ERABLE (UG/L AS PB)	LEAD, SUS- PENDE RECOV- ERABLE (UG/L AS PB)	LEAD, DIS- SOLVED (UG/L AS PB)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)	MANGA- NESE, SUS- PENDE RECOV- ERABLE (UG/L AS MN)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	MERCURY TOTAL RECOV- ERABLE (UG/L AS HG)	MERCURY SUS- PENDE RECOV- ERABLE (UG/L AS HG)	MERCURY DIS- SOLVED (UG/L AS HG)	NICKEL, TOTAL RECOV- ERABLE (UG/L AS NI)
OCT , 1979												
08...	70	7	--	9	90	80	10	.2	.0	.2	3	
NOV												
14...	280	23	19	4	70	50	20	.4	.0	.4	29	
FEB , 1980												
06...	290	26	7	19	40	10	30	.2	.0	.2	2	
MAY												
07...	190	3	--	4	90	84	6	.2	.0	.2	1	
AUG												
13...	220	15	15	0	160	150	10	.2	--	.4	3	

DATE	TIME	NICKEL, SUS- PENDE RECOV- ERABLE (UG/L AS NI)	NICKEL, DIS- SOLVED (UG/L AS NI)	SELE- NIUM, TOTAL (UG/L AS SE)	SELE- NIUM, SUS- PENDE TOTAL (UG/L AS SE)	SELE- NIUM, DIS- SOLVED (UG/L AS SE)	SILVER, TOTAL RECOV- ERABLE (UG/L AS AG)	SILVER, SUS- PENDE RECOV- ERABLE (UG/L AS AG)	SILVER, DIS- SOLVED (UG/L AS AG)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN)	ZINC, SUS- PENDE RECOV- ERABLE (UG/L AS ZN)	ZINC, DIS- SOLVED (UG/L AS ZN)
OCT , 1979												
08...	3	0	0	0	0	0	0	0	40	35	5	
NOV												
14...	28	1	0	0	0	0	0	0	500	480	20	
FEB , 1980												
06...	2	0	0	0	0	0	0	0	70	60	10	
MAY												
07...	1	0	0	0	0	0	0	0	340	170	170	
AUG												
13...	2	1	0	0	0	0	0	0	20	10	10	

RADIOCHEMICAL ANALYSES

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	GROSS ALPHA, DIS- SOLVED (UG/L U-NAT)	GROSS ALPHA, SUSP. TOTAL (UG/L U-NAT)	GROSS ALPHA, DIS- SOLVED (PCI/L AS)	GROSS ALPHA, SUSP. TOTAL (UG/L U-NAT)	GROSS BETA, DIS- SOLVED (PCI/L CS-137)	GROSS BETA, SUSP. TOTAL (UG/L CS-137)	GROSS BETA, DIS- SOLVED (PCI/L AS SR/ YT-90)	GROSS BETA, SUSP. TOTAL (UG/L AS SR/ YT-90)	RADIUM 226, DIS- SOLVED (PCI/L METHOD)	URANIUM DIS- SOLVED, EXTRAC- TION (UG/L)
MAY , 1980												
07...	1200	4790	<.9	<.4	<.6	<.3	2.5	.4	2.3	.4	.02	.13
SEP												
03...	1400	10900	<1.1	<.4	<.7	<.3	2.5	<.4	2.3	<.4	.03	.08

CHIPPEWA RIVER BASIN

05369500 CHIPPEWA RIVER AT DURAND, WI--CONTINUED

WATER-QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	PCB, TOTAL (UG/L)	PCB, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	ALDRIN, TOTAL (UG/L)	ALDRIN, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	CHLOR- DANE, TOTAL (UG/L)	CHLOR- DANE, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	DDD, TOTAL (UG/L)	DDD, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	DDE, TOTAL (UG/L)	DDE, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)
NOV , 1979												
14...	1400	8130	.0	0	.00	.0	.0	0	.00	.0	.00	.0
FEB , 1980												
06...	1530	4200	.0	--	.00	--	.0	--	.00	--	.00	--
MAY												
07...	1200	4790	.0	--	.00	--	.0	--	.00	--	.00	--

DATE	DDT, TOTAL (UG/L)	DDT, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	DI- AZINON, TOTAL (UG/L)	DI- AZINON, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	DI- ELDRIN, TOTAL (UG/L)	DI- ELDRIN, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	ENDRIN, TOTAL (UG/L)	ENDRIN, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	ETHION, TOTAL (UG/L)	ETHION, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	HEPTA- CHLOR, TOTAL (UG/L)
NOV , 1979											
14...	.00	.0	.00	.0	.00	.0	.00	.0	.00	.0	.00
FEB , 1980											
06...	.00	--	.00	--	.00	--	.00	--	.00	--	.00
MAY											
07...	.00	--	.00	--	.00	--	.00	--	.00	--	.00

DATE	HEPTA- CHLOR, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	HEPTA- CHLOR EPOXIDE TOT. IN BOTTOM MATL. (UG/L)	HEPTA- CHLOR EPOXIDE TOT. IN BOTTOM MATL. (UG/KG)	LINDANE TOTAL (UG/L)	LINDANE TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	MALA- THION, TOTAL (UG/L)	MALA- THION, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	METH- OXY- CHLOR, TOTAL (UG/L)	METH- OXY- CHLOR, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	METHYL PARA- THION, TOT. IN BOTTOM MATL. (UG/L)	METHYL PARA- THION, TOT. IN BOTTOM MATL. (UG/KG)
NOV , 1979											
14...	.0	.00	.0	.00	.0	.00	.0	.00	.0	.00	.0
FEB , 1980											
06...	--	.00	--	.00	--	.00	--	.00	--	.00	--
MAY											
07...	--	.00	--	.00	--	.00	--	.00	--	.00	--

DATE	METHYL THION, TOTAL (UG/L)	METHYL THION, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	PARA- THION, TOTAL (UG/L)	PARA- THION, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	TOX- APHENE, TOTAL (UG/L)	TOX- APHENE, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	TRI- THION, TOTAL (UG/L)	TRI- THION, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	2,4-D, TOTAL (UG/L)	2,4,5-T TOTAL (UG/L)	SILVEX, TOTAL (UG/L)
NOV , 1979											
14...	.00	.0	.00	.0	0	0	.00	.0	.00	.00	.00
FEB , 1980											
06...	.00	--	.00	--	0	--	.00	--	--	--	--
MAY											
07...	.00	--	.00	--	0	--	.00	--	--	--	--

CHIPPEWA RIVER BASIN

05369500 CHIPPEWA RIVER AT DURAND, WI--CONTINUED

QUALITATIVE AND ASSOCIATED QUANTITATIVE BIOLOGICAL DATA, SEPTEMBER 1979 TO SEPTEMBER 1980

PHYTOPLANKTON

Date	Time	Organism	Count (cells/ml)	Percent of total	Diversity index	Sampling method
Sept. 11, 1979	1000	CHLOROPHYTA				Grab sample
		Chlorophyceae				
		<i>Ankistrodesmus</i>	300	1		
		<i>Golenkinia</i>	300	1		
		<i>Kirchneriella</i>	440	1		
		<i>Scenedesmus</i>	300	1		
		CHRYSOPHYTA				
		Bacillariophyceae				
		<i>Cyclotella</i>	1,800	4		
		<i>Melosira</i>	1,000	3		
		<i>Navicula</i>	300	1		
		<i>Nitzschia</i>	300	1		
		<i>Skeletonema</i>	4,300	10		
		<i>Synedra</i>	300	1		
		CYANOPHYTA				
		Cyanophyceae				
		<i>Anacyetis</i>	15,000	36		
		<i>Oscillatoria</i>	16,000	39		
		<i>Schizothrix</i>	590	1		
		EUGLENOPHYTA				
		Euglenophyceae				
		<i>Eutreptia</i>		0	2.2	
		TOTAL	41,000			
Nov. 14, 1979	1400	CHLOROPHYTA				Grab sample
		Chlorophyceae				
		<i>Ankistrodesmus</i>	140	7		
		<i>Chlamydomonas</i>	27	1		
		<i>Scenedesmus</i>	110	6		
		CHRYSOPHYTA				
		Bacillariophyceae				
		<i>Cyclotella</i>	650	33		
		<i>Melosira</i>	14	1		
		<i>Navicula</i>	55	3		
		<i>Nitzschia</i>	41	2		
		<i>Stephanodiscus</i>	14	1		
		CYANOPHYTA				
		Cyanophyceae				
		<i>Oscillatoria</i>	930	47		
		TOTAL	2,000		2.0	
Mar. 12, 1980	1330	CHLOROPHYTA				Grab sample
		Chlorophyceae				
		<i>Actinastrum</i>		0		
		<i>Ankistrodesmus</i>		0		
		<i>Crucegenia</i>		0		
		<i>Dictyosphaerium</i>	140	1		
		<i>Oocystis</i>		0		
		CHRYSOPHYTA				
		Bacillariophyceae				
		<i>Achnanthes</i>		0		
		<i>Asterionella</i>		0		
		<i>Cocconeis</i>		0		
		<i>Cyclotella</i>	170	1		
		<i>Cymbella</i>		0		
		<i>Gomphonema</i>		0		
		<i>Melosira</i>		0		
		<i>Navicula</i>		0		
		<i>Nitzschia</i>	180	1		
		<i>Synedra</i>		0		
		CYANOPHYTA				
		Cyanophyceae				
		<i>Anacyetis</i>	3,300	13		
		<i>Oscillatoria</i>	21,000	83		
		TOTAL	25,000		0.9	
May 7, 1980	1200	CHLOROPHYTA				Grab sample
		Chlorophyceae				
		<i>Ankistrodesmus</i>	830	2		
		<i>Chlamydomonas</i>	280	1		
		<i>Dictyosphaerium</i>	1,400	3		
		<i>Microactinium</i>	3,900	9		
		<i>Scenedesmus</i>	3,900	9		
		CHRYSOPHYTA				
		Bacillariophyceae				
		<i>Cyclotella</i>	22,000	53		
		<i>Cymbella</i>	560	1		
		<i>Fragilaria</i>	280	1		
		<i>Melosira</i>	4,400	11		
		<i>Nitzschia</i>	1,900	5		
		<i>Stephanodiscus</i>	1,100	3		
		<i>Synedra</i>	830	2		
		CRYPTOPHYTA				
		Cryptophyceae				
		<i>Chroomonas</i>	280	1		
		TOTAL	42,000		2.4	

CHIPPEWA RIVER BASIN

05369500 CHIPPEWA RIVER AT DURAND, WI--CONTINUED

QUALITATIVE AND ASSOCIATED QUANTITATIVE BIOLOGICAL DATA, SEPTEMBER 1979 TO SEPTEMBER 1980

PHYTOPLANKTON					
Date	Time	Organism	(cells/ml)	of total	index
June 4, 1980	1550	CHLOROPHYTA			
		Chlorophyceae			Grab sample
		<i>Actinastrum</i>	320	5	
		<i>Ankistrodesmus</i>	160	3	
		<i>Chlamydomonas</i>	81	1	
		<i>Chlorella</i>	40	1	
		<i>Coelastrum</i>	320	5	
		<i>Golenkia</i>	40	1	
		<i>Schroederia</i>	200	3	
		CHRYSOPHYTA			
		Bacillariophyceae			
		<i>Cyclotella</i>	2,300	35	
		<i>Melosira</i>	2,100	32	
		<i>Navicula</i>	81	1	
		<i>Nitzschia</i>	81	1	
		<i>Synedra</i>	40	1	
		CYANOPHYTA			
		Cyanophyceae			
		<i>Anacystis</i>	730	11	2.5
		TOTAL	6,400		
July 16, 1980	1615	CHLOROPHYTA			
		Chlorophyceae			Grab sample
		<i>Ankistrodesmus</i>		0	
		<i>Dictyosphaerium</i>	1,200	1	
		<i>Microactinium</i>	19,000	13	
		<i>Scenedesmus</i>		0	
		CHRYSOPHYTA			
		Bacillariophyceae			
		<i>Cyclotella</i>	1,500	1	
		<i>Melosira</i>	87,000	58	
		<i>Navicula</i>		0	
		<i>Nitzschia</i>		0	
		CYANOPHYTA			
		Cyanophyceae			
		<i>Anabaena</i>	5,400	4	
		<i>Anacystis</i>		0	
		<i>Aphanizomenon</i>	3,600	2	
		<i>Oscillatoria</i>	30,000	20	1.9
		TOTAL	150,000		
Aug. 13, 1980	0900	CHLOROPHYTA			
		Chlorophyceae			Grab sample
		<i>Ankistrodesmus</i>		0	
		<i>Crucigenia</i>	400	1	
		<i>Dictyosphaerium</i>		0	
		<i>Scenedesmus</i>	560	2	
		<i>Schroederia</i>		0	
		<i>Selenastrum</i>		0	
		CHRYSOPHYTA			
		Bacillariophyceae			
		<i>Cyclotella</i>		0	
		<i>Melosira</i>	350	1	
		<i>Navicula</i>		0	
		<i>Synedra</i>		0	
		CYANOPHYTA			
		Cyanophyceae			
		<i>Anabaena</i>	180	1	
		<i>Anacystis</i>	2,300	8	
		<i>Aphanizomenon</i>	22,000	77	
		<i>Oscillatoria</i>	2,800	9	1.3
		TOTAL	29,000		
Sept. 3, 1980	1400	CHLOROPHYTA			
		Chlorophyceae			Grab sample
		<i>Ankistrodesmus</i>		0	
		<i>Chlamydomonas</i>		0	
		<i>Kirchneriella</i>	200	1	
		<i>Pediastrum</i>	200	1	
		<i>Scenedesmus</i>		0	
		<i>Schroederia</i>		0	
		CHRYSOPHYTA			
		Bacillariophyceae			
		<i>Cyclotella</i>		0	
		<i>Fragilaria</i>	3,300	14	
		<i>Melosira</i>	2,100	9	
		<i>Nitzschia</i>		0	
		CYANOPHYTA			
		Cyanophyceae			
		<i>Anacystis</i>	8,700	38	
		<i>Aphanizomenon</i>	4,600	20	
		<i>Oscillatoria</i>	3,500	15	2.4
		TOTAL	23,000		

CHIPPEWA RIVER BASIN

05369500 CHIPPEWA RIVER AT DURAND, WI--CONTINUED

WATER-QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SEDI- MENT, SUS- PENDE (MG/L)	SEDI- MENT DIS- CHARGE, SUS- PENDE (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM	SED. SUSP. SIEVE DIAM. % FINER THAN .125 MM	SED. SUSP. SIEVE DIAM. % FINER THAN .250 MM	SED. SUSP. SIEVE DIAM. % FINER THAN .500 MM	SED. SUSP. SIEVE DIAM. % FINER THAN 1.00 MM
MAR , 1980									
25...	1515	9100	60	1470	35	63	84	98	100
APR									
07...	1610	16100	66	2870	28	44	74	96	100
11...	1440	24200	96	6270	17	26	51	95	100
12...	0940	23000	85	5280	19	28	55	96	100
JUN									
08...	0925	34900	413	38900	71	79	86	97	100
SEP									
24...	1635	39200	84	8890	25	33	62	94	100

PARTICLE-SIZE DISTRIBUTION OF SURFACE BED MATERIAL

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	BED MAT. SIEVE DIAM. % FINER THAN .062 MM	BED MAT. SIEVE DIAM. % FINER THAN .125 MM	BED MAT. SIEVE DIAM. % FINER THAN .250 MM	BED MAT. SIEVE DIAM. % FINER THAN .500 MM	BED MAT. SIEVE DIAM. % FINER THAN 1.00 MM
MAR , 1980							
25...	1515	9100	--	--	2	32	68
APR							
07...	1610	16100	--	--	2	30	71
11...	1440	24200	--	--	2	42	82
12...	0940	23000	--	--	3	44	78
JUN							
08...	0925	34900	4	10	17	55	86
SEP							
24...	1635	39200	--	3	13	54	81

DATE	2.00 MM	4.00 MM	8.00 MM	16.0 MM	32.0 MM	64.0 MM
MAR , 1980						
25...	81	86	90	94	98	100
APR						
07...	87	92	95	97	100	--
11...	86	87	88	90	96	100
12...	85	86	88	93	100	--
JUN						
08...	94	97	99	100	--	--
SEP						
24...	84	87	88	89	--	100

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	TEMPER- ATURE, WATER (DEG C)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	SEDI- MENT, SUS- PENDE (MG/L)	SEDI- MENT DIS- CHARGE, SUS- PENDE (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
OCT , 1979							
08...	1300	3270	13.0	192	6	53	60
NOV							
14...	1400	8130	2.5	154	13	285	12
DEC							
14...	1100	3500	.5	203	--	--	--
JAN , 1980							
17...	1200	6200	.0	160	1	17	100
FEB							
06...	1530	4200	.0	164	2	23	100
MAR							
12...	1330	5380	.0	174	10	145	36
25...	1515	9100	3.5	175	60	1470	35
26...	0845	8450	2.0	173	55	1260	65
APR							
07...	1610	16100	5.0	130	66	2870	28
11...	1440	24200	4.5	105	96	6270	17
12...	0940	23000	4.5	105	85	5280	19
MAY							
07...	1200	4790	12.5	125	31	401	35
JUN							
04...	1550	5600	22.5	123	34	514	61
08...	0925	34900	18.0	112	413	38900	71
JUL							
16...	1615	4830	27.5	116	77	1000	87
AUG							
13...	0900	11900	22.0	102	58	1860	34
SEP							
03...	1400	10900	21.5	117	36	1060	42
24...	1635	39200	15.0	100	84	8890	25

CHIPPEWA RIVER BASIN

05369500 CHIPPEWA RIVER AT DURAND, WI--CONTINUED

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DAY	OCT	NOV	DEC	JAN	FEB	ONCE-DAILY MAR	APR	MAY	JUN	JUL	AUG	SEP
1	170	140	---	170	---	140	165	150	176	---	180	139
2	165	145	---	155	160	220	195	140	158	148	181	140
3	---	---	---	155	---	225	---	175	---	132	---	---
4	---	195	160	155	220	150	150	150	---	182	---	138
5	175	150	165	170	200	150	145	145	155	188	---	118
6	175	---	160	---	210	155	145	---	118	140	---	118
7	160	---	145	150	175	210	140	140	105	140	---	---
8	---	140	165	---	190	200	120	160	---	---	---	122
9	---	140	165	170	170	170	120	---	---	165	106	120
10	315	130	165	470	210	180	105	168	---	159	104	124
11	180	---	145	220	205	170	105	144	---	149	111	116
12	---	210	190	195	160	175	105	163	118	162	---	121
13	185	145	---	225	165	160	100	170	123	188	---	112
14	250	140	235	210	155	190	110	140	121	184	111	109
15	250	155	205	180	155	165	---	150	158	117	---	99
16	175	145	210	230	170	225	120	140	177	125	128	92
17	190	---	180	170	---	230	---	158	---	133	181	102
18	200	---	165	160	225	220	---	157	---	142	157	116
19	---	150	190	150	---	165	115	---	162	179	144	121
20	185	150	155	---	215	---	210	120	141	198	160	128
21	---	150	155	225	---	---	115	130	---	165	158	117
22	120	---	160	150	225	140	115	121	176	171	156	96
23	---	---	175	---	165	170	125	---	158	163	155	---
24	125	---	170	---	215	155	130	137	161	---	141	---
25	115	---	---	---	---	170	130	---	144	106	140	106
26	115	130	185	170	145	---	125	150	153	165	---	104
27	125	150	180	210	150	175	140	161	174	163	123	121
28	---	145	175	215	145	155	145	163	141	178	136	116
29	135	---	170	---	150	155	150	---	---	---	122	118
30	140	---	165	200	---	160	150	139	140	174	120	119
31	140	---	180	165	---	185	---	158	---	173	141	---

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DAY	OCT	NOV	DEC	JAN	FEB	ONCE-DAILY MAR	APR	MAY	JUN	JUL	AUG	SEP
1	15.0	6.0	---	1.5	---	.0	5.0	16.5	20.0	---	25.0	20.0
2	14.5	6.5	---	1.0	.0	.5	7.0	18.0	20.0	25.5	23.0	22.0
3	---	---	---	.0	.0	1.0	---	12.0	---	25.0	---	---
4	---	6.5	1.5	1.5	.0	1.0	4.0	19.5	---	27.0	---	21.5
5	14.5	5.0	2.0	.0	.0	.5	3.0	17.0	20.0	22.0	---	23.0
6	11.0	---	2.5	---	.0	.5	6.0	---	20.5	26.0	---	20.0
7	4.0	---	1.0	.0	---	1.0	6.0	12.0	19.5	29.0	---	---
8	---	4.0	.0	---	.5	1.0	3.0	13.0	---	---	---	23.5
9	---	2.0	1.0	.0	.5	1.0	1.0	---	---	28.5	23.0	21.0
10	12.0	.5	3.5	.0	.5	1.0	2.0	13.0	---	30.0	22.0	21.0
11	11.0	---	.0	.0	.5	.5	4.0	15.0	---	30.0	23.0	18.0
12	---	1.0	.0	.0	.5	1.5	4.0	16.0	20.0	25.0	24.0	19.0
13	6.5	3.0	---	.5	.5	1.5	3.0	13.5	23.0	28.0	---	19.0
14	11.0	3.0	1.5	.0	.5	2.5	4.5	14.0	21.0	30.0	24.5	12.5
15	13.0	4.0	1.0	1.0	.5	.5	---	18.0	19.5	30.0	---	18.0
16	13.5	7.0	.0	1.0	.5	1.5	7.0	16.0	23.0	27.0	20.0	16.5
17	13.0	---	.0	1.0	---	1.5	---	14.0	---	27.5	20.0	16.5
18	14.0	---	.5	1.0	.5	3.0	---	14.0	21.0	27.5	24.0	16.0
19	---	7.5	2.0	.5	---	3.5	9.0	---	22.0	21.5	26.0	16.0
20	15.0	6.5	1.5	---	1.0	---	14.0	20.0	20.0	24.0	24.0	16.0
21	---	5.0	2.0	1.0	---	---	13.0	20.0	---	26.5	24.0	16.0
22	7.0	---	.0	.0	2.0	2.0	14.0	21.0	24.0	26.0	26.0	16.5
23	---	---	1.0	---	1.0	1.0	12.0	---	25.5	25.5	20.5	---
24	10.0	---	1.0	---	1.0	1.5	10.0	18.0	26.0	---	22.0	---
25	4.5	---	---	---	---	4.0	10.0	---	27.0	26.0	26.0	14.5
26	9.0	3.5	.5	.0	1.0	---	9.5	23.0	26.0	20.0	---	14.0
27	9.0	3.0	.5	.0	1.0	4.0	13.5	22.0	21.0	27.0	21.5	13.0
28	---	1.0	1.0	.0	1.0	3.0	15.0	26.0	20.5	27.0	21.5	14.0
29	11.0	---	.5	---	.5	2.0	14.0	---	---	---	25.0	16.0
30	10.5	---	1.5	.0	---	5.0	16.0	20.5	23.0	27.0	22.0	17.5
31	11.0	---	1.0	.0	---	7.5	---	20.0	---	25.0	19.5	---

CHIPPEWA RIVER BASIN

05369900 EAU GALLE RIVER NEAR WOODVILLE, WI

LOCATION.--Lat 44°54'18", long 92°15'51", in SE 1/4 sec.13, T.28 N., R.15 W., St. Croix County, Hydrologic Unit 07050005, on left bank 20 ft (6.1 m) downstream from bridge on County Trunk Highway N, 1.3 mi (2.1 km) downstream from Carr Creek, and 2.9 mi (4.7 km) south of Woodville.

DRAINAGE AREA.--39.3 mi² (101.8 km²).

WATER-DISCHARGE RECORDS

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

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 1,508.66 ft (322.680 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Records good except those below 3.0 ft³/s (0.08 m³/s), which are fair.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 5,280 ft³/s (150 m³/s) June 7, 1980, gage height, 11.07 ft (3.374 m), from floodmarks, from rating curve extended above 1,000 ft³/s (28.3 m³/s) on basis of contracted-opening measurement of peak flow; minimum daily discharge, 0.70 ft³/s (0.020 m³/s) Mar. 5-7, 1979.

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

DATE	TIME	DISCHARGE		GAGE HEIGHT		DATE	TIME	DISCHARGE		GAGE HEIGHT	
		(ft ³ /s)	(m ³ /s)	(ft)	(m)			(ft ³ /s)	(m ³ /s)	(ft)	(m)
Mar. 20	1900	906	25.7	7.08	2.158	Aug. 8	0515	4,140	117	10.38	3.164
June 5	1200	995	28.2	7.23	2.204	Sept. 12	0300	3,700	105	10.07	3.069
June 6	0115	1,760	49.8	8.27	2.521	Sept. 20	0100	971	27.5	7.19	2.192
June 7	0615	*5,280	150	*11.07	3.374	Sept. 21	0500	1,370	38.8	7.78	2.371

minimum daily discharge, 0.80 ft³/s (0.023 m³/s) Mar. 1.

RATING TABLE (gage height, in feet, and discharge, in cubic feet per second).
(Shifting-control method used June 24 to July 15, July 19 to Aug. 6, Aug. 15-19;
stage-discharge relation affected by ice Dec. 1 to Mar. 17.)

3.3	0.7	4.4	60
3.4	2.0	4.8	114
3.5	4.1	5.4	238
3.6	6.7	6.0	420
3.8	14	7.0	860
4.0	25	8.0	1,540
4.2	40.1		

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DAY	MEAN VALUES											
	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.4	12	2.6	1.7	1.4	.80	96	4.6	2.4	3.1	2.7	16
2	2.2	5.6	2.5	1.7	1.4	.88	80	4.4	2.6	3.8	3.1	9.7
3	2.2	5.3	2.5	1.6	1.4	1.0	90	4.3	3.3	3.6	2.8	32
4	2.2	3.4	2.5	1.6	1.4	1.1	54	4.1	2.6	3.4	3.3	65
5	2.3	3.0	2.4	1.6	1.4	.98	160	4.1	361	3.6	2.5	19
6	2.4	2.8	2.4	1.7	1.3	.96	140	4.0	473	3.1	2.6	9.1
7	2.4	3.6	2.4	1.7	1.2	.94	120	3.8	1140	3.4	169	6.7
8	2.4	3.4	2.3	1.6	1.2	.96	98	3.6	58	4.8	971	6.1
9	2.3	3.0	2.2	1.6	1.2	1.0	80	3.5	18	4.4	60	6.0
10	2.2	2.8	2.2	1.7	1.4	1.1	46	3.6	12	3.5	19	9.6
11	2.4	2.8	2.2	1.7	1.4	.88	38	3.3	9.0	4.0	16	97
12	1.9	2.8	2.2	1.8	1.3	.88	64	3.2	8.2	4.3	10	1070
13	1.9	2.6	2.3	1.8	1.2	.90	110	3.5	7.7	3.5	8.0	71
14	1.9	2.6	2.3	1.8	1.1	.90	50	3.9	7.2	3.7	5.4	23
15	2.0	2.6	2.3	1.9	1.1	.92	35	3.9	5.5	2.9	4.0	15
16	2.0	2.6	2.3	1.9	1.1	1.5	21	3.8	5.0	20	3.9	13
17	2.2	2.6	2.2	1.8	1.1	2.0	15	3.8	4.8	11	3.7	13
18	2.4	2.6	2.2	1.7	1.2	2.1	14	3.8	4.5	4.7	3.4	10
19	3.0	2.6	2.2	1.7	1.2	119	13	3.6	4.2	2.7	3.8	19
20	2.8	2.4	2.1	1.6	1.2	486	12	3.4	3.6	2.6	3.7	302
21	2.8	2.4	2.1	1.6	1.2	302	9.9	3.4	3.4	2.5	3.3	526
22	3.4	5.0	2.1	1.6	1.2	87	9.0	3.0	3.0	2.3	3.1	78
23	13	8.9	2.0	1.6	.98	33	7.9	2.9	3.0	2.3	3.1	22
24	16	7.9	2.0	1.7	1.0	17	7.4	2.9	2.7	2.3	3.0	15
25	8.2	5.0	1.9	1.6	.90	30	7.2	3.0	2.6	2.5	2.9	13
26	5.3	4.3	1.8	1.4	.92	163	6.4	3.0	2.6	2.4	3.0	12
27	4.3	3.8	1.8	1.4	.96	187	6.1	3.0	2.9	2.4	2.7	11
28	3.8	3.4	1.7	1.4	.90	118	5.6	2.7	13	2.4	2.6	11
29	3.6	2.8	1.7	1.4	.86	138	5.0	2.4	5.9	2.4	2.6	10
30	3.4	2.7	1.7	1.4	---	201	5.1	2.9	3.6	2.6	98	9.7
31	2.6	---	1.7	1.4	---	144	---	2.4	---	2.6	36	---
TOTAL	111.9	117.3	66.8	50.7	34.12	2044.80	1405.6	107.8	2175.3	122.8	1458.2	2519.9
MEAN	3.61	3.91	2.15	1.64	1.18	66.0	46.9	3.48	72.5	3.96	47.0	84.0
MAX	16	12	2.6	1.9	1.4	486	160	4.6	1140	20	971	1070
MIN	1.9	2.4	1.7	1.4	.86	.80	5.0	2.4	2.4	2.3	2.5	6.0
CFSM	.09	.10	.06	.04	.03	1.68	1.19	.09	1.85	.10	1.20	2.14
IN.	.11	.11	.06	.05	.03	1.94	1.33	.10	2.06	.12	1.38	2.39
CAL YR 1979	TOTAL	6345.86	MEAN	17.4	MAX	583	MIN	.70	CFSM	.44	IN	6.01
WTR YR 1980	TOTAL	10215.22	MEAN	27.9	MAX	1140	MIN	.80	CFSM	.71	IN	9.67

CHIPPEWA RIVER BASIN

05369900 EAU GALLE RIVER NEAR WOODVILLE, WI--CONTINUED

WATER-QUALITY RECORDS

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

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: June 1978 to current year.

WATER TEMPERATURES: June 1978 to current year.

INSTRUMENTATION.--Water-quality monitor since June 20, 1978.

REMARKS.--Unpublished records of hourly specific conductance and water temperatures are available in files of District Office. Water-quality monitor inoperative part of year.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Maximum observed, 550 micromhos Aug 27, 1980; Minimum observed, 161 micromhos Aug. 10, 1979.

WATER TEMPERATURES: Maximum observed, 26.5°C July 17, 1980; Minimum observed, 1.0°C on many days during winter periods.

EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum observed, 550 micromhos Aug. 27; minimum observed, 163 micromhos May 29.

WATER TEMPERATURES: Maximum observed, 26.5°C July 17; minimum observed, 1.0°C on many days during winter period.

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DAY	MAX	MIN OCTOBER	MEAN	MAX	MIN NOVEMBER	MEAN	MAX	MIN DECEMBER	MEAN	MAX	MIN JANUARY	MEAN
1	384	351	365	403	300	337	461	407	444	463	454	459
2	413	368	386	337	304	322	463	452	459	461	446	454
3	391	347	368	413	338	361	473	458	464	452	444	447
4	371	359	365	437	379	399	473	452	463	454	448	450
5	382	354	367	423	396	405	481	456	466	458	446	451
6	378	363	370	435	394	406	479	461	469	456	441	449
7	397	367	377	461	405	429	450	402	428	441	428	432
8	400	368	381	491	403	424	461	405	443	443	428	436
9	390	367	374	496	427	459	502	452	471	450	443	447
10	396	375	384	469	444	457	505	456	478	448	446	447
11	388	368	378	471	443	458	487	432	458	444	428	437
12	382	368	376	481	425	450	463	430	453	---	---	---
13	427	371	386	489	454	470	467	456	460	---	---	---
14	405	375	391	487	458	469	471	458	463	---	---	---
15	427	367	396	496	432	459	467	454	460	---	---	---
16	428	396	406	479	427	447	459	446	453	---	---	---
17	411	384	395	509	450	474	463	456	460	---	---	---
18	405	375	387	511	425	455	469	456	461	---	---	---
19	407	375	386	483	422	441	456	441	448	---	---	---
20	393	378	386	458	427	439	467	443	450	---	---	---
21	430	393	404	443	423	433	491	448	465	---	---	---
22	400	368	384	430	341	399	494	456	469	---	---	---
23	369	234	286	326	281	294	485	456	465	---	---	---
24	262	234	246	323	290	302	463	458	461	---	---	---
25	303	265	285	418	325	373	469	448	454	---	---	---
26	338	307	318	443	354	386	471	456	459	---	---	---
27	452	345	372	432	369	399	471	452	459	---	---	---
28	469	399	429	388	372	378	459	452	457	---	---	---
29	473	384	415	400	385	390	459	450	455	---	---	---
30	479	384	414	452	399	422	459	452	457	---	---	---
31	405	378	394	---	---	---	461	454	458	---	---	---
MONTH	479	234	373	511	281	411	505	402	458	463	428	446

CHIPPEWA RIVER BASIN

05369900 EAU GALLE RIVER NEAR WOODVILLE, WI--CONTINUED

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DAY	MAX	MIN FEBRUARY	MEAN	MAX	MIN MARCH	MEAN	MAX	MIN APRIL	MEAN	MAX	MIN MAY	MEAN
1							---	---	---	405	363	385
2							---	---	---	400	354	379
3							---	---	---	390	345	369
4							---	---	---	379	328	356
5							---	---	---	362	279	328
6							---	---	---			
7							---	---	---	327	254	295
8							---	---	---	297	263	282
9							---	---	---	279	225	256
10							---	---	---	247	187	225
11							---	---	---	224	212	219
12							---	---	---			
13							---	---	---	231	186	211
14							---	---	---	220	161	197
15							---	---	---	190	175	183
16							---	---	---	195	165	180
17							---	---	---	194	171	184
18							---	---	---			
19							---	---	---	211	179	193
20							---	---	---	196	187	192
21							---	---	---	205	178	195
22							---	---	---	---	---	---
23							---	---	---	---	---	---
24							---	---	---	---	---	---
25							---	---	---	---	---	---
26							---	---	---	---	---	---
27							---	---	---	---	---	---
28							---	---	---	---	---	---
29							---	---	---	---	---	---
30							---	---	---	---	---	---
31							---	---	---	---	---	---
MONTH							390	362	372	405	161	253

DAY	MAX	MIN JUNE	MEAN	MAX	MIN JULY	MEAN	MAX	MIN AUGUST	MEAN	MAX	MIN SEPTEMBER	MEAN
1	---	---	---	278	233	261	456	402	424			
2	416	399	406	296	242	258	452	381	421			
3	418	382	404	275	233	257	491	410	439			
4	422	379	402	326	224	272	446	396	423			
5	---	---	---	374	254	326	443	374	415			
6	---	---	---	349	249	305	467	367	426			
7	---	---	---	407	300	343	---	---	---			
8	---	---	---	405	369	390	---	---	---			
9	301	221	263	416	315	373	---	---	---			
10	369	302	331	420	295	367	489	274	418			
11	390	359	373	411	263	361	498	327	454			
12	400	374	387	423	269	344	505	363	459			
13	408	379	394	384	369	376	518	365	459			
14	413	388	400	415	294	367	530	388	464			
15	422	381	400	427	367	406	537	393	476			
16	430	374	401	423	203	325	542	461	519			
17	420	345	376	321	210	265	545	439	525			
18	385	315	345	378	327	359	548	418	501			
19	327	256	286	425	379	403	540	427	503			
20	337	262	301	444	382	416	542	465	518			
21	362	236	294	471	394	431	542	400	499			
22	296	233	258	485	378	424	545	473	526			
23	334	214	264	491	423	453	545	427	518			
24	362	258	307	479	397	430	545	425	517			
25	364	234	303	452	387	413	542	435	524			
26	314	222	273	487	397	438	550	415	501			
27	301	284	297	483	416	447	550	423	504			
28	297	178	264	473	423	448	---	---	---			
29	265	200	244	463	410	433	---	---	---			
30	267	226	245	465	400	421	---	---	---			
31	---	---	---	435	382	416	---	---	---			
MONTH	430	178	329	491	203	372	550	274	476			

CHIPPEWA RIVER BASIN

05369900 EAU GALLE RIVER NEAR WOODVILLE, WI--CONTINUED

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DAY	MAX	MIN OCTOBER	MEAN	MAX	MIN NOVEMBER	MEAN	MAX	MIN DECEMBER	MEAN	MAX	MIN JANUARY	MEAN
1	13.0	11.0	12.0	9.0	6.5	8.0	4.5	1.5	3.0	5.0	4.5	5.0
2	12.5	9.0	10.5	8.0	5.5	6.5	4.0	2.0	3.0	5.0	3.5	4.0
3	13.5	10.0	11.5	8.0	5.5	6.5	4.5	2.0	3.0	4.5	3.0	4.0
4	11.0	9.0	10.0	8.0	5.5	7.0	5.0	3.0	4.0	4.5	3.5	4.0
5	13.0	8.0	10.5	7.5	6.0	6.5	5.0	3.5	4.5	4.5	3.0	4.0
6	10.5	8.5	9.5	6.5	4.5	5.5	5.5	3.0	4.5	4.5	2.5	3.0
7	12.5	7.5	10.0	5.5	4.5	5.0	5.0	1.5	3.5	2.5	1.5	2.0
8	11.0	9.5	10.5	5.5	2.0	4.0	4.0	1.0	2.5	2.0	1.5	1.5
9	10.5	7.5	9.0	5.0	3.0	4.0	5.0	2.5	4.0	2.0	1.5	1.5
10	9.0	7.5	8.5	5.5	3.0	4.0	5.5	4.0	4.5	2.5	1.5	2.0
11	10.5	8.0	9.0	5.5	4.0	5.0	5.5	1.0	3.5	3.0	1.5	2.0
12	8.5	6.0	7.5	6.5	4.5	5.5	3.5	1.0	2.5	---	---	---
13	10.5	5.5	8.0	5.5	4.0	5.0	4.5	2.5	3.0	---	---	---
14	11.0	6.0	8.5	6.0	4.5	5.0	5.0	3.0	3.5	---	---	---
15	12.0	7.5	9.5	6.0	5.0	5.5	4.5	3.0	4.0	---	---	---
16	12.0	8.0	10.0	8.0	5.5	6.5	3.0	1.5	2.5	---	---	---
17	13.0	9.0	11.0	8.5	5.5	7.0	3.0	1.5	2.5	---	---	---
18	11.5	9.0	10.5	9.0	5.0	7.0	4.0	3.0	3.5	---	---	---
19	12.5	11.5	12.0	10.5	8.0	9.0	4.5	3.0	4.0	---	---	---
20	15.5	11.5	13.5	8.0	7.5	7.5	5.0	3.5	4.0	---	---	---
21	13.5	9.5	11.5	7.5	4.0	6.5	5.0	4.0	4.5	---	---	---
22	9.0	5.5	8.0	5.0	3.5	4.5	5.0	4.0	4.5	---	---	---
23	6.5	5.0	6.0	3.5	1.5	3.0	5.0	4.0	4.5	---	---	---
24	7.5	5.0	6.5	4.5	1.5	3.0	5.0	4.0	4.5	---	---	---
25	8.5	5.5	7.0	5.5	2.5	4.0	5.0	3.5	4.5	---	---	---
26	8.0	5.5	6.5	5.5	4.0	5.0	5.0	4.0	4.5	---	---	---
27	9.0	6.5	7.5	5.0	3.5	4.5	5.0	4.5	5.0	---	---	---
28	11.0	6.0	8.0	4.5	2.5	3.0	5.0	4.0	5.0	---	---	---
29	11.0	7.0	8.5	4.0	1.0	2.5	5.0	4.0	4.5	---	---	---
30	10.0	8.0	9.0	4.5	1.0	3.0	5.0	3.5	4.0	---	---	---
31	11.0	9.0	10.0	---	---	---	5.0	4.5	5.0	---	---	---
MONTH	15.5	5.0	9.5	10.5	1.0	5.5	5.5	1.0	4.0	5.0	1.5	3.0

DAY	MAX	MIN FEBRUARY	MEAN	MAX	MIN MARCH	MEAN	MAX	MIN APRIL	MEAN	MAX	MIN MAY	MEAN
1	---	---	---	---	---	---	---	---	---	19.0	10.0	14.5
2	---	---	---	---	---	---	---	---	---	20.0	10.5	15.0
3	---	---	---	---	---	---	---	---	---	20.5	11.0	15.0
4	---	---	---	---	---	---	---	---	---	19.5	11.5	15.0
5	---	---	---	---	---	---	---	---	---	19.0	11.5	15.0
6	---	---	---	---	---	---	---	---	---	16.5	10.0	13.0
7	---	---	---	---	---	---	---	---	---	11.5	9.0	10.0
8	---	---	---	---	---	---	---	---	---	14.0	8.5	10.5
9	---	---	---	---	---	---	---	---	---	19.0	9.0	13.0
10	---	---	---	---	---	---	---	---	---	13.0	10.5	12.0
11	---	---	---	---	---	---	---	---	---	17.0	8.5	12.5
12	---	---	---	---	---	---	---	---	---	17.0	9.0	12.5
13	---	---	---	---	---	---	---	---	---	13.0	10.5	12.0
14	---	---	---	---	---	---	---	---	---	15.0	10.0	12.5
15	---	---	---	---	---	---	---	---	---	18.5	8.5	13.5
16	---	---	---	---	---	---	---	---	---	17.0	10.0	13.5
17	---	---	---	---	---	---	---	---	---	13.5	11.5	12.5
18	---	---	---	---	---	---	---	---	---	13.5	11.0	12.0
19	---	---	---	---	---	---	---	---	---	21.0	10.0	14.5
20	---	---	---	---	---	---	---	---	---	22.0	12.0	16.5
21	---	---	---	---	---	---	---	---	---	23.0	12.0	17.0
22	---	---	---	---	---	---	---	---	---	23.5	13.0	17.5
23	---	---	---	---	---	---	---	---	---	23.0	13.0	17.5
24	---	---	---	---	---	---	---	---	---	21.5	13.5	17.5
25	---	---	---	---	---	---	---	---	---	24.0	14.0	18.5
26	---	---	---	---	---	---	---	---	---	22.5	15.0	18.0
27	---	---	---	---	---	---	---	---	---	23.5	15.0	19.0
28	---	---	---	---	---	---	---	---	---	25.5	15.0	19.5
29	---	---	---	---	---	---	---	---	---	21.5	16.5	18.5
30	17.0	13.5	15.5	---	---	---	---	---	---	18.5	15.5	17.0
31	---	---	---	---	---	---	---	---	---	20.5	13.0	16.5
MONTH	17.0	13.5	15.5	25.5	8.5	15.0	17.0	13.5	15.5	25.5	8.5	15.0

CHIPPEWA RIVER BASIN

05369900 EAU GALLE RIVER NEAR WOODVILLE, WI--CONTINUED

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DAY	MAX	MIN JUNE	MEAN	MAX	MIN JULY	MEAN	MAX	MIN AUGUST	MEAN	MAX	MIN SEPTEMBER	MEAN
1	18.5	15.0	16.5	11.5	7.0	9.5	21.0	15.0	18.0			
2	18.0	13.5	15.5	19.0	8.0	9.5	22.5	16.0	18.5			
3	22.0	13.0	17.0	21.0	9.0	12.0	20.0	14.0	17.5			
4	22.5	14.5	18.5	15.5	8.0	11.0	19.0	16.0	17.5			
5	19.0	15.0	17.0	18.0	12.0	14.0	21.5	14.5	17.5			
6	22.5	17.0	19.5	16.5	10.0	13.5	22.0	15.0	18.5			
7	21.5	19.0	20.0	18.5	11.5	14.0	23.5	18.5	21.5			
8	20.0	16.0	18.0	18.0	16.0	17.0	24.0	20.5	22.5			
9	18.5	15.5	16.5	18.5	12.5	16.0	22.5	17.0	21.0			
10	19.5	13.5	16.0	18.5	12.5	16.0	18.0	11.5	14.0			
11	20.0	12.0	16.0	18.5	9.0	15.5	18.5	12.0	14.0			
12	16.0	13.0	14.5	20.0	13.5	16.5	19.0	11.5	14.0			
13	18.5	13.5	16.0	16.5	15.5	16.0	18.0	12.0	14.0			
14	23.0	14.0	17.5	18.5	14.5	16.0	20.5	11.5	14.5			
15	19.5	13.5	16.0	22.0	17.5	19.5	19.0	11.0	14.5			
16	19.5	11.0	15.0	26.0	17.0	21.5	12.5	11.0	11.5			
17	19.5	12.5	16.0	26.5	21.0	23.5	14.0	10.5	11.5			
18	19.0	12.5	15.5	23.5	18.5	20.5	19.5	10.5	13.5			
19	20.0	10.5	14.5	20.5	15.5	18.5	20.5	12.0	14.5			
20	15.5	10.0	12.0	19.5	15.5	18.0	15.0	12.0	13.5			
21	18.5	10.5	13.5	20.5	14.5	17.0	20.5	12.0	14.5			
22	21.0	10.5	15.0	22.0	14.0	18.0	16.5	11.5	13.5			
23	20.5	10.5	15.5	19.0	13.5	16.5	16.0	12.0	13.5			
24	18.5	10.0	14.0	23.0	14.5	18.5	17.5	11.5	13.5			
25	19.0	12.5	14.5	22.5	17.5	19.5	17.5	12.0	13.5			
26	14.5	9.5	12.0	22.0	14.5	18.0	16.5	12.0	14.0			
27	11.5	10.5	11.0	19.5	14.0	17.0	15.0	12.0	13.0			
28	12.5	5.0	10.0	18.5	15.5	16.5	---	---	---			
29	10.0	4.5	8.0	22.0	14.0	17.5	---	---	---			
30	10.0	6.0	8.0	19.5	15.5	18.0	---	---	---			
31	---	---	---	22.5	16.0	18.5	---	---	---			
MONTH	23.0	4.5	15.0	26.5	7.0	16.5	24.0	10.5	15.5			

CHIPPEWA RIVER BASIN

05370000 EAU GALLE RIVER AT SPRING VALLEY, WI

LOCATION.--Lat 44°51'10", long 92°14'17", in SE 1/4 NE 1/4 sec.6, T.27 N., R.15 W., Pierce County, Hydrologic Unit 07050005, on right bank 770 ft (235 m) downstream from flood control dam, 1,500 ft (460 m) upstream from Mines Creek, at Spring Valley.

DRAINAGE AREA.--64.8 mi² (167.8 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--March 1944 to current year.

REVISED RECORDS.--WDR WI-67-1: 1966.

GAGE.--Water-stage recorder and v-notch sharp-crested weir. Datum of gage is National Geodetic Vertical Datum of 1929 (levels by Corps of Engineers). Prior to July 31, 1957, nonrecording gage at site 850 ft (260 m) downstream at datum of 912.45 ft (278.115 m) National Geodetic Vertical Datum of 1929. Aug. 1, 1957, to June 6, 1966, nonrecording gage at downstream site at datum of 910.45 ft (277.505 m) National Geodetic Vertical Datum of 1929. June 7, 1966, to Oct. 31, 1968, nonrecording gage at downstream site at datum of 909.45 ft (277.200 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Records good. Low flow slightly regulated and high flow completely regulated by flood-control dam 770 ft (235 m) upstream.

AVERAGE DISCHARGE.--12 years (1969-80), 33.7 ft³/s (0.954 m³/s), since operation of flood-control reservoir.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 7,000 ft³/s (198 m³/s) Apr. 15, 1954, gage height, 12.50 ft (3.810 m), datum then in use; no flow Aug. 11-15, 1971, flow shut off at flood-control dam upstream; minimum observed prior to dam construction period, 5.8 ft³/s (0.16 m³/s) Sept. 25, 27, 28, 30, 1949.

EXTREMES OUTSIDE OF PERIOD OF RECORD.--Maximum stage since at least 1894, that of Sept. 18, 1942, 19.98 ft (6.090 m), with datum at 909.45 ft (277.200 m) National Geodetic Vertical Datum of 1929, from floodmarks, discharge, 33,000 ft³/s (930 m³/s) estimated by Corps of Engineers on basis of slope-area measurement by Geological Survey of peak discharge of 39,000 ft³/s (1,100 m³/s) at Elmwood, drainage area, 91.9 mi² (238.0 km²).

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 3,030 ft³/s (85.8 m³/s) June 7, gage height, 919.90 ft (280.386 m); minimum discharge, 13 ft³/s (0.368 m³/s) Jan. 29, Feb. 23, 24, July 2, gage height, 913.43 ft (278.413 m).

RATING TABLE (gage height, in feet, and discharge, in cubic feet per second).

913.4	12	914.8	183
913.5	14	915.3	373
913.8	23	916.0	660
914.1	44	918.0	1,750
914.4	90	919.0	2,400

DAY	DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980											
	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	20	22	17	16	15	14	159	21	17	45	16	42
2	19	24	17	16	15	14	93	20	19	35	18	30
3	17	21	17	15	15	14	106	19	17	22	18	27
4	15	19	17	15	15	14	62	19	16	23	23	62
5	15	18	17	15	15	14	144	19	249	29	22	55
6	15	18	17	18	15	14	158	18	719	33	21	34
7	15	18	18	17	15	14	142	17	2030	36	154	25
8	15	18	17	16	15	14	113	17	575	38	1230	22
9	15	18	16	15	15	14	95	18	114	38	292	21
10	15	18	16	15	15	14	53	18	57	39	87	18
11	17	18	16	15	15	14	41	19	39	46	47	48
12	16	17	15	16	15	14	73	18	32	89	37	1760
13	15	17	15	16	15	14	187	19	28	59	32	299
14	15	17	15	16	15	14	65	19	28	54	35	91
15	15	17	15	16	14	14	50	18	28	57	37	58
16	15	17	15	18	14	14	43	18	25	68	37	56
17	15	17	15	20	14	15	35	17	24	35	38	42
18	16	17	15	18	15	16	31	19	23	28	38	35
19	18	17	16	16	15	90	28	19	29	23	34	61
20	18	17	16	16	15	524	26	19	28	21	29	394
21	17	18	16	16	15	452	24	18	27	20	25	718
22	22	21	16	15	15	184	26	17	26	19	22	194
23	29	23	17	15	14	81	24	17	26	18	21	84
24	34	22	17	17	14	46	22	17	32	17	21	50
25	29	23	16	16	14	40	22	17	32	18	21	42
26	24	20	16	15	14	126	21	16	35	18	21	39
27	21	19	15	15	14	283	21	16	32	17	21	35
28	19	18	16	15	14	177	21	16	36	17	20	33
29	19	18	16	14	14	163	21	17	40	17	20	32
30	18	17	16	15	---	256	21	22	46	17	54	31
31	18	---	16	15	---	246	---	19	---	17	84	---
TOTAL	571	564	500	493	425	2923	1927	563	4429	1013	2575	4438
MEAN	18.4	18.8	16.1	15.9	14.7	94.3	64.2	18.2	148	32.7	83.1	148
MAX	34	24	18	20	15	524	187	22	2030	89	1230	1760
MIN	15	17	15	14	14	14	21	16	16	17	16	18
CAL YR 1979	TOTAL	12664.9	MEAN	34.7	MAX	650	MIN	2.0				
WTR YR 1980	TOTAL	20421.0	MEAN	55.8	MAX	2030	MIN	14				

CHIPPEWA RIVER BASIN

05370000 EAU GALLE RIVER AT SPRING VALLEY, WI--CONTINUED

WATER-QUALITY RECORDS

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

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: June 1978 to current year.

WATER TEMPERATURES: June 1978 to current year.

INSTRUMENTATION.--Water-quality monitor since June 20, 1978.

REMARKS.--Unpublished records of hourly specific conductance and water temperatures are available in files of District Office. Water-quality monitor inoperative part of year.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Maximum, 407 micromhos Mar. 1, 1980; minimum, 163 micromhos Mar. 3, 1979.

WATER TEMPERATURES: Maximum, 26.5°C July 17, 1980; minimum, 0.5°C Mar. 21-24, 1980.

EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum, 407 micromhos Mar. 1; minimum, 164 micromhos June 13.

WATER TEMPERATURES: Maximum, 26.5°C July 17; minimum, 0.5°C Mar. 21-24.

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DAY	MAX	MIN OCTOBER	MEAN	MAX	MIN NOVEMBER	MEAN	MAX	MIN DECEMBER	MEAN	MAX	MIN JANUARY	MEAN
1	332	308	323	---	---	---	299	289	295	378	351	367
2	328	322	326	---	---	---	304	288	296	376	347	364
3	334	311	321	---	---	---	310	289	302	379	336	360
4	320	312	316	---	---	---	312	289	304	378	338	362
5	331	315	321	---	---	---	320	302	312	382	336	363
6	328	319	323	---	---	---	319	273	304	378	362	370
7	334	315	324	---	---	---	323	285	306	374	343	360
8	329	320	325	---	---	---	316	274	299	378	338	358
9	330	316	325	---	---	---	319	293	309	381	358	370
10	332	321	326	304	285	296	326	274	305	382	365	374
11	338	321	329	308	285	300	322	296	308	375	335	358
12	330	323	328	307	295	303	309	279	297	384	356	370
13	342	323	330	308	290	302	359	304	327	379	336	364
14	336	326	331	309	295	303	367	322	349	384	343	366
15	340	321	331	312	302	307	364	334	355	385	369	377
16	342	321	331	321	298	311	371	335	354	385	364	375
17	342	325	334	322	289	312	378	338	360	376	337	359
18	340	330	335	335	288	315	374	336	357	381	337	361
19	340	328	334	334	311	323	374	326	355	382	346	366
20	341	326	334	327	297	314	374	319	352	390	331	364
21	340	331	336	327	301	315	378	322	354	387	336	371
22	332	314	325	314	298	307	378	351	367	385	369	377
23	---	---	---	312	292	303	376	347	364	384	340	366
24	---	---	---	310	283	299	375	358	368	388	343	370
25	---	---	---	316	286	303	376	338	361	388	343	373
26	---	---	---	318	300	310	375	346	363	388	346	372
27	---	---	---	309	285	299	374	341	360	390	351	376
28	---	---	---	306	282	297	374	330	356	387	355	377
29	---	---	---	308	287	298	376	318	352	387	352	376
30	---	---	---	304	280	294	376	325	353	388	359	378
31	---	---	---	---	---	---	379	343	363	387	346	373
MONTH	342	308	328	335	280	305	379	273	336	390	331	368

CHIPPEWA RIVER BASIN

05370000 EAU GALLE RIVER AT SPRING VALLEY, WI--CONTINUED

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DAY	MAX	MIN FEBRUARY	MEAN	MAX	MIN MARCH	MEAN	MAX	MIN APRIL	MEAN	MAX	MIN MAY	MEAN
1	388	355	377	407	338	375	215	200	209	258	247	252
2	391	356	379	403	345	378	217	187	205	261	247	256
3	388	359	379	397	334	370	220	205	212	263	251	257
4	388	365	380	400	368	383	218	192	208	268	247	256
5	387	374	383	396	337	372	218	194	209	264	246	256
6	387	358	377	403	343	379	224	209	218	274	241	259
7	390	360	380	396	342	374	224	211	218	271	241	259
8	388	363	380	397	340	373	220	213	217	268	240	257
9	387	364	380	400	347	379	226	205	217	273	260	268
10	390	368	381	396	367	381	231	199	217	278	255	270
11	391	368	383	400	320	362	236	196	219	277	250	263
12	390	363	379	402	320	366	236	211	227	278	261	269
13	388	367	380	403	325	367	228	203	215	274	254	266
14	390	356	376	402	319	364	210	198	204	277	256	268
15	385	368	380	405	336	374	219	205	213	290	264	274
16	391	349	372	403	354	380	226	211	218	288	262	276
17	400	347	378	388	326	361	222	209	217	289	274	281
18	396	345	373	399	307	356	220	208	213	284	262	272
19	397	346	375	394	294	347	229	209	220	285	265	271
20	393	345	373	337	231	286	247	217	230	288	256	275
21	394	355	377	243	224	235	246	227	236	288	267	280
22	391	343	370	243	234	239	252	215	237	292	271	283
23	394	341	371	250	226	239	255	217	240	289	276	283
24	396	341	371	263	231	250	263	224	244	292	280	285
25	390	342	369	267	236	254	263	215	240	294	279	286
26	403	330	368	264	236	252	259	226	243	300	279	288
27	385	323	358	253	228	239	259	235	245	295	272	287
28	399	330	369	234	219	227	263	234	249	296	270	284
29	400	307	359	229	208	222	257	240	249	292	275	284
30	---	---	---	227	200	212	259	247	252	284	268	277
31	---	---	---	208	188	199	---	---	---	298	267	281
MONTH	403	307	375	407	188	319	263	187	225	300	240	272
DAY	MAX	MIN JUNE	MEAN	MAX	MIN JULY	MEAN	MAX	MIN AUGUST	MEAN	MAX	MIN SEPTEMBER	MEAN
1	297	283	288	271	254	262	279	264	275	237	233	235
2	292	267	282	278	255	265	277	263	270	247	235	240
3	292	269	283	281	260	273	283	266	274	254	243	247
4	294	278	285	287	266	277	281	255	266	240	231	236
5	292	218	259	275	264	271	280	263	270	244	239	241
6	234	168	190	289	258	272	277	268	275	253	242	247
7	---	---	---	297	259	276	263	231	244	255	246	249
8	---	---	---	273	244	260	---	---	---	259	246	251
9	---	---	---	269	250	260	---	---	---	259	244	253
10	---	---	---	266	244	255	---	---	---	267	255	261
11	---	---	---	263	229	254	---	---	---	261	179	247
12	---	---	---	243	216	228	---	---	---	---	---	---
13	178	164	171	263	234	246	175	167	172	---	---	---
14	179	171	174	260	248	256	183	174	178	---	---	---
15	189	175	182	260	208	248	192	181	185	---	---	---
16	194	180	187	243	220	233	207	189	199	---	---	---
17	200	188	193	251	232	240	211	203	206	182	---	174
18	201	191	196	258	246	251	209	202	205	188	178	181
19	197	189	192	260	241	252	215	203	208	224	179	197
20	204	195	198	258	248	253	220	206	212	---	---	---
21	211	196	203	265	251	259	225	211	217	---	---	---
22	214	202	206	271	257	264	231	215	223	---	---	---
23	216	205	211	279	255	268	236	218	229	---	---	---
24	211	198	208	282	259	271	243	226	236	182	172	178
25	222	205	211	275	261	268	246	231	239	182	175	179
26	225	208	216	275	259	268	241	234	237	197	182	188
27	242	224	232	280	251	269	247	234	240	205	193	199
28	242	227	235	279	263	271	251	243	246	227	202	212
29	244	229	234	279	250	269	257	247	251	224	209	217
30	267	234	247	284	259	274	257	219	235	229	214	221
31	---	---	---	283	267	275	241	229	235	---	---	---
MONTH	297	164	220	297	208	261	283	167	232	267	172	222

CHIPPEWA RIVER BASIN

05370000 EAU GALLE RIVER AT SPRING VALLEY, WI--CONTINUED

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DAY	MAX	MIN OCTOBER	MEAN	MAX	MIN NOVEMBER	MEAN	MAX	MIN DECEMBER	MEAN	MAX	MIN JANUARY	MEAN
1	15.5	14.5	15.5	---	---	---	1.5	1.0	1.5	4.5	3.5	4.0
2	15.5	14.5	15.0	---	---	---	2.0	1.5	1.5	4.0	3.0	3.5
3	15.5	14.0	14.5	---	---	---	2.0	1.5	2.0	4.5	3.5	3.5
4	14.0	13.0	13.5	---	---	---	2.5	2.0	2.0	5.0	3.0	4.0
5	14.5	12.5	13.5	---	---	---	2.5	2.0	2.0	5.0	3.5	4.0
6	12.5	11.5	12.0	---	---	---	2.5	2.0	2.0	3.5	2.0	3.0
7	13.5	11.0	12.0	---	---	---	2.5	1.5	2.0	3.0	1.5	2.5
8	12.5	11.0	12.0	---	---	---	3.0	1.0	2.0	3.5	3.0	3.0
9	12.0	10.5	11.0	---	---	---	3.5	1.5	2.5	3.5	3.0	3.0
10	11.0	10.5	10.5	3.5	2.5	3.0	3.5	2.5	3.0	3.5	3.0	3.0
11	11.0	10.0	10.5	4.0	2.5	3.0	3.0	1.0	2.5	3.5	1.0	1.5
12	10.0	8.5	9.0	3.5	2.5	3.0	3.5	1.0	2.5	3.0	1.5	3.0
13	10.5	8.0	9.0	3.5	2.5	3.0	4.0	3.0	3.0	4.5	3.0	3.5
14	10.5	8.5	9.0	3.0	2.5	3.0	4.0	3.5	3.5	4.0	3.0	3.5
15	10.0	8.5	9.0	3.5	3.0	3.0	4.0	2.0	3.5	4.0	3.5	3.5
16	10.5	8.5	9.5	4.5	3.0	3.5	3.5	1.0	2.5	4.0	3.0	3.5
17	10.5	8.5	9.5	5.0	3.0	3.5	4.0	3.5	3.5	3.5	3.0	3.0
18	10.0	8.5	9.0	5.5	3.0	4.0	4.5	3.5	3.5	4.0	3.0	3.0
19	10.5	9.5	10.0	5.5	3.5	4.5	5.0	3.5	4.0	4.5	3.0	3.0
20	11.5	10.0	10.5	5.0	4.0	4.5	4.5	3.5	4.0	3.5	3.0	3.0
21	11.0	10.0	10.5	5.0	3.0	4.5	5.0	3.5	4.0	4.0	3.0	3.0
22	10.0	8.5	9.5	3.5	3.0	3.5	4.5	3.5	4.0	3.0	1.5	2.0
23	---	---	---	3.5	2.5	3.0	4.5	3.5	4.0	3.5	2.0	2.5
24	---	---	---	3.5	2.5	3.0	4.5	3.5	4.0	3.5	2.5	3.0
25	---	---	---	4.5	3.0	3.5	5.0	3.5	4.0	4.0	2.5	3.0
26	---	---	---	3.5	2.0	3.0	4.5	3.5	4.0	3.0	2.5	3.0
27	---	---	---	3.0	1.5	2.5	4.5	3.5	4.0	3.0	2.5	3.0
28	---	---	---	2.5	1.0	1.5	4.5	3.5	4.0	3.0	3.0	3.0
29	---	---	---	2.0	1.0	1.5	5.0	3.5	4.0	3.0	2.5	3.0
30	---	---	---	1.5	1.0	1.0	5.0	3.5	4.0	3.0	2.5	3.0
31	---	---	---	---	---	---	4.5	4.0	4.0	3.0	2.5	3.0
MONTH	15.5	8.0	11.0	5.5	1.0	3.0	5.0	1.0	3.0	5.0	1.0	3.0

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

CHIPPEWA RIVER BASIN

05370000 EAU GALLE RIVER AT SPRING VALLEY, WI--CONTINUED

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980												
DAY	MAX	MIN JUNE	MEAN	MAX	MIN JULY	MEAN	MAX	MIN AUGUST	MEAN	MAX	MIN SEPTEMBER	MEAN
1	17.0	15.5	16.0	21.0	16.5	18.0	24.5	19.5	22.0	20.5	18.5	19.0
2	17.0	15.5	16.0	21.0	15.5	18.0	24.0	20.0	22.0	20.5	18.0	19.0
3	19.0	15.0	17.0	21.0	15.5	18.0	25.5	20.0	22.0	19.5	18.0	18.5
4	18.0	15.5	16.5	22.0	15.5	18.0	23.0	19.5	21.0	21.0	18.5	19.5
5	20.0	15.5	18.0	20.5	16.5	18.5	23.5	20.0	21.5	21.0	18.5	19.5
6	18.5	17.5	18.0	22.5	17.5	19.5	24.5	19.5	21.5	20.0	18.0	19.0
7	19.0	17.5	18.5	21.5	18.5	20.5	24.0	21.0	23.0	21.0	18.5	19.0
8	19.0	17.5	18.0	22.0	18.5	20.5	23.0	20.0	21.5	22.5	18.5	20.0
9	19.0	17.0	18.0	23.0	19.0	21.0	20.5	20.0	20.5	21.0	17.5	19.0
10	20.0	17.0	18.5	24.0	19.5	21.5	21.0	19.5	20.0	21.0	17.0	18.5
11	19.5	17.0	18.0	24.0	20.5	22.0	22.0	19.5	20.5	17.5	15.5	17.0
12	18.5	17.0	18.0	26.0	23.5	24.5	22.5	19.5	20.5	16.0	14.0	14.0
13	19.0	17.5	18.5	25.0	22.0	23.0	21.0	19.5	20.5	15.5	14.0	15.0
14	22.0	18.5	20.0	25.0	21.5	23.0	23.5	19.5	21.0	15.0	14.0	14.5
15	20.5	18.0	19.5	25.0	21.0	23.0	21.5	19.5	20.5	14.0	14.0	14.0
16	21.0	17.5	19.0	26.0	23.5	24.5	20.0	18.0	18.5	14.5	14.0	14.0
17	21.5	17.5	19.0	26.5	22.5	24.5	18.5	18.0	18.0	14.5	13.5	14.0
18	20.5	18.0	19.0	25.0	23.0	23.5	20.5	17.5	18.5	14.0	13.0	13.5
19	20.5	18.0	19.0	25.5	22.0	23.0	22.0	18.5	19.5	14.0	13.0	13.5
20	21.0	17.5	19.5	23.0	21.5	22.0	20.5	19.0	19.5	15.0	14.0	14.5
21	22.5	18.0	19.5	24.5	20.5	22.0	21.5	18.5	20.0	14.5	13.5	14.0
22	23.5	19.0	20.5	23.5	20.5	21.5	22.5	18.0	19.5	14.5	13.5	14.0
23	23.5	19.5	21.0	24.5	19.5	22.0	20.0	18.5	19.0	14.5	13.0	13.5
24	23.5	20.0	21.5	25.0	20.0	22.0	20.5	18.0	19.0	14.5	12.5	13.5
25	25.0	21.0	22.5	23.5	20.5	21.5	22.5	18.5	20.0	13.5	12.5	13.5
26	25.0	21.5	23.5	24.0	19.5	21.5	20.0	19.0	19.5	13.5	12.0	12.5
27	23.0	18.5	20.0	25.5	19.5	22.0	20.0	18.5	19.0	13.5	12.0	12.5
28	22.5	18.0	19.5	22.5	20.5	21.0	19.0	18.5	18.5	12.5	12.0	12.5
29	19.5	18.0	19.0	25.0	19.0	21.5	21.5	18.5	19.5	13.0	12.0	12.5
30	21.0	16.5	18.5	25.0	20.0	21.5	22.5	18.5	20.5	14.0	12.5	13.0
31	---	---	---	24.5	19.5	22.0	21.0	19.0	19.5	---	---	---
MONTH	25.0	15.0	19.0	26.5	15.5	21.5	25.5	17.5	20.0	22.5	12.0	15.5

CHIPPEWA RIVER BASIN

05371200 CHIPPEWA RIVER NEAR PEPIN, WI

LOCATION.--Lat 44°26'15", long 92°04'30", in NE 1/4 NE 1/4 Sec.33, T.23 N., R.14 W., Buffalo County, Hydrologic Unit 07050005, at bridge on State Highway 35 3.6 mi (5.8 km) east of Pepin.

DRAINAGE AREA.--9,095 mi² (23,560 km²) approximately.

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

WATER-QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	TEMPER- ATURE, WATER (DEG C)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)
APR , 1980				
07...	1610	14800	--	--
07...	1700	15800	5.0	147
11...	1630	29200	3.5	--
12...	0900	25000	3.0	--
JUN				
07...	1055	22000	20.0	152
08...	1920	33800	18.5	--
SEP				
25...	1315	37700	14.5	108

PARTICLE-SIZE DISTRIBUTION OF SUSPENDED SEDIMENT

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SEDI- MENT, SUS- PENDE (MG/L)	SEDI- MENT DIS- CHARGE, SUS- (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM	SED. SUSP. SIEVE DIAM. % FINER THAN .125 MM	SED. SUSP. SIEVE DIAM. % FINER THAN .250 MM	SED. SUSP. SIEVE DIAM. % FINER THAN .500 MM	SED. SUSP. SIEVE DIAM. % FINER THAN 1.00 MM
APR , 1980									
07...	1700	15800	81	3460	40	58	79	96	100
11...	1630	29200	124	9780	17	36	70	96	100
12...	0900	25000	86	5810	21	37	71	97	100
JUN									
07...	1055	22000	207	12300	56	70	86	96	100
08...	1920	33800	299	27300	58	71	84	96	100
SEP									
25...	1315	37700	113	11500	16	29	57	91	100

PARTICLE-SIZE DISTRIBUTION OF SURFACE BED MATERIAL

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	BED MAT. SIEVE DIAM. % FINER THAN .125 MM	BED MAT. SIEVE DIAM. % FINER THAN .250 MM	BED MAT. SIEVE DIAM. % FINER THAN .500 MM	BED MAT. SIEVE DIAM. % FINER THAN 1.00 MM	BED MAT. SIEVE DIAM. % FINER THAN 2.00 MM	BED MAT. SIEVE DIAM. % FINER THAN 4.00 MM	BED MAT. SIEVE DIAM. % FINER THAN 8.00 MM	BED MAT. SIEVE DIAM. % FINER THAN 16.0 MM
APR , 1980										
07...	1610	14800	--	4	50	87	94	95	97	100
11...	1630	29200	2	12	63	92	97	98	99	100
12...	0900	25000	2	15	67	94	99	100	--	--
JUN										
07...	1055	22000	1	6	53	89	96	98	99	100
08...	1920	33800	--	3	30	86	95	98	99	100
SEP										
25...	1315	37700	1	8	50	89	96	98	99	100

CHIPPEWA RIVER BASIN

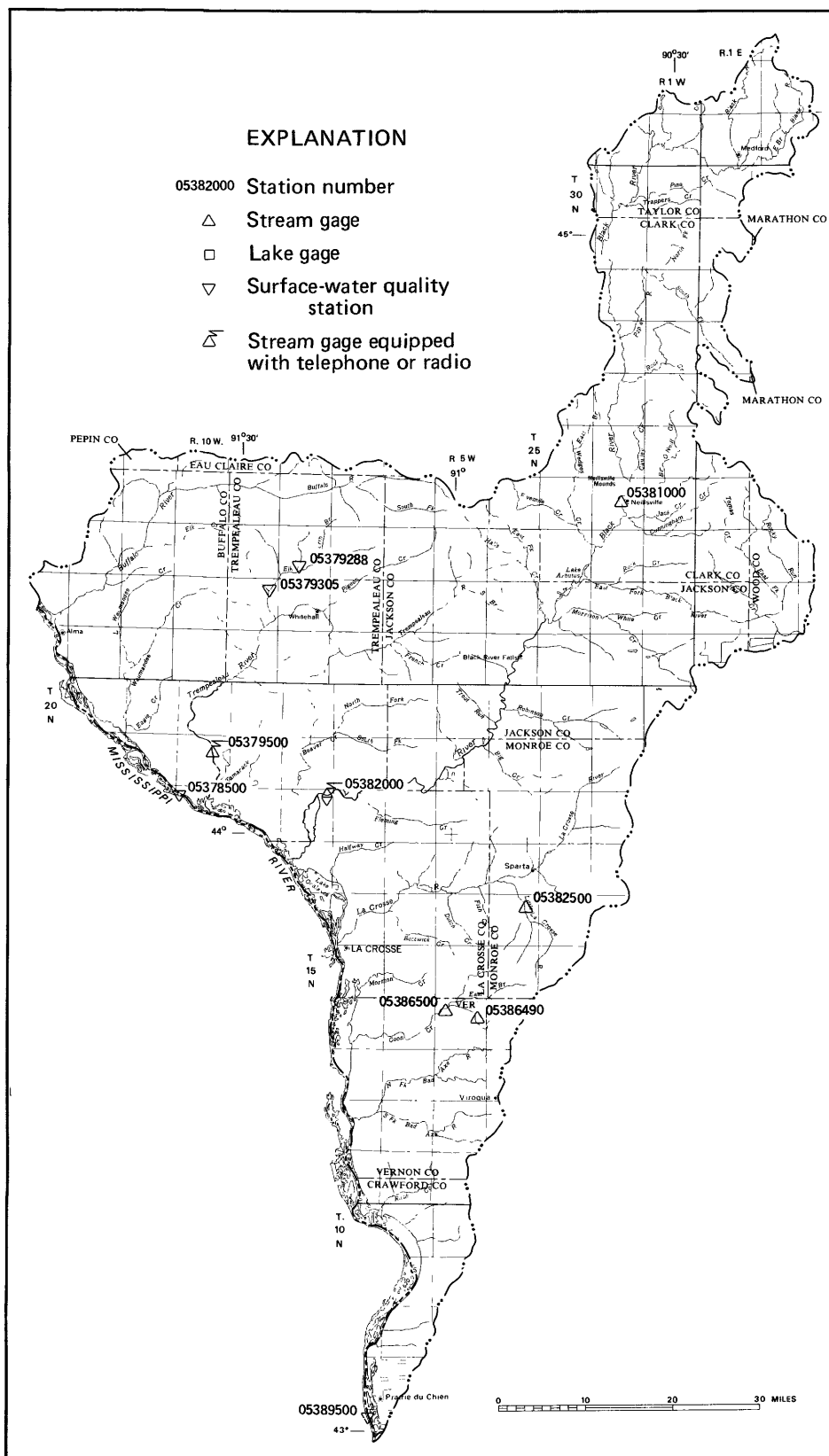
RESERVOIRS IN CHIPPEWA RIVER BASIN

The five reservoirs listed below are used to stabilize the flow of the Chippewa and Flambeau Rivers for power utilization, and are also used for recreational purposes. The first four are operated by Chippewa-Flambeau Improvement Co. The remaining one is operated by the Northern States Power Co., which also furnishes the gage heights and capacity tables for all the reservoirs. Month-end contents are computed by the Geological Survey. The usable capacity of these reservoirs is usually less in summer than the winter, because the allowable summer drawdown is limited by the Department of Natural Resources in the interest of riparian property owners. There are occasionally formal or informal changes in capacity and in minimum drawdown levels. Usable capacity figures listed below are for winter regulations.

- 05355400 Moose Lake on West Fork Chippewa River, lat 46°02'00", long 91°04'32", in NE 1/4 sec.14, T.41 N., R.6 W., Sawyer County, 15.0 mi (24.1 km) north of Winter, completed in 1893, has a usable capacity of 400,000,000 ft³ (11,000,000 m³). Drainage area, 225 mi² (583 km²). Datum of gage is National Geodetic Vertical Datum of 1929 (Northern States Power Co. bench mark).
- 05355600 Lake Chippewa on Chippewa River, lat 45°53'20", long 91°04'40", in SE 1/4 sec.2, T.39 N., R.6 W., Sawyer County, 3.2 mi (5.2 km) upstream from Geological Survey river-gaging station, 5.5 mi (8.8 km) northwest of Winter, completed in 1923, has a usable capacity of 10,000,000,000 ft³ (283,000,000 m³). Drainage area, 775 mi² (2,007 km²). Datum of gage is National Geodetic Vertical Datum of 1929 (Northern States Power Co. bench mark).
- 05357300 Rest Lake on Manitowish River, lat 46°08'20", long 89°53'05", in NW 1/4 sec.9, T.42 N., R.5 E., Vilas County, 6.2 mi (10 km) east of Manitowish, used as a reservoir since 1887, has a capacity of 660,000,000 ft³ (19,000,000 m³) between gage heights 105.00 ft (32.00 m) and 108.50 ft (33.07 m). This reservoir includes nine lakes controlled by the same dam. Drainage area, 243 mi² (629 km²). Altitude of gage is 1,600 ft (488 m), by U.S. Geological Survey topographic map.
- 05357400 Flambeau Flowage on North Fork Flambeau River, lat 46°04'13", long 90°13'23", in SE 1/4 sec.34, T.42 N., R.2 E., Iron County, 0.5 mi (0.8 km) upstream from discontinued Geological Survey river-gaging station, 10.2 mi (16.4 km) southwest of Mercer, completed in 1929, has a usable capacity of 5,895,000,000 ft³ (167,000,000 m³). Drainage area, 666 mi² (1,725 km²). Datum of gage is National Geodetic Vertical Datum of 1929 (Northern States Power Co. bench mark).
- 05364200 Lake Wissota on Chippewa River, lat 44°56'18", long 91°20'27", in NW 1/4 sec.3, T.28 N., R.8 W., Chippewa County, 2.0 mi (3.2 km) east of Chippewa Falls city limits, completed in 1917, has a usable capacity of 3,547,000,000 ft³ (100,500,000 m³). Drainage area, 5,548 mi² (14,369 km²). Datum of gage is National Geodetic Vertical Datum of 1929 (Northern States Power Co. bench mark).

MONTH-END CONTENTS, IN MILLIONS OF CUBIC FEET, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

	MOOSE LAKE	LAKE CHIPPEWA	REST LAKE	FLAMBEAU FLOWAGE	LAKE WISSOTA
SEPT. 30	400	8,634	850	3,306	3,844
OCT. 31	200	9,496	435	4,010	3,898
NOV. 30	39	9,496	350	4,440	3,887
DEC. 31	10	7,190	350	3,980	3,911
JAN. 31	5	5,244	350	3,650	3,884
FEB. 29	5	3,140	350	3,068	3,705
MAR. 31	40	3,228	364	2,306	2,279
APR. 30	400	5,965	550	4,130	3,951
MAY 31	400	6,460	717	4,130	3,938
JUNE 30	393	7,070	867	3,530	4,002
JULY 31	397	7,280	991	3,334	3,948
AUG. 31	386	8,534	973	3,890	3,932
SEPT. 30	323	9,928	883	5,088	3,962



TREMPEALEAU-BLACK RIVER BASIN

MISSISSIPPI RIVER MAIN STEM

05378500 MISSISSIPPI RIVER AT WINONA, MN

LOCATION.--Lat 44°03'20", long 91°38'15", in sec.23, T.107 N., R.7 W., Winona County, Hydrologic Unit 07040003, on right bank at Winona pumping station in Winona, 9.5 mi (15.3 km) upstream from Trempealeau River, and at mile 725.7 (1,167.7 km) upstream from the Ohio River.

DRAINAGE AREA.--59,200 mi² (153,300 km²), approximately.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--June 1928 to current year. Gage-height records collected in this vicinity since 1878 are contained in reports of Mississippi River Commission.

GAGE.--Water-stage recorder. Datum of gage is 639.64 ft (194.962 m) National Geodetic Vertical Datum of 1929. June 10, 1928, to Apr. 15, 1931, nonrecording gage at site 800 ft (244 m) upstream. Prior to Oct. 1, 1929, at datum 0.20 ft (0.06 m) higher and Oct. 1, 1929, to Apr. 15, 1931, at datum 0.12 ft (0.04 m) lower. Apr. 16, 1931, to Nov. 12, 1934, nonrecording gage at present site and datum. Since Mar. 31, 1937, auxiliary water-stage recorder 2.7 mi (4.3 km) upstream at tailwater of Navigation Dam 5A.

REMARKS.--Records good. Some regulation by reservoirs, navigation dams, and powerplants at low and medium stages. Flood flow not materially affected by artificial storage.

AVERAGE DISCHARGE.--52 years, 26,400 ft³/s (747.6 m³/s), 6.06 in/yr (154 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 268,000 ft³/s (7,590 m³/s) Apr. 19, 1965, gage height, 20.77 ft (6.331 m), from floodmark; minimum, 2,250 ft³/s (63.7 m³/s) Dec. 29, 1933, gage height, -1.18 ft (-0.360 m); minimum gage height, -3.38 ft (-1.030 m) Aug. 31, 1934.

EXTREMES OUTSIDE OF PERIOD OF RECORD.--Flood of June 18, 1880, reached an elevation of 657.14 ft (200.296 m), discharge, 172,000 ft³/s (4,870 m³/s), from information by Corps of Engineers.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 69,000 ft³/s (1,950 m³/s) Apr. 13, 14, gage height, 8.96 ft (2.731 m); minimum, 6,350 ft³/s (180 m³/s) June 30; minimum gage height, 4.79 ft (1.460 m) June 29.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980												
DAY	MEAN VALUES											
	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	19900	26800	28700	24200	15500	16500	42000	30100	17400	22500	10200	26100
2	20100	28700	27600	24100	15700	16400	40000	28600	20300	22300	10400	24000
3	19000	31100	24700	23000	15900	16200	42500	27200	25300	21700	10800	20800
4	18600	31900	22300	21000	16600	15800	46500	25000	26200	20200	10200	21300
5	18900	28900	19800	19500	17100	15900	49400	24800	26800	18300	9700	25300
6	18400	33800	20600	18300	16800	15800	50800	23500	34100	16000	10400	29300
7	18400	37700	21900	16200	16600	15700	52700	22000	42100	12900	10500	36400
8	17000	36800	25200	13000	15700	16200	57000	19900	47600	12700	16300	38800
9	14600	36600	26600	11900	15400	16500	58500	18600	53300	14200	24600	36500
10	14700	37500	25400	11400	15500	17100	59800	17500	59200	14700	30400	33700
11	15100	38700	25300	12900	15700	17100	63600	17730	62730	14700	34300	31900
12	14600	39700	24700	13700	15600	16900	67600	19000	60700	14400	32800	33100
13	14700	39100	18900	14000	15600	16600	68800	20700	55000	14800	31500	35200
14	15100	36900	14500	16000	15700	16900	68500	21400	49500	12200	28500	37000
15	14400	34200	14600	17900	15700	16800	67700	22100	45700	10700	22400	37300
16	14500	32100	16300	20700	15800	17900	65500	22300	42700	10700	17500	38500
17	13900	31800	20100	23300	15900	23700	63100	21300	38900	11600	16000	41000
18	14100	32900	21300	25400	15800	32600	60400	18200	36800	13100	15600	40300
19	14500	33100	20100	26000	15800	41500	57400	16600	36500	14700	15500	37200
20	16500	32100	21600	25800	15800	58500	54700	16500	34900	14600	16600	35800
21	17200	31200	22000	24600	15900	66500	52200	17200	31900	12200	18800	40600
22	20700	30700	22500	23000	16800	60500	48600	19500	27800	12100	18800	41400
23	28200	30900	24900	20500	17800	52800	47700	21000	24900	11400	16900	43500
24	29400	30900	27200	18300	18600	53000	44900	21100	25700	11500	14400	44700
25	29600	31400	28600	17900	19100	50400	40700	20000	26500	11800	14100	46400
26	31700	32200	27500	18100	18500	47300	37300	15900	24900	13000	19500	49400
27	33300	32700	26600	18000	17000	43900	37400	12500	23100	13600	21700	49300
28	33600	33000	25100	17800	16600	43200	35600	12600	21700	13500	20400	44000
29	32400	32300	24000	17600	16600	44800	34100	13400	13300	12700	20000	35500
30	29800	30100	24000	16300	---	45400	32000	20400	16100	10800	22300	33600
31	26700	---	24100	15300	---	44700	---	22100	---	10200	25700	---
TOTAL	639600	995800	716700	585700	475100	973100	1547000	628700	1051600	439800	586800	1087900
MEAN	20630	33190	23120	18890	16380	31390	51570	20280	35050	14190	18930	36260
MAX	33600	39700	28700	26000	19100	66500	68800	30100	62700	22500	34300	49400
MIN	13900	26800	14500	11400	15400	15700	32000	12500	13300	10200	9700	20800
CFSM	.35	.56	.39	.32	.28	.53	.87	.34	.59	.24	.32	.61
IN.	.40	.63	.45	.37	.30	.61	.97	.40	.66	.28	.37	.68
CAL YR 1979	TOTAL	14607800	MEAN	40020	MAX	130000	MIN	12700	CFSM	.68	IN	9.18
WTR YR 1980	TOTAL	9727800	MEAN	26580	MAX	68800	MIN	9700	CFSM	.45	IN	6.11

MISSISSIPPI RIVER MAIN STEM

05378500 MISSISSIPPI RIVER AT WINONA, MN--CONTINUED
(NATIONAL STREAM-QUALITY ACCOUNTING NETWORK STATION)

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1964 to current year.

PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: October 1975 to current year.

SUSPENDED-SEDIMENT DISCHARGE: September 1975 to current year.

REMARKS.--Daily sediment loads for the winter period were estimated on the basis of water records and weekly sediment samples. water temperatures were obtained once daily for most of the open water period and weekly for winter period.

EXTREMES FOR PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: Maximum, 29.0°C July 10, 1976; minimum, 0.0°C on many days during winter periods.

SUSPENDED-SEDIMENT CONCENTRATIONS: Maximum daily mean, 393 mg/l July 2, 1978; minimum daily mean, 1 mg/l on many days.

SUSPENDED-SEDIMENT DISCHARGE: Maximum daily 65,300 tons (59,200 tonnes) July 2, 1978; minimum daily, 34 tons (31 tonnes) Jan. 5, 1979.

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURES: Maximum observed, 28.0°C July 11-14; minimum 0.0°C on many days during winter period.

SUSPENDED-SEDIMENT CONCENTRATIONS: Maximum daily mean, 98 mg/l June 8; minimum daily mean, 1 mg/l Mar. 10.

SUSPENDED-SEDIMENT DISCHARGE: Maximum daily, 13,300 tons (10,160 tonnes) Apr. 12; minimum daily, 46 tons (43 tonnes) Mar. 10.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH FIELD (UNITS)	TEMPER- ATURE, WATER (DEG C)	TUR- BID- ITY (NTU)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, (PER- CENT SATUR- ATION)	COLI- FORM, FECAL, UM-MF (COLS./ 100 ML)	STREP- TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)
OCT , 1979										
30...	1345	29600	415	8.2	10.0	5.0	10.1	93	190	57
DEC										
03...	1530	22600	500	8.4	.5	3.0	14.6	105	K17	K9
JAN , 1980										
14...	1500	16500	580	7.9	.0	.80	13.8	98	K12	K9
FEB										
20...	1630	22600	530	7.8	.5	1.0	12.2	87	100	29
APR										
09...	1715	58200	318	7.8	3.0	.60	11.2	87	K26	280
MAY										
28...	1615	12100	385	8.8	22.0	4.5	11.6	135	K22	K17
JUL										
28...	1710	13500	405	8.3	26.0	3.6	8.1	104	70	K6
SEP										
08...	1700	38100	210	7.9	23.0	1.6	7.7	92	K600	280

DATE	HARD- NESS (MG/L AS CaCO3)	HARD- NESS, NONCAR- BONATE (MG/L CaCO3)	CALCIUM DIS- SOLVED (MG/L AS Ca)	MAGNE- SIUM, DIS- SOLVED (MG/L AS Mg)	SODIUM, DIS- SOLVED (MG/L AS Na)	PERCENT SODIUM	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LITY (MG/L AS CaCO3)	SULFATE DIS- SOLVED (MG/L AS SO4)
OCT , 1979										
30...	180	32	45	17	13	20	.4	2.9	150	32
DEC										
03...	240	78	59	22	11	14	.3	2.5	160	60
JAN , 1980										
14...	270	75	65	25	15	11	.4	2.7	190	54
FEB										
20...	210	31	53	19	14	12	.4	2.4	180	43
APR										
09...	130	18	33	11	7.0	10	.3	4.8	110	22
MAY										
28...	160	26	37	16	10	12	.3	2.5	120	33
JUL										
28...	190	42	47	18	9.9	10	.3	2.7	150	41
SEP										
08...	100	26	25	9.9	5.3	10	.2	1.9	77	13

K RESULTS BASED ON COLONY COUNT OUTSIDE THE ACCEPTABLE RANGE (NON-IDEAL COLONY COUNT).

MISSISSIPPI RIVER MAIN STEM

05378500 MISSISSIPPI RIVER AT WINONA, MN--CONTINUED

WATER-QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	CHLORO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)	SOLIDS, DIS- SOLVED (TONS PER DAY)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N)
OCT , 1979										
30...	14	.2	9.5	258	230	.35	20600	1.4	1.4	.060
DEC 03...	15	.2	13	305	295	.41	18600	3.7	3.6	.000
JAN , 1980										
14...	18	.2	14	346	321	.47	15400	3.1	3.0	.240
FEB 20...	18	.2	14	303	280	.41	18500	1.9	1.9	.770
APR 09...	11	.1	9.7	188	170	.26	29500	1.2	1.2	.690
MAY 28...	13	.2	.1	234	198	.32	7650	.03	.03	.220
JUL 28...	15	.2	13	288	238	.39	10500	.16	.16	.120
SEP 08...	7.6	.1	10	139	121	.19	14300	.34	.34	.010
DATE	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N)	NITRO- GEN, ORGANIC DIS- SOLVED (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO- GEN,NH4 + ORG. SUSP. TOTAL (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC DIS- SOLVED (MG/L AS N)	NITRO- GEN, DIS- SOLVED (MG/L AS N)	NITRO- GEN, TOTAL (MG/L AS N)	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHORUS, DIS- SOLVED (MG/L AS P)
OCT , 1979										
30...	.050	1.0	.75	1.1	.30	.80	2.2	2.5	.130	.070
DEC 03...	.000	.92	.89	.92	.03	.89	4.5	4.6	.100	.070
JAN , 1980										
14...	.240	.47	.47	.71	.00	.71	3.7	3.8	.090	.070
FEB 20...	.400	.63	.60	1.4	.40	1.0	2.9	3.3	.100	.080
APR 09...	.620	1.3	.69	2.0	.70	1.3	2.5	3.2	.230	.150
MAY 28...	.070	.41	.41	.94	.13	.48	.51	.64	.140	.050
JUL 28...	.020	.87	.44	.99	.53	.46	.62	1.2	.180	.170
SEP 08...	.000	.99	.71	1.0	.29	.71	1.1	1.3	.170	.120
DATE	SILVER, TOTAL RECOV- ERABLE (UG/L AS AG)	CARBON, ORGANIC TOTAL (MG/L AS C)	CARBON, ORGANIC DIS- SOLVED (MG/L AS C)	CARBON, ORGANIC SUS- PENDED (MG/L AS C)	PHYTO- PLANK- TON, TOTAL (CELLS PER ML)	PERI- PHYTON BIOMASS WEIGHT G/SQ M	PERI- PHYTON BIOMASS WEIGHT G/SQ M	CHLOR-A PERI- PHYTON CHROMO- GRAPHIC FLUOROM (MG/M2)	CHLOR-B PERI- PHYTON CHROMO- GRAPHIC FLUOROM (MG/M2)	BIOMASS CHLORO- PHYLL RATIO PERI- PHYTON (UNITS)
OCT , 1979										
30...	0	8.1	--	--	5800	6.6	7.3	14	.53	51.8
DEC 03...	--	--	7.6	.1	--	--	--	--	--	--
JAN , 1980										
14...	0	12	--	--	--	--	--	--	--	--
FEB 20...	--	--	--	--	--	--	--	--	--	--
APR 09...	0	--	11	.7	2200	1.8	2.5	2.2	.65	329
MAY 28...	0	--	6.3	.7	60000	--	--	--	--	--
JUL 28...	0	9.0	--	--	110000	62	82	110	22	182
SEP 08...	0	--	9.0	.7	25000	--	--	--	--	--

MISSISSIPPI RIVER MAIN STEM

05378500 MISSISSIPPI RIVER AT WINONA, MN--CONTINUED

WATER-QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	ARSENIC TOTAL (UG/L AS AS)	ARSENIC SUS- PENDE TOTAL (UG/L AS AS)	ARSENIC DIS- SOLVED (UG/L AS AS)	BARIUM, TOTAL RECOV- ERABLE (UG/L AS BA)	BARIUM, SUS- PENDE RECOV- ERABLE (UG/L AS BA)	BARIUM, DIS- SOLVED (UG/L AS BA)	CADMIUM TOTAL RECOV- ERABLE (UG/L AS CD)	CADMIUM SUS- PENDE RECOV- ERABLE (UG/L AS CD)	CADMIUM DIS- SOLVED (UG/L AS CD)
DEC , 1979											
03...	1530	22600	2	1	1	--	--	50	--	--	--
APR , 1980											
09...	1715	58200	1	0	1	<50	<0	50	4	0	4
MAY											
28...	1615	12100	4	0	4	<50	--	<50	0	0	0
SEP											
08...	1700	38100	1	0	1	100	0	100	0	0	0

DATE	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR)	CHRO- MIUM, SUS- PENDE RECOV- ERABLE (UG/L AS CR)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR)	COBALT, TOTAL RECOV- ERABLE (UG/L AS CO)	COBALT, SUS- PENDE RECOV- ERABLE (UG/L AS CO)	COBALT, DIS- SOLVED (UG/L AS CO)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU)	COPPER, SUS- PENDE RECOV- ERABLE (UG/L AS CU)	COPPER, DIS- SOLVED (UG/L AS CU)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	IRON, SUS- PENDE RECOV- ERABLE (UG/L AS FE)
DEC , 1979											
03...	--	--	<10	--	--	2	--	--	4	--	--
APR , 1980											
09...	20	10	10	0	0	0	10	6	4	1200	1100
MAY											
28...	10	0	10	0	0	0	6	0	6	350	350
SEP											
08...	10	0	10	3	3	0	9	5	4	1100	1100

DATE	IRON, DIS- SOLVED (UG/L AS FE)	LEAD, TOTAL RECOV- ERABLE (UG/L AS PB)	LEAD, SUS- PENDE RECOV- ERABLE (UG/L AS PB)	LEAD, DIS- SOLVED (UG/L AS PB)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)	MANGA- NESE, SUS- PENDE RECOV- ERABLE (UG/L AS MN)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	MERCURY TOTAL RECOV- ERABLE (UG/L AS HG)	MERCURY SUS- PENDE RECOV- ERABLE (UG/L AS HG)	MERCURY DIS- SOLVED (UG/L AS HG)	NICKEL, TOTAL RECOV- ERABLE (UG/L AS NI)
DEC , 1979											
03...	40	--	--	--	--	--	30	<.1	<.0	<.1	3
APR , 1980											
09...	110	3	2	1	60	0	60	.1	.0	.1	5
MAY											
28...	0	4	4	0	180	180	2	<.1	--	<.1	3
SEP											
08...	10	6	6	0	170	170	0	<.1	--	<.1	3

DATE	NICKEL, SUS- PENDE RECOV- ERABLE (UG/L AS NI)	NICKEL, DIS- SOLVED (UG/L AS NI)	SELE- NIUM, TOTAL (UG/L AS SE)	SELE- NIUM, SUS- PENDE TOTAL (UG/L AS SE)	SELE- NIUM, DIS- SOLVED (UG/L AS SE)	SILVER, TOTAL RECOV- ERABLE (UG/L AS AG)	SILVER, SUS- PENDE RECOV- ERABLE (UG/L AS AG)	SILVER, DIS- SOLVED (UG/L AS AG)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN)	ZINC, SUS- PENDE RECOV- ERABLE (UG/L AS ZN)	ZINC, DIS- SOLVED (UG/L AS ZN)
DEC , 1979											
03...	0	3	0	0	0	--	--	0	--	--	10
APR , 1980											
09...	4	1	0	0	0	0	0	0	20	20	5
MAY											
28...	2	1	0	0	0	0	0	0	20	10	10
SEP											
08...	3	0	0	0	0	0	0	0	10	10	0

QUALITATIVE AND ASSOCIATED QUANTITATIVE BIOLOGICAL DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

PHYTOPLANKTON

Date	Time	Organism	Count (cells/ml)	Percent of total	Diversity index	Sampling method
Oct. 30, 1979	1345	CHLOROPHYTA				Grab sample
		Chlorophyceae				
		<i>Ankistrodesmus</i>	44	1		
		<i>Chlamydomonas</i>	220	4		
		<i>Gloeactinium</i>	350	6		
		<i>Oocystis</i>	44	1		
		<i>Selenastrum</i>	180	3		
		CHRYSOPHYTA				
		Bacillariophyceae				
		<i>Cyclotella</i>	3,400	59		
		<i>Melosira</i>	920	16		
		<i>Nitzschia</i>	88	2		
		<i>Synedra</i>	44	1		
		CRYPTOPHYTA				
		Cryptophyceae				
		<i>Cryptomonas</i>	88	2		
		CYANOPHYTA				
		Cyanophyceae				
		<i>Anacystis</i>	350	6		
		PYRRHOPHYTA				
		Dinophyceae				
		<i>Glenodinium</i>	44	1		
		TOTAL	5,800		2.1	

MISSISSIPPI RIVER MAIN STEM

05378500 MISSISSIPPI RIVER AT WINONA, MN--CONTINUED

QUALITATIVE AND ASSOCIATED QUANTITATIVE BIOLOGICAL DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

PHYTOPLANKTON						
Date	Time	Organism	Count (cells/ml)	Percent of total	Diversity index	Sampling method
Apr. 9, 1980	1715	CHLOROPHYTA				Grab sample
		Chlorophyceae				
		Ankistrodesmus	350	16		
		Chlamydomonas	100	5		
		Chlorogonium	13	1		
		Selenastrum	13	1		
		CHRYSOPHYTA				
		Bacillariophyceae				
		Cyclotella	77	4		
		Cymbella	13	1		
		Gomphonema	13	1		
		Fragilaria	550	25		
		Melosira	52	2		
		Navicula	64	3		
		Nitzschia	180	8		
		Stephanodiscus	540	25		
		Surirella	26	1		
		Synedra	100	5		
		CYANOPHYTA				
		Cyanophyceae				
		Anacystis	13	1		
		EUGLENOPHYTA				
		Euglenophyceae				
		Euglena	26	1		
		Trachelomonas	26	1		
		PYRRHOPHYTA				
		Dinophyceae				
		Clenodinium	26	1		
		TOTAL	2,200		3.1	
May 28, 1980	1615	CHLOROPHYTA				Grab sample
		Chlorophyceae				
		Actinastrum	1,900	3		
		Ankistrodesmus	720	1		
		Chlamydomonas		0		
		Chlorella		0		
		Golenkinia	720	1		
		Microactinium	8,600	14		
		Scenedesmus	5,800	10		
		Schroederia		0		
		Tetrastrum	960	2		
		Treubaria		0		
		CHRYSOPHYTA				
		Bacillariophyceae				
		Asterionella	1,200	2		
		Cyclotella	19,000	31		
		Melosira	6,200	10		
		Nitzschia	1,700	3		
		CRYPTOPHYTA				
		Cryptophyceae				
		Cryptomonas		0		
		CYANOPHYTA				
		Cyanophyceae				
		Anacystis	960	2		
		Oscillatoria	11,000	18		
		EUGLENOPHYTA				
		Euglenophyceae				
		Trachelomonas		0		
		TOTAL	60,000		3.0	
July 28, 1980	1710	CHLOROPHYTA				Grab sample
		Chlorophyceae				
		Actinastrum	1,200	1		
		Ankistrodesmus		0		
		Chlamydomonas		0		
		Coelastrum	3,200	3		
		Dictyosphaerium	2,000	2		
		Oocystis	580	1		
		Polyedriopsis		0		
		Scenedesmus	3,800	3		
		Selenastrum		0		
		CHRYSOPHYTA				
		Bacillariophyceae				
		Cyclotella	4,400	4		
		Melosira	9,900	9		
		Nitzschia		0		
		CRYPTOPHYTA				
		Cryptophyceae				
		Chroomonas		0		
		CYANOPHYTA				
		Cyanophyceae				
		Agmenellum	2,300	2		
		Anacystis	11,000	10		
		Aphanizomenon	44,000	39		
		Oscillatoria	29,000	26		
		TOTAL	110,000		2.6	

MISSISSIPPI RIVER MAIN STEM

05378500 MISSISSIPPI RIVER AT WINONA, MN--CONTINUED

QUALITATIVE AND ASSOCIATED QUANTITATIVE BIOLOGICAL DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

PHYTOPLANKTON

Date	Time	Organism	Count (cells/ml)	Percent of total	Diversity index	Sampling method
Sept. 8, 1980	1700	CHLOROPHYTA				Grab sample
		Chlorophyceae				
		<i>Ankistrodesmus</i>	170	1		
		<i>Chlamydomonas</i>	170	1		
		<i>Dictyosphaerium</i>	300	1		
		<i>Golenkinia</i>		0		
		<i>Kirchneriella</i>		0		
		<i>Scenedesmus</i>	1,100	4		
		<i>Selenastrum</i>	340	1		
		<i>Tetraedron</i>		0		
		<i>Tetrastrum</i>	170	1		
		CHRYSOPHYTA				
		Bacillariophyceae				
		<i>Cyclotella</i>	1,300	5		
		<i>Melosira</i>	2,500	10		
		<i>Nitzschia</i>		0		
		CYANOPHYTA				
		Cyanophyceae				
		<i>Anacyctis</i>	4,000	16		
		<i>Aphanizomenon</i>	12,000	48		
		<i>Oscillatoria</i>	2,600	10		
		TOTAL	25,000		2.4	

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DAY	ONCE-DAILY											
	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	16.0		---	---	---	---	2.0	---	20.0	22.0	26.0	21.0
2	16.0		---	---	---	---	3.0	---	21.0	22.0	26.0	20.0
3	16.0		.5	---	---	1.0	3.0	---	21.0	23.0	27.0	21.0
4	14.0		---	---	.0	---	3.0	---	21.0	24.0	27.0	21.0
5	14.0		---	---	---	---	3.0	---	20.0	24.0	24.0	21.0
6	14.0		---	---	---	---	4.0	---	21.5	24.0	25.0	20.0
7	13.0		---	---	---	---	5.0	---	21.5	25.0	25.0	21.0
8	13.0		---	---	---	---	5.0	---	20.0	25.0	25.0	22.5
9	12.0		---	---	---	---	3.0	---	20.0	26.0	25.0	21.0
10	12.0		---	---	---	.0	2.0	---	20.0	26.0	25.0	19.0
11	11.0		---	---	.0	---	2.0	---	20.0	28.0	24.0	19.0
12	---		---	---	---	---	3.0	---	20.0	28.0	24.0	20.0
13	---		---	---	---	---	3.0	---	21.0	28.0	23.0	19.0
14	---		---	.0	---	---	4.0	---	22.0	28.0	24.0	19.0
15	---		---	---	---	---	4.0	---	21.0	27.5	24.0	17.0
16	---		---	---	---	---	5.0	---	20.0	27.0	23.0	17.0
17	---		---	---	---	.0	7.0	---	21.0	27.0	23.0	16.0
18	---		---	---	.0	3.0	9.0	---	21.0	27.0	24.0	16.0
19	---		---	---	---	2.0	9.0	---	20.0	27.0	22.0	16.0
20	---		---	---	.5	---	10.0	---	21.0	27.0	24.0	17.0
21	---		---	---	---	2.0	12.0	---	21.0	25.0	23.0	17.0
22	---		---	---	---	---	15.0	---	22.0	25.0	24.0	17.0
23	---		---	---	---	2.0	12.0	---	23.0	25.0	23.0	15.0
24	---		---	---	---	2.0	10.0	---	24.0	25.0	22.0	15.0
25	---		---	---	.0	2.0	10.0	---	25.0	26.0	23.0	15.0
26	---		---	---	---	2.0	10.0	---	25.0	24.0	23.0	14.0
27	---		---	---	---	2.0	10.0	---	24.0	---	22.0	14.0
28	---		---	1.0	---	2.0	11.0	22.0	23.0	25.5	21.0	14.0
29	---		---	---	---	2.0	12.0	21.0	24.0	25.0	22.0	15.0
30	10.0		---	---	---	2.0	---	21.0	22.0	25.0	22.0	15.0
31	---		---	---	---	2.0	---	20.5	---	26.0	22.0	---

MISSISSIPPI RIVER MAIN STEM

05378500 MISSISSIPPI RIVER AT WINONA, MN--CONTINUED

SUSPENDED-SEDIMENT, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DAY	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
	MEAN CONCENTRATION (MG/L)	LOADS (T/DAY)	MEAN CONCENTRATION (MG/L)	LOADS (T/DAY)	MEAN CONCENTRATION (MG/L)	LOADS (T/DAY)	MEAN CONCENTRATION (MG/L)	LOADS (T/DAY)	MEAN CONCENTRATION (MG/L)	LOADS (T/DAY)	MEAN CONCENTRATION (MG/L)	LOADS (T/DAY)
1	15	806	16	1160	10	775	8	523	8	335	2	89
2	17	923	16	1240	8	596	8	521	9	382	2	89
3	20	1030	16	1340	9	600	8	497	13	558	2	87
4	20	1000	16	1380	8	482	7	397	18	807	2	85
5	19	970	17	1330	8	428	7	369	12	554	2	86
6	14	696	17	1550	8	445	6	296	7	318	2	85
7	15	745	17	1730	8	473	5	219	6	269	2	85
8	16	734	17	1690	8	544	5	175	5	212	2	87
9	15	591	17	1680	8	575	5	161	4	166	2	89
10	14	556	16	1620	8	549	5	154	4	167	1	46
11	11	448	16	1670	8	546	5	174	3	127	3	139
12	11	434	15	1610	8	534	5	185	3	126	4	183
13	12	476	13	1370	8	408	5	189	3	126	6	269
14	15	612	11	1100	8	313	5	216	3	127	7	319
15	16	622	9	831	8	315	6	290	3	127	9	408
16	12	470	9	780	10	440	9	503	3	128	16	773
17	13	488	11	944	14	760	14	881	3	129	22	1410
18	12	457	8	711	16	920	25	1710	3	128	28	2460
19	13	509	12	1070	14	760	24	1680	3	128	41	4590
20	14	624	12	1040	11	642	21	1460	3	128	49	7740
21	15	697	8	674	10	594	19	1260	2	86	24	4310
22	23	1290	10	829	9	547	18	1120	2	91	13	2120
23	24	1830	9	751	9	605	16	886	2	96	9	1280
24	18	1430	8	667	8	588	15	741	2	100	15	2150
25	15	1200	8	678	8	618	14	677	2	103	15	2040
26	15	1280	7	609	8	594	11	538	2	100	17	2170
27	18	1620	7	618	8	575	10	486	2	92	17	2020
28	18	1630	8	713	8	542	9	433	2	90	19	2220
29	13	1140	9	785	8	518	8	380	2	90	20	2420
30	14	1130	9	731	8	518	7	308	---	---	20	2450
31	15	1080	---	---	8	521	6	248	---	---	17	2050
TOTAL	---	27518	---	32901	---	17325	---	17677	---	5890	---	44349

DAY	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
	MEAN CONCENTRATION (MG/L)	LOADS (T/DAY)	MEAN CONCENTRATION (MG/L)	LOADS (T/DAY)	MEAN CONCENTRATION (MG/L)	LOADS (T/DAY)	MEAN CONCENTRATION (MG/L)	LOADS (T/DAY)	MEAN CONCENTRATION (MG/L)	LOADS (T/DAY)	MEAN CONCENTRATION (MG/L)	LOADS (T/DAY)
1	15	1700	15	1220	38	1790	21	1280	11	303	14	987
2	13	1400	13	1000	20	1100	23	1380	12	337	12	778
3	15	1720	16	1180	23	1570	20	1170	11	321	12	674
4	17	2130	20	1350	20	1410	22	1200	9	248	12	690
5	18	2400	19	1270	34	2460	20	988	10	262	14	956
6	20	2740	21	1330	88	8100	19	821	11	309	16	1270
7	34	4840	21	1250	93	10600	16	557	9	255	16	1570
8	41	6310	22	1180	98	12600	17	583	14	616	27	2830
9	45	7110	21	1050	84	12100	17	652	27	1790	30	2960
10	41	6620	18	850	83	13300	16	635	23	1890	21	1910
11	35	6010	21	1000	70	11900	17	675	22	2040	18	1550
12	43	7850	17	872	56	9180	13	505	20	1770	15	1340
13	42	7800	18	1010	45	6680	16	639	15	1280	20	1900
14	26	4810	15	867	42	5610	13	428	17	1310	19	1900
15	26	4750	17	1010	39	4810	12	347	12	726	24	2420
16	22	3890	19	1140	37	4270	15	433	10	472	25	2600
17	20	3410	18	1040	32	3360	15	470	11	475	22	2440
18	20	3260	17	835	29	2880	12	424	10	421	24	2610
19	19	2940	12	538	34	3350	13	516	9	377	20	2010
20	20	2950	13	579	35	3300	14	552	9	403	19	1840
21	23	3240	13	604	32	2760	14	461	12	609	40	4380
22	15	1970	14	737	28	2100	13	425	11	558	50	5590
23	15	1930	12	680	24	1610	12	369	11	502	38	4460
24	14	1700	13	741	25	1730	11	342	10	389	33	3980
25	12	1320	13	702	27	1930	12	382	11	419	33	4130
26	10	1010	14	601	28	1880	12	421	12	632	38	5070
27	12	1210	13	439	36	2250	12	441	13	762	30	3990
28	12	1150	16	544	40	2340	11	401	11	606	21	2490
29	14	1290	13	470	39	1400	11	377	13	702	18	1730
30	13	1120	27	1490	20	869	12	350	13	783	16	1450
31	---	---	56	3340	---	---	13	358	15	1040	---	---
TOTAL	---	100580	---	30919	---	139239	---	18582	---	22607	---	72505

TREMPEALEAU RIVER BASIN

05379288 BRUCE VALLEY CREEK NEAR PLEASANTVILLE, WI

LOCATION.--Lat 44°26'45", long 91°21'40", in SE 1/4 NW 1/4 sec.28, T.23 N., R.8 W., Trempealeau County, Hydrologic Unit 07040005, on right bank, 50 ft (15 m) upstream of bridge on County Highway D, 0.9 mi (1.4 km) upstream from Elk Creek and 2.9 mi (4.7 km) west of Pleasantville.

DRAINAGE AREA.--10.1 mi² (26.2 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1979 to September 1980 (discontinued).

GAGE.--Water-stage recorder. Altitude of gage is 850 ft (259 m), from topographic map.

REMARKS.--Records are good.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 306 ft³/s (8.67 m³/s) Sept. 21, gage height, 9.02 ft (2.749 m); minimum daily, 2.8 ft³/s (0.079 m³/s) July 23, 24, 27, 30, Aug. 6.

RATING TABLE (gage height, in feet, and discharge, in cubic feet per second).
(Stage-discharge relation affected by ice Nov. 26 to Dec. 1, Dec. 15, 16, 28, 30, Jan. 7-9, 25-31, Feb. 5-8, 16, 26-29, Mar. 11.)

4.1	2.4	5.0	27
4.3	5.9	6.0	75
4.5	11	7.0	138

DAY	DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980											
	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6.2	9.6	6.0	4.9	3.9	3.6	7.8	5.9	5.5	4.3	2.9	5.4
2	7.0	6.8	5.7	4.9	3.9	3.6	7.8	5.2	5.3	4.0	2.9	4.6
3	5.2	5.9	5.9	4.8	3.8	3.8	6.9	5.2	4.8	4.0	3.0	4.3
4	4.8	5.7	6.1	4.8	3.8	3.8	24	5.1	4.5	4.0	2.9	14
5	4.6	14	6.8	4.8	3.7	3.9	22	4.9	20	5.0	3.1	4.8
6	4.5	13	6.6	4.7	3.7	3.7	12	4.9	25	3.9	2.8	4.0
7	4.4	6.8	8.4	4.7	3.7	3.8	18	4.7	17	3.9	18	4.3
8	4.4	6.6	6.6	4.6	3.6	3.8	21	4.8	7.1	3.7	33	4.1
9	4.4	5.9	6.4	4.6	3.6	3.7	11	4.9	5.6	3.7	5.4	6.3
10	4.5	5.7	6.6	4.7	3.7	4.0	8.2	5.1	5.0	3.7	4.0	4.0
11	4.8	5.6	6.6	7.3	3.7	3.8	10	6.6	4.7	3.5	3.9	5.8
12	4.5	5.8	5.5	5.4	3.7	3.7	11	5.3	4.4	3.5	3.6	40
13	4.4	5.5	5.3	4.8	3.7	3.9	8.6	5.8	4.4	3.2	3.4	8.7
14	4.3	5.2	5.3	4.7	3.7	3.8	7.2	5.4	4.3	3.3	3.4	6.5
15	4.3	5.6	5.2	4.8	3.7	4.3	7.4	5.0	3.9	3.5	3.1	5.9
16	4.2	6.2	5.2	70	3.7	68	7.1	4.8	3.8	6.5	3.1	6.5
17	4.2	6.5	5.1	24	3.7	40	8.0	4.9	3.8	3.4	5.0	5.7
18	4.3	6.2	5.1	8.0	3.7	76	8.4	6.6	25	3.3	4.6	5.3
19	8.0	6.6	5.3	5.9	3.7	93	8.4	6.1	48	3.2	3.4	29
20	5.4	6.4	5.3	5.2	3.8	33	8.3	5.3	7.5	3.1	3.4	76
21	5.9	7.9	5.3	5.0	4.7	13	8.3	5.3	6.1	3.1	4.9	123
22	62	11	5.3	4.8	6.7	6.8	8.4	5.2	5.4	2.9	3.3	17
23	28	10	11	4.6	5.6	5.2	7.7	5.0	5.1	2.8	3.2	12
24	12	8.4	7.2	4.4	4.2	7.4	7.0	4.7	4.9	2.8	3.2	11
25	7.1	7.7	5.6	4.3	3.7	15	6.7	4.6	4.7	3.0	3.4	11
26	6.5	7.4	5.4	4.2	3.7	15	6.6	4.3	4.7	3.1	6.3	10
27	6.7	7.0	5.3	4.1	3.6	12	6.5	4.2	4.6	2.8	8.5	9.4
28	6.4	6.8	5.2	4.1	3.6	11	6.2	4.3	7.9	2.9	4.7	8.6
29	6.0	6.4	5.0	4.0	3.6	13	6.3	5.2	4.5	2.9	4.0	9.1
30	5.8	6.2	5.0	3.9	---	11	6.4	12	4.4	2.8	27	8.5
31	12	---	4.9	3.9	---	9.3	---	7.8	---	2.9	6.8	---
TOTAL	256.8	218.4	184.2	234.9	113.9	485.9	293.2	169.1	261.9	108.7	190.2	464.8
MEAN	8.28	7.28	5.94	7.58	3.93	15.7	9.77	5.45	8.73	3.51	6.14	15.5
MAX	62	14	11	70	6.7	93	24	12	48	6.5	33	123
MIN	4.2	5.2	4.9	3.9	3.6	3.6	6.2	4.2	3.8	2.8	2.8	4.0
CFSM	.82	.72	.59	.75	.39	1.55	.97	.54	.86	.35	.61	1.54
IN.	.95	.80	.68	.87	.42	1.79	1.08	.62	.96	.40	.70	1.71
WTR YR 1980	TOTAL	2982.0	MEAN	8.15	MAX	123	MIN	2.8	CFSM	.81	IN	10.98

05379288 BRUCE VALLEY CREEK NEAR PLEASANTVILLE, WI--CONTINUED

WATER-QUALITY

PERIOD OF RECORD.--October 1979 to September 1980.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: October 1979 to September 1980.

WATER TEMPERATURES: October 1979 to September 1980.

SUSPENDED-SEDIMENT DISCHARGE: October 1979 to September 1980.

INSTRUMENTATION.--Water-quality monitor since October 11, 1979. Sediment pumping sampler since October 11, 1979.

EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum observed, 828 micromhos Feb. 26; minimum observed, 70 micromhos Aug. 8.

WATER TEMPERATURES: Maximum observed, 23.5°C June 26, July 10, 12, 16; minimum observed 0.0°C on several days during winter period.

SUSPENDED-SEDIMENT CONCENTRATIONS: Maximum daily mean, 603 mg/l June 18, minimum daily mean, 3 mg/l July 30, 31, Aug. 1-6. Maximum observed, 2,690 mg/l June 5; minimum observed, 3 mg/l July 31.

SUSPENDED-SEDIMENT DISCHARGE: Maximum daily, 283 tons (257 tonnes) Sept. 25, minimum daily, 0.02 ton (0.02 tonne) July 30, 31, Aug. 1-6.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH FIELD (UNITS)	TEMPER- ATURE, WATER (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION)	ALKA- LINITY (MG/L AS CaCO3)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)	SOLIDS, DIS- SOLVED (TONS PER DAY)
OCT , 1979												
22...	0215	25	--	--	--	--	--	--	--	--	--	--
22...	0245	36	--	--	--	--	--	53	24	193	.26	18.8
22...	0845	66	--	--	--	--	--	--	12	124	.17	22.1
22...	0915	75	--	--	--	--	--	--	--	--	--	--
22...	1245	86	--	--	--	--	--	31	8.4	119	.16	27.6
22...	1515	81	--	--	--	--	--	--	--	--	--	--
22...	1545	81	--	--	--	--	--	29	7.2	108	.15	23.6
23...	1145	23	--	--	--	--	--	--	--	--	--	--
NOV												
16...	0930	5.9	--	--	--	--	--	57	4.8	120	.16	1.91
MAR , 1980												
04...	1400	3.7	210	7.8	3.0	12.0	93	54	4.7	124	.17	1.24
21...	1830	14	150	--	3.0	--	--	--	--	--	--	--

[illegible]

TREMPEALEAU RIVER BASIN

05379288 BRUCE VALLEY CREEK NEAR PLEASANTVILLE, WI--CONTINUED

WATER-QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	ALKA- LINIT (MG/L AS CACO3)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	SOLIDS, RESIDUE AT 105 DEG. C, DIS- SOLVED (MG/L)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N)	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- ORTHOPH OSPATE DISSOL. (MG/L AS P)
JAN , 1980										
15...	1600	4.5	60	4.0	128	1.5	.120	--	.320	.141
16...	1245	60	46	11	180	--	--	--	--	--
16...	1345	83	--	--	--	1.2	2.000	--	2.100	.720
16...	1512	160	39	11	153	.04	1.900	--	2.570	.830
16...	1600	185	34	8.4	140	.82	1.800	--	2.310	.730
16...	2345	72	--	--	--	.65	.740	--	1.110	.570
17...	0045	63	22	7.4	87	--	--	--	--	--
18...	1256	17	50	4.6	117	1.3	.580	--	.460	.310
MAR										
16...	1215	65	E52	5.6	164	--	--	--	--	--
16...	1415	99	--	--	--	.03	3.400	--	2.600	.570
16...	1600	135	--	--	--	.03	1.500	--	2.700	.690
16...	1645	147	--	8.4	197	--	--	--	--	--
16...	1730	153	--	--	--	.05	1.900	--	2.700	.820
16...	1900	154	--	--	--	.05	1.800	--	2.510	.880
16...	1945	149	--	9.3	199	--	--	--	--	--
16...	2115	130	--	--	--	.05	1.000	--	2.140	.740
17...	0015	90	--	--	--	.05	1.100	--	1.640	.600
17...	0100	75	--	5.6	128	--	--	--	--	--
18...	0800	62	--	--	--	<.10	.800	--	1.670	.490
18...	1500	110	--	--	--	<.10	4.200	--	3.160	1.000
18...	1715	164	--	--	--	<.10	1.400	--	2.980	.650
18...	1845	154	--	--	--	<.10	1.400	--	2.700	.710
18...	2100	118	--	--	--	.09	1.700	--	1.790	.620
18...	2400	69	--	--	--	.28	1.500	--	1.270	.530
19...	1300	104	--	--	--	<.10	3.500	--	3.160	.960
19...	1430	167	--	--	--	<.10	2.700	--	3.160	.600
19...	1600	208	--	--	--	<.10	2.400	--	2.880	.540
19...	1815	200	--	--	--	<.10	1.400	--	2.140	.300
19...	1945	181	--	--	--	<.10	1.300	--	1.620	.340
20...	0845	16	--	--	--	.56	1.120	--	.670	.190
MAY										
01...	--	5.6	72	3.0	136	.89	.050	--	.290	.115
30...	1300	15	64	5.0	144	.85	.260	2.4	.840	--
JUN										
05...	0900	19	--	--	--	2.2	.190	--	3.440	--
05...	0945	24	47	15	169	--	--	--	--	.410
05...	1200	34	--	--	--	1.6	.220	5.1	10.000	--
05...	1245	34	44	6.5	123	--	--	--	--	.240
05...	1915	20	--	--	--	1.3	.120	2.1	1.000	--
05...	2400	58	33	7.4	134	--	--	--	--	.480
06...	0100	59	--	--	--	2.0	.540	12	5.390	--
06...	0900	29	--	--	--	1.5	.270	2.0	.950	--
07...	0730	23	--	--	--	1.3	.160	.90	.430	.150
07...	1045	27	--	--	--	1.1	.240	2.8	1.560	--
07...	1245	29	--	--	--	.93	.200	2.5	1.390	--
07...	1545	24	46	1.9	113	--	--	--	--	.240
07...	1645	21	--	--	--	1.3	.170	2.2	.790	--
08...	0732	7.5	--	--	--	1.2	--	--	--	--
JUL										
10...	1900	3.6	72	4.0	162	1.4	.100	--	.440	--
11...	--	3.5	--	--	--	.02	1.400	--	.020	--

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TREMPEALEAU RIVER BASIN

05379288 BRUCE VALLEY CREEK NEAR PLEASANTVILLE, WI--CONTINUED

WATER-QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	ALKA- LINITY (MG/L AS CACO3)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	SOLIDS, RESIDUE AT 180 DEG. C SOLVED (MG/L)	SOLIDS, RESIDUE AT 105 DEG. C, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)	SOLIDS, DIS- SOLVED (TONS PER DAY)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N)	PHOS- PHORUS, TOTAL (MG/L AS P)
AUG , 1980											
08...	0345	23	39	3.7	--	104	--	--	--	--	--
08...	0430	51	--	--	--	--	--	--	.75	.310	5.300
08...	0515	75	35	2.8	--	99	--	--	--	--	--
08...	0600	90	--	--	--	--	--	--	.69	.410	4.000
08...	0645	88	39	2.8	--	99	--	--	--	--	--
08...	0900	47	--	--	--	--	--	--	.32	.110	1.140
08...	1030	40	--	--	--	--	--	--	.38	.100	1.270
08...	1330	44	--	--	--	--	--	--	.47	.170	1.570
08...	1415	40	24	1.9	--	108	--	--	--	--	--
08...	1500	37	--	--	--	--	--	--	.50	19.000	1.950
09...	1300	41	62	2.8	--	128	--	--	1.0	.110	.890
09...	1413	40	61	4.6	--	151	--	--	--	--	--
30...	0745	49	--	--	--	--	--	--	.88	.600	4.090
30...	0830	56	48	7.4	293	--	.40	44.3	--	--	--
30...	1045	40	--	--	--	--	--	--	.83	.430	1.120
30...	1515	45	--	--	--	--	--	--	.69	.110	.132
30...	2030	19	52	.9	98	--	.13	5.03	.50	.065	.860
SEP											
04...	0345	19	--	--	--	--	--	--	.75	.120	3.160
04...	0515	22	--	--	--	--	--	--	.93	.460	2.420
04...	0645	19	--	--	--	--	--	--	.84	.320	1.640
04...	0815	18	--	--	--	--	--	--	.70	.160	1.370
04...	0945	19	--	--	--	--	--	--	.64	.065	1.000
04...	1115	21	--	--	--	--	--	--	.66	.080	1.020
12...	0045	20	--	--	--	--	--	--	.87	.480	2.050
12...	0215	30	--	--	--	--	--	--	.76	.410	1.950
12...	0345	51	--	--	--	--	--	--	.79	.410	2.420
12...	0430	61	56	5.6	98	--	.13	16.1	--	--	--
12...	0515	65	--	--	--	--	--	--	7.1	.270	2.050
12...	0945	65	--	--	--	--	--	--	.64	.200	1.240
12...	1430	40	--	--	--	--	--	--	.65	.100	.760
12...	1945	18	--	--	--	--	--	--	.72	.100	.600
12...	2030	17	42	<2.0	102	--	.14	4.68	--	--	--
18...	1300	5.3	--	--	--	--	--	--	1.2	.090	.320
19...	2115	59	--	--	--	--	--	--	.75	.065	4.090
19...	2245	262	--	--	--	--	--	--	.76	.300	5.770
20...	0015	200	--	--	--	--	--	--	.73	.190	3.070
20...	0145	117	--	--	--	--	--	--	.67	.330	2.790
20...	0315	132	--	--	--	--	--	--	.81	.130	1.950
20...	0445	121	--	--	--	--	--	--	7.7	.070	1.580
20...	0615	91	--	--	121	--	.17	29.7	.70	.050	1.300
20...	0830	52	33	<2.0	130	--	.18	18.3	--	--	--
20...	1045	31	--	--	--	--	--	--	.70	.040	.760
20...	1345	18	--	--	--	--	--	--	.79	.060	.650
20...	2200	160	--	--	--	--	--	--	.57	.390	7.160
20...	2330	283	--	--	--	--	--	--	.53	.330	4.560
21...	0015	285	23	<2.0	214	--	.29	165	--	--	--
21...	1100	93	--	--	--	--	--	--	.52	.090	.880
21...	1215	72	--	--	--	--	--	--	.52	.090	1.200
21...	1645	36	--	--	--	--	--	--	.70	.090	.630
22...	0045	21	--	--	--	--	--	--	.90	.100	.480
22...	1245	17	--	--	--	--	--	--	1.0	.140	.390
26...	1045	11	--	--	--	--	--	--	1.1	.080	.320

		STREAM- FLOW, INSTAN- TANEOUS (CFS)	ARSENIC TOTAL (UG/L AS AS)	CADMIUM TOTAL RECOV- ERABLE (UG/L AS CD)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU)	LEAD, TOTAL RECOV- ERABLE (UG/L AS PB)	ZINC TOTAL RECOV- ERABLE (UG/L AS ZN)				
SEP , 1980											
26...	1045	11	<10	0	3	<3	20				
DATE	TIME	BED MAT. SIEVE DIAM. % FINER THAN .062 MM	BED MAT. SIEVE DIAM. % FINER THAN .125 MM	BED MAT. SIEVE DIAM. % FINER THAN .250 MM	BED MAT. SIEVE DIAM. % FINER THAN .500 MM	BED MAT. SIEVE DIAM. % FINER THAN 1.00 MM	BED MAT. SIEVE DIAM. % FINER THAN 2.00 MM	BED MAT. SIEVE DIAM. % FINER THAN 4.00 MM	BED MAT. SIEVE DIAM. % FINER THAN 8.00 MM	BED MAT. SIEVE DIAM. % FINER THAN 16.0 MM	BED MAT. SIEVE DIAM. % FINER THAN 32.0 MM
SEP , 1980											
23...	1030	1	1	6	40	88	92	94	96	98	100

TREMPEALEAU RIVER BASIN

05379288 BRUCE VALLEY CREEK NEAR PLEASANTVILLE, WI--CONTINUED

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DAY	MAX	MIN OCTOBER	MEAN	MAX	MIN NOVEMBER	MEAN	MAX	MIN DECEMBER	MEAN	MAX	MIN JANUARY	MEAN
1	---	---	---	190	171	182	202	194	197	---	---	---
2	---	---	---	189	185	188	203	197	201	195	192	194
3	---	---	---	190	186	188	202	197	201	---	---	---
4	---	---	---	193	186	191	199	197	198	---	---	---
5	---	---	---	212	190	200	197	191	194	---	---	---
6	---	---	---	365	183	193	354	191	200	199	195	199
7	---	---	---	192	185	189	206	189	194	199	196	198
8	---	---	---	192	187	190	195	193	194	198	193	195
9	---	---	---	193	190	192	196	194	195	197	195	197
10	---	---	---	---	---	---	196	192	194	196	195	196
11	195	185	194	---	---	---	192	189	190	---	---	---
12	196	194	194	---	---	---	201	193	197	---	---	---
13	198	194	196	---	---	---	200	198	199	---	---	---
14	199	196	197	---	---	---	200	200	198	---	---	---
15	199	196	198	207	179	206	198	198	196	200	177	198
16	202	197	199	197	192	194	203	203	198	252	114	185
17	201	198	199	195	190	193	206	184	190	175	114	147
18	203	200	201	195	192	193	202	200	201	195	179	188
19	283	200	231	193	188	191	201	197	199	200	196	198
20	216	209	211	191	188	189	201	196	198	205	198	201
21	223	202	213	226	190	199	203	196	198	204	199	201
22	274	87	168	238	186	196	199	193	196	205	197	200
23	168	144	158	203	188	192	229	209	209	210	203	205
24	178	166	171	189	186	187	224	207	217	205	196	201
25	179	174	177	189	186	188	200	194	197	200	196	198
26	182	179	180	188	186	187	196	193	194	204	198	201
27	184	180	182	187	184	185	---	---	---	205	198	201
28	185	180	183	194	185	190	---	---	---	205	198	202
29	187	183	185	352	192	199	---	---	---	205	200	203
30	193	186	190	198	194	195	---	---	---	205	199	201
31	206	169	187	---	---	---	---	---	---	211	198	205
MONTH	283	87	191	365	171	192	354	184	198	252	114	196

DAY	MAX	MIN FEBRUARY	MEAN	MAX	MIN MARCH	MEAN	MAX	MIN APRIL	MEAN	MAX	MIN MAY	MEAN
1	212	208	210	228	220	225	184	168	176	194	181	182
2	213	207	210	228	218	223	197	169	179	190	181	186
3	212	208	210	223	218	220	194	164	183	215	187	196
4	214	209	211	222	209	215	263	172	202	---	---	---
5	210	206	208	212	208	210	197	95	164	---	---	---
6	209	205	207	215	207	211	231	155	195	---	---	---
7	211	205	207	215	209	211	293	183	213	---	---	---
8	210	206	208	216	210	212	294	199	221	---	---	---
9	211	206	208	216	210	212	199	188	194	---	---	---
10	210	207	209	218	208	212	254	199	214	---	---	---
11	210	206	208	219	209	213	245	179	215	---	---	---
12	209	205	207	215	211	213	191	173	181	---	---	---
13	209	205	207	215	210	211	---	---	---	---	---	---
14	209	205	207	215	211	213	---	---	---	---	---	---
15	209	205	207	247	211	220	---	---	---	---	---	---
16	210	205	207	264	171	214	---	---	---	---	---	---
17	210	206	208	250	137	190	---	---	---	---	---	---
18	211	206	208	240	121	192	---	---	---	---	---	---
19	211	207	209	206	120	151	---	---	---	---	---	---
20	232	207	211	206	128	156	---	---	---	---	---	---
21	306	227	247	166	139	153	---	---	---	---	---	---
22	383	304	339	178	159	169	---	---	---	---	---	---
23	384	303	340	183	179	182	---	---	---	---	---	---
24	301	252	271	188	167	182	---	---	---	---	---	---
25	249	225	235	188	161	173	---	---	---	---	---	---
26	828	218	303	179	151	165	---	---	---	---	---	---
27	335	235	263	176	151	164	---	---	---	---	---	---
28	241	225	230	183	171	177	---	---	---	---	---	---
29	231	222	227	184	157	173	---	---	---	---	---	---
30	---	---	---	176	158	166	---	---	---	265	162	213
31	---	---	---	180	161	170	---	---	---	234	203	208
MONTH	828	205	228	264	120	193	294	95	195	265	162	197

TREMPEALEAU RIVER BASIN

05379288 BRUCE VALLEY CREEK NEAR PLEASANTVILLE, WI--CONTINUED

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DAY	MAX	MIN JUNE	MEAN	MAX	MIN JULY	MEAN	MAX	MIN AUGUST	MEAN	MAX	MIN SEPTEMBER	MEAN
1	208	200	205	205	201	203	211	201	207	216	213	214
2	210	205	206	206	202	204	212	202	206	215	212	213
3	213	203	208	203	201	202	207	203	205	217	211	213
4	213	207	210	203	194	201	208	202	206	235	191	202
5	268	95	189	237	191	200	205	196	200	219	199	212
6	217	158	187	200	196	197	207	181	202	218	214	216
7	289	158	198	202	196	199	239	144	169	215	210	214
8	184	172	180	202	197	200	173	70	126	216	210	213
9	184	183	183	203	198	200	209	168	196	236	207	214
10	186	182	183	205	198	201	213	208	210	215	210	213
11	189	185	187	207	202	204	215	210	213	259	205	215
12	191	188	190	206	200	203	214	210	211	220	145	168
13	198	188	193	209	201	204	213	210	212	209	188	204
14	191	182	185	205	199	202	213	210	211	209	207	208
15	186	183	185	209	198	203	214	210	212	208	205	208
16	186	182	185	299	185	201	214	206	210	211	204	208
17	187	183	185	205	195	200	241	205	220	207	203	205
18	185	135	179	204	196	201	206	194	201	208	204	206
19	175	126	144	205	197	200	214	206	210	208	119	194
20	199	178	191	203	199	201	220	210	213	193	102	147
21	204	197	200	204	198	201	252	197	211	169	98	124
22	207	204	205	205	200	202	215	206	211	191	172	185
23	210	204	207	208	201	203	215	210	213	194	190	192
24	209	205	208	212	201	204	216	209	212	195	191	193
25	211	205	208	205	197	201	218	211	214	202	191	196
26	214	206	209	200	196	198	286	209	235	193	190	192
27	214	198	208	204	199	201	275	206	229	193	190	191
28	273	170	195	205	200	203	217	209	214	191	188	190
29	202	195	199	206	201	203	221	217	218	187	184	186
30	204	198	201	210	201	205	218	161	186	186	183	185
31	---	---	---	208	201	204	213	182	204	---	---	---
MONTH	289	95	194	299	185	202	286	70	206	259	98	197

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DAY	MAX	MIN OCTOBER	MEAN	MAX	MIN NOVEMBER	MEAN	MAX	MIN DECEMBER	MEAN	MAX	MIN JANUARY	MEAN
1	---	---	---	10.0	6.5	8.5	2.5	1.0	1.5	---	---	---
2	---	---	---	7.5	5.5	6.5	2.5	1.0	1.5	---	---	---
3	---	---	---	8.0	6.0	7.0	4.0	1.5	2.5	---	---	---
4	---	---	---	8.0	5.5	7.0	4.5	2.0	3.0	---	---	---
5	---	---	---	8.0	5.0	7.0	5.0	3.5	4.5	---	---	---
6	---	---	---	5.5	4.5	5.0	4.5	2.5	3.5	---	---	---
7	---	---	---	5.0	3.0	4.5	5.0	2.0	3.5	---	---	---
8	---	---	---	5.0	3.0	4.0	2.0	.5	1.5	---	---	---
9	---	---	---	4.5	3.0	3.5	4.0	2.0	3.0	---	---	---
10	---	---	---	---	---	---	5.0	2.5	3.5	---	---	---
11	10.0	9.0	9.5	---	---	---	4.5	.5	3.5	---	---	---
12	9.5	7.5	8.0	---	---	---	2.0	.0	1.0	---	---	---
13	9.5	6.5	8.0	---	---	---	2.5	1.0	2.0	---	---	---
14	10.0	6.0	8.0	---	---	---	3.0	1.0	2.0	---	---	---
15	10.5	7.0	8.5	6.0	5.5	5.5	4.0	.5	3.0	4.5	2.5	3.5
16	12.0	8.0	10.0	6.5	5.5	6.0	1.0	.0	.5	2.5	1.0	1.5
17	10.5	8.5	9.5	7.0	4.0	5.5	1.5	.5	1.0	1.5	1.0	1.5
18	12.0	9.5	11.0	7.5	4.5	6.5	2.5	1.0	2.0	3.5	1.5	2.5
19	13.5	11.5	12.5	9.5	7.5	8.5	4.0	2.0	1.5	4.0	1.5	2.5
20	15.5	12.5	14.0	8.0	7.0	7.5	4.5	2.0	3.0	3.5	1.5	2.0
21	14.5	11.0	13.0	7.5	5.0	6.5	4.5	2.5	3.5	2.5	1.5	2.0
22	11.0	6.0	9.0	6.0	4.5	5.0	4.5	2.5	3.5	2.5	1.0	2.0
23	7.0	5.0	6.0	6.0	5.0	5.5	4.5	2.0	3.0	1.5	1.0	1.0
24	8.5	5.5	7.0	5.5	4.0	5.0	4.5	2.5	3.5	2.0	1.0	1.5
25	8.0	6.0	7.0	5.5	3.5	4.5	4.5	2.0	3.0	2.5	1.0	1.5
26	7.5	5.5	6.5	6.0	5.0	5.5	---	---	---	1.5	1.0	1.0
27	9.0	7.0	8.0	5.5	3.5	4.5	---	---	---	1.5	1.0	1.0
28	10.0	7.0	8.5	4.0	2.5	3.0	---	---	---	1.5	1.0	1.0
29	10.0	7.0	8.5	3.0	2.0	2.5	---	---	---	1.5	1.0	1.0
30	10.0	8.0	9.0	3.0	2.0	2.5	---	---	---	1.5	1.0	1.0
31	12.5	9.5	10.5	---	---	---	---	---	---	2.0	.5	1.0
MONTH	15.5	5.0	9.0	10.0	2.0	5.5	5.0	.0	2.5	4.5	.5	1.5

TREMPEALEAU RIVER BASIN

05379288 BRUCE VALLEY CREEK NEAR PLEASANTVILLE, WI--CONTINUED

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DAY	MAX	MIN FEBRUARY	MEAN	MAX	MIN MARCH	MEAN	MAX	MIN APRIL	MEAN	MAX	MIN MAY	MEAN
1	1.5	.5	1.0	1.5	.0	.5	7.0	2.5	5.0	19.0	14.5	16.5
2	2.0	.5	1.0	1.5	.0	.5	10.0	3.5	7.0	18.0	11.0	14.5
3	2.0	.5	1.0	3.5	.5	1.5	7.0	2.5	4.0	13.5	11.5	12.5
4	2.0	.5	1.0	3.0	.5	1.5	8.5	1.5	4.0	---	---	---
5	3.0	1.0	2.0	3.0	.0	1.0	10.0	1.0	5.0	---	---	---
6	3.5	.5	1.5	1.5	.0	.5	7.5	4.0	5.5	---	---	---
7	2.0	.5	1.0	3.5	.0	1.5	8.0	5.5	6.5	---	---	---
8	2.5	.5	1.0	4.0	.0	1.5	6.0	1.5	4.5	---	---	---
9	3.0	.5	1.5	3.5	.0	1.5	3.5	1.0	2.0	---	---	---
10	4.0	1.0	2.0	4.0	.0	1.5	6.5	2.0	4.5	---	---	---
11	3.5	1.0	2.0	3.5	.5	1.0	8.0	2.5	5.5	---	---	---
12	3.0	.5	1.5	4.0	.5	2.0	7.5	3.0	5.0	---	---	---
13	4.0	1.5	2.5	4.5	.5	2.0	---	---	---	---	---	---
14	4.0	.5	2.0	6.0	.5	2.5	---	---	---	---	---	---
15	4.0	.5	2.0	6.5	1.0	3.5	---	---	---	---	---	---
16	2.0	.5	1.0	1.5	.5	1.0	---	---	---	---	---	---
17	1.5	.5	1.0	2.0	.5	1.0	---	---	---	---	---	---
18	3.0	.5	1.5	3.0	.5	1.0	---	---	---	---	---	---
19	4.0	2.0	3.0	3.0	.5	1.5	---	---	---	---	---	---
20	5.0	3.5	4.0	4.0	1.0	2.0	---	---	---	---	---	---
21	4.0	1.5	3.5	4.5	1.0	2.0	---	---	---	---	---	---
22	3.0	1.5	2.0	2.5	1.0	2.0	---	---	---	---	---	---
23	4.0	1.5	2.0	5.0	2.0	3.5	---	---	---	---	---	---
24	4.5	1.0	2.5	6.5	1.5	3.5	---	---	---	---	---	---
25	3.0	.0	1.0	5.5	1.0	2.5	---	---	---	---	---	---
26	1.0	.0	.5	6.5	1.5	3.5	---	---	---	---	---	---
27	3.0	.0	1.0	4.5	2.0	3.0	---	---	---	---	---	---
28	3.0	.0	1.0	5.0	2.5	3.5	---	---	---	---	---	---
29	1.0	.0	.5	8.0	2.5	4.5	---	---	---	---	---	---
30	---	---	---	7.5	1.5	4.5	---	---	---	21.0	17.0	18.0
31	---	---	---	8.0	2.5	5.0	---	---	---	19.5	14.0	17.0
MONTH	5.0	.0	1.5	8.0	.0	2.0	10.0	1.0	5.0	21.0	11.0	15.5

DAY	MAX	MIN JUNE	MEAN	MAX	MIN JULY	MEAN	MAX	MIN AUGUST	MEAN	MAX	MIN SEPTEMBER	MEAN
1	17.5	14.5	16.0	21.5	14.5	17.5	20.0	14.5	17.5	17.5	14.5	15.5
2	17.5	13.5	15.0	20.5	13.5	17.0	19.5	15.0	17.0	17.0	13.5	15.0
3	21.0	12.5	16.5	20.5	13.5	17.0	20.0	14.0	16.5	19.5	14.0	16.5
4	20.0	13.5	16.5	21.5	15.0	18.0	17.0	14.5	16.0	20.5	16.5	18.5
5	18.0	14.5	16.5	21.5	16.5	18.5	20.0	13.5	16.5	18.0	13.0	15.5
6	21.0	16.5	18.5	21.0	14.5	17.5	20.5	13.5	17.0	16.5	12.5	14.5
7	20.0	16.5	18.5	22.0	17.0	19.5	21.0	17.5	19.5	19.0	14.5	16.0
8	17.5	12.5	15.0	22.0	16.0	18.5	22.0	19.0	20.0	19.5	14.5	16.5
9	17.0	13.0	15.0	23.0	16.0	19.0	18.5	15.5	17.0	18.5	14.5	17.0
10	18.5	12.0	15.0	23.5	16.0	19.0	17.5	14.5	16.0	16.0	11.5	13.5
11	19.0	12.0	15.5	21.5	16.5	19.0	19.0	15.0	16.5	13.0	11.5	12.0
12	17.0	13.0	15.0	23.5	18.0	20.0	18.5	14.0	16.0	15.0	13.0	14.0
13	20.0	14.5	17.0	20.0	15.5	18.0	17.5	14.5	16.0	16.5	14.0	15.0
14	23.0	15.5	18.5	21.5	16.5	18.5	19.0	14.0	16.0	15.0	12.5	13.5
15	18.5	14.5	16.5	23.0	16.5	19.5	18.5	13.5	15.5	13.5	12.5	13.0
16	19.5	11.5	15.0	23.5	18.5	20.0	15.0	13.0	13.5	13.0	11.5	12.5
17	19.5	12.0	15.5	22.5	15.5	19.0	14.5	12.5	13.5	12.0	9.5	11.0
18	19.0	14.0	16.5	21.5	17.0	18.5	19.0	13.0	16.0	12.0	10.5	11.5
19	19.0	13.5	16.0	22.0	15.0	18.0	20.0	16.0	18.0	18.0	10.0	12.5
20	18.0	13.0	16.0	19.0	16.5	18.0	20.0	16.5	18.0	17.0	14.5	16.0
21	21.0	14.0	17.0	21.0	15.0	17.5	20.5	16.0	18.0	16.5	14.5	15.0
22	20.5	15.5	17.5	19.5	14.5	17.0	19.5	13.5	16.5	14.0	12.5	13.5
23	22.0	15.0	18.5	20.0	13.0	16.0	18.0	13.5	15.5	12.5	9.5	11.5
24	21.0	16.0	18.5	21.0	13.5	17.0	17.5	14.5	16.0	13.5	11.0	12.0
25	23.0	16.0	19.0	18.0	16.0	17.0	20.0	15.5	17.0	12.5	11.0	11.5
26	23.5	17.0	20.0	19.0	14.5	16.5	18.5	17.0	18.0	11.5	9.0	10.5
27	19.5	15.0	17.0	20.0	13.0	16.0	17.5	16.0	16.5	13.0	9.5	11.5
28	21.5	15.0	17.5	19.0	13.5	16.0	16.0	15.0	15.5	11.0	9.5	10.5
29	17.5	14.5	15.5	21.0	14.0	17.0	20.0	15.0	17.0	13.5	10.0	12.0
30	18.0	12.0	15.0	19.0	14.5	16.5	19.5	17.0	18.0	15.0	12.5	13.5
31	---	---	---	21.5	15.0	17.5	17.5	14.5	15.5	---	---	---
MONTH	23.5	11.5	16.5	23.5	13.0	18.0	22.0	12.5	16.5	20.5	9.0	13.5

TREMPEALEAU RIVER BASIN

05379288 BRUCE VALLEY CREEK NEAR PLEASANTVILLE, WI--CONTINUED

SUSPENDED-SEDIMENT, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DAY	MEAN CONCENTRATION (MG/L)	LOADS (T/DAY)	MEAN CONCENTRATION (MG/L)	LOADS (T/DAY)	MEAN CONCENTRATION (MG/L)	LOADS (T/DAY)	MEAN CONCENTRATION (MG/L)	LOADS (T/DAY)	MEAN CONCENTRATION (MG/L)	LOADS (T/DAY)	MEAN CONCENTRATION (MG/L)	LOADS (T/DAY)	MEAN CONCENTRATION (MG/L)	LOADS (T/DAY)
OCTOBER			NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH			
1	---	.20	75	2.2	19	.31	14	.19	9	.09	14	.13		
2	---	.30	33	.60	18	.28	14	.19	10	.11	14	.13		
3	---	.20	21	.34	17	.27	14	.18	11	.12	14	.14		
4	---	.10	14	.22	16	.26	14	.18	13	.13	14	.14		
5	---	.10	509	32	15	.28	14	.18	14	.14	14	.15		
6	---	.10	57	2.9	14	.25	14	.18	16	.16	14	.14		
7	---	.10	12	.21	13	.29	14	.18	16	.16	14	.14		
8	---	.10	12	.22	12	.21	14	.17	16	.16	14	.14		
9	---	.10	13	.21	11	.19	14	.17	16	.15	14	.14		
10	---	.10	14	.21	11	.20	14	.18	15	.15	14	.15		
11	7	.09	15	.22	10	.18	41	.79	15	.15	14	.14		
12	7	.09	16	.25	10	.15	29	.43	15	.15	14	.14		
13	8	.09	17	.25	10	.14	19	.25	15	.15	14	.14		
14	8	.09	18	.25	10	.14	13	.17	15	.15	14	.14		
15	8	.09	19	.29	10	.14	9	.11	15	.15	17	.20		
16	9	.10	20	.34	10	.14	301	91	15	.15	307	87		
17	9	.10	20	.35	10	.14	73	6.6	14	.14	322	36		
18	9	.11	20	.33	10	.14	28	.61	14	.14	447	121		
19	55	1.3	20	.36	10	.14	24	.39	14	.14	517	209		
20	42	.62	20	.34	10	.14	21	.30	14	.14	264	29		
21	31	.50	39	.91	10	.14	19	.25	14	.18	197	7.0		
22	431	69	72	2.4	10	.14	16	.21	14	.25	145	2.7		
23	72	5.9	29	.78	157	5.7	14	.18	14	.21	126	1.8		
24	39	1.1	28	.64	54	1.1	13	.16	14	.16	109	2.2		
25	29	.58	27	.56	26	.39	12	.14	14	.14	---	6.0		
26	27	.48	25	.50	11	.16	11	.12	14	.14	---	6.0		
27	26	.46	24	.45	11	.15	11	.12	14	.14	---	4.0		
28	24	.42	23	.42	13	.18	10	.11	14	.14	---	3.0		
29	23	.37	22	.38	13	.18	9	.10	14	.14	---	4.0		
30	21	.34	20	.33	13	.18	9	.09	---	---	---	3.0		
31	259	15	---	---	14	.18	8	.08	---	---	---	2.0		
TOTAL	---	98.23	---	49.46	---	12.49	---	104.01	---	4.33	---	525.86		

DAY	MEAN CONCENTRATION (MG/L)	LOADS (T/DAY)	MEAN CONCENTRATION (MG/L)	LOADS (T/DAY)	MEAN CONCENTRATION (MG/L)	LOADS (T/DAY)	MEAN CONCENTRATION (MG/L)	LOADS (T/DAY)	MEAN CONCENTRATION (MG/L)	LOADS (T/DAY)	MEAN CONCENTRATION (MG/L)	LOADS (T/DAY)	MEAN CONCENTRATION (MG/L)	LOADS (T/DAY)
APRIL			MAY		JUNE		JULY		AUGUST		SEPTEMBER			
1	31	.65	25	.40	48	.71	18	.21	3	.02	46	.67		
2	27	.58	21	.30	44	.63	12	.14	3	.02	39	.48		
3	26	.48	18	.25	41	.54	9	.10	3	.02	33	.38		
4	---	60	15	.20	37	.45	10	.11	3	.02	121	5.8		
5	---	48	12	.16	597	53	11	.15	3	.03	14	.19		
6	---	8.0	10	.14	553	61	13	.14	3	.02	7	.08		
7	509	34	8	.11	351	21	14	.15	272	18	7	.08		
8	---	41	7	.09	70	1.4	16	.16	382	57	7	.08		
9	---	6.0	7	.10	46	.69	18	.18	30	.48	69	1.3		
10	32	.71	8	.11	38	.52	22	.21	19	.21	29	.32		
11	33	4.0	9	.15	31	.40	32	.30	19	.20	32	.89		
12	34	6.0	9	.13	26	.31	36	.34	20	.19	207	28		
13	35	.82	10	.16	26	.31	36	.32	20	.19	39	.95		
14	36	.70	10	.15	28	.32	36	.32	20	.18	26	.46		
15	37	.75	11	.15	30	.31	36	.34	20	.17	19	.31		
16	39	.75	12	.16	32	.32	166	3.4	20	.17	15	.26		
17	39	.85	13	.17	34	.34	39	.36	20	.27	14	.21		
18	37	.84	14	.25	603	147	26	.23	20	.25	14	.20		
19	34	.76	15	.24	286	71	19	.17	20	.18	278	141		
20	31	.69	16	.22	39	.81	14	.12	20	.19	410	177		
21	28	.63	17	.24	27	.44	11	.09	77	1.1	469	283		
22	26	.58	18	.25	22	.32	8	.06	12	.11	55	2.6		
23	24	.49	19	.26	17	.24	6	.05	8	.07	48	1.6		
24	22	.41	21	.26	14	.18	5	.04	9	.08	45	1.4		
25	22	.40	22	.28	11	.14	5	.04	10	.09	43	1.3		
26	22	.39	24	.28	9	.11	5	.04	88	1.8	40	1.1		
27	23	.40	25	.29	17	.24	4	.03	108	2.6	38	.95		
28	23	.39	27	.32	185	4.6	4	.03	15	.19	35	.82		
29	24	.40	33	.45	47	.57	4	.03	10	.11	33	.81		
30	24	.42	240	8.6	25	.30	3	.02	263	28	31	.71		
31	---	---	64	1.4	---	---	3	.02	59	1.1	---	---		
TOTAL	---	220.09	---	16.27	---	368.20	---	7.90	---	113.06	---	652.95		

TREMPEALEAU RIVER BASIN

05379305 ELK CREEK NEAR INDEPENDENCE, WI

LOCATION.--Lat 44°23'26", long 91°25'45", in NE 1/4 NE 1/4 sec.14, T.22 N., R.9 W., Trempealeau County, Hydrologic Unit 07040005, on left bank 800 ft (244 m) upstream of bridge on town road, 0.5 mi (0.8 km) downstream from Borst Valley, and 2.3 mi (3.7 km) north of Independence.

DRAINAGE AREA.--99.7 mi² (258 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1979 to September 1980 (discontinued).

GAGE.--Water-stage recorder. Altitude of gage is 790 ft (241 m), from topographic map.

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

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,020 ft³/s (28.9 m³/s) Mar. 19, gage height, 8.73 ft (2.661 m); minimum daily, 43 ft³/s (1.22 m³/s) Aug. 6.

RATING TABLE (gage height, in feet, and discharge, in cubic feet per second).
(Stage-discharge relation affected by ice Dec. 3, 13-21, Dec. 31 to Jan. 16,
Jan. 23 to Feb. 21, Feb. 26 to Mar. 9, Mar. 11-13.)

3.9	38	6.0	326
4.0	45	6.5	428
4.5	95	7.0	541
5.0	159	8.0	800
5.5	236	9.0	1,100

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980												
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	78	116	70	58	50	45	88	70	71	54	45	88
2	84	87	70	58	50	45	80	68	70	53	44	75
3	63	78	70	58	49	48	80	66	61	51	44	70
4	59	74	69	58	48	48	153	64	57	50	45	134
5	58	97	70	58	48	48	232	62	174	61	46	86
6	56	159	70	58	48	47	150	61	297	52	43	71
7	56	100	78	58	47	47	156	59	194	51	127	71
8	56	89	72	58	47	46	199	59	118	49	220	69
9	56	83	68	58	46	46	166	58	92	49	109	77
10	56	79	67	58	46	45	113	59	84	47	72	71
11	57	77	69	82	46	45	109	69	75	47	74	69
12	57	77	65	68	46	45	129	63	70	47	63	341
13	56	76	64	60	45	44	113	63	67	46	60	161
14	55	74	64	58	45	44	93	64	65	46	58	104
15	56	73	64	56	45	44	90	60	61	47	54	94
16	56	76	64	397	45	324	86	58	60	60	53	97
17	55	78	62	460	45	479	86	57	59	50	70	77
18	54	77	62	139	45	455	91	61	65	48	71	80
19	73	77	62	92	45	733	91	64	337	48	60	103
20	68	76	72	81	46	554	90	59	117	47	60	579
21	64	83	64	75	50	230	88	57	82	46	88	833
22	348	116	61	66	57	118	89	54	72	46	62	330
23	390	96	85	62	57	82	78	54	66	46	57	208
24	164	85	77	60	50	76	78	54	63	45	56	174
25	117	80	65	58	45	125	75	53	60	46	58	158
26	99	78	63	58	46	151	73	52	57	47	80	140
27	93	77	62	56	45	134	72	52	56	45	106	123
28	88	75	61	54	45	112	70	53	68	44	79	112
29	80	74	60	52	45	116	70	56	58	47	69	110
30	76	72	59	52	---	118	70	96	56	45	199	103
31	85	---	58	52	---	101	---	86	---	45	135	---
TOTAL	2813	2559	2067	2718	1372	4595	3158	1911	2832	1505	2407	4808
MEAN	90.7	85.3	66.7	87.7	47.3	148	105	61.6	94.4	48.5	77.6	160
MAX	390	159	85	460	57	733	232	96	337	61	220	833
MIN	54	72	58	52	45	44	70	52	56	44	43	69
CFSM	.91	.86	.67	.88	.47	1.48	1.05	.62	.95	.49	.78	1.61
IN.	1.05	.95	.77	1.01	.51	1.71	1.18	.71	1.06	.56	.90	1.79
WTR YR 1980	TOTAL	32745	MEAN	89.5	MAX	833	MIN	43	CFSM	.90	IN	12.22

PERIOD OF RECORD.--October 1979 to September 1980.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: OCTOBER 1979 TO SEPTEMBER 1980.

WATER TEMPERATURES: OCTOBER 1979 TO SEPTEMBER 1980.

SUSPENDED-SEDIMENT DISCHARGE: October 1979 to September 1980.

INSTRUMENTATION.--Water-quality monitor since October 6, 1979. Sediment pumping sampler since October 6, 1979.

REMARKS.--Water-quality monitor inoperative part of year.

COOPERATION.--Chemical analyses by the Wisconsin State Laboratory of Hygiene.

EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum observed, 339 micromhos Sept. 15; minimum observed, 98 micromhos Sept. 21.

WATER TEMPERATURES: Maximum observed, 265°C on several days during winter period.

SUSPENDED-SEDIMENT CONCENTRATIONS: Minimum daily mean, 1,470 mg/l June 6; minimum daily mean, 6 mg/l

Jan. 23, 24. Minimum observed, 3,820 mg/l June 6, minimum observed, 6 mg/l Jan. 23.

SUSPENDED-SEDIMENT DISCHARGE: Maximum daily, 2,000 tons (1,810 tonnes) June 19; minimum daily, 1.0 ton (0.90 tonne) Jan. 23, 24.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	TIME	STREAM- FLOW- INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH FIELD (UNITS)	TEMPER- ATURE, WATER (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION)	ALKA- LINITY (MG/L AS CACO3)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)
OCT , 1979											
22...	0600	163	--	--	--	--	--	--	--	--	--
22...	0630	178	--	--	--	--	--	60	11	158	.21
22...	1630	515	--	--	--	--	--	39	9.6	123	.17
22...	1800	522	--	--	--	--	--	--	--	--	--
23...	1400	339	--	--	--	--	--	--	--	--	--
23...	1430	332	--	--	--	--	--	39	7.6	127	.17
24...	1545	141	--	--	--	--	--	58	7.6	136	.19
24...	1615	139	--	--	--	--	--	--	--	--	--
NOV											
15...	1630	74	--	--	--	--	--	77	5.8	149	.20
MAR , 1980											
04...	1100	48	225	7.7	1.0	10.1	73	85	6.0	190	.26
22...	0930	111	210	--	1.0	--	--	--	--	--	--

[illegible]

TREMPEALEAU RIVER BASIN
05379305 ELK CREEK NEAR INDEPENDENCE, WI--CONTINUED

WATER-QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	ALKA- LITY (MG/L AS CACO3)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	SOLIDS, RESIDUE AT 105 DEG. C, DIS- SOLVED (MG/L)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N)	PHOS- PHORUS, OSPHATE TOTAL (MG/L AS P)	PHOS- PHORUS, ORTHOPH OSPHATE DISSOL. (MG/L AS P)
JAN , 1980										
16...	1030	97	78	10	174	1.8	1.800	--	1.160	.430
16...	1445	420	--	--	--	2.0	3.000	--	3.420	.900
16...	1615	885	52	19	194	--	--	--	--	--
16...	2000	856	--	--	--	1.1	2.100	--	2.680	.710
16...	2045	851	39	10	146	--	--	--	--	--
17...	0245	831	--	--	--	1.1	1.500	--	2.160	.580
17...	0315	794	32	8.0	120	--	--	--	--	--
17...	0945	456	--	--	--	.98	1.400	--	1.760	.540
17...	1015	436	38	9.0	128	--	--	--	--	--
18...	1336	345	59	11	152	1.2	1.200	--	.740	.340
MAR										
16...	2115	865	--	--	--	.05	1.100	--	2.300	.800
17...	0015	814	--	--	--	.05	1.200	--	1.760	.640
20...	0915	419	--	--	--	.10	2.000	--	1.460	.380
APR										
04...	2000	341	--	--	--	<.02	.020	--	2.400	--
04...	2200	415	--	--	--	1.4	.790	--	5.400	--
04...	2400	415	--	--	--	1.4	.990	--	4.000	--
05...	0200	381	--	--	--	1.2	1.000	--	3.500	--
07...	1400	124	--	--	--	1.2	.530	--	.660	--
MAY										
01...	--	70	82	4.0	166	1.3	.020	--	.280	.131
30...	1150	125	44	8.0	168	1.3	.360	4.0	1.980	--
JUN										
05...	1130	194	59	6.0	--	--	--	--	--	.210
05...	1300	234	--	--	--	1.7	.210	7.7	3.800	--
05...	2315	292	--	--	--	1.4	.310	12	6.200	--
06...	0215	454	--	--	--	1.6	.370	12	6.400	--
06...	0345	476	39	4.0	140	--	--	--	.360	--
06...	1030	347	--	--	--	1.5	.090	6.0	3.400	--
06...	2230	154	--	--	--	1.0	.030	2.6	1.210	--
06...	2359	145	57	4.0	132	--	--	--	--	.210
07...	0715	159	--	--	--	1.1	.030	6.8	4.000	--
07...	1145	255	56	6.0	--	--	--	--	--	.320
07...	1315	250	--	--	--	1.9	.260	12	5.500	--
08...	--	--	--	--	--	--	--	1.6	--	--
08...	0345	137	--	--	--	1.2	.090	2.1	1.070	--
08...	0515	129	71	4.0	164	--	--	--	--	.210
08...	0830	121	--	--	--	1.3	.100	1.3	.700	.182
08...	1030	117	--	--	--	--	--	6.0	--	--
JUL										
11...	--	--	--	--	--	<.02	.120	--	.140	--
11...	1100	46	92	5.0	198	1.6	.050	.60	.470	--

TREMPEALEAU RIVER BASIN

05379305 ELK CREEK NEAR INDEPENDENCE, WI--CONTINUED

WATER-QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	ALKA- LITY (MG/L AS CaCO3)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, RESIDUE AT 105 DEG. C, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)	SOLIDS, DIS- SOLVED (TONS PER DAY)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N)	PHOS- PHORUS, TOTAL (MG/L AS P)
AUG , 1980											
07...	0945	142	56	8.0	--	144	--	--	--	--	--
07...	1115	154	--	--	--	--	--	--	1.5	.270	3.600
07...	1415	172	--	--	--	--	--	--	1.4	.200	3.100
07...	1715	178	--	--	--	--	--	--	1.4	.160	2.900
07...	2315	122	--	--	--	--	--	--	1.2	.110	1.870
08...	0400	110	--	--	--	--	--	--	.94	.090	1.700
08...	0530	137	44	4.0	--	130	--	--	.88	.210	3.700
08...	1000	324	--	--	--	--	--	--	.78	.190	3.200
08...	1300	326	--	--	--	--	--	--	.86	.090	1.830
08...	1430	312	36	4.0	--	124	--	--	--	--	--
08...	1900	239	--	--	--	--	--	--	.63	.060	1.100
09...	0830	120	52	5.0	--	144	--	--	.84	.070	.740
09...	1000	115	--	--	--	--	--	--	--	--	--
09...	1411	94	--	--	--	--	--	--	.95	.650	--
09...	1413	94	66	5.0	--	162	--	--	1.1	.300	3.500
30...	0745	99	--	--	--	--	--	--	1.0	.080	2.300
30...	1130	218	--	--	--	--	--	--	--	--	--
30...	1730	324	--	--	--	--	--	--	.95	.040	1.380
30...	1900	330	53	4.0	145	--	.20	129	--	--	--
30...	2330	243	--	--	--	--	--	--	.95	.040	1.380
31...	0700	153	64	4.0	145	--	.20	59.9	--	--	--
31...	1430	116	--	--	--	--	--	--	.87	.030	.770
SEP											
04...	0630	116	--	--	--	--	--	--	1.2	.040	1.680
04...	0930	169	--	--	--	--	--	--	1.1	.050	1.780
04...	1230	182	--	--	--	--	--	--	1.0	.070	1.800
04...	1400	184	64	4.0	145	--	.20	72.0	--	--	--
04...	1530	175	--	--	--	--	--	--	.88	.030	1.360
04...	2130	119	--	--	--	--	--	--	.89	.030	1.050
12...	0315	182	--	--	--	--	--	--	1.1	.200	1.680
12...	0615	296	--	--	--	--	--	--	1.0	.330	2.500
12...	1100	443	--	--	--	--	--	--	.97	.222	2.100
12...	1400	492	--	--	--	--	--	--	.93	.190	1.760
12...	2000	349	--	--	--	--	--	--	1.0	.080	1.150
13...	0800	175	--	--	--	--	--	--	.90	.060	.850
14...	0430	110	--	--	--	--	--	--	1.2	<.020	.550
18...	1540	79	--	--	--	--	--	--	1.5	.060	.460
18...	2130	78	--	--	--	--	--	--	1.2	.040	2.200
20...	0030	557	--	--	--	--	--	--	1.1	.250	5.200
20...	0330	802	--	--	--	--	--	--	1.0	.100	3.500
20...	0500	802	29	4.0	160	--	.22	346	--	--	--
20...	0630	780	--	--	--	--	--	--	1.0	.070	2.500
20...	1230	529	--	--	--	--	--	--	1.0	.060	1.440
20...	2130	332	--	--	--	--	--	--	.84	.040	1.560
21...	0030	766	--	--	--	--	--	--	.76	.190	3.700
21...	0330	903	--	--	--	--	--	--	.80	.190	2.900
21...	0630	942	--	--	--	--	--	--	.84	.140	2.200
21...	0930	948	--	--	--	--	--	--	.77	.110	1.600
21...	1100	954	32	<2.0	145	--	.20	373	--	--	--
21...	1145	954	--	--	--	--	--	--	.82	.110	1.240
21...	1330	924	--	--	--	--	--	--	.84	.110	1.310
21...	2000	701	--	--	--	--	--	--	.83	.080	1.310
22...	0500	406	--	--	--	--	--	--	.96	.060	--
22...	1100	324	--	--	--	--	--	--	1.0	.080	.850
22...	1230	307	60	3.0	175	--	.24	145	--	--	--
22...	1415	301	--	--	--	--	--	--	1.0	.080	.750
23...	1055	219	75	4.0	185	--	.25	109	1.3	.100	2.020
24...	0900	176	--	--	--	--	--	--	1.5	.090	.440

TREMPEALEAU RIVER BASIN

05379305 ELK CREEK NEAR INDEPENDENCE, WI--CONTINUED

WATER-QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	ARSENIC TOTAL (UG/L AS AS)	CADMIUM TOTAL RECOV- ERABLE (UG/L AS CD)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU)	LEAD, TOTAL RECOV- ERABLE (UG/L AS PB)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN)
SEP , 1980							
26...	1100	139	<10	0	4	<3	40

PARTICLE-SIZE DISTRIBUTION OF SUSPENDED SEDIMENT

DATE	TIME	SEDI- MENT, SUS- PENDED (MG/L)	SED. SUSP. FALL DIAM. % FINER THAN .002 MM	SED. SUSP. FALL DIAM. % FINER THAN .004 MM	SED. SUSP. FALL DIAM. % FINER THAN .008 MM	SED. SUSP. FALL DIAM. % FINER THAN .016 MM	SED. SUSP. FALL DIAM. % FINER THAN .031 MM	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM	SED. SUSP. SIEVE DIAM. % FINER THAN .125 MM	SED. SUSP. SIEVE DIAM. % FINER THAN .250 MM	SED. SUSP. SIEVE DIAM. % FINER THAN .500 MM	SED. SUSP. SIEVE DIAM. % FINER THAN 1.00 MM
AUG , 1980												
08...	1710	431	29	38	50	64	81	91	96	99	100	--
SEP												
21...	1850	316	--	--	--	--	--	71	76	86	99	100

PARTICLE-SIZE DISTRIBUTION OF SURFACE BED MATERIAL

DATE	TIME	BED MAT. SIEVE DIAM. % FINER THAN .062 MM	BED MAT. SIEVE DIAM. % FINER THAN .125 MM	BED MAT. SIEVE DIAM. % FINER THAN .250 MM	BED MAT. SIEVE DIAM. % FINER THAN .500 MM	BED MAT. SIEVE DIAM. % FINER THAN 1.00 MM	BED MAT. SIEVE DIAM. % FINER THAN 2.00 MM	BED MAT. SIEVE DIAM. % FINER THAN 4.00 MM	BED MAT. SIEVE DIAM. % FINER THAN 8.00 MM
AUG , 1980									
08...	1710	1	3	17	75	98	99	100	--
SEP									
21...	1850	4	6	30	80	98	99	99	100

TREMPEALEAU RIVER BASIN

05379305 ELK CREEK NEAR INDEPENDENCE, WI--CONTINUED

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DAY	MAX	MIN OCTOBER	MEAN	MAX	MIN NOVEMBER	MEAN	MAX	MIN DECEMBER	MEAN	MAX	MIN JANUARY	MEAN
1				---	---	---	234	225	229	---	---	---
2				---	---	---	254	218	236	---	---	---
3				---	---	---	240	214	229	---	---	---
4				---	---	---	233	229	231	---	---	---
5				---	---	---	237	225	231	---	---	---
6				---	---	---	227	223	225	---	---	---
7				---	---	---	225	212	217	---	---	---
8				---	---	---	229	216	223	---	---	---
9				---	---	---	230	228	229	---	---	---
10				---	---	---	232	228	231	---	---	---
11				---	---	---	231	218	224	---	---	---
12				---	---	---	256	221	236	---	---	---
13				---	---	---	242	217	232	---	---	---
14				---	---	---	238	216	229	---	---	---
15				237	224	236	232	220	230	---	---	---
16				236	230	233	231	225	229	264	140	202
17				231	226	227	---	---	---	138	117	125
18				228	224	226	---	---	---	166	140	154
19				226	221	224	---	---	---	175	166	172
20				223	221	222	---	---	---	179	172	176
21				229	211	218	---	---	---	180	175	177
22				212	199	205	---	---	---	179	174	177
23				212	207	209	---	---	---	198	178	186
24				217	214	216	---	---	---	181	168	174
25				224	219	222	---	---	---	176	169	170
26				225	220	223	---	---	---	185	178	182
27				225	221	223	---	---	---	---	---	---
28				231	217	224	---	---	---	---	---	---
29				224	221	222	---	---	---	---	---	---
30				229	223	225	---	---	---	---	---	---
31				---	---	---	---	---	---	---	---	---
MONTH				237	199	222	256	212	229	264	117	172

DAY	MAX	MIN FEBRUARY	MEAN	MAX	MIN MARCH	MEAN	MAX	MIN APRIL	MEAN	MAX	MIN MAY	MEAN
1				---	---	---	203	184	193	234	229	231
2				---	---	---	232	175	199	252	209	233
3				---	---	---	198	176	185	236	230	233
4				232	207	227	219	169	198	241	232	236
5				254	226	233	170	145	157	241	236	238
6				256	233	242	187	134	163	241	235	238
7				269	202	238	189	175	181	236	233	235
8				234	191	210	201	177	188	234	231	232
9				214	200	207	193	181	187	237	229	233
10				212	207	209	210	194	203	234	228	232
11				249	195	216	215	207	211	234	225	229
12				228	202	214	207	184	194	235	227	231
13				215	209	214	200	180	190	233	223	228
14				227	217	220	210	202	206	228	221	225
15				231	221	224	211	206	209	234	225	229
16				296	198	239	210	203	207	232	228	230
17				260	169	212	211	207	209	230	228	229
18				272	177	224	211	201	207	228	221	225
19				214	161	185	210	203	207	230	219	224
20				197	164	181	212	204	208	234	224	229
21				199	169	188	215	208	212	235	221	230
22				222	194	207	218	212	215	224	219	222
23				238	222	232	219	213	216	225	220	223
24				245	218	239	219	214	216	229	223	224
25				224	192	210	221	218	220	230	223	226
26				209	178	191	223	219	221	227	222	225
27				202	173	187	227	223	224	229	221	224
28				206	192	198	227	223	225	230	221	225
29				206	183	194	228	227	227	226	213	220
30				199	171	185	230	228	229	217	186	198
31				201	177	188	---	---	---	194	183	191
MONTH				296	161	211	232	134	204	252	183	227

TREMPEALEAU RIVER BASIN

05379305 ELK CREEK NEAR INDEPENDENCE, WI--CONTINUED

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DAY	MAX	MIN JUNE	MEAN	MAX	MIN JULY	MEAN	MAX	MIN AUGUST	MEAN	MAX	MIN SEPTEMBER	MEAN
1	215	126	198	249	242	245	233	229	231	246	218	237
2	212	193	205	251	242	247	237	230	233	252	245	249
3	237	227	231	252	245	248	237	232	235	285	235	253
4	250	217	235	253	244	249	238	230	234	299	210	232
5	230	141	185	250	232	241	238	230	236	313	204	237
6	185	136	161	256	247	252	244	220	240	297	213	227
7	207	176	191	258	253	256	224	162	193	325	194	278
8	228	196	218	260	254	257	176	127	150	312	235	282
9	232	225	230	261	256	258	209	152	181	257	225	244
10	235	229	232	264	257	260	222	200	216	246	232	242
11	235	230	233	262	259	260	223	184	216	245	231	241
12	233	230	231	254	248	252	230	223	227	232	103	181
13	233	227	230	243	238	240	228	226	227	---	---	---
14	231	225	228	232	229	231	234	227	231	309	223	236
15	229	224	227	226	217	222	233	197	219	339	222	275
16	231	224	227	228	206	216	234	192	214	291	226	246
17	230	223	227	231	221	227	233	188	210	246	234	240
18	230	194	223	232	227	229	228	216	223	251	216	232
19	160	129	142	234	228	231	231	226	228	239	130	222
20	216	156	191	233	228	231	235	224	231	149	113	131
21	235	219	229	235	231	233	232	212	222	137	98	112
22	243	237	240	238	233	235	239	229	234	210	138	180
23	246	242	243	242	225	231	247	220	236	231	213	224
24	245	242	244	236	229	232	240	233	238	236	233	235
25	247	243	245	232	224	228	239	230	235	237	229	233
26	248	242	245	228	223	226	252	228	241	239	232	236
27	245	226	241	230	224	228	252	234	241	242	239	241
28	237	217	229	229	224	227	242	237	240	241	237	239
29	243	236	240	230	218	225	248	241	244	238	233	235
30	245	240	242	230	227	228	246	174	206	238	236	237
31	---	---	---	234	226	229	327	181	220	---	---	---
MONTH	250	126	221	264	206	238	327	127	224	339	98	230

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

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

TREMPEALEAU RIVER BASIN

05379305 ELK CREEK NEAR INDEPENDENCE, WI--CONTINUED

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DAY	MAX	MIN FEBRUARY	MEAN	MAX	MIN MARCH	MEAN	MAX	MIN APRIL	MEAN	MAX	MIN MAY	MEAN
1				---	---	---	7.5	3.5	5.5	20.0	10.0	14.5
2				---	---	---	12.0	3.5	7.0	20.5	12.0	16.5
3				---	---	---	8.0	2.5	4.5	21.0	10.5	15.5
4				2.5	.0	1.0	10.0	1.5	5.0	20.5	11.0	15.5
5				2.5	.0	.5	8.0	.5	4.0	19.5	11.5	15.5
6				.0	.0	.0	9.0	4.5	6.5	17.0	9.5	13.0
7				.0	.0	.0	8.5	6.0	7.0	10.0	7.0	9.0
8				1.5	.0	.0	7.0	3.5	5.5	13.0	6.5	9.5
9				3.0	.0	.5	3.5	.5	2.0	17.5	7.5	12.0
10				3.5	.0	1.0	7.0	2.0	4.0	12.0	10.0	11.0
11				1.0	.0	.0	9.0	2.5	5.5	16.0	8.0	11.5
12				3.5	.0	1.0	8.0	3.5	5.5	17.0	8.5	12.5
13				4.5	.0	1.5	5.5	3.5	4.5	13.0	9.5	10.5
14				6.5	.0	2.5	7.0	3.0	4.5	13.5	8.5	11.0
15				7.5	.0	3.5	10.5	4.0	6.5	19.0	8.0	13.0
16				4.0	.0	1.5	12.5	4.5	8.0	15.5	9.0	12.5
17				1.5	.0	.5	15.0	7.5	11.0	12.5	11.0	11.5
18				2.5	.0	1.0	16.0	7.5	11.5	13.0	10.5	11.5
19				2.5	.5	1.0	17.0	9.0	12.5	20.0	10.5	15.0
20				4.0	.5	1.5	17.0	8.5	12.5	22.0	11.5	16.5
21				4.0	.0	1.5	19.0	10.0	13.5	23.0	12.0	17.0
22				2.0	.0	1.0	19.5	11.5	15.0	23.5	13.0	18.0
23				5.0	1.0	3.0	17.0	9.5	13.0	23.5	13.0	18.0
24				7.0	2.0	4.0	13.5	6.0	10.0	24.0	14.0	18.5
25				7.0	1.0	3.5	13.5	8.0	10.0	24.5	14.5	19.0
26				7.0	1.0	4.0	11.5	6.5	9.0	22.5	14.5	18.0
27				5.0	2.5	3.5	17.0	8.0	11.0	24.0	14.0	18.5
28				5.5	3.0	4.0	16.0	7.5	11.5	26.0	15.5	20.5
29				9.0	.0	5.0	13.5	9.5	11.0	22.0	17.0	19.0
30				9.0	.0	5.5	17.0	9.5	12.0	20.0	16.5	18.0
31				10.0	3.5	6.5	---	---	---	22.0	15.5	18.5
MONTH				10.0	.0	2.0	19.5	.5	8.5	26.0	6.5	15.0

DAY	MAX	MIN JUNE	MEAN	MAX	MIN JULY	MEAN	MAX	MIN AUGUST	MEAN	MAX	MIN SEPTEMBER	MEAN
1	19.5	15.0	17.0	24.0	15.0	19.0	24.5	16.5	20.5	19.0	15.5	16.5
2	18.0	14.0	16.0	24.0	14.0	18.5	23.0	17.0	19.5	19.0	13.5	16.0
3	23.5	13.0	17.5	23.5	14.0	18.5	24.5	15.0	19.0	22.0	14.0	17.5
4	22.0	14.0	17.5	24.0	16.0	19.5	19.0	16.5	18.0	20.0	17.0	18.5
5	17.0	15.0	16.0	24.0	17.0	20.0	24.0	14.5	18.5	20.0	14.0	17.0
6	20.0	16.0	18.0	24.0	15.0	19.5	24.0	15.0	19.5	19.0	13.0	16.0
7	19.0	16.0	18.0	25.0	18.0	21.5	20.5	18.0	19.5	21.0	15.0	17.5
8	18.0	13.0	15.5	24.5	16.5	20.5	21.5	19.0	20.0	21.5	15.0	18.0
9	17.5	12.5	15.0	25.5	17.0	21.0	20.5	17.5	19.5	19.5	15.5	17.5
10	19.5	11.5	15.0	26.5	17.0	21.5	19.5	16.0	17.5	18.5	12.0	15.0
11	20.5	11.0	15.5	24.5	18.0	21.5	22.0	16.5	18.5	14.0	11.5	12.5
12	18.0	12.5	15.5	26.5	19.5	22.0	22.0	15.0	18.0	15.0	12.5	14.0
13	20.5	14.5	17.5	23.5	16.5	20.0	19.5	16.0	17.5	17.0	15.0	16.0
14	24.5	15.5	19.5	25.0	19.0	21.0	22.0	15.0	18.0	15.5	13.0	14.0
15	19.5	15.0	17.0	26.5	18.0	22.0	22.0	14.0	17.5	14.5	12.5	13.5
16	21.5	11.5	16.0	25.5	18.0	21.0	16.5	13.5	14.5	13.5	11.5	13.0
17	22.0	12.0	17.0	25.5	16.5	21.0	16.0	13.0	14.5	13.5	9.0	11.0
18	22.0	14.5	17.5	23.5	18.0	20.5	22.5	13.0	17.5	13.0	11.0	12.0
19	17.5	14.0	16.0	25.5	16.5	20.5	24.5	16.5	20.0	17.5	9.5	13.0
20	19.5	15.0	17.0	21.5	18.0	19.5	22.5	18.0	19.5	17.0	15.5	16.5
21	22.5	14.5	18.0	24.0	16.0	19.5	23.0	17.5	19.5	16.5	15.0	15.5
22	22.5	16.0	19.0	23.5	16.0	19.0	23.0	14.5	18.5	15.0	12.5	14.0
23	24.0	15.5	19.5	24.0	13.5	18.5	19.5	14.5	17.5	13.5	10.5	12.0
24	22.5	16.0	19.5	25.0	14.5	19.5	19.5	15.5	17.5	14.5	11.0	12.5
25	24.5	16.0	20.0	20.5	18.0	19.0	22.0	16.0	18.5	12.5	11.0	11.5
26	26.0	18.0	21.5	22.0	15.5	18.0	19.0	17.5	18.0	12.0	9.0	10.5
27	19.5	16.0	17.0	24.0	13.5	18.5	17.5	16.0	17.0	14.5	9.5	11.5
28	23.5	14.0	18.0	23.0	15.0	18.5	17.5	15.5	16.5	11.5	9.5	10.5
29	17.5	14.5	16.0	25.0	15.5	20.0	22.5	15.5	18.5	15.0	9.5	12.5
30	20.5	12.0	16.5	23.0	16.5	19.5	19.0	17.0	18.0	16.5	12.5	14.0
31	---	---	---	25.5	16.5	20.5	18.0	16.0	17.0	---	---	---
MONTH	26.0	11.0	17.5	26.5	13.5	20.0	24.5	13.0	18.0	22.0	9.0	14.5

TREMPEALEAU RIVER BASIN

05379305 ELK CREEK NEAR INDEPENDENCE, WI--CONTINUED

SUSPENDED-SEDIMENT, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DAY	MEAN CONCENTRATION (MG/L)	LOADS (T/DAY)	MEAN CONCENTRATION (MG/L)	LOADS (T/DAY)	MEAN CONCENTRATION (MG/L)	LOADS (T/DAY)	MEAN CONCENTRATION (MG/L)	LOADS (T/DAY)	MEAN CONCENTRATION (MG/L)	LOADS (T/DAY)	MEAN CONCENTRATION (MG/L)	LOADS (T/DAY)
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	---	5.0	337	113	19	3.6	40	6.3	13	1.8	29	3.5
2	---	6.4	85	20	20	3.8	47	7.4	15	2.0	27	3.3
3	---	3.1	46	9.6	21	4.5	46	7.2	17	2.2	25	3.2
4	---	2.6	44	8.7	23	4.2	45	7.0	19	2.5	24	3.1
5	---	2.5	86	28	24	4.5	43	6.7	22	2.8	22	2.8
6	---	2.4	153	68	24	4.5	42	6.6	25	3.2	21	2.7
7	16	2.4	65	18	24	5.0	41	6.4	25	3.2	21	2.7
8	16	2.4	48	12	24	4.6	39	6.1	23	2.9	20	2.5
9	16	2.4	45	10	24	4.4	37	5.8	22	2.7	20	2.5
10	16	2.4	42	8.9	24	4.3	36	5.6	20	2.5	19	2.3
11	15	2.3	39	8.1	24	4.5	35	7.8	19	2.4	19	2.3
12	12	1.9	36	7.5	25	4.3	35	6.4	18	2.2	18	2.2
13	13	2.0	34	6.9	25	4.3	35	5.7	17	2.1	17	2.0
14	13	1.9	31	6.3	26	4.5	35	5.5	16	1.9	16	1.9
15	14	2.1	29	5.8	26	4.5	---	5.3	15	1.8	15	1.8
16	14	2.1	29	5.9	27	4.7	251	515	19	2.3	331	638
17	14	2.2	29	6.1	28	4.7	201	313	23	2.8	464	696
18	15	2.2	28	5.8	28	4.7	77	30	28	3.4	591	1130
19	45	9.5	28	5.8	29	4.8	34	8.6	35	4.2	784	1850
20	40	7.4	28	5.8	27	5.2	16	3.5	42	5.2	675	1110
21	26	4.4	43	10	25	4.4	11	2.3	42	5.7	354	237
22	404	414	80	25	23	3.7	8	1.5	40	6.1	140	48
23	157	180	57	15	21	4.7	6	1.0	39	6.0	63	14
24	80	37	45	10	19	4.0	6	1.0	37	5.0	51	11
25	62	20	35	7.4	18	3.1	7	1.1	36	4.4	95	39
26	60	16	27	5.7	16	2.8	8	1.2	35	4.4	195	90
27	57	14	21	4.3	18	3.1	8	1.2	33	4.0	290	115
28	55	13	17	3.3	22	3.5	9	1.3	32	3.9	134	43
29	53	11	17	3.4	25	4.1	9	1.3	30	3.6	120	42
30	51	10	18	3.5	29	4.7	10	1.4	---	---	169	59
31	80	22	---	---	34	5.6	11	1.5	---	---	106	30
TOTAL	---	806.6	---	447.8	---	133.3	---	980.7	---	97.2	---	6190.8

DAY	MEAN CONCENTRATION (MG/L)	LOADS (T/DAY)	MEAN CONCENTRATION (MG/L)	LOADS (T/DAY)	MEAN CONCENTRATION (MG/L)	LOADS (T/DAY)	MEAN CONCENTRATION (MG/L)	LOADS (T/DAY)	MEAN CONCENTRATION (MG/L)	LOADS (T/DAY)	MEAN CONCENTRATION (MG/L)	LOADS (T/DAY)
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	73	17	60	12	129	28	34	5.0	37	4.4	55	13
2	63	14	58	10	122	23	34	4.9	36	4.3	45	9.2
3	55	12	49	8.7	69	11	34	4.7	35	4.2	43	8.2
4	437	431	36	6.3	60	9.3	35	4.7	35	4.1	174	72
5	707	524	27	4.5	664	444	35	5.7	34	4.2	105	25
6	268	113	20	3.3	1470	1500	36	5.0	33	3.8	77	15
7	256	123	15	2.4	696	404	36	4.9	389	161	55	11
8	287	165	11	1.8	175	59	37	4.9	551	370	41	7.6
9	237	113	12	1.9	67	17	37	4.9	144	46	57	12
10	96	29	13	2.1	43	9.7	40	5.1	70	14	66	13
11	82	24	14	2.6	36	7.2	52	6.6	83	17	57	11
12	102	36	15	2.6	30	5.7	54	6.8	60	10	351	338
13	96	30	16	2.8	29	5.3	54	6.7	51	8.2	95	44
14	72	18	18	3.0	30	5.2	54	6.7	44	6.9	70	20
15	68	17	19	3.1	30	5.0	54	6.8	42	6.2	63	16
16	65	15	21	3.2	31	4.9	100	16	41	5.9	57	15
17	62	14	22	3.3	31	5.0	70	9.4	40	7.6	51	11
18	63	16	22	3.7	82	31	65	8.4	39	7.5	45	9.8
19	66	16	23	4.0	---	2000	56	7.2	38	6.2	182	151
20	69	17	24	3.8	162	55	50	6.3	39	6.3	575	1010
21	72	17	24	3.8	57	13	48	6.0	86	20	455	1060
22	75	18	25	3.7	37	7.2	44	5.5	59	9.9	139	128
23	78	16	26	3.8	36	6.4	33	4.1	46	7.1	88	50
24	80	17	29	4.3	35	6.0	32	3.8	44	6.7	64	30
25	77	16	33	4.8	35	5.6	33	4.0	43	6.8	53	22
26	74	15	38	5.4	34	5.3	33	4.3	88	21	47	18
27	71	14	44	6.0	33	5.0	34	4.2	128	36	42	14
28	68	13	50	7.2	33	6.1	35	4.2	73	15	37	11
29	65	12	56	8.5	33	5.2	36	4.5	54	10	33	9.9
30	62	12	217	64	33	5.1	37	4.5	343	227	30	8.1
31	---	---	121	29	---	---	38	4.6	116	46	---	---
TOTAL	---	1894	---	225.6	---	4694.2	---	180.4	---	1103.3	---	3162.8

TREMPEALEAU RIVER BASIN

05379500 TREMPEALEAU RIVER AT DODGE, WI

LOCATION.--Lat 44°07'55", long 91°33'14", in SE 1/4 sec.10, T.19 N., R.10 W., Trempealeau County, Hydrologic Unit 07040005, near left bank on downstream side of highway bridge in Dodge, 9.0 mi (14.5 km) upstream from mouth.

DRAINAGE AREA.--643 mi² (1,665 km²).

PERIOD OF RECORD.--December 1913 to September 1919, April 1934 to current year.

REVISED RECORDS.--WSP 1238: Drainage area. WSP 1388: 1919(M). WSP 1438: 1914, 1915-18(M), 1934-44(M), 1946-49(M).

GAGE.--Water-stage recorder. Datum of gage is 661.42 ft (201.601 m) National Geodetic Vertical Datum of 1929. Prior to July 14, 1977, nonrecording gage at same site and datum. Prior to Oct. 1, 1966, datum 2.00 ft (0.610 m) higher.

REMARKS.--Records are good, except those for winter period, which are fair. Gage-height telemeter at station.

AVERAGE DISCHARGE.--51 years (1914-19, 1934-80), 412 ft³/s (11.67 m³/s), 8.70 in/yr (221 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 17,400 ft³/s (493 m³/s) Apr. 4, 1956, gage height, 10.35 ft (3.155 m); minimum daily, 98 ft³/s (2.78 m³/s) Jan. 10, 1938.

EXTREMES FOR CURRENT YEAR.--Peak discharge above base of 1,300 ft³/s (36.8 m³/s) and maximum (*):

DATE	TIME	DISCHARGE (ft ³ /s) (m ³ /s)	GAGE HEIGHT (ft) (m)	DATE	TIME	DISCHARGE (ft ³ /s) (m ³ /s)	GAGE HEIGHT (ft) (m)
Oct. 25	0500	1,580	44.7	May 30	1900	1,590	45.0
Mar. 20	2400	*4,430	125	Sept. 7	0500	1,860	52.7
				Sept. 24	0100	4,110	116
							*10.13
							3.088

minimum discharge, 243 ft³/s (6.88 m³/s) Aug. 2, gage height 2.41 ft (0.735 m), but may have been less during period of ice effect.

RATING TABLE (gage height, in feet, and discharge, in cubic feet per second).
(Shifting-control method used Oct. 1-22, Oct. 27 to Nov. 22, Sept. 22-26;
stage-discharge relation affected by ice Nov. 7 to Mar. 19.)

2.3	224	6.0	1,240
2.5	258	7.0	1,650
3.0	355	8.0	2,170
4.0	595	9.0	2,910
5.0	885	10.0	4,200

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DAY	MEAN VALUES											
	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	297	518	420	330	280	300	582	398	1040	311	249	849
2	353	525	410	320	280	290	537	393	995	304	249	688
3	353	486	410	320	270	280	525	383	912	298	254	556
4	332	458	420	310	270	280	570	373	673	292	254	581
5	316	465	420	310	260	280	876	367	571	290	259	642
6	308	605	440	300	260	270	957	357	1080	305	252	539
7	305	704	420	290	260	270	800	350	1110	300	372	1540
8	306	603	410	280	260	270	842	345	1000	288	877	1130
9	304	546	400	280	260	270	1040	339	805	282	934	585
10	304	501	430	270	260	270	1040	339	616	273	697	512
11	312	477	400	270	270	270	878	360	515	274	575	512
12	311	460	390	280	270	270	754	368	464	267	490	702
13	305	455	380	290	270	280	719	367	432	265	425	1050
14	302	447	370	310	270	310	655	361	403	263	388	1040
15	300	438	390	340	270	360	587	356	390	268	357	819
16	299	433	370	380	280	600	552	340	370	286	342	682
17	298	437	370	800	290	1000	531	331	356	281	379	582
18	299	440	360	880	280	1900	517	329	348	274	410	527
19	320	433	370	700	290	2200	530	337	532	271	412	498
20	346	432	380	520	310	3940	531	339	704	276	407	862
21	360	441	390	420	360	3730	527	325	565	273	553	1640
22	662	460	400	380	400	2530	520	313	473	270	477	2500
23	1280	520	390	350	480	1260	502	303	396	264	415	3510
24	1450	540	380	320	460	716	482	295	366	258	371	3510
25	1480	520	370	300	440	623	456	288	348	263	377	2580
26	921	480	360	290	400	751	437	279	335	283	421	1670
27	636	450	350	280	350	804	425	275	324	272	726	1050
28	545	440	340	270	320	763	413	316	329	266	804	829
29	507	430	340	270	310	682	407	327	329	258	758	755
30	479	420	330	280	---	661	403	857	323	255	690	705
31	469	---	340	280	---	632	---	1180	---	256	842	---
TOTAL	15059	14564	11940	11220	8980	27062	18595	11890	17104	8586	15016	33645
MEAN	486	485	385	362	310	873	620	384	570	277	484	1122
MAX	1480	704	440	880	480	3940	1040	1180	1110	311	934	3510
MIN	297	420	330	270	260	270	403	275	323	255	249	498
CFSM	.76	.75	.60	.56	.48	1.36	.96	.60	.89	.43	.75	1.75
IN.	.87	.84	.69	.65	.52	1.57	1.08	.69	.99	.50	.87	1.95

CAL YR 1979 TOTAL 178720 MEAN 490 MAX 1590 MIN 240 CFSM .76 IN 10.34
WTR YR 1980 TOTAL 193661 MEAN 529 MAX 3940 MIN 249 CFSM .82 IN 11.20

BLACK RIVER BASIN

05381000 BLACK RIVER AT NEILLSVILLE, WI

LOCATION.--Lat 44°33'34", long 90°36'52", in sec.15, T.24 N., R.2 W., Clark County, Hydrologic Unit 07040007, on right bank at downstream side of bridge on U.S. Highway 10 in Neillsville, 1.0 mi (1.6 km) downstream from O'Neill Creek, and 2.6 mi (4.2 km) upstream from Cunningham Creek.

DRAINAGE AREA.--756 mi² (1,958 km²).

PERIOD OF RECORD.--April 1905 to March 1909, October 1913 to current year. Monthly discharge only for some periods, published in WSP 1308.

REVISED RECORDS.--WSP 805: Drainage area. WSP 1308: 1914. WSP 1438: 1905, 1906-8(M), 1914-17(M), 1918-19, 1920-25(M), 1926-27, 1928-29(M), 1930, 1931(M), 1932, 1933(M), 1934, 1935(M), 1936. WSP 1508: 1950.

GAGE.--Water-stage recorder. Datum of gage is 962.34 ft (293.321 m) National Geodetic Vertical Datum of 1929. Prior to Oct. 24, 1934, nonrecording gage; Oct. 24, 1934, to June 16, 1977, water-stage recorder; June 17, 1977, to Nov. 19, 1977, nonrecording gage at site 150 ft (46 m) downstream at datum 1.58 ft (0.482 m) lower.

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

AVERAGE DISCHARGE.--70 years (1905-8, 1913-80), 587 ft³/s (16.62 m³/s), 10.54 in/yr (268 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 48,800 ft³/s (1,380 m³/s) Sept. 10, 1938, gage height, 23.8 ft (7.25 m); minimum, 0.6 ft³/s (0.017 m³/s) Aug. 15, 1936, gage height, 1.84 ft (0.561 m).

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

DATE	TIME	DISCHARGE (ft ³ /s) (m ³ /s)	GAGE HEIGHT (ft) (m)	DATE	TIME	DISCHARGE (ft ³ /s) (m ³ /s)	GAGE HEIGHT (ft) (m)				
Oct. 23	0400	7,540	214	10.92	3.328	Aug. 8	0900	11,100	314	12.76	3.889
Mar. 20	0100	14,600	413	14.31	4.362	Aug. 27	0800	5,280	150	9.54	2.908
Apr. 8	2400	8,220	233	11.29	3.441	Sept. 12	1300	8,420	238	11.40	3.475
June 6	1200	21,300	603	16.76	5.108	Sept. 21	1000	*28,300	801	*18.95	5.776

minimum discharge, 35 ft³/s (0.99 m³/s) Oct. 1, gage height, 2.59 ft (0.789 m).

RATING TABLE (gage height, in feet, and discharge, in cubic feet per second).
(Stage-discharge relation affected by ice Nov. 27 to Mar. 18.)

2.6	41	6.0	1,470
2.7	55	7.0	2,250
3.0	104	9.0	4,510
3.5	224	11.0	7,680
4.0	392	14.0	13,900
5.0	850	17.0	22,000

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DAY	MEAN VALUES											
	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	46	480	240	84	60	60	2030	339	1000	1130	87	1360
2	74	450	200	80	56	56	1970	328	776	605	79	1190
3	92	446	200	74	54	54	2070	299	450	399	77	901
4	93	420	220	66	52	52	1980	290	330	293	75	1070
5	116	895	230	66	54	52	2620	266	2650	363	73	1220
6	103	2310	200	72	54	52	3480	239	17900	351	71	1050
7	94	1610	180	78	56	54	4390	194	17500	240	378	785
8	82	1080	160	70	54	54	6430	181	9850	187	7680	559
9	75	730	150	68	50	54	6900	152	5620	160	3840	453
10	69	491	180	70	50	52	5520	146	3020	140	1950	1150
11	67	396	180	74	54	52	4930	182	1800	122	1920	1540
12	67	376	170	78	56	52	3650	184	1230	723	1220	6900
13	64	322	170	86	58	54	2450	192	824	447	728	4870
14	64	264	180	96	64	60	1670	221	617	197	509	4460
15	62	261	180	110	70	66	1220	237	422	163	381	3130
16	64	259	140	350	72	88	922	238	325	181	299	2100
17	65	249	120	800	70	500	785	210	256	201	293	1410
18	65	245	100	580	68	1800	763	210	224	209	307	1010
19	110	278	96	450	68	6910	799	576	246	182	273	766
20	149	356	88	340	72	4410	846	1040	371	157	324	1100
21	218	480	84	280	84	2790	863	844	708	136	1010	21100
22	3200	822	88	230	88	1920	856	570	565	123	605	17800
23	6920	1240	120	190	90	1540	800	399	407	109	565	9580
24	5010	1440	230	160	86	1120	696	299	391	101	560	5570
25	3200	1150	250	130	80	833	599	229	332	95	506	3110
26	1980	966	200	110	74	1100	512	182	254	96	497	2270
27	1330	1200	170	96	68	1620	459	150	202	99	3690	1770
28	894	900	140	82	66	1520	415	130	2280	119	1850	1310
29	637	560	120	76	64	1340	382	119	3570	138	1190	954
30	525	330	96	68	---	1500	363	283	2100	113	1510	724
31	470	---	90	64	---	1950	---	1580	---	101	1540	---
TOTAL	26005	21006	4972	5178	1892	31765	61370	10509	76220	7680	34087	101212
MEAN	839	700	160	167	65.2	1025	2046	339	2541	248	1100	3374
MAX	6920	2310	250	800	90	6910	6900	1580	17900	1130	7680	21100
MIN	46	245	84	64	50	52	363	119	202	95	71	453
CFSM	1.11	.93	.21	.22	.09	1.36	2.71	.45	3.36	.33	1.46	4.46
IN.	1.28	1.03	.24	.25	.09	1.56	3.02	.52	3.75	.38	1.68	4.98
CAL YR 1979	TOTAL	315263	MEAN	864	MAX	14200	MIN	37	CFSM	1.14	IN	15.51
WTR YR 1980	TOTAL	381896	MEAN	1043	MAX	21100	MIN	46	CFSM	1.38	IN	18.79

BLACK RIVER BASIN

05382000 BLACK RIVER NEAR GALESVILLE, WI
(NATIONAL STREAM-QUALITY ACCOUNTING NETWORK STATION)

LOCATION.--Lat 44°04'22", long 91°17'41", in SW 1/4 sec.1, T.18 N., R.8 W., LaCrosse County, Hydrologic Unit 07040007, on left bank 1,000 ft (305 m) upstream from bridge on U.S. Highway 53, 4.5 mi (7.2 km) southeast of Galesville, and 4.8 mi (7.7 km) downstream from Fleming Creek.

DRAINAGE AREA.--2,120 mi² (5,490 km²), approximately.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--December 1931 to current year.

REVISED RECORDS.--WSP 1438: 1932-34, 1935-36(M).

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 658.43 ft (200.689 m) National Geodetic Vertical Datum of 1929. Prior to Apr. 2, 1941, nonrecording gage on bridge 1,000 ft (305 m) downstream at same datum. Apr. 3, 1941, to Oct. 1, 1971, water-stage recorder at site 1,100 ft (335 m) downstream at same datum.

REMARKS.--Records good except those for winter periods, which are fair. Flow partly regulated by Hatfield Dam Powerplant where drainage area is 1,290 mi² (3,340 km²) and storage capacity is 272,000,000 ft³ (7.70 hm³). Water diverted periodically from basin into Lemonweir River basin for cranberry culture. Gage-height telemeter at station.

AVERAGE DISCHARGE.--48 years, 1,699 ft³/s (48.12 m³/s) 10.88 in/yr (276 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 65,500 ft³/s (1,850 m³/s) Apr. 1, 1967, gage height, 14.63 ft (4.459 m); maximum gage height, 15.46 ft (4.712 m) Sept. 23, 1980; minimum observed, 180 ft³/s (5.10 m³/s) Dec. 20, 1931

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 12,500 ft³/s (354 m³/s) and maximum (*):

DATE	TIME	DISCHARGE (ft ³ /s) (m ³ /s)	GAGE HEIGHT (ft) (m)	DATE	TIME	DISCHARGE (ft ³ /s) (m ³ /s)	GAGE HEIGHT (ft) (m)
Apr. 11	1300	13,800 391	11.57 3.527	Sept. 15	0800	13,800 391	11.59 3.533
June 8	2300	27,000 765	14.36 4.377	Sept. 23	0800	*44,400 1,260	*15.46 4.712
Aug. 11	0700	16,100 456	12.21 3.722				

minimum daily discharge, 450 ft³/s (12.7 m³/s) Oct. 1, 2.

RATING TABLES (gage height, in feet, and discharge, in cubic feet per second).
(Shifting-control method used Oct. 1-17, Apr. 9 to May 6; stage-discharge relation affected by ice Nov. 29 to Dec. 7, Dec. 12 to Mar. 19.)

Oct. 1 to May 5

May 6 to Sept. 30

1.6	450	9.0	8,740	1.8	502	13.0	19,200
2.0	690	11.0	13,100	3.0	1,260	14.0	24,500
4.0	2,230	12.0	16,600	5.0	2,960	15.0	33,600
6.0	4,300			8.0	6,670	15.5	45,000
				11.0	12,100		

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DAY	MEAN VALUES											
	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	450	2150	1800	880	480	470	3660	1640	3890	3070	602	5680
2	450	2090	1800	900	480	470	4150	1330	4650	2200	599	5420
3	460	2000	1800	900	480	450	4230	1510	4240	1850	602	4370
4	460	1880	1800	920	480	470	3960	1260	3740	1640	529	3280
5	460	1810	1700	920	480	500	4360	1070	2470	1330	525	2810
6	470	1630	1700	720	480	490	4610	1060	2970	1080	563	2700
7	470	3140	1400	700	470	480	5630	1350	5490	941	709	3380
8	480	4350	1260	640	490	480	6500	1130	18200	925	1200	2770
9	490	3820	1110	520	490	540	7820	1040	22700	964	2960	2370
10	555	2560	979	540	480	520	10600	1030	16600	908	7930	1890
11	571	2300	1030	520	470	500	13600	964	11900	851	15000	1930
12	574	2120	1100	500	480	540	11700	865	7320	832	11100	2690
13	554	1990	1000	500	500	600	10300	982	4340	790	7680	4140
14	530	1890	1000	560	490	620	8160	1400	3020	889	5240	8330
15	475	1750	1100	560	490	620	5630	1140	2560	1260	3190	13000
16	546	1700	1100	580	490	1000	3860	1070	2280	1150	2490	10700
17	813	1440	1000	700	490	2000	3230	1360	2050	953	2120	8950
18	683	1630	1000	1300	470	1900	2520	1200	1910	864	1790	5500
19	550	1200	1100	1000	470	3500	2520	904	1780	846	1730	3500
20	535	1230	1100	860	500	4850	2470	894	1690	998	1810	3290
21	500	1670	1100	740	500	3610	2450	1370	1990	915	1860	7900
22	597	1770	1000	700	520	5660	2450	1520	1650	798	2360	14200
23	1350	1540	1000	660	580	5520	2410	1540	1780	828	3040	38000
24	4280	2000	1000	600	580	4090	2290	1480	1730	764	2510	28300
25	7150	2700	980	580	500	3390	2150	1090	1440	666	2410	20700
26	9000	2750	960	560	480	2570	1990	990	1240	673	2170	14700
27	6580	2600	960	560	480	2340	1900	902	1190	660	2200	10300
28	4250	2480	980	540	490	2040	1820	829	1140	592	3200	6840
29	2790	2300	980	520	480	3390	1730	889	1180	564	5580	5180
30	2460	2000	940	500	---	3060	1690	1120	2860	604	6920	4250
31	2200	---	900	490	---	3050	---	1890	---	606	5800	---
TOTAL	51733	64490	36679	21170	14270	60620	140390	36819	140000	32011	106419	247070
MEAN	1669	2150	1183	683	492	1955	4680	1188	4667	1033	3433	8236
MAX	9000	4350	1800	1300	580	5660	13600	1890	22700	3070	15000	38000
MIN	450	1200	900	490	470	450	1690	829	1140	564	525	1890
CFSM	.79	1.01	.56	.32	.23	.92	2.21	.56	2.20	.49	1.62	3.89
IN.	.91	1.13	.64	.37	.25	1.06	2.46	.65	2.46	.56	1.87	4.34

CAL YR 1979 TOTAL 861621 MEAN 2361 MAX 29000 MIN 450 CFSM 1.11 IN 15.12
WTR YR 1980 TOTAL 951671 MEAN 2600 MAX 38000 MIN 450 CFSM 1.23 IN 16.70

BLACK RIVER BASIN

05382000 BLACK RIVER NEAR GALESVILLE, WI--CONTINUED
(NATIONAL STREAM QUALITY ACCOUNTING NETWORK STATION)

WATER-QUALITY RECORDS

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

PERIOD OF DAILY RECORD.--

SUSPENDED-SEDIMENT DISCHARGE: May 1976 to September 1979 (discontinued).

WATER-QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH FIELD (UNITS)	TEMPER- ATURE, WATER (DEG C)	TUR- BID- ITY (NTU)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	STREP- TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)
OCT , 1979										
09...	1330	490	150	7.4	9.5	2.0	9.3	85	200	1100
NOV										
13...	1430	1870	112	6.8	2.0	6.0	12.3	93	1500	1900
DEC										
13...	1315	1000	128	6.6	.0	3.0	12.8	92	35	K15
JAN , 1980										
16...	1330	580	155	6.8	.5	1.5	11.4	83	360	9100
FEB										
05...	1600	484	162	6.3	.0	2.5	7.8	56	K6	K15
MAR										
11...	1315	497	163	6.2	.0	55	10.2	73	K3	K14
25...	1500	3080	128	6.2	1.0	.50	7.0	51	K310	K2100
MAY										
06...	1430	1040	123	7.0	16.0	4.0	9.5	100	20	66
JUN										
03...	1600	4200	74	6.1	19.5	10	7.4	84	1000	510
JUL										
15...	1425	1320	94	7.0	26.0	6.1	8.3	106	420	210
AUG										
12...	1200	10200	54	5.5	21.0	4.8	5.8	67	1400	1900
SEP										
02...	1600	5270	70	6.2	21.0	4.2	7.0	81	420	580

DATE	HARD- NESS (MG/L AS CACO3)	HARD- NESS, NONCAR- BONATE (MG/L CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	PERCENT SODIUM	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LINITY (MG/L AS CACO3)	SULFATE DIS- SOLVED (MG/L AS SO4)
OCT , 1979										
09...	63	17	15	6.2	3.0	14	.2	1.9	46	9.4
NOV										
13...	40	15	9.6	3.8	2.8	18	.2	3.4	25	11
DEC										
13...	50	19	12	4.9	2.9	16	.2	2.0	31	11
JAN , 1980										
16...	61	15	14	6.2	3.8	18	.2	3.0	46	13
FEB										
05...	100	3	27	8.6	3.7	7	.2	1.0	100	6.3
MAR										
11...	60	17	14	6.0	4.0	12	.2	2.7	43	11
25...	33	10	7.6	3.4	3.2	13	.2	9.8	23	7.6
MAY										
06...	56	12	13	5.6	2.9	10	.2	2.3	44	7.9
JUN										
03...	26	7	6.2	2.6	2.5	16	.2	1.8	19	7.4
JUL										
15...	40	9	9.5	4.0	2.4	11	.2	2.3	31	6.5
AUG										
12...	20	4	4.6	2.0	1.5	12	.1	2.9	16	5.4
SEP										
02...	35	10	8.9	3.0	2.1	11	.2	2.8	25	6.0

K RESULTS BASED ON COLONY COUNT OUTSIDE THE ACCEPTABLE RANGE (NON-IDEAL COLONY COUNT).

BLACK RIVER BASIN

05382000 BLACK RIVER NEAR GALESVILLE, WI--CONTINUED

WATER-QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	CHLORIDE, DIS-SOLVED (MG/L AS CL)	FLUORIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SiO2)	SOLIDS, RESIDUE AT 180 DEG. C SOLVED (MG/L)	SOLIDS, SUM OF CONSTI- TUENTS, DIS-SOLVED (MG/L)	SOLIDS, DIS-SOLVED (TONS PER AC-FT)	SOLIDS, DIS-SOLVED (TONS PER DAY)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO- GEN, NO2+NO3 DIS-SOLVED (MG/L AS N)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N)
OCT , 1979										
09...	4.5	.1	8.8	86	80	.12	114	.64	.61	.090
NOV										
13...	5.9	.1	9.6	83	64	.11	419	.54	.55	.090
DEC										
13...	5.0	.1	12	89	72	.12	240	.75	.73	.080
JAN , 1980										
16...	6.6	.1	13	99	91	.13	155	.90	.89	.170
FEB										
05...	3.3	.1	17	134	129	.18	175	.31	.31	.080
MAR										
11...	5.9	.1	13	97	87	.13	130	1.0	.97	.120
25...	7.8	.1	5.2	91	59	.12	757	.50	.02	1.400
MAY										
06...	4.8	.1	7.8	94	73	.13	264	.31	.33	.060
JUN										
03...	3.6	.1	5.1	76	42	.10	862	.28	.30	.100
JUL										
15...	3.9	.1	5.7	75	54	.10	267	.19	.20	.060
AUG										
12...	2.5	.1	5.2	70	35	.10	1930	.18	.16	.100
SEP										
02...	4.2	.1	10	99	53	.13	1410	.27	.23	.020

DATE	NITRO- GEN, AMMONIA DIS-SOLVED (MG/L AS N)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N)	NITRO- GEN, ORGANIC DIS-SOLVED (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO- GEN,NH4 + ORG. SUSP. TOTAL (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC DIS. (MG/L AS N)	NITRO- GEN, DIS-SOLVED (MG/L AS N)	NITRO- GEN, TOTAL (MG/L AS N)	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHORUS, DIS-SOLVED (MG/L AS P)
OCT , 1979										
09...	.050	.22	.26	.31	.00	.31	.92	.95	.110	.040
NOV										
13...	.050	1.6	1.4	1.7	.30	1.4	2.0	2.2	.140	.090
DEC										
13...	.070	.34	.38	.42	.00	.45	1.2	1.2	.090	.060
JAN , 1980										
16...	.150	1.0	.77	1.2	.28	.92	1.8	2.1	.120	.090
FEB										
05...	.080	.26	.22	.34	.04	.30	.61	.65	.030	.020
MAR										
11...	.150	.49	.15	.61	.31	.30	1.3	1.6	.110	.070
25...	.010	1.3	1.9	2.7	.80	1.9	1.9	3.2	.610	.280
MAY										
06...	.010	.63	.43	.69	.25	.44	.77	1.0	.170	.070
JUN										
03...	.140	.89	.65	.99	.20	.79	1.1	1.3	.120	.100
JUL										
15...	.000	.56	.49	.62	.13	.49	.69	.81	.160	.070
AUG										
12...	.030	.46	.49	.56	.04	.52	.68	.74	.250	.110
SEP										
02...	.030	.59	.56	.61	.02	.59	.82	.88	.170	.120

DATE	SILVER, TOTAL RECOV- ERABLE (UG/L AS AG)	CARBON, ORGANIC TOTAL (MG/L AS C)	CARBON, ORGANIC DIS-SOLVED (MG/L AS C)	CARBON, ORGANIC SUS- PENDEED (MG/L AS C)	PHYTO- PLANK- TON, TOTAL (CELLS PER ML)	PERI- PHYTON BIOMASS ASH WEIGHT G/SQ M	PERI- PHYTON BIOMASS TOTAL DRY WEIGHT G/SQ M	CHLOR-A PERI- PHYTON CHROMO- GRAPHIC FLUOROM (MG/M2)	CHLOR-B PERI- PHYTON CHROMO- GRAPHIC FLUOROM (MG/M2)	BIOMASS CHLORO- PHYLL RATIO PERI- PHYTON (UNITS)
OCT , 1979										
09...	0	--	5.5	.5	--	--	--	--	--	--
NOV										
13...	0	--	9.0	.3	770	--	--	--	--	--
DEC										
13...	0	5.6	--	--	--	--	--	--	--	--
JAN , 1980										
16...	--	7.4	--	--	--	--	--	--	--	--
FEB										
05...	0	--	4.4	.4	--	--	--	--	--	--
MAR										
11...	0	3.3	--	--	200	--	--	--	--	--
25...	--	18	--	--	--	--	--	--	--	--
MAY										
06...	0	--	14	1.3	20000	--	--	--	--	--
JUN										
03...	0	15	--	--	1700	.47	.63	.08	.00	1975
JUL										
15...	--	9.1	--	--	41000	5.9	6.3	--	--	--
AUG										
12...	0	--	13	.5	1500	--	--	--	--	--
SEP										
02...	0	26	--	--	970	--	--	--	--	--

BLACK RIVER BASIN

05382000 BLACK RIVER NEAR GALESVILLE, WI--CONTINUED

WATER-QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	ARSENIC TOTAL (UG/L AS AS)		ARSENIC SUS- PENDEDD TOTAL (UG/L AS AS)		ARSENIC DIS- SOLVED (UG/L AS AS)		BARIUM, TOTAL RECOV- ERABLE (UG/L AS BA)		BARIUM, SUS- PENDEDD RECOV- ERABLE (UG/L AS BA)		BARIUM, DIS- SOLVED (UG/L AS BA)		CADIUM TOTAL RECOV- ERABLE (UG/L AS CD)		CADIUM SUS- PENDEDD RECOV- ERABLE (UG/L AS CD)		CADIUM DIS- SOLVED (UG/L AS CD)		
OCT., 1979																					
09...	1330	490		1		0		1		0		--		20		0		0			0
NOV																					
13...	1430	1870		1		0		1		0		--		30		1		--			3
FEB., 1980																					
05...	1600	484		0		0		0		100		70		30		5		0			5
MAY																					
06...	1430	1040		1		0		1		<50		--		30		0		--			4
AUG																					
12...	1200	10200		1		0		1		100		--		<50		1		0			1

DATE	CHROMIUM, TOTAL RECOVERABLE (UG/L AS CR)	CHROMIUM, SUS- PENDED RECOV. (UG/L AS CR)	CHROMIUM, DIS- SOLVED (UG/L AS CR)	COBALT, TOTAL RECOVERABLE (UG/L AS CO)	COBALT, SUS- PENDED RECOVERABLE (UG/L AS CO)	COBALT, DIS- SOLVED (UG/L AS CO)	COPPER, TOTAL RECOVERABLE (UG/L AS CU)	COPPER, SUS- PENDED RECOVERABLE (UG/L AS CU)	COPPER, DIS- SOLVED (UG/L AS CU)	IRON, TOTAL RECOVERABLE (UG/L AS FE)	IRON, SUS- PENDED RECOVERABLE (UG/L AS FE)
OCT., 1979											
09...	20	10	<10	2	2	0	2	--	3	850	560
NOV											
13...	10	0	10	2	1	1	5	--	6	960	560
FEB., 1980											
05...	20	10	<10	0	0	0	4	0	4	660	300
MAY											
06...	<10	--	<10	0	0	0	5	0	5	1000	520
AUG											
12...	<10	--	20	2	2	0	5	--	9	990	520

DATE	IRON, DIS- SOLVED (UG/L AS FE)	LEAD, TOTAL RECOV- ERABLE (UG/L AS PB)	LEAD, SUS- PENDE RECOV- ERABLE (UG/L AS PB)	LEAD, DIS- SOLVED (UG/L AS PB)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)	MANGA- NESE, SUS- PENDE RECOV. (UG/L AS MN)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	MERCURY TOTAL RECOV- ERABLE (UG/L AS HG)	MERCURY SUS- PENDE RECOV- ERABLE (UG/L AS HG)	MERCURY DIS- SOLVED (UG/L AS HG)	NICKEL, TOTAL RECOV- ERABLE (UG/L AS NI)
OCT , 1979											
09...	290	16	0	16	50	10	40	.1	.0	.1	4
NOV											
13...	400	4	4	0	40	20	20	.3	.1	.2	3
FEB , 1980											
05...	360	26	0	26	30	0	30	.2	.0	.2	2
MAY											
06...	480	5	1	4	70	40	30	.3	.1	.2	1
AUG											
12...	470	8	6	2	60	30	30	.3	--	.4	2

DATE	NICKEL, SUS- PENDED RECOV- ERABLE (UG/L AS NI)	NICKEL, DIS- SOLVED (UG/L AS NI)	SELE- NIUM, TOTAL (UG/L AS SE)	SELE- NIUM, SUS- PENDED TOTAL (UG/L AS SE)	SELE- NIUM, DIS- SOLVED (UG/L AS SE)	SILVER, TOTAL RECOV- ERABLE (UG/L AS AG)	SILVER, SUS- PENDED RECOV- ERABLE (UG/L AS AG)	SILVER, DIS- SOLVED (UG/L AS AG)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN)	ZINC, SUS- PENDED RECOV- ERABLE (UG/L AS ZN)	ZINC, DIS- SOLVED (UG/L AS ZN)
OCT , 1979											
09...	2	2	0	0	0	0	0	0	80	63	7
NOV											
13...	1	2	0	0	0	0	0	0	30	--	40
FEB , 1980											
05...	2	0	0	0	0	0	0	0	10	--	20
MAY											
06...	1	0	0	0	0	0	0	0	40	20	20
AUG											
12...	0	2	0	0	0	0	0	0	30	20	10

BLACK RIVER BASIN

05382000 BLACK RIVER NEAR GALESVILLE, WI--CONTINUED

QUALITATIVE AND ASSOCIATED QUANTITATIVE BIOLOGICAL DATA, SEPTEMBER 1979 TO SEPTEMBER 1980

PHYTOPLANKTON

Date	Time	Organism	Count (cells/ml)	Percent of total	Diversity index	Sampling method
Sept. 11, 1979	1630	CHLOROPHYTA				Grab sample
		Chlorophyceae				
		Ankistrodesmus		0		
		Chlorella		0		
		Crucigenia	1,000	1		
		Dictyosphaerium		0		
		Kirchneriella		0		
		Scenedesmus	2,600	2		
		Tetraedron		0		
		CHRYSOPHYTA				
		Bacillariophyceae				
		Cyclotella	7,300	5		
		Melosira	7,500	5		
		Navicula		0		
		Nitzschia		0		
		Skeletonema		0		
		Surirella		0		
		Synedra		0		
		CYANOPHYTA				
		Cyanophyceae				
Nov. 13, 1979	1430	Agmenellum	2,100	1		Grab sample
		Anacyctis	130,000	82		
		Oscillatoria	3,300	2		
		Schizothrix		0		
		TOTAL	160,000		1.2	
		CHLOROPHYTA				
		Chlorophyceae				
		Chlamydomonas	14	2		
		Chlorella	440	57		
		Closteriopsis	14	2		
Mar. 11, 1980	1315	Dictyosphaerium	57	7		Grab sample
		CHRYSOPHYTA				
		Bacillariophyceae				
		Fragilaria	240	31		
		TOTAL	770		1.5	
		CHLOROPHYTA				
		Chlorophyceae				
		Ankistrodesmus	61	31		
		Chlorella	20	10		
		Crucigenia	10	5		
May 6, 1980	1430	CHRYSOPHYTA				Grab sample
		Bacillariophyceae				
		Achnanthes	5	3		
		Cocconeis	5	3		
		Cyclotella	5	3		
		Meridion	10	5		
		Navicula	20	10		
		Nitzschia	20	10		
		Skeletonema	10	5		
		Synedra	25	13		
		CRYPTOPHYTA				
		Cryptophyceae				
		Cryptomonas	5	3		
		TOTAL	200		3.1	
		CHLOROPHYTA				
		Chlorophyceae				
		Ankistrodesmus	940	5		
		Chlamydomonas	4,000	20		
		Coelastrum	1,100	5		
		Dictyosphaerium	6,400	33		
		Kirchneriella	670	3		
		Microactinium	800	4		
		Oocystis	130	1		
		Scenedesmus	270	1		
		CHRYSOPHYTA				Grab sample
		Bacillariophyceae				
		Cyclotella	3,300	17		
		Melosira	800	4		
		Nitzschia	270	1		
		Synedra	270	1		
		Chrysophyceae				
		Chrysococcus	670	3		
		TOTAL	20,000		2.9	

BLACK RIVER BASIN

05382000 BLACK RIVER NEAR GALESVILLE, WI--CONTINUED

QUALITATIVE AND ASSOCIATED QUANTITATIVE BIOLOGICAL DATA, SEPTEMBER 1979 TO SEPTEMBER 1980

PHYTOPLANKTON

Date	Time	Organism	Count (cells/ml)	Percent of total	Diversity index	Sampling method
June 3, 1980	1600	CHLOROPHYTA				Grab sample
		Chlorophyceae				
		<i>Ankistrodesmus</i>	13	1		
		<i>Chlamydomonas</i>	65	4		
		<i>Chlorella</i>	39	2		
		<i>Crucigenia</i>	100	6		
		<i>Golenkinia</i>	13	1		
		<i>Microactinium</i>	78	5		
		<i>Scenedesmus</i>	100	6		
		<i>Schroederia</i>	26	2		
		<i>Sphaerocystis</i>	100	6		
		<i>Tetrastrum</i>	100	6		
		<i>Treubaria</i>	13	1		
		CHRYSOPHYTA				
		Bacillariophyceae				
		<i>Asterionella</i>	39	2		
		<i>Cyclotella</i>	90	5		
		<i>Melosira</i>	170	10		
		<i>Nitzschia</i>	13	1		
		CYANOPHYTA				
		Cyanophyceae				
		<i>Anacystis</i>	710	42		
		PYRRHOPHYTA				
		Dinophyceae				
		<i>Glenodinium</i>	13	1		
		TOTAL	1,700		3.1	
July 15, 1980	1425	CHLOROPHYTA				Grab sample
		Chlorophyceae				
		<i>Ankistrodesmus</i>	500	1		
		<i>Chlamydomonas</i>	330	1		
		<i>Coelastrum</i>	2,000	5		
		<i>Dictyosphaerium</i>	2,000	5		
		<i>Golenkinia</i>		0		
		<i>Oocystis</i>	660	2		
		<i>Scenedesmus</i>	5,300	13		
		<i>Schroederia</i>		0		
		<i>Selenastrum</i>	990	2		
		CHRYSOPHYTA				
		Bacillariophyceae				
		<i>Cyclotella</i>	10,000	25		
		<i>Melosira</i>	3,600	9		
		<i>Nitzschia</i>	660	2		
		CYANOPHYTA				
		Cyanophyceae				
		<i>Agmenellum</i>	11,000	26		
		<i>Anacystis</i>	2,200	5		
		<i>Gomphosphaeria</i>	1,300	3		
		TOTAL	41,000		3.0	
Aug. 12, 1980	1200	CHLOROPHYTA				Grab sample
		Chlorophyceae				
		<i>Ankistrodesmus</i>	13	1		
		<i>Chlamydomonas</i>	13	1		
		<i>Coelastrum</i>	180	12		
		<i>Kirchneriella</i>	52	3		
		<i>Scenedesmus</i>	230	16		
		<i>Selenastrum</i>	39	3		
		<i>Tetraedron</i>	13	1		
		<i>Tetrastrum</i>	52	3		
		CHRYSOPHYTA				
		Bacillariophyceae				
		<i>Cyclotella</i>	52	3		
		<i>Navicula</i>	13	1		
		<i>Nitzschia</i>	39	3		
		<i>Synedra</i>	13	1		
		CYANOPHYTA				
		Cyanophyceae				
		<i>Anacystis</i>	650	43		
		<i>Aphanizomenon</i>	120	8		
		PYRRHOPHYTA				
		Dinophyceae				
		<i>Glenodinium</i>	13	1		
		<i>Peridinium</i>	13	1		
		TOTAL	1,500		2.8	
Sept. 2, 1980	1600	CHLOROPHYTA				Grab sample
		Chlorophyceae				
		<i>Ankistrodesmus</i>	65	7		
		<i>Chlamydomonas</i>	65	7		
		<i>Crucigenia</i>	120	12		
		<i>Scenedesmus</i>	180	19		
		CHRYSOPHYTA				
		Bacillariophyceae				
		<i>Cyclotella</i>	91	9		
		<i>Navicula</i>	13	1		
		<i>Synedra</i>	13	1		
		CYANOPHYTA				
		Cyanophyceae				
		<i>Anacystis</i>	220	23		
		<i>Oscillatoria</i>	210	21		
		TOTAL	970		2.8	

BLACK RIVER BASIN

05382000 BLACK RIVER NEAR GALESVILLE, WI--CONTINUED

WATER-QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SEDI- MENT, SUS- PENDED (MG/L)	SEDI- MENT DIS- CHARGE, SUS- PENDED (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM	SED. SUSP. SIEVE DIAM. % FINER THAN .125 MM	SED. SUSP. SIEVE DIAM. % FINER THAN .250 MM	SED. SUSP. SIEVE DIAM. % FINER THAN .500 MM	SED. SUSP. SIEVE DIAM. % FINER THAN 1.00 MM	SED. SUSP. SIEVE DIAM. % FINER THAN 2.00 MM
MAR , 1980										
25...	1615	3080	139	1160	63	70	90	99	100	--
APR										
07...	1305	5540	117	1750	41	51	88	99	100	--
10...	1900	11400	251	7730	14	19	53	97	100	--
12...	1600	11300	146	4450	12	14	42	99	100	--
JUN										
04...	1005	3910	57	602	74	83	93	98	100	--
07...	1845	6770	313	5720	85	94	98	99	100	--
08...	1100	19900	371	19900	15	18	32	95	100	--
09...	1130	22600	235	14300	12	13	21	80	100	--
AUG										
12...	1230	10200	57	1570	36	43	78	96	100	--
SEP										
22...	1705	19200	816	42300	26	31	58	95	100	--
23...	1115	41800	602	67900	8	9	16	77	98	100
23...	1615	35100	294	27900	15	16	28	75	100	--

PARTICLE-SIZE DISTRIBUTION OF SURFACE BED MATERIAL

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	BED MAT. SIEVE DIAM. % FINER THAN .062 MM	BED MAT. SIEVE DIAM. % FINER THAN .125 MM	BED MAT. SIEVE DIAM. % FINER THAN .250 MM	BED MAT. SIEVE DIAM. % FINER THAN .500 MM	BED MAT. SIEVE DIAM. % FINER THAN 1.00 MM	BED MAT. SIEVE DIAM. % FINER THAN 2.00 MM	BED MAT. SIEVE DIAM. % FINER THAN 4.00 MM	BED MAT. SIEVE DIAM. % FINER THAN 8.00 MM	BED MAT. SIEVE DIAM. % FINER THAN 16.0 MM
MAR , 1980											
25...	1615	3080	--	--	16	65	96	99	100	--	--
APR											
07...	1305	5540	--	--	17	64	94	99	100	--	--
10...	1900	11400	--	--	27	77	97	99	100	--	--
12...	1600	11300	--	--	19	76	97	99	100	--	--
JUN											
04...	1005	3910	--	--	8	65	97	100	--	--	--
07...	1845	6770	--	1	12	72	98	100	--	--	--
08...	1100	19900	5	10	25	73	95	98	99	100	--
09...	1130	22600	--	--	13	68	97	99	100	--	--
AUG											
12...	1230	10200	--	--	7	58	94	99	99	100	--
SEP											
22...	1705	19200	--	2	15	56	94	98	99	100	--
23...	1115	41800	--	--	13	69	99	100	--	--	--
23...	1615	35100	--	--	8	54	88	95	97	99	100

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	TEMPER- ATURE, WATER (DEG C)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	SEDI- MENT, SUS- PENDED (MG/L)	SEDI- MENT DIS- CHARGE, SUS- PENDED (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
OCT , 1979							
09...	1330	490	9.5	150	2	2.6	100
NOV							
13...	1430	1870	2.0	112	8	40	65
DEC							
13...	1315	1000	.0	128	3	8.1	100
JAN , 1980							
16...	1330	580	.5	155	--	--	--
FEB							
05...	1600	484	.0	162	3	3.9	100
MAR							
11...	1315	497	.0	163	4	5.4	4
25...	1500	3080	1.0	128	103	857	66
25...	1615	3080	1.0	--	139	1160	63
APR							
07...	1305	5540	4.5	80	117	1750	41
10...	1900	11400	2.0	--	251	7730	14
12...	1600	11300	3.5	--	146	4450	12
MAY							
06...	1430	1040	16.0	123	41	115	59
JUN							
03...	1600	4200	19.5	74	89	1010	79
04...	1005	3910	19.5	80	57	602	74
04...	1025	3910	19.5	--	47	496	90
07...	1845	6770	20.0	--	313	5720	85
08...	1100	19900	18.0	--	371	19900	15
09...	1130	22600	17.0	--	235	14300	12
JUL							
15...	1425	1320	26.0	94	25	89	100
AUG							
12...	1200	10200	21.0	54	58	1600	32
12...	1230	10200	21.0	54	57	1570	36
SEP							
02...	1600	5270	21.0	70	36	512	63
22...	1705	19200	15.5	84	816	42300	26
23...	1115	41800	14.5	55	602	67900	8
23...	1615	35100	14.5	52	294	27900	15

LA CROSSE RIVER BASIN

05382500 LITTLE LA CROSSE RIVER NEAR LEON, WI

LOCATION.--Lat 43°53'45", long 90°50'25", in NE 1/4 NW 1/4 sec.3, T.16 N., R.4 W., Monroe County, Hydrologic Unit 07040006, on left bank, 30 ft (9 m) upstream from a township road bridge, 1.1 mi (1.8 km) downstream from Sand Creek, 1.5 mi (2.4 km) northwest of Leon, and 4 mi (6 km) upstream from mouth.

DRAINAGE AREA.--77.4 mi² (200 km²).

PERIOD OF RECORD.--March 1934 to September 1961. Occasional low-flow measurements and annual maximum, water years 1962-78. October 1978 to current year.

GAGE.--Water-stage record. Datum of gage is 760.28 ft (231.733 m) above mean sea level, adjustment of 1912.

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

AVERAGE DISCHARGE.--29 years (1935-61, 1979-80) 47.5 ft³/s (1.345 m³/s) 8.33 in/yr (212 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 4,620 ft³/s (131 m³/s) Aug. 6, 1935, gage height, 14.43 ft (4.398 m); minimum, 14 ft³/s (0.396 m³/s) Feb. 25, 1935, caused by ice jam upstream from gage; minimum daily, 18 ft³/s (0.510 m³/s) June 2, 3, 1934.

EXTREMES FOR CURRENT PERIOD.--Water year 1979: Maximum discharge, 459 ft³/s (13.0 m³/s) Aug. 27, gage height, 4.47 ft (1.36 m); minimum, 33 ft³/s (0.93 m³/s) Oct. 22, gage height 0.60 ft (0.18 m).

Water year 1980: Maximum discharge, 1,770 ft³/s (50.1 m³/s) Aug. 8, gage height, 8.13 ft (7.47 m); minimum daily, 31 ft³/s (0.88 m³/s) Dec. 16.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979												
DAY	MEAN VALUES											
	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	38	36	50	44	39	40	110	59	59	46	43	66
2	37	36	47	43	39	41	103	89	55	45	42	68
3	37	38	48	42	40	40	94	120	52	46	43	59
4	37	38	47	41	40	40	87	78	50	56	48	56
5	37	39	46	40	40	40	79	67	53	46	72	54
6	38	39	44	40	40	40	72	63	50	45	57	54
7	38	39	44	40	41	41	69	60	132	44	44	50
8	38	40	44	40	41	42	68	59	83	44	42	50
9	38	40	44	40	40	41	65	57	64	45	69	48
10	39	41	45	40	41	40	63	55	63	44	147	47
11	39	40	46	40	41	41	62	87	58	44	62	47
12	40	40	46	39	41	42	62	63	55	43	49	46
13	39	71	46	39	41	43	64	58	52	43	47	46
14	38	58	46	39	41	43	60	56	51	46	45	45
15	37	51	46	39	41	44	59	54	50	43	43	45
16	36	47	46	40	40	47	57	52	49	42	42	44
17	36	98	45	40	39	53	55	51	49	42	44	43
18	37	85	46	40	40	100	54	50	48	42	45	43
19	37	73	45	39	41	328	53	138	47	42	154	42
20	36	67	46	39	41	169	56	83	50	41	196	43
21	36	60	46	39	41	116	59	66	48	41	87	43
22	36	55	46	39	39	106	54	60	48	43	76	42
23	39	53	47	38	39	179	52	60	48	41	69	42
24	36	52	48	39	39	158	51	57	46	44	64	42
25	36	53	47	38	40	102	52	54	46	49	60	42
26	36	51	47	39	41	85	57	53	45	45	58	41
27	37	49	46	40	41	76	55	53	46	43	211	41
28	36	48	46	40	41	74	62	51	46	43	89	41
29	37	48	45	39	---	100	55	50	51	42	240	41
30	36	48	45	39	---	291	63	115	48	48	92	42
31	36	---	44	40	---	149	---	66	---	46	73	---
TOTAL	1153	1533	1424	1234	1128	2751	1952	2084	1642	1374	2453	1413
MEAN	37.2	51.1	45.9	39.8	40.3	88.7	65.1	67.2	54.7	44.3	79.1	47.1
MAX	40	98	50	44	41	328	110	138	132	56	240	68
MIN	36	36	44	38	39	40	51	50	45	41	42	41
CFSM	.48	.66	.60	.52	.52	1.15	.84	.87	.71	.58	1.03	.61
IN.	.56	.74	.69	.60	.54	1.33	.94	1.01	.79	.66	1.18	.68
WTR YR 1979	TOTAL	20141	MEAN 55.2	MAX 328	MIN 36	CFSM .72	IN 9.72					

LA CROSSE RIVER BASIN

05382500 LITTLE LA CROSSE RIVER NEAR LEON, WI--CONTINUED

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980													
DAY	OCT	NOV	DEC	JAN	MEAN VALUES		APR	MAY	JUN	JUL	AUG	SEP	
					FEB	MAR							
1	50	54	39	34	50	43	51	52	65	50	50	108	
2	54	48	36	33	50	41	51	49	59	49	51	94	
3	47	47	37	33	49	41	54	49	55	48	50	74	
4	45	46	37	33	47	41	82	49	52	46	47	113	
5	45	49	38	33	46	41	76	48	58	45	55	77	
6	46	70	39	33	46	40	61	46	503	44	51	68	
7	45	54	40	33	46	39	67	45	345	44	204	362	
8	45	52	38	40	46	38	216	46	130	43	1030	130	
9	45	50	37	42	47	38	264	48	93	43	217	164	
10	44	48	37	44	46	37	98	47	81	44	105	99	
11	46	47	36	64	46	37	89	48	74	44	96	82	
12	45	48	35	49	47	37	90	46	70	45	85	672	
13	45	47	34	39	45	40	78	48	67	47	100	230	
14	44	46	33	37	44	45	72	47	64	44	84	136	
15	44	48	32	33	44	57	67	48	62	45	71	113	
16	44	48	31	276	44	474	64	47	58	81	68	95	
17	44	48	31	234	44	412	63	46	58	55	83	88	
18	43	46	32	89	43	197	63	47	58	54	68	83	
19	43	43	33	68	42	272	63	47	66	51	165	80	
20	44	45	35	60	44	157	62	43	57	75	90	98	
21	45	46	35	57	48	94	61	45	54	56	168	83	
22	126	75	35	55	80	65	60	43	52	53	83	85	
23	118	55	54	53	65	61	57	43	54	49	72	77	
24	65	50	44	53	46	60	55	44	53	46	67	75	
25	55	48	39	52	45	60	54	42	53	45	68	76	
26	50	52	37	51	44	73	53	43	51	45	64	73	
27	48	54	36	51	44	64	53	43	51	45	96	71	
28	47	46	35	51	43	57	53	44	55	45	79	71	
29	46	42	34	51	42	59	53	74	52	44	73	76	
30	45	40	34	50	---	59	54	168	52	48	301	71	
31	46	---	34	49	---	56	---	93	---	51	183	---	
TOTAL	1599	1492	1127	1880	1373	2835	2285	1628	2602	1524	4024	3724	
MEAN	51.6	49.7	36.4	60.6	47.3	91.5	76.2	52.5	86.7	49.2	130	124	
MAX	126	75	54	276	80	474	264	168	503	81	1030	672	
MIN	43	40	31	33	42	37	51	42	51	43	47	68	
CFSM	.67	.65	.47	.79	.61	1.19	.99	.68	1.13	.64	1.69	1.61	
IN.	.77	.72	.54	.91	.66	1.37	1.10	.79	1.26	.74	1.94	1.80	
CAL YR 1979	TOTAL	20249	MEAN	55.5	MAX	328	MIN	31	CFSM	.72	IN	9.77	
WTR YR 1980	TOTAL	26093	MEAN	71.3	MAX	1030	MIN	31	CFSM	.93	IN	12.59	

DAY	VALUES											
	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.5	4.5	5.2	4.9	4.1	4.4	7.6	6.2	5.3	4.5	4.5	8.5
2	4.6	4.5	5.2	4.9	4.1	4.6	7.4	8.6	5.2	4.4	4.6	8.2
3	4.5	4.7	5.2	4.9	4.1	4.8	6.8	8.3	5.2	5.0	4.9	7.5
4	4.4	4.7	5.2	4.9	4.1	4.9	6.5	7.3	5.2	4.9	5.5	7.1
5	4.4	4.7	5.2	4.9	4.1	4.9	6.6	7.0	5.1	4.5	8.9	7.0
6	4.2	4.7	5.1	4.9	4.0	4.8	6.0	6.9	5.0	4.4	11	6.9
7	4.1	5.0	5.0	4.9	4.1	4.7	6.0	6.7	6.1	4.4	7.0	6.3
8	4.1	4.7	5.0	5.0	4.2	4.7	6.0	6.7	5.6	4.4	6.4	6.1
9	4.4	4.7	4.9	5.2	4.1	4.7	5.8	6.5	5.4	4.4	6.8	5.8
10	4.9	4.7	4.9	5.2	4.1	4.7	5.8	6.8	5.1	4.4	6.5	5.8
11	4.9	4.9	4.9	5.2	4.1	4.8	6.0	7.1	4.9	4.6	6.0	5.7
12	4.7	5.0	4.8	5.0	4.1	4.8	6.2	6.5	4.8	4.5	5.8	5.6
13	4.5	6.4	4.8	5.0	4.1	4.9	6.0	6.4	4.7	4.5	5.8	5.6
14	4.5	5.6	4.9	4.9	4.0	4.9	5.8	6.2	4.7	4.9	5.6	5.4
15	4.5	5.3	4.9	4.8	4.0	5.2	6.0	6.1	4.7	4.4	5.3	5.4
16	4.5	5.2	4.9	4.7	4.1	4.7	6.2	5.8	4.7	4.3	5.2	5.2
17	4.5	7.2	4.9	4.6	4.1	4.7	6.0	5.8	4.7	4.2	5.2	5.2
18	4.6	6.3	4.9	4.5	4.1	6.4	6.0	6.0	4.7	4.2	6.0	5.1
19	4.3	6.0	4.9	4.5	4.1	28	6.0	9.2	4.5	4.2	11	5.1
20	4.3	5.8	4.8	4.6	4.1	9.1	6.0	6.8	5.1	4.2	30	5.2
21	4.3	5.5	4.8	4.6	4.1	7.8	6.2	6.0	4.7	4.3	9.0	5.0
22	4.3	5.4	4.8	4.5	4.2	7.6	6.1	5.8	4.6	4.6	8.0	5.1
23	4.3	5.4	4.8	4.5	5.5	12	6.1	5.9	4.7	4.4	7.4	5.0
24	4.3	5.4	4.8	4.4	4.6	9.0	6.1	5.7	4.5	5.3	7.0	5.1
25	4.3	5.4	4.8	4.2	4.4	7.6	6.3	5.5	4.4	4.8	6.6	5.0
26	4.5	5.4	4.9	4.1	4.7	6.9	6.2	5.5	4.5	4.5	8.4	5.0
27	4.5	5.6	4.8	4.2	4.5	6.5	6.8	5.4	4.6	4.4	92	4.9
28	4.5	5.6	4.8	4.3	4.4	6.4	6.7	5.4	4.6	4.4	145	5.0
29	4.5	5.6	4.9	4.4	---	9.4	6.5	5.4	4.8	4.4	60	5.1
30	4.5	5.3	4.9	4.3	---	21	6.9	5.7	4.6	5.0	11	5.0
31	4.5	---	4.9	4.2	---	8.3	---	5.4	---	4.5	9.4	---
TOTAL	137.9	159.2	152.8	145.2	118.2	227.2	188.6	198.6	146.7	139.9	595.9	172.9
MEAN	4.45	5.31	4.93	4.68	4.22	7.33	6.29	6.41	4.89	4.51	19.2	5.76
MAX	4.9	7.2	5.2	5.2	5.5	28	7.6	9.2	6.1	5.3	145	8.5
MIN	4.1	4.5	4.8	4.1	4.0	4.4	5.8	5.4	4.4	4.2	4.5	4.9
WTR YR 1979	TOTAL	2383.1	MEAN	6.53	MAX	145	MIN	4.0				

COON CREEK BASIN

05386490 SPRING COULEE CREEK NEAR COON VALLEY, WI--CONTINUED

DAY	DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980											
	MEAN VALUES											
	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6.3	5.9	5.0	5.0	4.9	4.0	5.9	5.7	6.5	5.2	4.2	7.7
2	5.8	5.6	4.7	5.0	4.8	4.0	5.9	5.5	6.5	5.0	5.6	7.2
3	5.6	5.3	4.7	5.0	4.7	4.0	6.7	5.5	6.3	5.0	4.4	6.9
4	5.5	5.2	4.6	5.0	4.7	4.0	7.5	5.5	5.9	5.0	4.5	7.4
5	5.4	5.8	4.9	4.8	4.7	4.0	6.7	5.7	6.7	5.0	4.4	6.6
6	5.7	6.3	4.9	5.0	4.7	4.0	7.0	5.9	7.5	4.8	4.4	6.5
7	5.5	5.7	5.3	5.0	4.7	4.0	7.5	5.7	7.3	4.8	22	19
8	5.5	5.6	5.0	5.0	4.7	4.0	15	5.9	6.7	4.8	42	8.6
9	5.4	5.5	4.9	5.0	4.7	4.0	11	5.7	6.5	4.8	7.3	9.0
10	5.5	5.4	4.9	5.0	4.7	4.0	8.4	6.1	6.1	4.8	7.1	7.7
11	5.6	5.4	5.0	10	4.6	4.1	8.0	6.1	5.9	4.8	7.4	7.5
12	5.5	5.3	4.8	6.9	4.6	4.2	7.8	5.9	5.9	4.7	6.5	11
13	5.3	5.1	4.6	5.0	4.6	4.5	7.4	6.5	5.9	4.7	7.8	8.1
14	5.2	5.1	4.4	4.8	4.6	4.7	7.1	6.1	5.9	4.8	6.8	7.6
15	5.4	5.2	4.3	5.5	4.6	14	6.9	6.1	5.7	4.8	6.2	7.4
16	5.4	5.2	4.3	134	4.6	136	6.7	5.9	5.7	5.5	6.5	7.2
17	5.5	5.2	4.2	14	4.6	30	6.7	5.9	5.7	5.2	6.8	6.8
18	5.6	5.2	4.2	6.6	4.6	70	6.7	6.1	6.3	5.0	6.4	6.6
19	5.5	5.2	4.2	5.9	4.6	38	6.7	6.1	6.9	5.0	7.6	6.7
20	5.4	5.0	4.3	5.7	4.6	14	6.7	5.9	5.9	8.7	18	7.3
21	5.4	5.3	4.4	5.4	4.8	7.3	6.7	5.5	5.9	5.2	11	6.7
22	7.8	6.0	4.8	5.4	6.9	6.0	6.6	5.5	5.5	5.0	7.8	7.2
23	7.0	5.5	6.9	5.3	6.5	5.8	6.4	5.4	5.5	4.9	7.2	7.0
24	6.0	5.3	5.6	5.2	4.6	5.6	6.2	5.5	5.5	4.6	6.8	6.8
25	5.9	5.2	5.4	5.2	3.8	6.1	6.1	5.4	5.5	4.6	6.6	6.6
26	5.7	5.6	5.4	5.2	4.0	7.3	5.9	5.2	5.4	4.5	6.4	6.5
27	5.8	5.3	5.2	5.2	4.0	6.9	5.8	5.4	5.4	4.5	7.4	6.5
28	5.7	5.2	5.2	5.2	4.0	6.4	5.8	5.5	5.7	4.2	6.8	6.7
29	5.6	5.2	5.0	5.1	4.0	7.2	5.9	6.5	5.4	4.2	6.6	6.6
30	5.6	5.1	5.0	5.1	---	6.4	5.9	9.5	5.2	4.4	13	6.5
31	6.0	---	5.0	5.0	---	6.1	---	7.1	---	4.3	8.3	---
TOTAL	177.1	161.9	151.1	305.5	135.9	430.6	213.6	184.3	180.8	152.8	273.8	229.9
MEAN	5.71	5.40	4.87	9.85	4.69	13.9	7.12	5.95	6.03	4.93	8.83	7.66
MAX	7.8	6.3	6.9	134	6.9	136	15	9.5	7.5	8.7	42	19
MIN	5.2	5.0	4.2	4.8	3.8	4.0	5.8	5.2	5.2	4.2	4.2	6.5
CAL YR 1979	TOTAL	2423.3	MEAN	6.64	MAX	145	MIN	4.0				
WTR YR 1980	TOTAL	2597.3	MEAN	7.10	MAX	136	MIN	3.8				

COON CREEK BASIN

05386500 COON CREEK AT COON VALLEY, WI

LOCATION.--Lat 43°42'17", long 91°01'06", in SE 1/4 NE 1/4 sec.7, T.14 N., R.5 W., Vernon County, Hydrologic Unit 07060001, on left bank approximately 300 ft (90 m) upstream from foot bridge across Coon Creek and 1,400 ft (43 m) upstream from U.S. Highways 14 and 61, in village park in Coon Valley.

DRAINAGE AREA.--78.3 mi² (203 km²).

PERIOD OF RECORD.--April 1934 to September 1940. December 1978 to current year.

GAGE.--Water-stage recorder. Datum of gage is 711.61 ft (216.899 m) National Geodetic Vertical Datum of 1929 (Carl C. Crane, Inc., bench mark). Prior to September 30, 1940, at site 700 ft (200 m) downstream and at datum 5.04 ft (1.536 m) higher.

REMARKS.--Records good except winter records, which are fair.

AVERAGE DISCHARGE.--8 years (1935-40, 1979-80) 47.0 ft³/s (1.330 m³/s) 8.14 in/yr (207 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 8,110 ft³/s (230 m³/s) Aug. 6, 1935, gage height 12.90 ft (3.932 m) site and datum then in use; minimum 4.4 ft³/s (0.12 m³/s) Feb. 22, 1935, gage height, 0.65 ft (0.198 m) site and datum then in use, caused by ice jam upstream from gage; minimum daily discharge, 21 ft³/s (0.60 m³/s) Aug. 26, 1934.

EXTREMES FOR CURRENT PERIOD.--Water year 1979: Maximum discharge, 3,270 ft³/s (92.6 m³/s) Aug. 29, gage height, 12.46 ft (3.798 m); minimum daily, 36 ft³/s (1.02 m³/s) Dec. 10.

Water year 1980: Maximum discharge, 1,910 ft³/s (54.1 m³/s) Aug. 8, gage height, 10.20 ft (3.11 m); minimum daily, 40.0 ft³/s (1.13 m³/s) Jan. 6-10.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979												
DAY	MEAN VALUES											
	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	41	40	46	40	38	45	91	57	58	47	48	91
2	41	40	52	40	38	44	87	89	57	47	46	91
3	41	41	54	40	38	47	82	85	55	50	57	79
4	41	41	52	40	39	51	78	71	55	60	60	75
5	41	41	52	40	39	51	77	66	54	51	360	77
6	42	42	51	40	39	50	68	64	57	48	84	74
7	42	42	45	40	40	48	68	61	88	47	69	71
8	42	42	40	40	40	47	68	60	77	46	64	68
9	42	41	37	41	40	47	65	58	61	47	76	66
10	42	42	36	40	41	47	64	60	60	47	81	64
11	45	43	39	40	40	47	61	80	60	53	60	63
12	44	44	39	40	40	46	64	62	59	47	57	62
13	42	56	39	40	41	48	61	59	56	48	56	62
14	41	51	40	40	40	50	58	58	54	56	54	61
15	40	47	42	39	40	49	60	56	54	50	50	60
16	40	46	41	39	39	47	61	54	52	47	50	59
17	40	64	42	39	39	50	58	55	52	46	50	58
18	41	59	41	40	40	80	58	55	51	43	51	58
19	40	55	41	40	41	222	59	120	49	44	135	57
20	40	52	42	40	40	148	57	80	56	44	163	57
21	39	51	44	40	41	102	56	69	51	44	82	55
22	39	51	44	41	45	98	52	64	48	51	80	55
23	39	50	44	41	61	151	51	63	48	47	76	55
24	39	50	44	40	51	123	50	60	48	55	71	55
25	39	49	43	38	48	95	52	58	46	56	65	55
26	39	48	42	39	47	87	54	57	46	49	64	55
27	39	48	42	39	47	82	58	58	47	48	470	53
28	39	48	41	40	45	85	58	57	46	48	163	53
29	38	47	41	40	---	122	54	54	47	46	740	53
30	39	46	40	39	---	270	63	67	48	53	116	53
31	39	---	40	39	---	118	---	60	---	50	94	---
TOTAL	1256	1417	1336	1234	1177	2597	1893	2017	1640	1515	3692	1895
MEAN	40.5	47.2	43.1	39.8	42.0	83.8	63.1	65.1	54.7	48.9	119	63.2
MAX	45	64	54	41	61	270	91	120	88	60	740	91
MIN	38	40	36	38	38	44	50	54	46	43	46	53
CFSM	.53	.61	.56	.52	.54	1.09	.82	.84*	.71	.63	1.54	.82
IN.	.61	.68	.64	.59	.57	1.25	.91	.97	.79	.73	1.78	.91
WTR YR 1979	TOTAL	21669	MEAN 59.4	MAX 740	MIN 36	CFSM .77	IN 10.44					

COON CREEK BASIN
05386500 COON CREEK AT COON VALLEY, WI--CONTINUED

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980												
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	61	55	50	45	54	53	57	55	62	53	45	99
2	63	51	48	45	54	53	56	55	62	53	48	92
3	57	49	47	45	54	53	60	55	61	53	48	83
4	56	48	46	45	54	54	66	54	59	53	45	94
5	56	51	46	41	54	51	64	53	65	53	47	77
6	56	61	46	40	54	52	66	53	88	51	45	74
7	55	54	49	40	54	52	72	53	96	51	220	370
8	55	53	48	40	54	53	130	54	77	51	620	116
9	54	53	47	40	54	51	110	54	73	52	106	119
10	52	51	47	40	54	51	94	56	69	53	86	96
11	52	51	47	41	54	51	86	58	66	45	123	87
12	52	51	46	52	54	50	76	56	64	45	82	301
13	51	50	45	47	54	52	74	56	66	45	100	122
14	51	50	44	46	51	51	70	56	64	45	81	102
15	51	50	44	47	51	86	68	56	60	45	72	96
16	53	50	43	574	52	586	64	55	61	61	73	91
17	53	51	42	208	51	253	65	55	60	50	87	87
18	53	51	42	95	48	366	64	55	61	49	72	82
19	53	51	42	79	53	283	65	55	73	49	174	78
20	53	51	43	70	53	140	64	55	58	112	161	90
21	53	51	44	67	59	82	64	55	58	56	273	80
22	80	64	45	65	74	63	64	53	56	51	102	86
23	74	59	70	64	66	58	62	53	55	49	88	77
24	57	58	53	62	57	54	61	53	55	46	81	74
25	53	55	50	60	55	53	60	53	54	46	80	74
26	51	57	48	60	54	59	60	53	53	46	74	72
27	51	57	47	58	53	61	60	53	52	46	94	71
28	50	54	45	56	53	58	57	53	52	45	79	72
29	48	51	45	54	53	60	55	61	52	44	74	73
30	48	51	45	53	---	59	55	95	52	45	255	72
31	51	---	45	53	---	59	---	66	---	46	119	---
TOTAL	1703	1589	1449	2332	1585	3107	2069	1747	1884	1589	3654	3107
MEAN	54.9	53.0	46.7	75.2	54.7	100	69.0	56.4	62.8	51.3	118	104
MAX	80	64	70	574	74	586	130	95	96	112	620	370
MIN	48	48	42	40	48	50	55	53	52	44	45	71
CFSM	.71	.69	.61	.97	.71	1.30	.89	.73	.81	.67	1.53	1.35
IN.	.82	.77	.70	1.12	.76	1.50	1.00	.84	.91	.77	1.76	1.50
CAL YR 1979	TOTAL	22401	MEAN	61.4	MAX	740	MIN	38	CFSM	.80	IN	10.79
WTR YR 1980	TOTAL	25815	MEAN	70.5	MAX	620	MIN	40	CFSM	.91	IN	12.44

COON CREEK BASIN

05386999 COON CREEK NEAR STODDARD, WI

LOCATION.--Lat 43°39'36", long 91°08'37", in SE 1/4 NW 1/4 sec.30, T.14 N., R.6 W., Vernon County, Hydrologic Unit 07060001, near center of upstream side of bridge on State Highway 162, 3.8 mi (6.1 km) east of Stoddard.

DRAINAGE AREA.--120 mi² (311 km²).

PERIOD OF RECORD.--April 1934 to September 1940, January 1979 to current year.

GAGE.--Nonrecording gage. Datum of gage is 656.67 ft (200.153 m) National Geodetic Vertical Datum of 1929. Prior to Sept. 30, 1940, recording gage at site 0.8 mi (1.3 km) downstream at datum approximately 6.5 ft (1.98 m) lower. Jan. 10, 1979, to Apr. 18, 1979, nonrecording gage, and Apr. 19, 1979, to May 7, 1980, recording gage.

REMARKS.--Records fair.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 5,160 ft³/s (146 m³/s) Aug. 6, 1935, gage height, 10.70 ft (3.261 m), site and datum then in use; minimum, 17 ft³/s (0.48 m³/s) Jan. 25, 1938, caused by ice jam upstream from gage; minimum daily, 31 ft³/s (0.88 m³/s) Dec. 23, 1937.

EXTREMES FOR CURRENT PERIOD.--January to September 1979: Maximum discharge, 1,460 ft³/s (41.3 m³/s) Aug. 29, gage height, 13.01 ft (3.965 m); minimum daily, 62 ft³/s (1.76 m³/s) Feb. 16.

October 1979 to July 1980: Maximum daily discharge, 801 ft³/s (22.7 m³/s) Mar. 17; minimum daily discharge, 59 ft³/s (1.67 m³/s) Jan. 8.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979												
DAY	OCT	NOV	DEC	JAN	MEAN VALUES		APR	MAY	JUN	JUL	AUG	SEP
					FEB	MAR						
1				---	63	68	120	84	79	70	68	129
2				---	64	69	118	114	76	70	68	129
3				---	63	74	105	135	75	73	77	110
4				---	63	77	105	95	75	81	80	105
5				---	64	80	104	91	77	71	420	110
6				---	63	79	96	89	75	69	453	124
7				---	63	78	95	86	79	69	96	102
8				---	63	72	96	86	84	68	88	98
9				---	64	70	91	84	79	68	90	96
10				65	64	71	90	88	80	68	112	95
11				65	64	72	91	120	77	74	86	93
12				64	64	73	92	88	75	70	82	92
13				64	65	71	88	84	74	69	81	91
14				64	64	70	87	83	73	77	79	89
15				63	63	70	88	81	73	71	79	88
16				64	62	71	87	79	73	68	80	87
17				65	63	76	83	78	73	67	82	86
18				65	64	116	81	78	73	67	82	85
19				64	64	280	80	152	72	67	162	84
20				63	65	180	84	92	78	66	339	84
21				64	66	130	86	84	74	66	123	83
22				64	70	120	80	83	72	68	109	82
23				64	86	205	79	83	72	69	103	82
24				63	78	165	78	81	71	73	99	82
25				63	72	118	80	80	70	79	94	82
26				64	70	104	83	79	70	70	92	81
27				64	70	98	82	79	71	68	729	81
28				63	68	105	86	77	71	68	389	81
29				63	---	133	81	78	72	68	988	81
30				63	---	135	90	82	72	72	340	82
31				63	---	140	---	80	---	71	150	---
TOTAL				---	1852	3270	2706	2773	2235	2175	5920	2794
MEAN				---	66.1	105	90.2	89.5	74.5	70.2	191	93.1
MAX				---	86	280	120	152	84	81	988	129
MIN				---	62	68	78	77	70	66	68	81
CFSM				---	.55	.88	.75	.75	.62	.59	1.59	.78
IN.				---	.57	1.01	.84	.86	.69	.67	1.84	.87

COON CREEK BASIN
05386999 COON CREEK NEAR STODDARD, WI--CONTINUED

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980											
DAY	MEAN VALUES										
	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG
1	94	87	68	67	80	79	89	84	94		
2	100	81	67	68	80	81	88	84	92		
3	89	79	66	66	81	80	95	83	90		
4	87	78	64	64	80	79	110	82	92		
5	85	81	65	61	81	78	164	82	103		
6	85	93	66	60	79	80	90	82	128		
7	85	82	69	60	79	80	100	83	153		
8	84	80	68	59	80	78	150	83	120		
9	84	80	68	60	81	76	292	86	108		
10	83	78	67	60	81	75	131	87	103		
11	85	76	68	61	82	76	111	89	98		
12	85	77	64	74	82	80	100	94	99		
13	83	77	62	69	81	80	100	99	100		
14	82	75	62	72	79	85	102	97	97		
15	84	76	61	200	78	200	98	107	94		
16	83	75	61	770	78	589	99	92	93		
17	82	74	62	230	76	801	100	88	92		
18	82	74	62	150	72	315	100	92	95		
19	84	73	62	120	78	627	98	91	110		
20	85	71	61	113	83	349	98	85	91		
21	84	73	64	104	90	156	97	83	88		
22	139	86	76	98	105	105	96	83	87		
23	131	77	100	98	93	96	96	81	85		
24	97	74	80	96	85	84	94	80	83		
25	87	72	78	92	81	84	91	82	82		
26	85	75	70	89	81	91	91	81	80		
27	84	75	68	87	80	92	86	79	79		
28	84	71	66	84	80	90	85	81	78		
29	82	70	66	82	80	91	84	82	77		
30	80	69	67	79	---	90	82	138	75		
31	85	---	67	79	---	89	---	95	---		
TOTAL	2749	2309	2095	3472	2366	5056	3217	2735	2866		
MEAN	88.7	77.0	67.6	112	81.6	163	107	88.2	95.5		
MAX	139	93	100	770	105	801	292	138	153		
MIN	80	69	61	59	72	75	82	79	75		
CFSM	.74	.64	.56	.93	.68	1.36	.89	.74	.80		
IN.	.85	.72	.65	1.08	.73	1.57	1.00	.85	.89		

MISSISSIPPI RIVER MAIN STEM

05389500 MISSISSIPPI RIVER AT MC GREGOR, IA

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

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

WATER-DISCHARGE RECORDS

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

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

GAGE.--Water-stage recorder. Datum of gage is 604.84 ft (184.355 m) National Geodetic Vertical Datum of 1929. Prior to June 1, 1937, and since June 2, 1939, auxiliary water-stage recorder; June 1, 1937, to June 1, 1939, auxiliary nonrecording gage 14.1 mi (22.7 km) upstream in tailwater of dam 9, at datum 5.30 ft (1.615 m) lower.

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

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

AVERAGE DISCHARGE.--44 years, 33,800 ft³/s (957.2 m³/s), 6.80 in/yr (173 mm/yr), 24,490,000 acre-ft/yr (30,200 hm³/yr).

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

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

EXTREMES FOR CURRENT YEAR.--Maximum daily discharge, 87,400 ft³/s (2,480 m³/s) Sept. 26; maximum gage height, 14.05 ft (4.282 m) Sept. 29; minimum daily discharge, 11,300 ft³/s (320 m³/s) July 8; minimum gage height, 5.93 ft (1.807 m) July 9.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980												
DAY	MEAN VALUES											
	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	20700	38500	37700	22000	23000	25000	49100	37200	34900	17900	13800	43200
2	21800	35900	32900	22000	22500	24000	48900	36600	38700	20400	12700	37600
3	24700	35200	32000	22000	22000	23500	48800	36400	37600	25700	13200	30700
4	25600	35900	27500	22000	22000	23000	49700	34000	36500	28300	13700	29500
5	25300	36800	24500	24000	22000	22500	50500	29200	37900	28300	13500	34100
6	23800	38600	24000	26000	22500	22500	52000	26800	45400	23200	13500	38300
7	22200	40400	24000	27000	23000	22000	55600	25500	51500	15700	14000	46300
8	19300	41100	23500	26000	23500	22000	61900	24700	55000	11300	21600	52800
9	19200	42500	23000	23000	24000	22000	67900	23600	57300	12000	27100	51600
10	19500	45000	25000	18500	24000	22500	70300	20500	61800	16100	32600	49000
11	20100	47300	26500	15500	24000	23000	72300	19400	70700	20100	37900	43800
12	20300	47800	26000	14500	24000	24000	74900	20000	76200	19300	41500	41800
13	20300	47500	23500	15000	24000	25000	78800	21600	78400	20300	44600	42500
14	19200	46300	21000	16000	23500	26000	83900	24700	76900	19800	47000	45900
15	16800	45000	19000	16000	23500	27000	85700	27600	74600	18200	45500	48200
16	16700	43700	18500	18000	23500	30000	86700	28700	70400	17300	39300	49700
17	16500	40500	17000	24000	23000	36900	87100	28900	60900	14700	32400	52400
18	16600	36700	16000	33000	23000	44500	84200	28000	49700	14500	25700	55000
19	18400	36500	17000	39000	23000	52400	79500	24900	44800	15000	20100	58100
20	20500	37000	19500	41000	23500	60400	75200	19900	42300	21700	19600	58900
21	24100	38300	23000	39000	23500	66200	69100	18800	41100	23100	23300	58700
22	26200	38800	25000	36000	24000	69000	63500	19300	36600	20500	30500	66900
23	28700	39100	27000	34000	25000	72400	58800	21600	32800	16000	32000	71500
24	31300	37800	29000	31000	26000	75500	55100	25200	29800	14200	29400	75100
25	36200	38500	31000	29000	27000	73100	50100	27600	27700	13500	24200	83000
26	42000	39900	32500	27000	28000	68300	47100	24600	28500	13500	21100	87400
27	45400	40500	32000	26000	27000	65600	43800	18900	28900	16400	32800	84900
28	46900	41500	30000	25000	26000	60800	40400	14600	28700	19600	30900	81200
29	47100	41700	28000	24500	25500	54600	39200	11800	25600	19400	33800	78100
30	46600	40700	26000	24000	---	50000	37500	16000	20300	18500	40600	73100
31	43300	---	23500	23500	---	49200	---	26800	---	15600	43300	---
TOTAL	825300	1215000	785100	783500	695500	1282900	1867600	763400	1401500	570100	871200	1669300
MEAN	26620	40500	25330	25270	23980	41380	62250	24630	46720	18390	28100	55640
MAX	47100	47800	37700	41000	28000	75500	87100	37200	78400	28300	47000	87400
MIN	16500	35200	16000	14500	22000	22000	37500	11800	20300	11300	12700	29500
CFSM	.39	.60	.38	.37	.36	.61	.92	.37	.69	.27	.42	.82
IN.	.45	.67	.43	.43	.38	.71	1.03	.42	.77	.31	.48	.92
CAL YR 1979	TOTAL	17300200	MEAN	47400	MAX	133000	MIN	14400	CFSM	.70	IN	9.53
WTR YR 1980	TOTAL	12730400	MEAN	34780	MAX	87400	MIN	11300	CFSM	.52	IN	7.02

MISSISSIPPI RIVER MAIN STEM

05389500 MISSISSIPPI RIVER AT MCGREGOR, IA--CONTINUED

WATER-QUALITY RECORDS

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

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

PERIOD OF DAILY RECORD.--

SUSPENDED-SEDIMENT DISCHARGE: July 1975 to current year.

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

EXTREMES FOR PERIOD OF DAILY RECORD.--

SUSPENDED-SEDIMENT CONCENTRATIONS: Maximum daily mean, 707 mg/l Mar. 31, 1979; minimum daily mean, 1 mg/l Dec. 23-25, 1976, Dec. 20, 28, 1977.

SUSPENDED-SEDIMENT DISCHARGE: Maximum daily, 166,000 tons (150,600 tonnes) Mar. 31, 1979; minimum daily, 31 tons (28 tonnes) Dec. 25, 1976.

EXTREMES FOR CURRENT YEAR.--

SEDIMENT CONCENTRATIONS: Maximum daily mean, 324 mg/l Mar. 14; minimum daily mean, 7 mg/l Feb. 7.

SUSPENDED-SEDIMENT DISCHARGE: Maximum daily, 42,400 tons (38,960 tonnes) June 9; minimum daily, 435 tons (395 tonnes) Feb. 6.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

				BED MAT. FALL DIAM. % FINER THAN .004 MM	BED MAT. SIEVE DIAM. % FINER THAN .062 MM	BED MAT. SIEVE DIAM. % FINER THAN .125 MM	BED MAT. SIEVE DIAM. % FINER THAN .250 MM	
DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	TEMPER- ATURE, WATER (DEG C)					
OCT , 1979								
24...	1000	29800	--	--	3	7	37	
APR , 1980								
09...	1030	66800	--	3	7	8	18	
MAY								
20...	1130	19000	16.5	--	3	6	42	
JUL								
01...	1100	17700	--	--	9	16	48	
AUG								
12...	1200	42200	--	--	5	12	43	
		BED MAT. SIEVE DIAM. % FINER THAN .500 MM	BED MAT. SIEVE DIAM. % FINER THAN 1.00 MM	BED MAT. SIEVE DIAM. % FINER THAN 2.00 MM	BED MAT. SIEVE DIAM. % FINER THAN 4.00 MM	BED MAT. SIEVE DIAM. % FINER THAN 8.00 MM	BED MAT. SIEVE DIAM. % FINER THAN 16.0 MM	BED MAT. SIEVE DIAM. % FINER THAN 32.0 MM
OCT , 1979								
24...	87	97	99	100	--	--	--	--
APR , 1980								
09...	70	96	99	100	--	--	--	--
MAY								
20...	91	97	99	100	--	--	--	--
JUL								
01...	89	97	99	99	100	--	--	--
AUG								
12...	79	86	88	91	95	98	100	100

MISSISSIPPI RIVER MAIN STEM

05389500 MISSISSIPPI RIVER AT MCGREGOR, IOWA--CONTINUED

WATER-QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	STREAM- FLOW (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	TEMPER- ATURE (DEG C)	DATE	STREAM- FLOW (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	TEMPER- ATURE (DEG C)
OCT , 1979				APR , 1980			
02...	21800	510	16.5	09...	67900	330	6.0
05...	25300	500	10.0	14...	83900	290	5.0
07...	22200	500	12.0	20...	75200	310	14.0
12...	20300	500	10.0	24...	55100	340	10.0
14...	19200	500	8.5	MAY			
19...	18400	520	13.0	02...	36600	320	14.0
21...	24100	415	13.0	04...	34000	300	18.0
24...	31300	490	8.0	09...	23600	310	13.0
26...	42000	480	7.0	11...	19400	320	14.0
29...	47100	480	10.0	16...	28700	320	14.0
NOV				18...	28000	330	14.0
02...	35900	360	8.0	21...	18800	330	16.5
04...	35900	390	7.0	24...	25200	340	18.5
07...	40400	410	6.0	26...	24600	340	20.0
14...	46300	430	3.0	30...	16000	360	22.0
16...	43700	445	4.0	JUNE			
18...	36700	470	--	01...	34900	340	20.0
22...	38800	490	6.0	06...	45400	320	22.0
25...	38500	500	5.0	08...	55000	330	20.0
29...	41700	500	2.0	12...	76200	290	18.0
DEC				16...	70400	270	18.0
03...	32000	500	1.0	20...	42300	360	18.0
06...	24000	500	3.0	22...	36600	380	22.0
09...	23000	490	2.0	26...	28500	400	24.0
27...	32000	545	6.0	29...	25600	410	23.0
30...	26000	560	.0	JULY			
JAN , 1980				01...	17900	420	22.5
02...	22000	565	.0	03...	25700	430	23.5
06...	26000	575	.0	07...	15700	440	25.0
08...	26000	605	.0	12...	19300	430	28.0
12...	14500	545	3.0	15...	18200	410	27.5
14...	16000	460	.0	18...	14500	420	27.0
18...	33000	440	.0	20...	21700	400	26.0
21...	39000	555	.0	25...	13500	410	24.0
25...	29000	565	.0	27...	16400	420	22.0
29...	24500	550	.0	AUG			
FEB				01...	13800	410	24.0
01...	23000	555	.0	03...	13200	410	24.0
04...	22000	560	.0	08...	21600	415	24.0
08...	23500	560	.0	11...	37900	400	24.0
11...	24000	540	.0	12...	41500	400	26.0
15...	23500	550	.0	14...	47000	380	23.0
18...	23000	540	.0	20...	19600	300	24.0
21...	23500	540	.0	23...	32000	320	23.0
25...	27000	500	.0	25...	24200	330	23.0
29...	25500	500	.0	29...	33800	340	24.0
MAR				31...	43300	350	23.0
02...	24000	500	.0	SEPT			
06...	22500	500	.0	05...	34100	320	20.0
09...	22000	495	.0	07...	46300	300	22.5
13...	25000	490	.0	11...	43800	270	20.0
17...	36900	445	--	14...	45900	260	20.0
21...	66200	355	--	17...	52400	250	16.0
24...	75500	360	--	21...	58700	250	18.0
27...	65600	375	--	24...	75100	240	17.0
31...	49200	395	--	25...	83000	255	16.0
APR				29...	78100	190	15.0
03...	48800	400	--				
07...	55600	370	--				

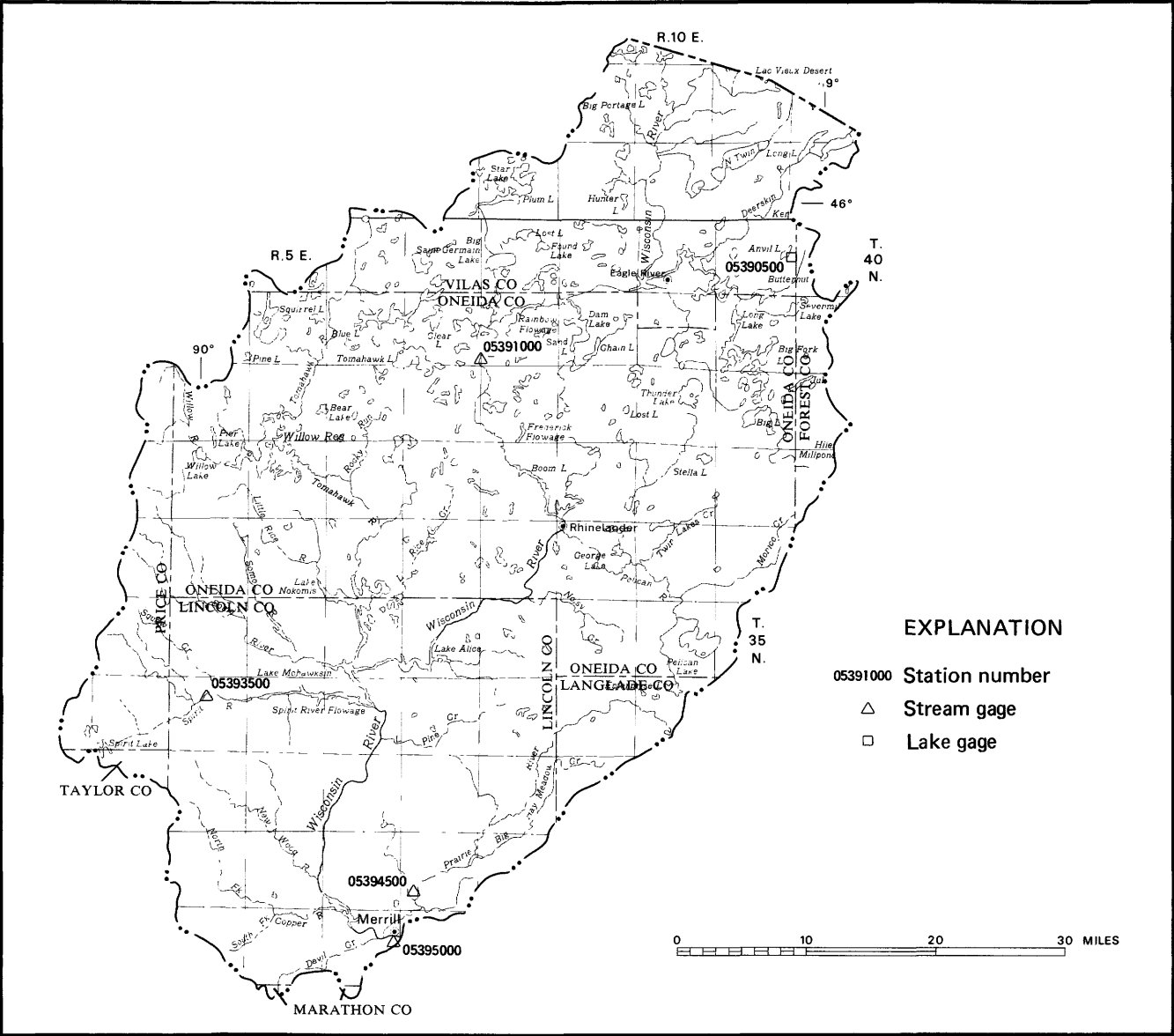
MISSISSIPPI RIVER MAIN STEM

05389500 MISSISSIPPI RIVER AT MCGREGOR, IOWA--CONTINUED

SUSPENDED-SEDIMENT, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DAY	MEAN CONCEN- TRATION (MG/L)	LOADS (T/DAY)	MEAN CONCEN- TRATION (MG/L)	LOADS (T/DAY)	MEAN CONCEN- TRATION (MG/L)	LOADS (T/DAY)	MEAN CONCEN- TRATION (MG/L)	LOADS (T/DAY)	MEAN CONCEN- TRATION (MG/L)	LOADS (T/DAY)	MEAN CONCEN- TRATION (MG/L)	LOADS (T/DAY)
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	38	2120	92	9560	37	3770	53	3150	18	1120	40	2700
2	31	1820	116	11200	29	2580	51	3030	14	850	30	1940
3	40	2670	89	8460	25	2160	52	3090	11	653	24	1520
4	70	4840	50	4850	82	6090	103	6120	8	475	18	1120
5	71	4850	54	5370	133	8800	168	10900	8	475	15	911
6	52	3340	66	6880	119	7710	207	14500	8	486	11	668
7	41	2460	74	8070	85	5510	210	15300	7	435	14	832
8	39	2030	73	8100	61	3870	180	12600	10	634	56	3330
9	37	1920	70	8030	48	2980	155	9630	31	2010	128	7600
10	36	1900	64	7780	45	3040	142	7090	74	4800	138	8380
11	31	1680	57	7280	43	3080	134	5610	108	7000	117	7270
12	37	2030	52	6710	41	2880	129	5050	103	6670	185	12000
13	59	3230	46	5900	40	2540	118	4780	84	5440	307	20700
14	76	3940	42	5250	39	2210	101	4360	69	4380	324	22700
15	72	3270	34	4130	39	2000	86	3720	52	3300	266	19400
16	66	2980	30	3540	38	1900	82	3990	58	3680	193	15600
17	62	2760	35	3830	37	1700	85	5510	54	3350	126	12600
18	56	2510	40	3960	37	1600	91	8110	50	3110	108	13000
19	63	3130	43	4240	34	1560	80	8420	46	2860	107	15100
20	68	3760	47	4700	42	2210	56	6200	42	2660	103	16800
21	60	3900	51	5270	52	3230	30	3160	37	2350	97	17300
22	75	5310	57	5970	56	3780	25	2430	38	2460	88	16400
23	111	8600	74	7810	57	4160	24	2200	57	3850	67	13100
24	149	12600	77	7860	60	4700	23	1930	53	3720	45	9170
25	153	15000	65	6760	61	5110	23	1800	30	2190	38	7500
26	135	15300	59	6360	54	4740	21	1530	24	1810	31	5720
27	108	13200	56	6120	37	3200	18	1260	22	1600	22	3900
28	79	10000	53	5940	34	2750	14	945	24	1680	22	3610
29	61	7760	50	5630	49	3700	14	926	49	3370	22	3240
30	63	7930	45	4950	57	4000	17	1100	---	---	22	2970
31	66	7720	---	---	55	3490	23	1460	---	---	22	2920
TOTAL	---	164560	---	190510	---	111050	---	159901	---	77418	---	270001

DAY	MEAN CONCEN- TRATION (MG/L)	LOADS (T/DAY)	MEAN CONCEN- TRATION (MG/L)	LOADS (T/DAY)	MEAN CONCEN- TRATION (MG/L)	LOADS (T/DAY)	MEAN CONCEN- TRATION (MG/L)	LOADS (T/DAY)	MEAN CONCEN- TRATION (MG/L)	LOADS (T/DAY)	MEAN CONCEN- TRATION (MG/L)	LOADS (T/DAY)
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	22	2920	86	8640	82	7730	57	2750	116	4320	253	29500
2	23	3040	74	7310	126	13200	82	4520	109	3740	242	24600
3	22	2900	63	6190	128	13000	221	15300	114	4060	206	17100
4	22	2950	51	4680	112	11000	252	19300	117	4330	160	12700
5	23	3140	49	3860	104	10600	210	16000	117	4260	130	12000
6	24	3370	55	3980	124	15200	149	9330	114	4160	155	16000
7	45	6760	66	4540	188	26100	101	4280	110	4160	199	24900
8	97	16200	78	5200	252	37400	67	2040	145	8460	215	30700
9	167	30600	93	5930	274	42400	55	1780	175	12800	208	29000
10	190	36100	88	4870	243	40500	80	3480	172	15100	158	20900
11	173	33800	67	3510	172	32800	104	5640	122	12500	108	12800
12	148	29900	58	3130	117	24100	80	4170	70	7840	94	10600
13	126	26800	61	3560	96	20300	77	4220	68	8190	87	9980
14	99	22400	69	4600	89	18500	73	3900	60	7610	86	10700
15	81	18700	80	5960	89	17900	65	3190	57	7000	76	9890
16	70	16400	89	6900	93	17700	56	2620	54	5730	63	8450
17	61	14300	81	6320	98	16100	48	1910	53	4640	58	8210
18	54	12300	70	5290	107	14400	42	1640	49	3400	63	9360
19	51	10900	56	3760	117	14200	49	1980	48	2600	68	10700
20	50	10200	44	2360	123	14000	75	4390	96	5080	71	11300
21	50	9330	35	1780	119	13200	135	8420	195	12300	82	13000
22	80	13700	46	2400	112	11100	128	7080	268	22100	105	19000
23	124	19700	63	3670	101	8940	110	4750	252	21800	210	40500
24	158	23500	80	5440	92	7400	90	3450	231	18300	240	48700
25	162	21900	102	7600	100	7480	72	2620	233	15200	115	25800
26	150	19100	100	6640	122	9390	87	3170	166	9460	78	18400
27	134	15800	86	4390	144	11200	125	5530	100	8860	64	14700
28	120	13100	69	2720	159	12300	151	7990	94	7840	55	12100
29	109	11500	49	1560	152	10500	164	8590	132	12000	52	11000
30	97	9820	44	1900	99	5430	152	7590	182	20000	64	12600
31	---	---	57	4120	---	---	134	5640	230	26900	---	---
TOTAL	---	461130	---	142810	---	504070	---	177270	---	304740	---	535190



Base from U.S. Geological Survey
State base map, 1968

UPPER WISCONSIN RIVER BASIN

WISCONSIN RIVER BASIN

05390500 ANVIL LAKE NEAR EAGLE RIVER, WI

LOCATION.--Lat 45°57'10", long 89°03'11", in sec.13, T.40 N., R.11 E., Vilas County, Hydrologic Unit 07070001, on north side of lake, 11 mi (17.7 km) northeast of Eagle River.

DRAINAGE AREA.--4.11 mi² (10.6 km²), revised. Area of Anvil Lake, 380 acres (1.54 km²).

PERIOD OF RECORD.--August 1936 to current year (fragmentary).

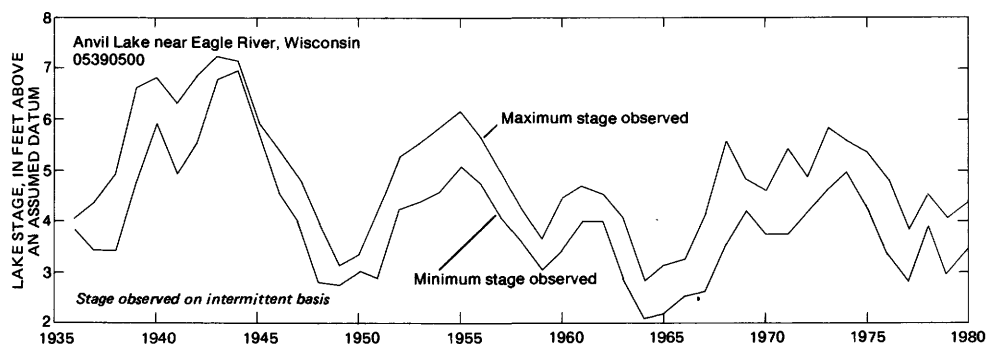
GAGE.--Nonrecording gage. Datum of gage is 90.00 ft (27.4 m) above datum assumed by Wisconsin Department of Natural Resources; gage readings have been reduced to elevations above this datum. Prior to Aug. 13, 1950, staff gage 0.3 mi (0.5 km) south at same datum.

REMARKS.--Add 90 ft (27.4 m) to obtain elevation above datum assumed for this lake by Wisconsin Department of Natural Resources. Lake has no surface outlet. Lake was ice covered about Nov. 20 to Apr. 10.

EXTREMES FOR PERIOD OF RECORD.--Maximum elevation observed, 7.20 ft (2.195 m) May 3, 7, 17, 21, 24, 28, June 20, 24, 1943; minimum observed, 2.10 ft (0.640 m) July 31, 1964.

EXTREMES FOR CURRENT YEAR.--Maximum elevation observed, 4.35 ft (1.326 m) Apr. 2; minimum observed, 3.45 ft (1.052 m) Oct. 13, 19.

GAGE HEIGHT (FEET ABOVE DATUM), WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980												
DAY	OCT	NOV	DEC	JAN	FEB	MEAN VALUES MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---				---	---	---	---	---	---
2	---	---	---				4.35	---	---	---	---	---
3	3.51	3.71	---				---	---	3.86	3.74	3.73	---
4	---	---	---				---	---	---	---	---	---
5	---	---	---				---	---	---	---	---	---
6	3.47	---	---				---	---	---	---	---	4.18
7	---	---	---				---	---	---	---	---	---
8	---	---	---				---	---	---	---	3.90	---
9	---	3.73	---				---	---	---	---	---	---
10	---	---	---				---	---	---	3.68	---	---
11	---	---					---	---		---	---	---
12	---	---	3.95				---	---	3.86	---	---	---
13	3.45	---	---				---	---	---	---	---	4.21
14	---	---	---				---	---	---	---	---	---
15	---	---	---				---	---	---	---	3.86	---
16	---	---	---				---	---	---	---	---	---
17	---	---	---				---	---	---	---	---	---
18	---	---	---				---	---	---	---	---	---
19	3.45	---	---				---	---	3.86	3.76	3.84	4.14
20	---	---	---				---	---	---	---	---	---
21	---		---				---	---		---	---	---
22	---	3.75	---				---	---	---	---	---	---
23	---	---	---				---	---	---	---	3.97	---
24	---	---	---				---	---	3.80	3.80	---	---
25	---	---	---				---	---	3.80	3.84	---	---
26		---	---				---	---	---	---	---	---
27	3.71	---	---				---	---	---	---	---	4.31
28	---	---	---				---	3.72	---	---	---	---
29	---	---	---				---	---	---	---	---	---
30	---	---	---				---	---	---	---	4.08	---
31	---	---	---				---	---	---	---	---	---



WISCONSIN RIVER BASIN

05391000 WISCONSIN RIVER AT RAINBOW LAKE, NEAR LAKE TOMAHAWK, WI

LOCATION.--Lat 45°49'58", long 89°32'51", in S 1/2 SW 1/4 sec.30, T.39 N., R.8 E., Oneida County, Hydrologic Unit 07070001, on right bank 400 ft (122 m) upstream from Gilmore Creek, 0.3 mi (0.5 km) downstream from Rainbow Lake, and 2.5 mi (4.0 km) northeast of Lake Tomahawk. Records include flow of Gilmore Creek.

DRAINAGE AREA.--755 mi² (1,955 km²), includes that of Gilmore Creek.

PERIOD OF RECORD.--July 1936 to current year. Prior to October 1955, published as "at Rainbow Reservoir, near Lake Tomahawk."

REVISED RECORDS.--WSP 895: 1937(M). WSP 1508: 1944. WDR WI-77-1: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 1,569.05 ft (478.246 m), revised, National Geodetic Vertical Datum of 1929 (levels by Wisconsin Valley Improvement Co.).

REMARKS.--Record good. Flow regulated by Rainbow Lake and 12 smaller reservoirs above station (see reservoir records at end of Wisconsin River Basin).

AVERAGE DISCHARGE.--44 years, 696 ft³/s (19.71 m³/s).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 3,570 ft³/s (101 m³/s) Sept. 5, 1941, gage height, 7.59 ft (2.313 m); minimum, 17 ft³/s (0.48 m³/s) Oct. 10-12, 1940; minimum daily, 35 ft³/s (0.99 m³/s) Apr. 6, 1955.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 2,110 ft³/s (59.8 m³/s) Sept. 25, gage height, 5.30 ft (1.615 m); minimum daily, 168 ft³/s (4.76 m³/s) Apr. 10.

RATING TABLE (gage height, in feet, and discharge, in cubic feet per second).
(Shifting-control method used Mar. 7 to May 18, July 9-11.)

0.5	122	4.0	1,350
1.0	212	5.0	1,920
2.0	490	6.0	2,560
3.0	875		

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	661	358	1100	897	983	883	643	364	365	501	539	641
2	664	312	1100	897	975	873	616	369	375	543	585	733
3	646	282	1100	906	972	882	604	366	367	554	605	796
4	628	410	1100	923	968	905	502	390	384	555	605	1100
5	619	506	1010	929	963	889	393	399	355	550	603	1280
6	635	577	949	932	948	864	373	412	254	568	599	1370
7	643	766	948	934	961	833	391	408	212	575	601	1410
8	650	854	951	933	980	810	317	403	261	555	478	1280
9	644	922	951	931	975	765	200	400	294	540	404	1070
10	643	973	951	926	973	775	168	399	319	539	533	763
11	649	975	947	926	964	781	226	281	372	464	613	692
12	650	924	947	922	961	781	312	288	402	418	616	913
13	651	889	948	921	953	771	347	339	405	494	618	1190
14	651	891	948	909	945	769	316	369	403	560	618	1320
15	648	890	947	905	932	754	266	403	399	535	636	1200
16	648	965	947	914	917	707	207	411	431	552	660	1090
17	647	1000	949	923	912	685	176	408	467	558	664	1090
18	651	1000	946	918	911	702	247	409	475	523	679	1130
19	626	929	942	914	928	689	302	426	407	500	683	1120
20	601	883	941	915	943	733	279	446	315	472	655	1130
21	542	884	939	915	933	769	242	482	363	440	617	1470
22	330	964	934	913	920	688	210	479	431	469	601	1720
23	234	1080	933	916	910	709	193	473	457	499	637	1810
24	236	1120	928	924	902	726	225	453	454	551	667	1830
25	232	1110	930	938	894	745	297	450	462	502	596	1980
26	235	1110	930	940	915	735	346	448	508	458	428	2090
27	232	1120	928	941	919	707	357	448	504	461	368	1900
28	238	1110	926	928	907	703	356	455	339	502	357	1700
29	243	1110	922	919	896	693	354	477	319	454	527	1450
30	249	1110	920	953	---	669	357	448	421	345	621	1190
31	315	---	907	994	---	653	---	308	---	435	631	---
TOTAL	15941	26024	29819	28656	27260	23648	9822	12611	11520	15672	18044	38458
MEAN	514	867	962	924	940	763	327	407	384	506	582	1282
MAX	664	1120	1100	994	983	905	643	482	508	575	683	2090
MIN	232	282	907	897	894	653	168	281	212	345	357	641
CAL YR 1979	TOTAL	299229	MEAN 820	MAX 1640	MIN 232							
WTR YR 1980	TOTAL	257475	MEAN 703	MAX 2090	MIN 168							

WISCONSIN RIVER BASIN

05393500 SPIRIT RIVER AT SPIRIT FALLS, WI

LOCATION.--Lat 45°26'58", long 89°58'47", in NW 1/4 sec.10, T.34 N., R.4 E., Lincoln County, Hydrologic Unit 07070001, near center of span on downstream side of bridge 0.2 mi (0.3 km) south of Spirit Falls, 0.6 mi (1.0 km) upstream from Squaw Creek, and 2.0 mi (3.2 km) downstream from Richie Creek.

DRAINAGE AREA.--81.6 mi² (211.3 km²).

PERIOD OF RECORD.--April 1942 to current year.

REVISED RECORDS.--WSP 1308: 1943(M), 1948-50(M). WDR WI-77-1: Drainage area.

GAGE.--Nonrecording gage and crest-stage gage. Datum of gage is 1,461.63 ft (445.505 m) National Geodetic Vertical Datum of 1929.

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

AVERAGE DISCHARGE.--38 years, 84.6 ft³/s (2.396 m³/s), 14.08 in/yr (358 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 4,180 ft³/s (118 m³/s) Sept. 18, 1942, gage height, 10.00 ft (3.048 m), from rating curve extended above 2,500 ft³/s (70.8 m³/s); minimum observed, 1.0 ft³/s (0.028 m³/s) Aug. 11, 1964, gage height, 0.85 ft (0.259 m).

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,890 ft³/s (53.5 m³/s) Sept. 21, gage height, 6.66 ft (2.030 m); minimum daily, 5.6 ft³/s (0.159 m³/s) Oct. 1.

RATING TABLE (gage height, in feet, and discharge, in cubic feet per second).
(Stage-discharge relation affected by ice Dec. 1 to Apr. 6.)

1.1	4.7	2.5	112
1.3	9.7	3.0	200
1.5	18	4.0	470
1.8	36	5.0	870
2.1	64	6.0	1,400

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5.6	130	86	19	15	11	200	58	31	26	9.1	173
2	14	120	80	18	14	10	300	56	28	25	8.6	138
3	15	98	74	16	13	11	450	50	28	22	8.3	98
4	12	88	66	15	12	11	420	43	26	15	9.1	458
5	12	68	62	14	12	11	400	39	23	13	10	491
6	10	84	56	13	12	11	700	37	224	13	9.7	235
7	10	74	52	12	12	12	744	33	220	12	9.4	173
8	10	79	48	13	12	13	950	31	300	10	23	98
9	10	94	42	15	11	14	1240	29	194	11	50	206
10	9.4	88	39	18	11	15	804	28	117	10	28	329
11	9.7	65	37	18	11	16	544	41	80	12	20	182
12	9.7	49	35	16	11	17	437	39	62	8.9	15	128
13	10	45	32	16	11	18	356	39	47	8.6	14	210
14	9.4	41	29	17	10	19	295	38	39	7.5	13	298
15	10	42	27	18	10	20	240	34	31	7.2	13	206
16	10	40	25	20	10	21	214	33	26	13	10	128
17	9.7	45	23	24	10	25	171	26	18	24	13	120
18	9.4	50	22	26	11	31	206	34	29	15	14	93
19	12	65	21	29	12	41	208	64	78	12	13	70
20	29	69	20	34	13	54	208	48	76	12	16	64
21	40	82	19	32	15	60	176	39	48	13	56	1230
22	87	99	20	30	16	66	164	34	41	12	79	1650
23	516	102	21	27	17	74	144	29	29	10	50	744
24	323	108	22	25	19	90	122	20	24	9.4	39	371
25	178	102	21	23	18	84	99	18	20	11	62	252
26	123	99	21	22	15	77	96	17	18	11	55	206
27	114	91	20	20	14	82	81	15	16	10	112	158
28	112	101	20	19	13	90	69	14	51	8.6	98	131
29	101	98	20	18	12	98	58	13	53	9.7	68	101
30	97	93	20	16	---	110	60	13	34	9.1	64	86
31	110	---	20	15	---	130	---	42	---	10	85	---
TOTAL	2027.9	2409	1100	618	372	1342	10156	1054	2011	391.0	1074.2	8827
MEAN	65.4	80.3	35.5	19.9	12.8	43.3	339	34.0	67.0	12.6	34.7	294
MAX	516	130	86	34	19	130	1240	64	300	26	112	1650
MIN	5.6	40	19	12	10	10	58	13	16	7.2	8.3	64
CFSM	.80	.98	.44	.24	.16	.53	4.15	.42	.82	.15	.43	3.60
IN.	.92	1.10	.50	.28	.17	.61	4.63	.48	.92	.18	.49	4.02
CAL YR 1979	TOTAL	43205.8	MEAN	118	MAX	1300	MIN	5.4	CFSM	1.45	IN	19.70
WTR YR 1980	TOTAL	31382.1	MEAN	85.7	MAX	1650	MIN	5.6	CFSM	1.05	IN	14.31

WISCONSIN RIVER BASIN

05394500 PRAIRIE RIVER NEAR MERRILL, WI

LOCATION.--Lat 45°14'09", long 89°38'59", on line between secs.20 and 29, T.32 N., R.7 E., Lincoln County, Hydrologic Unit 07070002, on left bank 40 ft (12 m) upstream from bridge on County Trunk Highway C, 1.5 mi (2.4 km) upstream from Meadow Creek, 4.5 mi (7.2 km) northeast of Merrill, and 8.0 mi (12.9 km) upstream from mouth.

DRAINAGE AREA.--184 mi² (477 km²).

PERIOD OF RECORD.--January 1914 to September 1931, August 1939 to current year. Monthly discharge only for some periods, published in WSP 1308.

REVISED RECORDS.--WSP 1308: 1915-17(M), 1919-21(M), 1923-31(M), 1942-43(M), 1945(M), 1948-50(M). WDR WI-77-1: Drainage area. WDR WI-79-1: 1972.

GAGE.--Water-stage recorder. Datum of gage is 1,297.22 ft (395.393 m) National Geodetic Vertical Datum of 1929. Prior to Oct. 9, 1968, nonrecording gage 40 ft (12 m) downstream at same datum.

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

AVERAGE DISCHARGE.--58 years (1914-31, 1939-80), 180 ft³/s (5.098 m³/s), 13.28 in/yr (337 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 5,800 ft³/s (164 m³/s) Aug. 31, 1941, gage height, 9.45 ft (2.880 m), from flood marks, based on rating curve extended above 2,200 ft³/s (62.3 m³/s); minimum observed, 34 ft³/s (0.96 m³/s) Oct. 26, 1947, gage height, 1.39 ft (0.424 m).

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 710 ft³/s (20.1 m³/s) and maximum (*):

DATE	TIME	DISCHARGE (ft ³ /s) (m ³ /s)	GAGE HEIGHT (ft) (m)	DATE	TIME	DISCHARGE (ft ³ /s) (m ³ /s)	GAGE HEIGHT (ft) (m)
Oct. 23	2000	726	20.6	Sept. 21	2400	*1,450	41.1
Apr. 9	0700	1,070	30.3				*5.66
			4.24				1.725
			5.00				
			1.524				

minimum, 78 ft³/s (2.21 m³/s) July 10, gage height, 2.02 ft (0.616 m), but may have been less during period of ice effect.

RATING TABLE (gage height, in feet, and discharge, in cubic feet per second).
(Stage-discharge relation affected by ice Dec. 13-15, Dec. 17-19, and Jan. 1 to Mar. 18.)

2.0	75	4.0	630
2.4	141	5.0	1,070

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DAY	MEAN VALUES											
	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	77	315	160	120	92	84	262	180	214	146	103	228
2	81	324	150	100	92	84	274	171	179	125	97	234
3	82	300	150	96	94	86	302	171	164	116	89	197
4	87	258	160	92	94	86	290	171	116	102	94	196
5	79	245	170	92	94	82	339	156	183	98	96	205
6	80	312	170	90	92	82	436	137	354	93	98	183
7	80	312	170	90	90	86	593	134	426	90	121	158
8	86	248	160	88	90	88	793	134	475	87	155	141
9	89	217	150	86	90	90	1040	127	398	84	201	202
10	79	207	160	90	88	92	943	133	306	81	197	183
11	82	168	127	100	86	84	717	178	223	84	180	144
12	91	156	105	100	84	84	554	187	169	86	166	183
13	100	150	120	110	86	84	453	187	138	87	135	280
14	98	140	120	120	88	84	363	186	119	85	118	344
15	97	130	110	120	88	86	313	180	107	85	106	261
16	89	120	91	130	88	88	271	163	98	90	98	240
17	86	120	110	150	86	94	256	142	96	104	97	229
18	82	130	110	150	86	96	267	144	150	110	96	200
19	99	140	110	130	88	132	280	146	282	111	101	163
20	117	160	100	120	90	190	286	137	292	136	110	160
21	169	170	101	110	92	214	294	135	217	141	128	957
22	438	200	103	110	92	190	325	116	163	136	122	1290
23	690	220	107	100	92	152	318	109	137	118	110	1000
24	644	230	113	100	90	134	292	104	118	112	104	669
25	582	200	111	98	90	114	250	99	106	106	101	492
26	445	190	106	96	88	126	224	94	107	104	122	420
27	327	200	105	94	86	152	213	93	121	99	266	357
28	282	190	102	92	84	138	201	91	171	96	273	285
29	255	180	95	90	84	143	193	90	206	95	219	235
30	222	170	99	90	---	185	184	111	172	110	182	204
31	220	---	97	90	---	236	---	165	---	112	171	---
TOTAL	6085	6102	3842	3244	2584	3666	11526	4371	6007	3229	4256	10040
MEAN	196	203	124	105	89.1	118	384	141	200	104	137	335
MAX	694	324	170	150	94	236	1040	187	475	146	273	1290
MIN	77	120	91	86	84	82	184	90	96	81	89	141
CFSM	1.07	1.10	.67	.57	.48	.64	2.09	.77	1.09	.57	.75	1.82
IN.	1.23	1.23	.78	.66	.52	.74	2.33	.88	1.21	.65	.86	2.03

CAL YR 1979	TOTAL	81264	MEAN	223	MAX	2100	MIN	77	CFSM	1.21	IN	16.43
WTR YR 1980	TOTAL	64952	MEAN	177	MAX	1290	MIN	77	CFSM	.96	IN	13.13

WISCONSIN RIVER BASIN

05395000 WISCONSIN RIVER AT MERRILL, WI

LOCATION.--Lat 45°10'41", long 89°40'52", on line between secs.12 and 13, T.31 N., R.6 E., Lincoln County, Hydrologic Unit 07070002, on left bank 300 ft (91 m) downstream from U.S. Highway 51 bridge at east end of Merrill, and 0.5 mi (0.8 km) downstream from Prairie River.

DRAINAGE AREA.--2,760 mi² (7,148 km²).

PERIOD OF RECORD.--November 1902 to current year.

REVISED RECORDS.--WSP 1308: 1904-7, 1909-11, 1913. WSP 1508: 1908, 1915-16(M), 1917, 1920-21(M), 1925(M), 1930, 1935-36. WDR WI-77-1: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 1,228.85 ft (374.553 m) National Geodetic Vertical Datum of 1929. Prior to June 18, 1903, nonrecording gage at different datum. June 18, 1903, to Sept. 10, 1914, nonrecording gage at present datum.

REMARKS.--Records good. Flow regulated by 20 reservoirs (see reservoir records at end of Wisconsin River Basin) and 9 powerplants above station. Gage-height telemeter at station.

AVERAGE DISCHARGE.--77 years, 2,671 ft³/s (75.64 m³/s).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 49,400 ft³/s (1,400 m³/s) Aug. 31, 1941, gage height, 18.26 ft (5.566 m) from rating curve extended above 20,000 ft³/s (566 m³/s); minimum, about 90 ft³/s (2.55 m³/s) Sept. 26, 1908, gage height, 2.45 ft (0.747 m).

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 21,200 ft³/s (600 m³/s) Sept. 21, gage height, 12.39 ft (3.776 m); minimum daily, 1,330 ft³/s (37.7 m³/s) July 27.

RATING TABLE (gage height, in feet, and discharge, in cubic feet per second).
(Stage-discharge relation affected by ice Nov. 30 to Dec. 4, 8-9, 12-22, 25, 27, Dec. 30 to Mar. 11 and Mar. 13-18.)

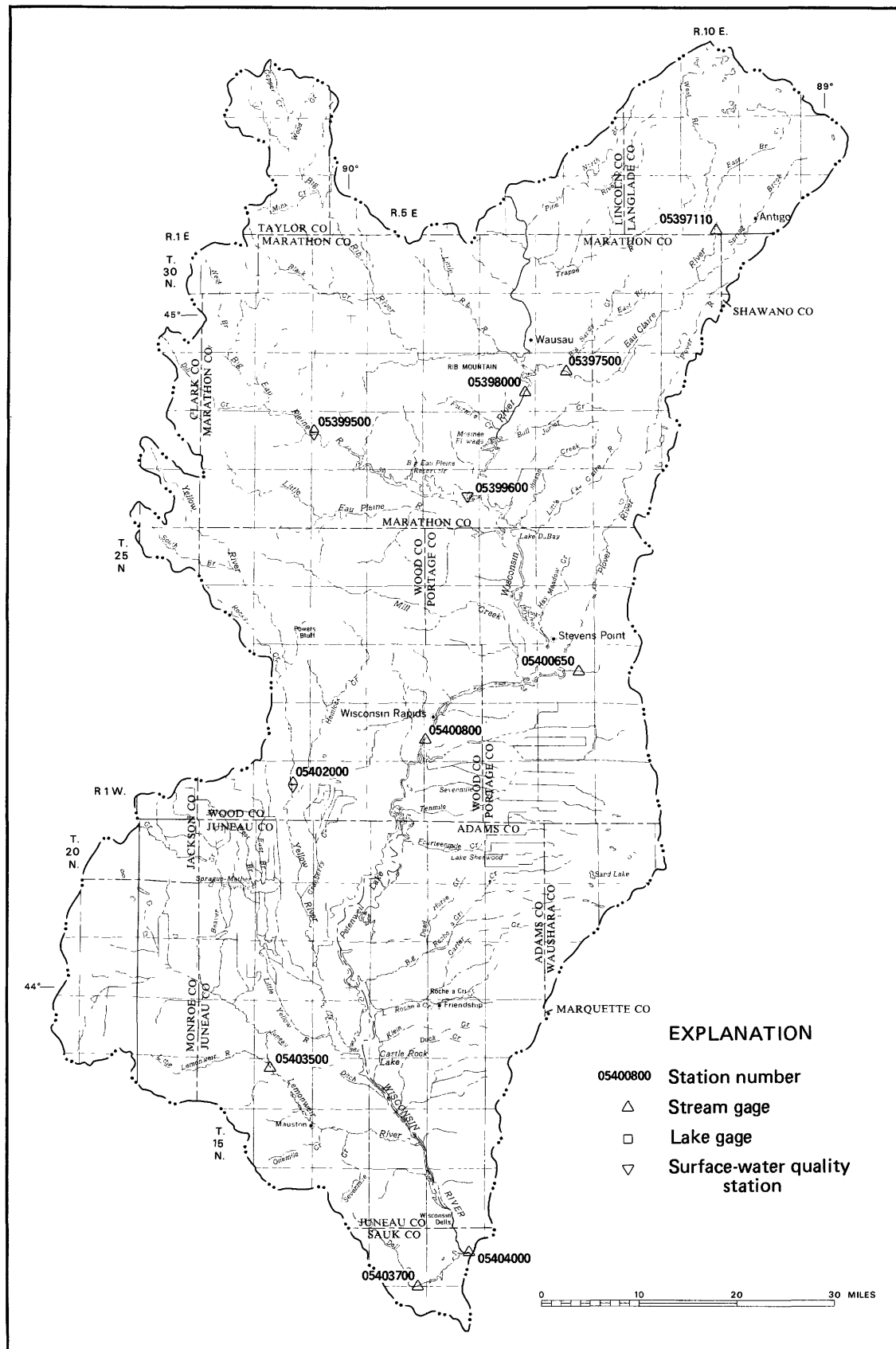
4.0	1,040	8.0	7,640
4.5	1,540	10.0	12,900
5.0	2,120	12.0	19,600
6.0	3,640		

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2050	2710	2800	2400	2300	1900	3210	1920	1720	1780	1490	3610
2	1960	2730	2700	2400	2000	1800	3440	1790	2070	1920	1370	3870
3	2020	2210	2800	2300	2200	2100	3950	1770	1740	1720	1390	3500
4	1860	2350	2500	2100	2200	2000	3750	1700	1390	1580	1680	3410
5	1850	2630	2390	2400	2300	2000	4330	2240	1970	1720	1700	4650
6	1610	2660	2320	2100	2100	1900	4830	2090	4120	1340	1530	4490
7	1690	2650	2420	2000	2200	1700	6580	1790	4600	1650	1650	4550
8	2100	2340	2600	2100	2200	1800	8420	1760	4450	1620	2140	3920
9	1850	2550	2100	2100	2300	2000	9940	1890	3900	1540	1930	4570
10	1850	2140	2730	2100	2300	1900	9210	2130	2430	1390	1660	4230
11	1730	1950	2740	2200	2300	2000	6790	1960	2180	1460	2010	3620
12	1770	2290	2300	2100	2200	1820	5110	1780	2020	1460	1650	3380
13	1630	2360	2300	2300	2300	1900	4390	1840	1860	1510	1560	4280
14	1460	2160	2400	2200	2100	1800	3700	2100	1700	1640	1650	4540
15	1830	2040	2200	2300	2200	1700	3140	2120	1660	1640	1640	4410
16	1810	1950	2000	2600	1800	1800	3010	1710	1750	1570	1570	4270
17	1640	1970	2300	2800	1900	1800	2650	1790	1690	1550	1390	3730
18	1490	2240	2100	2600	2100	1900	2540	1790	2050	1490	1720	3160
19	1710	2740	2100	2600	2300	2260	2460	1900	2950	1430	1650	3160
20	2250	2450	2200	2400	2100	2650	2240	1810	2470	1930	2760	2980
21	2060	2810	2400	2400	2100	2580	2280	1750	1870	1720	3100	13000
22	4570	3250	2500	2300	2100	2500	2530	1690	1800	1720	2170	16600
23	6480	2970	3020	2300	1900	2290	2740	1680	2040	1470	1940	14000
24	5920	3150	2820	2300	1900	2200	2400	1620	1710	1570	1600	9530
25	4890	2780	2800	2400	2200	2260	2200	1440	1420	1480	1830	7510
26	3790	3030	2340	2100	2100	2380	2100	1410	1710	1480	2170	6650
27	2920	3230	2200	2100	1900	2360	2000	1600	1720	1330	3240	5880
28	2820	3380	2540	2200	2000	2270	2100	1550	2210	1620	3220	5480
29	2650	3010	2720	2200	2000	2340	2110	1370	1710	1470	2780	4770
30	2420	2900	2400	2100	---	2410	1990	1640	1960	1580	2530	4650
31	2450	---	2400	2100	---	3310	---	2260	---	1570	2410	---
TOTAL	77130	77630	76140	70600	61600	65630	116140	55890	66870	48950	61130	166400
MEAN	2488	2588	2456	2277	2124	2117	3871	1803	2229	1579	1972	5547
MAX	6480	3380	3020	2800	2300	3310	9940	2260	4600	1930	3240	16600
MIN	1460	1950	2000	2000	1800	1700	1990	1370	1390	1330	1370	2980

CAL YR 1979 TOTAL 1130990 MEAN 3099 MAX 17400 MIN 1460
WTR YR 1980 TOTAL 944110 MEAN 2580 MAX 16600 MIN 1330

NOTE.--No gage-height record Jan. 9 to Feb. 29.



Base from U.S. Geological Survey
State base map, 1968

CENTRAL WISCONSIN RIVER BASIN

WISCONSIN RIVER BASIN

05397110 EAU CLAIRE RIVER NEAR ANTIGO, WI

LOCATION.--Lat 45°07'32", long 89°14'01", in NE 1/4 SW 1/4 sec.34, T.30 N., R.10 E., Langlade County, Hydrologic Unit 07070002, on left bank, 50 ft (15 m) downstream from bridge on County Trunk Highway Y, 1.0 mi (1.6 km) south of State Highway 64, 2.4 mi (3.9 km) downstream from confluence of East and West Branches of Eau Claire River, and 3.5 mi (5.6 km) west of Antigo.

DRAINAGE AREA.--200 mi² (518 km²).

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

REVISED RECORDS.--WDR WI-77-1: Drainage area.

GAGE.--Water-stage recorder and crest-stage gage. Altitude of gage is 1,440 ft (440 m) from planimetric map.

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

AVERAGE DISCHARGE.--6 years, 148 ft³/s (4.191 m³/s), 10.05 in/yr (255 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,840 ft³/s (52.1 m³/s) Apr. 24, 1975, gage height, 12.36 ft (3.77 m); minimum, 18 ft³/s (0.510 m³/s) Nov. 6, 1976, result of freezeup, but may have been less during period of ice effect, Jan. 9, 1977.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,380 ft³/s (39.1 m³/s) Apr. 9, gage height, 11.20 ft (3.414 m); minimum daily, 36 ft³/s (1.02 m³/s) Feb. 29.

RATING TABLE (gage height, in feet, and discharge, in cubic feet per second).
(Shifting-control method used Apr. 25 to June 1, Aug. 11-26, and Sept. 6-8;
stage-discharge relation affected by ice Nov. 10-13 and Nov. 30 to Mar. 31.)

6.4	28	9.0	590
7.0	126	10.0	900
8.0	340	11.0	1,290

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DAY	MEAN VALUES											
	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	53	231	130	74	40	37	251	154	149	88	60	191
2	61	274	100	74	40	38	283	142	126	81	54	182
3	68	236	90	74	40	39	281	133	105	71	54	151
4	62	186	90	68	40	39	259	125	89	64	56	144
5	57	192	96	64	41	39	306	117	114	59	63	141
6	55	322	100	60	42	38	436	107	612	57	65	116
7	57	338	100	56	43	38	580	101	732	55	70	102
8	57	263	120	52	44	38	799	97	792	52	119	91
9	55	201	110	48	44	39	1260	95	738	48	160	138
10	56	170	90	45	44	42	1220	94	385	45	126	168
11	56	140	98	54	44	41	821	159	212	67	103	129
12	56	120	100	58	44	41	580	178	148	63	88	163
13	54	110	88	50	47	42	443	168	117	59	78	254
14	54	105	80	47	50	45	369	183	98	55	73	357
15	55	101	74	48	52	50	286	166	85	55	68	330
16	56	99	74	58	48	60	245	142	75	63	63	269
17	59	99	66	90	42	64	225	124	68	68	65	246
18	56	100	66	100	42	68	228	136	127	71	73	195
19	65	117	74	88	46	150	245	158	372	73	70	164
20	71	153	80	76	54	320	266	135	456	78	75	164
21	99	180	82	70	56	290	273	116	296	133	103	612
22	225	254	84	66	57	270	279	100	185	110	101	1080
23	404	299	84	56	62	260	274	90	129	96	82	968
24	445	306	90	50	56	240	245	82	100	83	71	491
25	352	240	88	48	50	230	219	75	84	74	70	316
26	258	225	80	46	47	250	197	70	72	71	74	276
27	204	247	74	43	48	270	184	67	73	67	196	236
28	189	229	70	41	42	240	170	64	122	63	351	196
29	168	200	70	40	36	190	161	60	123	68	281	169
30	148	150	70	41	---	160	159	82	100	68	217	155
31	146	---	72	41	---	190	---	174	---	63	190	---
TOTAL	3801	5887	2690	1826	1341	3858	11544	3694	6884	2168	3319	8194
MEAN	123	196	86.8	58.9	46.2	124	385	119	229	69.9	107	273
MAX	445	338	130	100	62	320	1260	183	792	133	351	1080
MIN	53	99	66	40	36	37	159	60	68	45	54	91
CFSM	.62	.98	.43	.30	.23	.62	1.93	.60	1.15	.35	.54	1.37
IN.	.71	1.09	.50	.34	.25	.72	2.15	.69	1.28	.40	.62	1.52
CAL YR 1979	TOTAL	71602	MEAN	196	MAX	1410	MIN	47	CFSM	.98	IN	13.32
WTR YR 1980	TOTAL	55206	MEAN	151	MAX	1260	MIN	36	CFSM	.76	IN	10.27

WISCONSIN RIVER BASIN

05397500 EAU CLAIRE RIVER AT KELLY, WI

LOCATION.--Lat 44°55'06", long 89°33'00", on line between secs.9 and 10, T.28 N., R.8 E., Marathon County, Hydrologic Unit 07070002, on right bank 50 ft (15 m) downstream from County Highway SS bridge, 0.7 mi (1.1 km) northeast of Kelly, 1.3 mi (2.1 km) upstream from Big Sandy Creek, 4.5 mi (7.2 km) upstream from mouth, and 5.0 mi (8.0 km) southeast of Wausau.

DRAINAGE AREA.--375 mi² (971 km²).

PERIOD OF RECORD.--January 1914 to November 1926, August 1939 to current year.

REVISED RECORDS.--WSP 1508: 1915, 1916-17(M), 1919-26(M), 1940(M), 1945(M), 1950(M). WDR WI-76-1: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 1,177.88 ft (359.018 m) National Geodetic Vertical Datum of 1929. Prior to Sept. 17, 1953, nonrecording gage at same site at datum 1.00 ft (0.30 m) higher.

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

AVERAGE DISCHARGE.--53 years, 251 ft³/s (7.108 m³/s), 9.09 in/yr (231 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 8,300 ft³/s (235 m³/s) Aug. 21, 1926, gage height, 8.4 ft (2.56 m) from graph based on gage readings, from rating curve extended above 6,000 ft³/s (170 m³/s); maximum gage height, 9.45 ft (2.880 m) Mar. 24, 1979, ice jam; minimum observed, 8.0 ft³/s (0.23 m³/s) July 17, 1944, gage height, 0.17 ft (0.052 m), probably result of temporary regulation.

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

DATE	TIME	DISCHARGE (ft ³ /s) (m ³ /s)	GAGE HEIGHT (ft) (m)	DATE	TIME	DISCHARGE (ft ³ /s) (m ³ /s)	GAGE HEIGHT (ft) (m)
Apr. 9	1100	*2,720 77.0	*5.99 1.826	Sept. 21	1700	1,910 54.1	4.76 1.451
June 6	1100	2,610 73.9	5.82 1.774				

minimum daily discharge, 78 ft³/s (2.21 m³/s) Mar. 1.

RATING TABLE (gage height, in feet, and discharge, in cubic feet per second).
(Stage-discharge relation affected by ice Nov. 29 to Apr. 6.)

0.9	74	2.0	397
1.0	87	3.0	880
1.2	122	4.0	1,440
1.5	207	6.0	2,730

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	98	373	240	120	90	78	700	274	287	187	97	253
2	104	412	220	120	90	80	520	260	229	162	94	243
3	108	358	270	110	88	82	490	243	193	145	91	221
4	111	328	250	100	88	86	470	228	162	132	94	200
5	107	569	220	110	94	90	540	212	189	124	97	188
6	100	551	200	110	94	90	660	198	1940	117	98	176
7	100	466	180	120	92	86	923	181	1640	111	127	156
8	100	359	160	90	90	90	1350	163	1430	107	151	143
9	101	290	150	96	88	90	2530	164	1100	101	182	241
10	99	270	200	110	84	90	2370	164	836	98	200	245
11	101	240	210	100	82	92	1730	260	461	96	170	218
12	101	220	190	100	86	86	1110	310	309	113	143	391
13	101	210	170	94	86	90	790	300	236	114	127	483
14	99	200	170	92	90	100	620	310	201	105	116	480
15	99	190	170	100	90	100	520	292	171	100	108	458
16	99	190	170	110	90	110	447	254	150	101	103	387
17	100	190	140	190	86	110	401	221	136	104	109	331
18	100	220	150	170	80	120	401	236	163	106	120	294
19	104	260	150	160	82	230	412	281	543	110	116	250
20	111	330	160	140	90	500	438	257	736	113	144	258
21	142	400	160	130	96	800	448	217	597	120	272	1290
22	285	580	170	120	98	740	457	188	402	161	211	1460
23	598	640	180	120	98	540	454	164	314	140	155	1460
24	610	540	160	110	98	430	427	147	220	126	127	1120
25	557	470	150	110	96	400	383	135	179	120	117	615
26	435	500	140	100	90	390	351	123	152	114	138	470
27	344	520	140	98	86	410	325	116	167	107	473	410
28	302	400	130	96	90	400	304	112	411	102	481	343
29	291	340	130	94	82	380	288	108	313	97	415	294
30	251	280	130	92	---	480	281	161	229	99	337	258
31	229	---	130	90	---	600	---	232	---	101	290	---
TOTAL	6087	10896	5390	3502	2594	7970	21140	6511	14096	3633	5503	13336
MEAN	196	363	174	113	89.4	257	705	210	470	117	178	445
MAX	610	640	270	190	98	800	2530	310	1940	187	481	1460
MIN	98	190	130	90	80	78	281	108	136	96	91	143
CFSM	.52	.97	.46	.30	.24	.69	1.88	.56	1.25	.31	.48	1.19
IN.	.60	1.08	.53	.35	.26	.79	2.10	.65	1.40	.36	.55	1.32
CAL YR 1979	TOTAL	117489	MEAN 322	MAX 2700	MIN 84	CFSM .86	IN 11.65					
WTR YR 1980	TOTAL	100658	MEAN 275	MAX 2530	MIN 78	CFSM .73	IN 9.99					

WISCONSIN RIVER BASIN

05398000 WISCONSIN RIVER AT ROTHSCHILD, WI

LOCATION.--Lat 44°53'09", long 89°38'05", in sec.26, T.28 N., R.7 E., Marathon County, Hydrologic Unit 07070002, on left bank at Rothschild, 0.5 mi (0.8 km) downstream from Rothschild Dam, 1.7 mi (2.7 km) north of bridge on U.S. Highway 51, 2.0 mi (3.2 km) downstream from Eau Claire River, and 5.0 mi (8.0 km) upstream from Black Creek.

DRAINAGE AREA.--4,020 mi² (10,412 km²).

PERIOD OF RECORD.--October 1944 to current year.

REVISED RECORDS.--WDR WI-77-1: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 1,125.86 ft (343.162 m) National Geodetic Vertical Datum of 1929. Prior to Oct. 1, 1975, at datum 10.00 ft (3.048 m) higher. Auxiliary water-stage recorder in Mosinee Pond 8 mi (12.9 km) downstream. Prior to July 23, 1964, nonrecording auxiliary gage at same site and datum, read hourly.

REMARKS.--Records good. Flow regulated by 20 reservoirs (see reservoir records at end of Wisconsin River Basin) and 12 powerplants above station.

AVERAGE DISCHARGE.--36 years, 3,461 ft³/s (98.02 m³/s).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 49,200 ft³/s (1,390 m³/s) Apr. 12, 1965, Mar. 31, 1967, gage height, 18.46 ft (5.627 m), datum then in use; minimum daily, 670 ft³/s (19.0 m³/s) Dec. 9, 1976.

EXTREMES OUTSIDE THE PERIOD OF RECORD.--Flood of Sept. 1, 1941, reached stage of 22.3 ft (6.80 m), datum then in use, from tailwater data at Rothschild dam, discharge, 75,000 ft³/s (2,120 m³/s) from rating curve extended above 45,000 ft³/s (1,270 m³/s).

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 41,600 ft³/s (1,180 m³/s) Sept. 22, gage height, 26.89 ft (8.196 m); minimum daily, 1,290 ft³/s (36.5 m³/s) Aug. 3.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980												
DAY	MEAN VALUES											
	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2480	4630	3310	2810	2700	2040	5660	2740	2930	2990	1740	5410
2	2340	4680	3180	2860	2400	2000	6250	2790	2890	2940	1450	5980
3	2320	3670	3180	2920	2350	2100	6660	2380	2550	2730	1290	5000
4	2330	3270	3430	2740	2870	2300	6390	2260	2080	2130	1850	5120
5	2060	4060	3360	2220	2800	2220	7610	2670	2330	1910	2070	5930
6	1900	6340	3190	2600	2600	2270	9240	2820	16100	2060	1950	5500
7	1420	5610	2980	2400	2500	2150	11800	2420	19600	1770	2210	5790
8	2180	4270	2930	2630	2500	1450	16000	2280	17100	2340	2910	4890
9	2190	4210	2730	2800	2390	1930	25100	2190	9810	1860	3160	6870
10	2140	3420	2800	2700	2490	2210	21500	2450	6540	1740	2440	7520
11	2060	2720	3640	2800	2790	2430	14000	2680	4340	1740	2510	5970
12	1840	3100	2900	2500	2700	1990	9950	3050	3580	1590	2190	6570
13	1760	3050	2700	2600	2500	2070	7780	2650	3190	1370	2220	9360
14	1360	3120	2560	2900	2600	2090	6590	3000	2380	1840	1990	10400
15	1650	2820	2490	2980	2400	1779	5550	3110	2100	2050	1910	7920
16	2170	2690	2480	3110	2300	1560	4700	2550	2000	2150	1510	7150
17	1950	2530	2490	4640	2230	2120	4540	2220	2350	1950	1630	6550
18	1980	2580	2840	4610	2190	2240	4300	2500	2740	1930	1840	5110
19	1920	3860	2730	3870	2660	3490	4580	3400	6620	1770	2170	4640
20	2210	4130	2690	3450	2860	6980	4230	3310	7210	1790	3500	4890
21	2490	4460	2750	3120	2450	5690	4000	2660	4160	2300	5540	16700
22	4980	5580	2840	3100	2550	4820	4640	2520	3430	2140	4780	37500
23	11100	6390	2930	3000	2310	4100	4490	2160	4060	2110	3250	25500
24	10900	5630	3350	2900	2020	2900	4080	1940	2930	1750	2380	15700
25	8000	5140	3290	2800	2210	2820	3490	1600	2120	1930	2350	10600
26	6000	4890	3100	2500	2780	3220	3340	1620	2180	1510	2590	9990
27	4840	6530	2860	2600	2560	4040	3080	1510	2470	1330	5560	8600
28	4160	5680	2850	2700	2200	3880	3020	1870	6780	1920	6990	7800
29	3630	4330	2690	2800	2200	3360	3100	1580	6080	1880	4890	7000
30	3490	3980	2790	2700	---	3950	3050	2080	3530	1760	4040	6410
31	3330	---	2740	2600	---	5190	---	3120	---	2040	4270	---
TOTAL	103180	127370	90800	90960	72110	91380	218720	76130	156180	61320	89180	272370
MEAN	3328	4246	2929	2934	2487	2948	7291	2456	5206	1978	2877	9079
MAX	11100	6530	3640	4640	2870	6980	25100	3400	19600	2990	6990	37500
MIN	1360	2530	2480	2220	2020	1450	3020	1510	2000	1330	1290	4640
CAL YR 1979	TOTAL	1643870	MEAN	4504	MAX	25600	MIN	1360				
WTR YR 1980	TOTAL	1449700	MEAN	3961	MAX	37500	MIN	1290				

WISCONSIN RIVER BASIN

05399500 BIG EAU PLEINE RIVER NEAR STRATFORD, WI

LOCATION.--Lat 44°49'19", long 90°04'46", on line between sec.13, T.27 N., R.3 E., and sec.18, T.27 N., R.4 E., Marathon County, Hydrologic Unit 07070002, on left bank 15 ft (4.6 m) upstream from bridge on State Highway 97, 1.0 mi (1.6 km) north of Stratford, and 1.4 mi (2.3 km) downstream from small tributary.

DRAINAGE AREA.--224 mi² (580 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--July 1914 to December 1925, April 1937 to current year. Monthly discharge only for some periods, published in WSP 1308.

REVISED RECORDS.--WSP 1308: 1917, 1920-22, 1926, 1946, 1948, 1950. WSP 1508: 1915-25(M), 1937, 1946(M), 1948(M).

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 1,154.24 ft (351.812 m) National Geodetic Vertical Datum of 1929. July 24, 1914, to Dec. 31, 1925, nonrecording gage at site 0.5 mi (0.8 km) upstream at different datum. Apr. 30, 1937, to Sept. 15, 1938, nonrecording gage at present site and datum.

REMARKS.--Records good except those for winter periods and those for period of no gage-height record, June 6, 7, which are fair.

AVERAGE DISCHARGE.--54 years (1914-25, 1937-80), 175 ft³/s (4.956 m³/s), 10.61 in/yr (269 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 41,000 ft³/s (1,160 m³/s) Sept. 9, 1938, gage height, 24.5 ft (7.47 m), from floodmarks, based on rating curve extended above 24,000 ft³/s (680 m³/s); no flow Aug. 17, 1947, Jan. 22 to Feb. 5, 1961.

EXTREMES OUTSIDE OF PERIOD OF RECORD.--Flood of June 5, 1914, reached a stage of 20.7 ft (6.31 m), from floodmarks; discharge, 40,000 ft³/s (1,130 m³/s), former site and datum.

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

DATE	TIME	DISCHARGE (ft ³ /s) (m ³ /s)	GAGE HEIGHT (ft) (m)	DATE	TIME	DISCHARGE (ft ³ /s) (m ³ /s)	GAGE HEIGHT (ft) (m)
Oct. 23	0715	3,270 92.6	10.53 3.210	June 28	0930	4,000 113	11.36 3.463
Mar. 19	2300	Unknown	A14.49 4.417	Aug. 27	0700	3,940 112	11.14 3.395
Apr. 9	0145	4,440 126	11.74 3.578	Sept. 12	1245	5,500 156	12.78 3.895
June 6	--	*32,900 932	*B23.47 7.154	Sept. 21	1345	13,500 382	18.13 5.526

minimum discharge, 4.1 ft³/s (0.12 m³/s), Oct. 1, gage height, 2.41 ft (0.735 m).

A Ice jam; B High-water mark

RATING TABLE (gage height, in feet, and discharge, in cubic feet per second).
(Rate of change in stage used as factor, Oct. 22-24, Nov. 5, 6, Apr. 4, 6, 7, 9, 10, June 5, 6, 8, 27, 29, Aug. 8, 9, 27, Sept. 9, 12, 13, 21, 22; stage discharge relation affected by ice Nov. 10-18, Dec. 1 to Mar. 26.)

2.4	3.8	6.0	670
2.5	7.7	8.0	1,540
2.7	18	10.0	2,840
3.0	41	13.0	5,710
3.5	93	16.0	9,780
4.0	165	20.0	17,200
5.0	383		

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6.3	200	86	27	11	7.6	657	64	156	290	16	661
2	9.8	215	64	25	10	7.4	567	58	102	146	11	337
3	11	140	52	23	10	7.4	511	52	66	86	7.6	195
4	17	99	46	21	9.6	7.2	560	46	45	59	7.6	277
5	14	738	43	19	9.8	7.2	1010	40	1970	66	8.4	374
6	14	1490	40	17	10	7.2	1430	34	16500	69	7.3	161
7	12	598	36	16	10	7.2	2080	29	6330	45	52	102
8	10	302	33	15	9.4	7.2	3220	27	1830	34	1320	75
9	9.2	188	30	13	10	7.6	3080	42	712	27	785	1240
10	8.9	120	31	12	10	7.8	1370	65	420	23	274	566
11	9.1	90	33	12	9.4	7.8	807	55	210	20	256	291
12	9.1	76	28	11	9.0	7.6	513	47	110	18	226	3180
13	8.8	70	22	11	8.8	7.6	351	49	89	16	121	1920
14	8.5	64	20	10	8.8	7.6	239	53	67	15	80	1180
15	8.5	54	18	12	8.8	8.0	181	72	50	14	55	582
16	8.6	52	14	60	8.8	15	146	58	39	21	40	393
17	9.0	62	11	520	8.4	40	130	46	32	26	42	330
18	9.1	84	10	400	7.6	90	141	224	28	46	60	197
19	14	241	10	220	7.8	1100	164	450	52	31	228	137
20	20	316	12	130	8.4	2700	178	259	214	49	198	267
21	75	265	14	100	8.4	1600	177	159	138	36	452	11200
22	1300	785	16	80	8.2	900	175	102	155	19	271	3830
23	2810	782	70	62	7.8	500	158	67	105	26	108	1080
24	1170	552	160	43	7.8	250	127	48	104	43	70	512
25	544	338	120	32	7.8	150	105	36	71	35	56	309
26	295	431	70	24	7.8	340	92	28	49	24	74	450
27	180	730	56	19	7.8	1170	82	22	822	17	1690	317
28	127	347	45	16	7.8	784	74	18	3580	16	552	210
29	99	211	39	14	7.8	796	69	16	1440	14	240	150
30	80	141	34	13	---	872	67	134	608	26	431	115
31	75	---	30	12	---	834	---	247	---	20	608	---
TOTAL	6971.9	9781	1293	1989	256.8	12253.4	18461	2647	36094	1377	8346.9	30638
MEAN	225	326	41.7	64.2	8.86	395	615	85.4	1203	44.4	269	1021
MAX	2810	1490	160	520	11	2700	3220	450	16500	290	1690	11200
MIN	6.3	52	10	10	7.6	7.2	67	16	28	14	7.3	75
CFSM	1.00	1.46	.19	.29	.04	1.76	2.75	.38	5.37	.20	1.20	4.56
IN.	1.16	1.62	.21	.33	.04	2.03	3.07	.44	5.99	.23	1.39	5.09

CAL YR 1979 TOTAL 91938.3 MEAN 252 MAX 6600 MIN 4.1 CFSM 1.13 IN 15.27
WTR YR 1980 TOTAL 130109.0 MEAN 355 MAX 16500 MIN 6.3 CFSM 1.59 IN 21.61

WISCONSIN RIVER BASIN

05399500 BIG EAU PLEINE RIVER NEAR STRATFORD, WI--CONTINUED

WATER-QUALITY RECORDS

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

WATER-QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	TEMPER- ATURE, WATER (DEG C)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	SEDI- MENT, SUS- PENDED (MG/L)	SEDI- MENT DIS- CHARGE, SUS- PENDED (T/DAY)
OCT , 1979						
02...	1330	9.8	15.0	200	--	--
NOV						
14...	1520	51	1.0	160	--	--
DEC						
05...	1155	42	.5	150	--	--
19...	1605	10	.0	270	--	--
JAN , 1980						
14...	1545	10	.0	290	--	--
23...	1545	58	.0	220	--	--
FEB						
25...	1320	7.6	.0	330	--	--
MAR						
26...	1220	156	2.0	--	--	--
APR						
08...	1745	3730	2.5	170	--	--
MAY						
07...	1145	29	12.5	190	--	--
JUN						
05...	1230	1310	--	--	180	637
05...	1415	1370	--	--	282	1040
06...	1520	11500	18.0	80	196	6090
JUL						
24...	1310	38	26.0	145	--	--
AUG						
27...	1305	2000	--	--	46	248
SEP						
10...	1205	526	18.0	180	--	--

WISCONSIN RIVER BASIN

05399600 BIG EAU PLEINE RIVER NEAR KNOWLTON, WI

LOCATION.--Lat 44°43'52", long 89°45'35", in SE 1/4 SW 1/4 Sec.14, T.26 N., R.6 E., Marathon County, Hydrologic unit 07070002, at reservoir floodgate 3.0 mi (4.8 km) northeast of Dancy and 4.0 mi (6.4 km) west of Knowlton.

DRAINAGE AREA.--363 mi² (940 km²).

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

WATER-QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SEDI- MENT, SUS- PENDE (MG/L)	SEDI- MENT DIS- CHARGE, SUS- PENDE (T/DAY)	DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SEDI- MENT, SUS- PENDE (MG/L)	SEDI- MENT DIS- CHARGE, SUS- PENDE (T/DAY)
OCT , 1979					MAY , 1980				
01...	0745	350	6	5.7	05...	0745	40	4	.43
02...	0745	440	10	12	10...	0745	245	4	2.6
03...	0745	280	12	9.1	12...	0745	120	5	1.6
07...	0745	250	8	5.4	19...	0745	120	5	1.6
08...	0745	245	14	9.3	20...	0745	40	7	.76
10...	0745	195	6	3.2	26...	0745	40	10	1.1
11...	0745	90	8	1.9	27...	0745	250	5	3.4
15...	0745	88	18	4.3	28...	0745	335	5	4.5
NOV					JUN				
30...	0745	250	8	5.4	01...	0745	40	16	1.7
DEC					02...	0745	40	6	.65
03...	0745	250	6	4.0	09...	0745	975	11	29
04...	0745	340	3	2.8	11...	0745	500	13	18
10...	0745	340	1	.92	12...	0745	250	9	6.1
11...	0745	475	1	1.3	13...	0745	40	17	1.8
12...	0745	270	1	.73	16...	0745	40	10	1.1
14...	0745	475	1	1.3	17...	0745	330	6	5.3
29...	0745	540	1	1.5	20...	0745	40	12	1.3
31...	0745	535	1	1.4	23...	0745	40	10	1.1
JAN , 1980					27...	0745	600	10	16
04...	0745	552	3	4.5	28...	0745	1850	12	60
07...	0745	552	4	6.0	30...	0745	975	12	32
09...	0745	615	12	20	JUL				
14...	0745	611	12	20	01...	0745	495	10	13
16...	0745	693	44	82	03...	0745	240	11	7.1
18...	0745	86	2	.46	07...	0745	240	12	7.8
21...	0745	86	3	.70	08...	0745	600	8	13
24...	0745	188	2	1.0	10...	0745	375	7	7.1
25...	0745	315	7	6.0	14...	0745	370	12	12
26...	0745	375	1	1.0	21...	0745	360	6	5.8
28...	0745	375	2	2.0	28...	0745	355	8	7.7
29...	0745	506	5	6.8	AUG				
FEB					01...	0745	385	10	10
04...	0745	461	6	7.5	04...	0745	375	10	10
05...	0745	617	10	17	08...	0745	108	32	9.3
11...	0745	600	8	13	09...	0745	35	12	1.1
18...	0745	624	2	3.4	11...	0745	35	36	3.4
25...	0745	584	2	3.2	18...	0745	35	12	1.1
MAR					19...	0745	225	14	8.5
03...	0745	560	5	7.6	21...	0745	36	43	4.2
10...	0745	512	7	9.7	25...	0745	37	10	1.0
11...	0745	552	6	8.9	26...	0745	310	10	8.4
17...	0745	492	6	8.0	28...	0745	37	3	.30
18...	0745	556	8	12	SEP				
19...	0745	608	8	13	01...	0745	40	10	1.1
21...	0745	115	6	1.9	02...	0745	900	10	24
24...	0745	120	23	7.5	04...	0745	415	8	9.0
31...	0745	135	18	6.6	07...	0745	500	16	22
APR					08...	0745	500	12	16
07...	0745	145	13	5.1	09...	0745	370	13	13
14...	0745	160	6	2.6	10...	0745	980	8	21
21...	0745	160	6	2.6	11...	0745	745	6	12
23...	0745	120	4	1.3	15...	0745	970	18	47
24...	0745	80	8	1.7	16...	0745	500	8	11
					17...	0745	330	7	6.2
					18...	0745	500	10	13
25...	0745	40	4	.43	22...	0745	14100	32	1220
28...	0745	40	5	.54	23...	0745	3500	44	416
					26...	0745	725	14	27
					28...	0745	490	7	9.3
					29...	0745	245	12	7.9

WISCONSIN RIVER BASIN

05400650 LITTLE PLOVER RIVER AT PLOVER, WI

LOCATION.--Lat 44°28'26", long 89°31'44", in SW 1/4 sec.14, T.23 N., R.8 E., Portage County, Hydrologic Unit 07070003, on right bank at bridge on town road, 1.0 mi (1.6 km) northeast of Plover and 1.2 mi (1.9 km) upstream from mouth.

DRAINAGE AREA.--19 mi² (49 km²), of which 7.33 mi² (18.98 km²) probably is noncontributing.

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

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

GAGE.--Water-stage recorder and parshall flume. Datum of gage is 1,068.34 ft (325.630 m) National Geodetic Vertical Datum of 1929 (levels by Wisconsin Department of Natural Resources). Prior to May 1960, nonrecording gage at same site and datum 0.88 ft (0.268 m) lower.

REMARKS.--Records good.

AVERAGE DISCHARGE.--21 years, 10.23 ft³/s (0.290 m³/s).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, about 99 ft³/s (2.80 m³/s) Mar. 7, 1973; minimum, 1.4 ft³/s (0.040 m³/s) Nov. 16, 1974, gage height, 0.28 ft (0.085 m), result of temporary dam at flume entrance.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 22 ft³/s (0.62 m³/s) and maximum (*):

DATE	TIME	DISCHARGE (ft ³ /s) (m ³ /s)	GAGE HEIGHT (ft) (m)	DATE	TIME	DISCHARGE (ft ³ /s) (m ³ /s)	GAGE HEIGHT (ft) (m)
Jan. 16	2245	23 0.65	1.69 0.515	Apr. 9	--	24 0.68	1.74 0.530
Mar. 19	2100	*45 1.27	*2.34 0.713	Sept.12	1630	40 1.13	2.24 0.683
				Sept.21	1130	22 0.62	1.68 0.512

minimum discharge, 5.5 ft³/s (0.16 m³/s) July 19, gage height, 0.68 ft (0.207 m).

RATING TABLE (gage height, in feet, and discharge, in cubic feet per second).
(Shifting-control method used Apr. 10-16.)

0.7	5.7	1.5	19
0.9	8.5	2.0	29
1.2	13		

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	9.6	13	11	8.9	8.0	7.5	11	11	10	7.3	6.0	9.2
2	9.7	12	10	8.9	7.9	7.5	12	11	9.6	7.1	6.0	9.4
3	9.3	11	10	8.7	7.9	7.8	13	10	9.1	7.0	5.9	9.0
4	9.1	11	10	8.6	7.9	7.9	13	10	8.8	6.9	6.4	9.0
5	9.1	11	10	8.4	8.0	7.7	12	10	10	7.6	6.8	8.6
6	9.1	12	10	8.2	8.1	7.5	14	9.9	12	7.1	6.3	8.5
7	9.0	11	11	8.7	8.1	7.8	16	9.8	12	7.0	8.9	8.4
8	9.1	11	9.8	8.4	8.0	7.7	15	9.6	11	6.9	11	8.4
9	9.2	11	10	8.0	8.1	7.8	18	9.5	10	6.7	9.1	10
10	9.0	11	10	8.1	8.3	7.7	22	9.8	9.8	6.6	8.5	8.9
11	9.2	11	10	8.8	8.4	7.7	17	10	9.6	6.5	9.2	8.9
12	9.0	11	9.7	8.2	8.4	7.7	16	9.5	9.3	6.4	8.7	25
13	8.8	11	9.6	8.3	8.5	8.0	16	9.5	9.2	6.4	8.4	16
14	9.0	11	9.4	8.5	8.5	7.9	15	9.4	9.2	6.4	8.2	14
15	9.1	11	9.4	8.7	8.6	8.0	15	9.2	8.8	6.1	8.0	13
16	9.0	11	9.2	14	8.5	8.5	14	9.1	8.6	6.2	8.0	13
17	9.0	11	9.2	18	8.3	9.8	14	9.3	8.4	5.9	8.4	13
18	9.0	11	9.2	11	8.5	11	14	11	8.5	5.9	8.2	12
19	9.2	11	9.4	9.9	8.6	22	14	9.6	9.5	5.8	8.2	12
20	9.9	10	9.1	9.6	8.6	20	14	9.4	8.7	8.2	8.3	13
21	12	11	9.1	9.5	8.6	12	14	9.3	8.5	7.1	9.5	18
22	14	12	9.3	9.3	8.5	10	13	9.2	8.3	6.4	8.5	15
23	14	11	9.8	8.8	8.1	10	13	9.1	8.1	6.3	8.0	13
24	12	11	9.5	9.0	8.1	9.8	12	9.0	7.9	6.1	8.0	13
25	12	11	9.5	9.0	8.0	9.8	12	8.8	7.8	6.7	8.6	13
26	11	12	9.2	8.5	7.8	9.8	12	8.5	7.5	6.7	8.3	12
27	11	12	9.1	8.4	8.1	10	11	8.4	7.5	6.4	9.1	12
28	11	11	9.0	8.2	7.9	11	11	8.9	7.7	6.3	8.8	12
29	11	11	9.0	8.1	7.5	11	11	9.2	7.5	6.2	8.6	12
30	11	11	9.1	8.1	---	10	11	11	7.5	6.3	9.7	12
31	12	---	9.0	8.1	---	10	---	11	---	6.2	9.5	---
TOTAL	314.4	336	297.6	284.9	237.8	300.9	415	299.0	270.4	204.7	255.1	361.3
MEAN	10.1	11.2	9.60	9.19	8.20	9.71	13.8	9.65	9.01	6.60	8.23	12.0
MAX	14	13	11	18	8.6	22	22	11	12	8.2	11	25
MIN	8.8	10	9.0	8.0	7.5	7.5	11	8.4	7.5	5.8	5.9	8.4
CAL YR 1979	TOTAL	3939.3	MEAN	10.8	MAX	32	MIN	5.7				
WTR YR 1980	TOTAL	3577.1	MEAN	9.77	MAX	25	MIN	5.8				

WISCONSIN RIVER BASIN

05400800 WISCONSIN RIVER AT WISCONSIN RAPIDS, WI

LOCATION.--Lat 44°22'05", long 89°51'30", in SW 1/4 sec.24, T.22 N., R.5 E., Wood County, Hydrologic Unit 07070003, at Centralia Powerplant of Nekoosa Papers, Inc., 1.6 mi (2.6 km) downstream from Chicago and Northwestern Railway bridge in Wisconsin Rapids.

DRAINAGE AREA.--5,430 mi² (14,060 km²).

PERIOD OF RECORD.--May 1914 to March 1950 (published as "near Nekoosa"), October 1957 to current year.

REVISED RECORDS.--WSP 1308: 1915(M).

GAGE.--Water-stage recorders on headwater and tailwater. Elevation of powerplant pond is 980 ft (299 m) and datum of powerplant gages is 887.83 ft (270.611 m) National Geodetic Vertical Datum of 1929 (levels by Wisconsin Valley Improvement Co.). May 1914 to March 1950, at site 7.0 mi (11.3 km) downstream at different datum.

REMARKS.--Records good. Discharge computed from powerplant records on basis of load-discharge rating of hydroelectric units as developed by Geological Survey and tainter-gate ratings and spillway ratings based on theoretical formulas and discharge measurements. Flow regulated by 21 reservoirs (see reservoir records at end of Wisconsin River Basin) and many powerplants above station. Water diverted periodically from pond of Wisconsin Rapids powerplant 2.6 mi (4.2 km) upstream into Cranberry Creek, a tributary of Yellow River, for cranberry culture. These diversions in cubic feet per second, for water year October 1979 to September 1980, were as follows:

Oct. 1	100	Oct. 11	29
2	100	July 31	67
3	100	Aug. 1	100
4	100	2	100
5	100	3	100
6	100	4	100
7	100	5	100
8	100	6	100
9	100	7	77
10	100		

AVERAGE DISCHARGE.--58 years (1914-50, 1957-80), 4,947 ft³/s (140.1 m³/s).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 70,400 ft³/s (1,990 m³/s) Sept. 12, 1938, gage height, 19.10 ft (5.822 m), from rating curve extended above 58,000 ft³/s (1,640 m³/s); minimum, 26 ft³/s (0.74 m³/s) Sept. 7, 1942; minimum daily, 165 ft³/s (4.67 m³/s) Aug. 12, 1934.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 55,900 ft³/s (1,580 m³/s) June 7; minimum daily, 2,010 ft³/s (56.9 m³/s) Oct. 14.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980												
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2570	4670	5010	3420	3580	3340	7940	3810	3480	4500	2420	7160
2	2530	5060	4150	3540	3570	3260	8560	3960	3580	4130	2330	8500
3	2510	5120	3760	3580	3510	3250	9870	3910	3530	4050	2200	8810
4	2500	3610	3880	3740	3470	3080	9030	3430	3760	2440	2160	7500
5	2610	4820	3920	3500	3510	3240	10300	3280	5540	2570	2130	7350
6	2510	7040	4030	3410	3480	3320	11700	3320	25100	2720	2270	6850
7	2460	7760	3950	3110	3520	3420	14300	3190	51500	2570	3180	6820
8	2250	6520	3800	3380	3660	3380	18400	3170	41800	2620	6480	6740
9	2560	5340	3850	3430	3640	3290	26300	3150	20200	2620	3600	9400
10	2510	5130	3870	3260	3640	3190	32400	3210	14400	2620	3390	11000
11	2570	4150	3690	3240	3550	3210	23100	3180	12400	2580	3220	10100
12	2400	3900	3840	3240	3540	3280	13500	3300	7650	2530	3100	14900
13	2260	3620	3560	3280	3560	3200	13000	3600	6520	2480	3270	19000
14	2010	4220	3120	3220	3450	3170	10800	3700	5780	2480	3350	16300
15	2020	3950	3280	3320	3610	3170	8290	3580	5720	2320	3340	14900
16	2300	3910	3280	4170	3910	3200	6620	3720	4250	2700	3200	12100
17	2230	3130	3150	5280	3550	3070	6420	3500	3520	2900	2770	9240
18	2190	3180	3260	6210	3480	3020	6540	3460	3210	2550	2960	7850
19	2250	3800	3340	5940	3620	3330	5920	3860	5100	2410	3130	6270
20	2230	4700	3400	5600	3590	5200	5790	4230	9090	2370	3930	6420
21	2650	5570	3260	5130	3380	6860	5280	4300	6880	2360	6000	26100
22	6280	6350	3470	4370	3460	8110	5200	3950	3890	2430	6390	43300
23	12100	8380	3600	4070	3310	7320	5490	3950	4900	2320	4900	46500
24	11100	7670	3960	4190	3310	6180	6210	2810	4920	2440	4840	27100
25	10500	7060	4120	3900	3340	5010	5920	2900	4660	2500	3830	16900
26	8580	7370	4230	3640	3330	5220	4840	2770	3920	2580	3500	13800
27	6630	7360	4190	3390	3210	5700	4560	2940	4760	2470	7190	14000
28	5000	7150	4010	3580	3260	5780	4320	2850	8230	2590	11400	12300
29	4170	6760	4040	3540	3250	5660	4120	3210	9890	2570	10000	9090
30	3830	5490	3990	3520	---	5640	3690	3850	6660	2470	7440	8230
31	3960	---	3890	3610	---	6490	---	3890	---	2320	6920	---
TOTAL	122270	162790	116900	120810	101290	134590	298410	107980	294840	83210	134840	414530
MEAN	3944	5426	3771	3897	3493	4342	9947	3483	9828	2684	4350	13820
MAX	12100	8380	5010	6210	3910	8110	32400	4300	51500	4500	11400	46500
MIN	2010	3130	3120	3110	3210	3020	3690	2770	3210	2320	2130	6270
CAL YR 1979	TOTAL	2351270	MEAN	6442	MAX	33600	MIN	2010				
WTR YR 1980	TOTAL	2092460	MEAN	5717	MAX	51500	MIN	2010				

WISCONSIN RIVER BASIN

05402000 YELLOW RIVER AT BABCOCK, WI

LOCATION.--Lat 44°18'05", long 90°07'15", in NW 1/4 sec.14, T.21 N., R.3 E., Wood County, Hydrologic Unit 07070003, on right bank at downstream side of bridge on State Highway 80 at Babcock, 1.9 mi (3.1 km) upstream from Hemlock Creek.

DRAINAGE AREA.--215 mi² (557 km²).

PERIOD OF RECORD.--March 1944 to current year.

REVISED RECORDS.--WSP 1308: 1944(M), 1946-47(M), 1949(M). WDR WI-77-1: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 954.75 (291.008 m) National Geodetic Vertical Datum of 1929. Prior to Oct. 28, 1948, nonrecording gage at same site and datum.

REMARKS.--Records good except those for winter period, which are fair. There is a large recreation dam about 5.0 mi (8.0 km) upstream.

AVERAGE DISCHARGE.--36 years, 150 ft³/s (4.248 m³/s), 9.47 in/yr (241 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 11,600 ft³/s (329 m³/s) Apr. 2, 1952, gage height, 17.38 ft (5.297 m); minimum observed, 1.0 ft³/s (0.028 m³/s) Oct. 1, 1948, gage height, 1.22 ft (0.372 m).

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 1,200 ft³/s (34 m³/s) and maximum (*):

DATE	TIME	DISCHARGE (ft ³ /s) (m ³ /s)	GAGE HEIGHT (ft) (m)	DATE	TIME	DISCHARGE (ft ³ /s) (m ³ /s)	GAGE HEIGHT (ft) (m)
Mar. 21	0400	1,880 53.2	10.05 3.063	Aug. 29	0800	2,200 62.3	10.06 3.231
Apr. 9	1700	3,650 103	12.48 3.804	Sept.13	0400	3,410 96.6	12.21 3.722
June 7	1600	3,260 92.3	12.07 3.679	Sept.22	0300	*6,930 196	*14.93 4.551

minimum discharge, 8.9 ft³/s (0.25 m³/s) part of each day, Aug. 3, 4, 6, but may have been less during period of ice effect.

RATING TABLE (gage height, in feet, and discharge, in cubic feet per second).
(Rate of change in stage used as factor, Oct. 26, Nov. 9, Mar. 22-24, 27, Apr. 5, 8, 9, 11-13, June 6, 8-10, Aug. 9, 27-30, Sept. 1, 12, 14, 15, 21-25; shifting-control method used Oct. 1-19, July 27-31, Sept. 27-30; stage-discharge relation affected by ice Dec. 7 to Mar. 20.)

1.8	6.5	6.0	678
2.0	19	8.0	1,080
2.3	41	10.0	1,850
2.6	71	12.0	3,180
3.0	121	15.0	7,020
4.0	280		

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	12	85	120	19	17	13	673	91	574	25	11	675
2	10	88	100	18	16	12	675	86	258	25	9.5	497
3	16	154	84	17	15	12	585	78	171	22	9.5	352
4	18	143	68	17	14	12	507	69	122	22	9.5	336
5	17	78	62	16	14	13	627	62	100	22	10	353
6	16	227	56	16	14	12	992	56	1250	22	9.5	325
7	14	669	47	15	13	13	1100	51	3100	20	18	255
8	12	801	40	15	13	13	1630	44	2340	20	167	274
9	10	554	35	15	14	12	2850	40	1240	20	554	221
10	10	270	34	15	13	13	2520	39	731	16	557	111
11	11	179	35	16	13	12	1420	43	478	15	547	129
12	10	142	35	17	13	12	809	41	226	18	379	720
13	9.8	132	36	16	13	12	656	52	148	20	299	2920
14	9.6	62	30	16	14	15	408	59	104	17	219	2170
15	9.8	40	27	16	13	16	467	63	81	16	156	1180
16	10	34	25	18	13	17	205	64	63	16	112	782
17	11	30	22	45	12	16	176	59	49	16	94	487
18	13	33	21	440	13	17	181	57	41	14	88	213
19	20	47	20	400	14	30	178	55	51	14	90	198
20	32	100	19	230	15	700	192	64	52	20	112	192
21	44	230	19	160	16	1840	211	65	46	18	254	2980
22	53	450	19	140	16	1430	225	58	40	15	612	6160
23	149	560	20	84	16	917	221	50	37	14	399	3060
24	543	350	21	62	15	588	196	43	34	13	273	1340
25	734	240	22	44	14	235	169	38	30	12	270	849
26	486	360	25	33	13	173	145	35	29	14	242	681
27	291	430	27	27	13	337	129	34	28	12	391	494
28	161	470	26	24	13	576	114	33	28	11	1800	259
29	116	250	25	21	13	481	104	32	26	13	1920	282
30	96	160	26	19	---	478	97	43	25	11	1040	220
31	81	---	20	18	---	494	---	266	---	11	842	---
TOTAL	3025.2	7368	1166	2009	405	8521	18462	1870	11502	524	11494.0	28715
MEAN	97.6	246	37.6	64.8	14.0	275	615	60.3	383	16.9	371	957
MAX	734	801	120	440	17	1840	2850	266	3100	25	1920	6160
MIN	9.6	30	19	15	12	12	97	32	25	11	9.5	111
CFSM	.45	1.14	.18	.30	.07	1.28	2.86	.28	1.78	.08	1.73	4.45
IN.	.52	1.27	.20	.35	.07	1.47	3.19	.32	1.99	.09	1.99	4.97

CAL YR 1979	TOTAL	90459.7	MEAN 248	MAX 6000	MIN 9.5	CFSM 1.15	IN 15.65
WTR YR 1980	TOTAL	95061.2	MEAN 260	MAX 6160	MIN 9.5	CFSM 1.21	IN 16.45

WISCONSIN RIVER BASIN

05403500 LEMONWEIR RIVER AT NEW LISBON, WI.

LOCATION.--Lat 43°52'47", long 90°09'40", in SE 1/4 sec.8 T.16 N., R.3 E., Juneau County, Hydrologic Unit 07070003, near center of span on downstream side of bridge on State Highway 80 in New Lisbon, 200 ft (60 m) downstream from recreation dam and 1.2 mi (1.9 km) upstream from Webster Creek.

DRAINAGE AREA.--507 mi² (1,313 km²).

PERIOD OF RECORD.--March 1944 to current year.

REVISED RECORDS.--WSP 1308: 1944(M), 1949-50(M). WDR WI-78-1: Drainage area.

GAGE.--Nonrecording gage and crest-stage gage. Datum of gage is 867.05 ft (264.277 m) National Geodetic Vertical Datum of 1929. Prior to May 5, 1948, nonrecording gage at site 100 ft (30 m) downstream at same datum.

REMARKS.--Records good except those for winter periods, which are fair. Occasional regulation by dam 200 ft (60 m) upstream. Water diverted periodically into the basin from the Yellow and Black River basins for cranberry culture.

AVERAGE DISCHARGE.--36 years, 369 ft³/s (10.5 m³/s), 9.88 in/yr (251 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 6,880 ft³/s (195 m³/s) May 8, 1950, gage height, 12.94 ft (3.944 m) from graph based on gage readings; minimum observed, 29 ft³/s (0.821 m³/s) June 9, 1976, gage height, 0.47 ft (0.143 m) during period of dam repair.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 2,400 ft³/s (68.0 m³/s) Aug. 12, gage height, 9.82 ft (2.993 m); minimum daily, 88 ft³/s (2.49 m³/s) Aug. 6.

RATING TABLE (gage height, in feet, and discharge, in cubic feet per second).
(Shifting-control method used May 6 to June 8; stage-discharge relation affected by ice Dec. 4-7, 15-21, Jan. 1 to Feb. 26, Feb. 29.)

1.3	85	6.0	774
1.6	108	7.0	1,030
2.0	143	8.0	1,410
3.0	250	9.0	1,870
4.0	392	10.0	2,530
5.0	560		

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	127	726	568	230	160	155	446	319	418	159	91	1450
2	155	636	475	210	160	153	475	310	540	121	92	1660
3	181	580	466	180	150	149	513	301	715	102	89	1720
4	216	558	470	160	150	147	535	287	671	116	91	1530
5	238	546	490	160	160	150	608	269	576	147	91	1280
6	245	526	450	160	160	149	684	270	616	138	88	1080
7	236	517	440	150	160	145	719	270	851	140	265	1040
8	208	564	403	150	160	150	869	225	1210	134	726	1030
9	192	580	366	150	160	153	1100	192	1710	125	877	1080
10	190	555	349	160	160	151	1400	186	2090	118	1160	1150
11	194	540	336	170	160	145	1620	190	2100	111	1660	1130
12	194	537	332	200	160	141	1720	208	1750	114	2250	1210
13	192	528	276	170	160	147	1620	220	1400	112	2330	1410
14	181	506	220	160	160	149	1470	239	1050	112	2000	1630
15	172	485	230	160	160	147	1270	216	784	107	1620	1820
16	172	469	240	200	160	242	1130	200	477	115	1330	1760
17	179	453	230	350	160	486	1000	203	357	114	1100	1560
18	195	435	220	640	160	555	887	198	321	116	962	1320
19	183	429	210	660	160	646	767	182	304	112	910	1010
20	183	418	210	500	160	736	695	177	323	114	903	808
21	205	419	210	400	160	874	628	171	451	111	892	722
22	242	472	213	300	180	835	566	162	624	112	808	810
23	349	535	233	230	200	793	511	150	660	110	769	968
24	442	580	269	200	190	654	386	135	572	105	784	1080
25	576	616	310	190	190	513	255	121	469	105	769	1390
26	764	650	326	180	190	462	311	112	363	103	713	1490
27	892	691	315	170	175	466	314	105	276	102	713	1340
28	895	706	298	170	175	466	304	102	224	99	815	1260
29	877	695	284	170	170	456	315	110	195	99	936	1210
30	835	656	262	170	---	495	329	162	179	97	1080	1090
31	772	---	254	160	---	448	---	301	---	94	1270	---
TOTAL	10682	16608	9955	7260	4810	11358	23447	6293	22276	3564	28184	38038
MEAN	345	554	321	234	166	366	782	203	743	115	909	1268
MAX	895	726	568	660	200	874	1720	319	2100	159	2330	1820
MIN	127	418	210	150	150	141	255	102	179	94	88	722
CFSM	.68	1.09	.63	.46	.33	.72	1.54	.40	1.47	.23	1.79	2.50
IN.	.78	1.22	.73	.53	.35	.83	1.72	.46	1.63	.26	2.07	2.79
CAL YR 1979	TOTAL	176231	MEAN 483	MAX 2840	MIN 111	CFSM .95	IN 12.93					
WTR YR 1980	TOTAL	182475	MEAN 499	MAX 2330	MIN 88	CFSM .98	IN 13.39					

WISCONSIN RIVER BASIN

05403700 DELL CREEK NEAR LAKE DELTON, WI

LOCATION.--Lat 43°33'05", long 89°51'55", in NW 1/4 sec.2, T.12 N., R.5 E., Sauk County, Hydrologic Unit 07070003, on right bank 50 ft (15 m) upstream from highway bridge, 6.0 mi (9.7 km) southwest of Lake Delton, and 7.0 mi (11.3 km) upstream from mouth.

DRAINAGE AREA.--44.9 mi² (116.3 km²).

PERIOD OF RECORD.--September 1957 to September 1965. October 1965 to September 1970 (annual maximum discharge). October 1970 to September 1980 (discontinued).

REVISED RECORDS.--WDR WI-74-1: 1971-72, 1973(M).

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 847.49 ft (258.315 m) National Geodetic Vertical Datum of 1929. Prior to Sept. 1965, wire-weight gage 50 ft (15 m) downstream at same datum. Oct. 1965 to Sept. 1970, crest-stage gage only.

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

AVERAGE DISCHARGE.--18 years (1957-65, 1970-80), 30.0 ft³/s (0.850 m³/s), 9.07 in/yr (230 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,130 ft³/s (32.0 m³/s) Jan. 29, 1968, gage height, 8.76 ft (2.670 m); minimum, 11 ft³/s (0.31 m³/s) Aug. 1, 2, 1959, gage height, 1.75 ft (0.533 m).

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 110 ft³/s (3.12 m³/s) and maximum (*):

DATE	TIME	DISCHARGE (ft ³ /s) (m ³ /s)	GAGE HEIGHT (ft) (m)	DATE	TIME	DISCHARGE (ft ³ /s) (m ³ /s)	GAGE HEIGHT (ft) (m)
Jan. 17	1600	211 5.98	6.08 1.853	Aug. 8	0145	*1,110 31.4	*9.53 2.905
Mar. 16	2330	208 5.89	6.06 1.847	Sept. 8	0530	112 3.17	5.04 1.536
June 7	1745	129 3.65	5.27 1.606	Sept.13	2030	157 4.45	5.60 1.707
July 21	0030	378 10.7	7.17 2.185	Sept.22	2030	201 5.69	6.00 1.829

minimum daily discharge, 17 ft³/s (0.48 m³/s) July 8, 11.

RATING TABLE (gage height, in feet, and discharge, in cubic feet per second).
(Shifting-control method used Oct. 1 to Dec. 15, 18-28, and Aug. 13 to Sept. 6;
stage-discharge relation affected by ice Dec. 16, 17, Jan. 7-10, Feb. 29 to
Mar. 2, March 6-8, 11.)

2.3	16	6.0	201
2.5	20	7.0	346
3.0	31	8.0	570
4.0	59	9.0	890
5.0	109		

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DAY	OCT	NOV	DEC	JAN	MEAN VALUES		APR	MAY	JUN	JUL	AUG	SEP
					FEB	MAR						
1	21	30	22	22	19	20	31	29	27	19	26	45
2	28	25	22	22	19	20	31	28	26	18	27	37
3	24	24	21	22	20	20	34	28	27	18	28	33
4	23	23	21	22	20	20	41	27	24	18	26	35
5	22	23	22	22	20	20	48	26	28	18	28	33
6	22	25	23	22	20	20	35	26	79	18	26	30
7	23	25	23	22	20	20	40	25	94	18	110	79
8	23	23	23	22	20	20	61	25	79	17	744	105
9	23	23	22	22	20	20	81	25	28	18	309	63
10	22	23	22	22	20	20	45	25	24	18	123	48
11	24	22	23	29	20	20	36	28	21	17	57	38
12	23	22	22	26	20	20	34	26	20	18	55	81
13	23	23	21	23	20	20	33	28	20	18	49	148
14	23	22	20	21	20	20	33	30	21	18	47	100
15	23	23	21	22	20	25	34	30	21	19	38	46
16	23	23	21	76	20	114	35	27	21	32	35	43
17	23	23	21	190	20	170	33	27	20	22	38	40
18	23	22	21	95	20	92	33	30	20	19	36	38
19	23	22	21	30	20	46	33	29	23	19	36	37
20	24	22	20	28	21	37	33	26	22	160	36	60
21	24	31	21	26	25	33	33	25	21	245	51	51
22	26	41	22	24	40	31	32	24	20	56	36	149
23	42	29	31	23	34	29	32	24	20	29	32	171
24	30	25	39	22	26	29	30	23	19	27	30	69
25	25	24	38	21	24	29	29	23	19	28	30	48
26	24	31	26	21	27	33	29	23	19	28	31	46
27	24	33	24	21	22	33	29	22	19	28	32	42
28	23	26	23	21	21	31	28	22	20	27	37	42
29	23	24	23	20	21	30	30	23	19	26	50	50
30	23	23	22	20	---	31	31	36	19	26	50	43
31	24	---	22	20	---	31	---	41	---	27	66	---
TOTAL	751	755	723	1001	639	1104	1087	831	840	1069	2319	1850
MEAN	24.2	25.2	23.3	32.3	22.0	35.6	36.2	26.8	28.0	34.5	74.8	61.7
MAX	42	41	39	190	40	170	81	41	94	245	744	171
MIN	21	22	20	20	19	20	28	22	19	17	26	30
CFSM	.54	.56	.52	.72	.49	.79	.81	.60	.62	.77	1.67	1.37
IN.	.62	.63	.60	.83	.53	.91	.90	.69	.70	.89	1.92	1.53
CAL YR 1979	TOTAL	10842	MEAN 29.7	MAX 151	MIN 20	CFSM .66	IN 8.98					
WTR YR 1980	TOTAL	12969	MEAN 35.4	MAX 744	MIN 17	CFSM .79	IN 10.74					

NOTE.--No gage-height record Jan. 22 to Feb. 26.

WISCONSIN RIVER BASIN

05404000 WISCONSIN RIVER NEAR WISCONSIN DELLS, WI

LOCATION.--Lat 43°36'22", long 89°45'25", in NW 1/4 sec.14, T.13 N., R.6 E., Sauk County, Hydrologic Unit 07070003, on right bank 0.5 mi (0.8 km) downstream from Dell Creek and 1.8 mi (2.9 km) southeast of Wisconsin Dells.

DRAINAGE AREA.--8,090 mi² (20,950 km²).

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

REVISED RECORDS.--WSP 1728: 1936(M). WSP 1914: 1951, 1953-55. WDR WI-77-1: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 801.48 ft (244.291 m) National Geodetic Vertical Datum of 1929 (levels by Corps of Engineers). Prior to Oct. 1, 1963, water-stage recorder at same site at datum 5.00 ft (1.524 m) higher.

REMARKS.--Records good, except those for the winter period which are fair. Flow regulated by 24 reservoirs above station (see reservoir records at end of Wisconsin River Basin). In 1958, when the maximum of record occurred, there were 22 reservoirs above station, the two large reservoirs, Petenwell and Castle Rock, not in existence. Diurnal fluctuation is caused by powerplant of Wisconsin Power and Light Co. at Wisconsin Dells.

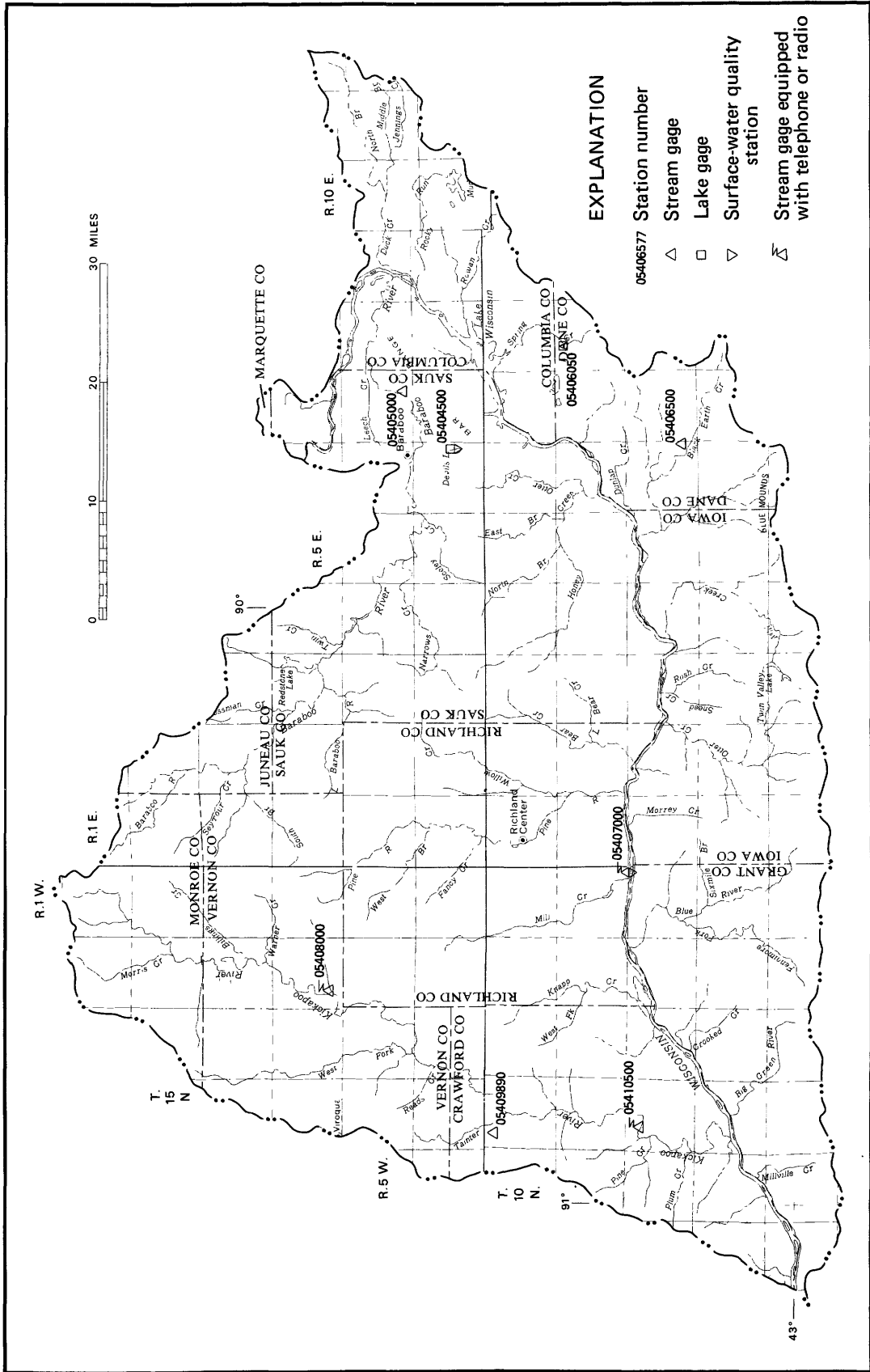
AVERAGE DISCHARGE.--46 years, 6,760 ft³/s (191.4 m³/s).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 72,200 ft³/s (2,040 m³/s) Sept. 14, 1938, gage height, 23.83 ft (7.263 m), present datum; minimum daily, 1,060 ft³/s (30.0 m³/s) Aug. 19, 1936.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 45,100 ft³/s (1,280 m³/s) Sept. 25, gage height, 16.82 ft (5.127 m); minimum daily, 2,540 ft³/s (71.9 m³/s) Aug. 3.

RATING TABLES (gage height, in feet, and discharge, in cubic feet per second).
(Stage-discharge relation affected by ice Dec. 17-19, Jan. 7 to Mar. 4.)

DAY	Oct. 1 to Apr. 9				Apr. 10 to Sept. 30							
	4.4	5.0	6.0	8.0	10.0	4.3	5.0	7.0	9.0	11.0	13.0	15.0
	2,830	3,950	5,950	10,900	16,800	2,500	3,950	8,610	14,200	21,000	28,500	36,800
												45,900
DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980												
MEAN VALUES												
	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3050	7190	7710	4810	4700	5600	7190	6150	3990	6400	2980	11300
2	3440	6650	6580	5280	5400	4800	7360	6100	4260	6400	2920	13100
3	3420	6470	6940	5320	5400	4700	7460	5990	4740	6000	2540	15500
4	3450	6350	6640	5410	5400	5400	7410	4800	4710	4500	2790	13100
5	3550	5540	6230	5300	5800	5490	7600	4510	5300	3700	2780	13000
6	3510	6360	5870	5170	5600	5350	7680	5050	6680	3300	3060	11000
7	3120	7790	6140	4400	5400	5350	8910	4540	23800	2800	5120	10400
8	3080	8320	6140	4500	5400	5260	9760	4860	38900	3600	7280	11100
9	3280	7940	5560	4000	5400	4920	14900	5110	42900	3400	13600	10900
10	3400	7770	5260	4400	4300	4840	29000	4550	35600	3100	10700	11600
11	3690	7010	5700	4800	4700	4930	32200	4140	26500	3000	7060	11800
12	3540	6440	5710	3600	5000	4970	22000	4190	18800	3100	7190	15900
13	3550	6210	5930	5400	5400	5040	15000	4950	12800	3000	9950	18100
14	3010	6120	5990	4800	5400	4860	11000	4860	14300	3000	8100	25200
15	2930	6150	5670	4400	5400	5000	11000	4980	14700	3140	8370	24600
16	2920	6130	4590	4800	5000	5160	11000	4900	9190	3270	8770	19700
17	3050	6000	3500	5800	4600	5470	10000	4570	7830	3030	6630	18700
18	3350	4620	5000	6000	4700	5630	10000	3970	6900	3070	6160	14800
19	3370	4950	4800	6000	5600	5650	9600	4210	7000	3070	7270	13200
20	3370	5880	4740	6000	5600	5920	9000	5030	8000	3910	7240	11400
21	3540	6090	4670	5200	5600	6260	8400	4710	8400	3250	6280	11900
22	4330	6200	4610	4700	5600	6790	8000	4790	7800	3340	8540	31000
23	7380	6300	4400	4600	5600	7510	7880	4630	7400	3020	7970	39900
24	12200	7500	4400	5000	4800	7640	8290	4590	7000	3100	7370	42500
25	12700	8250	3540	6000	5000	7450	8040	3930	6800	3040	6630	43600
26	10700	8510	3930	6000	5400	7670	7580	3890	7000	2930	7480	29800
27	10200	9010	5360	6000	5800	7470	6990	4040	6400	2650	8070	19800
28	10100	8880	5470	5000	5600	7440	6550	4460	6600	2710	10900	20300
29	8730	9130	5530	4500	5600	7320	6410	4340	6800	2930	14100	18000
30	7850	8820	5420	4400	---	6640	6070	4490	6600	2970	14000	12700
31	7400	---	5160	4600	---	6600	---	4260	---	3000	12400	---
TOTAL	161210	208580	167190	156190	153200	183130	322280	145590	367700	107730	234250	563900
MEAN	5200	6953	5393	5038	5283	5907	10740	4696	12260	3475	7556	18800
MAX	12700	9130	7710	6000	5800	7670	32200	6150	42900	6400	14100	43600
MIN	2920	4620	3500	3600	4300	4700	6070	3890	3990	2650	2540	10400
CAL YR 1979	TOTAL	3079870	MEAN	8438	MAX	35400	MIN	2720				
WTR YR 1980	TOTAL	2770950	MEAN	7571	MAX	43600	MIN	2540				



LOWER WISCONSIN RIVER BASIN

Base from U.S. Geological Survey
State base map, 1968

WISCONSIN RIVER BASIN

05404500 DEVILS LAKE NEAR BARABOO, WI

LOCATION.--43°25'18", long 89°43'38", in NW 1/4 NE 1/4 sec.24, T.11 N., R.6 E., Sauk County, Hydrologic Unit 07070004, in Devils Lake State Park, 3.5 mi (5.6 km) south of Baraboo.

DRAINAGE AREA.--4.79 mi² (12.41 km²). Area of Devils Lake, 361 acres (1.46 km²).

PERIOD OF RECORD.--June 1922 to August 1930, June to August 1932, June 1934 to current year (fragmentary).

REVISED RECORDS.--WDR WI-78-1: Drainage area.

GAGE.--Nonrecording gage. Elevation of lake from reference mark read about twice a week except in winter. Datum of gage is 955.00 ft (291.084 m) National Geodetic Vertical Datum of 1929.

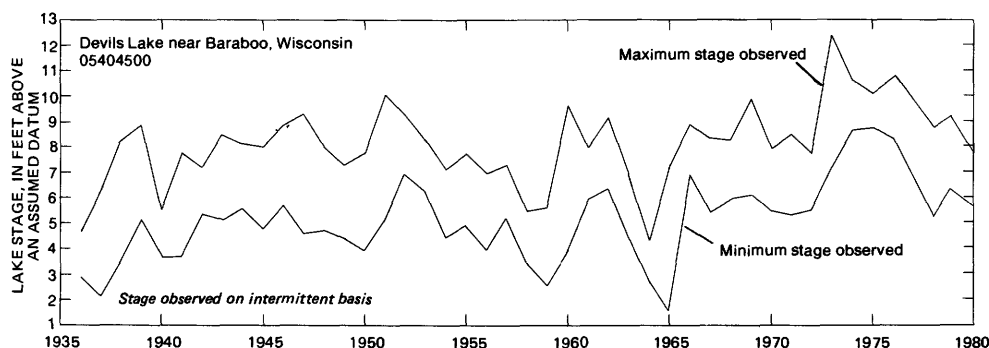
REMARKS.--Lake has no surface outlet. Lake was ice covered Dec. 19 to Apr. 12.

EXTREMES OUTSIDE OF PERIOD OF RECORD.--Gage readings furnished by employee of Devils Lake State Park.

EXTREMES FOR PERIOD OF RECORD.--Maximum gage height observed, 12.40 ft (3.780 m) May 31, June 1, 1973; minimum observed, 1.49 ft (0.454 m) Feb. 8, 1965.

EXTREMES FOR CURRENT YEAR.--Maximum gage height observed, 7.76 ft (2.365 m) Sept. 24; minimum observed, 5.61 ft (1.710 m) Aug. 6.

GAGE HEIGHT (FEET ABOVE DATUM), WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980												
DAY	OCT	NOV	DEC	JAN	FEB	MEAN VALUES MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	---	---	---	---	---	---
2	---	---	---	---	---	---	---	---	---	---	---	---
3	---	---	---	---	---	---	---	---	---	6.15	---	---
4	---	---	---	---	---	---	---	---	---	---	---	---
5	6.80	6.54	---	---	---	---	---	---	---	---	---	6.81
6	---	---	6.39	---	---	---	---	---	---	---	5.61	---
7	---	---	---	---	---	---	---	---	---	---	---	---
8	---	---	---	---	---	---	---	6.67	---	---	---	---
9	6.73	---	---	---	---	---	---	---	---	---	---	---
10	---	---	---	---	---	---	6.66	---	---	---	---	---
11	---	---	6.35	---	---	---	---	---	---	6.06	---	---
12	---	---	---	---	---	---	---	---	---	---	6.23	---
13	---	---	---	---	---	---	---	---	---	---	---	---
14	---	6.44	---	---	---	---	---	6.66	---	---	---	---
15	---	---	---	6.30	---	---	---	---	---	5.97	---	---
16	---	---	---	---	---	---	---	---	---	---	---	---
17	---	---	---	---	---	---	6.80	---	---	6.01	---	---
18	6.59	---	---	---	---	---	---	---	---	---	---	---
19	---	---	---	---	---	---	---	---	---	---	---	---
20	---	---	---	---	---	---	---	---	6.43	---	---	7.56
21	---	---	---	---	---	---	---	6.61	---	---	---	---
22	---	---	---	---	---	---	---	---	---	---	6.66	---
23	---	---	---	---	---	---	6.82	---	---	5.91	---	---
24	---	---	---	---	---	---	---	---	---	---	---	7.76
25	6.66	---	---	---	6.21	---	---	---	6.34	---	---	---
26	6.63	---	---	---	---	---	---	---	---	---	---	---
27	---	6.46	---	---	---	---	---	---	---	---	---	---
28	---	---	---	---	---	---	---	---	---	---	6.59	---
29	---	---	---	---	---	---	6.78	---	---	5.78	---	---
30	---	---	---	---	---	---	---	6.46	---	---	---	---
31	---	---	---	---	---	---	---	---	---	---	---	---



WISCONSIN RIVER BASIN

05405000 BARABOO RIVER NEAR BARABOO, WI

LOCATION.--Lat 43°28'51", long 89°38'09", in NW 1/4 sec.35, T.12 N., R.7 E., Sauk County, Hydrologic Unit 07070004, on left bank 50 ft (15 m) downstream from highway bridge, 0.3 mi (0.5 km) downstream from Rowley Creek and 5.3 mi (8.5 km) east of Baraboo.

DRAINAGE AREA.--609 mi² (1,577 km²).

PERIOD OF RECORD.--December 1913 to March 1922. September 1942 to current year.

REVISED RECORDS.--WSP 455: 1915. WSP 505: 1917(M). WSP 1438: 1914-15(M), 1916-17, 1918-20(M), 1944(M), 1949(M). WSP 1914: 1948, 1950, 1956. WDR WI-75-1: 1968. WDR WI-77-1: Drainage area.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 788.21 ft (240.246 m) National Geodetic Vertical Datum of 1929. Dec. 18, 1913, to Mar. 31, 1922, nonrecording gage at bridge 2.3 mi (3.7 km) upstream at datum 7.6 ft (2.32 m) higher. Sept. 24, 1942, to June 10, 1963, nonrecording gage at present site and datum.

REMARKS.--Records good except those for the winter period, which are fair. Diurnal fluctuation from several powerplants at Baraboo.

AVERAGE DISCHARGE.--45 (water years 1915-21, 1943-80), 371 ft³/s (10.51 m³/s), 8.27 in/yr (210 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge observed, 7,900 ft³/s (224 m³/s) Mar. 26, 1917, gage height, 17.5 ft (5.33 m), estimated, site and datum then in use, from rating curve extended above 6,000 ft³/s (170 m³/s); minimum observed, 9.0 ft³/s (0.25 m³/s) Feb. 17, 1944, gage height, 5.08 ft (1.548 m); minimum daily, 26 ft³/s (0.74 m³/s) Oct. 6, 1950.

EXTREMES OUTSIDE THE PERIOD OF RECORD.--Flood of Aug. 6, 1935, reached a stage of 15.8 ft (4.82 m) from floodmarks, site and datum in use in 1922, discharge, 5,100 ft³/s (144 m³/s).

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 3,360 ft³/s (95.2 m³/s) Aug. 13, gage height, 18.10 ft (5.517 m); minimum, 59 ft³/s (1.67 m³/s) July 13, gage height 6.19 ft (1.887 m).

RATING TABLE (gage height, in feet, and discharge, in cubic feet per second).
(Shifting-control method used Oct. 7 to Dec. 2 and June 7-10; stage-discharge relation affected by ice Dec. 16 and Jan. 18 to Mar. 15.)

6.5	114	13.0	1,760
7.0	216	19.0	3,720

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

MEAN VALUES												
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	160	225	264	210	180	170	323	271	249	147	155	747
2	171	216	198	210	170	170	334	272	264	145	155	789
3	178	234	229	210	170	170	381	268	244	134	145	832
4	201	251	225	210	170	170	533	251	215	135	146	796
5	236	238	229	210	170	170	579	236	205	151	153	578
6	229	223	216	210	170	170	648	223	306	127	156	425
7	199	216	218	210	170	170	738	215	705	132	362	563
8	184	218	198	210	170	170	835	206	1010	134	1190	892
9	174	229	218	210	170	170	1130	196	894	132	1720	980
10	176	231	198	220	170	170	1150	192	655	133	2360	1020
11	180	218	238	220	170	170	1090	193	450	126	2910	975
12	176	205	214	230	170	170	1060	195	296	134	3280	1120
13	176	201	179	250	170	170	890	217	237	123	3350	1420
14	177	201	150	260	170	170	629	236	210	127	3010	1470
15	174	203	212	250	170	190	496	251	194	126	2180	1400
16	173	203	200	350	170	660	460	249	188	153	1350	1460
17	168	207	210	1000	170	1230	445	253	180	167	793	1500
18	171	209	210	1200	170	1500	415	258	173	213	489	1420
19	177	212	210	1300	170	1490	396	256	173	220	517	1110
20	176	212	210	1400	170	1680	389	257	173	217	481	804
21	175	240	200	1600	190	1880	378	248	182	392	779	719
22	205	278	200	1300	210	1530	379	229	186	734	806	1260
23	260	333	200	1000	250	1020	366	210	182	806	815	1540
24	279	379	210	500	400	536	347	195	168	675	800	1100
25	345	387	250	250	390	333	327	183	148	366	735	800
26	361	359	330	200	380	290	303	174	154	225	499	700
27	301	325	360	200	250	327	284	171	144	189	332	660
28	245	335	330	200	190	417	268	167	152	191	322	660
29	214	351	240	190	180	454	266	159	142	191	319	800
30	203	335	230	180	---	398	268	160	142	184	518	700
31	205	---	220	180	---	340	---	177	---	169	724	---
TOTAL	6449	7674	6996	14370	5850	16655	16107	6768	8621	7098	31551	29240
MEAN	208	256	226	464	202	537	537	218	287	229	1018	975
MAX	361	387	360	1600	400	1880	1150	272	1010	806	3350	1540
MIN	160	201	150	180	170	170	266	159	142	123	145	425
CFSM	.34	.42	.37	.76	.33	.88	.88	.36	.47	.38	1.67	1.60
IN.	.39	.47	.43	.88	.36	1.02	.98	.41	.53	.43	1.93	1.79
CAL YR 1979	TOTAL	135346	MEAN	371	MAX	3260	MIN	150	CFSM	.61	IN	8.27
WTR YR 1980	TOTAL	157379	MEAN	430	MAX	3350	MIN	123	CFSM	.71	IN	9.61

NOTE.--No gage-height record Dec. 17 to Jan. 17.

WISCONSIN RIVER BASIN

05406050 FISH LAKE NEAR SAUK CITY, WI

LOCATION.--Lat 43°17'02", long 89°39'15", in NE 1/4 SW 1/4 sec.3, T.9 N., R.7 E., Dane County, Hydrologic Unit 07070005, on south side of lake near Ganser's Tavern and Dance Hall, 0.4 mi (0.6 km) southwest of Crystal Lake, and 3.1 mi (5.0 km) east of Sauk City.

DRAINAGE AREA.--8.97 mi² (23.23 km²), includes 7.11 mi² (18.41 km²) without surface drainage. Area of Fish Lake, 252 acres (1.02 km²).

PERIOD OF RECORD.--November 1966 to current year (fragmentary).

REVISED RECORDS.--WDR WI-77-1: Drainage area

GAGE.--Nonrecording gage in lake bed. Datum of gage is 848.07 ft (258.492 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Lake has no surface outlet. Lake ice covered Dec. 18 to middle part of April.

EXTREMES FOR PERIOD OF RECORD.--Maximum gage height observed, 8.20 ft (2.499 m) May 29, 1976; minimum observed, 3.02 ft (0.920 m) Aug. 29, 1970.

EXTREMES FOR CURRENT YEAR.--Maximum gage height observed, 7.54 ft (2.298 m) Sept. 23, 27; minimum observed 6.36 ft (1.939 m) Aug. 5.

GAGE HEIGHT (FEET ABOVE DATUM), WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980												
DAY	OCT	NOV	DEC	JAN	FEB	MEAN VALUES MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	6.81	---	---	---	---	---	---	---	---	---
2	---	---	---	---	---	---	---	---	---	---	6.38	7.02
3	---	6.82	---	---	---	---	---	7.18	---	---	---	---
4	---	---	---	---	---	---	---	---	---	6.72	---	---
5	---	---	---	---	---	---	---	---	---	---	6.36	7.00
6	6.78	---	6.81	---	---	---	---	---	7.08	---	---	---
7	---	---	---	---	---	---	---	---	---	6.70	6.44	---
8	---	---	---	---	---	---	---	---	---	---	6.72	---
9	---	---	---	---	---	---	---	---	---	---	---	7.08
10	---	6.82	---	---	---	---	---	7.12	---	6.68	6.74	---
11	---	---	---	---	---	---	---	---	---	---	---	---
12	---	---	---	---	---	---	---	---	---	6.66	---	---
13	6.74	6.78	---	---	---	---	---	---	7.02	6.64	---	7.22
14	---	---	---	---	---	---	---	---	---	---	---	---
15	---	---	---	6.87	---	---	---	---	---	6.61	6.76	7.22
16	6.72	---	---	---	---	---	---	---	---	---	---	7.22
17	---	6.75	---	---	---	---	---	7.12	---	---	6.74	---
18	---	---	---	---	---	---	---	---	---	---	---	---
19	---	---	---	---	---	---	---	---	---	6.56	6.84	7.20
20	6.74	---	---	---	---	---	---	---	---	---	---	---
21	---	---	---	---	---	---	7.32	---	6.88	---	---	---
22	---	---	---	---	---	---	---	---	---	---	---	---
23	6.86	---	---	---	---	---	---	---	---	6.50	6.92	7.54
24	---	6.81	---	---	---	---	---	7.04	6.86	---	---	---
25	---	---	---	---	---	---	---	---	---	---	6.88	---
26	---	---	---	---	7.04	---	7.28	---	---	6.46	---	---
27	6.82	---	---	---	---	---	---	---	---	---	6.86	7.54
28	---	---	---	---	---	---	---	7.03	6.84	---	---	---
29	---	---	---	---	---	---	---	---	---	6.42	6.96	---
30	---	---	---	---	---	---	---	7.04	6.78	---	---	---
31	---	---	---	---	---	---	---	---	---	6.38	7.00	---

WISCONSIN RIVER BASIN

05406500 BLACK EARTH CREEK AT BLACK EARTH, WI

LOCATION.--Lat 43°08'03", long 89°43'56", in SW 1/4 sec.25, T.8 N., R.6 E., Dane County, Hydrologic Unit 07070005, on right bank, 0.8 mi (1.3 km) east of Black Earth and 2.1 mi (3.4 km) upstream from Vermont Creek.

DRAINAGE AREA.--45.6 mi² (118.1 km²), of which 2.8 mi² (7.2 km²) probably is noncontributing.

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

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

GAGE.--Water-stage recorder. Datum of gage is 812.95 ft (247.787 m) National Geodetic Vertical Datum of 1929.

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

AVERAGE DISCHARGE.--26 years, 31.5 ft³/s (0.892 m³/s), 9.38 in/yr (238 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,750 ft³/s (49.6 m³/s) July 3, 1954, gage height, 6.58 ft (2.006 m); minimum, 4.8 ft³/s (0.14 m³/s) Nov. 29, 1958, gage height, 1.39 ft (0.424 m), result of freezeup.

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

DATE	TIME	DISCHARGE (ft ³ /s) (m ³ /s)	GAGE HEIGHT (ft) (m)	DATE	TIME	DISCHARGE (ft ³ /s) (m ³ /s)	GAGE HEIGHT (ft) (m)
Mar. 16	2200	345 9.77	4.00 1.219	Sept. 22	1500	*441 12.5	*4.35 1.326

minimum daily discharge, 18 ft³/s (0.51 m³/s) July 19-23.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	32	34	34	34	25	29	32	35	33	23	20	40
2	33	31	32	34	25	28	33	38	33	23	24	39
3	29	31	32	33	25	28	43	37	36	24	22	34
4	29	29	33	33	26	29	44	37	33	23	22	33
5	29	29	34	32	26	29	39	37	38	28	22	30
6	29	31	32	31	26	28	39	35	52	22	21	29
7	29	30	34	31	26	28	41	35	70	22	24	112
8	28	29	33	31	26	28	69	34	49	22	34	83
9	28	28	33	31	26	29	66	34	38	27	29	84
10	28	29	34	32	26	29	51	34	35	23	26	54
11	28	28	34	35	26	28	46	34	33	22	25	45
12	31	28	33	37	26	27	44	33	32	22	25	114
13	26	28	32	33	26	28	42	36	31	21	28	92
14	27	28	30	31	26	29	42	35	32	21	24	59
15	27	28	30	31	26	97	42	34	31	21	22	50
16	31	28	30	131	26	240	40	33	30	27	24	48
17	30	29	29	101	26	130	39	36	29	20	28	46
18	30	28	29	51	26	54	42	38	29	19	25	41
19	35	28	29	44	26	53	41	37	28	18	27	38
20	30	28	29	40	28	47	41	34	27	18	27	74
21	28	41	30	38	44	41	39	32	25	18	62	54
22	34	45	32	36	89	38	39	31	26	18	38	301
23	46	40	43	31	67	36	38	31	25	18	29	92
24	35	36	48	31	44	33	36	30	26	22	26	67
25	30	34	50	29	38	32	35	29	30	22	25	59
26	29	43	42	28	31	32	34	29	29	24	24	54
27	28	41	39	28	31	32	34	27	25	22	23	50
28	27	37	37	28	30	32	35	30	30	21	28	55
29	28	36	36	27	29	32	36	30	25	21	50	54
30	30	35	35	27	---	32	35	36	25	21	71	48
31	31	---	35	26	---	32	---	33	---	21	53	---
TOTAL	935	970	1063	1185	922	1390	1237	1044	985	674	928	1979
MEAN	30.2	32.3	34.3	38.2	31.8	44.8	41.2	33.7	32.8	21.7	29.9	66.0
MAX	46	45	50	131	89	240	69	38	70	28	71	301
MIN	26	28	29	26	25	27	32	27	25	18	20	29
CFSM	.66	.71	.75	.84	.70	.98	.90	.74	.72	.48	.66	1.45
IN.	.76	.79	.87	.97	.75	1.13	1.01	.85	.80	.55	.76	1.61
CAL YR 1979	TOTAL	13063	MEAN 35.8	MAX 190	MIN 22	CFSM .79	IN 10.66					
WTR YR 1980	TOTAL	13312	MEAN 36.4	MAX 301	MIN 18	CFSM .80	IN 10.86					

WISCONSIN RIVER BASIN

05407000 WISCONSIN RIVER AT MUSCODA, WI
(NATIONAL STREAM-QUALITY ACCOUNTING NETWORK STATION)

LOCATION.--Lat 43°11'54", long 90°26'26", in NW 1/4 sec.1, T.8 N., R.1 W., Grant County, Hydrologic Unit 07070005, on left bank at bridge on State Highway 80, 0.5 mi (0.8 km) upstream from Eagle Mill Creek and 1.0 mi (1.6 km) north of Muscoda.

DRAINAGE AREA.--10,400 mi² (26,900 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--December 1902 to December 1903, October 1913 to current year. Monthly discharge only for October and November 1913, published in WSP 1308. Gage-height records collected at same site November 1908 to December 1912 are contained in reports of U. S. Weather Bureau.

REVISED RECORDS.--WSP 785: 1921(M). WSP 875: 1921. WSP 1308: 1915(M), 1917-18(M), 1920-21(M), 1924(M). WDR WI-79-1: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 667.05 ft (230.32 m) National Geodetic Vertical Datum of 1929. Prior to Nov. 22, 1929, nonrecording gage on bridge 200 ft (61 m) upstream at same datum. Nov. 22, 1929, to Mar. 15, 1930, nonrecording gage at present site and datum.

REMARKS.--Records good except those for winter periods, which are fair. Flow regulated by 23 reservoirs and many powerplants above station (see reservoir records at end of Wisconsin River Basin). In 1938 when the maximum of record occurred, there were 21 reservoirs above station, the two large reservoirs, Petenwell and Castle Rock not yet in existence. Usually less than 5 ft³/s (0.14 m³/s) was diverted out of basin through Portage Canal to Fox River throughout the year. Gage-height telemeter at station.

AVERAGE DISCHARGE.--67 years (1913-80), 8,617 ft³/s (244.0 m³/s).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 80,800 ft³/s (2,290 m³/s) Sept. 16, 1938, gage height, 11.48 ft (3.50 m); minimum daily, 2,000 ft³/s (56.6 m³/s) Feb. 11, 1918.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 47,200 ft³/s (1,337 m³/s) Sept. 27, gage height, 8.58 ft (2.62 m); minimum, 3,330 ft³/s (94.3 m³/s) Aug. 6.

RATING TABLES (gage height, in feet, and discharge, in cubic feet per second).
(Stage-discharge relation affected by ice Dec. 13-16 and Jan. 7 to Mar. 21.)

Oct. 1 to Apr. 14				Apr. 15 to Sept. 30			
0.6	3,680	3.0	11,700	0.7	3,400	5.0	20,200
1.0	4,720	5.0	21,000	1.0	4,180	7.0	32,800
2.0	7,800	7.0	34,300	2.0	7,260	9.0	51,400
				3.0	11,100		

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4620	10100	11600	7200	6600	7800	8830	8540	6010	8780	4000	16100
2	4440	7990	10400	7020	6600	7200	8890	8290	6200	7830	4350	14000
3	4340	9840	8100	6810	6600	7400	10500	7460	5500	7210	4430	13800
4	4330	8490	7350	6780	7400	6600	10900	7740	6200	6810	4310	15000
5	4860	8450	8390	7180	8200	6400	10600	7210	6130	7010	3470	16300
6	4740	8410	9490	7240	7600	7000	10500	6070	6470	6160	3550	15000
7	4720	7230	9390	6400	7800	7400	11200	5910	9740	4730	4360	15500
8	4710	7600	7690	5200	8000	7000	11500	6550	11400	4300	7430	15200
9	4650	10500	7750	4000	7600	6800	14500	6440	17800	4810	10100	14600
10	4410	10200	7480	5000	7800	7000	14900	6250	24600	4520	12600	14200
11	4440	9270	7680	6200	7600	7000	17800	6680	35100	4380	15100	14000
12	4690	9140	7790	6000	5800	7000	23800	6030	41600	4200	14800	15000
13	4920	8920	7800	7000	6600	5800	30800	5640	35300	4140	11300	17700
14	5120	8400	7600	6200	7000	6800	30600	6150	24700	4280	12100	19000
15	4510	7730	7400	7600	7800	6800	18000	6720	17000	3790	14100	20800
16	4360	7310	7000	8200	7600	6800	14400	6670	15900	3980	12500	23300
17	4410	7560	7400	8000	7000	8000	13800	6700	15200	4540	12600	25600
18	4320	7710	3800	8800	6800	8600	13200	6620	10800	4810	11600	24200
19	4000	7470	4500	9600	6400	9200	13300	6360	10400	4500	9610	21300
20	4800	6140	7400	10000	7000	9600	12800	5890	8900	3970	10000	19600
21	5200	7750	7000	11000	7600	10000	12600	5800	8810	4210	11500	18200
22	4800	8310	6800	10000	8000	10700	11500	6150	10200	5380	11000	18100
23	5200	8170	7400	9600	8400	10500	10900	6160	10500	4460	10200	20500
24	7800	8010	7800	7600	8200	11000	10200	6300	9580	4730	11000	25000
25	10100	8580	7400	6800	8000	11000	9390	6170	8550	4540	10300	33700
26	12600	9910	7440	7800	7400	10400	10300	6120	7870	4530	9590	42200
27	13000	10700	6390	9200	6400	10500	9780	5080	8130	4650	8800	46100
28	13000	11000	6120	9400	7800	10500	9180	4500	8640	4140	10000	43400
29	11700	11100	7600	9200	8000	9900	8810	5560	7720	3940	10400	31500
30	11900	11000	7550	8400	---	10000	7690	7300	8380	3800	13000	24700
31	10500	---	7440	5600	---	10100	---	6050	---	3630	15700	---
TOTAL	197190	262990	234950	235030	213600	260800	401170	199110	403330	152760	303800	653600
MEAN	6361	8766	7579	7582	7366	8413	13370	6423	13440	4928	9800	21790
MAX	13000	11100	11600	11000	8400	11000	30800	8540	41600	8780	15700	46100
MIN	4000	6140	3800	4000	5800	5800	7690	4500	5500	3630	3470	13800

CAL YR 1979 TOTAL 3830890 MEAN 10500
WTR YR 1980 TOTAL 3518330 MEAN 9613
MAX 43300 MIN 3800
MAX 46100 MIN 3470

WISCONSIN RIVER BASIN

05407000 WISCONSIN RIVER AT MUSCODA, WI--CONTINUED
(NATIONAL STREAM QUALITY ACCOUNTING NETWORK STATION)
(NATIONAL PESTICIDE MONITORING NETWORK STATION)

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1964-67, 1971, 1975 to current year.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: July 1975 to current year.

WATER TEMPERATURES: July 1975 to current year.

SUSPENDED-SEDIMENT DISCHARGE: July 1975 to September 1979 (discontinued).

COOPERATION.--Pesticide samples were collected by the U.S. Geological Survey and were analyzed by Environmental Protection Agency.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Maximum daily, 355 micromhos Nov. 27, 1976; minimum daily, 120 micromhos Apr. 24, 1976.
WATER TEMPERATURES (WATER YEARS 1975, 1977-1980): Maximum daily, 31.0°C Aug. 1, 1975; minimum daily, 0.0°C on many days during winter periods.

EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum daily, 260 micromhos Jan. 8, Feb. 13; minimum daily, 145 micromhos Aug. 15.
WATER TEMPERATURES: Maximum daily, 30.0°C July 13; minimum daily, 0.0°C on many days during winter period.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH FIELD (UNITS)	TEMPER- ATURE, WATER (DEG C)	TUR- BID- ITY (NTU)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED (PER- CENT)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	STREP- TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)
OCT , 1979										
26...	1000	12700	220	8.3	9.0	6.0	10.5	95	130	E450
NOV										
07...	1100	7180	195	7.9	11.5	3.0	11.4	110	34	72
DEC										
11...	1100	7660	235	7.4	3.0	3.0	12.2	95	K15	K8
JAN , 1980										
04...	1030	6780	250	7.9	.5	1.5	12.8	93	68	K12
FEB										
19...	1000	10300	280	7.8	.5	18	10.0	72	K13	K10
MAR										
26...	1100	10300	240	7.2	3.0	.50	12.0	93	E35	470
APR										
23...	1430	10500	220	8.2	15.5	2.5	11.0	115	K5	24
MAY										
19...	1100	6450	205	8.6	15.5	3.6	10.9	114	130	44
JUN										
11...	1100	34600	170	6.6	18.5	1.3	4.9	54	150	370
JUL										
07...	1100	5080	210	8.1	26.5	3.9	8.9	114	33	K10
AUG										
06...	1100	3500	280	8.1	25.0	6.1	8.8	110	45	K14
SEP										
10...	1000	14200	200	7.8	20.0	6.5	7.4	85	1700	780

DATE	HARD- NESS (MG/L AS CAO3)	HARD- NESS, NONCAR- BONATE (MG/L CAO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	PERCENT SODIUM	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LITY (MG/L AS CAO3)	SULFATE DIS- SOLVED (MG/L AS SO4)
OCT , 1979										
26...	92	9	22	9.1	7.7	23	.3	1.6	83	15
NOV										
07...	110	22	24	11	10	26	.4	1.7	83	18
DEC										
11...	96	19	23	9.3	7.7	22	.3	1.8	77	15
JAN , 1980										
04...	110	21	26	11	7.5	20	.3	1.6	89	16
FEB										
19...	100	17	25	10	6.8	12	.3	1.9	87	18
MAR										
26...	88	19	21	8.7	8.8	17	.4	4.3	69	13
APR										
23...	80	15	19	7.8	7.3	16	.4	3.4	65	11
MAY										
19...	88	13	20	9.3	5.0	11	.2	2.3	75	11
JUN										
11...	52	12	12	5.3	6.9	22	.4	2.2	40	13
JUL										
07...	86	13	20	8.7	6.1	13	.3	2.3	73	12
AUG										
06...	110	11	24	11	5.1	9	.2	2.4	94	9.5
SEP										
10...	85	10	20	8.6	5.3	12	.3	2.6	75	12

K RESULTS BASED ON COLONY COUNT OUTSIDE THE ACCEPTABLE RANGE (NON-IDEAL COLONY COUNT).

E ESTIMATED.

WISCONSIN RIVER BASIN

05407000 WISCONSIN RIVER AT MUSCODA, WI--CONTINUED

WATER-QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	CHLORIDE, DIS-SOLVED (MG/L AS CL)	FLUORIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SiO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L)	SOLIDS, SUM OF CONSTITUENTS, DIS-SOLVED (MG/L)	SOLIDS, DIS-SOLVED (TONS PER AC-FT)	SOLIDS, DIS-SOLVED (TONS PER DAY)	NITROGEN, NO2+NO3 TOTAL (MG/L AS N)	NITROGEN, NO2+NO3 DIS-SOLVED (MG/L AS N)	NITROGEN, AMMONIA TOTAL (MG/L AS N)
OCT , 1979										
26...	12	.1	.4	126	118	.17	4320	.32	.02	.070
NOV										
07...	12	.1	2.9	139	132	.19	2700	.43	.42	.020
DEC										
11...	12	.0	4.8	144	122	.20	2980	.62	.58	.110
JAN , 1980										
04...	11	.1	8.1	144	138	.20	2640	.77	.77	.110
FEB										
19...	12	.1	10	162	140	.22	4510	.81	.77	.250
MAR										
26...	12	.1	9.2	158	119	.21	4390	.81	.01	.430
APR										
23...	11	.1	6.9	138	109	.19	3910	.82	.81	.040
MAY										
19...	8.2	.1	.6	117	102	.16	2040	.12	.13	.080
JUN										
11...	9.5	.1	2.1	97	77	.13	9060	.30	.31	.100
JUL										
07...	9.9	.1	3.8	125	107	.17	1710	.08	.09	.140
AUG										
06...	8.2	.1	5.1	149	123	.20	1410	.24	.26	.070
SEP										
10...	9.3	.1	6.2	136	110	.19	5210	.20	.16	.070

DATE	NITROGEN, AMMONIA DIS-SOLVED (MG/L AS N)	NITROGEN, ORGANIC TOTAL (MG/L AS N)	NITROGEN, ORGANIC DIS-SOLVED (MG/L AS N)	NITROGEN, AMMONIA + ORGANIC TOTAL (MG/L AS N)	NITROGEN, NH4 + ORG. SUSP. TOTAL (MG/L AS N)	NITROGEN, AMMONIA + ORGANIC DIS-SOLVED (MG/L AS N)	NITROGEN, DIS-SOLVED (MG/L AS N)	NITROGEN, TOTAL (MG/L AS N)	PHOSPHORUS, TOTAL (MG/L AS P)	PHOSPHORUS, DIS-SOLVED (MG/L AS P)
OCT , 1979										
26...	.110	1.0	1.3	1.1	.00	1.4	1.4	1.4	.080	.040
NOV										
07...	.000	.79	.39	.81	.42	.39	.81	1.2	.060	.030
DEC										
11...	.080	.61	.51	.72	.13	.59	1.2	1.3	.060	.030
JAN , 1980										
04...	.140	.72	.66	.83	.03	.80	1.6	1.6	.060	.040
FEB										
19...	.230	.52	.51	.77	.03	.74	1.5	1.6	.070	.060
MAR										
26...	.060	.57	.94	1.0	.00	1.0	1.0	1.8	.160	.080
APR										
23...	.060	.91	.55	.95	.34	.61	1.4	1.8	.150	.040
MAY										
19...	.040	.60	.61	.68	.03	.65	.78	.80	.130	.020
JUN										
11...	.040	.84	.71	.94	.19	.75	1.1	1.2	.100	.040
JUL										
07...	.010	1.2	.70	1.3	.59	.71	.80	1.4	.090	.020
AUG										
06...	.000	.48	.32	.55	.23	.32	.58	.79	.120	.040
SEP										
10...	.020	.89	.29	.96	.65	.31	.47	1.2	.170	.030

DATE	SILVER, TOTAL RECOVERABLE (UG/L AS AG)	CARBON, ORGANIC TOTAL (MG/L AS C)	CARBON, ORGANIC DIS-SOLVED (MG/L AS C)	CARBON, ORGANIC SUSPENDED (MG/L AS C)	PHYTOPLANKTON, TOTAL (CELLS PER ML)	PERI-PHYTON BIOMASS ASH WEIGHT G/SQ M	PERI-PHYTON BIOMASS DRY WEIGHT G/SQ M	CHLOR-A PERI-PHYTON CHROMO- GRAPHIC FLUOROM (MG/M2)	CHLOR-B PERI-PHYTON CHROMO- GRAPHIC FLUOROM (MG/M2)	BIOMASS CHLORO- PHYLL RATIO PERI-PHYTON (UNITS)
OCT , 1979										
26...	0	--	7.1	2.4	--	22	24	34	.00	65.7
NOV										
07...	0	--	9.5	1.1	2600	--	--	--	--	--
DEC										
11...	0	9.5	--	--	--	--	--	--	--	--
JAN , 1980										
04...	--	8.0	--	--	--	--	--	--	--	--
FEB										
19...	4	--	11	--	--	--	--	--	--	--
MAR										
26...	0	14	--	--	--	--	--	--	--	--
APR										
23...	--	7.6	--	--	1600	--	--	--	--	--
MAY										
19...	0	--	6.3	.6	34000	5.3	6.6	10	4.3	129
JUN										
11...	0	8.2	--	--	5900	--	--	--	--	--
JUL										
07...	--	11	--	--	230000	--	--	--	--	--
AUG										
06...	0	--	7.6	1.2	170000	--	--	--	--	--
SEP										
10...	0	--	--	--	33000	--	--	--	--	--

WISCONSIN RIVER BASIN

05407000 WISCONSIN RIVER AT MUSCODA, WI--CONTINUED

WATER-QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	ARSENIC TOTAL (UG/L AS AS)		ARSENIC SUS- PENDED TOTAL (UG/L AS AS)		ARSENIC DIS- SOLVED (UG/L AS AS)		BARIUM, TOTAL RECOV- ERABLE (UG/L AS BA)		BARIUM, SUS- PENDED RECOV- ERABLE (UG/L AS BA)		BARIUM, DIS- SOLVED (UG/L AS BA)		CADMIUM TOTAL RECOV- ERABLE (UG/L AS CD)		CADMIUM SUS- PENDED RECOV- ERABLE (UG/L AS CD)		CADMIUM DIS- SOLVED (UG/L AS CD)		
OCT , 1979																					
26...	1000	12700	1		1		0		100		80		20		0		0		0		0
NOV																					
07...	1100	7180	1		0		1		100		60		40		0		--		5		5
FEB , 1980																					
19...	1000	10300	1		0		1		200		170		30		0		--		1		1
MAY																					
19...	1100	6450	1		--		2		100		70		30		0		0		0		0
AUG																					
06...	1100	3500	2		1		1		100		80		20		0		--		2		2

DATE	CHROMIUM, TOTAL RECOVERABLE (UG/L AS CR)	CHROMIUM, SUS- PENDED RECOV. (UG/L AS CR)	CHROMIUM, DIS- SOLVED (UG/L AS CR)	COBALT, TOTAL RECOVERABLE (UG/L AS CO)	COBALT, SUS- PENDED RECOVERABLE (UG/L AS CO)	COBALT, DIS- SOLVED (UG/L AS CO)	COPPER, TOTAL RECOVERABLE (UG/L AS CU)	COPPER, SUS- PENDED RECOVERABLE (UG/L AS CU)	COPPER, DIS- SOLVED (UG/L AS CU)	IRON, TOTAL RECOVERABLE (UG/L AS FE)	IRON, SUS- PENDED RECOVERABLE (UG/L AS FE)
OCT , 1979											
26...	<10	<0	10	0	--	1	74	72	2	1200	1100
NOV											
07...	20	0	20	2	0	2	6	0	6	640	290
FEB , 1980											
19...	10	0	<10	0	0	0	4	2	2	850	380
MAY											
19...	30	--	<10	0	0	0	7	1	6	660	510
AUG											
06...	30	10	20	0	0	0	6	0	6	470	460

DATE	IRON, DIS- SOLVED (UG/L AS FE)	LEAD, TOTAL RECOV- ERABLE (UG/L AS PB)	LEAD, SUS- PENDED RECOV- ERABLE (UG/L AS PB)	LEAD, DIS- SOLVED (UG/L AS PB)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)	MANGA- NESE, SUS- PENDED RECOV. (UG/L AS MN)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	MERCURY TOTAL RECOV- ERABLE (UG/L AS HG)	MERCURY SUS- PENDED RECOV- ERABLE (UG/L AS HG)	MERCURY DIS- SOLVED (UG/L AS HG)	NICKEL, TOTAL RECOV- ERABLE (UG/L AS NI)
OCT , 1979											
26...	100	5	5	0	230	220	6	.1	.0	<.1	3
NOV											
07...	350	1	--	2	80	50	30	.3	.0	.3	4
FEB , 1980											
19...	470	3	3	0	40	20	20	.3	.2	<.1	2
MAY											
19...	150	5	5	0	150	150	5	.1	.0	.1	0
AUG											
06...	10	3	2	1	120	110	6	.2	.0	.2	4

[illegible]

WISCONSIN RIVER BASIN

05407000 WISCONSIN RIVER AT MUSCODA, WI--CONTINUED

WATER-QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	PCB, TOTAL (UG/L)	PCB, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	ALDRIN, TOTAL (UG/L)	ALDRIN, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	CHLOR- DANE, TOTAL (UG/L)	CHLOR- DANE, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	DDD, TOTAL (UG/L)	DDD, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	DDE, TOTAL (UG/L)	DDE, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)
NOV , 1979												
07...	1100	7180	--	0	--	.0	--	0	--	.0	--	.0
FEB , 1980												
19...	1000	10300	.0	--	.00	--	.0	--	.00	--	.00	--
DATE		DDT, TOTAL (UG/L)	DDT, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	DI- AZINON, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	DI- ELDRIN, TOTAL IN BOT- TOM MA- TERIAL (UG/L)	DI- ELDRIN, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	ENDRIN, TOTAL (UG/L)	ENDRIN, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	ETHION, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	HEPTA- CHLOR, TOTAL IN BOT- TOM MA- TERIAL (UG/L)	HEPTA- CHLOR, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	HEPTA- CHLOR EPOXIDE TOT. IN BOTTOM MATL. (UG/KG)
NOV , 1979												
07...	--	.0	.0	--	.0	--	.0	.0	--	.0	--	.0
FEB , 1980												
19...	.00	--	--	.00	--	.00	--	--	.00	--	.00	--
DATE		LINDANE TOTAL (UG/L)	LINDANE TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	MALA- THION, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	METH- OXY- CHLOR, TOTAL (UG/L)	METH- OXY- CHLOR, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	METHYL PARA- THION, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	METHYL PARA- THION, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	PARA- THION, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	TOX- APHENE, TOTAL (UG/L)	TOX- APHENE, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	TRI- THION, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)
NOV , 1979												
07...	--	.0	.0	--	.0	.0	.0	.0	--	0	.0	
FEB , 1980												
19...	.00	--	--	.00	--	--	--	--	0	--	--	

WISCONSIN RIVER BASIN

05407000 WISCONSIN RIVER AT MUSCODA, WI--CONTINUED

QUALITATIVE AND ASSOCIATED QUANTITATIVE BIOLOGICAL DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

PHYTOPLANKTON

Date	Time	Organism	Count (cells/ml)	Percent of total	Diversity index	Sampling method
Nov. 7, 1979	1100	CHLOROPHYTA				Grab sample
		Chlorophyceae				
		<i>Ankistrodesmus</i>	65	2		
		<i>Chlamydomonas</i>		0		
		<i>Crucigenia</i>	100	4		
		<i>Scenedesmus</i>	150	6		
		<i>Schroedaria</i>		0		
		CHRYSOPHYTA				
		Bacillariophyceae				
		<i>Asterionella</i>	170	6		
		<i>Cyclotella</i>	320	12		
		<i>Melosira</i>	310	12		
		<i>Stephanodiscus</i>	77	3		
		CRYPTOPHYTA				
		Cryptophyceae				
		<i>Chroomonas</i>	26	1		
		CYANOPHYTA				
		Cyanophyceae				
		<i>Anacystis</i>		0		
		<i>Oscillatoria</i>	1,300	50		
		EUGLENOPHYTA				
		Euglenophyceae				
		<i>Euglena</i>		0		
		PYRRHOPHYTA				
		Dinophyceae				
		<i>Glenodinium</i>	26	1		
		TOTAL	2,600		2.5	
Apr. 10, 1980	1200	CHLOROPHYTA				Grab sample
		Chlorophyceae				
		<i>Ankistrodesmus</i>	690	44		
		<i>Chlamydomonas</i>	30	2		
		<i>Tetradion</i>	15	1		
		CHRYSOPHYTA				
		Bacillariophyceae				
		<i>Asterionella</i>	15	1		
		<i>Cyclotella</i>	600	38		
		<i>Diatoma</i>	30	2		
		<i>Melosira</i>	45	3		
		<i>Navicula</i>	60	4		
		<i>Nitzschia</i>	45	3		
		<i>Synedra</i>	30	2		
		PYRRHOPHYTA				
		Dinophyceae				
		<i>Gymnodinium</i>	15	1		
		TOTAL	1,600		2.0	
May 19, 1980	1100	CHLOROPHYTA				Grab sample
		Chlorophyceae				
		<i>Ankistrodesmus</i>	620	2		
		<i>Chlamydomonas</i>	250	1		
		<i>Golenkinia</i>		0		
		<i>Microactinium</i>	990	3		
		<i>Oocystis</i>	6,000	18		
		<i>Scenedesmus</i>	3,200	9		
		<i>Selenastrum</i>		0		
		CHRYSOPHYTA				
		Bacillariophyceae				
		<i>Asterionella</i>	2,000	6		
		<i>Cyclotella</i>	7,900	23		
		<i>Diatoma</i>	1,500	4		
		<i>Melosira</i>	2,600	8		
		<i>Nitzschia</i>		0		
		<i>Synedra</i>	370	1		
		CRYPTOPHYTA				
		Cryptophyceae				
		<i>Chroomonas</i>		0		
		CYANOPHYTA				
		Cyanophyceae				
		<i>Agmenellum</i>	500	1		
		<i>Anacystis</i>	7,600	22		
		TOTAL	34,000		3.0	

WISCONSIN RIVER BASIN

05407000 WISCONSIN RIVER AT MUSCODA, WI--CONTINUED

QUALITATIVE AND ASSOCIATED QUANTITATIVE BIOLOGICAL DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

PHYTOPLANKTON

Date	Time	Organism	Count (cells/ml)	Percent of total	Diversity index	Sampling method
June 11, 1980	1100	CHLOROPHYTA				Grab sample
		Chlorophyceae				
		<i>Ankistrodesmus</i>	130	2		
		<i>Chlorella</i>		0		
		<i>Crucigenia</i>	150	3		
		<i>Oocystis</i>	75	1		
		<i>Schroederia</i>	170	3		
		<i>Scenedesmus</i>	340	6		
		<i>Sphaerocystis</i>	150	3		
		<i>Tetraedron</i>		0		
		<i>Tetrastrum</i>	75	1		
		CHRYSOPHYTA				
		Bacillariophyceae				
		<i>Cocconeis</i>		0		
		<i>Cyclotella</i>	510	9		
		<i>Cymbella</i>		0		
		<i>Fragilaria</i>	150	3		
		<i>Melosira</i>	1,400	24		
		<i>Nitzschia</i>	94	2		
		<i>Stephanodiscus</i>	38	1		
		CYANOPHYTA				
		Cyanophyceae				
		<i>Anabaena</i>	300	5		
		<i>Anacystis</i>	190	3		
		<i>Aphanizomenon</i>	2,000	34		
		<i>Coccochloris</i>		0		
		EUGLENOPHYTA				
		Euglenophyceae				
		<i>Trachelomonas</i>		0		
		TOTAL	5,900		3.1	
July 7, 1980	1100	CHLOROPHYTA				Grab sample
		Chlorophyceae				
		<i>Chlamydomonas</i>		0		
		<i>Dictyosphaerium</i>		0		
		<i>Kirchneriella</i>	1,600	1		
		<i>Schroederia</i>		0		
		<i>Selenastrum</i>		0		
		<i>Tetrastrum</i>		0		
		CHRYSOPHYTA				
		Bacillariophyceae				
		<i>Cyclotella</i>	2,400	1		
		<i>Melosira</i>	1,700	1		
		<i>Nitzschia</i>		0		
		CYANOPHYTA				
		Cyanophyceae				
		<i>Anabaena</i>	6,300	3		
		<i>Anacystis</i>	13,000	6		
		<i>Aphanizomenon</i>	200,000	87		
		<i>Oscillatoria</i>	1,800	1		
		TOTAL	230,000		0.9	
Aug. 6, 1980	1100	CHLOROPHYTA				Grab sample
		Chlorophyceae				
		<i>Tetraedron</i>		0		
		<i>Scenedesmus</i>		0		
		CHRYSOPHYTA				
		Bacillariophyceae				
		<i>Cyclotella</i>	1,200	1		
		<i>Melosira</i>	3,900	2		
		<i>Nitzschia</i>		0		
		<i>Synedra</i>		0		
		CYANOPHYTA				
		Cyanophyceae				
		<i>Anabaena</i>	2,400	1		
		<i>Anacystis</i>	58,000	35		
		<i>Gomphosphaeria</i>	74,000	45		
		<i>Oscillatoria</i>	24,000	14		
		TOTAL	170,000		1.8	
Sept. 10, 1980	1000	CHLOROPHYTA				Grab sample
		Chlorophyceae				
		<i>Ankistrodesmus</i>	560	2		
		<i>Chlamydomonas</i>	650	2		
		<i>Coelastrum</i>	750	2		
		<i>Dictyosphaerium</i>	2,400	7		
		<i>Oocystis</i>	470	1		
		<i>Scenedesmus</i>	5,400	16		
		<i>Schroederia</i>		0		
		<i>Sphaerocystis</i>	750	2		
		CHRYSOPHYTA				
		Bacillariophyceae				
		<i>Cyclotella</i>	1,000	3		
		<i>Melosira</i>	7,400	22		
		<i>Navicula</i>		0		
		<i>Nitzschia</i>	370	1		
		CRYPTOPHYTA				
		Cryptophyceae				
		<i>Chroomanas</i>	190	1		
		CYANOPHYTA				
		Cyanophyceae				
		<i>Agmenellum</i>	3,000	9		
		<i>Anacystis</i>	2,600	8		
		<i>Aphanizomenon</i>	1,900	6		
		<i>Lyngbya</i>	1,900	6		
		<i>Oscillatoria</i>	4,000	12		
		TOTAL	33,000		3.5	

WISCONSIN RIVER BASIN

05407000 WISCONSIN RIVER AT MUSCODA, WI--CONTINUED

WATER-QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SEDI- MENT, SUS- PENDE (MG/L)	SEDI- DIS- CHARGE, SUS- PENDE (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM	SED. SUSP. SIEVE DIAM. % FINER THAN .125 MM	SED. SUSP. SIEVE DIAM. % FINER THAN .250 MM	SED. SUSP. SIEVE DIAM. % FINER THAN .500 MM	SED. SUSP. SIEVE DIAM. % FINER THAN 1.00 MM
APR , 1980									
23...	1430	10500	24	680	70	72	81	100	--
MAY									
19...	1100	6450	24	418	73	75	82	98	100
JUN									
10...	1130	25600	91	6290	25	31	45	88	100
11...	1100	34600	72	6730	24	29	55	100	--
12...	1420	39900	--	--	13	15	38	87	100
16...	1330	16100	38	1650	40	45	59	95	100
SEP									
26...	1100	41100	125	13900	14	16	36	92	100
30...	1045	25300	47	3210	34	40	59	98	100

PARTICLE-SIZE DISTRIBUTION OF SURFACE BED MATERIAL

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	BED MAT. SIEVE DIAM. % FINER THAN .125 MM	BED MAT. SIEVE DIAM. % FINER THAN .250 MM	BED MAT. SIEVE DIAM. % FINER THAN .500 MM	BED MAT. SIEVE DIAM. % FINER THAN 1.00 MM	BED MAT. SIEVE DIAM. % FINER THAN 2.00 MM	BED MAT. SIEVE DIAM. % FINER THAN 4.00 MM	BED MAT. SIEVE DIAM. % FINER THAN 8.00 MM
APR , 1980									
23...	1430	10500	1	11	72	96	99	100	--
MAY									
19...	1100	6450	--	9	63	91	97	99	100
JUN									
10...	1130	25600	--	7	64	93	98	99	100
11...	1100	34600	--	6	60	90	96	99	100
12...	1420	39900	--	10	66	90	96	98	100
16...	1330	16100	--	7	52	88	96	99	100
SEP									
26...	1100	41100	--	5	57	89	95	98	100
30...	1045	25300	--	5	57	90	97	99	100

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	TEMPER- ATURE, WATER (DEG C)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	SEDI- MENT, SUS- PENDE (MG/L)	SEDI- MENT DIS- CHARGE, SUS- PENDE (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
OCT , 1979							
26...	1000	12700	9.0	220	44	1510	31
NOV							
07...	1100	7180	11.5	195	15	291	28
DEC							
11...	1100	7660	3.0	235	10	207	33
JAN , 1980							
04...	1030	6780	.5	250	17	311	19
FEB							
19...	1000	10300	.5	280	2	56	100
MAR							
26...	1100	10300	3.0	240	28	779	39
APR							
23...	1430	10500	15.5	220	24	680	70
MAY							
19...	1100	6450	15.5	205	24	418	73
JUN							
10...	1130	25600	18.0	--	91	6290	25
11...	1100	34600	18.5	170	72	6730	24
12...	1420	39900	18.5	145	--	--	13
16...	1330	16100	20.5	--	38	1650	40
JUL							
07...	1100	5080	26.5	210	34	466	45
AUG							
06...	1100	3500	25.0	280	23	217	83
SEP							
10...	1000	14200	20.0	200	46	1760	81
26...	1100	41100	15.0	--	125	13900	14
30...	1045	25300	16.5	--	47	3210	34

WISCONSIN RIVER BASIN

05407000 WISCONSIN RIVER AT MUSCODA, WI--CONTINUED

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	200	210	220	230	230	200	210	200	---	240	240
2	---	200	215	225	220	235	205	200	210	---	220	200
3	---	210	220	235	225	220	200	200	200	---	230	220
4	---	220	235	230	230	230	210	210	---	---	220	190
5	---	200	235	240	220	240	240	210	---	---	200	200
6	---	220	220	230	225	235	220	200	---	---	225	205
7	---	220	225	235	220	240	230	210	---	---	220	205
8	---	220	220	220	220	230	220	210	---	235	200	200
9	---	215	220	260	235	220	200	200	---	220	160	210
10	---	215	230	240	220	220	190	210	---	220	200	220
11	---	200	225	220	230	225	220	210	---	225	190	220
12	---	215	240	225	240	220	210	200	---	235	160	190
13	---	215	230	240	260	220	220	210	---	200	180	190
14	---	210	235	220	230	240	200	200	---	230	190	190
15	---	220	230	230	235	230	200	200	---	245	145	190
16	250	215	235	235	230	220	210	190	---	230	180	195
17	240	215	230	225	220	230	220	200	---	200	190	190
18	245	220	230	220	230	220	200	210	---	220	190	200
19	225	240	240	230	220	220	230	200	---	220	195	200
20	225	225	225	220	225	220	220	200	---	200	195	200
21	225	220	230	235	230	225	220	200	---	220	200	200
22	220	240	230	220	240	230	220	220	---	210	200	205
23	225	220	220	225	245	230	210	210	---	200	190	200
24	220	230	230	230	230	220	200	200	---	220	195	200
25	---	230	240	235	240	220	210	200	---	220	195	195
26	---	220	240	220	250	230	220	220	---	230	195	200
27	---	235	250	220	260	220	200	230	---	230	195	200
28	---	220	240	230	240	200	230	200	---	240	195	195
29	---	225	230	220	240	225	220	200	---	245	200	200
30	---	215	225	220	---	220	210	190	---	250	205	200
31	---	---	230	230	---	210	---	200	---	245	260	---

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	9.0	1.0	1.0	1.0	1.0	7.0	15.0	23.5	---	22.5	23.0
2	---	8.5	1.5	1.0	1.0	1.0	7.5	17.0	24.0	---	25.0	23.0
3	---	8.0	1.5	1.0	1.0	1.0	7.5	17.0	25.0	---	22.0	21.0
4	---	7.5	2.0	1.0	1.0	1.0	7.0	16.5	---	---	23.0	22.0
5	---	7.5	2.5	1.0	1.0	1.0	7.0	16.5	---	---	26.0	21.0
6	---	7.5	2.5	.5	1.0	1.0	7.5	16.5	---	---	26.0	20.0
7	---	6.0	2.0	.5	1.0	1.0	7.5	16.0	---	---	23.0	21.0
8	---	5.5	2.0	.0	1.0	1.0	7.5	15.5	---	25.0	22.0	21.0
9	---	5.0	1.5	.0	1.0	1.0	7.0	15.0	---	26.0	23.0	23.0
10	---	3.0	1.5	.0	1.0	1.5	7.0	16.0	---	24.0	24.0	20.0
11	---	3.0	1.0	.5	1.0	1.5	5.5	16.0	---	25.0	24.0	20.0
12	---	4.0	.5	.5	.5	1.0	4.0	16.5	---	28.0	23.0	19.0
13	---	4.5	1.0	1.0	.0	1.5	4.5	16.5	---	30.0	24.0	19.0
14	---	5.0	1.0	1.0	.5	1.0	4.5	16.0	---	28.0	23.0	19.0
15	---	5.5	1.5	1.0	.5	1.0	5.0	16.5	---	29.0	24.0	20.0
16	13.0	6.5	1.5	1.0	1.0	1.0	7.0	16.5	---	28.0	22.0	20.0
17	14.0	6.5	2.0	1.0	1.0	1.0	8.5	17.0	---	29.0	19.0	19.0
18	13.0	7.0	2.5	1.0	1.0	1.0	10.0	17.0	---	28.0	19.0	18.0
19	12.0	6.5	2.0	1.0	1.0	1.0	11.5	18.0	---	28.0	20.0	19.0
20	11.5	5.0	2.5	.5	1.5	1.5	13.0	19.0	---	27.0	22.0	20.0
21	11.5	5.0	2.5	.5	1.5	1.5	14.0	19.0	---	28.0	24.0	19.0
22	10.0	5.5	3.0	.5	1.0	1.5	14.5	19.5	---	28.0	24.0	19.0
23	9.5	5.5	3.5	.0	1.0	1.5	16.0	19.5	---	27.0	25.0	18.0
24	9.5	6.0	3.0	.0	1.0	2.0	14.0	21.0	---	22.5	26.0	17.0
25	---	6.0	2.0	.0	.5	1.5	14.0	22.5	---	24.0	26.0	18.0
26	---	5.5	1.0	.0	.5	1.0	14.5	24.0	---	22.0	24.0	17.0
27	---	5.0	1.0	.0	1.0	4.0	14.0	26.5	---	23.5	24.0	17.0
28	---	3.0	1.0	.0	1.0	3.5	13.5	26.0	---	26.0	23.0	16.0
29	---	1.5	1.0	.0	1.0	5.0	13.5	24.5	---	25.0	22.0	16.0
30	---	1.0	1.5	.0	---	6.0	13.5	21.5	---	25.0	22.0	15.0
31	---	---	1.0	.5	---	7.0	---	22.0	---	22.0	23.0	---

WISCONSIN RIVER BASIN

05408000 KICKAPOO RIVER AT LA FARGE, WI

LOCATION.--Lat 43°34'27", long 90°38'35", on east-west quarter section line in W 1/2 sec.29, T.13 N., R.2 W., Vernon County, Hydrologic Unit 07070006, on left bank 10 ft (3 m) upstream from bridge on State Highway 82, in La Farge, 0.3 mi (0.5 km) upstream from Otter Creek, and 1.3 mi (2.1 km) downstream from powerplant.

DRAINAGE AREA.--266 mi² (689 km²).

PERIOD OF RECORD.--October 1938 to current year.

REVISED RECORDS.--WSP 1388: 1951(M), 1954(M). WSP 1438: 1944-45(M), 1946, 1948, 1950(M).

GAGE.--Water-stage recorder. Datum of gage is 781.54 ft (238.213 m) National Geodetic Vertical Datum of 1929. Prior to Dec. 4, 1939, nonrecording gage on highway bridge at same datum.

REMARKS.--Records good except those for winter period, which are fair. Gage-height telemeter at station.

AVERAGE DISCHARGE.--42 years, 171 ft³/s (4.843 m³/s), 8.73 in/yr (222 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 14,300 ft³/s (405 m³/s) July 1, 1978, gage height, 14.92 ft (4.548 m); minimum, 1.8 ft³/s (0.051 m³/s) Mar. 24, 1951; minimum daily, 36 ft³/s (1.02 m³/s) Nov. 3, 1939.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 1,700 ft³/s (48.1 m³/s) and maximum (*):

DATE	TIME	DISCHARGE (ft ³ /s) (m ³ /s)	GAGE HEIGHT (ft) (m)	DATE	TIME	DISCHARGE (ft ³ /s) (m ³ /s)	GAGE HEIGHT (ft) (m)
Mar. 17	1630	2,910 82.4	11.34 3.456	Aug. 9	0400	*3,200 90.6	*11.55 3.520
Apr. 9	0330	1,740 49.3	8.97 2.734	Aug. 21	1300	1,700 48.1	8.85 2.697
				Sept. 13	0900	1,980 56.1	9.59 2.923

minimum daily discharge, 97 ft³/s (2.75 m³/s) July 14.

RATING TABLES (gage height, in feet, and discharge, in cubic feet per second).
(Shifting-control method used Oct. 1 to Nov. 30; stage-discharge relation affected by ice Dec. 1-11, 13-22, and Dec. 30 to Mar. 15.)

Oct. 1 to Mar. 16				Mar. 17 to Sept. 30			
2.5	126	6.0	820	2.1	96	7.0	1,100
3.0	200	7.0	1,100	3.0	206	9.0	1,750
4.0	370	8.0	1,420	4.0	370	11.0	2,620
5.0	580			5.0	580		

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	136	167	150	150	140	140	182	157	157	110	102	427
2	201	157	140	150	140	140	174	150	140	107	104	299
3	162	148	150	150	140	140	184	147	132	104	114	247
4	148	145	150	150	140	140	256	144	124	105	103	276
5	143	144	150	150	140	140	317	141	131	104	105	265
6	143	165	160	150	140	140	203	138	463	101	100	211
7	143	167	160	150	140	140	246	136	367	100	572	766
8	141	157	150	140	140	140	727	136	392	100	2380	459
9	141	155	150	140	140	140	984	136	183	102	2340	555
10	138	154	160	140	140	140	305	137	166	107	384	361
11	145	148	160	160	140	140	258	148	156	100	321	263
12	147	148	156	200	140	140	250	139	145	99	273	856
13	141	151	150	160	140	140	219	145	138	98	282	1470
14	136	147	150	150	140	150	204	149	136	97	294	475
15	137	147	150	170	140	200	196	152	130	102	216	352
16	139	151	140	400	140	861	188	139	127	136	193	306
17	139	152	140	1400	140	2000	185	139	123	133	234	272
18	137	152	140	300	140	741	189	147	123	106	209	247
19	142	152	140	200	140	1040	191	146	145	104	324	229
20	146	150	150	180	140	696	193	137	145	446	402	306
21	147	151	150	170	150	338	189	134	125	181	1330	261
22	178	203	160	160	220	202	186	130	121	133	368	679
23	348	206	249	160	270	174	180	126	119	122	258	298
24	216	176	265	150	180	165	171	124	118	115	221	251
25	172	167	210	150	160	160	168	122	116	112	202	238
26	159	175	181	150	150	244	164	120	114	116	192	229
27	155	211	169	150	140	249	162	116	113	114	210	218
28	154	180	160	140	140	191	157	116	115	108	240	219
29	150	168	149	140	140	188	158	120	118	100	201	258
30	147	156	150	140	---	206	161	169	111	110	631	222
31	148	---	150	140	---	195	---	219	---	107	918	---
TOTAL	4879	4850	4989	6440	4350	9820	7347	4359	4793	3779	13823	11515
MEAN	157	162	161	208	150	317	245	141	160	122	446	384
MAX	348	211	265	1400	270	2000	984	219	463	446	2380	1470
MIN	136	144	140	140	140	140	157	116	111	97	100	211
CFSM	.59	.61	.61	.78	.56	1.19	.92	.53	.60	.46	1.68	1.44
IN.	.68	.68	.70	.90	.61	1.37	1.03	.61	.67	.53	1.93	1.61

CAL YR 1979	TOTAL	77845	MEAN 213	MAX 1740	MIN 120	CFSM .80	IN 10.89
WTR YR 1980	TOTAL	80944	MEAN 221	MAX 2380	MIN 97	CFSM .83	IN 11.32

WISCONSIN RIVER BASIN

05409890 NEDERLO CREEK NEAR GAYS MILLS, WI

LOCATION.--Lat 43°21'43", long 90°52'44", in NW 1/4 sec.8, T.10 N., R.4 W., Crawford County, Hydrologic Unit 07070006, on right bank just upstream from bridge on private road, 1.2 mi (1.9 km) upstream from Tainter Creek and 3.4 mi (5.5 km) north of Gays Mills.

DRAINAGE AREA.--9.46 mi² (24.5 km²).

PERIOD OF RECORD.--October 1967 to September 1980 (discontinued).

REVISED RECORDS.--WDR WI-77-1: Drainage area.

GAGE.--Water-stage recorder. Altitude of gage is 740 ft (230 m), from topographic map.

REMARKS.--Records are fair.

AVERAGE DISCHARGE.--13 years, 5.45 ft³/s (0.154 m³/s), 7.82 in/yr (199 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 8,000 ft³/s (227 m³/s) June 30, 1978, gage height, 18.65 ft (5.685 m) based on slope-area measurement of peak flow; minimum, 1.7 ft³/s (0.05 m³/s) Feb. 16, 1968, gage height, 10.78 ft (3.286 m), result of freezeup.

EXTREMES FOR CURRENT YEAR.--Maximum discharge recorded, 458 ft³/s (13.0 m³/s) Sept. 22, gage height, 14.57 ft (4.441 m); minimum daily, 3.8 ft³/s (0.108 m³/s) July 13.

RATING TABLE (gage height, in feet, and discharge, in cubic feet per second).

DAY	DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980											
	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5.5	5.3	4.6	4.4	4.2	4.2	4.8	4.5	4.4	4.1	4.1	6.1
2	5.4	5.2	4.5	4.4	4.2	4.1	4.6	4.5	4.4	4.1	4.5	5.6
3	5.2	5.0	4.4	4.4	4.2	4.1	11	4.5	4.5	4.1	4.3	5.4
4	4.9	4.7	4.4	4.4	4.1	4.1	5.7	4.5	4.5	4.1	4.2	6.6
5	4.8	4.8	4.5	4.4	4.1	4.2	5.0	4.4	5.4	4.1	4.2	5.4
6	4.9	4.9	4.5	4.5	4.1	4.2	5.1	4.3	7.4	4.1	4.1	5.3
7	4.9	4.7	4.6	4.2	4.1	4.2	6.1	4.3	8.8	4.0	8.6	39
8	4.9	4.6	4.5	4.2	4.1	4.2	11	4.3	5.0	4.0	12	8.0
9	4.9	4.7	4.5	4.2	4.1	4.3	7.5	4.2	4.7	4.2	5.1	17
10	4.9	4.7	4.5	4.3	4.1	4.2	5.9	4.7	4.6	4.1	7.0	7.3
11	5.0	4.7	4.5	6.7	4.1	4.2	5.5	4.8	4.5	4.0	13	7.0
12	5.0	4.8	4.5	4.5	4.1	4.2	5.4	4.6	4.3	4.0	5.6	26
13	5.0	4.8	4.4	4.3	4.1	4.2	5.2	5.0	4.4	3.8	9.0	8.6
14	5.0	4.7	4.4	4.3	4.1	4.6	5.2	4.7	4.6	3.9	5.7	7.7
15	5.0	4.7	4.4	28	4.1	50	5.1	4.8	4.5	4.1	5.3	7.4
16	4.9	4.7	4.3	104	4.2	82	4.8	4.6	4.4	5.1	6.0	7.2
17	4.9	4.7	4.3	16	4.2	17	4.6	5.1	4.3	4.0	5.8	6.6
18	4.9	4.7	4.3	5.0	4.3	22	4.7	5.1	4.2	4.1	5.3	6.3
19	5.0	4.5	4.3	4.7	4.3	14	4.7	4.9	4.2	4.0	5.5	6.7
20	5.0	4.4	4.2	4.6	4.3	8.0	4.9	4.6	4.2	4.6	20	48
21	5.0	5.0	4.2	4.5	22	4.9	4.9	4.5	4.1	4.3	12	9.5
22	7.5	5.3	4.4	4.6	31	4.6	4.8	4.3	4.1	4.1	6.1	72
23	5.6	5.2	6.8	4.4	7.3	4.6	4.7	4.4	4.1	4.1	5.7	9.3
24	5.4	5.0	5.0	4.4	5.0	4.6	4.6	4.3	4.1	4.0	5.4	8.1
25	5.2	4.9	4.6	4.4	5.0	4.5	4.6	4.3	4.1	4.1	5.0	7.9
26	5.2	5.2	4.6	4.3	4.4	4.5	4.5	4.2	4.1	4.2	4.9	7.4
27	5.2	4.9	4.6	4.2	4.3	4.5	4.6	4.2	4.3	4.1	4.9	7.2
28	5.0	4.9	4.5	4.3	4.3	4.6	4.4	4.2	4.7	4.1	4.7	7.8
29	4.9	4.9	4.4	4.2	4.2	4.8	4.5	4.6	4.3	4.1	4.6	7.3
30	4.9	4.6	4.4	4.2	---	4.8	4.6	5.0	4.3	4.2	21	6.8
31	5.2	---	4.4	4.2	---	4.8	---	4.6	---	4.2	11	---
TOTAL	159.1	145.2	140.5	273.2	170.6	303.2	163.0	141.0	139.5	128.0	224.6	380.5
MEAN	5.13	4.84	4.53	8.81	5.88	9.78	5.43	4.55	4.65	4.13	7.25	12.7
MAX	7.5	5.3	6.8	104	31	82	11	5.1	8.8	5.1	21	72
MIN	4.8	4.4	4.2	4.2	4.1	4.1	4.4	4.2	4.1	3.8	4.1	5.3
CFSM	.54	.51	.48	.93	.62	1.03	.57	.48	.49	.44	.77	1.34
IN.	.63	.57	.55	1.07	.67	1.19	.64	.55	.55	.50	.88	1.50
CAL YR 1979	TOTAL	1901.5	MEAN	5.21	MAX	35	MIN	3.8	CFSM	.55	IN	7.48
WTR YR 1980	TOTAL	2368.4	MEAN	6.47	MAX	104	MIN	3.8	CFSM	.68	IN	9.31

WISCONSIN RIVER BASIN

05410500 KICKAPOO RIVER AT STEUBEN, WI

LOCATION.--Lat 43°11'27", long 90°52'28", in NW 1/4 sec.8, T.8 N., R.4 W., Crawford County, Hydrologic Unit 07070006, on right bank 0.8 mi (1.3 km) upstream from Duffy Creek, 1.0 mi (1.6 km) northwest of Steuben, and 14 mi (23 km) upstream from mouth.

DRAINAGE AREA.--690 mi² (1,790 km²).

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

REVISED RECORDS.--WSP 855: Drainage area. WSP 1438: 1933-38.

GAGE.--Water-stage recorder. Datum of gage is 657.36 ft (200.363m) National Geodetic Vertical Datum of 1929. Prior to Oct. 20, 1938, nonrecording gage at site 1.0 mi (1.6 km) upstream at datum 1.3 ft (0.4 m) higher.

REMARKS.--Records good except those for winter period, which are fair. Gage-height telemeter at station.

AVERAGE DISCHARGE.--47 years, 469 ft³/s (13.28 m³/s), 9.23 in/yr (234 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 16,500 ft³/s (467 m³/s) July 3, 1978, gage height, 14.81 ft (4.514 m); minimum observed, 161 ft³/s (4.56 m³/s) Aug. 9, 1936, gage height, 0.76 ft (0.232 m) site and datum then in use.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 2,340 ft³/s (66.3 m³/s) Mar. 21, gage height, 9.01 ft (2.75 m), no other peak above base of 1,900 ft³/s (53.8 m³/s); minimum daily discharge, 282 ft³/s (7.99 m³/s) July 16.

RATING TABLES (gage height, in feet, and discharge, in cubic feet per second).
(Stage-discharge relation affected by ice Nov. 30 to Dec. 12, Dec. 19-25, and Jan. 9 to Mar. 14.)

Oct. 1 to Aug. 13

Aug. 14 to Sept. 30

3.5	270	7.0	1,170	5.0	560	8.0	1,250
4.0	346	8.0	1,640	6.0	760	9.0	1,820
5.0	538	9.0	2,330	7.0	1,000		
6.0	812						

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DAY	OCT	NOV	DEC	JAN	FEB	MEAN VALUES MAR	APR	MAY	JUN	JUL	AUG	SEP
1	400	457	450	412	370	360	478	437	351	354	314	953
2	404	455	440	404	360	360	476	432	365	346	311	1100
3	408	455	440	408	360	360	476	426	370	342	306	1170
4	416	455	440	407	360	360	497	416	373	335	305	986
5	424	453	440	405	360	360	538	408	373	328	305	793
6	428	449	440	402	360	360	614	402	378	321	303	736
7	430	449	440	378	360	360	662	395	389	317	302	738
8	430	449	440	357	360	360	665	387	488	317	318	920
9	430	453	440	350	360	360	730	381	596	315	476	1110
10	430	453	440	350	360	360	960	378	627	315	730	1240
11	430	453	440	350	360	360	1230	378	536	314	996	1330
12	428	453	440	350	360	360	1440	379	443	314	1290	1380
13	426	453	441	360	360	360	1200	382	402	311	1690	1330
14	426	453	432	360	360	370	858	386	387	302	1470	1280
15	424	453	422	370	360	387	724	387	386	285	1460	1270
16	420	451	422	400	360	470	648	390	387	282	868	1270
17	418	447	416	450	360	993	596	390	386	285	666	1290
18	416	445	412	700	360	1540	560	389	382	293	640	1140
19	414	443	410	1200	360	1880	538	389	381	297	636	848
20	414	441	410	1500	360	2110	528	390	379	300	618	796
21	416	441	410	1800	360	2300	523	389	379	338	785	960
22	418	441	410	1300	360	2330	519	382	382	455	1000	1090
23	426	447	410	700	400	1900	514	373	374	474	1140	1210
24	435	453	410	620	500	712	509	365	371	443	1230	1310
25	449	461	430	540	520	509	499	359	370	404	1150	1420
26	459	465	463	490	450	451	492	352	363	374	774	1390
27	465	468	463	450	370	435	478	346	362	359	633	1010
28	468	472	453	420	360	470	463	340	360	345	575	798
29	468	478	443	400	360	507	451	337	360	337	579	750
30	465	470	433	390	---	502	441	335	357	329	617	752
31	461	---	424	380	---	484	---	342	---	320	751	---
TOTAL	13346	13616	13404	17403	10890	23030	19307	11842	12057	10451	23238	32370
MEAN	431	454	432	561	376	743	644	382	402	337	750	1079
MAX	468	478	463	1800	520	2330	1440	437	627	474	1690	1420
MIN	400	441	410	350	360	360	441	335	351	282	302	736
CFSM	.63	.66	.63	.81	.55	1.08	.93	.55	.58	.49	1.09	1.56
IN.	.72	.73	.72	.94	.59	1.24	1.04	.64	.65	.56	1.25	1.75
CAL YR 1979	TOTAL	205336	MEAN	563	MAX	2010	MIN	310	CFSM	.82	IN	11.07
WTR YR 1980	TOTAL	200954	MEAN	549	MAX	2330	MIN	282	CFSM	.80	IN	10.83

WISCONSIN RIVER BASIN

RESERVOIRS IN WISCONSIN RIVER BASIN

The 24 reservoirs listed below are used to stabilize the flow of the Wisconsin and Tomahawk Rivers for power generation and are also used for recreational purposes. The first 21 reservoirs are owned and operated by the Wisconsin Valley Improvement Co., which furnishes the gage heights and capacity tables. Revised capacity tables for all 21 reservoirs were received from the Company in April 1957 and were used to compute month-end usable contents beginning Sept. 30, 1955. Another revised capacity table for Burnt Rollways Reservoir was used to compute month-end usable contents beginning Sept. 30, 1964. Lake Dubay is owned by the Consolidated Water Power Co. Petenwell and Castle Rock are owned and operated by the Wisconsin River Power Co., which furnished the gage heights and capacity tables for those two reservoirs. Month-end contents are computed by the U.S. Geological Survey. The usable capacity of these reservoirs is usually less in summer than in winter because the allowable summer drawdown is limited by the Department of Natural Resources in the interest of riparian property owners. There are occasionally formal or informal changes in capacity and in minimum drawdown levels. Usable capacity figures listed below are for winter regulation.

- 05390100 Lac Vieux Desert on Wisconsin River, lat 46°07'18", long 89°09'07", in SE 1/4 NW 1/4 sec.17, T.42 N., R.11 E., Vilas County, 4.8 mi (7.7 km) northwest of Phelps, used as a reservoir since 1908, has a usable capacity of 652,000,000 ft³ (18,500,000 m³). Drainage area, 34.4 mi² (89.1 km²). Datum of gage is 1,679.53 ft (511.42 m) National Geodetic Vertical Datum of 1929.
- 05390150 Twin Lakes on Twin River, lat 46°01'20", long 89°10'05", in SW 1/4 NE 1/4 sec.19, T.41 N., R.11 E., Vilas County, 5.0 mi (8.0 km) southwest of Phelps, used as a reservoir since 1908, has a usable capacity of 313,000,000 ft³ (8,860,000 m³). Drainage area, 26 mi² (67 km²). Altitude of gage is 1,640 ft (500 m), from river-profile map.
- 05390200 Buckatabon Lakes on Buckatabon Creek, lat 46°01'18", long 89°18'40", in SE 1/4 NE 1/4 sec.24, T.41 N., R.9 E., Vilas County, 3.3 mi (5.3 km) southwest of Conover, used as a reservoir since 1908, has a usable capacity of 130,000,000 ft³ (3,680,000 m³). Drainage area, 16.9 mi² (43.8 km²). Datum of gage is 1,637.85 ft (499.22 m) National Geodetic Vertical Datum of 1929 (levels by Wisconsin Valley Improvement Co.).
- 05390250 Sevenmile Lake on Sevenmile Creek, lat 45°52'30", long 89°04'07", in SE 1/4 NE 1/4 sec.11, T.39 N., R.11 E., Oneida County, 9.1 mi (14.6 km) southeast of town of Eagle River, used as a reservoir since 1908, has a usable capacity of 93,000,000 ft³ (2,630,000 m³). Drainage area, 12.1 mi² (31.3 km²). Datum of gage is 1,646.30 ft (501.79 m) National Geodetic Vertical Datum of 1929 (levels by Wisconsin Valley Improvement Co.).
- 05390300 Lower Ninemile Lake on Ninemile Creek, lat 45°53'37", long 89°07'15", in NE 1/4 NW 1/4 sec.4, T.39 N., R.11 E., Oneida County, 6.6 mi (10.6 km) southeast of town of Eagle River, used as a reservoir since 1908, has a usable capacity of 121,000,000 ft³ (3,430,000 m³). Drainage area, 28.8 mi² (74.6 km²). Datum of gage is 1,638.27 ft (499.34 m) National Geodetic Vertical Datum of 1929.
- 05390350 Burnt Rollways Reservoir on Eagle River, lat 45°53'40", long 89°08'28", in NE 1/4 NW 1/4 sec.5, T.39 N., R.11 E., Oneida County, 5.3 mi (8.5 km) southeast of town of Eagle River, used as a reservoir since 1908, has a usable capacity of 779,000,000 ft³ (22,100,000 m³). This reservoir includes 18 lakes controlled by the same dam. Drainage area, 142 mi² (368 km²). Altitude of gage is 1,620 ft (494 m), from river-profile map.
- 05390400 Long Lake on Deerskin River, lat 46°02'37", long 89°02'44", in NW 1/4 SE 1/4 sec.7, T.41 N., R.12 E., Vilas County, 2.5 mi (4.0 km) southeast of Phelps, used as a reservoir since 1908, has a usable capacity of 400,000,000 ft³ (11,300,000 m³). Drainage area, 22.9 mi² (59.3 km²). Datum of gage is 1,695.14 ft (516.68 m) National Geodetic Vertical Datum of 1929 (levels by Wisconsin Valley Improvement Co.).
- 05390600 Deerskin Lake on Little Deerskin River, lat 45°59'07", long 89°09'40", in SE 1/4 sec.31, T.41 N., R.11 E., Vilas County, 6.3 mi (10.1 km) northeast of town of Eagle River, used as a reservoir since 1908, has a usable capacity of 22,000,000 ft³ (623,000 m³). Drainage area, 2.47 mi² (6.39 km²). Datum of gage is 1,640.16 ft (499.92 m) National Geodetic Vertical Datum of 1929 (levels by Wisconsin Valley Improvement Co.).
- 05390650 Sugar Camp Reservoir on Sugar Camp Creek, lat 45°52'19", long 89°23'40", in NE 1/4 sec.17, T.39 N., R.9 E., Oneida County, 7.6 mi (12.2 km) southwest of town of Eagle River, used as a reservoir since 1908, has a usable capacity of 471,000,000 ft³ (13,300,000 m³). Drainage area, 48.4 mi² (125.4 km²). Datum of gage is 1,591.94 ft (485.22 m) National Geodetic Vertical Datum of 1929 (levels by Wisconsin Valley Improvement Co.).
- 05390700 Little St. Germain Lake on Little St. Germain Creek, lat 45°53'57", long 89°27'08", in SE 1/4 sec.35, T.40 N., R.8 E., Vilas County, 9.6 mi (15.4 km) west of town of Eagle River, used as a reservoir since 1908, has a usable capacity of 79,000,000 ft³ (2,240,000 m³). Drainage area, 19 mi² (49 km²). Datum of gage is 1,611.54 ft (491.20 m) National Geodetic Vertical Datum of 1929 (levels by Wisconsin Valley Improvement Co.).
- 05390750 Big St. Germain Lake on St. Germain River, lat 45°55'06", long 89°31'55", in SE 1/4 sec.30, T.40 N., R.8 E., Vilas County, 5.0 mi (8.0 km) south of Sayner, used as a reservoir since 1908, has a usable capacity of 202,000,000 ft³ (5,720,000 m³). Drainage area, 73.1 mi² (189.3 km²). Datum of gage is 1,588.32 ft (484.12 m) National Geodetic Vertical Datum of 1929 (levels by Public Service Commission of Wisconsin).
- 05390800 Pickerel Lake on St. Germain River, lat 45°52'22", long 89°31'47", in NE 1/4 sec.18, T.39 N., R.8 E., Oneida County, 5.0 mi (8.0 km) northeast of town of Lake Tomahawk, used as a reservoir since 1935, has a usable capacity of 338,000,000 ft³ (9,570,000 m³). Drainage area, 86.2 mi² (223.2 km²). Datum of gage is 1,582.00 ft (482.19 m) National Geodetic Vertical Datum of 1929 (levels by Wisconsin Valley Improvement Co.).
- 05390900 Rainbow Lake on Wisconsin River, lat 45°50'02", long 89°32'42", in SW 1/4 sec.30, T.39 N., R.8 E., Oneida County, 800 ft (244 m) upstream from U.S. Geological Survey river gaging station, 2.7 mi (4.3 km) northeast of town of Lake Tomahawk, used as a reservoir since 1935, has a usable capacity of 2,181,000,000 ft³ (61,770,000 m³). Drainage area, 744 mi² (1,927 km²). Datum of gage is 1,570.00 ft (478.54 m) National Geodetic Vertical Datum of 1929 (levels by Wisconsin Valley Improvement Co.).
- 05391100 South Pelican Lake on Pelican River, lat 45°31'37", long 89°12'24", in S 1/2 sec.11, T.35 N., R.10 E., Oneida County, 2.8 mi (4.5 km) northwest of town of Pelican Lake, used as a reservoir since 1909, has a usable capacity of 305,000,000 ft³ (8,640,000 m³). Drainage area, 19.8 mi² (51.3 km²). Datum of gage is 1,589.98 ft (484.63 m) National Geodetic Vertical Datum of 1929 (levels by Wisconsin Valley Improvement Co.).

WISCONSIN RIVER BASIN
RESERVOIRS IN WISCONSIN RIVER BASIN--CONTINUED

- 05391300 North Pelican Lakes (includes Moen Lakes) on North Branch Pelican River, lat 45°38'05", long 89°14'38", in SE 1/4 sec.4, T.36 N., R.10 E., Oneida County, 0.2 mi (0.3 km) below Twin Lakes Creek and 8.0 mi (12.9 km) east of Rhinelander, city limits, used as a reservoir since 1908, has a usable capacity of 218,000,000 ft³ (6,170,000 m³). Drainage area 95 mi² (246 km²). Datum of gage is 1,569.10 ft (478.26 m) National Geodetic Vertical Datum of 1929 (levels by Wisconsin Valley Improvement Co.).
- 05392100 Minocqua Lake on Tomahawk River, lat 45°52'35", long 89°43'38", on line between secs.10 and 15, T.39 N., R.6 E., Oneida County, 1.0 mi (1.6 km) west of Minocqua, used as a reservoir since 1910, has a usable capacity of 628,000,000 ft³ (17,800,000 m³). Drainage area, 72.5 mi² (187.8 km²). Datum of gage is 1,584.56 ft (482.97 m) National Geodetic Vertical Datum of 1929 (levels by Wisconsin Valley Improvement Co.).
- 05392200 Squirrel Lake on Squirrel River, lat 45°50'37", long 89°54'13", in NE 1/4 sec.30, T.39 N., R.5 E., Oneida County, 9.4 mi (15.1 km) west of Minocqua, used as a reservoir since 1908, has a usable capacity of 182,000,000 ft³ (5,150,000 m³). Drainage area, 15.2 mi² (39.4 km²). Datum of gage is 1,560.93 ft (475.77 m) National Geodetic Vertical Datum of 1929 (levels by Wisconsin Valley Improvement Co.).
- 05392300 Willow Reservoir on Tomahawk River, lat 45°42'45", long 89°50'38", in NE 1/4 sec.10, T.37 N., R.5 E., Oneida County, 8.8 mi (14.2 km) southwest of Hazelhurst, used as a reservoir since 1927, has a usable capacity of 3,302,000,000 ft³ (93,510,000 m³). Drainage area, 310 mi² (803 km²). Datum of gage is 1,505.87 ft (458.99 m) National Geodetic Vertical Datum of 1929 (levels by Wisconsin Valley Improvement Co.).
- 05392500 Lake Nokomis on Tomahawk River, lat 45°32'20", long 89°44'48", in NW 1/4 sec.9, T.35 N., R.6 E., Lincoln County, at U.S. Geological Survey river gaging station, 0.5 mi (0.8 km) east of Bradley, used as a reservoir since 1912, has a usable capacity of 1,808,000,000 ft³ (51,200,000 m³). Drainage area, 544 mi (1,409 km²). Datum of gage is 1,448.24 ft (441.42 m) National Geodetic Vertical Datum of 1929.
- 05393600 Spirit River Flowage on Spirit River, lat 45°26'18", long 89°44'30", in NE 1/4 sec.16, T.34 N., R.6 E., Lincoln County, 2.0 mi (3.2 km) south of Tomahawk, used as a reservoir since 1923, has a usable capacity of 756,000,000 ft³ (21,400,000 m³). Drainage area, 158 mi² (409 km²). Datum of gage is 1,420.53 ft (432.98 m) National Geodetic Vertical Datum of 1929.
- 05399600 Big Eau Pleine Reservoir on Big Eau Pleine River lat 44°43'52", long 89°45'35", in SW 1/4 sec.14, T.26 N., R.6 E., Marathon County, 3.0 mi (4.8 km) northeast of Dancy, used as a reservoir since 1937, has a capacity of 4,457,000,000 ft³ (126,200,000 m³). Drainage area, 363 mi² (940 km²). Datum of gage is 1,115.00 ft (339.85 m) National Geodetic Vertical Datum of 1929 (levels by Wisconsin Valley Improvement Co.).
- 05400295 Lake Dubay on Wisconsin River, lat 44°39'54", long 89°39'03", in sec.10, T.25 N., R.7 E., Wood County, 1.5 mi (2.4 km) downstream from Little Eau Pleine River and 10.5 mi (16.9 km) northwest of Stevens Point, has a usable capacity of 2,117,000,000 ft³ (59,950,000 m³). Drainage area, 4,900 mi² (12,691 km²). Datum of gage is National Geodetic Vertical Datum of 1929 (Power Company levels).
- 05401400 Petenwell Flowage on Wisconsin River, lat 44°03'26", long 90°01'18", in SE 1/4 sec.4, T.18 N., R.4 E., Adams County, 5.2 mi (8.4 km) upstream from Roche a Cri Creek, 2.4 mi (3.9 km) west of Strongs Prairie, and 3.5 mi (5.6 km) northeast of Necedah, used as a reservoir since 1950, has a total capacity of 19,880,000,000 ft³ (563,000,000 m³). Drainage area, 5,970 mi² (15,462 km²). Datum of gage is 790.2 ft (240.9 m) National Geodetic Vertical Datum of 1929 (levels by Wisconsin River Power Co.).
- 05403200 Castle Rock Flowage on Wisconsin River, lat 43°51'48", long 89°57'38", in sec.13, T.16 N., R.4 E., Adams County, 4.5 mi (7.2 km) upstream from Duck Creek, and 2.0 mi (3.2 km) south of Germantown, and 7.0 mi (11.3 km) northeast of Mauston, used as a reservoir since 1950, has a total capacity of 7,630,000,000 ft³ (216,000,000 m³). Drainage area, 7,056 mi² (18,275 km²). Datum of gage is 790.2 ft (240.9 m) National Geodetic Vertical Datum of 1929 (levels by Wisconsin River Power Co.).

MONTH-END CONTENTS, IN MILLIONS OF CUBIC FEET, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

	LAC VIEUX	TWIN	BUCKATABON	SEVENMILE	LOWER	BURNT	LONG	DEERSKIN
	DESERT	LAKES	LAKE	LAKE	NINEMILE	ROLLWAYS	LAKE	LAKE
					LAKE	RESERVOIR		
SEPT. 30.....	285	261	117	59	99	575	209	13
OCT. 31.....	289	292	113	59	100	568	203	19
NOV. 30.....	216	204	57	34	72	351	129	19
DEC. 31.....	123	91	35	6	8	140	78	17
JAN. 31.....	100	0	22	0	3	0	36	15
FEB. 29.....	46	2	16	0	30	0	4	14
MAR. 31.....	38	20	33	5	44	0	13	12
APR. 30.....	153	87	85	37	90	469	142	16
MAY 31.....	161	130	119	45	102	530	207	16
JUNE 30.....	193	156	120	63	91	521	204	16
JULY 31.....	216	201	115	65	101	571	207	17
AUG. 31.....	254	248	117	54	99	568	214	16
SEPT. 30.....	--	283	115	70	103	562	251	10

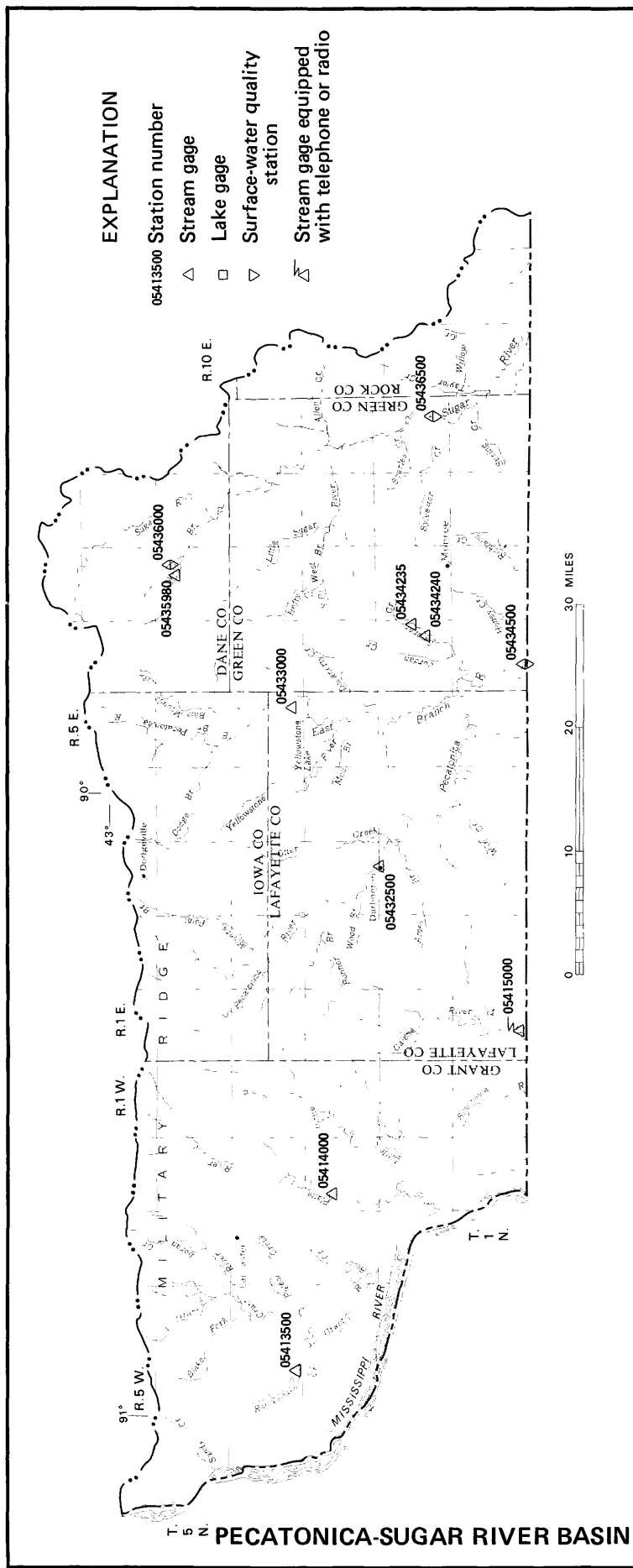
WISCONSIN RIVER BASIN

RESERVOIRS IN WISCONSIN RIVER BASIN--CONTINUED

MONTH-END CONTENTS, IN MILLIONS OF CUBIC FEET, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

	SUGAR CAMP RESERVOIR	LITTLE ST. GERMAIN LAKE	BIG ST. GERMAIN LAKE	PICKEREL LAKE	RAINBOW LAKE	SOUTH PELICAN LAKE	NORTH PELICAN LAKES	MINOCQUA LAKE
SEPT. 30.....	408	63	135	249	611	261	134	477
OCT. 31.....	384	55	129	243	1,576	282	139	471
NOV. 30.....	420	20	116	245	2,128	246	123	296
DEC. 31.....	297	12	83	227	1,886	191	49	167
JAN. 31.....	141	13	33	175	1,620	123	32	18
FEB. 29.....	81	15	19	156	750	85	22	5
MAR. 31.....	126	23	19	20	185	85	37	78
APR. 30.....	359	46	92	246	783	185	139	211
MAY 31.....	412	75	163	283	747	210	141	282
JUNE 30.....	399	76	158	268	1,464	239	134	351
JULY 31.....	406	76	157	267	1,314	224	135	442
AUG. 31.....	407	77	158	270	1,877	239	141	576
SEPT. 30.....	443	72	158	266	2,104	277	135	550

	SQUIRREL LAKE	WILLOW RESERVOIR	LAKE NOKOMIS	SPIRIT RIVER FLOWAGE	BIG EAU PLEINE RESERVOIR	LAKE DUBAY	PETENWELL FLOWAGE	CASTLE ROCK FLOWAGE
SEPT. 30.....	166	1,087	755	179	2,692	4,048	17,562	5,786
OCT. 31.....	162	1,316	1,059	488	3,125	4,194	17,527	5,677
NOV. 30.....	69	2,268	1,730	680	4,277	4,101	17,703	5,909
DEC. 31.....	37	2,149	1,304	505	3,767	4,060	17,676	5,741
JAN. 31.....	7	1,348	757	332	3,026	4,042	17,404	5,754
FEB. 29.....	10	596	369	114	1,519	3,448	15,621	4,412
MAR. 31.....	14	58	207	3	1,991	3,690	15,764	3,671
APR. 30.....	144	1,432	1,149	709	4,256	4,318	18,196	6,194
MAY 31.....	146	1,165	972	443	4,361	4,393	18,081	6,140
JUNE 30.....	163	1,248	1,252	654	4,307	4,082	17,483	5,709
JULY 31.....	174	937	1,011	357	3,492	4,129	17,386	5,716
AUG. 31.....	178	1,543	1,453	483	4,352	4,113	17,764	5,903
SEPT. 30.....	170	3,250	1,752	729	4,253	4,207	17,791	5,909



GRANT RIVER BASIN

05413500 GRANT RIVER AT BURTON, WI

LOCATION.--Lat 42°43'13", long 90°49'09", in NW 1/4 sec.23, T.3 N., R.4 W., Grant County, Hydrologic Unit 07060003, on right bank at downstream side of highway bridge at Burton, 5.9 mi (9.5 km) northwest of Potosi and 9.5 mi (15.3 km) upstream from mouth.

DRAINAGE AREA.--269 mi² (697 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1934 to current year. Published as "near Burton" October 1934 to September 1947. Records published for both sites March to September 1947. October 1934, monthly discharge only, published in WSP 1308.

REVISED RECORDS.--WSP 1308: 1935-37(M), 1941(M), 1945-46(M), 1949(M). WSP 1728: 1942(M). WDR WI-76-1: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 606.43 ft (184.840 m) National Geodetic Vertical Datum of 1929. Oct. 17, 1934, to Sept. 30, 1974, nonrecording gage at site 6 mi (10 km) upstream at datum 33.18 ft (10.113 m) higher. Mar. 18, 1947, to July 27, 1949, nonrecording gage at present site and datum.

REMARKS.--Records good except those for December to April, which are fair.

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

AVERAGE DISCHARGE.--46 years, 166 ft³/s (4.701 m³/s), 8.38 in/yr (213 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 25,000 ft³/s (708 m³/s) July 16, 1950, gage height, 24.82 ft (7.565 m), from rating curve extended above 18,000 ft³/s (510 m³/s) on basis of slope-area measurement of peak flow; minimum, 21 ft³/s (0.59 m³/s) Mar. 4, 1954, result of freezeup.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 2,160 ft³/s (61.2 m³/s) Mar. 16, gage height, 20.00 ft (6.096 m), backwater from ice; maximum gage height, 21.17 ft (6.453 m) Jan. 16, backwater from ice; no peak above base of 2,400 ft³/s (68.0 m³/s); minimum daily discharge, 80 ft³/s (2.27 m³/s) May 27, 28, and July 22-25.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	130	146	110	113	100	110	120	107	85	92	81	123
2	148	130	110	107	100	100	120	106	93	92	87	113
3	142	124	100	100	100	100	134	105	121	90	134	108
4	134	122	110	100	100	100	167	104	98	90	86	124
5	132	122	120	100	110	100	132	103	236	92	85	128
6	133	131	120	110	110	98	128	102	306	97	83	108
7	132	128	110	110	100	98	137	100	148	89	82	144
8	132	124	110	110	100	98	141	100	107	89	84	155
9	131	124	110	110	100	100	185	101	99	99	93	131
10	128	124	110	110	98	100	152	102	97	100	142	112
11	133	120	100	130	98	100	140	105	94	91	141	107
12	133	119	100	130	98	98	133	103	92	88	101	121
13	129	122	100	130	98	98	126	108	92	87	102	164
14	126	120	100	130	98	100	128	114	284	85	117	120
15	129	121	100	120	98	400	129	106	206	83	97	110
16	130	122	100	1500	98	2000	133	101	175	85	105	109
17	130	120	100	1000	98	800	122	102	106	85	176	109
18	128	120	100	500	100	337	118	111	100	82	120	106
19	134	119	100	250	110	320	120	104	97	82	115	103
20	138	118	100	180	200	182	117	98	94	82	126	112
21	136	134	100	150	500	168	114	93	93	81	897	117
22	158	160	130	130	1300	135	110	90	92	80	210	202
23	196	141	240	120	560	128	110	87	91	80	132	156
24	144	129	217	120	350	125	106	86	91	80	117	115
25	134	125	161	110	230	120	107	84	92	80	111	111
26	131	130	128	110	190	123	106	82	92	84	107	108
27	130	137	124	100	150	121	105	80	94	86	104	106
28	130	126	120	100	130	120	103	80	142	83	103	108
29	128	122	117	100	120	132	105	94	103	81	104	140
30	127	116	124	100	---	126	106	97	93	81	132	113
31	129	---	153	100	---	123	---	92	---	83	251	---
TOTAL	4195	3796	3724	6380	5644	6860	3754	3047	3713	2679	4425	3683
MEAN	135	127	120	206	195	221	125	98.3	124	86.4	143	123
MAX	196	160	240	1500	1300	2000	185	114	306	100	897	202
MIN	126	116	100	100	98	98	103	80	85	80	81	103
CFSM	.50	.47	.45	.77	.73	.82	.47	.37	.46	.32	.53	.46
IN.	.58	.52	.51	.88	.78	.95	.52	.42	.51	.37	.61	.51
CAL YR 1979	TOTAL	69308	MEAN	190	MAX	4330	MIN	100	CFSM	.71	IN	9.58
WTR YR 1980	TOTAL	51900	MEAN	142	MAX	2000	MIN	80	CFSM	.53	IN	7.18

GRANT RIVER BASIN

05413500 GRANT RIVER AT BURTON, WI--CONTINUED

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1964-67, 1977 to current year.

PERIOD OF DAILY RECORD.--

SUSPENDED-SEDIMENT DISCHARGE: October 1977 to current year.

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

EXTREMES FOR PERIOD OF DAILY RECORD.--

SUSPENDED-SEDIMENT CONCENTRATIONS: Maximum daily mean, 6,450 mg/l June 17, 1978; minimum daily mean, 7 mg/l on many days. Maximum observed 13,600 mg/l July 13, 1979; minimum observed 7 mg/l Mar. 2, 1978.

SUSPENDED-SEDIMENT DISCHARGE: Maximum daily, 95,300 tons (86,500 tonnes) June 17, 1978; minimum daily, 1.5 tons (1.4 tonnes) Mar. 1, 2, 1978.

EXTREMES FOR CURRENT YEAR.--

SUSPENDED-SEDIMENT CONCENTRATIONS: Maximum daily mean, 2,410 mg/l Mar. 16, minimum daily mean, 17 mg/l on many days. Maximum observed, 8,180 mg/l June 5; minimum observed, 11 mg/l Feb. 19.

SUSPENDED-SEDIMENT DISCHARGE: Maximum daily, 10,800 tons (9,800 tonnes) Mar. 16; minimum daily, 4.5 tons (4.1 tonnes) Feb. 15-17.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SED. SUSP. FALL DIAM.	SED. SUSP. FALL DIAM.	SED. SUSP. FALL DIAM.	SED. SUSP. FALL DIAM.	SED. SUSP. FALL DIAM.	SED. SUSP. FALL DIAM.	SED. SUSP. FALL DIAM.	SED. SUSP. FALL DIAM.
			% FINER THAN .002 MM	% FINER THAN .004 MM	% FINER THAN .008 MM	% FINER THAN .016 MM	% FINER THAN .031 MM	% FINER THAN .062 MM	% FINER THAN .125 MM	% FINER THAN .250 MM
MAR , 1980										
18...	0936	889	24	32	42	59	86	91	98	100
DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	BED MAT. SIEVE DIAM.	BED MAT. SIEVE DIAM.	BED MAT. SIEVE DIAM.	BED MAT. SIEVE DIAM.	BED MAT. SIEVE DIAM.	BED MAT. SIEVE DIAM.	BED MAT. SIEVE DIAM.	BED MAT. SIEVE DIAM.
			% FINER THAN .062 MM	% FINER THAN .125 MM	% FINER THAN .250 MM	% FINER THAN .500 MM	% FINER THAN 1.00 MM	% FINER THAN 2.00 MM	% FINER THAN 4.00 MM	% FINER THAN 8.00 MM
MAR , 1980										
18...	0936	889	6	8	21	55	64			
18...	1100	889	9	13	40	92	99			
DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	BED MAT. SIEVE DIAM.	BED MAT. SIEVE DIAM.	BED MAT. SIEVE DIAM.	BED MAT. SIEVE DIAM.	BED MAT. SIEVE DIAM.	BED MAT. SIEVE DIAM.	BED MAT. SIEVE DIAM.	BED MAT. SIEVE DIAM.
			% FINER THAN 2.00 MM	% FINER THAN 4.00 MM	% FINER THAN 8.00 MM	% FINER THAN 16.0 MM	% FINER THAN 32.0 MM	% FINER THAN 64.0 MM	% FINER THAN 100 MM	% FINER THAN 100 MM
MAR , 1980										
18...			65	67	71	81	89	100		
18...			100	--	--	--	--	--		

GRANT RIVER BASIN

05413500 GRANT RIVER AT BURTON, WI--CONTINUED

SUSPENDED-SEDIMENT, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DAY	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
	MEAN CONCEN- TRATION (MG/L)	LOADS (T/DAY)	MEAN CONCEN- TRATION (MG/L)	LOADS (T/DAY)	MEAN CONCEN- TRATION (MG/L)	LOADS (T/DAY)	MEAN CONCEN- TRATION (MG/L)	LOADS (T/DAY)	MEAN CONCEN- TRATION (MG/L)	LOADS (T/DAY)	MEAN CONCEN- TRATION (MG/L)	LOADS (T/DAY)
1	34	12	70	28	33	9.8	32	9.8	20	5.4	20	5.9
2	35	14	60	21	32	9.5	27	7.8	20	5.4	20	5.4
3	35	13	58	19	33	8.9	28	8.1	20	5.4	20	5.4
4	35	13	54	18	33	9.8	28	7.6	20	5.4	20	5.4
5	36	13	50	17	33	11	28	7.6	20	5.9	20	5.4
6	36	13	51	18	34	11	28	8.3	20	5.9	20	5.3
7	37	13	52	18	34	10	28	8.3	20	5.4	20	5.3
8	37	13	52	17	34	10	28	8.3	20	5.4	20	5.3
9	37	13	53	18	35	10	28	8.3	20	5.4	20	5.4
10	38	13	53	18	35	10	28	8.3	20	5.3	20	5.4
11	38	14	54	18	35	10	30	11	20	5.3	20	5.4
12	39	14	55	18	36	9.7	30	11	20	5.3	20	5.3
13	39	14	55	18	36	10	30	11	20	5.3	20	5.3
14	39	13	56	18	37	10	30	11	20	5.3	20	5.4
15	40	14	56	18	37	10	43	14	17	4.5	47	51
16	40	14	57	19	37	10	2000	8100	17	4.5	2410	10800
17	41	14	58	19	38	10	958	2590	17	4.5	1300	2800
18	41	14	58	19	38	10	297	400	17	4.6	450	409
19	42	15	59	19	39	11	164	111	17	5.0	300	259
20	42	16	56	18	39	11	58	28	55	30	150	74
21	54	20	80	29	39	11	35	14	220	297	100	45
22	70	30	96	41	40	14	30	11	1100	3860	46	17
23	120	64	80	30	192	124	30	9.7	300	454	29	10
24	90	35	64	22	69	42	30	9.7	220	208	26	8.8
25	80	29	44	15	44	19	30	8.9	150	93	29	9.4
26	70	25	42	15	42	15	30	8.9	100	51	32	11
27	60	21	40	15	40	13	20	5.4	80	32	40	13
28	54	19	38	13	38	12	20	5.4	40	14	55	18
29	52	18	36	12	36	12	20	5.4	20	6.5	53	19
30	50	18	34	11	35	12	20	5.4	---	---	33	11
31	48	17	---	---	33	14	20	5.4	---	---	45	15
TOTAL	---	568	---	579	---	489.7	---	11458.6	---	5144.7	---	14645.8

DAY	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
	MEAN CONCEN- TRATION (MG/L)	LOADS (T/DAY)	MEAN CONCEN- TRATION (MG/L)	LOADS (T/DAY)	MEAN CONCEN- TRATION (MG/L)	LOADS (T/DAY)	MEAN CONCEN- TRATION (MG/L)	LOADS (T/DAY)	MEAN CONCEN- TRATION (MG/L)	LOADS (T/DAY)	MEAN CONCEN- TRATION (MG/L)	LOADS (T/DAY)
1	31	10	37	11	105	24	152	38	130	29	196	65
2	30	9.7	59	17	133	36	123	30	107	25	187	57
3	65	24	57	16	363	120	104	25	239	91	182	53
4	80	36	51	14	189	50	84	20	123	29	177	59
5	47	17	49	14	1980	1900	161	40	114	26	186	64
6	41	14	54	15	1970	1730	146	38	106	24	159	46
7	48	18	52	14	750	322	123	30	103	23	334	136
8	58	22	43	12	376	110	106	26	94	21	242	104
9	97	48	56	15	271	73	236	64	137	34	156	57
10	37	15	68	19	252	66	105	28	248	98	131	39
11	35	13	61	17	207	53	78	19	204	81	147	42
12	39	14	69	19	182	45	79	19	122	33	156	51
13	32	11	85	25	212	53	53	12	128	35	238	107
14	33	11	94	29	541	620	48	11	124	39	135	44
15	34	12	103	29	590	481	97	22	147	38	134	40
16	30	11	110	30	1060	542	109	25	219	63	119	35
17	21	6.9	128	35	514	149	115	26	272	130	117	34
18	29	9.2	130	39	331	90	115	25	134	44	108	31
19	27	8.7	115	32	279	74	91	20	102	31	101	28
20	33	10	85	22	270	69	52	12	96	33	99	30
21	24	7.4	93	23	231	58	99	22	1620	4510	130	41
22	43	13	88	21	201	50	128	28	614	382	322	278
23	33	9.8	94	22	193	47	163	35	288	103	434	190
24	48	14	133	31	187	46	89	19	194	61	241	75
25	50	14	98	22	193	48	122	26	184	55	143	43
26	28	8.0	87	19	167	41	149	34	185	53	97	28
27	45	13	94	20	148	37	386	90	160	45	99	28
28	22	5.8	87	19	365	145	210	47	176	49	113	33
29	30	8.5	154	39	193	54	315	69	171	48	192	74
30	31	9.1	137	36	143	36	230	51	186	76	109	33
31	---	---	132	33	---	---	145	32	191	192	---	---
TOTAL	---	423.1	---	709	---	7169	---	983	---	6501	---	1945

PLATTE RIVER BASIN

05414000 PLATTE RIVER NEAR ROCKVILLE, WI

LOCATION.--Lat 42°43'52", long 90°38'25", in SW 1/4 sec.17, T.3 N., R.2 W., Grant County, Hydrologic Unit 07060003, on right bank just downstream from bridge on County Trunk Highway B, 0.8 mi (1.3 km) upstream from Blakely Branch, 2.2 mi (3.5 km) east of Rockville, 4.5 mi (7.2 km) northeast of Potosi, and 15.2 mi (24.5 km) upstream from mouth.

DRAINAGE AREA.--142 mi² (368 km²).

PERIOD OF RECORD.--October 1934 to current year. Monthly discharge only for October and November 1934, published in WSP 1308.

REVISED RECORDS.--WSP 1438: 1935-36, 1937(M), 1939(M), 1941-43, 1946(M). WDR WI-76-1: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 642.50 ft (195.834 m) National Geodetic Vertical Datum of 1929. Prior to Oct. 1, 1941, nonrecording gage at site 1.3 mi (2.1 km) upstream at datum 12.55 ft (3.82 m) higher. Oct. 1, 1941, to June 29, 1949, nonrecording gage at present site and datum.

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

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

AVERAGE DISCHARGE.--46 years, 97.8 ft³/s (2.770 m³/s), 9.35 in/yr (237 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 43,500 ft³/s (1,230 m³/s) July 16, 1950, gage height, 17.26 ft (5.261 m), from rating curve extended above 7,000 ft³/s (198 m³/s) on basis of slope-area measurement of peak flow; no flow Nov. 24, 1950.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 2,100 ft³/s (59.5 m³/s) and maximum (*):

DATE	TIME	DISCHARGE (ft ³ /s) (m ³ /s)	GAGE HEIGHT (ft) (m)	DATE	TIME	DISCHARGE (ft ³ /s) (m ³ /s)	GAGE HEIGHT (ft) (m)
Jan. 16	1215	2,370	67.1	Sept. 8	0515	2,380	67.4
Mar. 16	1915	*2,560	72.5				9.53 2.905
			*9.75				2.972

minimum discharge, 23 ft³/s (0.651 m³/s) Dec. 17, gage height, 3.20 ft (0.975 m), result of freezeup.

RATING TABLE (gage height, in feet, and discharge, in cubic feet per second).
(Shifting-control method used Oct. 1 to Nov. 9; stage-discharge relation affected by ice Nov. 30 to Dec. 3, Dec. 14-17, Dec. 26 to Jan. 16, Jan. 20 to Feb. 21, Feb. 25 to Mar. 15.)

3.3	32	5.0	323
3.6	64	6.0	618
4.0	120	7.0	1,000
4.5	210	8.0	1,500

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	72	78	62	64	58	56	61	57	51	57	43	65
2	77	74	60	62	58	58	61	56	63	52	55	62
3	76	72	64	62	58	58	69	54	89	51	67	60
4	74	71	67	62	58	56	85	54	59	51	50	64
5	73	71	69	60	58	56	73	53	138	55	50	66
6	72	75	69	60	58	56	69	51	221	55	48	61
7	72	74	69	60	56	56	70	50	102	51	47	165
8	72	72	67	60	56	56	83	50	80	49	50	650
9	72	72	64	60	56	54	125	50	72	82	58	146
10	72	72	66	70	56	54	95	51	68	72	81	109
11	74	70	68	100	56	54	85	52	63	57	68	94
12	74	69	64	96	56	54	80	50	62	52	55	146
13	72	70	60	90	54	54	75	54	59	50	58	130
14	72	70	58	84	54	54	72	55	154	47	63	98
15	72	70	58	80	54	250	73	53	117	49	53	89
16	70	69	58	1000	54	1270	72	51	96	117	57	87
17	70	69	58	348	54	367	69	55	74	71	81	91
18	70	69	79	138	54	180	68	60	68	56	66	83
19	74	69	79	97	54	162	66	57	65	53	70	79
20	76	68	78	80	60	111	65	55	62	49	82	94
21	77	77	78	78	190	86	63	52	60	47	376	92
22	85	86	80	72	523	76	63	51	58	46	111	102
23	92	79	144	62	194	70	61	49	58	46	86	97
24	79	74	100	62	83	69	59	48	57	41	76	87
25	75	71	88	60	74	65	59	48	56	41	71	85
26	73	74	78	60	60	64	58	47	56	47	66	82
27	73	77	76	58	60	63	57	46	60	50	64	79
28	73	73	72	58	58	64	57	45	87	47	62	83
29	73	70	70	58	56	68	56	52	63	47	62	88
30	73	64	68	58	---	68	57	56	57	46	69	80
31	75	---	66	58	---	65	---	54	---	45	71	---
TOTAL	2304	2169	2237	3417	2420	3874	2106	1616	2375	1679	2316	3314
MEAN	74.3	72.3	72.2	110	83.4	125	70.2	52.1	79.2	54.2	74.7	110
MAX	92	86	144	1000	523	1270	125	60	221	117	376	650
MIN	70	64	58	58	54	54	56	45	51	41	43	60
CFSM	.52	.51	.51	.78	.59	.88	.49	.37	.56	.38	.53	.78
IN.	.60	.57	.59	.90	.63	1.01	.55	.42	.62	.44	.61	.87
CAL YR 1979	TOTAL	38060	MEAN	104	MAX	1260	MIN	47	CFSM	.73	IN	9.97
WTR YR 1980	TOTAL	29827	MEAN	81.5	MAX	1270	MIN	41	CFSM	.57	IN	7.81

GALENA RIVER BASIN

05415000 GALENA RIVER AT BUNCOMBE, WI

LOCATION.--Lat 42°30'49", long 90°22'40", in SW 1/4 sec.33, T.1 N., R.1 E., Lafayette County, Hydrologic Unit 07060005, on left bank at Buncombe, 0.6 mi (1.0 km) upstream from Coon Branch, 1.5 mi (2.4 km) upstream from Scrabble Branch, 2.0 mi (3.2 km) upstream from Wisconsin-Illinois State line, and 3.5 mi (5.6 km) southeast of Hazel Green.

DRAINAGE AREA.--125 mi² (324 km²).

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

REVISED RECORDS.--WSP 1438: 1942(P), 1943(M), 1944(P), 1945(M). WDR WI-76-1: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 682.31 ft (207.968 m) National Geodetic Vertical Datum of 1929. Prior to Dec. 1, 1939, nonrecording gage at same site and datum.

REMARKS.--Records good except those for winter periods, which are fair. Gage-height telemeter at station.

AVERAGE DISCHARGE.--41 years, 76.7 ft³/s (2.172 m³/s), 8.33 in/yr (212 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 29,700 ft³/s (841 m³/s) June 29, 1969, gage height, 19.57 ft (5.965 m) from rating curve extended above 8,100 ft³/s (229 m³/s) on basis of slope-area measurements at gage heights 15.68 ft (4.779 m) and 19.57 ft (5.965 m); minimum discharge, 0.8 ft³/s (0.023 m³/s) Mar. 3, 1954.

EXTREMES OUTSIDE OF PERIOD OF RECORD.--Flood of February 1937 reached a stage of about 17.1 ft (5.212 m), from information by local resident, discharge, 18,000 ft³/s (510 m³/s).

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 2,760 ft³/s (78.2 m³/s), Jan. 16, gage height, 9.78 ft (2.981 m), no peaks above base of 3,000 ft³/s (85.0 m³/s); minimum discharge, 20 ft³/s (0.566 m³/s) Dec. 12, gage height, 2.61 ft (0.796 m), result of freezeup.

RATING TABLE (gage height, in feet, and discharge, in cubic feet per second).
(Stage-discharge relation affected by ice Nov. 30 to Dec. 10, Dec. 12-19,
Dec. 29 to Jan. 1, Jan. 3-13, Jan. 20 to Feb. 20, Feb. 24 to Mar. 15.)

2.6	23	4.5	312
2.8	37	5.0	454
3.0	55	6.0	796
3.5	122	8.0	1,730
4.0	206		

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980												
DAY	OCT	NOV	DEC	JAN	FEB	MEAN VALUES	APR	MAY	JUN	JUL	AUG	SEP
1	49	60	43	45	38	41	43	47	35	41	35	40
2	56	49	43	44	38	40	45	44	41	39	35	38
3	52	46	44	44	38	40	73	42	69	38	40	36
4	50	45	45	43	37	39	109	41	41	38	35	42
5	50	46	46	42	37	39	67	41	53	38	37	42
6	49	56	46	41	37	39	61	39	159	36	34	37
7	48	52	45	41	37	39	64	38	73	35	32	79
8	50	49	43	41	37	40	123	39	57	34	32	148
9	47	47	44	42	37	40	176	39	49	50	36	79
10	45	46	45	45	36	40	114	40	47	46	76	55
11	49	43	44	70	36	40	96	41	44	37	64	50
12	49	43	44	66	36	41	90	38	42	35	44	90
13	46	44	43	62	36	42	79	41	44	34	70	192
14	46	44	41	58	36	45	79	42	64	33	61	97
15	46	44	39	54	36	500	78	40	141	34	44	78
16	53	44	32	1410	35	1290	75	37	86	36	49	75
17	47	44	35	369	35	350	69	49	59	38	95	93
18	45	44	40	127	36	89	66	59	53	33	62	73
19	65	43	41	82	39	81	65	44	50	32	60	65
20	60	42	42	60	46	65	62	39	46	32	65	101
21	53	63	42	52	653	54	59	37	44	31	96	83
22	56	64	45	48	713	47	57	34	43	30	61	87
23	67	54	157	44	229	45	53	33	43	30	49	82
24	53	49	82	45	60	44	51	32	44	29	45	71
25	49	46	79	45	50	42	51	32	43	47	43	68
26	46	58	61	40	46	42	50	29	42	239	41	63
27	46	59	52	39	44	42	48	29	41	90	39	61
28	47	51	49	39	43	43	46	28	92	45	38	59
29	47	46	48	39	42	52	48	51	49	39	38	61
30	46	44	47	38	---	48	49	47	42	38	39	59
31	50	---	46	38	---	44	---	37	---	38	41	---
TOTAL	1562	1465	1553	3253	2623	3443	2146	1229	1736	1395	1536	2204
MEAN	50.4	48.8	50.1	105	90.4	111	71.5	39.6	57.9	45.0	49.5	73.5
MAX	67	64	157	1410	713	1290	176	59	159	239	96	192
MIN	45	42	32	38	35	39	43	28	35	29	32	36
CFSM	.40	.39	.40	.84	.72	.89	.57	.32	.46	.36	.40	.59
IN.	.46	.44	.46	.97	.78	1.02	.64	.37	.52	.42	.46	.66
CAL YR 1979	TOTAL	31612	MEAN	86.6	MAX	2010	MIN	32	CFSM	.69	IN	9.41
WTR YR 1980	TOTAL	24145	MEAN	66.0	MAX	1410	MIN	28	CFSM	.53	IN	7.19

ROCK RIVER BASIN

05423000 WEST BRANCH ROCK RIVER NEAR WAUPUN, WI

LOCATION.--Lat 43°40'04", long 88°39'08", in SE 1/4 sec.24, T.14 N., R.15 E., Fond du Lac County, Hydrologic Unit 07090001, on right bank 700 ft (213 m) downstream from bridge on U.S. Highway 151, 4.1 mi (6.6 km) upstream from South Branch Rock River, and 4.5 mi (7.24 km) northeast of Waupun.

DRAINAGE AREA.--40.7 mi² (105 km²), revised.

PERIOD OF RECORD.--January 1949 to September 1970, March 1978 to current year. Annual maximum, water years 1971-77.

REVISED RECORDS.--WSP 1728: Drainage area.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 870.53 ft (265.338 m) National Geodetic Vertical Datum of 1929.

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

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

AVERAGE DISCHARGE.--23 years (water years 1949-70, 1979-80), 20.5 ft³/s (0.581 m³/s), 6.84 in/yr (174 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,140 ft³/s (32.3 m³/s) Mar. 24, 1975; maximum gage height, 7.77 ft (2.368 m) Mar. 25, 1979, backwater from ice; no flow Dec. 5, 1949, Feb. 6-13, 1959, Dec. 20-22, 1963, many days in 1964-65, and Aug. 2 to Sept. 16, 1970.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 328 ft³/s (9.29 m³/s) June 8, gage height, 5.03 ft (1.533 m), no other peaks above base of 250 ft³/s (7.08 m³/s); minimum, 3.6 ft³/s (0.102 m³/s) Jan. 3, gage height, 1.89 ft (0.576 m), but may have been lower during period of missing record.

RATING TABLE (gage height, in feet, and discharge, in cubic feet per second).
(Stage-discharge relation affected by ice Dec. 12-14, Jan. 7-9, Jan. 19 to Mar. 15.)

1.9	3.8	3.5	99
2.1	8.5	4.0	148
2.3	16	4.5	216
2.6	32	5.0	320
3.0	59	6.0	600

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DAY	MEAN VALUES											
	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6.3	12	13	13	6.6	4.5	26	33	23	10	7.4	31
2	6.6	11	11	12	6.4	4.3	23	30	18	9.0	7.2	30
3	6.7	10	11	11	6.2	4.2	43	27	16	8.6	7.9	27
4	7.0	9.1	10	11	6.0	4.0	72	24	14	8.2	7.3	23
5	7.1	8.8	11	9.7	5.8	3.9	64	22	46	8.6	7.5	21
6	6.7	10	12	8.6	5.6	3.9	51	20	131	9.0	6.8	19
7	6.8	11	11	7.4	5.6	3.9	64	18	180	8.2	9.6	20
8	7.0	10	13	7.2	5.4	3.9	103	16	230	7.9	125	21
9	7.0	9.6	11	6.8	5.2	4.0	110	15	200	7.3	176	42
10	7.0	8.5	10	8.4	5.0	3.8	90	15	110	6.9	84	39
11	7.0	8.1	11	13	4.9	3.8	68	15	82	6.4	58	30
12	6.9	8.0	10	11	4.8	3.9	60	14	62	6.3	43	49
13	6.6	8.3	9.4	9.9	4.7	4.0	51	16	52	6.2	36	69
14	6.4	8.0	8.8	8.6	4.7	4.2	44	21	48	5.8	32	56
15	6.0	8.2	8.7	8.6	4.6	5.6	43	20	42	6.0	28	48
16	6.0	8.5	7.9	60	4.6	24	44	19	36	9.1	24	45
17	6.0	8.6	7.4	127	4.5	62	41	17	31	9.3	22	50
18	6.0	8.8	7.4	110	4.4	37	39	21	27	7.3	21	45
19	6.4	8.8	7.5	38	4.3	38	39	23	33	6.8	20	39
20	6.8	8.8	7.5	28	4.8	32	38	21	35	52	19	43
21	6.9	12	7.8	22	5.6	22	37	18	29	43	24	48
22	6.7	22	8.3	17	7.0	18	36	16	25	24	22	134
23	12	22	16	13	8.6	16	33	15	20	16	18	134
24	15	18	34	9.6	8.0	15	31	13	17	12	15	102
25	12	15	55	9.0	6.8	15	30	12	15	10	17	78
26	10	21	35	8.4	5.6	19	28	10	13	11	22	72
27	9.6	33	27	8.0	5.4	30	26	9.3	12	12	20	65
28	9.4	27	21	7.6	4.8	31	25	9.2	13	11	35	62
29	9.2	19	17	7.2	4.6	28	28	13	12	8.9	44	58
30	8.7	16	16	7.0	---	26	34	18	11	7.8	39	53
31	8.7	---	14	6.8	---	28	---	34	---	8.0	33	---
TOTAL	240.5	389.1	449.7	624.8	160.5	502.9	1421	574.5	1583	362.6	1030.7	1553
MEAN	7.76	13.0	14.5	20.2	5.53	16.2	47.4	18.5	52.8	11.7	33.2	51.8
MAX	15	33	55	127	8.6	62	110	34	230	52	176	134
MIN	6.0	8.0	7.4	6.8	4.3	3.8	23	9.2	11	5.8	6.8	19
CFSM	.19	.32	.36	.50	.14	.40	1.17	.46	1.30	.29	.82	1.27
IN.	.22	.36	.41	.57	.15	.46	1.30	.53	1.45	.33	.94	1.42
CAL YR 1979	TOTAL	16408.7	MEAN	45.0	MAX	574	MIN	5.3	CFSM	1.11	IN	15.00
WTR YR 1980	TOTAL	8892.3	MEAN	24.3	MAX	230	MIN	3.8	CFSM	.60	IN	8.13

NOTE.--No gage-height record Jan. 19 to Mar. 10, June 7 to July 7.

ROCK RIVER BASIN

05423100 WEST BRANCH ROCK RIVER AT COUNTY TRUNK HIGHWAY D NEAR WAUPUN, WI

LOCATION.--Lat 43°38'51", long 88°40'50", in SW 1/4 SW 1/4 sec.26, T.14 N., R.15 E., Fond du Lac County, Hydrologic Unit 07090001, on left bank, 120 ft (37 m) upstream of County Trunk Highway D bridge, 1.3 mi (2.1 km) east of U.S. Highway 151, and 1.8 mi (2.9 km) northeast of Waupun.

DRAINAGE AREA.--43.9 mi² (114 km²).

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

GAGE.--Water-stage recorder and crest-stage gage. Altitude of gage is 880 ft (268 m), from topographic map.

REMARKS.--Records good except those for Oct. 1 to Mar. 15, which are fair.

COOPERATION.--Six discharge measurements were furnished by the Army Corps of Engineers.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 502 ft³/s (14.2 m³/s) Mar. 24, 1979, gage height, 11.38 ft (3.469 m); minimum, 2.3 ft³/s (0.065 m³/s) Dec. 8, 1980, gage height, 6.80 ft (2.073 m).

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 270 ft³/s (7.65 m³/s) June 8, gage height, 9.94 ft (3.030 m); minimum, 2.3 ft³/s (0.065 m³/s) Dec. 8, gage height, 6.80 ft (2.073 m), but may have been less during period of missing record.

RATING TABLE (gage height, in feet, and discharge, in cubic feet per second).
(Stage-discharge relation affected by ice Dec. 1, 2, 12-14, Jan. 7-10, Jan. 24 to Feb. 20, Feb. 27 to Mar. 3, and Mar. 7, 8, 12.)

6.9	3.7	8.0	56
7.0	5.8	8.5	95
7.2	11.7	9.0	148
7.5	26	10.0	278

DAY	DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980											
	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	7.2	13	15	14	7.2	5.0	28	39	28	11	8.2	33
2	7.6	12	11	13	7.0	4.9	25	36	22	11	7.5	32
3	7.8	11	11	13	6.6	4.9	42	33	21	10	8.0	29
4	7.8	9.8	11	12	6.4	5.3	74	29	18	9.7	7.8	26
5	7.6	10	12	10	6.2	5.0	68	27	42	11	7.6	23
6	7.6	11	13	9.2	6.0	4.7	54	24	141	11	7.5	21
7	7.8	11	13	9.0	5.8	4.2	67	22	196	10	9.7	22
8	8.0	11	11	8.8	5.8	4.2	110	20	262	9.3	112	23
9	7.8	10	12	8.4	5.6	4.9	117	19	232	8.5	161	44
10	7.8	9.2	11	8.0	5.6	4.9	97	19	152	7.9	125	42
11	7.8	8.8	12	15	5.4	4.3	74	18	96	7.3	70	33
12	7.6	8.8	12	12	5.4	4.0	64	17	71	7.0	50	49
13	7.4	8.8	10	11	5.2	4.9	57	19	59	7.0	42	70
14	7.0	8.8	9.8	9.8	5.2	4.9	50	26	58	6.8	37	59
15	6.8	9.0	9.6	18	5.0	5.1	48	25	47	6.9	32	50
16	6.8	9.0	9.0	70	4.9	18	50	22	38	10	27	46
17	6.8	9.0	8.4	150	4.9	61	47	20	32	11	25	51
18	7.0	9.0	8.4	110	4.9	42	45	24	27	8.5	25	47
19	7.4	9.0	8.6	50	4.8	36	45	27	33	7.6	23	41
20	7.8	9.8	8.8	32	5.2	35	44	24	36	53	22	45
21	7.8	14	9.0	24	6.3	30	43	21	30	49	27	49
22	7.8	24	12	18	8.4	26	41	17	26	30	26	140
23	12	23	22	14	10	18	39	15	22	20	21	148
24	17	20	47	11	9.8	15	36	13	19	15	17	110
25	13	17	54	10	8.5	16	35	12	17	12	18	83
26	11	25	38	9.0	6.8	18	33	11	15	13	24	74
27	11	36	28	8.8	5.6	32	31	10	14	14	23	68
28	10	29	22	8.4	5.2	31	30	10	15	13	34	63
29	9.6	21	19	8.0	5.0	29	33	15	14	11	45	60
30	9.2	17	18	7.6	---	28	40	18	12	9.2	41	56
31	9.8	---	15	7.4	---	28	---	39	---	8.9	36	---
TOTAL	267.6	424.0	500.6	709.4	178.7	534.2	1567	671	1795	419.6	1119.3	1637
MEAN	8.63	14.1	16.1	22.9	6.16	17.2	52.2	21.6	59.8	13.5	36.1	54.6
MAX	17	36	54	150	10	61	117	39	262	53	161	148
MIN	6.8	8.8	8.4	7.4	4.8	4.0	25	10	12	6.8	7.5	21
CFSM	.20	.32	.37	.52	.14	.39	1.19	.49	1.36	.31	.82	1.24
IN.	.23	.36	.42	.60	.15	.45	1.33	.57	1.52	.36	.95	1.39
CAL YR 1979	TOTAL	16312.3	MEAN	44.7	MAX	478	MIN	5.8	CFSM	1.02	IN	13.82
WTR YR 1980	TOTAL	9823.4	MEAN	26.8	MAX	262	MIN	4.0	CFSM	.61	IN	8.32

NOTE.--No gage-height record Oct. 1 to Nov. 27, Dec. 11 to Jan. 23.

ROCK RIVER BASIN

05424082 ROCK RIVER AT HUSTISFORD, WI

LOCATION.--Lat 43°20'44", long 88°35'52", in NE 1/4 sec.9, T.10 N., R.16 E., Dodge County, Hydrologic Unit 07090001, on left bank 400 ft (122 m) downstream from State Highway 106 bridge, 40 ft (12 m) downstream from the Hustisford dam, at Hustisford.

DRAINAGE AREA.--511 mi² (1,323 km²).

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

GAGE.--Water-stage recorder. Altitude of gage is 850 ft (259 m), from topographic map.

REMARKS.--Records fair. Some regulation caused by manipulation of gates at dams on Horicon Marsh and Lake Sinissippi.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 3,550 ft³/s (101 m³/s) Apr. 4, 1979, gage height, 6.80 ft (2.073 m); minimum daily, 0.10 ft³/s (0.003 m³/s) Aug. 1, 1979, Mar. 7-18, May 12, July 14, 1980.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,540 ft³/s (43.6 m³/s) Sept. 26, gage height, 5.41 ft (1.649 m); minimum daily, 0.10 ft³/s (0.003 m³/s) Mar. 7-18, May 12, July 14.

RATING TABLES (gage height, in feet, and discharge, in cubic feet per second).
(Shifting-control method used Sept. 15-30.)

Oct. 1 to Jan. 20

Jan. 21 to Sept. 30

2.2	1.2	3.2	103
2.3	3.5	3.5	185
2.4	8.0	3.8	310
2.5	16	4.5	930
3.0	71		

2.1	0.1	3.3	114
2.2	1.8	3.6	205
2.3	4.4	4.0	420
2.4	8.1	4.5	820
2.5	13	5.0	1,400
2.7	27	5.5	2,150
3.0	59		

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DISCHARGE, IN CUBIC FEET PER SECOND AT NEW YORK, 1979 TO SEPTEMBER 1980												
DAY	MEAN VALUES											
	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	20	238	379	271	209	221	250	543	23	18	83	174
2	32	227	366	271	205	223	253	544	24	16	73	239
3	16	216	349	271	205	221	276	479	31	13	65	222
4	18	194	339	271	205	161	565	304	40	10	47	226
5	9.5	185	337	271	205	79	607	312	59	18	49	218
6	17	209	325	267	205	33	541	229	320	9.4	41	158
7	9.1	182	306	261	205	.10	523	87	504	6.7	71	130
8	8.1	181	284	260	203	.10	540	3.3	494	7.3	140	131
9	11	176	266	255	205	.10	752	1.1	481	3.9	301	163
10	4.9	173	256	252	204	.10	812	.54	585	4.3	384	160
11	7.2	165	249	238	201	.10	989	8.3	661	2.2	563	231
12	19	162	247	231	125	.10	1140	.10	668	1.1	719	353
13	13	162	239	229	5.5	.10	1090	2.8	675	.56	680	406
14	2.4	159	198	223	3.3	.10	1070	21	718	.10	665	427
15	2.1	159	136	223	2.7	.10	1020	49	729	4.1	595	416
16	1.9	64	145	210	2.1	.10	949	56	866	24	381	478
17	2.1	16	143	220	1.4	.10	916	73	899	48	448	544
18	1.3	30	143	230	1.4	.10	786	104	840	41	625	518
19	3.5	43	145	280	1.4	49	574	229	797	37	572	500
20	3.5	58	143	330	1.5	146	573	332	735	42	438	523
21	6.6	68	140	390	1.7	148	561	303	706	44	372	524
22	13	83	138	476	87	158	567	272	288	62	341	1010
23	63	83	139	476	146	176	578	244	55	73	162	1330
24	33	83	154	468	146	193	557	200	57	80	2.3	1350
25	57	94	166	450	175	203	544	100	49	89	4.6	1390
26	67	132	215	448	221	213	543	40	45	99	20	1500
27	85	126	262	435	221	221	552	26	33	109	43	1480
28	108	136	250	427	221	230	551	24	38	109	53	1410
29	174	143	254	391	221	238	546	22	38	116	67	1380
30	257	231	266	349	---	241	543	21	25	106	82	1350
31	235	---	271	269	---	250	---	22	---	101	90	---
TOTAL	1300.2	4178	7250	9643	3836.0	3405.20	19768	4652.14	11483	1294.66	8176.9	18941
MEAN	41.9	139	234	311	132	110	659	150	383	41.8	264	631
MAX	257	238	379	476	221	250	1140	544	899	116	719	1500
MIN	1.3	16	136	210	1.4	.10	250	.10	23	.10	2.3	130
CFSM	.08	.27	.46	.61	.26	.22	1.29	.29	.75	.08	.52	1.24
IN.	.09	.30	.53	.70	.28	.25	1.44	.34	.84	.09	.60	1.38
CAL YR 1979	TOTAL	191543.70	MEAN	525	MAX	3340	MIN	.10	CFSM	1.03	IN	13.94
WTR YR 1980	TOTAL	93928.10	MEAN	257	MAX	1500	MIN	.10	CFSM	.50	IN	6.84

ROCK RIVER BASIN

05425500 ROCK RIVER AT WATERTOWN, WI

LOCATION.--Lat 43°11'17", long 88°43'34", in SW 1/4 sec.4, T.8 N., R.15 E., Jefferson County, Hydrologic Unit 07090001, on left bank, 700 ft (213 m) downstream from Milwaukee Street bridge, 1.1 mi (1.77 km) downstream from Silver Creek, at Watertown.

DRAINAGE AREA.--969 mi² (2,510 km²).

PERIOD OF RECORD.--June 1931 to September 1970, October 1976 to current year.

REVISED RECORDS.--WSP 1438: 1933,1935(M), 1937(M), 1938-39, 1945(M); WDR WI-79-1: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 792.58 ft (241.578 m) National Geodetic Vertical Datum of 1929. Prior to Sept. 26, 1933, nonrecording gage at site 700 ft (213 m) upstream at different datum.

REMARKS.--Records good except those for winter period and period of no gage-height record, which are fair. Some regulation caused by manipulation of gates at dams on Horicon Marsh, Lake Sinissippi, and other dams in the basin.

AVERAGE DISCHARGE.--43 years, (water years 1931-70, 1977-80), 427 ft³/s (12.09 m³/s), 5.98 in/yr (152 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 5,080 ft³/s (144 m³/s) Mar. 31, 1979, gage height, 6.19 ft (1.887 m); maximum gage height, 6.32 ft (1.926 m) Apr. 4, 1959; minimum daily discharge, 0.9 ft³/s (0.025 m³/s) Oct. 15, 1939, Sept. 9, 1944.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 1,100 ft³/s (31.2 m³/s) and maximum (*):

DATE	TIME	DISCHARGE (ft ³ /s) (m ³ /s)	GAGE HEIGHT (ft) (m)	DATE	TIME	DISCHARGE (ft ³ /s) (m ³ /s)	GAGE HEIGHT (ft) (m)
Apr. 18	1000	1,450 41.1	3.54 1.079	Sept. 23	0245	*1,850 52.4	3.98 1.213

minimum daily discharge, 39 ft³/s (1.104 m³/s) Oct. 5.

RATING TABLE (gage height, in feet, and discharge, in cubic feet per second).
(Stage-discharge relation affected by ice Dec. 19, 20, Jan. 8-12, Feb. 7-24, Mar. 1-3, 9-13.)

0.9	34	2.1	365
1.2	75	2.5	630
1.5	138	3.0	990
1.8	230	4.0	1,870

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DAY	MEAN VALUES											
	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	84	389	331	530	715	420	424	928	152	82	180	267
2	82	424	362	509	620	400	418	891	146	79	177	267
3	90	469	412	475	537	380	469	869	144	66	168	303
4	65	469	502	462	469	346	614	840	144	62	160	331
5	39	443	523	424	424	367	722	818	154	81	203	336
6	39	437	544	357	400	412	795	780	228	71	193	322
7	79	418	558	307	390	267	862	715	372	71	239	326
8	88	400	495	300	380	203	1010	620	653	71	462	298
9	84	383	502	310	370	180	1200	395	751	66	666	322
10	94	357	488	320	370	150	1290	258	787	60	751	362
11	98	346	456	330	360	130	1280	187	795	56	810	383
12	94	346	443	340	330	120	1240	174	787	53	833	551
13	92	336	412	357	280	110	1320	180	780	51	825	810
14	88	331	312	378	240	110	1340	193	773	51	818	869
15	86	322	383	395	220	124	1370	231	758	48	818	869
16	94	322	317	462	200	180	1420	267	743	57	810	891
17	100	307	293	633	180	254	1430	289	729	57	825	997
18	110	254	284	736	160	307	1430	322	722	71	810	1030
19	130	203	280	773	140	357	1360	383	751	92	825	1040
20	134	180	270	729	120	383	1350	449	758	88	862	1180
21	134	207	289	701	120	406	1340	537	765	86	876	1290
22	139	243	298	673	200	418	1290	588	773	84	840	1630
23	152	284	326	601	320	412	1250	580	780	88	773	1770
24	207	312	406	544	400	383	1220	544	765	90	708	1630
25	267	317	607	660	475	372	1170	495	653	92	566	1620
26	298	341	694	722	469	383	1110	389	430	134	326	1660
27	262	412	708	773	437	372	1060	267	243	180	210	1700
28	246	495	687	780	418	378	1020	200	171	165	168	1740
29	280	502	640	802	430	395	997	168	119	213	193	1750
30	280	400	601	780	---	412	966	160	102	210	239	1780
31	336	---	558	729	---	418	---	152	---	193	267	---
TOTAL	4371	10649	13981	16892	10174	9549	32767	13869	15928	2868	16601	28324
MEAN	141	355	451	545	351	308	1092	447	531	92.5	536	944
MAX	336	502	708	802	715	420	1430	928	795	213	876	1780
MIN	39	180	270	300	120	110	418	152	102	48	160	267
CFSM	.15	.37	.47	.56	.36	.32	1.13	.46	.55	.10	.55	.97
IN.	.17	.41	.54	.65	.39	.37	1.26	.53	.61	.11	.64	1.09
CAL YR 1979	TOTAL	340999	MEAN 934	MAX 4760	MIN 39	CFSM .96	IN 13.09					
WTR YR 1980	TOTAL	175973	MEAN 481	MAX 1780	MIN 39	CFSM .50	IN 6.76					

ROCK RIVER BASIN

05426000 CRAWFISH RIVER AT MILFORD, WI

LOCATION.--Lat 43°06'00", long 88°50'58", in SW 1/4 sec.4, T.7 N., R.14 E., Jefferson County, Hydrologic Unit 07090002, on left bank near upstream side of highway bridge in Milford, 1.4 mi (2.2 km) downstream from Rock Creek and 9.8 mi (15.8 km) upstream from mouth.

DRAINAGE AREA.--762 mi² (1,974 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--June 1931 to current year.

REVISED RECORDS.--WSP 975: 1937-38. WSP 1438: 1932-33(M), 1935(M), 1937, 1938-41(M), 1943-44(M), 1947-48(M).
WDR WI-79-1: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 779.40 ft (237.561 m) National Geodetic Vertical Datum of 1929. Prior to July 28, 1966, nonrecording gage at present site and datum.

REMARKS.--Records are good except those for the winter period, which are fair. Some diurnal fluctuation at lower flows, due to manipulation of gates on small dams upstream.

AVERAGE DISCHARGE.--49 years, 363 ft³/s (10.28 m³/s), 6.47 in/yr (164 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 6,140 ft³/s (174 m³/s) Apr. 6, 1959, gage height, 11.15 ft (3.398 m); minimum observed, 0.2 ft³/s (0.006 m³/s) Sept. 15, 1958, gage height, 1.11 ft (0.338 m).

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 2,510 ft³/s (71.1 m³/s) Sept. 27, gage height, 7.30 ft (2.225 m), no other peaks above base of 1,250 ft³/s (35.4 m³/s); minimum daily, 56 ft³/s (1.586 m³/s) July 14.

RATING TABLE (gage height, in feet, and discharge, in cubic feet per second).
(Stage-discharge relation affected by ice Dec. 17, 18, Jan. 3 to Mar. 30.)

1.7	47	3.0	515
1.9	86	4.0	1,020
2.2	155	7.0	2,370
2.5	260	7.5	2,610

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	95	114	392	474	270	240	253	350	146	132	90	1100
2	120	147	436	452	240	220	256	343	153	130	93	1120
3	92	174	364	440	220	220	265	332	164	116	96	1090
4	104	150	324	380	210	230	362	314	146	99	68	1070
5	90	163	317	340	190	240	374	305	136	112	86	1040
6	112	196	315	280	180	250	415	294	204	91	86	1000
7	100	133	326	260	180	250	459	268	358	82	112	982
8	100	152	418	250	170	250	535	245	521	100	224	963
9	103	173	313	240	160	250	705	211	641	94	350	1030
10	86	152	314	230	170	260	812	177	706	94	488	1010
11	96	141	351	220	170	270	887	205	717	85	588	999
12	112	141	321	210	170	260	952	192	671	81	662	1090
13	110	151	293	210	170	250	953	204	639	77	680	1210
14	79	144	320	200	170	240	998	189	615	56	712	1280
15	90	155	272	200	170	230	935	196	586	72	709	1340
16	95	134	203	210	180	260	886	190	521	78	680	1430
17	97	142	190	240	180	360	854	200	451	85	664	1520
18	87	141	190	340	180	500	832	219	420	71	662	1510
19	76	141	187	400	180	600	762	238	423	84	745	1500
20	75	161	171	500	170	640	750	271	376	73	827	1560
21	85	171	159	540	170	700	677	285	336	90	958	1600
22	125	187	155	540	210	680	641	276	309	94	1040	1820
23	175	185	171	580	240	660	656	268	292	86	1100	2000
24	140	216	224	490	300	580	598	250	265	70	1120	2200
25	158	258	321	420	430	500	518	228	233	75	1120	2380
26	147	310	425	430	440	430	485	192	210	93	1100	2480
27	148	311	485	410	380	380	465	174	184	93	1060	2510
28	167	353	526	430	320	350	440	159	172	80	1020	2500
29	158	320	585	430	290	320	392	149	163	86	1010	2450
30	141	324	578	350	---	310	364	116	146	77	1070	2390
31	105	---	553	290	---	317	---	159	---	93	1090	---
TOTAL	3468	5640	10199	10986	6510	11247	18481	7199	10904	2749	20310	46174
MEAN	112	188	329	354	224	363	616	232	363	88.7	655	1539
MAX	175	353	585	580	440	700	998	350	717	132	1120	2510
MIN	75	114	155	200	160	220	253	116	136	56	68	963
CFSM	.15	.25	.43	.47	.29	.48	.81	.30	.48	.12	.86	2.02
IN.	.17	.28	.50	.54	.32	.55	.90	.35	.53	.13	.99	2.25
CAL YR 1979	TOTAL	235512	MEAN 645	MAX 4460	MIN 75	CFSM .85	IN 11.50					
WTR YR 1980	TOTAL	153867	MEAN 420	MAX 2510	MIN 56	CFSM .55	IN 7.51					

ROCK RIVER BASIN

05426000 CRAWFISH RIVER AT MILFORD, WI--CONTINUED

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1964-1968, October 1979 to September 1980.

PERIOD OF DAILY RECORD.--

SUSPENDED-SEDIMENT DISCHARGE: October 1979 to September 1980.

REMARKS.--Sediment records are good except those for winter period which are fair.

EXTREMES FOR CURRENT YEAR.--

SUSPENDED-SEDIMENT CONCENTRATIONS: Maximum daily mean, 311 mg/l June 7; minimum daily mean, 3 mg/l Mar. 17.

Maximum observed, 465 mg/l June 7, minimum observed, 1 mg/l Nov. 17.

SUSPENDED-SEDIMENT DISCHARGE: Maximum daily, 383 tons (347 tonnes) Aug. 23, Sept. 24; minimum daily, 3.9 tons (3.5 tonnes) Mar. 17.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SEDI- MENT, SUS- PENDE (MG/L)	SEDI- MENT DIS- CHARGE, SUS- PENDE (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM	SED. SUSP. SIEVE DIAM. % FINER THAN .125 MM	SED. SUSP. SIEVE DIAM. % FINER THAN .250 MM	SED. SUSP. SIEVE DIAM. % FINER THAN .500 MM	SED. SUSP. SIEVE DIAM. % FINER THAN 1.00 MM	SED. SUSP. SIEVE DIAM. % FINER THAN 2.00 MM
SEP , 1980										
22...	1340	1850	41	205	86	92	94	97	99	100
24...	0834	2170	77	451	90	95	100	--	--	--

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	TEMPER- ATURE, WATER (DEG C)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	SEDI- MENT, SUS- PENDE (MG/L)	SEDI- MENT DIS- CHARGE, SUS- PENDE (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
OCT , 1979							
29...	1245	147	10.0	640	--	--	--
DEC							
10...	1400	302	.5	700	--	--	--
JAN , 1980							
22...	1315	600	.0	530	--	--	--
MAR							
04...	1255	231	.0	660	--	--	--
APR							
21...	1100	706	15.0	580	--	--	--
MAY							
27...	1445	160	25.0	690	--	--	--
JUL							
08...	1311	105	30.0	620	--	--	--
AUG							
21...	1400	952	25.0	530	--	--	--
SEP							
04...	1020	1070	--	--	71	205	92
19...	1400	1490	--	--	40	161	88
22...	1340	1850	17.0	450	41	205	86
24...	0834	2170	16.0	--	77	451	90
24...	1340	2250	14.5	390	--	--	--
29...	1250	2420	13.5	460	--	--	--

ROCK RIVER BASIN
05426000 CRAWFISH RIVER AT MILFORD, WI--CONTINUED

SUSPENDED-SEDIMENT, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DAY	MEAN CONCEN- TRATION (MG/L)	LOADS (T/DAY)	MEAN CONCEN- TRATION (MG/L)	LOADS (T/DAY)	MEAN CONCEN- TRATION (MG/L)	LOADS (T/DAY)	MEAN CONCEN- TRATION (MG/L)	LOADS (T/DAY)	MEAN CONCEN- TRATION (MG/L)	LOADS (T/DAY)	MEAN CONCEN- TRATION (MG/L)	LOADS (T/DAY)
OCTOBER			NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	22	5.8	70	22	40	42	30	38	17	12	16	10
2	35	11	95	38	50	59	26	32	17	11	15	8.9
3	28	7.0	120	56	45	44	24	29	16	9.5	14	8.3
4	32	9.0	90	36	39	34	22	23	16	8.8	14	8.7
5	30	7.3	96	42	34	29	20	18	15	7.7	14	9.1
6	34	10	160	85	30	26	19	14	15	7.3	14	9.4
7	32	8.7	100	36	25	22	18	13	15	7.0	14	9.4
8	30	8.1	110	45	20	23	17	11	14	6.4	14	9.4
9	29	8.1	120	56	18	15	16	10	14	5.8	14	9.4
10	25	5.8	80	33	16	14	15	9.3	14	6.2	14	9.8
11	47	12	60	23	15	14	15	9.0	13	6.0	14	10
12	44	13	45	17	14	12	15	8.2	13	6.0	14	9.8
13	40	12	40	16	14	11	14	8.0	13	5.7	14	9.4
14	28	6.0	36	14	13	11	14	7.6	12	5.5	14	9.1
15	32	7.8	32	13	13	10	14	7.3	12	5.5	10	6.2
16	35	9.0	28	10	13	6.9	13	7.4	12	5.8	6	4.2
17	37	9.7	26	10	13	6.4	13	8.4	12	5.8	3	3.9
18	32	7.5	23	8.8	13	6.4	20	18	12	5.8	8	16
19	28	5.7	20	7.6	12	6.1	16	17	12	5.8	22	47
20	24	4.9	22	9.6	12	5.5	18	24	12	5.5	27	60
21	45	10	24	11	12	5.2	20	29	12	5.5	18	42
22	70	24	27	14	12	5.0	22	32	13	7.4	11	24
23	140	66	30	15	14	6.5	24	38	15	9.7	10	20
24	130	49	33	19	16	9.7	23	30	16	13	10	18
25	110	47	36	25	20	17	22	25	18	21	5	6.9
26	115	46	40	33	23	26	21	24	20	24	6	7.5
27	120	48	45	38	28	37	22	24	18	18	6	6.5
28	130	59	41	39	34	48	20	23	17	15	9	9.6
29	120	51	38	33	40	63	19	22	17	13	12	11
30	70	27	35	31	35	55	19	17	---	---	14	12
31	50	14	---	---	31	46	18	14	---	---	15	13
TOTAL	---	609.4	---	836.0	---	715.7	---	590.2	---	265.7	---	438.5
DAY	MEAN CONCEN- TRATION (MG/L)	LOADS (T/DAY)	MEAN CONCEN- TRATION (MG/L)	LOADS (T/DAY)	MEAN CONCEN- TRATION (MG/L)	LOADS (T/DAY)	MEAN CONCEN- TRATION (MG/L)	LOADS (T/DAY)	MEAN CONCEN- TRATION (MG/L)	LOADS (T/DAY)	MEAN CONCEN- TRATION (MG/L)	LOADS (T/DAY)
APRIL			MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	27	18	65	61	96	38	75	27	105	26	79	236
2	28	19	82	76	86	36	95	33	121	31	82	247
3	42	30	78	70	86	38	102	32	112	29	82	242
4	30	29	76	65	80	32	122	32	100	18	80	230
5	32	33	62	51	88	32	128	39	115	27	77	214
6	41	46	98	77	74	41	108	27	120	28	70	190
7	46	57	74	53	311	325	102	23	130	39	54	144
8	64	93	69	45	130	182	65	18	97	59	53	139
9	64	121	72	41	118	205	105	26	102	97	59	165
10	39	85	76	36	125	239	66	17	157	207	54	147
11	22	52	70	39	145	281	68	16	151	239	48	129
12	27	71	61	31	130	237	67	15	172	306	41	121
13	33	85	70	38	115	198	81	17	135	248	45	146
14	23	60	69	35	126	209	96	15	95	182	59	204
15	13	33	72	38	125	198	81	15	92	176	60	219
16	20	49	86	44	121	169	95	20	100	184	49	187
17	22	51	110	59	144	175	100	23	106	190	47	191
18	45	101	87	51	145	165	95	18	98	175	46	187
19	66	135	58	37	130	148	117	26	103	206	43	174
20	91	184	57	42	96	97	104	20	105	234	38	160
21	79	145	51	39	122	110	79	19	124	318	51	221
22	99	172	50	37	116	97	99	25	112	314	39	192
23	106	188	64	47	106	83	118	27	129	383	58	315
24	79	128	110	74	101	72	118	23	126	381	64	383
25	57	79	102	63	89	57	124	25	108	328	52	334
26	60	79	88	46	72	41	127	32	93	278	41	271
27	69	87	66	31	92	45	163	41	96	275	38	258
28	70	82	64	28	99	46	146	32	86	238	28	191
29	56	59	84	34	121	53	109	25	74	201	22	145
30	56	55	81	26	110	43	134	28	77	221	25	159
31	---	---	98	42	---	---	113	28	71	210	---	---
TOTAL	---	2426	---	1456	---	3692	---	764	---	5848	---	6141

ROCK RIVER BASIN

05426031 ROCK RIVER AT JEFFERSON, WI

LOCATION.--Lat 42°59'46", long 88°48'26", in sec.2, T.6 N., R.14 E., Jefferson County, Hydrologic Unit 07090001, on right bank 30 ft (9.0 m) downstream from bridge on State Highway 26, in Jefferson.

DRAINAGE AREA.--1,850 mi² (4,792 km²).

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

GAGE.--Water-stage recorder. Datum of gage 774.97 ft (236.211 m) National Geodetic Vertical Datum of 1929 (levels by Wisconsin Department of National Resources). Auxiliary water-stage recorder 6.9 mi (11.1 km) downstream from base gage to provide slope data.

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

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 10,300 ft³/s (292 m³) Apr. 1, 1979, gage height, 10.79 ft (3.289 m); maximum gage height, 10.84 ft (3.304 m) Apr. 2, 1979; minimum daily discharge, 166 ft³/s (4.701 m³) July 13, 1980.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 5,270 ft³/s (149 m³) Sept. 25, gage height, 6.61 ft (2.015 m); maximum gage height, 6.75 ft (2.057 m) Sept. 29; minimum daily discharge, 166 ft³/s (4.701 m³) July 13.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980												
DAY	MEAN VALUES											
	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	217	540	1160	1180	1100	820	693	1580	338	265	297	1610
2	223	600	1160	998	1000	720	685	1510	327	231	294	1660
3	218	720	1120	960	880	680	771	1420	336	208	281	1650
4	231	700	1140	920	840	700	1060	1380	334	191	277	1610
5	223	680	1160	840	780	740	1150	1320	355	212	304	1630
6	221	700	1110	780	740	760	1260	1240	506	199	338	1600
7	225	640	1040	660	700	680	1440	1140	792	195	450	1560
8	229	620	975	600	700	620	1750	938	1160	189	1210	1590
9	208	688	1020	600	660	520	2100	835	1520	190	1460	1630
10	201	680	1010	600	660	470	2440	690	1730	181	1510	1700
11	200	644	965	600	680	450	2520	555	1770	182	1620	1660
12	199	660	819	600	660	410	2530	402	1730	171	1780	1850
13	220	650	823	600	620	410	2490	377	1680	166	1790	2260
14	204	636	876	640	600	410	2460	418	1650	179	1780	2360
15	195	635	877	700	540	460	2460	443	1580	176	1780	2610
16	199	653	823	800	500	640	2440	462	1480	217	1730	2700
17	195	654	753	1000	480	900	2430	483	1380	194	1680	2830
18	200	630	649	1200	450	1130	2430	564	1290	196	1690	2840
19	190	597	540	1400	450	1270	2390	650	1220	182	2020	2830
20	200	542	488	1400	430	1250	2330	714	1200	207	2240	3720
21	210	555	521	1400	450	1170	2310	795	1180	192	2290	2950
22	250	668	515	1400	560	1110	2290	860	1150	189	2280	3290
23	300	759	540	1300	620	1120	2220	886	1140	186	2310	3920
24	341	778	616	1200	760	1040	2090	869	1120	190	2290	4640
25	358	798	909	1200	980	964	1920	818	1060	183	2220	5190
26	405	946	1130	1200	1100	904	1790	718	938	291	1930	4490
27	420	1030	1430	1300	1000	825	1760	584	694	327	1670	4390
28	432	1130	1570	1300	920	757	1700	476	479	314	1500	4400
29	420	1150	1550	1300	880	724	1660	414	345	315	1440	4390
30	423	1080	1460	1200	---	699	1610	436	306	317	1510	4320
31	427	---	1340	1100	---	705	---	373	---	299	1600	---
TOTAL	8184	21763	30089	30978	20740	24058	57179	24350	30790	6734	45571	83880
MEAN	264	725	971	999	715	776	1906	785	1026	217	1470	2796
MAX	432	1150	1570	1400	1100	1270	2530	1580	1770	327	2310	5190
MIN	190	540	488	600	430	410	685	373	306	166	277	1560
CFSM	.14	.39	.53	.54	.39	.42	1.03	.42	.56	.12	.80	1.51
IN.	.16	.44	.61	.62	.42	.48	1.15	.49	.62	.14	.92	1.69
CAL YR 1979	TOTAL	653915	MEAN	1792	MAX	10200	MIN	190	CFSM	.97	IN	13.15
WTR YR 1980	TOTAL	384316	MEAN	1050	MAX	5190	MIN	166	CFSM	.57	IN	7.73

ROCK RIVER BASIN

05426250 BARK RIVER NEAR ROME, WI

LOCATION.--Lat 42°57'39", long 88°40'09", in SE 1/4 SW 1/4 sec.24, T.6 N., R.15 E., Jefferson County, Hydrologic Unit 07090001, on left bank just upstream from bridge on Cushman Road, 2.8 mi (4.5 km) southwest of Rome.

DRAINAGE AREA.--122 mi² (316 km²).

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

GAGE.--Water-stage recorder. Altitude of gage is 810 ft (2476 m), from topographic map.

REMARKS.--Records good.

EXTREMES FOR CURRENT YEAR.--Maximum discharge during period November to September, 210 ft³/s (5.95 m³/s) Aug. 19, gage height, 1.88 ft (0.573 m); minimum, 12 ft³/s (0.340 m³/s), July 7, 8, 11.

RATING TABLES (gage height, in feet, and discharge, in cubic feet per second).

Nov. 15 to July 13

July 14 to Sept. 30

0.4	6	1.2	99	0.5	10	1.5	135
0.6	23	1.5	159	0.7	28	2.0	238
0.9	56			1.0	60		

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DAY	OCT	NOV	DEC	JAN	MEAN VALUES		APR	MAY	JUN	JUL	AUG	SEP
					FEB	MAR						
1	---	---	89	78	52	58	62	91	35	25	27	85
2	---	---	77	74	54	53	63	86	34	25	27	80
3	---	---	72	71	52	52	70	83	37	25	28	73
4	---	---	70	68	53	50	77	77	34	24	31	66
5	---	---	69	64	52	50	80	75	48	29	54	62
6	---	---	70	64	53	58	84	70	77	17	82	60
7	---	---	70	58	55	52	92	64	110	13	105	62
8	---	---	65	57	56	50	111	65	101	12	116	66
9	---	---	65	56	57	50	125	63	91	14	109	72
10	---	---	63	56	61	48	142	63	87	15	108	71
11	---	---	66	61	57	54	150	60	81	14	105	67
12	---	---	64	60	59	47	150	61	74	25	101	81
13	---	---	63	57	60	48	146	63	69	28	97	100
14	---	---	59	58	60	50	145	66	67	27	95	101
15	---	56	57	59	62	54	134	71	64	18	88	104
16	---	55	52	79	60	64	133	70	64	76	81	108
17	---	55	50	110	63	73	130	74	61	66	84	136
18	28	55	50	98	65	70	122	79	56	60	81	152
19	---	55	45	85	66	71	113	84	52	50	160	150
20	---	55	35	76	60	72	116	82	48	37	181	151
21	---	68	39	73	57	70	112	73	46	30	180	145
22	---	75	45	70	75	71	105	69	41	25	171	156
23	---	76	53	62	73	72	100	67	39	23	164	171
24	---	76	69	61	74	70	100	64	31	21	158	168
25	---	76	91	60	72	66	99	62	19	21	145	165
26	---	85	98	63	71	64	97	58	18	27	129	167
27	---	119	101	64	63	64	94	53	19	29	109	157
28	---	111	100	57	62	64	91	46	25	29	102	149
29	---	105	96	56	62	64	95	26	22	29	97	145
30	---	97	89	52	---	64	95	27	22	26	91	142
31	63	---	83	52	---	61	---	28	---	27	87	---
TOTAL	---	---	2115	2059	1766	1854	3233	2020	1572	887	3193	3412
MEAN	---	---	68.2	66.4	60.9	59.8	108	65.2	52.4	28.6	103	114
MAX	---	---	101	110	75	73	150	91	110	76	181	171
MIN	---	---	35	52	52	47	62	26	18	12	27	60
CFSM	---	---	.56	.54	.50	.49	.89	.53	.43	.23	.84	.93
IN.	---	---	.64	.63	.54	.57	.99	.62	.48	.27	.97	1.04

ROCK RIVER BASIN

05426900 WHITEWATER CREEK AT MILLIS ROAD NEAR WHITEWATER, WI

LOCATION.--Lat 42°48'14", long 88°42'10", in NE 1/4 SE 1/4 sec.15, T.4 N., R.15 E., Walworth County, Hydrologic Unit 07090001, on left bank, 30 ft (9.0 m) upstream from Millis Road bridge, 2.0 mi (3.22 km) upstream from Tripp Lake dam, at Whitewater.

DRAINAGE AREA.--20.6 mi² (53.4 km²), of which 6.75 mi² (17.48 km²) is probably noncontributing.

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

GAGE.--Water-stage recorder and crest-stage gage. Altitude of gage is 835 ft (255 m), from topographic map.

REMARKS.--Records good except those for winter periods and August and September, which are fair.

COOPERATION.--Five discharge measurements were furnished by Corps of Engineers.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 198 ft³/s (5.61 m³/s) Mar. 19, 1979, gage height 6.13 ft (1.868 m); minimum daily, 13 ft³/s (0.368 m³/s) June 26, 1979.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 90 cfs (2.55 m³/s) June 6, gage height, 5.04 ft (1.536 m); minimum daily, 14 ft³/s (0.396 m³/s) July 5-7, July 29 to Aug. 29.

RATING TABLE (gage height, in feet, and discharge, in cubic feet per second).
(Stage-discharge relation affected by ice Dec. 15-19, Jan. 6-9, 11-13, Jan. 22 to Feb. 1; stage-discharge relation affected by bridge construction Aug. 11 to Sept. 30.)

3.8	12	5.0	87
4.0	22	6.0	184
4.5	51		

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DAY	MEAN VALUES											
	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	16	19	20	21	15	20	18	19	17	16	14	20
2	17	17	19	20	15	16	18	19	17	15	14	19
3	17	16	18	20	15	15	25	17	24	15	15	18
4	17	16	18	20	15	16	30	17	19	15	15	17
5	17	15	19	20	15	16	24	16	49	14	29	16
6	16	18	20	20	15	16	23	15	83	14	17	17
7	16	18	21	19	15	16	31	15	70	14	29	18
8	16	18	21	18	15	16	48	15	59	15	34	20
9	16	18	20	18	15	16	45	15	35	16	22	39
10	16	18	20	17	15	16	41	16	29	15	21	34
11	16	17	20	21	15	16	33	17	25	15	24	20
12	17	17	19	23	15	16	37	15	22	15	26	48
13	16	17	18	18	15	15	30	16	20	15	21	71
14	16	18	18	18	15	16	27	17	19	15	20	52
15	17	18	17	18	15	19	31	17	20	15	18	35
16	16	18	17	30	15	24	34	17	20	21	17	32
17	16	18	17	33	15	25	28	18	18	17	22	41
18	16	17	17	25	15	20	25	20	18	16	21	35
19	21	17	17	22	16	20	23	23	18	15	30	27
20	19	17	17	20	16	21	22	20	18	15	38	36
21	18	29	17	20	19	19	22	18	16	15	31	37
22	19	33	19	19	28	18	21	17	16	15	26	33
23	22	26	23	18	21	18	20	16	15	15	21	33
24	18	21	43	18	18	20	20	16	16	15	19	28
25	17	20	58	17	17	22	18	15	15	15	16	25
26	16	34	38	17	18	17	18	15	16	20	16	24
27	16	37	28	16	18	17	18	15	16	19	16	22
28	16	28	26	16	18	17	19	16	18	16	16	21
29	17	23	24	15	19	18	21	18	16	14	16	20
30	16	22	23	15	---	18	21	17	16	14	16	19
31	16	---	21	15	---	18	---	16	---	14	16	---
TOTAL	525	620	693	607	478	557	791	523	760	480	656	877
MEAN	16.9	20.7	22.4	19.6	16.5	18.0	26.4	16.9	25.3	15.5	21.2	29.2
MAX	22	37	58	33	28	25	48	23	83	21	38	71
MIN	16	15	17	15	15	15	18	15	15	14	14	16
CFSM	.82	1.01	1.09	.95	.80	.87	1.28	.82	1.23	.75	1.03	1.42
IN.	.95	1.12	1.25	1.10	.86	1.01	1.43	.94	1.37	.87	1.18	1.58
CAL YR 1979	TOTAL	8873	MEAN	24.3	MAX	186	MIN	13	CFSM	1.18	IN	16.02
WTR YR 1980	TOTAL	7567	MEAN	20.7	MAX	83	MIN	14	CFSM	1.01	IN	13.66

ROCK RIVER BASIN

05427000 WHITEWATER CREEK AT WHITEWATER, WI

LOCATION.--Lat 42°49'02", long 88°42'36", in NE 1/4 SW 1/4 sec.10, T.4 N., R.15 E., Walworth County, Hydrologic Unit 07090001, on right bank, 10 ft (3.0 m) upstream from Willis Ray Road twin culverts, 1.0 mi (1.61 km) upstream from Tripp Lake dam at Whitewater.

DRAINAGE AREA.--22.7 mi² (58.87 km²), of which 6.75 mi² (17.48 km²) is probably noncontributing.

PERIOD OF RECORD.--June 1978 to current year. Nonrecording gage 1926-28, 1946-54.

GAGE.--Water-stage recorder. Altitude of gage is 825 ft (251 m), from topographic map.

REMARKS.--Records are good except those for the period of ice effect, which are fair.

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

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 288 ft³/s (8.16 m³/s) Mar. 19, 1979, gage height, 12.00 ft (3.658 m) on basis of indirect measurement; minimum daily, 12 ft³/s (0.34 m³/s) June 11, 1978.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 105 ft³/s (2.97 m³/s) June 6, gage height, 9.96 ft (3.036 m); minimum daily, 14 ft³/s (0.396 m³/s) Mar. 5, 7-9, 12-14, July 6-8, 11-15, 30, 31, Aug. 1-3.

RATING TABLES (gage height, in feet, and discharge, in cubic feet per second).
(Stage-discharge relation affected by ice Dec. 17-18, Jan. 7-14, 23-31, Feb. 1-4, 16-18.)

Oct. 1 to Apr. 8				Apr. 9 to Sept. 30			
8.5	14	9.5	67	8.4	11	9.5	72
9.0	36	10.0	105	8.5	15	10.0	108
				9.0	40		

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DAY	MEAN VALUES											
	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	15	19	20	19	16	25	18	21	18	15	14	20
2	16	18	19	19	16	18	18	20	20	15	14	19
3	16	17	23	18	16	20	23	19	24	15	14	17
4	16	17	18	18	15	15	32	18	20	15	15	17
5	16	17	18	18	15	14	26	18	40	15	27	16
6	16	17	18	18	15	15	25	17	99	14	17	16
7	15	18	18	18	15	14	34	17	92	14	28	19
8	15	17	18	18	15	14	57	17	80	14	35	20
9	15	16	17	18	15	14	58	17	47	15	22	40
10	15	16	17	18	15	15	54	18	37	15	20	37
11	15	16	18	19	15	16	41	18	31	14	23	25
12	16	16	18	23	15	14	48	17	26	14	27	48
13	15	16	17	20	15	14	37	19	23	14	21	83
14	15	16	16	18	15	14	33	19	22	14	20	64
15	15	16	16	18	15	17	36	20	23	14	18	44
16	15	16	17	30	15	23	40	20	23	20	17	35
17	15	16	17	36	15	24	34	20	20	17	23	46
18	15	16	17	24	15	18	30	21	19	16	21	38
19	19	16	16	21	15	20	28	24	19	16	33	30
20	18	16	16	20	15	21	26	19	19	16	37	36
21	17	27	16	19	17	21	25	19	18	16	30	38
22	17	31	17	20	29	20	26	18	17	15	25	33
23	20	25	22	19	22	20	22	17	17	15	19	33
24	18	21	39	18	18	20	20	17	17	15	17	28
25	17	20	66	17	17	19	21	16	16	15	16	25
26	17	33	39	17	21	19	19	16	16	19	16	24
27	16	39	28	17	16	19	19	15	15	20	16	22
28	16	29	24	16	16	20	19	17	18	15	16	20
29	16	24	22	16	20	20	22	18	16	15	16	20
30	16	22	21	16	---	19	22	18	16	14	17	19
31	16	---	20	16	---	18	---	17	---	14	17	---
TOTAL	499	603	668	602	479	560	913	567	868	475	651	932
MEAN	16.1	20.1	21.5	19.4	16.5	18.1	30.4	18.3	28.9	15.3	21.0	31.1
MAX	20	39	66	36	29	25	58	24	99	20	37	83
MIN	15	16	16	16	15	14	18	15	15	14	14	16
CFSM	.71	.88	.94	.85	.72	.79	1.33	.60	1.27	.67	.92	1.36
IN.	.81	.98	1.09	.98	.78	.91	1.49	.93	1.42	.77	1.06	1.52
CAL YR 1979	TOTAL	9285	MEAN 25.4	MAX 266	MIN 13	CFSM 1.11	IN 15.15					
WTR YR 1980	TOTAL	7817	MEAN 21.4	MAX 99	MIN 14	CFSM .94	IN 12.75					

ROCK RIVER BASIN

05427507 KOSHKONONG CREEK NEAR ROCKDALE, WI

LOCATION.--Lat 42°57'05", long 89°01'37", in SW 1/4 SE 1/4 SW 1/4 sec.25, T.6 N., R.12 E., Dane County, Hydrologic Unit 07090001, on right bank at bridge on Hoopen Road, 1.4 mi (2.3 km) south of Rockdale, and 17.0 mi (27.4 km) above the mouth.

DRAINAGE AREA.--150 mi² (388 km²).

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

GAGE.--Water-stage recorder. Datum of gage is 794.37 ft (242.124 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Records are fair.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 873 ft³/s (24.7 m³/s) Mar. 25, 1979, gage height, 11.15 ft (3.399 m); maximum gage height, 11.52 ft (3.511 m) July 1, 1978; minimum daily discharge, 11 ft³/s (0.31 m³/s) July 13-14, 1977.

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

DATE	TIME	DISCHARGE (ft ³ /s) (m ³ /s)	GAGE HEIGHT (ft) (m)	DATE	TIME	DISCHARGE (ft ³ /s) (m ³ /s)	GAGE HEIGHT (ft) (m)
Dec. 25	1615	220 6.23	7.93 2.417	Aug. 9	0415	530 15.0	10.00 3.048
Jan. 17	2115	346 9.80	8.94 2.725	Aug. 20	0415	298 8.44	8.74 2.664
Feb. 24	0445	309 8.75	8.70 2.652	Sept. 10	1115	454 12.9	9.77 2.978
Mar. 17	1215	304 8.61	8.80 2.682	Sept. 13	1430	*574 16.3	*10.34 3.152
Apr. 10	0530	254 7.19	8.43 2.569	Sept. 23	1215	541 15.3	10.29 3.136
June 8	0245	303 8.58	8.78 2.676				

minimum daily, 14 ft³/s (0.40 m³/s) July 24 and Aug. 1.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DAY	OCT	NOV	DEC	JAN	MEAN VALUES		APR	MAY	JUN	JUL	AUG	SEP
					FEB	MAR						
1	30	54	88	87	34	60	56	76	26	22	14	143
2	35	59	80	82	33	50	60	74	26	20	16	135
3	32	60	74	74	33	49	75	67	36	17	18	117
4	35	50	65	70	32	48	131	61	30	15	16	98
5	34	48	65	68	32	45	134	56	47	50	19	81
6	35	51	65	66	31	38	121	48	117	52	15	70
7	34	49	62	64	31	38	117	46	192	41	83	94
8	35	54	54	60	31	39	158	42	276	30	356	152
9	34	52	63	60	31	40	230	40	197	31	500	235
10	31	48	60	64	30	40	250	39	149	30	420	438
11	31	41	56	70	30	39	214	39	113	25	350	342
12	33	45	51	60	30	39	182	38	84	21	351	342
13	33	46	50	66	29	39	156	40	68	19	303	550
14	32	46	56	72	29	50	137	48	60	19	252	504
15	31	46	64	74	29	80	129	52	52	25	205	395
16	31	46	56	116	28	230	135	43	46	120	161	336
17	32	47	52	299	28	298	135	40	40	71	154	375
18	33	48	56	313	30	242	126	45	36	44	142	351
19	32	49	58	232	35	149	116	61	30	29	209	282
20	49	50	61	180	60	118	112	56	27	21	283	328
21	50	74	61	145	80	101	105	48	27	18	257	428
22	53	108	61	122	192	83	100	39	25	17	223	444
23	51	119	67	113	284	72	95	34	24	15	172	530
24	73	106	104	100	271	66	86	30	22	14	131	452
25	83	93	207	86	181	60	81	24	21	15	108	377
26	74	114	202	70	110	57	77	21	19	41	92	339
27	61	142	160	60	92	56	73	18	20	37	81	304
28	56	137	128	45	80	57	69	18	25	24	73	274
29	53	115	116	37	74	57	68	23	25	21	89	246
30	49	95	106	35	---	59	74	25	23	17	117	220
31	47	---	96	34	---	58	---	30	---	18	138	---
TOTAL	1322	2092	2544	3024	2010	2457	3602	1321	1883	939	5348	8982
MEAN	42.6	69.7	82.1	97.5	69.3	79.3	120	42.6	62.8	30.3	173	299
MAX	83	142	207	313	284	298	250	76	276	120	500	550
MIN	30	41	50	34	28	38	56	18	19	14	14	70
CFSM	.28	.47	.55	.65	.46	.53	.80	.28	.42	.20	1.15	1.99
IN.	.33	.52	.63	.75	.50	.61	.89	.33	.47	.23	1.33	2.23
CAL YR 1979	TOTAL	38908	MEAN	107	MAX	785	MIN	30	CFSM	.71	IN	9.65
WTR YR 1980	TOTAL	35524	MEAN	97.1	MAX	550	MIN	14	CFSM	.65	IN	8.81

ROCK RIVER BASIN

05427570 ROCK RIVER AT INDIANFORD, WI

LOCATION.--Lat 42°48'15", long 89°05'25", in SW 1/4 SW 1/4 sec.16, T.4 N., R.12 E., Rock County, Hydrologic Unit 07090001, on right bank 50 ft (15 m) upstream from bridge on County Trunk Highways P and M, 250 ft (76 m) upstream from dam in Indianford, and 1.8 mi (2.9 km) upstream from Yahara River.

DRAINAGE AREA.--2,630 mi (6,812 km).

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

REVISED RECORDS.--WDR WI-79-1: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 763.74 ft (232.788 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Records fair. Natural flow of stream affected by dam in Indianford. Low flows (below 700 cfs) are adjusted for flow through wicket gates.

AVERAGE DISCHARGE.--5 years, 1,499 ft³/s (42.45 m³/s), 7.74 in/yr (197 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 11,900 ft³/s (337 m³/s) Apr. 5, 1979, gage height, 16.23 ft (4.947 m); minimum daily, 69 ft³/s (1.95 m³/s) May 13, 1977.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 5,160 ft³/s (146 m³/s) Sept. 30, gage height, 14.04 ft (4.279 m); minimum daily discharge, 250 ft³/s (7.08 m³/s) July 14.

DAY	DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980											
	MEAN VALUES											
	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	560	520	1300	2030	1340	1130	1480	2380	820	742	400	2320
2	480	660	1270	1990	1300	1050	1470	2330	801	733	430	2320
3	300	735	1550	1880	1270	1030	1500	2250	640	660	410	2270
4	330	755	1840	1780	1200	1080	1510	2150	470	620	350	2160
5	310	813	1730	1690	1190	1040	1540	2090	500	620	370	2170
6	320	908	1730	1530	1140	1030	1630	1960	600	600	400	2150
7	330	790	1650	1240	1060	1050	1720	1910	730	380	470	2170
8	360	827	1640	1350	1020	1010	1800	1820	846	260	600	2210
9	350	915	1510	1340	986	941	2040	1690	1500	270	726	2320
10	320	896	1470	1300	920	861	2330	1540	2120	280	877	2330
11	340	855	1490	1020	883	894	2600	1530	2160	270	1580	2300
12	340	834	1550	1150	865	952	2790	1480	2110	320	1970	2430
13	380	876	1370	1190	854	978	3030	1390	2120	290	2040	2630
14	350	860	1330	1240	862	822	3310	1260	2100	250	2140	2850
15	380	874	1290	1210	846	831	3070	1260	2260	280	2210	2970
16	390	799	1270	1230	771	822	3110	1230	2080	350	2250	3140
17	420	818	1160	1290	734	899	3090	1180	1910	370	2210	3350
18	390	829	1120	1380	708	963	3110	1130	1900	350	2180	3370
19	370	800	778	1510	702	1050	3010	1180	1920	390	2330	3460
20	410	874	440	1590	688	1240	3150	1190	1750	350	2500	3610
21	420	965	480	1660	704	1340	3030	1200	1650	360	2590	3650
22	460	906	540	1700	720	1500	2930	1220	1630	420	2780	3960
23	520	865	600	1720	765	1570	3120	1250	1600	430	2850	4130
24	580	921	701	1740	826	1690	3060	1240	1530	360	2870	4300
25	620	1040	823	1730	968	1630	2850	1250	1460	350	2890	4510
26	600	1030	926	1650	948	1620	2790	1190	1400	440	2830	4720
27	580	1140	1500	1570	1060	1570	2760	746	1260	450	2830	4750
28	640	1100	2160	1530	1130	1620	2690	420	901	420	2720	4950
29	700	1220	2150	1480	1150	1570	2530	640	799	440	2580	5000
30	741	1280	2140	1460	---	1600	2440	680	797	410	2450	5100
31	640	---	2090	1400	---	1530	---	796	---	420	2410	---
TOTAL	13931	26705	41598	46580	27610	36913	75490	43582	42364	12885	56243	97600
MEAN	449	890	1342	1503	952	1191	2516	1406	1412	416	1814	3253
MAX	741	1280	2160	2030	1340	1690	3310	2380	2260	742	2890	5100
MIN	300	520	440	1020	688	822	1470	420	470	250	350	2150
CFSM	.17	.34	.51	.57	.36	.45	.96	.54	.54	.16	.69	1.24
IN.	.20	.38	.59	.66	.39	.52	1.07	.62	.60	.18	.80	1.38
CAL YR 1979	TOTAL	844765	MEAN	2314	MAX	11700	MIN 300	CFSM .88	IN 11.95			
WTR YR 1980	TOTAL	521501	MEAN	1425	MAX	5100	MIN 250	CFSM .54	IN 7.38			

ROCK RIVER BASIN

05427718 YAHARA RIVER AT WINDSOR, WI

LOCATION.--Lat 43°12'32", long 89°21'09", in NW 1/4 NE 1/4 sec.31, T.9 N., R.10 E., Dane County, Hydrologic Unit 07090001, at bridge on road to Lake Windsor Country Club.

DRAINAGE AREA.--73.6 mi² (190.6 km²).

WATER-DISCHARGE RECORDS

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

GAGE.--Water-stage recorder. Altitude of gage is 870 ft (256 m), from topographic map.

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

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 587 ft³/s (16.6 m³/s) Mar. 12, 1976, gage height, 5.56 ft (1.695 m); minimum daily, 4.6 ft³/s (0.13 m³/s) Mar. 1-8, 1978.

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

DATE	TIME	DISCHARGE (ft ³ /s) (m ³ /s)	GAGE HEIGHT (ft) (m)	DATE	TIME	DISCHARGE (ft ³ /s) (m ³ /s)	GAGE HEIGHT (ft) (m)
Jan. 16	2100	208 5.89	4.05 1.234	Sept. 12	1230	162 4.59	A4.14 1.262
Mar. 17	1430	296 8.38	4.62 1.408	Sept. 22	0630	332 9.40	A5.58 1.701
June 7	1100	*438 12.4	*5.18 1.579				

A Backwater from vegetation.

minimum discharge, 6.4 ft³/s (0.18 m³/s) Mar. 9, result of freezeup.

RATING TABLE (gage height, in feet, and discharge, in cubic feet per second).
(Shifting-control method used Aug. 7, 8, 11, 19-21, 29-31, Sept. 7-9, 12-14, 20-26; stage-discharge relation affected by ice Jan. 6-15, Jan. 23 to Feb. 20, Feb. 26 to Mar. 14.)

0.5	6.0	2.5	83
0.7	9.8	3.0	114
1.0	17	3.7	170
1.5	34	4.4	256
2.0	56		

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	11	14	13	13	11	11	13	12	9.4	7.6	6.8	25
2	12	13	13	13	11	11	13	12	9.6	6.9	7.2	20
3	12	13	13	12	11	11	20	11	11	7.3	7.0	16
4	11	12	12	12	11	11	22	11	9.6	7.1	6.9	15
5	11	12	12	12	11	11	18	11	15	13	7.2	14
6	11	14	13	12	11	10	16	10	35	9.0	6.7	12
7	11	13	13	10	11	10	18	10	209	8.0	25	63
8	11	13	12	12	11	10	47	10	118	7.6	67	39
9	11	13	12	12	11	10	41	10	36	10	32	44
10	11	12	12	14	11	9.4	28	10	19	8.6	17	28
11	11	12	13	16	11	9.4	21	10	14	7.6	33	20
12	11	12	12	11	11	9.4	19	10	12	7.6	23	89
13	11	13	12	11	11	9.4	16	12	10	7.6	15	77
14	10	12	13	11	11	10	16	12	10	7.6	13	38
15	10	12	18	11	11	70	17	12	9.4	7.8	11	25
16	11	13	20	148	11	154	18	11	9.0	11	11	25
17	11	13	16	163	11	246	16	11	9.0	8.0	12	32
18	11	13	14	57	11	93	16	12	8.8	7.4	11	22
19	13	13	13	22	12	53	16	12	9.2	7.2	59	19
20	13	13	12	21	15	29	16	11	8.6	7.2	40	83
21	12	23	12	19	30	18	15	10	8.2	7.2	63	57
22	13	27	12	14	82	16	15	10	7.8	7.1	34	253
23	26	20	27	12	71	15	14	9.9	7.8	6.9	18	184
24	18	17	33	11	36	14	13	9.5	8.0	6.7	14	94
25	14	16	31	11	24	13	13	9.2	8.0	6.7	12	56
26	13	22	20	11	15	13	12	8.7	7.8	6.8	12	40
27	12	21	16	11	12	13	12	8.4	7.8	7.1	11	32
28	12	17	15	11	11	13	12	10	9.0	7.0	12	28
29	12	15	14	11	11	13	12	11	8.0	6.9	78	27
30	12	13	13	11	---	13	13	11	7.6	6.9	72	26
31	12	---	13	11	---	13	---	10	---	6.9	38	---
TOTAL	380	446	474	726	517	941.6	538	327.7	651.6	240.3	774.8	1503
MEAN	12.3	14.9	15.3	23.4	17.8	30.4	17.9	10.6	21.7	7.75	25.0	50.1
MAX	26	27	33	163	82	246	47	12	209	13	78	253
MIN	10	12	12	10	11	9.4	12	8.4	7.6	6.7	6.7	12
CFSM	.17	.20	.21	.32	.24	.41	.24	.14	.30	.11	.34	.68
IN.	.19	.23	.24	.37	.26	.48	.27	.17	.33	.12	.39	.76
CAL YR 1979	TOTAL	6602.2	MEAN	18.1	MAX	170	MIN	8.8	CFSM	.25	IN	3.34
WTR YR 1980	TOTAL	7520.0	MEAN	20.5	MAX	253	MIN	6.7	CFSM	.28	IN	3.80

ROCK RIVER BASIN

05427718 YAHARA RIVER AT WINDSOR, WI--CONTINUED

WATER-QUALITY RECORDS

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

WATER-QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	TEMPER- ATURE, WATER (DEG C)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	SEDI- MENT, SUS- PENDED (MG/L)	SEDI- MENT DIS- CHARGE, SUS- PENDED (T/DAY)
OCT , 1979						
10...	1024	11	9.0	650	--	--
15...	0855	10	--	--	17	.46
NOV						
19...	1322	13	9.5	665	--	--
DEC						
13...	0900	12	1.0	660	30	.98
JAN , 1980						
15...	1021	11	.5	770	--	--
16...	1105	200	--	--	316	171
16...	1610	182	--	--	232	114
17...	0200	204	--	--	313	172
17...	0810	187	--	--	256	129
29...	0845	11	.5	630	17	.50
MAR						
03...	1156	11	.5	680	--	--
APR						
08...	1000	68	--	--	283	52
10...	1205	27	5.0	585	--	--
21...	1620	15	--	--	22	.89
MAY						
27...	1250	8.4	--	--	22	.50
JUN						
06...	0740	63	--	--	446	76
06...	1415	33	18.5	410	--	--
07...	0925	243	--	--	6970	4570
07...	1235	417	--	--	4730	5330
JUL						
02...	1130	7.4	18.5	600	--	--
AUG						
04...	1115	6.9	22.0	580	34	.63
07...	1025	20	--	--	132	7.1
08...	0735	68	--	--	282	52
08...	1015	76	20.0	345	240	49
08...	1435	61	21.5	345	--	--
19...	0935	91	--	--	1080	265
29...	1150	110	--	--	720	214
SEP						
07...	0900	62	--	--	228	38
12...	0850	81	--	--	195	43
12...	1050	145	--	--	480	188
12...	1330	155	--	--	631	264
22...	0745	324	--	--	1060	927
22...	0950	306	--	--	582	481

ROCK RIVER BASIN

05427800 TOKEN CREEK NEAR MADISON, WI

LOCATION.--Lat 43°10'52", long 89°19'28", in SW 1/4 SW 1/4 sec.4, T.8 N., R.10 E., Dane County, Hydrologic Unit 07090001, on left bank 100 ft (30 m) upstream of culvert on U.S. Highway 51, 4.4 mi (7.1 km) north of junction with U.S. Highway 151, and 8.0 mi (12.9 km) northeast of State Capitol building in Madison.

DRAINAGE AREA.--24.3 mi² (62.9 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--Annual maximum, water years 1961-64, 1967-75; July 1964 to September 1966 (no winter records); October 1975 to December 1980 (discontinued).

GAGE.--Water-stage recorder. Altitude of gage is 860 ft (262 m), from topographic map.

REMARKS.--Records good except for periods of ice effect, which are fair. Flow slightly regulated by occasional diversion to fish ponds upstream.

AVERAGE DISCHARGE.--5 years (1975-80) 21.6 ft³/s (0.612 m³/s) 12.07 in/yr (307 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 576 ft³/s (16.3 m³/s) Mar. 12, 1976, gage height, 14.16 ft (4.316 m); minimum daily since Oct. 1975, 13 ft³/s (0.37 m³/s) May 14, July 15, 16, 1977.

EXTREMES FOR CURRENT PERIOD.--Water year 1980: Maximum discharge, 188 ft³/s (5.32 m³/s) Sept. 22, gage height, 12.40 ft (3.780 m); minimum daily, 15 ft³/s (0.42 m³/s) June 23, 24, 27, 30, and July 1-4.

October to December 1980: Maximum discharge, 32 ft³/s (0.91 m³/s) Nov. 14, gage height 9.50 ft (2.896 m); minimum daily, 21 ft³/s (0.59 m³/s) Nov. 12, Dec. 22, 23, 25-31.

RATING TABLE (gage height, in feet, and discharge, in cubic feet per second).
(Shifting-control method used Oct. 1 to Nov. 23, Aug. 8, 11, 12, Sept. 12-14, 20-24; stage-discharge relation affected by ice Jan. 7-11, 23, 26, Feb. 3, 5, 6, 16 and 17.)

9.0	13	11.0	104
9.5	36	11.5	134
10.0	58	12.0	178
10.5	80		

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DAY	MEAN VALUES											
	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	18	23	21	21	18	19	18	20	17	15	16	45
2	19	22	19	20	17	18	18	19	17	15	17	30
3	19	21	19	20	17	18	21	19	20	15	16	23
4	19	21	19	20	17	18	22	20	19	15	16	21
5	19	20	19	20	17	18	21	18	18	23	16	21
6	19	21	19	20	18	18	19	18	28	19	16	20
7	19	21	19	20	18	18	21	17	60	18	25	60
8	19	21	19	19	18	18	30	17	63	17	58	30
9	19	21	19	18	18	18	33	17	30	17	34	40
10	19	21	20	18	18	18	28	17	25	16	25	28
11	19	21	20	19	18	17	23	17	21	16	45	25
12	20	20	20	25	18	17	22	17	19	16	40	75
13	20	20	20	21	18	17	22	18	18	16	26	67
14	20	20	20	20	18	17	22	19	18	16	23	42
15	19	20	20	19	18	28	22	19	18	16	21	32
16	20	20	20	55	18	76	22	18	18	21	19	31
17	20	20	18	101	18	66	22	18	17	18	20	32
18	20	20	18	45	18	32	21	20	17	17	19	29
19	22	20	19	28	19	25	21	20	17	17	27	27
20	22	19	18	25	19	24	21	19	17	16	28	47
21	22	25	18	24	20	22	21	18	16	16	56	47
22	24	26	18	23	34	21	20	19	16	16	35	138
23	33	24	23	22	41	20	20	18	15	16	26	139
24	27	23	28	20	30	20	19	18	15	16	22	56
25	25	22	31	20	26	18	18	17	17	16	20	36
26	23	26	26	19	22	17	18	17	16	16	20	32
27	23	26	23	19	21	17	18	16	15	16	20	30
28	22	24	22	19	21	17	19	18	17	16	23	28
29	22	22	21	19	19	17	19	19	16	16	70	28
30	21	21	21	19	---	17	19	19	15	16	84	28
31	21	---	21	19	---	18	---	19	---	16	100	---
TOTAL	654	651	638	777	592	704	640	565	635	515	983	1288
MEAN	21.1	21.7	20.6	25.1	20.4	22.7	21.3	18.2	21.2	16.6	31.7	42.9
MAX	33	26	31	101	41	76	33	20	63	23	100	139
MIN	18	19	18	18	17	17	18	16	15	15	16	20
CFSM	.87	.89	.85	1.03	.84	.93	.88	.75	.87	.68	1.31	1.77
IN.	1.00	1.00	.98	1.19	.91	1.08	.98	.86	.97	.79	1.50	1.97
CAL YR 1979	TOTAL	8677	MEAN 23.8	MAX 95	MIN 17	CFSM .98	IN 13.28					
WTR YR 1980	TOTAL	8642	MEAN 23.6	MAX 139	MIN 15	CFSM .97	IN 13.23					

ROCK RIVER BASIN

05427800 TOKEN CREEK AT MADISON, WI--CONTINUED

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981												
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	28	24	24									
2	27	24	25									
3	26	24	23									
4	26	24	23									
5	25	24	23									
6	25	24	25									
7	25	23	29									
8	25	23	31									
9	24	23	29									
10	23	22	26									
11	23	22	24									
12	23	21	24									
13	22	23	24									
14	23	31	24									
15	24	27	23									
16	25	24	23									
17	29	24	23									
18	27	23	23									
19	26	23	25									
20	25	23	23									
21	24	23	22									
22	23	23	21									
23	23	24	21									
24	24	25	22									
25	27	24	21									
26	26	23	21									
27	25	23	21									
28	25	23	21									
29	24	24	21									
30	24	25	21									
31	24	---	21									
TOTAL	770	713	727									
MEAN	24.8	23.8	23.5									
MAX	29	31	31									
MIN	22	21	21									
CFSM	1.02	.98	.97									
IN.	1.18	1.09	1.11									
CAL YR 1980	TOTAL	8909	MEAN 24.3	MAX 139	MIN 15	CFSM 1.00	IN 13.64					

ROCK RIVER BASIN

05427800 TOKEN CREEK AT MADISON, WI--CONTINUED

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1968-70, February 1976 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	TEMPER- ATURE, WATER (DEG C)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	SEDI- MENT, SUS- PENDED (MG/L)	SEDI- MENT DIS- CHARGE, SUS- PENDED (T/DAY)
OCT., 1979						
11...	1208	19	10.0	585	--	--
15...	0910	19	--	--	20	1.0
NOV						
19...	1130	19	9.0	605	--	--
DEC						
13...	0915	20	2.5	615	20	1.1
JAN., 1980						
15...	1135	19	3.0	610	--	--
16...	1120	54	--	--	494	72
16...	1625	74	--	--	215	43
17...	0215	105	--	--	172	49
17...	0820	111	--	--	170	51
29...	0910	18	.5	620	13	.65
MAR						
03...	1250	18	2.0	600	--	--
APR						
08...	0945	32	--	--	57	4.9
18...	1150	21	11.0	550	--	--
21...	1635	20	--	--	75	4.0
MAY						
27...	1310	16	--	--	77	3.3
JUN						
06...	0755	34	--	--	132	12
07...	0940	51	--	--	1420	196
07...	1250	81	--	--	2250	492
08...	1830	47	--	--	427	54
JUL						
02...	1440	15	22.0	--	--	--
AUG						
04...	1045	16	22.5	575	193	8.3
07...	1010	22	--	--	269	16
08...	0750	62	--	--	195	33
08...	1005	63	21.5	415	198	34
29...	1200	91	--	--	746	183
SEP						
12...	0900	45	--	--	65	7.9
12...	1105	58	--	--	331	52
12...	1345	72	--	--	293	57
22...	0800	125	--	--	374	126
22...	1000	133	--	--	215	77
22...	1330	150	--	--	155	63

ROCK RIVER BASIN

05427900 SIXMILE CREEK NEAR WAUNAKEE, WI

LOCATION.--Lat 43°10'29", long 89°25'58", in NE 1/4 NW 1/4 sec.16, T.8 N., R.9 E., Dane County, Hydrologic Unit 07090001, on right bank at bridge on town road, 1.5 mi (2.4 km) southeast of Waunakee.

DRAINAGE AREA.--41.1 mi² (106.4 km²).

WATER-DISCHARGE RECORDS

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

GAGE.--Water-stage recorder. Altitude of gage is 880 ft (268 m), from topographic map.

REMARKS.--Records fair.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 564 ft³/s (16.0 m³/s) Aug. 25, 1976, gage height, 8.71 ft (2.655 m); minimum daily, 1.3 ft³/s (0.037 m³/s) Jan. 26-27, Mar. 2-6, 1978.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 130 ft³/s (3.68 m³/s) and maximum (*); peak discharges above base for period of record:

DATE	TIME	DISCHARGE (ft ³ /s) (m ³ /s)		GAGE HEIGHT (ft) (m)		DATE	TIME	DISCHARGE (ft ³ /s) (m ³ /s)		GAGE HEIGHT (ft) (m)	
Mar. 17	0030	*328	9.29	*7.64	2.329	Sept.12	1015	178	5.04	6.85	2.088
June 7	1000	203	5.75	7.10	2.164	Sept.22	0315	277	7.84	7.64	2.329
Aug. 29	1130	171	4.84	6.77	2.063						

minimum daily discharge, 1.9 ft³/s (0.054 m³/s) Aug. 1.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DAY	OCT	NOV	DEC	JAN	FEB	MEAN VALUES		APR	MAY	JUN	JUL	AUG	SEP
						MAR							
1	7.2	8.8	8.3	5.9	6.4	5.0	14	7.3	3.2	2.3	1.9	42	
2	6.6	9.1	6.9	5.6	5.8	5.2	14	6.8	4.6	2.2	3.0	39	
3	6.9	8.9	6.1	5.6	5.4	5.4	25	6.6	3.9	2.1	2.1	34	
4	7.7	8.4	5.9	5.4	4.7	5.6	29	6.2	3.3	2.1	2.1	31	
5	8.3	7.9	6.2	5.2	5.0	5.2	27	5.9	6.0	10	2.4	26	
6	8.1	10	6.3	5.0	5.0	5.0	25	5.7	14	2.9	2.0	22	
7	7.6	9.1	6.5	4.9	5.0	5.0	23	5.3	80	2.7	20	51	
8	7.1	9.4	6.4	4.8	5.0	5.4	34	4.8	38	2.4	61	33	
9	6.7	9.1	5.8	4.8	5.0	5.4	32	4.7	27	3.2	31	35	
10	6.5	9.0	5.8	4.8	5.0	5.4	30	4.9	24	2.5	36	31	
11	6.5	9.0	5.8	5.4	5.0	5.2	25	4.9	17	2.4	36	27	
12	6.6	7.4	5.6	4.8	5.0	5.0	21	4.5	10	2.3	30	76	
13	6.6	7.4	5.6	4.7	5.0	5.0	17	6.3	6.2	2.3	25	44	
14	6.6	7.6	5.4	4.6	5.0	7.0	15	5.4	4.6	2.3	20	37	
15	6.7	7.4	5.4	4.6	5.0	50	14	5.5	3.8	2.4	16	36	
16	6.5	7.7	5.4	40	5.0	150	14	5.1	3.3	5.4	16	33	
17	6.6	8.4	5.4	50	5.0	256	14	5.9	3.1	2.7	14	30	
18	6.5	10	5.4	30	5.0	138	14	6.7	2.9	2.5	12	25	
19	9.9	11	5.4	15	6.0	54	13	6.9	4.3	2.3	19	22	
20	9.6	10	5.4	12	10	44	12	6.0	3.1	2.3	17	41	
21	12	20	6.0	10	25	32	12	5.0	2.9	2.3	36	27	
22	16	23	7.2	9.0	40	21	11	4.4	2.8	2.1	21	198	
23	19	20	17	8.0	20	17	11	4.1	2.7	2.1	20	72	
24	15	18	26	8.0	10	15	9.6	3.8	2.7	2.1	20	69	
25	15	13	30	8.0	7.4	13	9.2	3.6	2.6	2.1	18	67	
26	13	16	28	7.8	6.4	12	8.7	3.3	2.4	2.8	15	59	
27	10	14	23	7.8	5.4	12	8.1	3.3	2.3	2.3	14	51	
28	8.5	14	12	7.8	5.0	12	7.7	3.4	3.5	2.2	14	44	
29	7.9	11	9.6	7.8	5.0	12	7.8	4.0	2.4	2.1	63	38	
30	7.6	11	8.8	7.2	---	12	7.9	4.2	2.3	2.1	49	32	
31	8.0	---	8.8	7.0	---	13	---	3.3	---	2.1	43	---	
TOTAL	276.8	335.6	295.4	311.5	232.5	937.8	505.0	157.8	288.9	83.6	679.5	1372	
MEAN	8.93	11.2	9.53	10.0	8.02	30.3	16.8	5.09	9.63	2.70	21.9	45.7	
MAX	19	23	30	50	40	256	34	7.3	80	10	63	198	
MIN	6.5	7.4	5.4	4.6	4.7	5.0	7.7	3.3	2.3	2.1	1.9	22	
CFSM	.22	.27	.23	.24	.20	.74	.41	.12	.23	.07	.53	1.11	
IN.	.25	.30	.27	.28	.21	.85	.46	.14	.26	.08	.62	1.24	
CAL YR 1979	TOTAL	4283.7	MEAN	11.7	MAX	110	MIN	2.3	CFSM	.29	IN	3.88	
WTR YR 1980	TOTAL	5476.4	MEAN	15.0	MAX	256	MIN	1.9	CFSM	.37	IN	4.96	

ROCK RIVER BASIN

05427900 SIXMILE CREEK NEAR WAUNAKEE, WI--CONTINUED

WATER-QUALITY RECORDS

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

WATER-QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	TEMPER- ATURE, WATER (DEG C)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	SEDI- MENT, SUS- PENDED (MG/L)	SEDI- MENT DIS- CHARGE, SUS- PENDED (T/DAY)
OCT , 1979						
11...	0851	6.4	8.5	625	--	--
15...	0835	6.5	--	--	15	.26
NOV						
19...	1504	11	9.0	--	--	--
DEC						
13...	0835	5.6	.5	650	33	.50
JAN , 1980						
15...	0848	4.2	.5	675	--	--
16...	1045	36	--	--	321	31
16...	1550	54	--	--	307	45
17...	0140	73	--	--	198	39
17...	0750	54	--	--	130	19
29...	0825	7.8	.5	585	22	.46
30...	0935	7.2	.0	600	--	--
MAR						
03...	1100	4.6	.5	630	--	--
APR						
08...	1030	39	--	--	730	77
10...	1012	30	2.0	400	--	--
18...	0900	13	7.0	475	--	--
21...	1600	12	--	--	12	.39
MAY						
27...	1230	3.5	--	--	21	.20
JUN						
05...	1200	19	--	--	209	11
06...	0720	14	--	--	279	11
07...	0910	142	--	--	2030	778
07...	0955	198	--	--	9070	4850
07...	1220	126	--	--	1640	558
JUL						
02...	0945	2.3	19.0	580	--	--
AUG						
04...	1200	1.9	22.0	550	31	.16
07...	1045	28	--	--	102	7.7
08...	0805	92	--	--	354	88
08...	1030	95	--	--	174	45
08...	1053	90	20.5	200	--	--
19...	0955	30	--	--	44	3.6
29...	1135	172	--	--	942	437
SEP						
07...	0845	52	--	--	149	21
12...	0830	146	--	--	1120	442
12...	1030	172	16.5	165	589	274
12...	1315	160	--	--	331	143
22...	0730	245	--	--	537	355
22...	0935	245	--	--	400	265

ROCK RIVER BASIN

05427943 PHEASANT BRANCH AT AIRPORT ROAD NEAR MIDDLETON, WI

LOCATION.--Lat 43°06'41", long 89°34'18", in SE 1/4 NW 1/4 sec.3, T.7 N., R.8 E., Dane County, Hydrologic Unit 07090001, on left bank, 30 ft (9.14 m) upstream from culvert on Airport Road at west edge of Morey Airport 1.7 mi (2.74 km) west of Middleton.

DRAINAGE AREA.--9.62 mi² (24.9 km²).

WATER-DISCHARGE RECORDS

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

GAGE.--Water-stage recorder and culvert control. Altitude of gage is 915 ft (279 m), from topographic map.

REMARKS.--Records good except those for winter periods, Dec. 6-21, Jan. 1-16, Jan. 26-30, Feb. 16-19, and Mar. 10-15, and periods of no gage-height record, Apr. 20 to May 29, which are poor.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 296 ft³/s (8.38 m³/s) June 25, 1978, gage height, 7.40 ft (2.256 m); minimum, 0.22 ft³/s (0.006 m³/s) July 20, 1980.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 150 ft³/s (4.25 m³/s) Sept. 22, gage height, 5.72 ft (1.743 m); maximum gage height, 6.43 ft (1.960 m) Mar. 15, backwater from ice; minimum, 0.22 ft³/s (0.006 m³/s) July 20.

REVISIONS.--Revised daily discharges, in cubic feet per second, for July to September of water year 1979 are given below. These figures supersede those published in WDR WI-79-1.

			JULY		AUGUST		SEPTEMBER					
			1	1.5		0.91		1.3				
			2	1.4		.90		1.2				
			3	1.4		1.1		1.1				
			4	1.4		.98		1.1				
			5	1.4		4.3		1.1				
			6	1.3		2.7		1.1				
			7	1.3		1.4		1.0				
			8	1.2		1.6		1.0				
			9	1.2		3.3		1.0				
			10	1.3		19		1.0				
			11	1.3		2.4		.99				
			12	1.2		1.7		.94				
			13	1.2		1.6		1.0				
			14	1.2		1.4		.86				
			15	1.1		1.3		.87				
			16	1.0		1.3		.80				
			17	.94		1.6		.78				
			18	.84		2.8		.82				
			19	.84		1.9		.83				
			20	.81		3.0		.74				
			21	.99		2.0		.83				
			22	1.3		1.8		.83				
			23	1.1		1.6		.80				
			24	1.0		1.5		.72				
			25	1.1		1.4		.77				
			26	1.0		1.3		.77				
			27	1.0		1.5		.65				
			28	.97		1.4		.66				
			29	.87		1.4		.63				
			30	1.0		1.4		.68				
			31	.99		1.3		--				
TOTAL				35.15		71.79		26.87				
MEAN				1.13		2.32		.90				
MAX				1.5		19		1.3				
MIN				.81		.90		.63				
CFSM				.12		.24		.09				
IN.				.14		.28		.10				
CAL YR 1978	TOTAL	775.59	MEAN	2.12	MAX	151	MIN	.20	CFSM	.22	IN	3.00
WTR YR 1979	TOTAL	567.58	MEAN	1.56	MAX	27	MIN	.50	CFSM	.16	IN	2.19

ROCK RIVER BASIN

05427943 PHEASANT BRANCH AT AIRPORT ROAD NEAR MIDDLETON, WI

RATING TABLE (gage height, in feet, and discharge, in cubic feet per second).
(Shifting-control method used Apr. 28, 29; stage-discharge relation affected
by ice Dec. 6-21, Jan. 1-16, Jan. 26-30, Feb. 16-19, and Mar. 10-15.)

3.3	0.13	4.0	16
3.4	0.93	4.5	44
3.5	2.1	5.0	86
3.6	3.8	5.5	130
3.8	8.8	6.0	176

DAY	DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980											
	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.81	.80	.66	1.3	.73	.88	.99	.86	.73	.46	.43	1.9
2	.70	.62	.71	1.2	.72	.77	.96	.86	.75	.45	.71	3.0
3	.60	.60	.72	1.1	.72	.76	2.0	.82	.83	.45	.62	1.6
4	.55	.60	.71	1.1	.72	.72	2.4	.80	.72	.57	.58	1.4
5	.75	.61	.82	1.0	.76	.71	1.6	.80	1.4	.68	.58	1.2
6	.69	.78	.75	.80	.72	.72	1.6	.70	2.4	.48	.46	1.1
7	.60	.72	.70	.50	.72	.72	1.7	.80	6.0	.47	.89	8.8
8	.55	.67	.65	.48	.72	.85	6.0	.80	1.8	.40	2.0	4.3
9	.55	.62	.70	.46	.72	.83	3.5	.70	1.3	.66	.91	14
10	.55	.62	.75	.80	.75	.86	2.3	.65	1.0	.50	.80	3.0
11	.66	.57	.80	2.5	.72	.70	2.0	.60	.80	.49	.93	2.1
12	.55	.60	.70	1.7	.72	.68	1.7	.70	.62	.37	.83	14
13	.53	.58	.60	1.0	.83	.70	1.8	.90	.60	.33	.85	5.9
14	.50	.54	.55	.90	.81	.84	1.7	.80	.60	.35	.68	2.8
15	.55	.66	.65	1.1	.83	25	1.9	.70	.63	.38	.54	2.2
16	.57	.72	.60	35	.78	50	2.0	.60	.62	.76	.61	2.7
17	.60	.73	.50	18	.74	10	1.7	.80	.61	.46	.85	2.6
18	.96	.72	.55	2.7	.78	3.0	1.5	.75	.62	.54	.62	1.9
19	1.4	.72	.60	1.7	.80	2.2	1.6	.70	.63	.42	1.3	1.7
20	1.2	.65	.55	1.5	.83	1.8	1.4	.64	.62	.28	.91	6.7
21	1.0	1.8	.90	1.4	5.3	1.6	1.3	.60	.61	.28	2.8	3.0
22	1.3	2.2	1.2	1.2	24	1.4	1.2	.60	.60	.32	1.2	45
23	1.5	1.4	4.2	1.1	7.7	1.2	1.1	.70	.59	.37	.72	5.1
24	.89	1.2	4.0	1.0	3.7	1.0	1.0	.70	.52	.40	.52	2.7
25	.71	1.1	3.1	.97	2.9	1.0	1.0	.68	.40	.42	.40	2.2
26	.62	1.8	2.0	.86	1.4	.93	1.0	.66	.45	.66	.35	1.9
27	.62	1.5	1.7	.79	1.1	.94	.95	.70	.48	.51	.56	1.7
28	.62	1.2	1.6	.74	.94	1.0	.93	.90	.97	.41	1.3	1.8
29	.58	1.0	1.5	.70	.89	1.1	.99	.78	.56	.44	15	1.9
30	.61	.88	1.5	.65	---	.95	.90	.76	.48	.45	4.2	1.7
31	.70	---	1.4	.74	---	1.0	---	.74	---	.41	2.4	---
TOTAL	23.02	27.21	36.37	84.99	63.05	114.86	50.72	22.80	28.94	14.17	45.55	149.9
MEAN	.74	.91	1.17	2.74	2.17	3.71	1.69	.74	.96	.46	1.47	5.00
MAX	1.5	2.2	4.2	35	24	50	6.0	.90	6.0	.76	15	45
MIN	.50	.54	.50	.46	.72	.68	.90	.60	.40	.28	.35	1.1
CFSM	.08	.10	.12	.29	.23	.39	.18	.08	.10	.05	.15	.52
IN.	.09	.11	.14	.33	.24	.44	.20	.09	.11	.05	.18	.58
CAL YR 1979	TOTAL	565.54	MEAN	1.55	MAX	27	MIN	.50	CFSM	.16	IN	2.19
WTR YR 1980	TOTAL	661.58	MEAN	1.81	MAX	50	MIN	.28	CFSM	.19	IN	2.56

ROCK RIVER BASIN

05427943 PHEASANT BRANCH AT AIRPORT ROAD NEAR MIDDLETON, WI--CONTINUED

WATER-QUALITY RECORDS

PERIOD OF RECORD---June to September 1977, water years 1978 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SEDI- MENT, SUS- PENDE (MG/L)	SEDI- MENT DIS- CHARGE, SUS- PENDE (T/DAY)	SED. SUSP. FALL DIAM. % FINER THAN .002 MM	SED. SUSP. FALL DIAM. % FINER THAN .004 MM	SED. SUSP. FALL DIAM. % FINER THAN .008 MM	SED. SUSP. FALL DIAM. % FINER THAN .016 MM	SED. SUSP. FALL DIAM. % FINER THAN .031 MM	SED. SUSP. FALL DIAM. % FINER THAN .062 MM	SED. SUSP. FALL DIAM. % FINER THAN .125 MM
AUG , 1980											
29...	1420	52	872	122	62	83	92	98	99	99	100
SEP											
09...	0830	26	678	48	66	84	90	96	98	99	100
22...	0830	133	1110	399	62	80	89	96	98	99	100

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	TEMPER- ATURE, WATER (DEG C)	SEDI- MENT, SUS- PENDE (MG/L)	SEDI- MENT DIS- CHARGE, SUS- PENDE (T/DAY)	SED. SUSP. FALL DIAM. % FINER THAN .062 MM
OCT , 1979						
18...	0845	.93	10.0	40	.10	--
NOV						
29...	1510	.93	--	48	.12	--
DEC						
27...	1345	1.3	--	28	.10	--
JAN , 1980						
16...	1500	23	--	206	13	--
17...	1030	17	--	88	4.0	--
FEB						
06...	0930	.72	--	32	.06	--
21...	1100	.93	--	25	.06	--
22...	1400	17	.5	64	2.9	--
MAR						
16...	1440	141	--	1060	404	--
17...	1040	7.1	--	41	.79	--
18...	0910	2.6	.5	39	.27	--
APR						
01...	1445	1.4	--	27	.10	--
08...	0830	6.6	5.5	188	3.4	--
08...	1430	11	8.0	242	7.2	--
09...	1115	4.4	3.0	31	.37	--
30...	0900	.90	9.5	4	.01	--
MAY						
29...	1050	.78	--	47	.10	--
JUN						
04...	1045	.72	17.0	23	.04	--
05...	1210	1.4	16.5	23	.09	--
30...	0950	.48	17.5	26	.03	--
JUL						
31...	0915	.53	19.0	21	.03	--
AUG						
07...	1040	.93	21.0	34	.09	--
08...	0845	2.4	18.5	21	.14	97
19...	0850	1.9	18.0	82	.42	--
28...	1155	1.7	17.0	38	.17	--
29...	1030	24	--	520	34	98
29...	1420	52	20.5	872	122	99
SEP						
03...	1505	1.5	20.0	31	.13	--
07...	1025	9.4	16.5	129	3.3	--
07...	1235	10	16.5	212	5.7	100
08...	0920	4.2	16.5	37	.42	--
09...	0830	26	20.0	678	48	99
09...	1255	14	20.0	215	8.1	--
10...	0845	3.1	14.0	28	.23	--
12...	1005	28	15.5	246	19	99
12...	1330	26	17.5	240	17	99
15...	1000	2.3	14.5	17	.11	--
22...	0830	133	17.0	1110	399	99
22...	1200	39	17.5	444	47	100

ROCK RIVER BASIN

05427945 SOUTH FORK PHEASANT BRANCH AT HIGHWAY 14 NEAR MIDDLETON, WI

LOCATION.--Lat 43°05'48", long 89°31'42", in NW 1/4 SE 1/4, sec.10, T.7 N., R.8 E., Dane County, Hydrologic Unit 07090001, on left bank, about 30 ft (9.14 m) downstream from box culvert on U.S. Highway 14, and 0.65 mi (1.53 km) upstream from confluence with Pheasant Branch, near Middleton.

DRAINAGE AREA.--5.74 mi² (14.9 km²), of which 1.22 mi² (3.16 km²) is non-contributing.

WATER-DISCHARGE RECORDS

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

GAGE.--Water-stage recorder. Altitude of gage 930 ft (283 m), from topographic map.

REMARKS.--Records good except those for winter periods and periods of no gage-height record, May 26-29, and Sept. 18-21, which are poor.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 200 ft³/s (5.66 m³/s) June 17, 1978, gage height, 9.12 ft (2.780 m); no flow on many days.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 73 ft³/s (2.07 m³/s) June 7, gage height, 8.05 ft (2.454 m); no flow on many days.

RATING TABLES (gage height, in feet, and discharge, in cubic feet per second).
(Shifting-control method used Aug. 7; stage-discharge relation affected by ice Dec. 22-26, Jan. 16-19, Feb. 21-25, and Mar. 15-19.)

Oct. 1 to Jan. 16

Jan. 17 to Sept. 30

4.4	0.0	5.0	1.0	4.4	0.0	5.0	2.0
4.5	0.04	5.4	2.8	4.5	0.42	5.4	3.8
4.6	0.06	5.8	5.3	4.6	0.72	5.8	6.7
4.7	0.17	6.2	9.5	4.7	1.0	6.2	11
4.8	0.36	6.6	19	4.8	1.3	6.6	17
4.9	0.65			4.9	1.6	7.0	26
						7.4	40

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DAY	MEAN VALUES											
	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.02	.00	.00	.00	.00	.00	.00	.00	.00	.00	.07
2	.00	.00	.00	.00	.00	.00	.00	.00	.14	.00	.11	.00
3	.00	.00	.00	.00	.00	.00	2.2	.00	.00	.00	.00	.00
4	.00	.00	.00	.00	.00	.00	.92	.00	.00	.00	.01	.00
5	.00	.00	.00	.00	.00	.00	.00	.00	.92	.65	.00	.00
6	.00	.07	.00	.00	.00	.00	.02	.00	2.4	.00	.00	.00
7	.00	.00	.00	.00	.00	.00	.00	.00	13	.00	.83	4.5
8	.00	.00	.00	.00	.00	.00	3.1	.00	.11	.00	2.8	.46
9	.00	.00	.00	.00	.00	.00	.06	.00	.00	1.5	.07	1.5
10	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.13	.14
11	.00	.00	.00	.48	.00	.00	.00	.00	.00	.00	.26	.00
12	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.10	10
13	.00	.00	.00	.00	.00	.00	.00	.05	.00	.00	.14	1.4
14	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.19
15	.00	.00	.00	.00	.00	9.8	.07	.00	.00	.00	.00	.00
16	.00	.00	.00	18	.00	28	.00	.00	.00	1.8	.23	5.3
17	.00	.00	.00	9.5	.00	7.1	.00	.14	.00	.00	.50	1.1
18	.00	.00	.00	1.0	.00	1.2	.00	.05	.00	.00	.00	.10
19	.02	.00	.00	.42	.00	.74	.00	.00	.00	.00	1.7	.00
20	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.35	4.0
21	.00	.33	.00	.00	1.1	.00	.00	.00	.00	.00	1.9	1.1
22	.23	.20	.19	.00	12	.00	.00	.00	.00	.00	.02	8.4
23	.25	.03	1.4	.00	5.3	.00	.00	.00	.00	.00	.00	.48
24	.00	.00	2.0	.00	1.9	.00	.00	.00	.00	.00	.00	.03
25	.00	.00	1.6	.00	1.1	.00	.00	.03	.00	.00	.00	.13
26	.00	.22	.53	.00	.00	.00	.00	.00	.00	.12	.00	.00
27	.00	.03	.00	.00	.00	.00	.00	.00	.00	.00	2.0	.00
28	.00	.02	.00	.00	.00	.00	.00	.15	.10	.00	2.3	.31
29	.00	.01	.00	.00	.00	.00	.00	.05	.00	.00	2.2	.17
30	.00	.00	.00	.00	---	.00	.00	.08	.00	.00	1.4	.06
31	.06	---	.00	.00	---	.00	---	.00	---	.00	.42	---
TOTAL	.56	.93	5.72	29.40	21.40	46.84	6.37	.01	16.67	4.07	17.47	39.44
MEAN	.018	.031	.18	.95	.74	1.51	.21	.018	.56	.13	.56	1.31
MAX	.25	.33	2.0	18	12	28	3.1	.15	13	1.8	2.8	10
MIN	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
CFSM	.003	.005	.03	.17	.13	.26	.04	.003	.10	.02	.10	.23
IN.	.00	.01	.04	.19	.14	.30	.04	.00	.11	.03	.11	.26
CAL YR 1979	TOTAL	91.38	MEAN	.25	MAX 13	MIN .00	CFSM .04	IN .59				
WTR YR 1980	TOTAL	189.42	MEAN	.52	MAX 28	MIN .00	CFSM .09	IN 1.23				

ROCK RIVER BASIN

05427945 SOUTH FORK PHEASANT BRANCH AT HWY 14 NEAR MIDDLETON, WI--CONTINUED

WATER-QUALITY RECORDS

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

PERIOD OF DAILY RECORD.--

SUSPENDED-SEDIMENT DISCHARGE: Water years 1979 to current year.

INSTRUMENTATION.--Sediment pumping sampler since March 1979.

REMARKS.--Sediment records are good.

EXTREMES FOR PERIOD OF DAILY RECORDS.--

SUSPENDED-SEDIMENT CONCENTRATIONS: Maximum daily mean, 2240 mg/l June 7, 1980; minimum daily mean, 0 mg/l on many days; maximum observed, 18,400 mg/l June 7, 1980; minimum observed, 0 mg/l on many days.
 SUSPENDED-SEDIMENT DISCHARGE: Maximum daily, .268 tons (243 tonnes) June 7, 1980; minimum daily, 0 tons (0 tonnes) on many days.

EXTREMES FOR CURRENT YEAR.--

SUSPENDED-SEDIMENT CONCENTRATIONS: Maximum daily mean, 2,240 mg/l June 7; minimum daily mean, 0 mg/l on many days. Maximum observed, 18,400 mg/l June 7; minimum observed, 0 mg/l on many days.
 SUSPENDED-SEDIMENT DISCHARGE: Maximum daily, 268 tons (243 tonnes) June 7; minimum daily, 0 ton (0 tonne) on many days.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SEDI- MENT, DIS- CHARGE, SUS- PENDED (MG/L)	SEDI- MENT CHARGE, SUS- PENDED (T/DAY)	SED. SUSP. FALL DIAM. % FINER THAN .002 MM	SED. SUSP. FALL DIAM. % FINER THAN .004 MM	SED. SUSP. FALL DIAM. % FINER THAN .008 MM	SED. SUSP. FALL DIAM. % FINER THAN .016 MM	SED. SUSP. FALL DIAM. % FINER THAN .031 MM	SED. SUSP. FALL DIAM. % FINER THAN .062 MM	SED. SUSP. FALL DIAM. % FINER THAN .125 MM	SED. SUSP. FALL DIAM. % FINER THAN .250 MM
SEP , 1980												
12...	0830	21	1380	78	47	65	81	95	98	99	100	--
12...	1240	41	950	105	59	76	85	93	97	99	99	100
22...	1003	25	744	50	73	87	93	97	98	99	100	--

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	TEMPER- ATURE, WATER (DEG C)	SEDI- MENT, DIS- CHARGE, SUS- PENDED (MG/L)	SEDI- MENT CHARGE, SUS- PENDED (T/DAY)	SED. SUSP. FALL DIAM. % FINER THAN .062 MM
JUN , 1980						
05...	1125		1.1	--	--	81
05...	1250		.96	16.0	343	90
AUG						
08...	1347		3.1	--	274	100
29...	1015		13	20.5	205	99
SEP						
07...	1015		8.5	--	332	99
12...	0830		21	15.5	1380	99
12...	1240		41	18.0	950	99
22...	1003		25	17.0	744	99

ROCK RIVER BASIN

05427945 SOUTH FORK PHEASANT BRANCH AT HWY 14 NEAR MIDDLETON, WI--CONTINUED

SUSPENDED-SEDIMENT, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DAY	MEAN CONCENTRATION (MG/L)	LOADS (T/DAY)	MEAN CONCENTRATION (MG/L)	LOADS (T/DAY)	MEAN CONCENTRATION (MG/L)	LOADS (T/DAY)	MEAN CONCENTRATION (MG/L)	LOADS (T/DAY)	MEAN CONCENTRATION (MG/L)	LOADS (T/DAY)	MEAN CONCENTRATION (MG/L)	LOADS (T/DAY)
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	0	.00	0	.00	0	.00	0	.00	0	.00	0	.00
2	0	.00	0	.00	0	.00	0	.00	0	.00	0	.00
3	0	.00	0	.00	0	.00	0	.00	0	.00	0	.00
4	0	.00	0	.00	0	.00	0	.00	0	.00	0	.00
5	0	.00	0	.00	0	.00	0	.00	0	.00	0	.00
6	0	.00	0	.00	0	.00	0	.00	0	.00	0	.00
7	0	.00	0	.00	0	.00	0	.00	0	.00	0	.00
8	0	.00	0	.00	0	.00	0	.00	0	.00	0	.00
9	0	.00	0	.00	0	.00	0	.00	0	.00	0	.00
10	0	.00	0	.00	0	.00	0	.00	0	.00	0	.00
11	0	.00	0	.00	0	.00	208	.27	0	.00	0	.00
12	0	.00	0	.00	0	.00	0	.00	0	.00	0	.00
13	0	.00	0	.00	0	.00	0	.00	0	.00	0	.00
14	0	.00	0	.00	0	.00	0	.00	0	.00	0	.00
15	0	.00	0	.00	0	.00	0	.00	0	.00	945	25
16	0	.00	0	.00	0	.00	278	19	0	.00	1100	83
17	0	.00	0	.00	0	.00	50	1.3	0	.00	219	4.2
18	0	.00	0	.00	0	.00	18	.05	0	.00	9	.03
19	0	.00	0	.00	0	.00	10	.02	0	.00	10	.02
20	0	.00	0	.00	0	.00	0	.00	0	.00	0	.00
21	0	.00	0	.00	0	.00	0	.00	30	.09	0	.00
22	0	.00	0	.00	19	.01	0	.00	38	2.4	0	.00
23	0	.00	0	.00	37	.14	0	.00	29	.42	0	.00
24	0	.00	0	.00	36	.30	0	.00	10	.05	0	.00
25	0	.00	0	.00	46	.20	0	.00	5	.01	0	.00
26	0	.00	0	.00	21	.03	0	.00	0	.00	0	.00
27	0	.00	0	.00	0	.00	0	.00	0	.00	0	.00
28	0	.00	0	.00	0	.00	0	.00	0	.00	0	.00
29	0	.00	0	.00	0	.00	0	.00	0	.00	0	.00
30	0	.00	0	.00	0	.00	0	.00	---	---	0	.00
31	0	.00	---	---	0	.00	0	.00	---	---	0	.00
TOTAL	---	0.00	---	0.00	---	0.68	---	20.64	---	2.97	---	112.25

DAY	MEAN CONCENTRATION (MG/L)	LOADS (T/DAY)	MEAN CONCENTRATION (MG/L)	LOADS (T/DAY)	MEAN CONCENTRATION (MG/L)	LOADS (T/DAY)	MEAN CONCENTRATION (MG/L)	LOADS (T/DAY)	MEAN CONCENTRATION (MG/L)	LOADS (T/DAY)	MEAN CONCENTRATION (MG/L)	LOADS (T/DAY)
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	0	.00	0	.00	0	.00	0	.00	0	.00	0	.00
2	0	.00	0	.00	0	.00	0	.00	0	.00	0	.00
3	502	6.0	0	.00	0	.00	0	.00	0	.00	0	.00
4	247	1.0	0	.00	0	.00	0	.00	0	.00	0	.00
5	0	.00	0	.00	1050	7.3	0	.00	0	.00	0	.00
6	0	.00	0	.00	455	7.6	0	.00	0	.00	0	.00
7	0	.00	0	.00	2240	268	0	.00	73	.64	166	3.2
8	431	7.6	0	.00	0	.00	0	.00	175	1.9	50	.12
9	10	.01	0	.00	0	.00	702	8.1	0	.00	205	.97
10	0	.00	0	.00	0	.00	0	.00	0	.00	56	.05
11	0	.00	0	.00	0	.00	0	.00	0	.00	0	.00
12	0	.00	0	.00	0	.00	0	.00	37	.01	429	31
13	0	.00	0	.00	0	.00	0	.00	0	.00	110	.48
14	0	.00	0	.00	0	.00	0	.00	0	.00	3	.00
15	0	.00	0	.00	0	.00	0	.00	0	.00	0	.00
16	0	.00	0	.00	0	.00	623	8.0	0	.00	267	15
17	0	.00	0	.00	0	.00	0	.00	0	.00	157	.58
18	0	.00	0	.00	0	.00	0	.00	0	.00	40	.01
19	0	.00	0	.00	0	.00	0	.00	143	1.2	0	.00
20	0	.00	0	.00	0	.00	0	.00	14	.10	565	6.1
21	0	.00	0	.00	0	.00	0	.00	113	.99	290	.86
22	0	.00	0	.00	0	.00	0	.00	0	.00	401	26
23	0	.00	0	.00	0	.00	0	.00	0	.00	108	.19
24	0	.00	0	.00	0	.00	0	.00	0	.00	0	.00
25	0	.00	0	.00	0	.00	0	.00	0	.00	0	.00
26	0	.00	0	.00	0	.00	0	.00	0	.00	0	.00
27	0	.00	0	.00	0	.00	0	.00	156	10	0	.00
28	0	.00	50	.02	0	.00	0	.00	283	4.6	100	.67
29	0	.00	0	.00	0	.00	0	.00	203	2.0	50	.33
30	0	.00	0	.00	0	.00	0	.00	99	.56	0	.00
31	---	---	0	.00	---	---	0	.00	38	.08	---	---
TOTAL	---	14.61	---	0.02	---	282.90	---	16.10	---	22.08	---	85.56

ROCK RIVER BASIN

05427948 PHEASANT BRANCH AT MIDDLETON, WI

LOCATION.--Lat 43°06'12", long 89°30'42", in NE 1/4 NW 1/4 sec.11, T.7 N., R.8 E., Dane County, Hydrologic Unit 07090001, on left bank at bridge on U.S. Highway 12, 2.5 mi (4.0 km) upstream from Lake Mendota, at Middleton.

DRAINAGE AREA.--18.3 mi² (47.40 km²), of which 1.22 mi (3.16 km²) is noncontributing.

WATER-DISCHARGE RECORDS

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

GAGE.--Water-stage recorder, parshall flume, and concrete control. Altitude of gage is 910 ft (277 m), from topographic map.

REMARKS.--Records good.

AVERAGE DISCHARGE.--6 years, 4.38 ft³/s (0.124 m³/s), 3.25 in/yr (82.6 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 516 ft³/s (14.6 m³/s) Mar. 21, 1975, gage height, 7.54 ft (2.298 m); maximum gage height, 8.54 ft (2.603 m) Mar. 12, 1976; minimum discharge, 0.29 ft³/s (0.008 m³/s) Jan. 26, 1978, gage height, 3.56 ft (1.085 m).

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 100 ft³/s (2.83 m³/s) and maximum (*);

DATE	TIME	DISCHARGE (ft ³ /s) (m ³ /s)	GAGE HEIGHT (ft) (m)	DATE	TIME	DISCHARGE (ft ³ /s) (m ³ /s)	GAGE HEIGHT (ft) (m)				
Jan. 16	0930	137	3.88	6.07	1.850	Sept. 22	0930	158	4.47	6.25	1.905
Mar. 15	2000	*227	6.43	*6.77	2.063						

minimum discharge, 0.54 ft³/s (0.015 m³/s) Aug. 1, gage height, 3.68 ft (1.122 m).

RATING TABLE (gage height, in feet, and discharge, in cubic feet per second).

3.6	.37	4.6	9.6
3.8	.84	4.8	19
4.0	1.4	5.0	32
4.2	2.2	5.5	77
4.4	3.7	6.0	129

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DAY	MEAN VALUES											
	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.6	1.7	1.7	1.6	.92	.96	1.3	1.4	1.0	.73	.56	4.2
2	1.4	1.3	1.5	1.5	.87	.95	1.3	1.4	1.6	.68	1.4	6.3
3	1.2	1.3	1.5	1.4	.85	.96	7.6	1.2	1.4	.68	.78	3.0
4	1.1	1.3	1.4	1.4	.86	.97	5.6	1.2	.99	2.1	.68	2.5
5	1.1	1.5	1.6	1.3	.88	.91	2.8	1.1	2.9	1.5	.81	2.0
6	1.2	1.8	1.5	1.3	.93	.91	2.7	1.1	8.3	.79	.62	1.7
7	1.1	1.4	1.5	.74	.93	.92	3.3	1.1	29	.77	5.2	31
8	1.1	1.3	1.3	1.1	.92	.99	21	1.2	4.0	.68	8.1	15
9	1.1	1.3	1.3	1.2	.93	.96	12	1.0	2.2	4.4	2.3	33
10	1.1	1.2	1.4	1.2	.92	.93	5.3	1.1	1.7	.85	1.7	9.2
11	1.2	1.2	1.5	2.9	.92	.91	4.0	1.1	1.4	.71	2.1	4.0
12	1.1	1.2	1.3	2.4	.92	.88	3.7	1.0	1.2	.73	1.5	52
13	1.1	1.3	1.2	1.3	.92	.91	3.2	1.8	1.2	.69	1.6	24
14	.99	1.2	1.2	1.2	.91	1.1	3.0	1.4	1.1	.68	1.3	9.1
15	1.1	1.2	1.3	1.3	.91	38	3.3	1.4	1.1	.78	1.1	4.6
16	1.1	1.2	1.2	70	.91	106	3.5	.99	1.0	3.8	2.0	14
17	1.1	1.2	1.0	37	.88	28	3.2	1.6	.94	.85	2.1	11
18	1.2	1.2	1.1	4.9	.89	5.4	3.1	1.3	.94	.77	1.4	4.5
19	2.4	1.2	1.2	2.6	.91	3.8	2.9	1.3	.92	.75	7.4	3.7
20	1.4	1.2	1.1	2.0	1.0	2.6	2.8	1.1	.86	.72	4.1	27
21	1.3	4.4	1.2	1.7	5.3	1.9	2.5	1.0	.87	.68	11	11
22	2.3	5.7	1.7	1.5	47	1.6	2.4	1.0	.86	.61	2.7	71
23	4.5	3.3	6.2	1.3	21	1.5	2.1	1.1	.89	.61	1.7	17
24	2.0	2.6	8.5	1.2	8.1	1.5	1.9	1.1	.91	.60	1.4	5.5
25	1.5	2.2	7.1	1.2	5.1	1.5	1.8	1.1	.86	.63	1.2	4.4
26	1.4	4.2	3.0	1.1	2.0	1.5	1.8	1.1	.85	1.4	1.1	3.7
27	1.4	3.4	2.5	.98	1.4	1.5	1.7	1.1	.80	.90	6.6	3.3
28	1.4	2.7	2.1	.97	1.2	1.2	1.7	1.8	2.1	.88	9.5	4.0
29	1.3	2.3	1.9	.86	1.0	1.2	1.8	1.6	.85	1.1	29	3.8
30	1.4	1.9	1.8	.82	---	1.3	1.7	1.5	.79	1.7	16	3.5
31	2.3	---	1.7	.96	---	1.3	---	1.0	---	1.2	7.4	---
TOTAL	45.49	58.9	64.5	150.93	110.28	213.06	115.0	38.19	73.53	33.97	134.35	389.0
MEAN	1.47	1.96	2.08	4.87	3.80	6.87	3.83	1.23	2.45	1.10	4.33	13.0
MAX	4.5	5.7	8.5	70	47	106	21	1.8	29	4.4	29	71
MIN	.99	1.2	1.0	.74	.85	.88	1.3	.99	.79	.60	.56	1.7
CFSM	.08	.11	.11	.27	.21	.38	.21	.07	.13	.06	.24	.71
IN.	.09	.12	.13	.31	.22	.43	.23	.08	.15	.07	.27	.79

CAL YR 1979	TOTAL	1218.70	MEAN	3.34	MAX	70	MIN	.80	CFSM	.18	IN	2.48
WTR YR 1980	TOTAL	1427.20	MEAN	3.90	MAX	106	MIN	.56	CFSM	.21	IN	2.90

ROCK RIVER BASIN

05427948 PHEASANT BRANCH AT MIDDLETON, WI--CONTINUED

WATER-QUALITY RECORDS

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

PERIOD OF DAILY RECORD.--

SUSPENDED-SEDIMENT DISCHARGE: Water years 1977 to current year.

INSTRUMENTATION.--Sediment pumping sampler since December 1977.

REMARKS.--Sediment records are good. Mean suspended-sediment concentrations for most low-flow periods were estimated.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SUSPENDED-SEDIMENT CONCENTRATIONS: Maximum daily mean, 2,860 mg/l June 17, 1978; minimum daily mean, 4 mg/l Mar. 12, 1979. Maximum observed, 6,360 mg/l June 25, 1978; minimum observed, 4 mg/l Mar. 12, 1979.

SUSPENDED-SEDIMENT DISCHARGE: Maximum daily, 2,130 tons (1,930 tonnes) June 17, 1978; minimum daily, 0.02 ton (0.02 tonne) on several days.

EXTREMES FOR CURRENT YEAR.--

SUSPENDED-SEDIMENT CONCENTRATIONS: Maximum daily mean, 1,690 mg/l June 7; minimum daily mean, 2 mg/l on several days. Maximum observed, 3,920 mg/l Aug. 29; minimum observed, 21 mg/l Feb. 21.

SUSPENDED-SEDIMENT DISCHARGE: Maximum daily, 248 tons (225 tonnes) June 7; minimum daily, 0.04 ton (0.04 tonne) on several days.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SEDI- MENT, SUS- PENDE (MG/L)	SEDI- MENT DIS- CHARGE, SUS- PENDE (T/DAY)	SED. SUSP. FALL DIAM. % FINER THAN .002 MM	SED. SUSP. FALL DIAM. % FINER THAN .004 MM	SED. SUSP. FALL DIAM. % FINER THAN .008 MM
AUG , 1980							
29...	1100	67	878	159	42	60	76
SEP							
09...	0845	58	477	75	60	78	86
12...	1400	101	713	194	56	71	79
22...	0900	156	1640	691	50	65	77

DATE	SED. SUSP. FALL DIAM. % FINER THAN .016 MM	SED. SUSP. FALL DIAM. % FINER THAN .031 MM	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM	SED. SUSP. SIEVE DIAM. % FINER THAN .125 MM	SED. SUSP. SIEVE DIAM. % FINER THAN .250 MM	SED. SUSP. SIEVE DIAM. % FINER THAN .500 MM
AUG , 1980						
29...	91	96	99	100	--	--
SEP						
09...	94	97	99	100	--	--
12...	89	95	98	99	100	--
22...	87	95	97	99	99	100

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	TEMPER- ATURE, WATER (DEG C)	SEDI- MENT, SUS- PENDE (MG/L)	SEDI- MENT DIS- CHARGE, SUS- PENDE (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
JUN , 1980						
06...	1100	10	17.0	198	5.3	69
AUG						
07...	0935	7.2	19.0	103	2.0	68
08...	0900	17	20.5	113	5.2	100
29...	1100	67	20.5	878	159	99
SEP						
07...	1045	36	17.0	186	18	99
09...	0845	58	20.0	477	75	99
12...	0930	95	16.0	591	152	97
12...	1400	101	17.0	713	194	98
22...	0900	156	17.0	1640	691	97

ROCK RIVER BASIN

05427948 PHEASANT BRANCH AT MIDDLETON, WI--CONTINUED

SUSPENDED-SEDIMENT, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DAY	CONCEN- TRATION (MG/L)	LOADS (T/DAY) OCTOBER	CONCEN- TRATION (MG/L)	LOADS (T/DAY) NOVEMBER	CONCEN- TRATION (MG/L)	LOADS (T/DAY) DECEMBER	CONCEN- TRATION (MG/L)	LOADS (T/DAY) JANUARY	CONCEN- TRATION (MG/L)	LOADS (T/DAY) FEBRUARY	CONCEN- TRATION (MG/L)	LOADS (T/DAY) MARCH
1	35	.15	36	.16	85	.39	39	.17	65	.16	44	.16
2	35	.13	36	.13	70	.28	38	.16	65	.15	44	.16
3	35	.11	36	.13	55	.22	37	.14	64	.15	44	.15
4	35	.10	37	.13	40	.15	37	.14	64	.15	43	.15
5	35	.10	37	.15	40	.17	36	.12	64	.15	43	.14
6	35	.11	37	.18	39	.16	35	.12	63	.16	43	.13
7	35	.10	37	.14	39	.16	35	.07	59	.15	43	.13
8	36	.11	37	.13	38	.13	34	.10	55	.14	43	.13
9	36	.11	37	.13	37	.13	34	.11	51	.13	42	.13
10	36	.11	36	.12	36	.14	33	.11	47	.12	42	.12
11	36	.12	36	.11	36	.15	50	.96	44	.11	42	.11
12	36	.11	35	.11	35	.12	40	.70	41	.10	41	.11
13	36	.11	34	.12	34	.11	31	.11	38	.09	41	.10
14	37	.10	34	.11	34	.11	31	.10	35	.09	41	.12
15	37	.11	33	.11	34	.12	30	.10	33	.08	186	59
16	37	.11	33	.11	33	.11	199	48	30	.07	390	133
17	37	.11	32	.10	32	.09	151	17	28	.07	168	17
18	37	.11	31	.10	32	.10	62	.83	26	.06	43	.60
19	65	.42	31	.10	31	.10	67	.47	24	.06	37	.38
20	37	.14	30	.10	31	.09	66	.35	23	.06	37	.26
21	37	.13	84	1.0	30	.10	66	.31	33	1.2	37	.19
22	63	.39	97	1.5	48	.22	66	.27	84	12	36	.15
23	90	1.1	75	.67	102	1.7	66	.24	56	3.5	36	.14
24	36	.19	67	.47	120	2.8	66	.22	45	2.6	36	.15
25	36	.15	62	.37	110	2.1	66	.22	45	1.0	36	.15
26	36	.14	86	.97	70	.58	66	.19	45	.39	36	.15
27	36	.14	86	.80	44	.29	65	.17	44	.26	36	.14
28	36	.13	102	.75	41	.24	65	.17	44	.22	36	.12
29	36	.13	117	.71	41	.21	65	.15	44	.18	35	.12
30	36	.14	102	.52	40	.19	65	.14	---	---	35	.12
31	36	.22	---	---	39	.18	65	.17	---	---	35	.12
TOTAL	---	5.43	---	10.23	---	11.64	---	72.11	---	23.60	---	213.63
DAY	MEAN CONCEN- TRATION (MG/L)	LOADS (T/DAY) APRIL	MEAN CONCEN- TRATION (MG/L)	LOADS (T/DAY) MAY	MEAN CONCEN- TRATION (MG/L)	LOADS (T/DAY) JUNE	MEAN CONCEN- TRATION (MG/L)	LOADS (T/DAY) JULY	MEAN CONCEN- TRATION (MG/L)	LOADS (T/DAY) AUGUST	MEAN CONCEN- TRATION (MG/L)	LOADS (T/DAY) SEPTEMBER
1	35	.12	62	.25	70	.19	72	.14	27	.04	86	.97
2	35	.12	61	.23	93	.40	69	.13	48	.18	106	1.8
3	110	2.3	61	.20	81	.31	66	.12	24	.05	27	.23
4	80	1.7	61	.20	85	.22	63	.35	23	.04	25	.17
5	35	.26	61	.18	142	1.3	61	.24	22	.05	23	.12
6	35	.25	60	.18	263	7.0	58	.12	21	.04	21	.10
7	35	.32	60	.17	1690	248	56	.12	96	2.1	179	18
8	329	26	60	.19	266	3.6	52	.10	108	2.6	66	3.3
9	58	2.0	60	.17	51	.90	250	4.9	60	.37	224	27
10	36	.52	59	.18	43	.70	365	.85	47	.22	27	.74
11	37	.40	59	.17	44	.59	152	.29	60	.34	21	.22
12	38	.38	59	.16	44	.52	58	.11	72	.29	320	71
13	39	.34	59	.28	44	.52	50	.09	76	.33	67	4.5
14	40	.33	58	.23	45	.49	50	.09	70	.24	46	1.2
15	41	.37	58	.22	45	.49	51	.11	65	.20	36	.45
16	42	.41	58	.15	46	.43	81	.83	61	.33	231	20
17	44	.38	58	.25	46	.41	51	.12	57	.32	117	4.8
18	45	.37	58	.20	46	.37	51	.11	53	.20	43	.53
19	46	.36	57	.21	47	.32	52	.10	106	3.4	34	.34
20	47	.35	57	.18	47	.27	52	.10	72	1.6	196	18
21	49	.33	57	.16	47	.24	51	.09	123	4.2	49	1.5
22	50	.32	57	.15	48	.22	49	.08	58	.43	498	151
23	51	.29	56	.16	48	.20	46	.08	39	.18	77	3.7
24	53	.27	56	.17	49	.18	43	.07	37	.14	73	1.1
25	54	.26	56	.17	49	.15	40	.07	35	.11	79	.93
26	56	.27	56	.17	49	.14	38	.14	33	.10	84	.84
27	57	.27	55	.17	50	.11	36	.09	137	19	91	.83
28	59	.27	55	.26	79	.46	34	.08	214	12	98	1.1
29	60	.29	56	.25	77	.18	32	.09	358	49	105	1.1
30	62	.28	74	.30	75	.16	30	.13	112	5.0	113	1.1
31	---	---	65	.18	---	---	28	.09	76	1.6	---	---
TOTAL	---	40.13	---	6.14	---	269.07	---	10.03	---	104.70	---	336.67

ROCK RIVER BASIN

05427950 PHEASANT BRANCH AT CENTURY AVENUE AT MIDDLETON, WI

LOCATION.--Lat 43°06'16", long 89°29'36", in SE 1/4 SE 1/4 sec.1, T.7 N., R.8 E., Dane County, Hydrologic Unit 07090001, on left bank, 40 ft (12.2 m) upstream from bridge on Century Avenue (County Trunk Highway M), in Middleton.

DRAINAGE AREA.--20.8 mi² (53.9 km²), of which 1.22 mi² (3.16 km²) is non-contributing.

WATER-DISCHARGE RECORDS

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

GAGE.--Water-stage recorder and concrete control. Datum of gage is 868.68 ft (264.77 m) National Geodetic Vertical Datum of 1929 (Wisconsin Department of Transportation bench mark).

REMARKS.--Records good except those for winter periods and periods of no gage-height record, Dec. 6 to Mar. 14, Apr. 18-30, which are poor.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 483 ft³/s (13.7 m³/s) July 1, 1978, gage height, 3.56 ft (1.085 m); minimum, 0.36 ft³/s (0.010 m³/s) Jan. 26, 1978, gage height, 0.29 ft (0.088 m).

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 195 ft³/s (5.52 m³/s) Mar. 16, gage height, 2.26 ft (0.689 m); minimum, 0.58 ft³/s (0.016 m³/s) on several days, but may have been less during period of ice effect.

RATING TABLE (gage height, in feet, and discharge, in cubic feet per second).
(Shifting-control method used Oct. 15-17; stage-discharge relation affected by ice Dec. 1-22, Dec. 28 to Jan. 16, Jan. 18 to Mar. 14.)

0.35	0.94	0.8	21
0.4	1.9	0.9	28
0.5	5.1	1.0	36
0.6	9.6	1.2	54
0.7	15	1.4	74
		1.7	111

DAY	DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980											
	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.1	2.0	2.1	1.9	1.2	1.4	1.8	1.7	1.1	.89	.77	4.8
2	2.0	1.6	1.8	1.8	1.1	1.3	1.7	1.7	2.0	.81	2.1	5.6
3	1.7	1.5	1.8	1.7	1.1	1.3	7.7	1.7	1.9	.81	.92	3.9
4	1.5	1.5	1.7	1.6	1.1	1.4	6.1	1.6	1.0	.81	.88	3.1
5	1.3	1.6	2.0	1.5	1.1	1.3	3.1	1.5	4.0	4.0	1.1	2.5
6	1.5	2.2	1.8	1.5	1.2	1.2	3.0	1.4	9.1	1.0	.81	2.5
7	1.5	1.5	1.8	1.3	1.2	1.2	3.5	1.4	29	.81	8.7	30
8	1.3	1.5	1.6	1.4	1.2	1.3	20	1.8	5.4	.78	9.8	14
9	1.3	1.4	1.6	1.5	1.2	1.2	10	1.4	3.1	6.0	3.3	31
10	1.3	1.5	1.7	2.0	1.2	1.2	5.9	1.5	2.2	1.0	2.1	10
11	1.4	1.5	1.8	4.0	1.2	1.2	4.5	1.6	1.9	.81	2.7	5.1
12	1.3	1.5	1.6	3.5	1.2	1.1	4.1	1.5	1.7	.81	1.6	53
13	1.3	1.6	1.5	2.1	1.2	1.2	3.4	2.5	1.5	.81	2.0	22
14	1.2	1.5	1.5	1.7	1.2	1.5	3.5	2.1	1.5	.81	1.4	10
15	1.4	1.5	1.6	2.1	1.2	39	3.5	2.0	1.1	.89	1.3	5.9
16	1.5	1.5	1.5	80	1.2	103	4.0	1.7	1.1	4.5	2.7	13
17	1.3	1.5	1.2	44	1.1	31	3.7	2.8	1.1	.86	2.5	11
18	1.5	1.5	1.3	6.0	1.1	6.9	3.6	2.1	.94	.69	1.8	5.1
19	3.6	1.5	1.4	3.4	1.2	4.9	3.4	2.0	.94	.69	8.6	3.9
20	1.7	1.5	1.3	2.8	1.4	3.5	3.3	1.7	.81	.78	4.8	24
21	1.7	7.6	1.5	2.4	6.0	2.6	3.0	1.5	.81	.74	11	10
22	4.1	7.2	2.0	1.9	50	2.5	2.9	1.5	.81	.69	3.3	67
23	5.2	3.7	8.8	1.7	25	2.2	2.5	1.5	.81	.69	2.2	16
24	2.1	2.9	11	1.6	11	2.2	2.4	1.5	.81	.66	1.9	7.0
25	1.8	2.8	8.8	1.6	6.0	1.9	2.3	1.5	.81	.58	1.8	5.7
26	1.7	5.1	3.9	1.5	2.5	1.9	2.3	1.5	.81	1.6	1.7	4.7
27	1.6	4.0	2.7	1.4	2.1	1.9	2.2	1.3	.96	.87	9.7	4.3
28	1.6	3.2	2.5	1.3	1.8	1.8	2.2	2.7	3.7	.76	11	4.6
29	1.5	2.5	2.4	1.2	1.6	1.7	2.3	1.8	1.1	.69	29	4.4
30	1.6	2.2	2.2	1.1	---	1.8	2.0	1.8	.91	.76	15	3.8
31	2.5	---	2.0	1.2	---	1.8	---	1.2	---	.88	8.0	---
TOTAL	58.1	72.6	80.4	182.7	129.6	228.4	123.9	53.5	82.92	37.48	154.48	387.9
MEAN	1.87	2.42	2.59	5.89	4.47	7.37	4.13	1.73	2.76	1.21	4.98	12.9
MAX	5.2	7.6	11	80	50	103	20	2.8	29	6.0	29	67
MIN	1.2	1.4	1.2	1.1	1.1	1.1	1.7	1.2	.81	.58	.77	2.5
CFSM	.09	.12	.13	.28	.22	.35	.20	.08	.13	.06	.24	.62
IN.	.10	.13	.14	.33	.23	.41	.22	.10	.15	.07	.28	.69
CAL YR 1979	TOTAL	1358.62	MEAN	3.72	MAX	68	MIN	.94	CFSM	.18	IN	2.43
WTR YR 1980	TOTAL	1591.98	MEAN	4.35	MAX	103	MIN	.58	CFSM	.21	IN	2.85

ROCK RIVER BASIN

05427950 PHEASANT BRANCH AT CENTURY AVENUE AT MIDDLETON, WI--CONTINUED

WATER-QUALITY RECORDS

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

PERIOD OF DAILY RECORD.--

SUSPENDED-SEDIMENT DISCHARGE: Water years 1977 to current year.

INSTRUMENTATION.--Sediment pumping sampler since November 1977.

REMARKS.--Sediment records are good.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SUSPENDED-SEDIMENT CONCENTRATIONS: Maximum daily mean, 3,030 mg/l June 17, 1978; minimum daily mean, 8 mg/l June 4, 1980. Maximum observed, 8,980 mg/l June 7, 1980; minimum observed, 3 mg/l Feb. 28, 1979.

SUSPENDED-SEDIMENT DISCHARGE: Maximum daily, 2,220 tons (2,010 tonnes) June 17, 1978; minimum daily, 0.02 ton (0.02 tonne) June 4, 1980.

EXTREMES FOR CURRENT YEAR.--

SUSPENDED-SEDIMENT CONCENTRATIONS: Maximum daily mean, 1,620 mg/l June 7; minimum daily mean, 8 mg/l June 4. Maximum observed, 8980 mg/l June 7; minimum observed, 6 mg/l June 4.

SUSPENDED-SEDIMENT DISCHARGE: Maximum daily, 238 tons (216 tonnes) June 7; minimum daily, 0.02 ton (0.02 tonne) June 4.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SEDI- MENT, SUS- PENDE (MG/L)	SEDI- MENT DIS- CHARGE, SUS- PENDE (T/DAY)	SED. SUSP. FALL DIAM. % FINER THAN .002 MM	SED. SUSP. FALL DIAM. % FINER THAN .004 MM	SED. SUSP. FALL DIAM. % FINER THAN .008 MM
AUG , 1980							
29...	1145	65	1240	218	36	54	73
SEP							
09...	0930	50	435	59	53	71	82
12...	1035	100	749	202	37	53	65
22...	1115	136	1450	532	50	65	75

DATE	SED. SUSP. FALL DIAM. % FINER THAN .016 MM	SED. SUSP. FALL DIAM. % FINER THAN .031 MM	SED. SUSP. FALL DIAM. % FINER THAN .062 MM	SED. SUSP. FALL DIAM. % FINER THAN .125 MM	SED. SUSP. FALL DIAM. % FINER THAN .250 MM	SED. SUSP. FALL DIAM. % FINER THAN .500 MM
AUG , 1980						
29...	90	96	98	99	100	--
SEP						
09...	92	96	98	99	100	--
12...	78	85	90	94	99	100
22...	84	89	92	95	98	100

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	TEMPER- ATURE, WATER (DEG C)	SEDI- MENT, SUS- PENDE (MG/L)	SEDI- MENT DIS- CHARGE, SUS- PENDE (T/DAY)	SED. SUSP. FALL DIAM. % FINER THAN .062 MM
JUN , 1980						
06...	1200	9.1	18.0	222	5.5	88
AUG						
07...	0917	22	20.0	135	8.0	93
08...	1015	17	20.5	116	5.3	97
29...	1145	65	19.5	1240	218	98
SEP						
07...	1125	32	17.0	150	13	100
09...	0930	50	20.0	435	59	98
12...	1035	100	16.0	749	202	90
22...	1115	136	17.0	1450	532	92

ROCK RIVER BASIN

05427950 PHEASANT BRANCH AT CENTURY AVENUE AT MIDDLETON, WI--CONTINUED

SUSPENDED-SEDIMENT, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DAY	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
	MEAN CONCENTRATION (MG/L)	LOADS (T/DAY)	MEAN CONCENTRATION (MG/L)	LOADS (T/DAY)	MEAN CONCENTRATION (MG/L)	LOADS (T/DAY)	MEAN CONCENTRATION (MG/L)	LOADS (T/DAY)	MEAN CONCENTRATION (MG/L)	LOADS (T/DAY)	MEAN CONCENTRATION (MG/L)	LOADS (T/DAY)
1	64	.51	15	.08	74	.42	46	.23	32	.10	37	.14
2	25	.14	17	.07	72	.35	45	.22	31	.09	35	.12
3	30	.14	19	.08	71	.35	45	.21	30	.09	34	.12
4	37	.15	19	.08	70	.32	45	.19	29	.09	32	.12
5	43	.15	20	.09	69	.37	44	.18	29	.09	31	.11
6	48	.20	23	.13	68	.33	44	.18	28	.09	30	.10
7	47	.19	26	.10	67	.33	43	.15	27	.09	28	.09
8	45	.16	27	.11	66	.28	43	.16	26	.08	27	.09
9	39	.14	28	.11	64	.28	43	.17	25	.08	26	.08
10	34	.12	33	.13	63	.29	42	.23	24	.08	25	.08
11	34	.13	41	.17	62	.30	57	.62	24	.08	24	.08
12	34	.12	57	.23	61	.26	54	.51	23	.07	23	.07
13	28	.10	74	.32	60	.24	41	.23	22	.07	22	.07
14	26	.09	76	.31	59	.24	41	.19	21	.07	21	.08
15	32	.12	75	.30	58	.25	40	.24	21	.07	437	46
16	37	.15	69	.28	57	.23	171	37	20	.06	374	104
17	30	.11	65	.26	57	.18	244	29	19	.06	155	13
18	26	.10	62	.25	56	.20	50	.81	19	.06	99	1.8
19	29	.34	58	.23	55	.21	44	.40	18	.06	56	.76
20	23	.11	54	.22	54	.19	43	.33	18	.07	39	.37
21	24	.11	36	.71	53	.21	42	.27	57	.93	37	.27
22	25	.28	41	.81	52	.23	41	.21	70	9.4	36	.24
23	25	.36	45	.45	72	1.7	40	.18	40	2.7	34	.21
24	23	.13	49	.38	74	2.2	39	.17	67	2.0	33	.19
25	21	.10	54	.41	67	1.6	38	.16	48	.77	31	.16
26	19	.09	73	1.0	57	.60	37	.15	44	.30	30	.15
27	17	.07	68	.74	48	.35	36	.14	42	.24	29	.15
28	15	.06	70	.59	48	.32	35	.12	40	.19	27	.13
29	14	.06	75	.52	47	.30	34	.11	38	.16	26	.12
30	12	.05	75	.44	47	.28	33	.10	---	---	25	.12
31	11	.08	---	---	46	.25	33	.11	---	---	24	.12
TOTAL	---	4.66	---	9.60	---	13.66	---	72.97	---	18.24	---	169.14

DAY	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
	MEAN CONCENTRATION (MG/L)	LOADS (T/DAY)	MEAN CONCENTRATION (MG/L)	LOADS (T/DAY)	MEAN CONCENTRATION (MG/L)	LOADS (T/DAY)	MEAN CONCENTRATION (MG/L)	LOADS (T/DAY)	MEAN CONCENTRATION (MG/L)	LOADS (T/DAY)	MEAN CONCENTRATION (MG/L)	LOADS (T/DAY)
1	23	.11	27	.14	46	.14	36	.09	30	.06	42	.54
2	22	.10	30	.15	46	.28	51	.11	42	.27	38	.58
3	96	2.0	34	.16	22	.12	72	.16	18	.05	36	.38
4	85	1.4	37	.16	8	.02	100	.22	17	.04	44	.37
5	21	.17	41	.17	37	.59	81	1.0	19	.05	54	.37
6	21	.17	46	.17	173	4.1	43	.12	20	.04	63	.42
7	20	.19	51	.19	1620	238	29	.06	57	2.0	173	16
8	361	25	62	.30	289	5.1	20	.04	108	3.0	106	4.8
9	99	3.1	72	.27	58	.49	150	2.8	66	.62	244	25
10	82	1.3	61	.25	101	.60	100	.28	36	.21	48	1.5
11	49	.60	50	.22	114	.58	65	.14	67	.49	25	.35
12	48	.53	49	.20	117	.54	68	.15	34	.15	408	91
13	48	.45	49	.47	115	.47	75	.16	46	.25	79	5.2
14	47	.44	49	.26	113	.46	79	.17	50	.20	47	1.3
15	46	.43	54	.21	110	.33	81	.20	57	.20	56	.87
16	65	.70	87	.40	110	.33	96	1.2	67	.49	162	9.9
17	62	.62	85	.63	119	.35	195	.46	40	.27	198	8.0
18	44	.43	74	.43	130	.33	88	.16	38	.18	104	1.4
19	43	.39	76	.41	140	.36	37	.07	92	3.0	100	1.1
20	43	.38	79	.36	138	.30	51	.11	66	1.2	201	16
21	42	.34	88	.37	131	.29	73	.15	126	3.9	65	1.8
22	42	.33	97	.39	110	.24	68	.13	75	.67	677	186
23	41	.28	96	.39	94	.20	62	.12	83	.50	69	3.2
24	41	.27	88	.35	91	.20	69	.12	96	.49	52	.98
25	40	.25	54	.22	92	.20	69	.11	98	.47	50	.77
26	35	.22	34	.14	106	.23	38	.16	99	.45	55	.70
27	29	.17	30	.11	126	.35	19	.05	155	13	60	.70
28	26	.15	52	.38	50	.79	11	.02	394	19	65	.81
29	23	.14	17	.08	24	.07	17	.03	382	41	63	.76
30	24	.13	28	.13	26	.06	27	.06	68	2.9	65	.66
31	---	---	47	.16	---	---	30	.07	45	.98	---	---
TOTAL	---	40.79	---	8.27	---	256.12	---	8.72	---	96.13	---	381.46

ROCK RIVER BASIN

05427952 PHEASANT BRANCH AT MOUTH AT MIDDLETON, WI

LOCATION.--Lat 43°06'28", long 89°29'01", in NE 1/4 SE 1/4 sec.1, T.7 N., R.8 E., Dane County, Hydrologic Unit 07090001, on left bank 875 ft (267 m) upstream of County Highway M and Q bridge, in Middleton.

DRAINAGE AREA.--24.5 mi² (63.5 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--Occasional Discharge measurements, water years 1974 to 1977. Recording gage from April 1978 to current year.

GAGE.--Water-stage recorder. Datum of gage 846.76 ft (258.09 m) National Geodetic Vertical Datum of 1929 (Wisconsin Department of Transportation benchmark). Prior to Apr. 1, 1978, nonrecording gage on upstream side of bridge on County Highway M and Q in Middleton at different datum. Auxiliary gage 750 ft (229 m) downstream of base gage to provide slope data at datum 0.69 ft (0.21 m) lower.

REMARKS.--Records fair except those between 10 cfs and 75 cfs, which are poor. Daily discharge computed by computer model "Computation of unsteady flows in rivers and estuaries by the method of characteristics (version 27E)".

EXTREMES.--April to September 1978: Maximum discharge during period, 437 ft³/s (12.7 m³/s) July 1, gage height 6.07 ft (1.85 m); minimum daily, 3.6 ft³/s (0.10 m³/s) Sept. 9.

Water year 1979: Maximum discharge, 113 ft³/s (3.20 m³/s) Mar. 23, gage height 3.37 ft (1.03 m); maximum gage height, 3.96 ft (1.21 m) Aug. 10, backwater from Lake Mendota; minimum daily, 3.9 ft³/s (0.11 m³/s) Nov. 7.

Water Year 1980: Maximum discharge, 136 ft³/s (3.85 m³/s) Sept. 22, gage height, 4.80 ft (1.46 m); maximum gage height, 4.83 ft (1.47 m) Sept. 25, backwater from Lake Mendota; minimum daily, 2.4 ft³/s (0.07 m³/s) July 4.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1							6.9	7.5	6.9	298	7.4	4.5
2							6.0	7.5	6.8	90	6.8	4.6
3							5.3	7.5	6.7	54	6.4	4.9
4							5.6	7.4	6.5	32	6.0	4.6
5							6.6	7.4	6.4	18	5.7	4.3
6							30	7.4	6.3	13	5.6	4.0
7							19	7.4	6.2	11	5.5	3.8
8							11	7.3	6.1	9.9	5.4	3.7
9							7.6	7.3	6.1	9.4	5.3	3.6
10							9.3	7.3	6.0	8.9	5.2	3.7
11							7.7	7.3	6.0	8.6	5.2	3.9
12							7.2	28	5.9	8.3	5.2	4.4
13							6.8	108	5.9	8.0	5.1	25
14							6.5	80	5.9	7.8	5.1	11
15							6.4	35	5.8	7.6	5.1	5.0
16							6.3	21	18	7.3	5.0	4.3
17							6.3	16	245	7.0	4.9	4.6
18							8.4	13	110	6.9	7.0	151
19							7.5	11	47	6.8	9.2	40
20							7.3	10	24	15	5.2	52
21							7.2	9.0	13	23	4.5	29
22							7.0	9.0	11	35	4.4	18
23							7.0	9.3	10	30	4.3	11
24							15	9.2	9.4	17	4.3	10
25							9.8	8.8	175	10	4.2	9.1
26							8.7	8.5	75	11	4.2	8.6
27							8.1	8.1	39	8.9	7.7	8.3
28							7.8	7.8	21	8.1	5.0	8.1
29							7.7	7.6	12	7.6	4.4	8.0
30							7.6	7.4	17	7.4	4.4	7.9
31							---	7.0	---	8.0	4.5	---
TOTAL							263.6	495.0	919.9	793.5	168.2	502.3
MEAN							8.79	16.0	30.7	25.6	5.43	16.7
MAX							30	108	245	298	9.2	151
MIN							5.3	7.0	5.8	6.8	4.2	3.6
CFSM							.38	.70	1.34	1.11	.24	.73
IN.							.43	.80	1.49	1.28	.27	.81

ROCK RIVER BASIN

05427952 PHEASANT BRANCH AT MOUTH AT MIDDLETON, WI--CONTINUED

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6.2	5.9	7.8	5.5	5.6	7.4	33	11	6.3	8.1	7.1	6.8
2	10	5.6	7.8	5.5	5.6	7.6	18	12	6.1	7.8	7.3	6.6
3	9.5	5.4	8.4	5.5	5.5	8.0	20	13	5.8	7.5	13	6.5
4	8.8	4.7	8.8	5.5	5.5	8.4	23	11	6.2	7.1	7.0	6.4
5	9.3	5.4	7.3	5.4	5.5	9.1	20	10	6.0	6.5	38	6.3
6	9.2	4.4	6.6	5.4	5.5	10	14	9.4	8.3	7.0	30	6.2
7	9.0	3.9	6.0	5.4	5.5	9.6	12	9.0	10	7.6	19	6.1
8	8.9	4.5	5.8	5.3	5.5	9.0	11	8.7	8.2	7.8	23	6.1
9	9.5	4.9	5.4	5.3	5.5	8.4	10	8.5	24	7.9	36	6.0
10	9.4	5.2	5.2	5.3	5.6	8.2	9.4	8.2	20	26	78	6.0
11	9.2	5.5	5.4	5.3	5.6	8.2	10	7.9	19	42	27	6.0
12	8.9	5.7	5.8	5.3	5.6	8.5	12	7.6	12	6.2	15	6.0
13	8.5	12	5.9	5.4	5.6	9.4	10	7.4	8.9	13	13	6.8
14	7.8	8.5	5.9	5.4	5.6	10	9.0	7.4	7.9	9.4	12	6.0
15	7.5	5.8	6.0	5.4	5.6	8.7	8.5	7.3	7.4	8.2	11	6.0
16	7.4	4.5	6.0	5.4	5.5	8.4	8.3	7.2	6.4	7.7	9.8	6.0
17	7.2	30	5.9	5.4	5.5	9.5	8.1	7.1	6.0	7.3	24	5.9
18	7.1	18	5.9	5.5	5.4	26	7.9	11	7.2	7.2	34	5.9
19	6.9	11	5.9	5.7	5.4	78	7.7	12	7.7	7.1	21	5.9
20	6.8	9.9	5.8	6.0	5.8	91	7.6	8.9	8.9	7.0	41	5.9
21	6.7	9.4	5.8	5.8	6.4	80	7.5	6.8	7.2	20	28	5.9
22	6.6	9.0	5.7	5.6	7.4	88	7.4	6.8	7.5	8.8	22	5.9
23	6.6	8.6	5.7	5.5	8.0	100	7.2	6.8	7.9	8.3	15	5.8
24	6.8	8.3	5.9	5.4	8.9	69	7.2	6.8	8.5	7.8	9.4	5.8
25	8.1	8.0	5.8	5.4	8.0	56	8.9	6.8	9.3	7.6	7.5	5.8
26	7.4	7.9	5.6	5.4	7.7	36	11	6.8	11	7.3	7.2	5.8
27	7.1	7.8	5.6	5.5	7.4	30	9.6	6.8	12	7.2	9.4	5.8
28	6.9	7.7	5.5	5.5	7.3	27	10	7.1	13	7.0	7.8	5.8
29	6.7	8.2	5.6	5.6	---	39	10	7.4	25	7.0	9.2	5.8
30	6.5	7.8	5.8	5.6	---	68	11	6.9	17	12	7.5	5.8
31	6.2	---	5.5	5.6	---	48	---	6.6	---	7.0	6.9	---
TOTAL	242.7	243.5	190.1	169.8	172.0	984.4	349.3	260.2	310.7	308.4	596.1	181.6
MEAN	7.83	8.12	6.13	5.48	6.14	31.8	11.6	8.39	10.4	9.95	19.2	6.05
MAX	10	30	8.8	6.0	8.9	100	33	13	25	42	78	6.8
MIN	6.2	3.9	5.2	5.3	5.4	7.4	7.2	6.6	5.8	6.2	6.9	5.8
CFSM	.34	.35	.27	.24	.27	1.38	.50	.37	.45	.43	.84	.26
IN.	.39	.39	.31	.27	.28	1.59	.56	.42	.50	.50	.96	.29
WTR YR 1979	TOTAL	4008.8	MEAN	11.0	MAX	100	MIN	3.9	CFSM	.48	IN	6.48

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	13	9.5	7.6	5.9	6.2	7.0	6.5	6.1	4.5	2.6	3.5	22
2	8.4	7.9	7.5	5.8	6.2	6.4	6.4	6.0	8.0	2.6	7.0	13
3	7.2	7.1	7.3	5.8	6.2	6.2	19	6.0	6.5	2.5	4.5	7.5
4	6.6	6.6	7.2	5.7	6.2	6.3	17	5.9	4.1	2.4	3.7	7.2
5	6.2	6.6	8.1	5.6	6.1	6.2	14	5.8	16	10	4.3	7.0
6	6.2	9.1	7.5	5.5	6.1	6.0	12	5.8	18	7.6	3.7	7.0
7	5.8	7.4	7.2	5.4	6.0	5.8	14	5.7	25	7.8	19	5.9
8	5.6	6.4	6.7	5.8	6.0	6.2	30	7.4	17	9.6	25	3.8
9	5.5	6.0	6.6	6.2	6.0	6.0	22	5.8	9.6	15	18	5.7
10	5.5	6.1	7.0	8.1	6.0	5.9	17	6.2	8.5	9.4	7.1	2.5
11	5.4	6.2	7.2	11	6.0	5.8	15	6.3	7.6	5.6	7.6	17
12	5.4	6.2	6.9	10	6.0	5.8	14	6.6	6.9	3.4	6.9	7.8
13	5.3	6.4	6.6	8.5	6.0	5.8	14	9.9	6.2	3.3	7.0	5.0
14	5.2	6.3	6.2	7.0	6.0	5.9	14	8.8	5.6	3.5	6.5	2.8
15	5.7	6.2	6.4	8.6	6.0	22	14	7.9	5.1	3.7	6.0	2.2
16	6.0	6.2	6.0	8.6	6.0	74	16	7.2	4.6	11	7.0	3.3
17	5.9	6.2	5.5	4.7	6.0	33	15	11	4.1	5.0	5.0	3.5
18	5.8	6.2	5.3	24	6.0	13	15	9.3	3.7	3.6	6.6	2.1
19	10	6.2	5.6	14	6.0	9.6	14	8.0	3.6	2.9	8.0	1.8
20	8.0	6.2	5.6	12	6.0	8.3	13	6.8	3.4	3.1	7.0	5.3
21	6.6	21	6.3	11	20	8.0	12	6.3	3.3	3.0	9.2	2.7
22	11	23	8.2	9.6	70	7.5	11	6.2	3.3	2.9	7.8	9.5
23	12	15	18	8.5	41	7.2	11	6.0	3.2	2.8	7.2	4.1
24	7.7	11	22	7.6	25	7.0	9.9	6.1	3.2	2.7	7.0	1.4
25	7.2	8.0	14	7.1	16	6.9	9.1	6.1	3.3	2.6	6.8	1.3
26	7.0	10	10	6.8	10	6.8	8.5	5.9	3.4	5.0	6.7	1.2
27	6.7	8.9	6.7	6.5	8.9	6.7	8.3	5.6	4.0	3.5	6.4	1.2
28	6.6	7.5	6.5	6.4	7.8	6.7	8.0	11	7.0	3.2	3.6	1.1
29	6.5	8.1	6.3	6.4	7.4	6.6	7.8	8.5	4.1	2.9	4.9	1.1
30	6.6	7.9	6.1	6.3	---	6.6	6.1	7.2	2.6	3.3	4.1	1.0
31	11	---	6.0	6.3	---	6.5	---	5.4	---	3.7	2.8	---
TOTAL	221.6	255.4	244.1	370.4	327.1	321.7	393.6	216.8	205.4	150.2	368.5	843.7
MEAN	7.15	8.51	7.87	11.9	11.3	10.4	13.1	6.99	6.85	4.85	11.9	28.1
MAX	13	23	22	86	70	74	30	11	25	15	49	95
MIN	5.2	6.0	5.3	5.4	6.0	5.8	6.1	5.4	2.6	2.4	3.5	7.0
CFSM	.31	.37	.34	.52	.49	.45	.57	.30	.30	.21	.52	1.22
IN.	.36	.41	.39	.60	.53	.52	.64	.35	.33	.24	.60	1.36
CAL YR 1979	TOTAL	4053.6	MEAN	11.1	MAX	100	MIN	5.2	CFSM	.48	IN	6.56
WTR YR 1980	TOTAL	3918.5	MEAN	10.7	MAX	95	MIN	2.4	CFSM	.47	IN	6.34

ROCK RIVER BASIN

05427952 PHEASANT BRANCH AT MOUTH AT MIDDLETON, WI--CONTINUED

WATER-QUALITY RECORDS

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

PERIOD OF DAILY RECORD.--

SUSPENDED-SEDIMENT DISCHARGE: April to September 1978, water years 1979 to current year.

INSTRUMENTATION.--Sediment pumping samples since November 1977.

REMARKS.--Sediment records are fair except those where water discharge ranged from 10 to 75 cubic feet per second, which are poor.--

SUSPENDED-SEDIMENT CONCENTRATIONS (April to September 1978): Maximum daily mean, 1,100 mg/l June 17; minimum daily mean, 15 mg/l Apr. 23. Maximum observed, 1,750 mg/l June 17, 25; minimum observed, 12 mg/l Apr. 18. (Water year 1979): Maximum daily mean, 245 mg/l July 11; minimum daily mean, 6 mg/l on several days. Maximum observed, 624 mg/l July 11; minimum observed, 1 mg/l Aug. 5.

SUSPENDED-SEDIMENT DISCHARGE (April to September 1978): Maximum daily, 793 tons (719 tonnes) June 17; minimum daily, 0.17 tons (0.15 tonnes) Sept. 9. (Water year 1979): Maximum daily, 43 tons (39 tonnes) Aug. 10; minimum daily, 0.05 tons (0.05 tonnes) July 19.

EXTREMES FOR CURRENT YEAR.--

SUSPENDED-SEDIMENT CONCENTRATIONS: Maximum daily mean, 710 mg/l June 7; minimum daily mean, 16 mg/l Oct. 18, June 30. Maximum observed, 834 mg/l Jan. 16; minimum observed, 15 mg/l July 16.

SUSPENDED-SEDIMENT DISCHARGE: Maximum daily, 83 tonnes (75 tonnes) June 7; minimum daily, 0.11 tonnes (0.10 tonnes) on several days.

WATER-QUALITY DATA, APRIL 1978 TO SEPTEMBER 1980

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SED. SUSP. FALL DIAM. % FINER THAN .002 MM	SED. SUSP. FALL DIAM. % FINER THAN .004 MM	SED. SUSP. FALL DIAM. % FINER THAN .008 MM	SED. SUSP. FALL DIAM. % FINER THAN .016 MM	SED. SUSP. FALL DIAM. % FINER THAN .031 MM	SED. SUSP. FALL DIAM. % FINER THAN .062 MM	SED. SUSP. SIEVE DIAM. % FINER THAN .125 MM	SED. SUSP. SIEVE DIAM. % FINER THAN .250 MM	SED. SUSP. SIEVE DIAM. % FINER THAN .500 MM	SED. SUSP. SIEVE DIAM. % FINER THAN 1.00 MM
JUN , 1978												
17...	0530	187	44	61	75	84	89	90	92	95	97	100
17...	2015	306	63	83	94	97	98	99	100	--	--	--
SEP , 1980												
22...	1145	110	63	81	89	94	97	97	99	100	--	--

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	TEMPER- ATURE, WATER (DEG C)	SEDI- MENT, SUS- PENDE (MG/L)	SEDI- MENT DIS- CHARGE, SUS- PENDE (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
JUN , 1978						
17...	0530	187	--	842	425	90
17...	2015	306	--	1500	1240	99
24...	1625	4.3	26.0	63	.74	90
AUG , 1980						
08...	1225	29	20.5	218	17	97
29...	1215	69	19.5	129	24	97
SEP						
07...	1215	73	17.0	93	18	98
09...	1205	71	19.0	132	25	97
12...	1145	100	17.0	128	35	94
22...	1145	110	17.5	381	112	97

DAY	MEAN CONCENTRATION (MG/L)		MEAN CONCENTRATION (MG/L)		MEAN CONCENTRATION (MG/L)		MEAN CONCENTRATION (MG/L)		MEAN CONCENTRATION (MG/L)		MEAN CONCENTRATION (MG/L)	
	LOADS (T/DAY)	APRIL	LOADS (T/DAY)	MAY	LOADS (T/DAY)	JUNE	LOADS (T/DAY)	JULY	LOADS (T/DAY)	AUGUST	LOADS (T/DAY)	SEPTEMBER
1	43	.80	36	.73	74	1.4	672	622	66	1.3	22	.27
2	42	.68	35	.71	74	1.4	212	68	67	1.2	21	.26
3	41	.59	33	.67	73	1.3	84	12	64	1.1	20	.26
4	40	.60	32	.64	73	1.3	73	6.3	62	1.0	19	.24
5	40	.71	32	.64	72	1.2	71	3.5	60	.92	19	.22
6	72	6.0	31	.62	72	1.2	69	2.4	57	.86	18	.19
7	33	1.7	31	.62	72	1.2	67	2.0	55	.82	18	.18
8	33	1.0	31	.61	72	1.2	65	1.7	53	.77	18	.18
9	32	.64	30	.59	72	1.2	63	1.6	51	.73	18	.17
10	40	1.0	30	.59	71	1.2	62	1.5	49	.69	18	.18
11	28	.58	30	.54	70	1.1	61	1.4	47	.66	21	.25
12	27	.52	107	8.6	70	1.1	60	1.3	46	.64	25	1.4
13	26	.48	352	129	70	1.1	60	1.3	44	.61	74	5.0
14	25	.44	127	38	70	1.1	61	1.3	43	.59	47	1.0
15	23	.40	26	2.5	70	1.1	61	1.3	41	.56	30	.73
16	22	.37	27	1.5	93	4.7	61	1.2	39	.53	25	.47
17	21	.35	29	1.3	1100	793	62	1.2	38	.50	100	16
18	23	.50	31	1.1	391	182	62	1.2	45	.60	227	109
19	21	.43	33	.98	59	7.5	62	1.1	50	.72	66	8.4
20	19	.37	35	.95	61	4.0	190	7.7	34	.48	171	30
21	18	.35	37	.90	50	1.8	513	32	33	.40	61	5.1
22	16	.30	40	.91	46	1.4	509	48	32	.38	45	2.2
23	15	.28	42	1.0	53	1.4	200	16	31	.36	43	1.3
24	50	2.0	45	1.1	60	1.5	70	2.4	30	.35	40	1.1
25	45	1.2	48	1.1	733	525	70	2.3	28	.32	37	.91
26	43	1.0	51	1.2	363	99	70	2.5	27	.31	35	.81
27	41	.90	54	1.2	115	12	69	2.0	35	.51	33	.74
28	39	.82	57	1.2	77	4.4	69	1.8	30	.38	31	.68
29	38	.79	61	1.3	59	1.9	68	1.7	24	.29	28	.60
30	37	.76	65	1.3	45	2.1	68	1.5	23	.27	27	.58
31	---	---	69	1.3	---	---	67	1.6	23	.28	---	---
TOTAL	---	26.56	---	203.40	---	1659.8	---	851.8	---	19.13	---	188.42

ROCK RIVER BASIN

05427952 PHEASANT BRANCH AT MOUTH AT MIDDLETON, WI--CONTINUED

SUSPENDED-SEDIMENT, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DAY	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
	MEAN CONCENTRATION (MG/L)	LOADS (T/DAY)	MEAN CONCENTRATION (MG/L)	LOADS (T/DAY)	MEAN CONCENTRATION (MG/L)	LOADS (T/DAY)	MEAN CONCENTRATION (MG/L)	LOADS (T/DAY)	MEAN CONCENTRATION (MG/L)	LOADS (T/DAY)	MEAN CONCENTRATION (MG/L)	LOADS (T/DAY)
1	27	.45	29	.46	40	.85	148	2.2	132	2.0	123	2.5
2	32	.82	29	.44	40	.85	146	2.2	131	2.0	124	2.5
3	24	.61	29	.42	42	.96	145	2.2	131	1.9	125	2.7
4	24	.57	29	.37	56	1.1	144	2.1	131	1.9	126	2.9
5	24	.60	29	.42	75	1.3	144	2.1	130	1.9	127	3.1
6	24	.60	29	.34	99	1.5	143	2.1	130	1.9	128	3.5
7	25	.61	29	.31	105	1.7	142	2.1	130	1.9	129	3.3
8	25	.60	30	.36	110	1.7	142	2.0	129	1.9	130	3.2
9	25	.64	30	.40	116	1.7	141	2.0	129	1.9	132	3.0
10	25	.63	30	.42	122	1.7	141	2.0	129	2.0	125	2.8
11	25	.62	30	.45	128	1.9	141	2.0	128	1.9	120	2.7
12	26	.62	30	.46	134	2.1	140	2.0	128	1.9	114	2.6
13	26	.60	52	1.7	140	2.2	140	2.0	127	1.9	105	2.7
14	26	.55	43	.98	148	2.4	140	2.0	127	1.9	98	2.6
15	26	.53	33	.54	153	2.5	139	2.0	126	1.9	90	2.1
16	26	.52	30	.36	153	2.5	139	2.0	126	1.9	80	1.8
17	26	.50	84	6.8	152	2.4	139	2.0	125	1.9	70	1.8
18	26	.50	64	3.1	151	2.4	138	2.0	125	1.8	60	5.0
19	27	.50	50	1.5	151	2.4	138	2.1	124	1.8	66	9.5
20	27	.50	45	1.2	150	2.3	138	2.2	124	1.9	75	11
21	27	.49	43	1.1	150	2.3	138	2.2	120	2.1	68	10
22	27	.48	45	1.1	150	2.3	137	2.1	117	2.3	75	11
23	27	.48	43	.99	150	2.3	137	2.0	118	2.5	88	13
24	28	.51	42	.94	150	2.3	136	2.0	119	2.9	61	12
25	28	.61	41	.89	150	2.3	136	2.0	119	2.6	53	8.0
26	28	.56	41	.87	149	2.3	135	2.0	120	2.5	51	5.0
27	28	.54	40	.85	149	2.3	135	2.0	121	2.4	49	4.0
28	28	.52	39	.82	148	2.2	134	2.0	122	2.4	47	3.4
29	28	.51	42	.92	148	2.2	133	2.0	---	---	45	4.8
30	28	.49	40	.85	147	2.3	133	2.0	---	---	139	32
31	29	.48	---	---	147	2.2	132	2.0	---	---	87	12
TOTAL	---	17.24	---	30.36	---	61.46	---	63.6	---	57.8	---	186.5

DAY	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
	MEAN CONCENTRATION (MG/L)	LOADS (T/DAY)	MEAN CONCENTRATION (MG/L)	LOADS (T/DAY)	MEAN CONCENTRATION (MG/L)	LOADS (T/DAY)	MEAN CONCENTRATION (MG/L)	LOADS (T/DAY)	MEAN CONCENTRATION (MG/L)	LOADS (T/DAY)	MEAN CONCENTRATION (MG/L)	LOADS (T/DAY)
1	69	6.1	47	1.5	29	.49	25	.53	22	.42	86	1.6
2	61	2.9	52	1.7	29	.48	20	.41	22	.43	82	1.5
3	59	3.2	54	1.9	28	.44	20	.41	37	1.3	77	1.4
4	56	3.5	47	1.4	28	.47	20	.38	7	.14	74	1.3
5	42	2.3	33	.89	28	.45	20	.35	52	7.3	70	1.2
6	38	1.4	31	.79	29	.55	20	.38	68	5.6	61	1.0
7	33	1.0	29	.70	30	.80	20	.41	36	1.9	54	.89
8	29	.90	27	.63	28	.54	20	.42	43	2.7	48	.79
9	26	.70	25	.57	68	4.4	20	.43	61	7.5	43	.70
10	25	.63	24	.53	57	3.1	90	6.3	187	43	38	.62
11	30	.81	23	.49	55	2.8	245	31	61	4.3	37	.60
12	47	1.6	21	.43	34	1.1	47	.78	55	2.2	37	.60
13	35	.95	20	.40	30	.73	49	1.7	36	1.3	36	.66
14	33	.80	18	.36	30	.64	52	1.3	40	1.3	35	.57
15	32	.73	17	.34	29	.58	40	.89	43	1.3	34	.55
16	30	.67	16	.31	28	.48	29	.61	45	1.2	33	.53
17	29	.63	15	.29	28	.45	20	.39	48	3.2	33	.53
18	27	.57	47	1.4	32	.42	10	.19	51	4.7	32	.51
19	26	.54	52	1.7	36	.48	5	.10	54	3.1	31	.49
20	24	.49	42	1.0	40	.63	3	.05	71	8.0	30	.48
21	23	.47	32	.59	29	.56	46	3.7	91	6.8	30	.48
22	22	.44	31	.57	29	.59	27	.67	99	5.9	29	.46
23	21	.41	31	.57	30	.64	6	.13	102	4.1	28	.44
24	20	.39	30	.55	30	.69	6	.13	105	2.7	28	.44
25	40	.96	30	.55	31	.78	6	.12	109	2.2	27	.42
26	59	1.5	30	.55	31	.92	6	.12	111	2.2	26	.41
27	56	1.2	30	.55	31	1.0	6	.12	113	2.8	26	.41
28	53	1.3	30	.57	32	1.1	6	.11	106	2.2	25	.39
29	49	1.3	29	.58	84	5.6	6	.11	100	2.5	25	.39
30	47	1.4	29	.54	30	1.3	58	1.1	95	1.9	24	.38
31	---	---	29	.52	---	---	22	.42	90	1.7	---	---
TOTAL	---	39.79	---	23.47	---	33.21	---	53.76	---	135.89	---	20.74

ROCK RIVER BASIN

05427952 PHEASANT BRANCH AT MOUTH AT MIDDLETON, WI--CONTINUED

SUSPENDED-SEDIMENT, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DAY	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
	MEAN CONCENTRATION (MG/L)	LOADS (T/DAY)	MEAN CONCENTRATION (MG/L)	LOADS (T/DAY)	MEAN CONCENTRATION (MG/L)	LOADS (T/DAY)	MEAN CONCENTRATION (MG/L)	LOADS (T/DAY)	MEAN CONCENTRATION (MG/L)	LOADS (T/DAY)	MEAN CONCENTRATION (MG/L)	LOADS (T/DAY)
1	34	1.2	47	1.2	140	2.9	236	3.8	320	5.4	58	1.1
2	33	.75	28	.60	138	2.8	230	3.6	340	5.7	57	.98
3	31	.60	30	.58	135	2.7	220	3.4	360	6.0	55	.92
4	30	.53	32	.57	132	2.6	210	3.2	380	6.4	54	.92
5	28	.47	34	.61	130	2.8	205	3.1	400	6.6	52	.87
6	27	.45	45	1.1	128	2.6	200	3.0	427	7.0	51	.83
7	26	.41	39	.78	126	2.4	192	2.8	360	5.8	49	.77
8	25	.38	41	.71	124	2.2	185	2.9	305	4.9	48	.80
9	24	.36	43	.70	122	2.2	180	3.0	255	4.1	47	.76
10	23	.34	46	.76	120	2.3	178	3.9	215	3.5	46	.73
11	22	.35	49	.82	118	2.3	200	4.4	184	3.0	44	.69
12	21	.31	52	.87	116	2.2	152	4.1	155	2.5	43	.67
13	20	.29	55	.95	114	2.0	140	3.9	130	2.1	42	.66
14	19	.27	58	.99	112	1.9	130	3.7	110	1.8	41	.65
15	18	.28	62	1.0	110	1.9	172	4.0	93	1.5	126	7.5
16	17	.28	66	1.1	108	1.7	387	90	78	1.3	296	59
17	17	.27	70	1.2	106	1.6	147	19	66	1.1	206	18
18	16	.25	74	1.2	104	1.5	147	9.5	55	.89	93	3.3
19	48	1.3	79	1.3	102	1.5	154	5.8	46	.75	72	1.9
20	42	.90	84	1.4	100	1.5	163	5.3	40	.65	66	1.5
21	19	.33	110	3.9	111	1.9	171	5.1	100	5.4	62	1.3
22	51	1.5	130	4.5	108	2.4	180	4.7	170	32	57	1.2
23	40	1.7	120	3.7	64	3.1	191	4.4	94	10	52	1.0
24	22	.84	105	3.1	71	4.2	203	4.2	80	5.4	48	.91
25	23	.45	113	2.4	132	5.0	215	4.1	65	2.8	45	.84
26	23	.43	120	3.2	222	6.0	228	4.2	63	1.7	41	.75
27	23	.42	127	3.0	280	5.1	240	4.2	62	1.5	38	.69
28	24	.43	133	2.7	270	4.7	255	4.4	60	1.3	35	.63
29	25	.44	144	3.1	262	4.5	270	4.7	59	1.2	33	.59
30	26	.46	142	3.0	254	4.2	285	4.8	---	---	30	.53
31	51	1.5	---	---	245	4.0	305	5.2	---	---	28	.49
TOTAL	---	18.49	---	51.04	---	88.7	---	232.4	---	132.29	---	111.48

DAY	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
	MEAN CONCENTRATION (MG/L)	LOADS (T/DAY)	MEAN CONCENTRATION (MG/L)	LOADS (T/DAY)	MEAN CONCENTRATION (MG/L)	LOADS (T/DAY)	MEAN CONCENTRATION (MG/L)	LOADS (T/DAY)	MEAN CONCENTRATION (MG/L)	LOADS (T/DAY)	MEAN CONCENTRATION (MG/L)	LOADS (T/DAY)
1	25	.44	60	.99	22	.27	16	.11	29	.27	115	7.0
2	25	.43	58	.94	46	.99	16	.11	50	.40	136	4.8
3	66	3.4	56	.91	21	.36	17	.11	35	.35	155	3.2
4	35	1.6	54	.86	20	.22	17	.11	30	.30	137	2.7
5	25	.95	53	.83	52	2.3	30	.80	35	.35	113	2.1
6	25	.81	52	.81	212	10	23	.47	30	.30	94	1.8
7	25	.94	50	.77	710	83	23	.49	63	3.4	95	16
8	353	19	48	.96	190	8.9	29	.74	156	10	97	10
9	102	7.9	47	.74	42	1.1	44	1.8	70	3.3	117	18
10	70	3.2	45	.75	39	.90	28	.71	78	1.5	72	5.3
11	70	2.8	44	.75	37	.76	24	.26	78	1.6	54	2.5
12	70	2.6	43	.77	36	.67	20	.18	77	1.4	128	32
13	69	2.6	45	1.2	35	.59	20	.18	76	1.4	156	22
14	69	2.6	42	1.0	34	.51	21	.20	75	1.3	108	8.2
15	68	2.6	39	.87	32	.44	21	.21	74	1.2	74	4.5
16	68	2.9	38	.76	30	.37	32	.96	73	1.4	56	5.1
17	67	2.7	51	1.5	29	.32	27	.22	72	.97	92	9.1
18	67	2.7	44	1.1	28	.28	22	.21	71	1.3	48	2.7
19	66	2.5	34	.73	26	.25	22	.17	70	1.5	45	2.2
20	66	2.3	33	.61	25	.23	22	.18	61	.92	42	6.0
21	65	2.1	32	.54	24	.21	21	.17	103	2.6	39	2.8
22	65	1.9	31	.52	23	.20	21	.16	57	1.4	224	64
23	65	1.9	30	.49	22	.19	21	.16	54	1.0	90	12
24	64	1.7	29	.48	21	.18	20	.15	50	.95	78	2.9
25	64	1.6	28	.46	20	.18	20	.14	46	.84	70	2.5
26	63	1.4	27	.43	19	.17	26	.21	43	.78	62	2.0
27	63	1.4	26	.39	26	.28	24	.19	41	1.4	56	1.8
28	62	1.3	51	1.5	21	.40	25	.20	127	13	49	1.5
29	62	1.3	43	.98	22	.24	28	.22	117	20	45	1.3
30	62	1.0	24	.47	16	.11	28	.25	124	15	40	1.1
31	---	---	23	.34	---	---	29	.29	98	7.3	---	---
TOTAL	---	80.57	---	24.45	---	114.62	---	10.36	---	97.43	---	257.1

ROCK RIVER BASIN

05427965 SPRING HARBOR STORM SEWER AT MADISON, WI

LOCATION.--Lat 43°04'45", long 89°28'15", in NW 1/4 SE 1/4 sec.18, T.7 N., R.9 E., Dane County, Hydrologic Unit 07090001, in city park near the junction of Spring Harbor Drive and University Avenue in Madison.

DRAINAGE AREA.--3.29 mi² (8.52 km²).

WATER-DISCHARGE RECORDS

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

GAGE.--Water-stage recorder and concrete control. Datum of gage is 855.3 ft (260.70 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Records are good except those for winter periods and flow less than 0.3 ft³/s (0.008 m³/s), which are poor.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 572 ft³/s (16.2 m³/s) July 18, 1977, gage height, 3.70 ft (1.128 m); no flow many days during period of record.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 450 ft³/s (12.7 m³/s) Sept. 12, gage height, 3.35 ft (1.021 m); minimum, 0.06 ft³/s (0.002 m³/s) Oct. 18, Dec. 17 and Jan. 22, gage height, 0.42 ft (0.128 m).

RATING TABLE (gage height, in feet, and discharge, in cubic feet per second).

0.41	0.0	0.9	12
0.5	0.55	1.0	18
0.6	1.8	1.1	26
0.7	3.8	1.2	33
0.8	6.7		

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DAY	MEAN VALUES											
	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.7	.53	.28	.49	.43	.39	.84	.50	.66	.60	.68	.63
2	2.1	.24	.30	.49	.37	.34	.85	.50	3.7	.55	4.7	.61
3	.39	.21	.36	.49	.24	.39	7.1	.50	1.2	.55	.69	.52
4	.31	.16	.34	.49	.31	.46	2.3	.50	.50	.51	1.6	1.2
5	.31	.54	.37	.42	.31	.54	.80	.49	8.4	12	1.1	.52
6	.63	2.2	.37	.40	.25	.39	1.1	.45	9.0	.57	.63	.52
7	.25	.35	.64	.25	.42	.55	1.0	.41	23	.58	18	24
8	.27	.23	.68	.25	.31	1.1	14	.39	.62	.57	8.1	.69
9	.25	.28	.68	.28	.31	.54	2.1	.42	.61	8.9	.60	8.1
10	.28	.24	.68	.82	.31	.72	1.0	.50	.48	.65	2.3	.63
11	.54	.18	1.4	3.5	.27	.46	.85	.43	.47	.58	4.9	.57
12	.26	.18	1.3	.30	.24	.43	.51	.51	.49	.55	.52	31
13	.19	.43	1.3	.37	.24	.46	.43	5.1	.52	.55	3.5	4.7
14	.18	.31	.85	.76	.24	1.9	2.1	.55	.76	.57	.53	.59
15	.25	.31	.38	1.2	.28	19	1.4	.92	1.1	.98	.51	.52
16	.26	.31	.28	28	.32	18	.53	.37	.47	12	5.5	14
17	.23	.37	.11	3.6	.24	4.5	.50	3.5	.46	.55	1.2	.77
18	.22	.43	.33	.63	.26	3.7	.50	1.6	.51	.68	.51	.52
19	5.4	.49	.36	.32	.37	1.3	.49	.80	.50	.68	9.8	.50
20	.18	.55	.32	.33	.98	.83	.49	.37	.46	.74	7.4	18
21	.16	13	.33	.32	6.7	.57	.50	.37	.52	.68	5.5	1.1
22	7.0	3.5	2.3	.31	12	.52	.49	.43	.53	.68	.54	32
23	5.2	.41	5.5	.31	7.9	.73	.49	.37	.56	.68	.52	.70
24	.55	.37	14	.31	5.3	.55	.49	.43	.59	.69	.55	.51
25	.40	.37	1.1	.37	.58	.55	.49	.43	.61	.73	.54	.82
26	.21	5.5	.41	.24	.42	.55	.48	.43	.62	5.3	.56	.58
27	.18	.38	.43	.24	.44	.55	.49	.43	1.3	.71	15	.49
28	.17	.32	.43	.24	.52	.55	.49	4.0	7.4	.65	3.6	3.1
29	1.4	.35	.44	.31	.35	.80	1.5	2.0	.55	.68	11	.55
30	.21	.31	.48	.37	---	.80	1.0	1.7	.55	1.3	6.9	.53
31	1.4	---	.48	.37	---	.84	---	.46	---	.68	.64	---
TOTAL	32.08	33.05	37.23	46.78	40.91	63.01	45.31	29.86	67.14	56.14	118.12	148.97
MEAN	1.03	1.10	1.20	1.51	1.41	2.03	1.51	.96	2.24	1.81	3.81	4.97
MAX	7.0	13	14	28	12	19	14	5.1	23	12	18	32
MIN	.16	.16	.11	.24	.24	.34	.43	.37	.46	.51	.51	.49
CFSM	.31	.33	.37	.46	.43	.62	.46	.29	.68	.55	1.16	1.51
IN.	.36	.37	.42	.53	.46	.71	.51	.34	.76	.63	1.34	1.68
CAL YR 1979	TOTAL 456.66	MEAN 1.25	MAX 30	MIN .00	CFSM .38	IN 5.16						
WTR YR 1980	TOTAL 718.60	MEAN 1.96	MAX 32	MIN .11	CFSM .60	IN 8.12						

ROCK RIVER BASIN

05427965 SPRING HARBOR STORM SEWER AT MADISON, WI--CONTINUED

WATER-QUALITY RECORDS

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

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SEDI- MENT, SUS- PENDED (MG/L)	SEDI- MENT DIS- CHARGE, SUS- PENDED (T/DAY)
OCT , 1979				
01...	1445	13	334	12
01...	1500	17	368	17
01...	1530	14	392	15
JAN , 1980				
16...	1455	34	3080	283
APR				
08...	1105	19	217	11
MAY				
13...	1010	14	2100	79
13...	1110	32	949	82
28...	1214	36	755	73
28...	1224	52	1930	271
JUN				
05...	1103	84	1790	406
05...	1113	89	2240	538
05...	1133	62	1720	288
07...	0707	17	1320	61
07...	0717	206	1740	968
07...	0737	393	1920	2040
07...	0747	257	2690	1870
07...	0817	130	2290	804
07...	0917	56	1810	274
JUL				
16...	0235	54	924	135
16...	0245	102	417	115
16...	0315	110	530	157
16...	0335	99	483	129
AUG				
02...	0845	34	529	49
02...	0920	52	442	62
07...	0845	58	362	57
07...	0935	39	183	19
19...	0625	110	653	194
19...	0635	114	872	268
19...	0700	77	749	156
19...	0800	47	822	104
27...	2115	215	984	571
27...	2130	359	1250	1210
27...	2145	200	640	346
27...	2215	94	668	170
27...	2300	56	886	134
29...	0915	161	937	407
SEP				
12...	0700	138	470	175
12...	0710	328	667	591
12...	0720	402	735	798
12...	0755	141	628	239

430343089274301 4910 MARATHON DRIVE, MADISON, WI
(TRITIUM STATION)

LOCATION.--Lat 43°03'43", long 89°27'43", in SW 1/4 Sec.20, T.7 N., R.9 E., Dane County, Hydrologic Unit 07090001,
at precipitation gage at 4910 Marathon Drive, Madison.

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

REMARKS.--Precipitation samples collected July to September 1980 are not yet analyzed.

WATER-QUALITY DATA, APRIL 1979 TO JUNE 1980

DATE	TRITIUM IN WATER MOLE- CULES (TU)	TRITIUM WATER MOLE- CULES COUNT ERROR (TU)	PRECIP- ITATION ACCUM- ULATED (INCHES)
1979			
APR 01 - JUL 14	55.2	4.2	10.67
JUL 15 - SEP 30	40.0	3.1	7.37
OCT 01 - DEC 31	26.8	1.3	6.56
1980			
JAN 01 - MAR 31	31.1	1.3	2.77
APR 01 - JUN 30	37.8	1.7	8.48

ROCK RIVER BASIN

05427970 WILLOW CREEK AT MADISON, WI

LOCATION.--Lat 43°04'27", long 89°25'21", in NW 1/4 NW 1/4 sec.22, T.7 N., R.9 E., Dane County, Hydrologic Unit 07090001, on left bank 800 ft (244 m) upstream from Observatory Drive on the University of Wisconsin Campus, 200 ft (61 m) downstream from storm sewer outlet and 0.3 mi (0.5 km) upstream from mouth.

DRAINAGE AREA.--3.15 mi² (8.16 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1973 to current year.

REVISED RECORDS.--WDR WI-79-1: Drainage area.

GAGE.--Water-stage recorder, parshall flume and concrete control. Datum of gage is 847.9 ft (258.4 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Records are good except those for discharges below 2.0 ft³/s (0.06 m³/s), which are poor. Stage-discharge rating based on indirect measurements.

AVERAGE DISCHARGE.--7 years (1974-80), 2.45 ft³/s (0.069 m³/s), 10.56 in/yr (268 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 745 ft³/s (21.1 m³/s) June 25, 1978, gage height, 6.40 ft (1.951 m), minimum daily, 0.01 ft /s (0.0003 m /s) Sept. 8, 1979.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 685 ft³/s (19.4 m³/s) June 7, gage height, 6.26 ft (1.908 m); minimum daily, 0.02 ft³/s (0.0006 m³/s) Nov. 18.

REVISIONS.--The maximum discharges for some water years have been revised, as shown in the following table. They supersede figures published in the reports for 1974 to 1978.

Water Year	Date	Discharge (ft ³ /s)	Discharge (m ³ /s)	Gage Height (ft)	Gage Height (m)
1974	Aug. 16, 1974	668	18.9	6.22	1.896
1975	July 3, 1975	664	18.8	6.21	1.893
1976	Aug. 14, 1976	420	11.9	5.54	1.689
1977	July 18, 1977	648	18.4	6.17	1.881
1978	June 25, 1978	745	21.1	6.40	1.951

RATING TABLE (gage height, in feet, and discharge, in cubic feet per second).
(Stage-discharge relation affected by backwater from Lake Mendota Mar. 5-21, 1974; Mar. 24 to Apr. 16, Apr. 18, Apr. 28 to June 13, June 15-23, June 25 to July 2, July 4-22, 1975; Mar. 15 to Apr. 9, Apr. 25-27, 1976; June 26 to Aug. 7, 1978; Aug. 30 to Sept. 30, 1980.)

2.48	0.0	2.8	3.7	3.5	33
2.5	0.2	2.9	5.5	3.7	50
2.6	1.2	3.1	11	3.9	71
2.7	2.3	3.3	20	4.1	96

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.1	.46	.53	.34	3.0	.39	.53	.86	.65	.84	1.0	1.3
2	.23	.28	.50	.49	6.7	.30	.59	.84	5.3	.94	6.1	1.0
3	.19	.26	.58	.48	6.6	.37	8.1	.82	.96	.82	.69	.90
4	.24	.22	.57	.49	.43	.55	1.1	.80	.53	.88	2.7	1.8
5	.26	.49	.63	.41	.46	.84	.48	.80	9.3	15	1.2	.90
6	.32	2.8	.62	.40	.52	.56	1.1	.74	9.2	.72	1.1	1.0
7	.11	.36	.77	.48	.50	.75	1.2	.57	23	1.1	21	25
8	.30	.27	.55	.53	.58	1.7	12	.46	.38	1.2	7.4	.90
9	.50	.20	.55	.53	.61	.74	2.4	.50	.75	13	.81	10
10	.60	.22	.70	1.6	.52	1.2	.51	.59	.45	1.2	2.6	1.0
11	.40	.12	1.5	5.0	.60	.61	.99	.42	.52	1.2	5.1	1.0
12	.50	.56	.77	.45	.62	.57	.59	.48	.64	1.1	.92	34
13	.80	.53	.72	.50	.64	.72	.55	7.7	.74	1.0	4.0	2.9
14	.40	.25	.66	1.2	.65	1.9	2.8	.79	.74	1.4	.81	1.0
15	.80	.26	.73	2.0	.75	12	1.4	1.2	.70	1.7	.85	.90
16	.40	.11	.62	22	.60	11	.64	.27	.36	15	6.1	11
17	.30	.08	.79	1.6	.50	1.5	.70	7.4	.46	1.3	.62	1.0
18	.30	.02	.77	.40	.54	.95	.65	1.6	.57	1.0	.77	.90
19	6.0	.17	.79	.27	.77	.87	.79	.54	.48	.94	8.5	.90
20	.60	.26	.83	.27	1.7	.60	.78	.39	.40	.93	7.6	13
21	.46	14	.77	.39	7.4	.42	.72	.56	.56	1.1	3.8	2.0
22	14	2.5	4.3	.59	7.3	.47	.89	.84	.62	1.0	.91	28
23	4.5	.30	4.3	.36	1.9	.89	.93	.72	.95	.96	.79	1.1
24	.31	.34	13	.36	1.4	.53	.72	.63	.98	.99	.72	.90
25	1.5	.33	.58	.31	.61	.48	1.9	.72	1.1	1.1	1.0	1.5
26	.50	6.0	.44	.29	.42	.44	.61	.47	1.3	11	1.1	1.1
27	.44	.48	.36	.22	.49	.55	.58	.78	2.0	.54	20	.90
28	.55	.43	.37	.45	.80	.55	.72	2.9	9.2	.83	1.3	1.5
29	.48	.43	.27	.44	.45	.52	1.3	3.3	.65	.96	17	1.0
30	.37	.46	.32	.44	---	.50	.90	3.1	.66	1.5	4.0	.90
31	3.0	---	.42	.47	---	.52	---	.57	---	.98	1.0	---
TOTAL	42.46	33.19	39.31	43.76	48.06	43.99	46.79	42.36	74.15	82.23	131.49	149.30
MEAN	1.37	1.11	1.27	1.41	1.66	1.42	1.56	1.37	2.47	2.65	4.24	4.98
MAX	14	14	13	22	7.4	12	12	7.7	23	15	21	34
MIN	.11	.02	.27	.22	.42	.30	.48	.27	.36	.54	.62	.90
CFSM	.44	.35	.40	.45	.53	.45	.50	.44	.78	.84	1.35	1.58
IN.	.50	.39	.46	.52	.57	.52	.55	.50	.88	.97	1.55	1.76

CAL YR 1979 TOTAL 598.17 MEAN 1.64 MAX 30 MIN .01 CFSM .52 IN 7.06
WTR YR 1980 TOTAL 777.09 MEAN 2.12 MAX 34 MIN .02 CFSM .67 IN 9.17

ROCK RIVER BASIN
05427970 WILLOW CREEK AT MADISON, WI--CONTINUED

DAY	REVISED DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1973 TO SEPTEMBER 1974											
	OCT	NOV	DEC	JAN	FEB	MEAN MAR	APR	MAY	JUN	JUL	AUG	SEP
1	7.0	1.6	1.3	1.2	1.3	1.5	1.4	1.3	2.0	2.0	2.6	1.6
2	3.0	1.7	1.3	1.2	1.2	9.2	1.6	1.6	2.5	2.3	2.2	1.5
3	2.4	1.5	1.3	1.2	1.2	9.8	12	2.2	1.9	2.3	1.6	1.6
4	11	1.4	21	1.2	1.2	12	3.6	1.3	2.2	2.0	2.5	1.9
5	1.7	1.6	2.9	1.2	1.2	1.5	1.2	1.4	4.7	2.0	1.7	2.0
6	1.5	1.6	1.5	1.2	1.3	1.4	1.1	1.2	3.0	1.9	2.0	2.1
7	3.2	1.6	1.4	1.1	1.3	1.4	1.0	5.9	4.4	1.6	1.9	2.1
8	1.4	1.5	1.3	1.2	1.3	4.6	1.6	7.2	1.8	2.3	2.0	2.0
9	2.5	1.5	1.2	1.3	1.2	4.1	1.2	1.2	38	2.4	2.0	2.7
10	11	1.5	1.2	1.3	1.2	1.4	1.2	3.4	2.5	13	1.9	2.3
11	2.2	1.4	1.3	1.2	1.3	1.5	3.2	8.2	1.8	2.3	4.7	2.4
12	3.5	1.5	1.3	1.2	2.1	1.3	4.5	1.2	1.8	2.1	6.0	3.6
13	1.5	1.5	1.4	1.1	1.6	1.2	9.8	6.9	1.9	2.1	2.0	1.7
14	1.4	2.2	1.4	1.3	1.2	1.2	27	6.5	3.8	2.0	2.2	1.6
15	1.6	9.2	1.4	1.6	1.2	6.0	1.4	1.2	1.8	2.4	2.4	1.7
16	1.6	1.6	1.3	9.0	1.8	1.3	2.1	31	1.2	2.8	20	1.8
17	1.8	1.6	1.4	4.0	1.8	1.2	1.2	1.5	1.4	3.0	2.4	1.8
18	1.7	1.7	1.4	3.0	6.1	1.3	4.6	4.2	4.5	3.0	1.5	1.9
19	1.8	1.8	1.3	1.5	3.6	1.2	1.3	1.1	2.3	2.7	1.4	2.0
20	1.8	5.2	1.2	29	5.0	1.2	1.2	1.4	2.2	2.1	1.4	2.0
21	1.9	2.7	1.2	7.5	4.6	1.2	3.3	18	8.9	1.9	5.0	1.8
22	1.9	1.5	1.2	2.6	1.8	1.8	1.2	5.5	1.8	2.4	3.5	1.5
23	1.7	1.4	1.2	2.0	1.1	1.2	1.2	1.7	1.5	2.2	2.4	3.0
24	2.4	7.8	3.3	1.4	1.1	1.2	1.2	1.5	1.7	2.2	2.0	1.8
25	1.9	1.3	15	2.2	1.2	1.3	1.2	1.4	1.7	14	1.9	1.7
26	1.7	1.4	1.7	39	1.3	1.4	1.2	1.3	1.9	2.2	3.8	1.9
27	5.7	3.5	1.7	6.4	2.5	1.5	1.2	1.4	2.1	2.0	6.8	1.9
28	2.2	1.8	1.6	1.4	3.5	14	6.5	1.8	2.1	2.3	1.9	5.7
29	2.9	1.5	1.3	2.0	---	15	4.5	2.0	1.9	2.3	2.2	2.7
30	2.1	1.4	1.2	7.2	---	6.9	1.3	1.9	1.8	2.4	6.0	1.6
31	---	---	1.1	2.0	---	1.2	---	2.1	---	2.5	3.5	---
TOTAL	89.6	67.5	78.3	138.7	55.2	111.0	105.0	128.5	111.1	92.7	105.4	63.9
MEAN	2.89	2.25	2.53	4.47	1.97	3.58	3.50	4.15	3.70	2.99	3.40	2.13
MAX	11	9.2	21	39	6.1	15	27	31	38	14	20	5.7
MIN	1.4	1.3	1.1	1.1	1.1	1.2	1.0	1.1	1.2	1.6	1.4	1.5
CFSM	.92	.71	.80	1.42	.63	1.14	1.11	1.32	1.18	.95	1.08	.68
IN.	1.06	.80	.92	1.64	.65	1.31	1.24	1.52	1.31	1.09	1.24	.75

WTR YR 1974 TOTAL 1146.9 MEAN 3.14 MAX 39 MIN 1.0 CFSM 1.00 IN 13.54

DAY	REVISED DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1974 TO SEPTEMBER 1975											
	OCT	NOV	DEC	JAN	FEB	MEAN MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.8	2.2	1.4	1.3	1.4	1.2	1.5	1.7	1.5	1.4	8.7	1.5
2	1.8	1.7	1.6	1.4	1.3	1.7	1.6	1.4	1.4	1.4	1.7	1.9
3	1.8	1.6	1.4	1.5	1.3	1.0	1.5	1.8	1.4	51	1.4	1.8
4	2.2	1.7	1.4	1.3	1.3	1.1	1.5	1.5	13	1.6	1.9	1.4
5	9.7	1.7	1.5	1.3	1.4	1.0	1.5	1.6	1.8	1.5	3.8	2.5
6	14	1.7	5.7	1.4	1.2	1.7	1.4	3.3	1.5	3.6	2.1	1.3
7	1.7	1.6	6.0	1.4	1.1	2.5	1.4	1.7	1.4	1.5	1.6	1.2
8	1.8	1.5	2.0	3.0	.84	1.5	1.4	1.5	1.4	1.4	1.7	1.5
9	1.9	1.4	1.4	1.8	1.1	.98	1.5	1.4	1.4	1.4	5.5	1.5
10	1.7	14	1.7	15	1.1	1.3	1.4	1.4	1.4	1.4	1.5	1.5
11	1.9	2.9	1.6	2.1	1.2	1.1	1.4	2.2	1.5	9.5	1.9	1.6
12	1.8	1.4	1.5	1.2	1.1	1.9	1.4	1.6	3.7	1.5	2.2	1.3
13	13	1.4	1.7	1.3	1.0	1.4	1.4	1.4	4.6	1.4	3.0	1.1
14	2.1	1.3	2.5	1.3	1.2	1.6	1.4	1.4	13	1.4	1.5	1.1
15	1.8	1.3	6.0	1.3	1.0	2.1	1.4	1.4	2.4	1.4	1.8	1.3
16	1.9	1.2	3.0	1.3	1.1	3.2	1.4	1.4	3.9	1.4	3.0	1.4
17	2.2	1.2	1.5	1.5	1.5	6.9	1.5	1.3	6.5	1.4	1.5	1.4
18	2.2	1.3	1.5	1.5	1.6	12	1.5	1.3	7.1	1.4	12	5.6
19	1.9	1.4	1.6	1.5	2.0	21	1.6	6.0	1.5	1.4	1.5	1.1
20	1.9	1.4	1.6	1.5	1.9	15	.84	1.5	2.1	1.4	2.0	1.3
21	2.0	1.5	1.4	1.6	2.7	23	1.6	1.4	1.5	1.5	3.0	.88
22	2.0	1.5	1.3	1.5	3.3	15	1.4	1.4	3.8	1.6	7.7	1.0
23	1.8	8.4	1.5	1.2	1.8	16	5.3	3.6	1.5	28	1.7	1.2
24	2.5	1.7	1.5	4.0	2.3	5.0	1.3	3.8	32	1.9	1.8	1.2
25	2.0	1.3	1.3	2.4	4.0	1.6	1.3	2.0	1.5	1.6	3.2	1.2
26	1.8	1.4	1.4	1.2	2.5	1.4	1.1	1.5	1.4	1.5	1.9	1.2
27	1.8	1.4	1.5	1.3	1.5	1.4	20	1.4	8.8	1.4	1.8	1.1
28	2.8	1.4	1.6	1.9	1.3	7.7	41	1.4	1.5	1.8	8.6	1.0
29	6.6	1.4	1.4	1.4	---	1.8	3.8	1.5	1.4	2.0	9.0	1.6
30	12	1.7	1.5	1.4	---	1.6	1.8	23	1.4	2.1	1.6	1.1
31	9.7	---	1.7	1.5	---	1.5	---	1.8	---	2.2	1.3	---
TOTAL	114.1	65.6	62.7	63.3	44.74	155.48	107.24	79.8	127.3	134.0	101.9	44.78
MEAN	3.68	2.19	2.02	2.04	1.60	5.02	3.57	2.57	4.24	4.32	3.29	1.49
MAX	14	14	6.0	15	4.0	23	41	23	32	51	12	5.6
MIN	1.7	1.2	1.3	1.2	.80	.98	.84	1.3	1.4	1.4	1.3	.88
CFSM	1.17	.70	.64	.65	.51	1.59	1.13	.82	1.35	1.37	1.04	.47
IN.	1.35	.77	.74	.75	.53	1.84	1.27	.94	1.50	1.58	1.20	.53

CAL YR 1974 TOTAL 1153.90 MEAN 3.16 MAX 39 MIN 1.0 CFSM 1.00 IN 13.62
WTR YR 1975 TOTAL 1100.94 MEAN 3.02 MAX 51 MIN .80 CFSM .96 IN 13.00

ROCK RIVER BASIN

05427970 WILLOW CREEK AT MADISON, WI--CONTINUED

DAY	REVISED DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976											
	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.1	1.1	1.2	1.1	1.1	1.4	1.8	.92	1.4	1.2	.85	1.7
2	1.0	8.5	.98	1.3	1.3	2.4	1.5	.85	1.4	1.4	1.2	1.4
3	1.3	4.9	1.1	1.2	1.4	1.8	1.4	.96	1.4	1.3	1.4	1.9
4	1.1	1.1	1.1	.95	1.5	36	1.3	1.4	1.5	1.0	1.5	1.4
5	1.2	1.1	1.2	1.0	1.6	10	1.2	2.9	1.4	1.3	2.1	1.0
6	1.5	1.1	1.1	1.2	1.5	3.8	1.2	1.0	1.3	1.7	1.3	1.1
7	1.4	1.9	1.0	1.1	1.4	5.9	1.2	.96	1.7	1.8	1.3	1.3
8	1.8	.96	1.2	1.2	1.7	3.5	1.1	.91	1.8	1.9	1.1	1.6
9	1.4	6.8	1.2	1.2	2.1	5.4	1.1	.75	1.8	2.0	1.4	1.6
10	1.5	1.6	1.1	1.1	4.9	4.4	7.4	1.3	1.8	1.9	1.7	1.3
11	.91	.96	1.2	1.0	2.1	3.4	1.6	1.1	2.1	1.8	1.8	1.5
12	1.4	1.0	1.1	1.3	4.3	24	1.2	1.1	1.9	1.9	1.9	1.3
13	1.6	.94	1.9	1.2	1.9	2.1	1.1	2.0	5.9	2.1	1.7	1.6
14	2.8	.93	2.8	1.2	1.3	1.9	1.2	1.1	3.2	2.3	13	1.7
15	1.2	.75	.99	1.1	6.9	1.4	7.4	19	1.7	2.2	.68	1.5
16	1.1	.71	1.1	1.1	4.3	1.3	1.3	13	1.5	1.9	.97	1.2
17	1.2	1.0	1.1	.87	3.9	1.2	1.9	1.3	1.7	1.6	1.0	1.0
18	.84	1.1	1.1	.97	11	1.1	2.1	.95	2.2	1.5	1.7	.74
19	.71	1.1	1.1	1.3	3.4	1.0	1.0	.95	1.4	2.0	2.0	4.2
20	.91	2.3	.99	1.2	4.2	1.4	19	1.4	1.4	2.6	1.9	.94
21	1.1	2.2	.92	1.2	2.3	1.2	17	1.1	1.8	1.9	1.6	.82
22	1.2	.76	1.0	1.3	2.0	1.1	1.5	.79	1.9	1.9	1.5	1.0
23	1.2	.70	1.1	1.3	2.6	1.0	2.4	.67	13	2.1	2.0	.90
24	6.1	.89	1.0	1.2	6.3	1.0	14	.95	1.9	1.8	2.0	1.1
25	.96	1.0	.90	1.1	8.9	1.0	2.8	1.0	1.5	1.7	6.5	1.4
26	.84	.98	1.1	1.3	10	12	1.5	1.1	1.4	2.3	1.6	.91
27	1.1	.85	1.3	1.4	11	1.5	1.2	1.4	1.3	2.1	5.7	1.2
28	1.3	.91	.94	1.4	2.4	1.1	1.2	1.5	1.8	9.5	3.2	1.0
29	1.2	13	1.1	1.4	2.0	3.1	1.2	1.2	1.8	1.6	.82	1.2
30	1.2	1.9	1.2	1.4	---	4.2	2.0	1.2	1.4	3.9	1.2	1.2
31	1.2	---	1.3	1.3	---	2.0	---	1.1	---	1.5	1.6	---
TOTAL	43.37	63.04	36.42	36.89	109.3	142.6	101.8	65.86	66.3	65.7	68.22	40.71
MEAN	1.40	2.10	1.17	1.19	3.77	4.60	3.39	2.12	2.21	2.12	2.20	1.36
MAX	6.1	13	2.8	1.4	11	36	19	19	13	9.5	13	4.2
MIN	.71	.70	.90	.87	1.1	1.0	1.0	.67	1.3	1.0	.68	.74
CFSM	.44	.67	.37	.38	1.20	1.46	1.08	.67	.70	.67	.70	.43
IN.	.51	.74	.43	.44	1.29	1.68	1.20	.78	.78	.78	.81	.48
CAL YR 1975	TOTAL	1001.37	MEAN 2.74	MAX 51	MIN .70	CFSM .87	IN 11.82					
WTR YR 1976	TOTAL	840.21	MEAN 2.30	MAX 36	MIN .67	CFSM .73	IN 9.92					

DAY	REVISED DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977											
	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.3	.76	.90	.73	1.1	1.0	1.7	.39	.94	.98	1.2	1.5
2	1.1	.95	.96	.70	1.2	.98	5.4	2.8	1.2	.90	1.5	1.2
3	.90	1.0	.83	.91	1.2	6.9	.82	.94	1.2	4.0	2.4	.85
4	.98	1.1	.69	1.0	1.7	4.4	11	1.9	1.2	.78	2.0	1.4
5	6.3	1.1	.61	1.0	1.4	1.2	1.2	1.2	14	1.6	4.4	1.1
6	.79	.83	.88	.95	1.3	.97	.98	.83	1.2	8.4	1.1	1.3
7	1.4	.86	.90	1.0	1.3	1.1	.98	.60	1.4	2.6	1.4	1.3
8	1.0	1.1	.91	.79	1.2	1.3	1.0	.41	2.8	1.5	9.3	1.1
9	1.4	1.1	.94	.73	1.6	1.1	1.6	.59	.90	1.2	2.6	1.3
10	.98	1.0	.92	.99	3.6	.90	.90	.76	.93	.91	1.4	1.1
11	2.2	.92	.76	.96	4.4	1.4	.50	.87	3.8	1.5	1.2	.87
12	1.4	.83	.64	.95	2.4	3.6	.56	1.0	.51	1.9	1.1	2.7
13	1.2	.74	.81	.96	1.6	1.9	.50	1.1	1.0	1.7	1.3	.84
14	1.4	.70	.94	.97	1.3	.70	.48	.94	1.3	1.7	.65	.75
15	1.4	.83	.92	.94	.79	.79	.45	3.7	1.6	1.7	.77	.75
16	1.0	.90	.86	.84	.85	.84	.45	1.1	2.1	19	14	.79
17	.83	.80	.86	1.2	.80	1.7	.46	1.3	2.5	25	.80	3.0
18	.91	.88	.76	.88	1.2	3.6	.48	1.5	1.1	61	.81	5.4
19	1.1	.84	.93	1.2	.75	.98	.80	1.7	1.1	1.6	.68	.96
20	.81	.78	1.0	.86	.60	2.4	3.0	2.3	.94	6.2	.63	.80
21	.96	.91	1.1	1.1	.68	.65	10	4.6	.92	8.7	1.6	.67
22	1.2	.97	1.1	.93	1.5	.58	1.5	.74	1.3	1.6	.88	1.1
23	.88	1.0	1.1	.86	46	.58	.56	1.1	1.3	1.4	2.7	3.1
24	.98	.93	1.0	1.6	6.4	.63	.40	1.5	1.3	2.0	.67	10
25	.81	.85	.90	1.2	.91	.74	4.1	1.5	1.2	1.7	.68	.38
26	.89	.73	.90	1.2	.93	.61	6.4	1.6	.95	1.7	.87	.56
27	.70	.78	1.1	1.4	.80	7.4	6.7	1.5	1.4	1.9	1.0	.58
28	.81	.64	1.1	1.3	.96	15	4.5	1.3	1.8	1.8	10	.59
29	.74	.72	1.1	1.2	---	8.0	1.0	3.3	1.3	1.8	.81	.82
30	7.7	.88	1.1	1.1	---	3.4	.36	.81	22	1.6	.90	5.7
31	.84	---	.93	1.2	---	.97	---	2.5	---	2.9	2.1	---
TOTAL	44.91	26.43	28.45	31.65	88.47	76.32	68.78	46.38	75.19	171.27	71.45	52.51
MEAN	1.45	.88	.92	1.02	3.16	2.46	2.29	1.50	2.51	5.52	2.30	1.75
MAX	7.7	1.1	1.1	1.6	46	15	11	4.6	22	61	14	10
MIN	.70	.64	.61	.70	.60	.58	.36	.39	.51	.78	.63	.38
CFSM	.46	.28	.29	.32	1.00	.78	.73	.48	.80	1.75	.73	.56
IN.	.53	.31	.34	.37	1.04	.90	.81	.55	.89	2.02	.84	.62
CAL YR 1976	TOTAL	797.17	MEAN 2.18	MAX 36	MIN .61	CFSM .69	IN 9.41					
WTR YR 1977	TOTAL	781.81	MEAN 2.14	MAX 61	MIN .36	CFSM .68	IN 9.23					

ROCK RIVER BASIN

05427970 WILLOW CREEK AT MADISON, WI--CONTINUED

REVISED DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978												
DAY	OCT	NOV	DEC	JAN	FEB	MEAN VALUES MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.9	9.1	.89	.60	.87	.88	7.5	1.0	1.4	96	1.2	1.4
2	.34	5.7	.65	.60	.92	.66	11	.78	1.0	3.0	1.1	1.1
3	.61	.52	.60	.67	.89	.95	8.4	.79	1.1	1.5	1.1	1.1
4	.60	.47	.33	.69	.81	.61	4.2	.79	.92	1.2	1.0	1.0
5	1.5	.33	.45	.72	.80	.60	7.5	.87	1.3	1.2	1.1	.90
6	1.2	1.4	.53	.91	.88	1.1	15	.94	1.6	1.3	1.2	.80
7	7.8	1.1	.52	1.2	1.0	1.0	.94	.72	3.3	1.2	1.2	1.9
8	2.1	.73	.56	.70	1.1	1.7	1.4	4.1	.97	1.1	1.3	1.6
9	1.0	.85	.54	.66	1.1	1.4	6.4	.96	1.1	1.3	1.2	1.5
10	2.1	.54	.40	.64	1.2	1.6	4.0	.91	1.1	1.1	1.3	1.5
11	1.1	.57	.40	.66	1.0	4.5	1.2	1.1	1.3	1.2	1.3	4.7
12	1.2	.44	.74	.70	1.3	2.8	1.0	12	1.4	3.0	1.2	2.6
13	1.1	.40	1.7	.70	1.1	1.4	1.7	43	1.2	1.5	1.0	14
14	.84	.42	.93	.64	1.2	2.4	1.6	1.4	.92	1.2	1.4	3.5
15	.89	.48	.77	.61	1.1	1.7	.82	.74	.99	1.1	6.1	.90
16	.88	.52	1.6	.61	1.1	2.2	.74	.74	37	1.2	1.3	.64
17	1.3	.56	4.2	.74	1.0	1.8	.85	.77	74	1.3	1.4	18
18	1.3	.48	.82	.74	.96	1.9	12	.91	1.3	1.2	8.9	39
19	1.4	.35	.79	.79	.84	3.8	.91	1.2	1.5	1.1	2.3	1.2
20	1.4	.95	.73	.73	.96	2.9	.95	1.0	1.6	23	.73	14
21	1.3	.55	.77	.64	1.2	2.4	.73	.58	1.5	25	1.1	1.1
22	.90	.64	.65	.60	1.1	1.9	.58	.83	1.4	5.0	1.4	.83
23	.75	1.4	.69	.71	1.1	4.6	4.9	1.6	1.4	1.5	1.5	.63
24	2.3	.50	.52	.96	1.2	7.4	14	1.0	1.2	1.1	1.8	.58
25	1.7	.41	.42	.85	1.3	7.2	.90	1.2	47	1.0	1.4	.63
26	.86	.30	.40	.84	1.3	7.7	.74	1.4	1.6	1.5	1.0	.67
27	.81	.30	.51	.66	.77	8.0	.84	1.3	1.4	1.2	8.1	.66
28	.77	.46	.62	.70	.72	7.7	.82	1.1	1.3	1.1	1.4	.58
29	.71	.75	.66	.84	---	7.3	.69	1.4	1.1	1.1	1.1	.78
30	.92	.56	.64	.76	---	7.1	.61	1.3	9.0	1.1	1.1	.55
31	1.6	---	.56	.90	---	7.8	---	1.4	---	1.2	1.2	---
TOTAL	43.18	31.78	24.59	22.77	28.82	105.00	112.92	87.83	201.90	185.5	58.43	118.35
MEAN	1.39	1.06	.79	.73	1.03	3.39	3.76	2.83	6.73	5.98	1.88	3.95
MAX	7.8	9.1	4.2	1.2	1.3	8.0	15	43	74	96	8.9	39
MIN	.34	.30	.33	.60	.72	.60	.58	.58	.92	1.0	.73	.55
CFSM	.44	.34	.25	.23	.33	1.08	1.19	.90	2.14	1.90	.60	1.25
IN.	.51	.38	.29	.27	.34	1.24	1.33	1.04	2.38	2.19	.69	1.40
CAL YR 1977	TOTAL	781.57	MEAN	2.14	MAX	61	MIN	.30	CFSM	.68	IN	9.23
WTR YR 1978	TOTAL	1021.07	MEAN	2.80	MAX	96	MIN	.30	CFSM	.89	IN	12.05

ROCK RIVER BASIN

05427970 WILLOW CREEK AT MADISON, WI--CONTINUED

WATER-QUALITY RECORDS

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

PERIOD OF DAILY RECORD.--

SUSPENDED-SEDIMENT DISCHARGE: Water years 1974 to current year.

INSTRUMENTATION.--Sediment pumping sampler since October 1, 1974.

REMARKS.--Sediment records are good. Sediment records for water years 1975 to 1978 have been revised based on revised water-discharge records and supersede those previously published.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SUSPENDED-SEDIMENT CONCENTRATIONS: Maximum daily mean, 602 mg/l July 1, 1978; minimum daily mean, 1 mg/l on many days. Maximum observed, 5,450 mg/l July 16, 1977; minimum observed, 1 mg/l on several days.

SUSPENDED-SEDIMENT DISCHARGE: Maximum daily, 319 tons (289 tonnes) July 1, 1978; minimum daily, 0 ton (0 tonne) on many days.

REVISIONS.--The maximum daily suspended-sediment discharges for water years 1975 to 1978 have been revised to 173 tons (157 tonnes) June 24, 1975; 18 tons (16 tonnes) Mar. 12, 1976; 133 tons (121 tonnes) July 16, 1977; 319 tons (289 tonnes) July 1, 1978, superseding those previously published.

EXTREMES FOR CURRENT YEAR.--

SUSPENDED-SEDIMENT CONCENTRATIONS: Maximum daily mean, 120 mg/l Apr. 3; minimum daily mean, 1 mg/l on many days. Maximum observed, 1,950 mg/l May 13; minimum observed, 1 mg/l on several days.

SUSPENDED-SEDIMENT DISCHARGE: Maximum daily, 58 tons (53 tonnes) June 7; minimum daily, 0.0 ton (0.0 tonne) on many days.

WATER-QUALITY DATA, WATER YEARS OCTOBER 1974 TO SEPTEMBER 1980								
DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SEDI- MENT, SUS- PENDE (MG/L)	SEDI- MENT DIS- CHARGE, SUS- PENDE (T/DAY)	SED. SUSP. FALL DIAM. % FINER THAN .002 MM	SED. SUSP. FALL DIAM. % FINER THAN .004 MM	SED. SUSP. FALL DIAM. % FINER THAN .008 MM	SED. SUSP. FALL DIAM. % FINER THAN .016 MM
MAY , 1980								
13...	1107	117	1140	360	9	15	26	42
13...	1122	108	726	212	11	17	27	42
JUN								
05...	1123	146	1100	434	--	--	--	--
07...	0736	685	1800	3330	--	--	--	--
07...	0752	569	2090	3210	--	--	--	--

DATE	TIME	SED. SUSP. FALL DIAM. % FINER THAN .031 MM	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM	SED. SUSP. SIEVE DIAM. % FINER THAN .125 MM	SED. SUSP. SIEVE DIAM. % FINER THAN .250 MM	SED. SUSP. SIEVE DIAM. % FINER THAN .500 MM	SED. SUSP. SIEVE DIAM. % FINER THAN 1.00 MM	SED. SUSP. SIEVE DIAM. % FINER THAN 2.00 MM
MAY , 1980								
13...		59	69	84	91	98	100	--
13...		58	68	84	94	98	99	100
JUN								
05...		--	43	59	78	92	100	--
07...		--	46	65	91	99	100	--
07...		--	22	29	51	83	93	96

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	TEMPER- ATURE, WATER (DEG C)	SEDI- MENT, SUS- PENDE (MG/L)	SEDI- MENT DIS- CHARGE, SUS- PENDE (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
MAY , 1980						
13...	1107	117	10.5	1140	360	69
13...	1122	108	10.5	726	212	68
JUN						
05...	1049	139	--	1030	387	65
05...	1110	253	--	1290	899	35
05...	1115	206	--	954	531	51
05...	1123	146	--	1100	434	43
05...	1149	36	--	767	75	92
05...	1157	25	--	525	35	95
07...	0736	685	--	1800	3330	46
07...	0748	569	--	1870	2870	26
07...	0752	569	--	2090	3210	22
07...	0820	103	--	856	238	69
JUL						
05...	0515	436	--	1210	1420	26
05...	0545	174	--	1000	470	39

ROCK RIVER BASIN

05427970 WILLOW CREEK AT MADISON, WI--CONTINUED

SUSPENDED-SEDIMENT, WATER YEAR OCTOBER 1974 TO SEPTEMBER 1975

DAY	MEAN CONCEN- TRATION (MG/L)	LOADS (T/DAY)	MEAN CONCEN- TRATION (MG/L)	LOADS (T/DAY)	MEAN CONCEN- TRATION (MG/L)	LOADS (T/DAY)	MEAN CONCEN- TRATION (MG/L)	LOADS (T/DAY)	MEAN CONCEN- TRATION (MG/L)	LOADS (T/DAY)	MEAN CONCEN- TRATION (MG/L)	LOADS (T/DAY)
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	4	.02	27	.14	3	.01	6	.02	8	.02	18	.04
2	4	.02	21	.08	10	.03	5	.01	8	.02	29	.06
3	4	.02	8	.03	3	.01	5	.01	8	.02	14	.03
4	6	.03	5	.02	3	.01	4	.01	8	.02	8	.02
5	40	5.5	4	.01	3	.01	4	.01	9	.03	19	.03
6	50	6.3	3	.01	45	1.6	4	.01	10	.02	28	.11
7	4	.01	3	.01	45	.81	4	.01	20	.04	90	.93
8	4	.01	3	.01	13	.08	55	.65	13	.02	36	.12
9	4	.02	3	.01	5	.01	13	.09	10	.01	14	.02
10	5	.02	17	1.1	5	.02	186	11	17	.04	15	.05
11	4	.02	4	.04	4	.01	26	.17	9	.02	19	.03
12	4	.02	4	.01	3	.01	8	.02	12	.02	84	.54
13	32	4.0	4	.01	3	.01	7	.02	28	.05	32	.08
14	4	.02	4	.01	5	.04	7	.02	44	.09	32	.13
15	2	.01	4	.01	45	.84	7	.02	40	.07	77	.39
16	2	.01	4	.01	21	.12	7	.02	15	.03	68	.97
17	2	.01	5	.01	32	.10	7	.02	6	.02	100	2.6
18	3	.01	5	.01	41	.12	7	.02	8	.04	133	6.0
19	3	.01	5	.01	27	.08	7	.02	18	.06	76	6.6
20	3	.01	4	.01	17	.06	8	.02	19	.11	43	3.6
21	4	.02	3	.01	12	.03	6	.02	46	.38	100	12
22	8	.03	3	.01	9	.02	8	.02	38	.38	104	17
23	5	.02	30	2.2	8	.02	7	.02	19	.07	97	11
24	5	.03	13	.05	8	.02	26	1.0	19	.16	42	1.1
25	3	.01	5	.01	7	.02	27	.22	66	1.2	37	.38
26	2	.01	3	.01	7	.02	9	.02	30	.16	29	.42
27	1	.00	3	.01	6	.02	7	.02	17	.05	17	.28
28	40	.47	3	.01	6	.02	7	.03	16	.04	60	3.3
29	17	1.0	3	.01	5	.01	6	.02	---	---	33	.48
30	42	5.4	3	.01	5	.01	6	.02	---	---	17	.21
31	33	6.2	---	---	8	.03	6	.02	---	---	18	.19
TOTAL	---	29.26	---	3.88	---	4.20	---	13.58	---	3.19	---	68.71

DAY	MEAN CONCEN- TRATION (MG/L)	LOADS (T/DAY)	MEAN CONCEN- TRATION (MG/L)	LOADS (T/DAY)	MEAN CONCEN- TRATION (MG/L)	LOADS (T/DAY)	MEAN CONCEN- TRATION (MG/L)	LOADS (T/DAY)	MEAN CONCEN- TRATION (MG/L)	LOADS (T/DAY)	MEAN CONCEN- TRATION (MG/L)	LOADS (T/DAY)
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	20	.09	8	.04	4	.02	3	.01	48	2.9	23	.07
2	19	.18	8	.04	1	.00	2	.00	3	.01	18	.07
3	19	.10	30	.20	3	.01	311	126	1	.00	13	.05
4	18	.08	10	.04	108	.25	45	.60	4	.02	6	.02
5	15	.06	7	.03	49	.52	17	.28	22	.46	30	.36
6	13	.06	54	1.4	4	.02	50	2.2	8	.07	15	.04
7	16	.11	12	.04	11	.04	5	.08	4	.01	14	.03
8	21	.08	5	.03	2	.01	6	.06	4	.01	6	.02
9	50	.31	4	.01	1	.00	6	.08	26	3.0	3	.01
10	37	.14	26	.08	1	.00	4	.03	2	.01	6	.02
11	15	.06	37	.92	2	.01	46	7.0	2	.01	4	.01
12	9	.04	40	.16	24	.54	11	.04	2	.01	4	.01
13	5	.02	5	.02	32	.96	9	.03	6	.07	5	.01
14	4	.01	3	.01	97	.31	2	.01	4	.01	4	.01
15	7	.02	4	.01	33	.31	3	.01	5	.01	2	.01
16	9	.03	3	.01	36	.76	4	.01	7	.06	1	.00
17	13	.04	3	.01	75	4.4	14	.04	2	.00	6	.02
18	6	.02	3	.01	93	10	4	.01	47	3.6	55	2.0
19	32	.12	108	.95	7	.03	2	.01	52	.14	24	.05
20	9	.01	7	.03	11	.17	2	.01	23	.11	15	.05
21	14	.09	5	.02	6	.02	4	.01	6	.11	14	.02
22	6	.02	4	.01	31	1.2	4	.02	32	.87	9	.02
23	58	4.2	13	.76	7	.02	103	65	7	.03	6	.01
24	5	.01	29	1.1	262	173	17	.07	14	.06	5	.01
25	3	.01	11	.11	54	.17	9	.03	9	.12	6	.01
26	5	.01	3	.01	2	.00	19	.06	2	.01	4	.01
27	92	11	4	.01	51	6.2	8	.02	5	.02	4	.01
28	177	105	5	.02	2	.01	5	.02	13	1.1	4	.01
29	19	.59	4	.01	1	.00	4	.02	70	4.5	6	.03
30	9	.10	169	36	1	.00	5	.03	44	.14	5	.01
31	---	---	7	.06	---	---	27	.13	33	.08	---	---
TOTAL	---	122.61	---	42.15	---	254.42	---	201.92	---	17.55	---	3.00

ROCK RIVER BASIN

05427970 WILLOW CREEK AT MADISON, WI--CONTINUED

SUSPENDED-SEDIMENT, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976

DAY	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
	MEAN CONCENTRATION (MG/L)	LOADS (T/DAY)	MEAN CONCENTRATION (MG/L)	LOADS (T/DAY)	MEAN CONCENTRATION (MG/L)	LOADS (T/DAY)	MEAN CONCENTRATION (MG/L)	LOADS (T/DAY)	MEAN CONCENTRATION (MG/L)	LOADS (T/DAY)	MEAN CONCENTRATION (MG/L)	LOADS (T/DAY)
1	8	.01	6	.01	7	.01	42	.08	199	.40	27	.23
2	11	.02	16	.80	5	.01	33	.08	51	.12	38	.35
3	11	.03	30	.77	5	.01	70	.14	25	.07	21	.08
4	9	.02	15	.03	6	.01	124	.18	16	.05	75	17
5	6	.01	16	.03	6	.01	42	.07	11	.03	57	1.5
6	10	.03	9	.02	7	.01	38	.08	10	.03	54	1.7
7	17	.05	28	.30	7	.01	69	.14	10	.03	119	5.6
8	10	.05	26	.05	8	.02	70	.15	41	.19	49	1.1
9	8	.02	31	1.3	8	.02	66	.15	47	.26	41	1.2
10	13	.05	15	.07	9	.02	62	.12	153	4.5	57	1.3
11	16	.02	10	.02	10	.02	59	.10	110	.50	32	.45
12	9	.03	9	.02	14	.03	55	.13	107	1.8	198	18
13	8	.02	9	.01	39	.18	52	.12	104	.42	37	.18
14	43	.99	8	.01	160	3.0	49	.11	12	.03	12	.05
15	10	.02	7	.01	95	.15	46	.09	117	8.7	8	.03
16	10	.02	5	.00	43	.08	44	.09	59	1.6	6	.02
17	10	.02	4	.01	105	.20	41	.05	70	.90	5	.02
18	9	.01	4	.01	168	.33	39	.06	103	4.2	5	.01
19	8	.01	5	.01	57	.11	37	.08	37	.52	4	.01
20	8	.01	27	.27	60	.09	34	.07	36	1.4	3	.01
21	8	.02	11	.06	56	.08	32	.07	48	.27	3	.01
22	8	.02	4	.00	46	.08	31	.07	44	.23	2	.01
23	11	.03	3	.00	59	.11	29	.07	46	.34	2	.01
24	91	6.0	3	.00	37	.06	27	.06	58	1.7	8	.02
25	12	.02	3	.00	51	.07	26	.05	50	2.4	22	.05
26	10	.01	3	.00	65	.12	35	.08	45	2.4	78	17
27	10	.02	3	.00	53	.13	231	.60	67	3.7	12	.05
28	10	.02	3	.00	51	.07	173	.45	16	.10	8	.02
29	10	.02	114	8.7	63	.12	139	.38	9	.07	19	.39
30	10	.02	14	.07	36	.08	167	.44	---	---	86	4.8
31	10	.02	---	---	31	.08	236	.54	---	---	77	.52
TOTAL	---	7.64	---	12.58	---	5.32	---	4.90	---	36.96	---	71.72

DAY	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
	MEAN CONCENTRATION (MG/L)	LOADS (T/DAY)	MEAN CONCENTRATION (MG/L)	LOADS (T/DAY)	MEAN CONCENTRATION (MG/L)	LOADS (T/DAY)	MEAN CONCENTRATION (MG/L)	LOADS (T/DAY)	MEAN CONCENTRATION (MG/L)	LOADS (T/DAY)	MEAN CONCENTRATION (MG/L)	LOADS (T/DAY)
1	26	.14	25	.04	2	.01	5	.01	22	.03	26	.10
2	19	.08	10	.01	1	.00	9	.02	4	.01	52	.14
3	15	.06	10	.02	2	.01	6	.01	4	.01	36	.14
4	13	.05	13	.05	4	.01	8	.01	5	.01	13	.03
5	10	.03	47	1.5	5	.01	12	.03	13	.07	19	.03
6	14	.04	23	.04	1	.00	2	.01	4	.01	11	.02
7	39	.11	11	.02	3	.01	3	.01	5	.01	2	.00
8	11	.03	10	.02	2	.01	5	.02	4	.01	1	.00
9	9	.02	9	.01	5	.02	5	.02	3	.01	3	.01
10	35	3.5	11	.03	9	.03	3	.01	8	.03	19	.05
11	40	.12	17	.03	5	.02	2	.01	5	.02	31	.09
12	27	.06	8	.02	9	.04	6	.03	6	.02	8	.02
13	13	.02	26	.32	77	4.7	3	.01	7	.03	5	.02
14	18	.04	6	.01	11	.27	4	.02	51	14	5	.02
15	141	11	68	10	8	.03	3	.02	8	.01	7	.02
16	7	.02	30	3.9	19	.06	1	.00	5	.01	8	.02
17	29	.35	12	.03	11	.03	1	.00	13	.02	6	.01
18	27	.37	15	.02	14	.11	4	.01	6	.02	13	.01
19	15	.02	25	.04	8	.02	7	.04	2	.01	28	.76
20	84	15	70	.18	5	.01	16	.16	2	.01	6	.01
21	112	15	18	.03	5	.02	7	.02	8	.03	10	.01
22	51	.16	15	.02	3	.01	3	.01	4	.01	11	.02
23	48	.68	10	.01	117	13	3	.02	10	.04	10	.01
24	41	2.7	11	.02	113	.62	1	.01	3	.01	9	.01
25	17	.22	15	.03	58	.14	3	.01	36	5.3	8	.02
26	11	.06	21	.04	15	.04	16	.12	10	.03	7	.01
27	12	.03	22	.06	11	.03	---	---	15	2.3	7	.01
28	9	.02	8	.02	9	.03	2	.01	7	.15	6	.01
29	9	.02	4	.01	8	.03	4	.01	2	.00	6	.01
30	110	.62	2	.00	8	.02	16	.85	2	.01	5	.01
31	---	---	7	.01	---	---	29	.10	8	.03	---	---
TOTAL	---	50.57	---	16.54	---	19.34	---	1.61	---	22.26	---	1.62

ROCK RIVER BASIN

05427970 WILLOW CREEK AT MADISON, WI--CONTINUED

SUSPENDED-SEDIMENT, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DAY	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
	MEAN CONCENTRATION (MG/L)	LOADS (T/DAY)	MEAN CONCENTRATION (MG/L)	LOADS (T/DAY)	MEAN CONCENTRATION (MG/L)	LOADS (T/DAY)	MEAN CONCENTRATION (MG/L)	LOADS (T/DAY)	MEAN CONCENTRATION (MG/L)	LOADS (T/DAY)	MEAN CONCENTRATION (MG/L)	LOADS (T/DAY)
1	5	.02	15	.03	9	.02	12	.02	7	.02	12	.03
2	8	.03	7	.02	10	.03	22	.04	9	.03	7	.02
3	5	.01	16	.05	12	.03	9	.02	6	.02	48	1.5
4	3	.01	52	.16	9	.02	11	.03	6	.03	52	.70
5	30	.94	104	.29	13	.02	10	.03	5	.02	14	.05
6	15	.03	121	.27	16	.04	7	.02	6	.02	10	.03
7	23	.12	137	.31	17	.04	7	.02	5	.02	10	.03
8	16	.05	67	.20	24	.06	18	.04	5	.02	10	.03
9	12	.05	83	.24	24	.06	32	.06	67	.29	9	.03
10	9	.02	106	.29	24	.06	10	.03	129	1.3	8	.02
11	19	.19	123	.31	22	.05	9	.02	158	1.9	20	.31
12	28	.11	107	.24	20	.04	13	.03	97	.63	52	1.2
13	12	.04	68	.14	24	.05	15	.04	74	.32	18	.13
14	10	.04	34	.06	26	.07	12	.03	26	.09	5	.01
15	8	.03	17	.04	26	.06	17	.04	11	.02	4	.01
16	9	.03	14	.03	24	.06	21	.05	5	.01	5	.01
17	8	.02	26	.06	24	.06	17	.05	2	.00	18	.13
18	5	.01	25	.06	22	.05	9	.02	21	.11	61	.88
19	8	.02	23	.05	26	.07	7	.02	38	.08	30	.08
20	8	.02	34	.07	28	.08	6	.01	21	.03	33	.27
21	2	.01	59	.15	28	.08	7	.02	8	.01	16	.03
22	11	.04	62	.16	51	.15	8	.02	18	.11	18	.03
23	7	.02	44	.12	90	.27	11	.03	244	.46	7	.01
24	8	.02	22	.05	95	.27	18	.08	50	.85	10	.02
25	15	.03	10	.02	88	.21	11	.03	60	.14	16	.03
26	26	.06	24	.05	61	.15	3	.01	24	.06	18	.03
27	20	.04	49	.10	41	.12	5	.02	14	.03	145	6.7
28	29	.06	10	.02	23	.07	36	.13	12	.03	77	6.2
29	8	.02	4	.01	61	.18	41	.13	---	---	22	.87
30	80	5.0	5	.01	47	.13	61	.18	---	---	29	.47
31	16	.04	---	---	10	.02	22	.07	---	---	21	.06
TOTAL	---	7.13	---	3.61	---	2.62	---	1.34	---	52.19	---	19.92

DAY	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
	MEAN CONCENTRATION (MG/L)	LOADS (T/DAY)	MEAN CONCENTRATION (MG/L)	LOADS (T/DAY)	MEAN CONCENTRATION (MG/L)	LOADS (T/DAY)	MEAN CONCENTRATION (MG/L)	LOADS (T/DAY)	MEAN CONCENTRATION (MG/L)	LOADS (T/DAY)	MEAN CONCENTRATION (MG/L)	LOADS (T/DAY)
1	22	.23	38	.04	29	.07	17	.04	8	.02	5	.02
2	103	1.7	30	.26	14	.04	34	.11	6	.02	10	.03
3	41	.10	57	.14	14	.04	23	.93	13	.14	22	.05
4	98	6.2	28	.27	29	.09	4	.01	13	.08	16	.07
5	33	.11	21	.07	64	9.1	23	.09	36	1.7	9	.03
6	46	.12	18	.04	17	.05	40	9.8	18	.05	9	.03
7	42	.11	44	.07	18	.08	9	.16	10	.05	11	.04
8	74	.16	34	.04	40	1.3	3	.01	27	1.6	4	.01
9	83	.36	28	.04	18	.04	4	.01	14	.15	14	.05
10	76	.18	34	.07	9	.02	4	.01	11	.04	9	.03
11	26	.04	26	.06	42	.77	2	.01	9	.03	4	.01
12	26	.04	16	.04	19	.03	5	.03	9	.02	16	.39
13	14	.02	42	.13	7	.02	3	.01	12	.05	14	.03
14	9	.01	27	.07	5	.02	3	.01	13	.02	8	.02
15	8	.01	122	4.7	15	.07	1	.01	5	.01	9	.02
16	18	.02	18	.05	8	.06	92	133	48	3.6	10	.02
17	19	.02	14	.05	12	.22	86	44	28	.06	42	3.0
18	20	.02	13	.06	5	.02	106	87	13	.03	12	.29
19	24	.05	13	.06	4	.02	9	.04	35	.06	19	.05
20	15	.12	20	.15	2	.01	38	3.0	16	.03	19	.04
21	30	1.1	90	7.8	4	.01	13	.68	15	.07	16	.03
22	18	.06	10	.02	6	.01	4	.02	34	.11	12	.04
23	23	.03	4	.01	9	.04	2	.01	32	.52	35	3.5
24	10	.01	10	.04	11	.04	6	.04	14	.02	35	4.9
25	12	.15	7	.03	22	.07	3	.01	18	.03	8	.01
26	18	.32	11	.05	7	.02	2	.01	26	.06	9	.02
27	26	.47	14	.06	3	.01	4	.02	8	.02	12	.02
28	21	.32	15	.05	7	.04	13	.07	38	5.9	9	.02
29	29	.09	54	3.0	4	.01	8	.04	13	.03	16	.04
30	36	.03	58	.13	55	10	5	.02	9	.02	37	.95
31	---	---	38	.49	---	---	34	.82	14	.16	---	---
TOTAL	---	12.20	---	18.09	---	22.32	---	280.02	---	14.70	---	13.76

ROCK RIVER BASIN

05427970 WILLOW CREEK AT MADISON, WI--CONTINUED

SUSPENDED-SEDIMENT, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DAY	MEAN CONCEN- TRATION (MG/L)	LOADS (T/DAY)	MEAN CONCEN- TRATION (MG/L)	LOADS (T/DAY)	MEAN CONCEN- TRATION (MG/L)	LOADS (T/DAY)	MEAN CONCEN- TRATION (MG/L)	LOADS (T/DAY)	MEAN CONCEN- TRATION (MG/L)	LOADS (T/DAY)	MEAN CONCEN- TRATION (MG/L)	LOADS (T/DAY)
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	10	.09	47	4.8	37	.09	11	.02	18	.04	12	.03
2	6	.01	23	1.2	21	.04	6	.01	18	.04	11	.02
3	6	.01	20	.03	37	.06	8	.01	18	.04	11	.03
4	11	.02	29	.04	16	.01	15	.03	17	.04	11	.02
5	11	.06	21	.02	15	.02	19	.04	17	.04	11	.02
6	13	.07	29	.18	24	.03	13	.03	17	.04	11	.03
7	32	.89	43	.15	38	.05	15	.05	16	.04	10	.03
8	10	.06	16	.04	67	.10	16	.03	16	.05	10	.05
9	11	.05	19	.05	44	.06	17	.03	16	.05	10	.08
10	13	.13	14	.02	39	.04	15	.03	16	.05	54	.83
11	15	.05	8	.01	24	.03	13	.02	15	.04	135	2.6
12	9	.03	15	.02	8	.02	11	.02	15	.05	168	2.2
13	10	.03	19	.02	23	.11	10	.02	15	.05	47	.18
14	13	.03	18	.02	13	.03	8	.01	15	.05	88	.63
15	22	.05	17	.02	11	.02	7	.01	14	.04	48	.26
16	39	.09	17	.02	33	.22	7	.01	14	.04	58	.49
17	19	.06	16	.02	148	2.9	22	.04	14	.04	39	.24
18	36	.13	16	.02	37	.08	30	.06	14	.04	50	.42
19	34	.12	15	.01	31	.07	27	.06	14	.03	52	.99
20	49	.19	35	.11	26	.05	21	.04	13	.03	41	.43
21	50	.17	41	.06	22	.04	13	.02	13	.04	57	.53
22	44	.11	16	.03	18	.03	7	.01	13	.04	86	.65
23	17	.04	57	.34	15	.03	5	.01	13	.04	42	.63
24	37	.76	34	.05	13	.02	6	.02	13	.04	23	.45
25	26	.20	23	.03	11	.01	12	.03	12	.04	29	.56
26	13	.03	14	.01	9	.01	19	.04	12	.04	35	.75
27	13	.03	6	.01	11	.02	20	.04	12	.02	44	.92
28	12	.03	4	.01	16	.03	19	.04	12	.02	25	.52
29	18	.04	36	.08	24	.04	19	.04	---	---	9	.19
30	12	.03	55	.08	32	.06	19	.04	---	---	18	.35
31	27	.19	---	---	20	.03	18	.04	---	---	27	.57
TOTAL	---	3.80	---	7.50	---	4.35	---	0.90	---	1.12	---	15.70

DAY	MEAN CONCEN- TRATION (MG/L)	LOADS (T/DAY)	MEAN CONCEN- TRATION (MG/L)	LOADS (T/DAY)	MEAN CONCEN- TRATION (MG/L)	LOADS (T/DAY)	MEAN CONCEN- TRATION (MG/L)	LOADS (T/DAY)	MEAN CONCEN- TRATION (MG/L)	LOADS (T/DAY)	MEAN CONCEN- TRATION (MG/L)	LOADS (T/DAY)
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	17	.35	28	.08	35	.14	602	319	39	.13	33	.12
2	102	4.1	18	.04	45	.12	50	1.1	35	.11	17	.04
3	40	.90	18	.04	31	.09	53	.23	30	.09	16	.05
4	53	.80	37	.08	22	.05	37	.12	38	.10	16	.04
5	95	20	29	.07	8	.03	47	.16	6	.02	14	.03
6	56	3.5	19	.05	10	.04	36	.14	3	.01	10	.02
7	21	.05	11	.02	67	3.4	49	1.1	6	.02	20	.10
8	24	.09	79	1.6	34	.09	48	.26	20	.07	10	.04
9	89	15	37	.10	49	.15	21	.08	24	.08	6	.02
10	62	1.0	24	.06	40	.12	9	.03	24	.08	2	.01
11	42	.14	22	.06	15	.05	24	.09	15	.05	29	.37
12	26	.07	61	8.4	10	.04	35	.90	15	.05	25	.20
13	33	.22	84	12	14	.05	16	.09	35	.09	20	.61
14	36	.18	39	.14	15	.04	37	.12	9	.03	64	2.1
15	16	.03	35	.07	35	.09	18	.05	89	6.0	9	.02
16	16	.03	32	.06	157	56	8	.03	27	.10	5	.01
17	23	.05	46	.10	190	141	5	.02	31	.12	166	8.6
18	87	6.5	31	.07	34	.12	7	.03	57	5.6	137	20
19	36	.09	34	.12	8	.03	9	.04	24	.30	12	.04
20	30	.08	29	.08	10	.05	105	28	9	.02	16	.60
21	30	.06	21	.03	17	.07	129	25	11	.04	21	.06
22	29	.05	15	.03	30	.12	62	1.7	16	.06	17	.04
23	33	.79	33	.20	31	.12	21	.11	15	.06	11	.02
24	97	16	13	.04	19	.06	13	.04	12	.06	8	.01
25	42	.11	27	.09	237	145	36	.11	15	.05	7	.01
26	22	.04	41	.16	30	.13	67	1.3	6	.02	11	.02
27	16	.04	38	.13	11	.04	40	.14	57	9.0	23	.04
28	14	.03	11	.03	8	.03	30	.10	21	.11	30	.05
29	16	.03	10	.04	5	.01	28	.08	9	.02	34	.07
30	19	.03	6	.02	97	11	50	.15	2	.01	11	.02
31	---	---	21	.09	---	---	24	.19	2	.01	---	---
TOTAL	---	70.36	---	24.10	---	358.28	---	380.51	---	22.51	---	33.36

ROCK RIVER BASIN
05427970 WILLOW CREEK AT MADISON, WI--CONTINUED

SUSPENDED-SEDIMENT, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DAY	MEAN CONCEN- TRATION (MG/L)	LOADS (T/DAY)	MEAN CONCEN- TRATION (MG/L)	LOADS (T/DAY)	MEAN CONCEN- TRATION (MG/L)	LOADS (T/DAY)	MEAN CONCEN- TRATION (MG/L)	LOADS (T/DAY)	MEAN CONCEN- TRATION (MG/L)	LOADS (T/DAY)	MEAN CONCEN- TRATION (MG/L)	LOADS (T/DAY)
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	7	.01	27	.06	24	.04	10	.01	12	.02	106	1.6
2	35	3.0	33	.08	14	.02	10	.02	13	.02	146	.36
3	30	.23	19	.05	48	.09	10	.01	15	.02	145	4.8
4	24	.05	10	.02	22	.04	8	.01	16	.02	27	.26
5	38	.64	52	2.3	20	.04	8	.01	17	.02	23	.08
6	26	.04	20	.04	21	.04	8	.01	17	.02	52	.13
7	39	.06	13	.02	10	.02	8	.01	11	.01	41	.07
8	11	.02	10	.02	41	.06	8	.01	6	.01	29	.04
9	48	1.0	10	.02	42	.06	8	.01	4	.01	20	.04
10	22	.04	8	.02	48	.06	8	.01	4	.01	14	.01
11	34	.05	6	.01	56	.08	8	.01	4	.00	12	.02
12	40	.07	6	.08	65	.11	8	.01	5	.01	53	.51
13	44	.07	46	2.7	76	.13	8	.01	15	.03	88	3.4
14	24	.03	20	.04	89	.14	8	.01	17	.03	26	.08
15	7	.01	10	.02	101	.21	8	.01	17	.03	25	.06
16	7	.04	5	.01	80	.21	8	.01	17	.03	42	.41
17	16	.04	53	11	20	.04	10	.01	18	.02	77	1.5
18	10	.02	18	.03	15	.03	12	.01	18	.02	58	2.5
19	52	.11	27	.04	15	.04	12	.01	19	.03	59	4.1
20	11	.02	40	.05	11	.04	15	.02	19	.03	21	.24
21	7	.01	95	.11	6	.01	15	.02	20	.06	22	.09
22	5	.01	56	.06	7	.01	15	.02	26	.08	94	3.1
23	6	.01	90	.31	15	.03	15	.02	153	3.5	108	3.5
24	7	.04	89	.20	15	.04	15	.02	47	.19	32	.07
25	15	.07	73	.11	15	.03	15	.02	29	.07	22	.01
26	21	.04	155	.21	15	.03	15	.02	26	.06	16	.02
27	33	.07	60	.15	15	.03	15	.02	60	.29	12	.03
28	8	.01	46	.08	15	.03	15	.02	54	.12	19	.11
29	7	.01	28	.14	15	.03	15	.02	---	---	96	2.8
30	7	.02	36	.07	15	.03	15	.02	---	---	240	41
31	32	.06	---	---	10	.01	15	.02	---	---	17	.03
TOTAL	---	5.90	---	18.05	---	1.78	---	0.44	---	4.76	---	70.97

DAY	MEAN CONCEN- TRATION (MG/L)	LOADS (T/DAY)	MEAN CONCEN- TRATION (MG/L)	LOADS (T/DAY)	MEAN CONCEN- TRATION (MG/L)	LOADS (T/DAY)	MEAN CONCEN- TRATION (MG/L)	LOADS (T/DAY)	MEAN CONCEN- TRATION (MG/L)	LOADS (T/DAY)	MEAN CONCEN- TRATION (MG/L)	LOADS (T/DAY)
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	12	.01	15	.07	7	.01	15	.02	1	.00	1	.00
2	57	.83	86	2.2	6	.01	13	.02	4	.01	2	.00
3	40	.23	9	.03	4	.00	23	1.1	21	3.2	4	.00
4	23	.05	3	.00	32	1.8	13	.02	12	.14	6	.01
5	41	.39	1	.00	23	.15	3	.00	56	24	9	.02
6	28	.03	5	.00	12	.03	5	.01	4	.01	12	.02
7	18	.01	16	.02	46	2.1	7	.01	1	.00	16	.01
8	9	.01	30	.35	14	.04	5	.00	22	1.6	12	.00
9	6	.00	13	.03	21	1.5	4	.01	74	21	8	.00
10	8	.01	33	.31	8	.14	20	7.5	33	1.2	6	.01
11	39	.84	27	.11	3	.01	11	.05	6	.02	3	.00
12	41	.15	27	.02	4	.01	49	6.8	4	.02	2	.00
13	20	.03	36	.04	8	.02	45	.11	8	.03	1	.00
14	18	.02	45	.05	13	.03	13	.19	3	.01	2	.00
15	16	.01	25	.03	12	.03	6	.01	3	.00	3	.00
16	13	.01	11	.02	10	.02	5	.01	3	.00	3	.00
17	11	.01	5	.01	9	.02	5	.01	35	6.7	4	.00
18	12	.01	204	50	16	.03	4	.01	17	.05	5	.00
19	14	.08	65	4.2	9	.02	3	.00	8	.02	4	.00
20	37	.36	12	.01	62	5.1	2	.00	16	2.4	2	.00
21	31	.03	16	.02	16	.04	27	1.3	2	.00	1	.00
22	22	.02	8	.01	10	.02	7	.01	17	.06	1	.00
23	16	.02	3	.00	14	.01	3	.01	10	.01	1	.00
24	12	.02	1	.00	20	.01	27	1.4	5	.00	1	.00
25	42	2.7	2	.00	27	.05	61	.15	2	.00	1	.00
26	21	.26	3	.00	21	.04	23	.05	13	.13	1	.00
27	34	.78	4	.00	15	.04	6	.01	13	.52	1	.00
28	16	.04	2	.00	75	58	4	.01	9	.27	1	.00
29	27	.37	28	1.2	82	11	4	.00	14	.16	1	.00
30	24	.06	9	.02	18	.02	21	2.4	6	.01	1	.00
31	---	---	7	.01	---	---	1	.00	3	.00	---	---
TOTAL	---	7.39	---	58.76	---	80.30	---	21.22	---	61.57	---	0.07

ROCK RIVER BASIN

05427970 WILLOW CREEK AT MADISON, WI--CONTINUED

SUSPENDED-SEDIMENT, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DAY	MEAN CONCENTRATION (MG/L)	LOADS (T/DAY)	MEAN CONCENTRATION (MG/L)	LOADS (T/DAY)	MEAN CONCENTRATION (MG/L)	LOADS (T/DAY)	MEAN CONCENTRATION (MG/L)	LOADS (T/DAY)	MEAN CONCENTRATION (MG/L)	LOADS (T/DAY)	MEAN CONCENTRATION (MG/L)	LOADS (T/DAY)
OCTOBER			NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	24	1.3	17	.02	4	.00	8	.01	14	.14	12	.01
2	8	.00	16	.01	2	.00	16	.02	19	.34	10	.00
3	6	.00	15	.01	2	.00	13	.02	19	.35	8	.00
4	5	.00	10	.00	2	.00	12	.02	7	.01	6	.00
5	5	.00	7	.01	3	.01	10	.01	6	.01	7	.02
6	4	.00	10	.15	8	.01	10	.01	5	.01	9	.01
7	4	.00	7	.00	12	.02	10	.01	4	.01	17	.04
8	3	.00	8	.00	11	.02	10	.01	4	.01	14	.09
9	3	.00	7	.00	11	.02	10	.01	6	.01	9	.02
10	3	.00	7	.00	10	.02	19	.38	5	.00	34	.15
11	2	.00	6	.00	45	.38	98	2.9	4	.00	17	.03
12	2	.00	7	.01	57	.12	8	.00	3	.00	13	.02
13	2	.00	5	.00	27	.05	8	.01	3	.00	23	.06
14	2	.00	8	.00	13	.02	20	.10	2	.00	66	1.3
15	1	.00	8	.00	7	.01	24	.06	3	.00	86	7.4
16	1	.00	9	.00	5	.00	59	2.6	5	.00	41	2.4
17	1	.00	9	.00	4	.00	26	.13	7	.00	28	.12
18	0	.00	9	.00	3	.00	15	.02	6	.00	24	.09
19	35	2.6	9	.00	2	.00	9	.00	5	.01	16	.04
20	5	.00	10	.00	3	.00	6	.00	15	.10	11	.02
21	2	.00	40	2.1	4	.00	5	.00	100	5.2	11	.01
22	46	4.5	19	.31	81	2.3	4	.00	35	.72	12	.01
23	29	.66	9	.00	23	.68	3	.00	17	.11	22	.05
24	4	.00	7	.00	54	3.3	4	.00	13	.08	15	.02
25	4	.07	5	.00	24	.06	5	.00	22	.04	17	.02
26	1	.00	13	.24	15	.02	6	.00	25	.03	19	.02
27	2	.00	10	.01	13	.01	5	.00	20	.03	15	.02
28	3	.00	13	.01	12	.01	3	.00	17	.04	12	.02
29	4	.00	9	.00	10	.01	2	.00	14	.02	9	.01
30	6	.00	6	.00	9	.01	4	.00	---	---	7	.00
31	28	.92	---	---	14	.02	6	.00	---	---	5	.00
TOTAL	---	10.05	---	2.88	---	7.10	---	6.32	---	7.27	---	12.00

DAY	MEAN CONCENTRATION (MG/L)	LOADS (T/DAY)	MEAN CONCENTRATION (MG/L)	LOADS (T/DAY)	MEAN CONCENTRATION (MG/L)	LOADS (T/DAY)	MEAN CONCENTRATION (MG/L)	LOADS (T/DAY)	MEAN CONCENTRATION (MG/L)	LOADS (T/DAY)	MEAN CONCENTRATION (MG/L)	LOADS (T/DAY)
APRIL			MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	4	.00	14	.03	17	.03	3	.00	10	.03	13	.04
2	7	.01	14	.03	52	6.6	3	.00	33	3.4	12	.03
3	120	6.4	14	.03	17	.06	4	.00	10	.02	11	.03
4	17	.07	14	.03	9	.01	5	.01	13	.17	14	.08
5	9	.01	14	.03	88	20	47	19	17	.06	10	.02
6	14	.08	12	.02	60	7.3	14	.03	13	.04	10	.03
7	16	.04	11	.02	85	58	17	.04	56	15	47	6.1
8	89	12	9	.01	16	.02	2	.00	25	1.2	15	.04
9	31	.22	9	.01	18	.06	40	13	10	.02	38	3.3
10	26	.04	9	.02	16	.02	4	.01	31	.31	19	.05
11	20	.05	10	.01	20	.03	3	.01	30	2.2	13	.04
12	15	.02	10	.02	25	.04	7	.02	10	.02	74	55
13	11	.02	107	16	12	.02	9	.02	18	.43	21	.57
14	19	.22	12	.06	5	.00	10	.04	4	.00	10	.03
15	14	.06	16	.11	2	.00	17	.11	4	.00	10	.02
16	13	.02	8	.01	3	.00	66	19	18	.81	42	6.2
17	12	.02	56	10	3	.00	3	.00	10	.02	22	.06
18	11	.02	21	.35	4	.00	0	.00	9	.02	24	.06
19	11	.02	14	.03	3	.00	2	.00	38	6.9	23	.08
20	10	.02	10	.01	3	.00	2	.00	39	6.0	44	6.3
21	9	.02	10	.02	2	.00	3	.00	26	.46	16	.09
22	8	.02	10	.02	2	.00	4	.01	9	.02	66	32
23	8	.02	10	.02	3	.00	5	.01	8	.02	18	.05
24	7	.02	10	.02	3	.00	6	.02	7	.01	15	.04
25	25	.24	10	.02	3	.00	8	.02	6	.02	18	.07
26	9	.02	10	.01	2	.00	37	4.3	6	.02	11	.03
27	8	.01	10	.02	10	1.4	36	.06	55	36	9	.02
28	8	.01	27	1.2	30	4.4	111	.25	19	.08	20	.08
29	22	.10	24	.61	10	.02	38	.09	52	17	10	.03
30	15	.04	41	1.9	7	.01	21	.12	25	.47	10	.02
31	---	---	21	.03	---	---	10	.03	14	.04	---	---
TOTAL	---	19.84	---	30.70	---	98.02	---	56.20	---	90.79	---	110.49

ROCK RIVER BASIN

05428000 LAKE MENDOTA AT MADISON, WI

LOCATION.--Lat 43°05'42", long 89°22'12", in SE 1/4 sec.12, T.7 N., R.9 E., Dane County, Hydrologic Unit 07090001, in city boat house at dam at outlet, in Madison.

DRAINAGE AREA.--233 mi² (603 km²). Area of Lake Mendota, 15.2 mi² (39.4 km²).

PERIOD OF RECORD.--December 1902 to May 1903, January 1916 to current year (incomplete).

REVISED RECORDS.--WDR WI-73-1: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 840.00 ft (256.032 m) National Geodetic Vertical Datum of 1929, or 5.60 ft (1.707 m) below city of Madison datum. Prior to Oct. 1, 1979, at datum 7.82 ft (2.384 m) higher; prior to Nov. 15, 1971, nonrecording gage at same site and datum.

REMARKS.--Lake level regulated by concrete dam with two 12-foot gates and 20-foot lock at outlet. Gage-height telemeter at station.

EXTREMES FOR PERIOD OF RECORD.--Maximum gage height observed, 12.01 ft (3.661 m) Apr. 5, 1959; minimum observed, 8.02 ft (2.444 m) Feb. 24 to Mar. 10, 1920, current datum.

EXTREMES FOR CURRENT YEAR.--Maximum gage height, 11.57 ft (3.527 m) Sept. 24; minimum, 8.90 ft (2.713 m) Dec. 22, but may have been lower during period of missing record.

GAGE HEIGHT (FEET ABOVE DATUM), WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980												
DAY	MEAN VALUES											
	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	9.65	9.98	9.38	9.14	9.41	9.44	9.32	9.66	9.60	9.90	9.73	10.62
2	9.83	9.92	9.34	9.15	9.41	9.42	9.33	9.65	9.62	9.88	9.74	10.63
3	9.83	9.88	9.31	9.15	9.40	9.40	9.37	9.64	9.65	9.86	9.76	10.60
4	9.82	9.84	9.29	9.15	9.39	9.40	9.43	9.65	9.64	9.84	9.73	10.61
5	9.80	9.82	9.28	9.15	9.39	9.40	9.44	9.64	9.65	9.89	9.75	10.59
6	9.81	9.83	9.22	9.16	9.41	9.39	9.45	9.63	9.78	9.85	9.73	10.59
7	9.78	9.79	9.28	9.16	9.40	9.39	9.49	9.59	9.88	9.86	9.82	10.70
8	9.78	9.76	9.20	9.16	9.40	9.37	9.57	9.58	9.97	9.85	9.95	10.81
9	9.77	9.73	9.14	9.16	9.40	9.35	9.64	9.57	9.99	9.88	10.00	10.89
10	9.76	9.70	9.12	9.16	9.39	9.33	9.67	9.55	9.99	9.89	10.03	10.90
11	9.77	9.64	9.12	9.16	9.39	9.32	9.68	9.58	9.99	9.89	10.07	10.89
12	9.77	9.61	9.09	9.17	9.38	9.31	9.71	9.58	9.98	9.88	10.11	10.99
13	9.74	9.61	9.07	9.17	9.38	9.30	9.70	9.58	9.98	9.86	10.13	11.10
14	9.73	9.57	9.04	9.17	9.38	9.29	9.72	9.59	9.99	9.84	10.14	11.12
15	9.73	9.55	9.00	9.18	9.38	9.28	9.74	9.61	9.99	9.84	10.13	11.10
16	9.74	9.51	9.02	9.24	9.37	9.30	9.73	9.61	9.98	9.91	10.11	11.14
17	9.74	9.48	---	9.33	9.37	9.38	9.73	---	9.97	9.89	10.14	11.15
18	9.74	9.46	---	9.40	9.36	9.43	9.72	---	9.97	9.87	10.15	11.13
19	9.80	9.44	---	9.43	9.36	9.45	9.72	9.67	9.97	9.85	10.18	11.09
20	9.81	9.42	---	9.43	9.35	9.46	9.72	9.69	9.96	9.84	10.23	11.19
21	9.83	9.48	8.95	9.44	9.36	9.45	9.71	9.69	9.95	9.85	10.31	11.24
22	9.89	9.51	8.92	9.44	9.39	9.43	9.71	9.62	9.94	9.83	10.30	11.38
23	10.03	9.50	8.96	9.44	9.43	9.42	9.71	9.61	9.94	9.80	10.30	11.49
24	9.99	9.47	9.03	9.44	9.44	9.41	9.70	9.60	9.94	9.78	10.28	11.52
25	9.98	9.46	9.10	9.45	9.46	9.38	9.69	9.60	9.94	9.76	10.27	11.53
26	9.97	9.50	9.12	9.44	9.46	9.36	9.68	9.58	9.94	9.78	10.27	11.51
27	9.97	9.47	9.13	9.43	9.46	9.35	9.68	9.57	9.91	9.78	10.28	11.46
28	9.95	9.47	9.13	9.43	9.47	9.36	9.66	9.56	9.98	9.76	10.38	11.45
29	9.95	9.43	9.14	9.42	9.46	9.35	9.66	9.59	9.98	9.76	10.43	11.42
30	9.93	9.40	9.14	9.42	---	9.35	9.67	9.61	9.93	9.74	10.53	11.39
31	9.91	---	9.14	9.42	---	9.34	---	9.62	---	9.75	10.59	---
MEAN	9.83	9.61	---	9.29	9.40	9.37	9.63	---	9.90	9.84	10.12	11.07
MAX	10.03	9.98	---	9.45	9.47	9.46	9.74	---	9.99	9.91	10.59	11.53
MIN	9.65	9.40	---	9.14	9.35	9.28	9.32	---	9.60	9.74	9.73	10.59

ROCK RIVER BASIN

05428665 OLBRICH PARK STORM DITCH AT MADISON, WI

LOCATION.--Lat 43°05'24", long 89°19'28", in NW 1/4 NW 1/4 sec.9, T.7 N., R.10 E., Dane County, Hydrologic Unit 07090001, on left bank at entrance to culvert, on Dennett Drive, in Madison.

DRAINAGE AREA.--2.57 mi² (6.66 km²).

WATER-DISCHARGE RECORDS

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

REVISED RECORDS.--WDR WI-79-1: Drainage area.

GAGE.--Water-stage recorder. Altitude of gage is 860 ft (262 m), from topographic map.

REMARKS.--Records good except those below 0.5 ft³/s (0.014 m³/s) and those for winter period, which are poor.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 480 ft³/s (13.6 m³/s) June 25, 1978, gage height, 10.37 ft (3.161 m); no flow for many days.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 244 ft³/s (6.91 m³/s) Sept. 9, gage height, 7.44 ft (2.268 m); no flow for many days.

RATING TABLE (gage height, in feet, and discharge, in cubic feet per second).
(Stage-discharge relation affected by ice Nov. 30 to Dec. 5, Dec. 8, 9, 14-22, Jan. 1 to Mar. 14.)

3.64	0.0	4.2	3.55
3.7	0.1	4.3	4.8
3.8	0.5	4.4	6.5
3.9	1.0	4.5	8.7
4.0	1.65	4.6	12
4.1	2.5	4.8	20

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980												
DAY	MEAN VALUES											
	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.1	.22	.10	.10	.00	.00	.93	.00	.30	.00	.00	.75
2	.23	.20	.08	.00	.00	.00	.65	.00	.76	.02	1.0	.42
3	.22	.18	.10	.00	.00	.00	2.8	.00	.10	.03	.03	.30
4	.22	.14	.20	.00	.00	.02	.89	.00	.05	.03	.30	.47
5	.49	.21	.50	.00	.00	.05	.55	.00	4.3	2.7	.14	.11
6	.23	.84	.27	.00	.00	.00	.62	.04	4.5	.08	.11	.08
7	.22	.22	.23	.00	.00	.00	.20	.05	9.0	.03	15	12
8	.22	.16	.10	.00	.00	.10	3.9	.05	1.6	.05	7.1	1.4
9	.23	.14	.25	.00	.00	.05	1.2	.08	1.8	1.4	.95	13
10	.28	.15	.27	.10	.00	.07	.40	.12	.62	.11	1.0	1.5
11	.27	.24	.28	.50	.00	.03	.40	.20	.32	.07	2.2	.81
12	.22	.16	.27	.00	.00	.00	.27	.15	.25	.07	.54	19
13	.22	.22	.21	.00	.00	.05	.18	1.9	.13	.07	1.3	4.4
14	.22	.07	.10	.20	.00	.60	.69	.16	.27	.07	.44	4.1
15	.36	.05	.35	.30	.00	10	.44	.48	.21	.19	.25	.90
16	.65	.05	.10	1.5	.00	8.0	.30	.07	.06	2.9	1.3	2.2
17	.26	.10	.00	.80	.00	1.8	.28	.75	.05	.13	.56	1.1
18	.21	.14	.00	.64	.00	1.1	.76	.54	.24	.07	.26	.66
19	1.2	.16	.00	.10	.20	.82	.18	.26	.07	.07	6.0	.22
20	.26	.14	.00	.00	2.0	.87	.22	.07	.07	.17	.80	7.3
21	.26	4.1	.00	.00	5.0	.98	.26	.04	.07	.08	1.6	1.2
22	5.0	1.3	.50	.00	4.0	.97	.10	.05	.07	.07	.34	14
23	3.3	.43	.63	.00	.80	1.2	.10	.05	.08	.03	.25	1.5
24	.37	.32	4.3	.00	.15	1.1	.08	.05	.08	.03	.18	1.1
25	.26	.21	1.1	.00	.00	1.3	.08	.03	.08	.03	.11	1.3
26	.18	2.7	.53	.00	.00	2.0	.05	.03	.08	1.1	.10	.79
27	.14	.59	.50	.00	.00	1.8	.05	.05	.30	.07	2.8	.60
28	.14	.33	.39	.00	.00	1.5	.07	.58	2.1	.07	.87	.93
29	.14	.33	.51	.00	.00	1.1	.38	.57	.05	.08	12	.52
30	.14	.15	.49	.00	---	1.0	.08	.10	.00	.20	2.3	.35
31	.99	---	.30	.00	---	1.1	---	.08	---	.03	1.5	---
TOTAL	18.23	14.25	12.66	4.24	12.15	37.61	17.11	6.55	27.61	10.05	61.33	93.01
MEAN	.59	.48	.41	.14	.42	1.21	.57	.21	.92	.32	1.98	3.10
MAX	5.0	4.1	4.3	1.5	5.0	10	3.9	1.9	9.0	2.9	15	19
MIN	.14	.05	.00	.00	.00	.00	.05	.00	.00	.00	.00	.08
CFSM	.23	.19	.16	.05	.16	.47	.22	.08	.36	.13	.77	1.21
IN.	.26	.21	.18	.06	.18	.54	.25	.09	.40	.15	.89	1.35
CAL YR 1979	TOTAL	208.51	MEAN	.57	MAX	7.4	MIN	.00	CFSM	.22	IN	3.02
WTR YR 1980	TOTAL	314.80	MEAN	.86	MAX	19	MIN	.00	CFSM	.34	IN	4.55

ROCK RIVER BASIN

05428665 OLBRICH PARK STORM DITCH AT MADISON, WI--CONTINUED

WATER-QUALITY RECORDS

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

WATER-QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SEDI- MENT, SUS- PENDE (MG/L)	SEDI- MENT DIS- CHARGE, SUS- PENDE (T/DAY)
JAN , 1980				
16...	1205	1.4	121	.46
17...	0240	1.0	19	.05
APR				
03...	1045	17	659	30
08...	0540	18	140	6.8
08...	0610	34	123	11
08...	0640	20	259	14
08...	0915	4.2	58	.66
MAY				
13...	1130	13	1220	43
JUN				
05...	0815	55	1220	181
05...	0825	113	831	254
05...	1120	42	440	50
06...	0040	64	173	30
07...	0730	33	1150	102
07...	0740	203	861	472
07...	0750	202	442	241
07...	0800	109	421	124
07...	0840	42	216	24
AUG				
07...	2215	137	257	95
07...	2235	164	114	50
07...	2320	56	96	15
19...	0615	24	472	31
19...	0625	167	1350	609
19...	0640	89	506	122
27...	2140	103	389	108
SEP				
09...	0330	237	288	184
09...	0340	222	287	172
09...	0350	132	207	74
12...	0730	149	116	47
12...	0750	161	119	52
12...	0850	140	72	27

ROCK RIVER BASIN

05429000 LAKE MONONA AT MADISON, WI

LOCATION.--Lat 43°03'48", long 89°23'49", in SW 1/4 sec.23, T.7 N., R.9 E., Dane County, Hydrologic Unit 07090001, in Brittingham Park, in Madison.

DRAINAGE AREA.--279 mi² (723 km²). Area of Lake Monona, 5.3 mi² (13.7 km²).

PERIOD OF RECORD.--September 1915 to current year (fragmentary) in reports of the Geological Survey. For 1856 to March 1917 in reports of Wisconsin Railroad Commission, volume 19.

REVISED RECORDS.--WSP 1338: Lake area. WDR WI-73-1: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 840.00 ft (256.032 m) National Geodetic Vertical Datum of 1929, or 5.60 ft (1.707 m) below city of Madison datum. Prior to Oct. 1, 1979, datum 3.61 ft (1.100 m) higher; prior to Nov. 15, 1971, nonrecording gage at same site and datum.

REMARKS.--Lake level regulated by concrete dam with four 12-foot stop-log sections and 12-foot lock at outlet of Lake Waubesa. Dane County Public Works provided four readings during January and February. Gage-height telemeter at station.

EXTREMES FOR PERIOD OF RECORD.--Maximum gage height observed, 7.27 ft (2.216 m) July 28, 1929; minimum observed, 3.22 ft (0.981 m) Jan. 20, 1965, current datum.

EXTREMES FOR CURRENT YEAR.--Maximum gage height, 5.96 ft (1.817 m) Sept. 24, 25; minimum, 3.87 ft (1.180 m) Feb. 14-21.

GAGE HEIGHT (FEET ABOVE DATUM), WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980												
DAY	MEAN VALUES											
	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.85	4.71	4.78	4.23	---	4.00	4.37	4.89	4.92	4.77	5.01	5.37
2	4.75	4.69	4.76	4.20	---	4.02	4.35	4.89	4.91	4.78	5.06	5.35
3	4.75	4.67	4.75	4.17	---	4.04	4.35	4.89	4.94	4.80	5.07	5.34
4	4.72	4.68	4.73	4.14	---	4.06	4.33	4.88	4.94	4.82	5.07	5.31
5	4.72	4.67	4.72	4.12	3.92	4.10	4.30	4.87	5.02	4.94	5.07	5.28
6	4.69	4.68	4.71	4.11	3.92	4.12	4.29	4.84	5.14	4.98	5.07	5.25
7	4.69	4.67	4.69	4.10	3.91	4.14	4.28	4.82	5.22	4.98	5.17	5.44
8	4.69	4.67	4.66	4.07	3.91	4.15	4.33	4.80	5.20	4.97	5.38	5.54
9	4.65	4.67	4.67	4.05	---	4.17	4.36	4.81	5.15	5.02	5.38	5.63
10	4.66	4.66	4.67	4.03	---	4.18	4.38	4.83	5.13	5.02	5.36	5.62
11	4.67	4.67	4.66	4.02	3.90	4.18	4.42	4.81	5.08	5.02	5.35	5.59
12	4.62	4.67	4.64	4.01	3.89	4.19	4.43	4.82	5.05	5.03	5.34	5.72
13	4.60	4.67	4.63	---	3.88	4.21	4.46	4.85	5.02	5.02	5.33	5.82
14	4.62	4.67	4.60	---	3.88	4.22	4.48	4.85	4.98	5.02	5.31	5.80
15	4.62	4.67	4.58	---	3.88	4.26	4.50	4.87	4.96	5.01	5.28	5.76
16	4.63	4.66	4.55	4.02	3.87	4.33	4.56	4.88	4.90	5.08	5.26	5.74
17	4.63	4.66	4.55	---	3.88	4.39	4.59	4.89	4.85	5.07	5.25	5.74
18	4.64	4.67	4.57	---	3.88	4.43	4.61	4.90	4.84	5.07	5.22	5.69
19	4.69	4.67	4.57	---	3.87	4.47	4.63	4.93	4.81	5.06	5.27	5.66
20	4.72	4.67	4.54	---	3.87	4.49	4.67	4.93	4.79	5.04	5.28	5.76
21	4.74	4.77	4.48	---	3.89	4.49	4.71	4.92	4.78	5.02	5.31	5.75
22	4.78	4.82	4.44	4.09	3.92	4.50	4.72	4.92	4.77	5.00	5.28	5.91
23	4.88	4.82	4.44	---	3.95	4.51	4.73	4.92	4.77	4.99	5.26	5.94
24	4.90	4.82	4.45	---	3.96	4.52	4.75	4.90	4.77	4.98	5.23	5.96
25	4.88	4.82	4.48	---	3.96	4.51	4.77	4.90	4.75	4.98	5.21	5.96
26	4.87	4.85	4.45	---	3.96	4.51	4.79	4.89	4.74	5.01	5.17	5.94
27	4.85	4.87	4.42	---	3.96	4.49	4.81	4.87	4.75	5.03	5.16	5.92
28	4.80	4.84	4.38	---	3.96	4.46	4.82	4.88	4.80	5.02	5.24	5.92
29	4.77	4.81	4.34	---	3.98	4.43	4.84	4.92	4.76	5.02	5.30	5.91
30	4.75	4.79	4.30	3.96	---	4.41	4.88	4.92	4.75	5.03	5.35	5.88
31	4.75	---	4.27	---	---	4.39	---	4.90	---	5.02	5.37	---
MEAN	4.73	4.72	4.56	---	---	4.30	4.55	4.88	4.92	4.99	5.24	5.68
MAX	4.90	4.87	4.78	---	---	4.52	4.88	4.93	5.22	5.08	5.38	5.96
MIN	4.60	4.66	4.27	---	---	4.00	4.28	4.80	4.74	4.77	5.01	5.25

ROCK RIVER BASIN

05429500 YAHARA RIVER NEAR MCFARLAND, WI

LOCATION.--Lat 43°00'32", long 89°18'18", in SW 1/4 sec.3, T.6 N., R.10 E., Dane County, Hydrologic Unit 07090001, on left bank just upstream from bridge on U.S. Highway 51, at dam at outlet of Lake Waubesa and 1.0 mi (1.6 km) southwest of McFarland.

DRAINAGE AREA.--327 mi² (847 km²).

PERIOD OF RECORD.--September 1930 to current year.

REVISED RECORDS.--WSP 805, WDR WI-73-1: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 840.40 ft (256.154 m) National Geodetic Vertical Datum of 1929 (levels by Wisconsin Department of Natural Resources). Prior to Dec. 23, 1934, nonrecording gage at same site and datum.

REMARKS.--Records fair. Flow regulated by dams at outlets of Lake Mendota and Lake Waubesa. The Madison Metropolitan Sewerage District diverted an average of 54.9 ft³/s (1.55 m³/s) of effluent into the Badfish Creek basin during 1979. Prior to 1958 the effluent was discharged into the Yahara River above Mc Farland. Gage-height telemeter at station.

AVERAGE DISCHARGE.--50 years, 151 ft³/s (4.276 m³/s), 6.27 in/yr (159 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 867 ft³/s (24.6 m³/s) Apr. 10, 1959, gage height, 5.82 ft (1.774 m); maximum gage height, 6.33 ft (1.929 m) July 23, 24, 1950, backwater from aquatic vegetation; minimum discharge, 1.0 ft³/s (0.028 m³/s) Oct. 18, 1964.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 415 ft³/s (11.8 m³/s) Sept. 25, gage height, 5.14 ft (1.567 m); maximum gage height, 5.15 ft (1.570 m) Sept. 23, backwater from aquatic vegetation; minimum daily, 9.6 ft³/s (0.272 m³/s) Aug. 6.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DAY	MEAN VALUES											
	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	28	218	263	180	114	101	195	111	58	33	15	224
2	29	220	251	175	109	101	186	111	71	39	17	229
3	28	217	231	168	107	104	185	113	84	31	19	224
4	26	213	240	164	105	110	198	120	73	31	16	217
5	24	211	248	157	105	121	191	115	64	50	13	203
6	21	220	250	155	108	121	184	98	131	59	9.6	194
7	20	216	248	156	106	125	135	65	179	56	39	223
8	19	213	243	150	102	125	110	37	189	54	171	253
9	16	210	236	145	102	127	66	32	186	49	205	277
10	16	211	237	143	98	131	38	31	189	56	193	286
11	16	206	240	147	98	128	40	31	185	55	180	282
12	13	201	229	143	97	127	46	31	174	50	173	315
13	12	204	235	136	94	130	47	33	160	49	161	352
14	14	204	230	136	93	134	53	36	162	42	155	352
15	14	204	224	133	98	135	61	38	157	42	151	345
16	18	204	231	148	97	157	63	35	156	59	140	344
17	18	205	244	164	95	172	70	41	107	66	140	349
18	16	205	233	164	94	173	67	48	69	59	138	338
19	24	205	230	159	91	172	37	52	59	56	143	330
20	31	206	225	154	91	177	42	59	62	59	151	348
21	35	226	218	150	92	186	44	65	65	49	167	357
22	39	243	211	147	104	190	46	60	61	25	168	391
23	56	243	213	145	110	197	48	49	63	24	167	410
24	121	240	219	143	107	201	47	50	60	17	161	408
25	154	239	232	138	106	203	50	60	62	9.7	155	411
26	183	255	222	135	104	203	50	55	64	16	153	411
27	237	274	214	133	100	202	54	56	59	20	149	406
28	232	279	205	127	103	201	54	55	75	23	176	405
29	224	274	199	124	100	203	56	63	76	20	191	405
30	213	270	191	121	---	200	94	68	57	15	209	402
31	206	---	186	116	---	198	---	66	---	13	220	---
TOTAL	2103	6736	7078	4556	2930	4855	2557	1884	3157	1226.7	4145.6	9691
MEAN	67.8	225	228	147	101	157	85.2	60.8	105	39.6	134	323
MAX	237	279	263	180	114	203	198	120	189	66	220	411
MIN	12	201	186	116	91	101	37	31	57	9.7	9.6	194
CFSM	.21	.69	.70	.45	.31	.48	.26	.19	.32	.12	.41	.99
IN.	.24	.77	.81	.52	.33	.55	.29	.21	.36	.14	.47	1.10
CAL YR 1979	TOTAL	57312.3	MEAN	157	MAX	331	MIN	1.2	CFSM	.48	IN	6.52
WTR YR 1980	TOTAL	50919.3	MEAN	139	MAX	411	MIN	9.6	CFSM	.43	IN	5.79

ROCK RIVER BASIN

05429580 DOOR CREEK NEAR COTTAGE GROVE, WI

LOCATION.--Lat 43°02'54", long 89°13'54", in NE 1/4 NE 1/4 sec.30, T.7 N., R.11 E., Dane County, Hydrologic Unit 07090001, on right bank 60 ft (18 m) upstream from Hepe Road, 1.8 mi (2.9 km) upstream from Little Door Creek, and 2.5 mi (4.0 km) southwest of Cottage Grove.

DRAINAGE AREA.--15.3 mi² (39.6 km²).

PERIOD OF RECORD.--December 1975 to December 1979 (discontinued).

GAGE.--Water-stage recorder. Altitude of gage is 850 ft (259 m), from topographic map.

REMARKS.--Records fair.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 208 ft³/s (5.89 m³/s) June 26, 1978, gage height, 11.32 ft (3.450 m); minimum daily, 1.1 ft³/s (0.031 m³/s) Sept. 11, 1977.

EXTREMES FOR PERIOD OCTOBER TO DECEMBER 1979: Maximum discharge, 24 ft³/s (0.680 m³/s) Dec. 25, gage height, 7.04 ft (2.15 m); minimum daily, 4.5 ft³/s (0.127 m³/s) Oct. 1, 13, 14, 16-18.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980												
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.5	6.4	5.9									
2	4.8	5.7	5.6									
3	4.6	5.3	5.4									
4	4.6	5.1	5.3									
5	4.6	4.9	5.6									
6	4.6	5.5	5.6									
7	4.6	5.7	5.6									
8	4.6	5.3	5.5									
9	4.6	5.3	5.5									
10	4.6	5.3	5.5									
11	4.7	5.7	5.7									
12	4.7	5.2	6.0									
13	4.5	5.1	5.4									
14	4.5	5.1	6.3									
15	4.6	5.1	5.7									
16	4.5	5.2	5.6									
17	4.5	5.3	5.4									
18	4.5	5.1	5.4									
19	5.3	5.0	5.4									
20	5.1	4.9	5.4									
21	5.0	8.8	5.4									
22	5.3	12	5.8									
23	9.9	9.2	8.3									
24	8.0	7.4	13									
25	6.3	6.7	20									
26	5.7	10	12									
27	5.7	12	9.1									
28	5.3	8.8	8.1									
29	5.1	7.3	7.4									
30	4.9	6.4	7.0									
31	5.1	---	6.6									
TOTAL	159.3	194.8	214.5									
MEAN	5.14	6.49	6.92									
MAX	9.9	12	20									
MIN	4.5	4.9	5.3									
CFSM	.34	.42	.45									
IN.	.39	.47	.52									
CAL YR 1979	TOTAL	3429.5	MEAN 9.40	MAX 88	MIN 4.3	CFSM .61	IN 8.34					

ROCK RIVER BASIN

05429580 DOOR CREEK NEAR COTTAGE GROVE, WI--CONTINUED

WATER-QUALITY RECORDS

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

WATER-QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	TEMPER- ATURE, WATER (DEG C)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	SEDI- MENT, SUS- PENDE (MG/L)	SEDI- MENT DIS- CHARGE, SUS- PENDE (T/DAY)
OCT , 1979						
15...	0940	4.6	--	--	79	.98
DEC						
13...	0930	5.4	.0	790	40	.58
JAN , 1980						
15...	1349	5.4	4.0	755	--	--
16...	1545	45	--	--	227	28
29...	1418	3.8	.0	--	--	--
MAR						
03...	1422	5.5	1.0	680	--	--
APR						
18...	1135	9.9	12.5	815	--	--
21...	1040	9.6	--	--	61	1.6

ROCK RIVER BASIN

05430030 OREGON BRANCH AT OREGON, WI

LOCATION.--Lat 42 55'38", long 89 23'05", in NW 1/4 NW 1/4, sec.12, T.5 N., R.9 E., Dane County, Hydrologic Unit 07090001, on right bank 15 ft (4.6 m) upstream from culvert located 300 ft (91 m) north of intersection of North Main and Jefferson Street, and 150 ft (46 m) west of North Main Street in Oregon.

DRAINAGE AREA.--9.93 mi² (25.72 km²).

PERIOD OF RECORD.--May 1979 to current year (no winter records).

GAGE.--Water-stage recorder. Altitude of gage is 935 ft (285 m), from topographic map.

REMARKS.--Records are good except those for discharge below 1.0 ft³/s (0.03 m³/s), which are fair.

EXTREMES FOR CURRENT PERIOD.--May to September 1979: Maximum discharge, 9.4 ft³/s (0.266 m³/s) Aug. 17, gage height, 1.98 ft³/s (0.604 m³/s); no flow for many days.

Water year 1980: Maximum discharge, 58 ft³/s (1.64 m³/s) June 7, gage height, 3.61 ft (1.100 m); no flow for many days.

RATING TABLE (gage height, in feet, and discharge, in cubic feet per second).
(Shifting-control method used May 1, 1979, to June 20, 1979; stage-discharge relation affected by ice Mar. 17, 18.)

1.08	0.0	1.9	9.2
1.1	0.3	2.4	19
1.5	4.3		

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979												
DAY	MEAN VALUES											
	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1								.51	.00	.00	.00	.22
2								.79	.00	.00	.00	.00
3								.92	.00	.00	.00	.00
4								.25	.04	.00	.02	.00
5								.00	.00	.00	.43	.00
6								.00	.00	.00	.00	.00
7								.00	.00	.00	.00	.00
8								.00	.00	.00	.04	.00
9								.00	.24	.00	.78	.00
10								.00	.10	.00	.17	.00
11								.00	.00	.00	.00	.00
12								.00	.00	.00	.00	.00
13								.00	.00	.00	.00	.00
14								.00	.00	.00	.08	.00
15								.00	.00	.00	.04	.00
16								.00	.00	.00	.25	.00
17								.00	.00	.00	.70	.00
18								.38	.00	.00	.02	.00
19								.09	.00	.00	.00	.00
20								.00	.13	.00	.93	.00
21								.00	.00	.00	.00	.00
22								.00	.00	.00	.06	.00
23								.00	.00	.00	.00	.00
24								.00	.00	.00	.00	.00
25								.00	.00	.00	.00	.00
26								.00	.00	.00	.00	.00
27								.00	.00	.00	.16	.00
28								.00	.56	.00	.12	.00
29								.00	.23	.00	.29	.00
30								.00	.00	.00	.00	.00
31								.00	---	.00	.00	---
TOTAL								2.94	1.30	.00	4.09	.22
MEAN								.095	.043	.000	.13	.007
MAX								.92	.56	.00	.93	.22
MIN								.00	.00	.00	.00	.00

ROCK RIVER BASIN

05430030 OREGON BRANCH AT OREGON, WI--CONTINUED

DAY	DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980											
	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.14	.00	.00			---	.00	.30	.00	.00	.07	.37
2	.00	.00	.00			---	.00	.27	1.2	.00	1.5	.00
3	.00	.00	.00			---	1.2	.12	.97	.00	.36	.00
4	.00	.00	.00			---	.89	.00	.01	.00	.11	.52
5	.00	.00	.00			---	.61	.00	1.5	.01	.09	.32
6	.00	.06	.00			---	.67	.00	3.4	.00	.00	.32
7	.00	.00	.00			---	.79	.00	17	.00	1.4	5.2
8	.00	.00	.00			---	2.9	.00	5.8	.00	1.3	2.2
9	.00	.00	.00			---	2.2	.00	3.3	.45	.45	4.0
10	.00	.00	.00			---	1.6	.00	1.5	.00	.91	1.9
11	.00	.00	.00			---	1.3	.00	.70	.00	.91	1.4
12	.00	.00	.00			---	1.1	.00	.25	.00	.39	6.3
13	.00	.00	.00			---	.81	.91	.59	.00	.99	4.4
14	.00	.00	.00			---	1.0	.08	.63	.00	.52	2.4
15	.00	.00	.00			---	1.0	.08	.31	.00	.20	1.8
16	.00	.00	.00			---	1.1	.00	.02	4.9	1.0	2.8
17	.00	.00	.00			2.3	.86	.53	.00	1.2	1.4	2.3
18	.00	.00	---			1.0	.75	.79	.00	.08	.70	1.5
19	.28	.00	---			.89	.59	.78	.00	.00	1.4	.98
20	.00	.00	---			.43	.55	.34	.00	.00	1.4	5.3
21	.00	.91	---			.19	.59	.05	.00	.00	2.8	2.5
22	.76	.19	---			.15	.37	.02	.00	.00	1.7	6.3
23	.38	.00	---			.20	.38	.00	.00	.00	.74	2.6
24	.00	.00	---			.00	.31	.00	.00	.00	.39	1.9
25	.00	.00	---			.00	.18	.00	.00	.07	.25	1.6
26	.00	1.1	---			.00	.11	.00	.00	4.2	.01	1.3
27	.00	.06	---			.00	.00	.00	.05	3.2	.26	.87
28	.00	.00	---			.00	.00	.26	.67	1.8	.08	.64
29	.00	.00	---			.00	.39	.20	.00	.52	.11	.60
30	.00	.00	---			.00	.34	.03	.00	.50	1.3	.47
31	.13	---	---			.00	---	.00	---	.29	.84	---
TOTAL	1.69	2.32	---			---	22.59	4.76	37.90	17.22	23.58	62.79
MEAN	.055	.077	---			---	.75	.15	1.26	.56	.76	2.09
MAX	.76	1.1	---			---	2.9	.91	17	4.9	2.8	6.3
MIN	.00	.00	---			---	.00	.00	.00	.00	.00	.00
CFSM	.006	.008	---			---	.08	.02	.13	.06	.08	.21
IN.	.01	.01	---			---	.08	.02	.14	.06	.09	.24

ROCK RIVER BASIN

05430150 BADFISH CREEK NEAR COOKSVILLE, WI

LOCATION.--Lat 42°50'00", long 89°11'48", in SW 1/4 SE 1/4 sec.4, T.4 N., R.11 E., Rock County, Hydrologic Unit 07090001, on right bank, 20 ft (6 m) upstream from bridge on State Highway 59, 2.2 mi (3.5 km) east of Cooksville, and 2.2 mi (3.5 km) above the mouth.

DRAINAGE AREA.--82.6 mi² (214 km²).

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

GAGE.--Water-stage recorder. Altitude of gage is 810 ft (247 m), from topographic map.

REMARKS.--Records good except those for December to February, which are fair. Approximately 56 per cent of flow is effluent from Nine Springs treatment plant.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 796 ft³/s (22.5 m³/s) July 1, 1978, gage height, 8.05 ft (2.454 m); minimum daily, 35 ft³/s (0.99 m³/s) Aug. 1, 1977.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 588 ft³/s (16.7 m³/s) June 7, gage height, 7.18 ft (2.188 m); minimum daily, 66 ft³/s (1.87 m³/s) Feb. 18, Mar. 9.

RATING TABLE (gage height, in feet, and discharge, in cubic feet per second).
(Shifting-control method used Oct. 1 to Nov. 2, June 20 to Sept. 13; stage-discharge relation affected by ice Jan. 7-13, Jan. 20-29.)

4.7	59	6.0	308
5.0	109	7.0	538

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	74	98	91	88	74	77	85	88	110	111	98	92
2	88	90	84	83	69	72	86	84	119	111	110	92
3	84	88	84	88	67	72	110	81	174	107	100	96
4	80	81	90	87	74	76	122	80	140	102	100	97
5	81	82	93	83	76	75	101	80	220	94	98	95
6	76	95	91	78	77	71	93	85	251	93	96	92
7	74	87	92	78	76	73	101	79	356	88	120	152
8	74	83	86	78	78	69	156	80	209	98	210	150
9	78	83	84	74	73	66	144	85	155	107	130	190
10	76	81	86	70	70	72	122	82	148	104	150	129
11	80	76	95	76	72	74	110	76	142	95	120	108
12	76	79	92	70	74	73	109	76	138	91	120	186
13	77	88	90	74	74	76	96	90	148	79	110	214
14	73	88	89	79	74	78	98	87	159	69	110	131
15	71	89	89	83	74	160	109	88	138	76	100	114
16	78	89	89	257	69	203	107	81	129	145	90	115
17	79	88	88	228	67	152	103	82	132	93	88	137
18	77	81	91	142	66	95	101	93	129	85	86	114
19	90	81	90	123	68	96	96	115	125	83	170	107
20	88	88	89	110	70	93	91	92	123	75	120	149
21	78	124	91	110	104	89	93	89	120	71	130	129
22	81	123	89	110	237	77	99	87	111	82	96	158
23	112	96	100	100	150	74	96	88	109	82	93	147
24	85	89	131	100	100	77	94	86	117	84	82	125
25	80	88	206	100	94	79	91	83	116	84	77	117
26	81	128	107	98	86	79	88	84	118	100	86	111
27	82	127	105	96	84	81	80	92	115	96	92	103
28	76	106	100	92	82	83	83	109	133	77	95	97
29	79	99	94	80	80	82	91	117	111	93	95	96
30	85	96	89	76	---	77	88	118	104	95	101	99
31	92	---	85	78	---	82	---	115	---	96	93	---
TOTAL	2505	2791	2980	3089	2459	2703	3043	2772	4399	2866	3366	3742
MEAN	80.8	93.0	96.1	99.6	84.8	87.2	101	89.4	147	92.5	109	125
MAX	112	128	206	257	237	203	156	118	356	145	210	214
MIN	71	76	84	70	66	66	80	76	104	69	77	92
CAL YR 1979	TOTAL	35449	MEAN	97.1	MAX	351	MIN	58				
WTR YR 1980	TOTAL	36715	MEAN	100	MAX	356	MIN	66				

ROCK RIVER BASIN

05430175 YAHARA RIVER NEAR FULTON, WI

LOCATION.--Lat 42°49'50", long 89°10'09", in NE 1/4 NE 1/4 sec.10, T.4 N., R.11 E., Rock County, Hydrologic Unit 07090001, on right bank, 700 ft (213 m) downstream from Badfish Creek, 2,000 ft (610 m) upstream from bridge on State Highway 59, and 2.8 mi (4.5 km) northwest of Fulton.

DRAINAGE AREA.--517 mi² (1,340 km²).

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

GAGE.--Water-stage recorder. Datum of gage is 792.7 ft (241.61 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Records good except those for winter periods, which are fair. Diurnal fluctuation caused by powerplant at Stebbensville 1.5 mi (2.4 km) upstream.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,870 ft³/s (81.3 m³/s) July 1, 1978, gage height, 7.99 ft (2.435 m); minimum daily, 60 ft³/s (1.70 m³/s) Aug. 7, 1977.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,050 ft³/s (29.7 m³/s) Sept. 13, gage height, 5.45 ft (1.661 m); minimum daily, 94 ft³/s (2.66 m³/s) Oct. 7.

RATING TABLE (gage height, in feet, and discharge, in cubic feet per second).
(Shifting-control method used Sept. 9-30; stage-discharge relation affected by ice Dec. 16-18, Jan. 8-12, 21, Jan. 23 to Feb. 19, Feb. 27 to Mar. 2, Mar. 6, 12.)

3.0	89	5.0	846
3.5	206	6.0	1,440
4.0	378		

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DAY	MEAN VALUES											
	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	108	394	512	400	260	200	305	179	182	150	130	292
2	100	380	488	407	260	200	338	165	197	142	132	281
3	136	330	474	394	260	216	321	170	326	126	130	281
4	138	399	477	370	260	233	401	177	265	143	113	290
5	132	393	475	362	250	211	290	265	303	143	130	278
6	126	310	468	365	250	210	342	192	586	130	125	261
7	94	389	425	358	250	207	343	258	684	119	161	408
8	146	362	361	360	240	260	396	217	501	136	228	523
9	128	392	410	340	250	243	418	196	335	179	247	632
10	122	354	318	350	230	232	371	155	316	187	299	604
11	128	338	418	370	220	216	323	211	397	222	317	582
12	123	343	337	350	210	210	378	196	434	223	304	701
13	134	360	329	307	230	214	304	248	368	308	336	889
14	128	350	468	315	230	274	296	204	504	205	302	694
15	124	352	430	344	220	335	306	189	446	146	331	656
16	152	379	380	601	220	493	315	234	403	277	311	719
17	100	299	440	514	210	474	295	214	326	176	346	691
18	118	328	420	333	210	418	245	234	282	218	315	672
19	168	351	389	312	210	334	260	308	149	230	354	655
20	110	340	408	289	222	419	244	239	131	161	354	677
21	120	409	429	290	325	358	265	259	140	165	406	657
22	182	466	406	293	455	337	235	204	181	219	376	681
23	254	382	400	290	367	377	189	257	215	114	367	634
24	181	402	494	290	290	379	112	195	205	131	350	660
25	173	398	586	290	270	309	162	206	230	136	340	681
26	217	446	496	290	197	372	197	189	162	155	333	675
27	296	487	477	290	200	373	178	200	189	180	345	647
28	376	491	442	280	200	378	133	214	198	137	269	612
29	378	511	435	270	200	298	143	215	167	167	146	607
30	315	559	402	270	---	364	178	262	188	141	214	595
31	355	---	416	270	---	283	---	200	---	100	290	---
TOTAL	5362	11694	13410	10564	7196	9427	8283	6652	9010	5266	8401	17235
MEAN	173	390	433	341	248	304	276	215	300	170	271	575
MAX	378	559	586	601	455	493	418	308	684	308	406	889
MIN	94	299	318	270	197	200	112	155	131	100	113	261
CFSM	.34	.75	.84	.66	.48	.59	.53	.42	.58	.33	.52	1.11
IN.	.39	.84	.96	.76	.52	.68	.60	.48	.65	.38	.60	1.24
CAL YR 1979	TOTAL	119950	MEAN 329	MAX 944	MIN 92	CFSM .64	IN 8.63					
WTR YR 1980	TOTAL	112500	MEAN 307	MAX 889	MIN 94	CFSM .59	IN 8.09					

ROCK RIVER BASIN

05430500 ROCK RIVER AT AFTON, WI

LOCATION.--Lat 42°36'33", long 89°04'14", in NE 1/4 sec.28, T.2 N., R.12 E., Rook County, Hydrologic Unit 07090001, on right bank in Afton, 0.3 mi (0.5 km) downstream from highway bridge and 1.1 mi (1.8 km) upstream from Bass Creek.

DRAINAGE AREA.--3,340 mi² (8,651 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--January 1914 to current year. Monthly discharge only for January 1914, published in WSP 1308.

REVISED RECORDS.--WSP 1238: 1916(M), 1919(M), 1933, 1937-38, 1943. WDR WI-79-1: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 742.36 ft (226.271 m) National Geodetic Vertical Datum of 1929. Prior to Aug. 21, 1932, a nonrecording gage, and Aug. 21, 1932, to Sept. 30, 1933, water-stage recorder, at same site at datum 1 ft (0.30 m) higher.

REMARKS.--Records good except those for winter periods and discharge below 800 ft³/s (22.7 m³/s), which are fair. Diurnal fluctuation caused by powerplants above station.

AVERAGE DISCHARGE.--66 years, 1,774 ft³/s (50.24 m³/s), 7.21 in/yr (183 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 13,000 ft³/s (368 m³/s) Mar. 23, 24, 1929, gage height, 11.81 ft (3.600 m) present datum; maximum gage height observed, 13.05 ft (3.978 m) Feb. 5, 1916, present datum (backwater from ice); minimum discharge, 22 ft³/s (0.62 m³/s) Sept. 9, 1964; minimum daily, 42 ft³/s (1.189 m³/s) Aug. 25, 26, 1934; minimum gage height, 0.09 ft (0.027 m) Aug. 26, 1934.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 5,820 ft³/s (165 m³/s) Sept. 30, gage height, 8.26 ft (2.518 m); minimum daily, 390 ft³/s (11.0 m³/s) July 8.

RATING TABLE (gage height, in feet, and discharge, in cubic feet per second).
(Stage-discharge relation affected by ice Dec. 14-23, Jan. 8-14, and Jan. 28 to Feb. 21.)

2.4	364	5.0	2,220
3.0	740	7.0	4,210
4.0	1,440	9.0	6,860

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DAY	MEAN VALUES											
	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	850	1070	1960	2410	1800	1390	1680	2430	1130	1100	740	2780
2	864	1050	1760	2350	1700	1500	1710	2430	1240	1000	800	2690
3	680	1180	2120	2290	1700	1450	1810	2360	1340	937	800	2660
4	600	1240	2320	2180	1700	1400	1870	2240	863	854	853	2510
5	500	1290	2270	2080	1600	1370	1820	2110	741	876	800	2540
6	600	1350	2180	2000	1500	1280	1850	2130	1320	871	720	2500
7	680	1280	2140	1740	1500	1350	1980	2040	1540	760	840	2770
8	777	1220	2040	1700	1400	1340	2160	2050	1850	390	920	2980
9	720	1310	1950	1700	1400	1310	2320	1900	1830	450	1100	2970
10	500	1380	1920	1700	1300	1190	2540	1800	2380	520	1490	3160
11	600	1300	1840	1500	1200	1130	2740	1680	2430	580	1890	2980
12	580	1270	1970	1600	1200	1250	3000	1580	2510	580	2370	3340
13	640	1250	1700	1600	1100	1300	3170	1640	2550	700	2480	3590
14	640	1300	1700	1700	1100	1200	3510	1570	2570	780	2540	3670
15	640	1310	1700	1760	1100	1270	3400	1490	2800	580	2570	3720
16	640	1460	1600	1910	1100	1590	3370	1440	2590	700	2690	3840
17	660	1330	1600	2220	1100	1480	3370	1510	2350	820	2740	4090
18	640	1280	1500	1940	1000	1400	3370	1460	2210	720	2650	4080
19	700	1220	1200	1850	1000	1480	3280	1500	2140	780	2760	4170
20	800	1320	900	1880	1000	1550	3310	1500	1980	800	2870	4290
21	800	1520	940	1960	1100	1680	3300	1440	1860	904	3080	4380
22	800	1590	940	1960	1760	1660	3160	1460	1800	908	3180	4540
23	897	1420	1000	2050	1630	1760	3200	1340	1820	700	3250	4740
24	829	1420	1270	2080	1340	1870	3150	1480	1820	450	3270	4890
25	892	1500	1510	2140	1310	1860	2890	1410	1760	600	3270	5180
26	839	1690	1640	2020	1260	1780	2870	1430	1790	766	3280	5440
27	996	1730	1810	1920	1330	1840	2820	1320	1610	830	3220	5530
28	996	1750	2490	1900	1420	1880	2770	970	1420	939	3140	5600
29	1150	1850	2530	1900	1400	1840	2630	811	1230	755	2900	5680
30	1160	1930	2490	1800	---	1790	2520	929	1150	794	2710	5740
31	1150	---	2450	1800	---	1810	---	916	---	780	2790	---
TOTAL	23820	41810	55440	59640	39050	47000	81570	50366	54624	23224	68713	117050
MEAN	768	1394	1788	1924	1347	1516	2719	1625	1821	749	2217	3902
MAX	1160	1930	2530	2410	1800	1880	3510	2430	2800	1100	3280	5740
MIN	500	1050	900	1500	1000	1130	1680	811	741	390	720	2500
CFSM	.23	.42	.54	.58	.40	.45	.81	.49	.55	.22	.66	1.17
IN.	.27	.47	.62	.66	.43	.52	.91	.56	.61	.26	.77	1.30
CAL YR 1979	TOTAL	1002331	MEAN	2746	MAX	11400	MIN	500	CFSM	.82	IN	11.16
WTR YR 1980	TOTAL	662307	MEAN	1810	MAX	5740	MIN	390	CFSM	.54	IN	7.38

ROCK RIVER BASIN

05430500 ROCK RIVER AT AFTON, WI--CONTINUED

WATER-QUALITY RECORDS

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

PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: September 1954 to current year.

INSTRUMENTATION.--Temperature recorder since Sept. 1, 1954.

EXTREMES FOR PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: Maximum, 32.0°C July 27-30, Aug. 4, 1955, July 26, 28, 1964; minimum, 0.0°C on many days during winter periods.

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURES: Maximum, 30.5°C July 20; minimum, 0.0°C on several days during winter period.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SEDI- MENT, SUS- PENDED (MG/L)	SEDI- MENT DIS- CHARGE, SUS- PENDED (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM	SED. SUSP. SIEVE DIAM. % FINER THAN .125 MM	SED. SUSP. SIEVE DIAM. % FINER THAN .250 MM	SED. SUSP. SIEVE DIAM. % FINER THAN .500 MM	SED. SUSP. SIEVE DIAM. % FINER THAN .500 MM
SEP , 1980									
29...	1332	5680	75	1150	84	95	98	100	

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	BED MAT. SIEVE DIAM. % FINER THAN .125 MM	BED MAT. SIEVE DIAM. % FINER THAN .250 MM	BED MAT. SIEVE DIAM. % FINER THAN .500 MM	BED MAT. SIEVE DIAM. % FINER THAN 1.00 MM	BED MAT. SIEVE DIAM. % FINER THAN 2.00 MM	BED MAT. SIEVE DIAM. % FINER THAN 4.00 MM	BED MAT. SIEVE DIAM. % FINER THAN 8.00 MM	BED MAT. SIEVE DIAM. % FINER THAN 16.0 MM	BED MAT. SIEVE DIAM. % FINER THAN 32.0 MM
AUG , 1980											
19...	1347	2840	1	3	17	23	29	41	62	92	100
SEP											
04...	--	2510	1	4	16	21	25	33	46	72	100
29...	1332	5680	2	10	26	29	31	38	53	76	100

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	TEMPER- ATURE, WATER (DEG C)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	SEDI- MENT, SUS- PENDED (MG/L)	SEDI- MENT DIS- CHARGE, SUS- PENDED (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
NOV , 1979							
07...	1322	1320	7.0	640	--	--	--
APR , 1980							
13...	1310	1350	2.0	630	--	--	--
25...	1026	2950	13.0	510	--	--	--
JUN							
13...	1507	2490	21.5	600	48	323	--
JUL							
18...	0950	717	25.0	565	71	137	--
AUG							
18...	1347	2650	24.5	--	115	823	--
19...	1347	2840	24.5	585	--	--	--
SEP							
04...	1445	2510	22.5	--	75	508	96
29...	1332	5680	16.5	--	75	1150	84

ROCK RIVER BASIN

05430500 ROCK RIVER AT AFTON, WI--CONTINUED

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

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

DAY	MAX	MIN FEBRUARY	MEAN	MAX	MIN MARCH	MEAN	MAX	MIN APRIL	MEAN	MAX	MIN MAY	MEAN
1	.0	.0	.0	1.5	1.0	1.0	7.0	5.5	6.0	13.5	12.0	13.0
2	.0	.0	.0	1.5	1.0	1.0	7.0	6.5	7.0	16.0	13.0	14.5
3	.0	.0	.0	2.0	1.5	1.5	8.0	8.0	8.0	17.0	14.5	16.0
4	.5	.0	.0	1.5	1.5	1.5	8.0	6.5	7.5	19.0	16.0	17.5
5	.0	.0	.0	2.5	1.5	1.5	7.0	6.5	7.0	20.5	18.0	19.0
6	.0	.0	.0	2.0	2.0	2.0	7.5	7.0	7.0	20.0	17.5	18.5
7	.5	.0	.0	2.0	2.0	2.0	8.5	7.0	7.5	17.0	14.5	16.0
8	.5	.0	.0	2.5	2.0	2.5	9.5	8.0	8.5	14.5	13.0	14.0
9	.5	.0	.0	3.0	2.5	3.0	8.5	8.0	8.5	15.5	12.5	14.0
10	.5	.0	.0	4.0	2.0	2.5	8.0	6.5	7.5	15.0	13.0	14.0
11	1.0	.5	.5	3.5	2.0	2.5	7.0	6.5	6.5	15.5	13.5	14.5
12	1.0	.5	.5	3.0	2.5	2.5	7.0	6.5	6.5	17.0	14.0	15.0
13	1.0	.5	.5	2.0	2.0	2.0	8.0	7.0	7.5	15.0	14.5	15.0
14	1.0	.5	1.0	4.0	2.0	2.0	7.0	6.0	6.5	16.5	13.5	15.0
15	1.0	.5	1.0	5.0	3.0	3.5	6.0	5.5	5.5	17.5	14.5	16.0
16	1.0	.5	.5	4.5	4.0	4.0	6.5	5.5	6.0	16.0	14.5	15.5
17	1.0	.5	1.0	4.5	4.5	4.5	8.0	6.5	7.0	15.5	15.0	15.0
18	1.0	.5	.5	5.5	4.0	4.5	9.5	8.0	9.0	15.0	14.5	15.0
19	1.0	1.0	1.0	5.0	4.5	5.0	---	---	---	17.0	14.0	15.5
20	1.5	1.0	1.0	5.5	4.5	5.0	---	---	---	18.5	15.0	17.0
21	1.5	1.0	1.5	6.0	4.5	5.5	14.0	12.5	13.0	20.5	16.5	18.5
22	1.5	1.0	1.5	5.0	4.5	4.5	---	---	---	22.5	18.5	20.5
23	1.5	1.5	1.5	4.5	4.5	4.5	15.0	15.0	15.0	22.0	20.0	21.0
24	2.5	1.5	1.5	4.5	4.0	4.5	14.0	14.0	14.0	23.0	20.5	22.0
25	2.0	1.5	1.5	4.0	3.5	3.5	13.0	12.0	12.5	23.5	20.5	22.0
26	1.5	1.0	1.5	4.0	3.5	3.5	12.5	11.5	12.0	23.5	21.0	22.0
27	1.5	1.0	1.0	5.5	4.0	4.5	12.5	12.0	12.5	24.0	20.5	22.5
28	2.0	1.0	1.0	5.0	5.0	5.0	12.5	12.0	12.0	25.0	21.5	23.0
29	1.5	1.0	1.5	6.0	5.0	5.5	12.0	11.5	12.0	23.5	19.5	21.5
30	---	---	---	5.5	5.5	5.5	12.5	11.5	12.0	24.5	21.5	23.0
31	---	---	---	6.0	5.5	5.5	---	---	---	25.0	20.5	22.5
MONTH	2.5	.0	.5	6.0	1.0	3.5	15.0	5.5	9.0	25.0	12.0	17.5

ROCK RIVER BASIN

05430500 ROCK RIVER AT AFTON, WI--CONTINUED

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980												
DAY	MAX	MIN JUNE	MEAN	MAX	MIN JULY	MEAN	MAX	MIN AUGUST	MEAN	MAX	MIN SEPTEMBER	MEAN
1	21.5	20.5	21.0	26.0	23.5	24.5	28.5	24.0	26.0	24.0	23.5	23.5
2	23.0	20.0	21.5	26.5	23.5	24.5	26.0	24.0	25.0	24.5	23.0	24.0
3	23.5	19.5	21.5	27.0	22.5	25.0	27.5	23.5	25.5	24.5	23.0	24.0
4	22.0	20.5	21.0	27.5	24.0	25.5	27.5	24.5	26.0	24.0	23.5	23.5
5	22.0	17.5	20.0	29.0	24.5	26.5	27.5	24.0	26.0	24.0	22.5	23.0
6	23.5	20.5	22.0	27.5	24.0	26.0	28.5	25.0	26.5	24.5	22.5	23.5
7	23.5	21.5	22.5	28.5	24.5	26.5	27.5	23.5	25.5	23.0	21.5	22.5
8	23.0	20.5	21.5	28.5	20.5	25.5	26.5	25.0	26.0	23.5	21.5	22.5
9	21.0	19.5	20.0	26.0	20.5	24.0	27.0	24.5	25.5	23.5	22.5	23.0
10	20.5	18.5	19.5	29.5	24.0	26.5	29.0	24.5	25.0	22.5	21.0	22.0
11	21.0	18.0	19.5	29.5	25.0	27.5	25.5	24.0	24.5	21.5	20.5	21.0
12	22.0	19.5	20.5	29.5	26.0	27.5	26.5	24.0	25.0	20.5	20.0	20.5
13	22.0	20.5	21.0	30.0	25.0	27.5	29.0	24.5	24.5	21.5	20.0	21.0
14	23.0	20.0	21.5	29.0	25.5	27.5	24.5	24.0	24.0	21.5	20.5	21.0
15	22.0	20.0	21.0	30.0	26.0	28.0	24.5	23.5	24.0	20.5	19.0	20.0
16	21.0	19.0	20.0	29.5	25.5	27.5	23.5	22.5	23.5	19.0	17.5	18.5
17	21.5	18.5	20.0	30.5	25.5	28.0	22.0	21.0	21.5	18.0	17.0	17.5
18	23.0	19.5	21.0	27.5	25.5	26.5	23.5	21.0	22.0	17.5	16.5	17.0
19	21.0	19.5	20.5	29.5	25.5	27.5	25.0	22.5	24.0	18.0	17.0	17.5
20	22.5	19.0	20.5	30.5	26.0	28.0	27.0	25.0	26.0	19.0	18.0	18.5
21	23.0	20.0	21.5	29.0	26.0	27.5	27.5	26.5	27.0	20.0	19.0	19.5
22	24.5	21.0	22.5	28.0	26.0	27.0	27.5	26.5	27.0	19.5	19.0	19.5
23	25.0	22.0	23.5	28.5	24.0	26.0	27.5	26.0	27.0	19.0	18.0	18.5
24	26.0	23.0	24.5	27.0	23.0	25.5	28.0	26.5	27.5	18.0	17.0	17.5
25	27.5	24.0	25.5	26.5	23.0	25.0	27.5	26.5	27.0	17.5	17.0	17.0
26	28.5	25.0	26.5	25.0	23.5	24.5	28.0	26.5	27.0	17.0	16.0	16.5
27	27.0	25.5	26.5	26.0	23.0	24.0	28.5	27.0	27.5	16.5	15.5	16.0
28	27.5	24.5	26.0	26.5	22.5	24.5	27.5	26.5	27.0	16.0	15.5	16.0
29	26.0	24.0	25.0	27.0	22.5	25.0	27.0	25.0	26.0	16.5	15.5	16.0
30	26.0	23.0	24.5	25.5	23.5	24.5	25.5	24.0	25.0	17.0	16.0	16.5
31	---	---	---	28.0	24.0	26.0	24.0	23.5	24.0	---	---	---
MONTH	28.5	17.5	22.0	30.5	20.5	26.0	28.5	21.0	25.5	24.5	15.5	20.0

ROCK RIVER BASIN

05431486 TURTLE CREEK AT CARVERS ROCK ROAD NEAR CLINTON, WI

LOCATION.--Lat 42°35'50", long 88°49'45", in SW 1/4 sec.27, T.2 N., R.14 E., Rock County, Hydrologic Unit 07090001, on left bank 25 ft (8 m) downstream from bridge on Carvers Rock Road, 3.3 mi (5.3 km) northeast of Clinton, 13 mi (21 km) northeast of Beloit, and 17.8 mi (28.6 km) upstream from mouth.

DRAINAGE AREA.--199 mi² (515 km²).

PERIOD OF RECORD.--January to September 1980.

GAGE.--Water-stage recorder. Altitude of gage is 823 ft (251 m), from topographic map. September 1939 to December 1979, water-stage recorder at site 1.8 mi (2.90 km) downstream at a different datum.

REMARKS.--Records good except those for winter periods, which are fair. Some seasonal regulation caused by dams used to maintain levels of Turtle and Delavan Lakes.

EXTREMES FOR CURRENT YEAR.--Maximum discharge during period January to September 1980, 763 ft³/s (21.6 m³/s) Feb. 23, gage height, 6.53 ft (1.990 m), no peak above base of 1,200 ft³/s (34.0 m³/s); minimum daily, 64 ft³/s (1.81 m³/s) July 7, 8.

RATING TABLE (gage height, in feet, and discharge, in cubic feet per second).
(Stage-discharge relation affected by ice Jan. 7-14, Jan. 23 to Feb. 20, and Feb. 26 to Mar. 6.)

				3.6 4.0	58 126					5.0 6.0	358 617					
DISCHARGE, IN CUBIC FEET PER SECOND, WATER MEAN VALUES													OCTOBER 1979		TO SEPTEMBER 1980	
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP				
1				167	86	110	104	134	144	73	77	104				
2				164	86	110	108	130	154	70	78	107				
3				157	90	100	135	126	258	70	89	95				
4				154	90	110	164	124	214	68	94	88				
5				152	90	110	138	120	223	68	136	85				
6				142	90	100	127	117	270	67	102	81				
7				110	90	110	139	115	327	64	119	278				
8				110	90	103	223	93	320	64	174	345				
9				110	90	96	265	83	289	71	173	430				
10				130	86	102	245	85	222	78	184	334				
11				160	86	100	199	85	119	76	191	272				
12				120	86	93	198	85	106	70	190	320				
13				110	86	73	173	85	93	68	173	549				
14				120	86	75	158	86	94	67	171	409				
15				128	86	95	171	85	174	76	144	317				
16				211	86	159	224	81	197	100	143	311				
17				292	80	172	214	83	140	92	194	393				
18				199	90	135	203	93	122	84	158	331				
19				163	110	127	185	99	113	77	124	288				
20				150	150	128	178	97	108	83	129	260				
21				140	179	126	172	92	97	102	164	241				
22				130	539	119	170	85	90	85	137	228				
23				120	464	116	144	80	88	78	112	245				
24				110	206	114	113	76	86	73	100	216				
25				100	130	109	108	75	83	70	93	200				
26				100	120	108	105	71	81	91	89	187				
27				98	120	109	104	68	76	114	85	175				
28				96	120	112	104	75	86	97	81	167				
29				94	120	127	111	104	78	88	77	163				
30				90	---	127	113	126	76	82	80	155				
31				86	---	123	---	138	---	81	85	---				
TOTAL				4213	3832	3498	4795	2996	4528	2447	3946	7374				
MEAN				136	132	113	160	96.6	151	78.9	127	246				
MAX				292	539	172	265	138	327	114	194	549				
MIN				86	80	73	104	68	76	64	77	81				
CFSM				.68	.66	.57	.80	.49	.76	.40	.64	1.24				
IN.				.79	.72	.65	.90	.56	.85	.46	.74	1.38				

ROCK RIVER BASIN

05431486 TURTLE CREEK AT CARVERS ROCK ROAD NEAR CLINTON, WI--CONTINUED

WATER-QUALITY RECORDS

PERIOD OF RECORD.--January to September 1980.

PERIOD OF DAILY RECORD.--

SUSPENDED-SEDIMENT DISCHARGE: January to September 1980.

REMARKS.--Sediment records are good except for ice period which are fair.

EXTREMES FOR CURRENT YEAR.--

SUSPENDED-SEDIMENT CONCENTRATIONS: Maximum daily mean, 598 mg/l Sept. 7; minimum daily mean, 6 mg/l Feb. 15, 19. Maximum observed 1,130 mg/l Sept. 7; minimum observed, 4 mg/l Feb. 14.

SUSPENDED-SEDIMENT DISCHARGE: Maximum daily, 758 tons (688 tonnes) Sept. 7; minimum daily, 1.4 tons (1.3 tonnes) Feb. 15.

WATER-QUALITY DATA, JANUARY TO SEPTEMBER 1980

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SEDI- MENT, SUS- PENDED (MG/L)	SEDI- MENT DIS- CHARGE, SUS- PENDED (T/DAY)	SED. SUSP. FALL DIAM. % FINER THAN .002 MM	SED. SUSP. FALL DIAM. % FINER THAN .004 MM	SED. SUSP. FALL DIAM. % FINER THAN .008 MM	SED. SUSP. FALL DIAM. % FINER THAN .016 MM	SED. SUSP. FALL DIAM. % FINER THAN .031 MM	SED. SUSP. FALL DIAM. % FINER THAN .062 MM	SED. SUSP. FALL DIAM. % FINER THAN .125 MM	SED. SUSP. FALL DIAM. % FINER THAN .250 MM
JUN , 1980												
07...	1316	338	782	714	40	55	69	82	90	95	98	100

PARTICLE-SIZE DISTRIBUTION OF SURFACE BED MATERIAL

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	BED MAT. SIEVE DIAM. % FINER THAN .062 MM	BED MAT. SIEVE DIAM. % FINER THAN .125 MM	BED MAT. SIEVE DIAM. % FINER THAN .250 MM	BED MAT. SIEVE DIAM. % FINER THAN .500 MM	BED MAT. SIEVE DIAM. % FINER THAN 1.00 MM	BED MAT. SIEVE DIAM. % FINER THAN 2.00 MM	BED MAT. SIEVE DIAM. % FINER THAN 4.00 MM	BED MAT. SIEVE DIAM. % FINER THAN 8.00 MM	BED MAT. SIEVE DIAM. % FINER THAN 16.0 MM	BED MAT. SIEVE DIAM. % FINER THAN 32.0 MM
JUN , 1980												
07...	1315	338	2	4	17	47	63	71	81	90	96	100

ROCK RIVER BASIN

05431486 TURTLE CREEK AT CARVERS ROCK ROAD NEAR CLINTON, WI--CONTINUED

SUSPENDED-SEDIMENT, JANUARY TO SEPTEMBER 1980

DAY	MEAN CONCENTRATION (MG/L)		LOADS (T/DAY)		MEAN CONCENTRATION (MG/L)		LOADS (T/DAY)		MEAN CONCENTRATION (MG/L)		LOADS (T/DAY)	
	JANUARY		FEBRUARY		MARCH							
1	21	9.5	21	4.9	21	6.2						
2	22	9.7	20	4.6	20	6.5						
3	36	15	20	4.9	20	5.4						
4	47	20	17	4.1	15	4.5						
5	41	17	14	3.4	27	8.0						
6	36	14	12	2.9	28	7.6						
7	38	12	12	2.9	29	8.6						
8	43	13	12	2.9	31	8.6						
9	41	12	20	4.9	32	8.3						
10	38	13	11	2.6	34	9.3						
11	36	16	12	2.8	35	10						
12	33	11	10	2.3	36	9.0						
13	31	16	14	3.2	29	5.8						
14	29	13	8	1.8	21	4.3						
15	27	9.2	6	1.4	38	10						
16	192	155	7	1.6	75	32						
17	288	244	8	1.7	59	27						
18	47	26	8	1.9	48	18						
19	21	9.2	6	1.8	34	12						
20	55	22	8	3.2	31	11						
21	45	17	11	5.3	22	7.6						
22	30	11	124	180	11	3.6						
23	25	8.1	140	175	11	3.3						
24	20	5.9	79	44	11	3.3						
25	12	3.2	89	31	6	1.9						
26	18	4.9	55	18	10	2.9						
27	18	4.8	34	11	22	6.4						
28	20	5.2	35	11	21	6.4						
29	20	5.1	37	12	19	6.5						
30	22	5.3	---	---	17	5.8						
31	25	5.8	---	---	16	5.3						
TOTAL	---	732.9	---	547.1	---	265.1						

DAY	MEAN CONCENTRATION (MG/L)		LOADS (T/DAY)		MEAN CONCENTRATION (MG/L)		LOADS (T/DAY)		MEAN CONCENTRATION (MG/L)		LOADS (T/DAY)		MEAN CONCENTRATION (MG/L)		LOADS (T/DAY)		MEAN CONCENTRATION (MG/L)		LOADS (T/DAY)	
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER									
1	24	6.7	90	32	97	37	59	12	69	14	105	30								
2	34	10	75	26	104	45	77	15	71	15	83	24								
3	49	19	88	30	414	291	67	13	78	19	78	20								
4	48	21	108	36	209	121	85	16	112	32	86	20								
5	27	10	88	29	425	268	83	15	204	76	69	16								
6	42	15	79	25	305	221	62	11	126	35	71	15								
7	63	24	56	17	465	442	55	9.5	161	53	598	758								
8	119	75	42	11	315	277	69	12	217	102	239	258								
9	86	61	30	6.7	175	137	68	13	199	93	333	422								
10	43	28	30	6.9	127	77	76	16	199	99	133	122								
11	29	16	26	6.0	94	30	72	15	169	87	118	86								
12	29	15	32	7.3	93	27	61	12	143	73	135	120								
13	26	12	34	7.8	96	24	42	7.7	144	67	213	317								
14	28	12	20	4.6	106	27	59	11	119	55	107	120								
15	25	12	30	6.9	364	212	75	15	102	40	87	75								
16	44	27	29	6.3	222	124	150	40	105	41	91	76								
17	59	34	30	6.7	86	32	89	27	134	70	87	93								
18	60	33	35	8.8	125	41	79	18	99	42	64	57								
19	70	35	44	12	130	40	78	16	118	40	75	58								
20	76	37	79	21	60	17	101	25	134	47	108	76								
21	83	39	58	14	116	30	162	45	199	89	92	60								
22	60	28	54	12	91	22	109	25	109	41	86	53								
23	55	21	44	9.5	98	23	78	16	91	28	67	44								
24	47	14	40	8.2	92	21	81	16	81	22	65	38								
25	33	9.5	36	7.3	87	19	80	15	71	18	71	38								
26	25	7.0	34	6.5	71	16	89	22	65	15	51	26								
27	33	9.2	40	7.3	65	13	105	32	64	15	51	24								
28	36	10	48	10	60	14	66	17	44	9.6	47	21								
29	48	14	96	27	53	11	83	20	46	9.5	50	22								
30	50	15	136	47	56	11	81	18	38	8.2	47	20								
31	---	---	114	43	---	---	69	15	52	12	---	---								
TOTAL	---	669.4	---	498.8	---	2670	---	560.2	---	1367.3	---	3109								

ROCK RIVER BASIN

05431500 TURTLE CREEK NEAR CLINTON, WI

LOCATION.--Lat 42°35'47", long 88°51'50", in SE 1/4 sec.29, T.2 N., R.14 E., Rock County, Hydrologic Unit 07090001, on left bank 15 ft (5 m) downstream from bridge on State Highway 140, 2.7 mi (4.3 km) north of Clinton, 11 mi (18 km) northeast of Beloit, and 16 mi (26 km) upstream from mouth.

DRAINAGE AREA.--202 mi² (523 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--September 1939 to December 1979 (discontinued).

REVISED RECORDS.--WSP 955: 1940. WSP 1308: 1950(M). WDR WI-71-1: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 817.00 ft (249.022 m) National Geodetic Vertical Datum of 1929 (levels by Corps of Engineers).

REMARKS.--Records are fair. Some seasonal regulation caused by dams used to maintain levels of Turtle and Delevan Lakes.

AVERAGE DISCHARGE.--41 years, 118 ft³/s (3.342 m³/s), 7.93 in/yr (201 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge: 16,500 ft³/s (467 m³/s) Apr. 21, 1973, gage height, 12.85 ft (3.971 m) from rating curve extended above 6,500 ft³/s (184 m³/s) on basis of slope-area measurement of peak flow; minimum discharge, 8.0 ft³/s (0.23 m³/s) Dec. 29, 1956, gage height, 2.04 ft (0.622 m), result of freezeup.

EXTREMES FOR CURRENT YEAR.--Maximum discharge during period October to December 1979, 431 ft³/s (12.1 m³/s) Dec. 25, gage height, 4.19 ft³/s (1.277 m), no peak above base of 1,200 ft³/s (34.0 m³/s); minimum daily 72 ft³/s (2.04 m³/s) Dec. 16.

RATING TABLE (gage height, in feet, and discharge, in cubic feet per second).
(Shifting-control method used Oct. 22 to Nov. 24; stage-discharge relation affected by ice Dec. 14, 17.)

2.9	64	3.7	234
3.2	108	4.1	376

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DAY	MEAN VALUES											
	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	100	140	130									
2	99	120	120									
3	96	110	110									
4	92	100	100									
5	87	100	100									
6	89	110	110									
7	90	113	110									
8	90	108	100									
9	92	107	92									
10	92	113	88									
11	90	111	88									
12	90	110	88									
13	90	111	88									
14	90	110	90									
15	90	107	91									
16	90	103	72									
17	90	100	90									
18	90	96	98									
19	100	89	104									
20	130	86	112									
21	140	129	108									
22	130	168	109									
23	180	147	134									
24	160	121	198									
25	130	106	363									
26	120	160	222									
27	120	200	200									
28	110	162	190									
29	110	150	170									
30	110	140	170									
31	100	---	170									
TOTAL	3287	3627	4015									
MEAN	106	121	130									
MAX	180	200	363									
MIN	87	86	72									
CFSM	.53	.60	.64									
IN.	.61	.67	.74									
CAL YR 1979	TOTAL	64034	MEAN	175	MAX	1620	MIN	64	CFSM	.87	IN	11.79

ROCK RIVER BASIN

05431500 TURTLE CREEK NEAR CLINTON, WI--CONTINUED

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1972-1975, October to December 1979.

PERIOD OF DAILY RECORD.--

SUSPENDED-SEDIMENT DISCHARGE: October to December 1979 (discontinued).

EXTREMES FOR CURRENT YEAR.--

SUSPENDED-SEDIMENT CONCENTRATIONS: Maximum daily mean, 93 mg/l Dec. 25; minimum daily mean, 17 mg/l Dec. 8. Maximum observed, 86 mg/l Nov. 21; minimum observed, 15 mg/l Dec. 8.

SUSPENDED-SEDIMENT DISCHARGE: Maximum daily, 96 tons (87 tonnes) Dec. 25; minimum daily, 3.9 tons (3.5 tonnes) Dec. 16.

WATER-QUALITY DATA, OCTOBER TO DECEMBER 1979

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	TEMPER- ATURE, WATER (DEG C)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)
NOV , 1979				
07...	0940	110	4.5	665
DEC				
18...	1448	97	.5	780
MAR , 1980				
14...	1350	77	.5	705
17...	1320	193	2.5	545
APR				
24...	1253	110	12.0	650
JUN				
04...	1312	216	19.0	570
07...	1323	342	21.5	520
JUL				
17...	1220	93	27.0	565
AUG				
29...	1018	72	22.5	640

SUSPENDED-SEDIMENT, OCTOBER TO DECEMBER 1979

DAY	MEAN CONCEN- TRATION (MG/L)	LOADS (T/DAY) OCTOBER	MEAN CONCEN- TRATION (MG/L)	LOADS (T/DAY) NOVEMBER	MEAN CONCEN- TRATION (MG/L)	LOADS (T/DAY) DECEMBER
1	28	7.5	45	17	32	13
2	24	6.5	37	12	29	9.4
3	24	6.2	34	10	30	8.9
4	24	6.0	31	8.4	30	8.1
5	24	5.6	29	7.8	28	7.6
6	24	5.8	33	9.8	21	8.1
7	24	5.8	34	9.3	22	7.4
8	23	5.6	32	9.2	17	6.5
9	23	5.7	29	8.5	29	12
10	23	5.7	27	8.4	25	12
11	23	5.6	26	7.6	26	6.2
12	23	5.6	24	7.0	25	5.9
13	23	5.6	22	6.7	24	5.7
14	23	5.6	21	6.2	23	5.6
15	22	5.3	18	5.1	21	5.2
16	22	5.3	18	4.9	20	3.9
17	22	5.3	19	5.1	19	5.3
18	22	5.3	26	6.7	34	9.0
19	29	7.8	37	8.9	30	8.4
20	38	13	32	7.4	36	11
21	50	19	68	26	26	7.5
22	45	16	72	33	32	9.7
23	65	32	35	14	37	14
24	54	23	31	10	63	41
25	40	14	33	9.4	93	96
26	39	13	41	18	33	21
27	38	12	40	22	19	9.3
28	35	10	34	15	20	6.7
29	33	9.8	38	17	35	14
30	29	8.6	51	26	35	14
31	25	6.8	---	---	18	6.8

ROCK RIVER BASIN

05432500 PECATONICA RIVER AT DARLINGTON, WI

LOCATION.--Lat 42°40'40", long 90°07'07", in NE 1/4 sec.3, T.2 N., R.3 E., Lafayette County, Hydrologic Unit 07090003, on right bank in Darlington, 0.3 mi (0.5 km) downstream from Vinegar Branch, and 3.6 mi (5.8 km) upstream from Otter Creek.

DRAINAGE AREA.--273 mi² (707 km²).

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

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

GAGE.--Water-stage recorder. Datum of gage is 802.42 ft (244.578 m) National Geodetic Vertical Datum of 1929.

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

AVERAGE DISCHARGE.--41 years, 183 ft³/s (5.183 m³/s), 9.10 in/yr (231 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 22,000 ft³/s (623 m³/s), July 16, 1950, gage height, 20.71 ft (6.312 m), from rating curve extended above 11,000 ft³/s (312 m³/s) on basis of slope-area determination of peak flow; minimum, 17 ft³/s (0.48 m³/s) Nov. 29, 1966, gage height, 2.09 ft (0.637 m), result of freezeup; minimum gage height, 1.07 ft (0.326 m), Dec. 6, 1968, result of freezeup.

EXTREMES OUTSIDE OF PERIOD OF RECORD.--Flood of Feb. 21, 1937, reached a stage of 17.6 ft (5.36 m), from floodmarks.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 1,500 ft³/s (42.48 m³/s) and maximum (*):

DATE	TIME	DISCHARGE (ft ³ /s) (m ³ /s)	GAGE HEIGHT (ft) (m)	DATE	TIME	DISCHARGE (ft ³ /s) (m ³ /s)	GAGE HEIGHT (ft) (m)
Jan. 17	1600	2,120 60.0	12.23 3.728	Mar. 17	1700	*2,360 66.8	*12.70 3.871
Feb. 22	0500	1,730 49.0	11.33 3.453				

minimum discharge, 62 ft³/s (1.76 m³/s) Jan. 5, gage height, 1.68 ft (0.512 m), result of freezeup.

RATING TABLE (gage height, in feet, and discharge, in cubic feet per second).
(Stage-discharge relation affected by ice Jan. 22, 24-27, 31, Feb. 1-20, Feb. 28 to Mar. 1.)

1.9	82	7.0	720
2.0	92	8.0	880
3.0	200	9.0	1,070
4.0	320	10.0	1,320
5.0	447	11.0	1,620
6.0	580	12.0	2,000
		13.0	2,550

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DAY	MEAN VALUES											
	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	121	145	127	129	100	110	113	113	95	95	78	105
2	138	139	101	112	100	100	114	108	93	92	83	100
3	137	123	123	102	100	100	150	104	222	88	113	92
4	130	118	115	102	100	100	292	101	148	86	92	95
5	126	118	116	83	110	98	195	99	168	86	86	102
6	128	134	114	99	110	98	156	96	495	95	81	92
7	130	135	118	136	100	94	160	93	472	85	76	131
8	128	123	93	126	100	94	268	92	317	81	77	553
9	126	122	110	108	100	94	528	93	179	327	89	312
10	121	120	110	105	98	94	335	99	154	188	117	172
11	125	114	118	163	98	94	249	100	136	109	122	144
12	128	113	94	201	98	93	222	95	126	96	106	218
13	124	117	97	153	98	95	196	104	118	90	100	422
14	119	115	113	134	96	93	183	114	146	85	125	281
15	122	116	106	124	96	330	181	104	251	91	105	215
16	124	118	109	1040	96	1450	177	98	250	207	96	197
17	123	116	115	1970	96	2190	166	125	158	198	161	263
18	121	115	104	1260	96	1210	159	175	137	103	143	203
19	141	115	98	307	96	415	153	147	128	93	121	178
20	147	113	99	184	96	258	150	141	121	89	152	179
21	138	145	99	174	390	176	144	114	112	85	242	202
22	140	176	105	160	1490	142	139	105	108	82	301	263
23	182	154	281	147	1650	125	133	99	107	79	135	292
24	162	133	338	140	641	120	125	96	110	76	115	210
25	134	125	220	140	283	113	121	95	102	77	106	188
26	127	137	159	130	217	112	119	90	100	184	101	180
27	124	155	138	120	154	113	117	86	100	128	97	167
28	125	138	128	114	130	113	113	84	147	91	95	161
29	122	121	111	109	120	121	112	98	122	84	99	174
30	120	98	113	105	---	125	115	108	98	80	96	162
31	123	---	117	100	---	118	---	100	---	80	106	---
TOTAL	4056	3811	3989	8077	7059	8588	5385	3276	5020	3430	3616	6053
MEAN	131	127	129	261	243	277	180	106	167	111	117	202
MAX	182	176	338	1970	1650	2190	528	175	495	327	301	553
MIN	119	98	93	83	96	93	112	84	93	76	76	92
CFSM	.48	.47	.47	.96	.89	1.02	.66	.39	.61	.41	.43	.74
IN.	.55	.52	.54	1.10	.96	1.17	.73	.45	.68	.47	.49	.82
CAL YR 1979	TOTAL	78887	MEAN 216	MAX 1850	MIN 92	CFSM .79	IN 10.75					
WTR YR 1980	TOTAL	62360	MEAN 170	MAX 2190	MIN 76	CFSM .62	IN 8.50					

ROCK RIVER BASIN

05433000 EAST BRANCH PECATONICA RIVER NEAR BLANCHARDVILLE, WI

LOCATION.--Lat 42°47'10" long 89°51'40", in SE 1/4 sec. 26, T.4 N., R.5 E., Lafayette County, Hydrologic Unit 07090003, on left bank at downstream side of bridge on State Highway 78, 1.8 mi (2.9 km) south of Blanchardville and 4.5 mi (7.2 km) upstream from Sawmill Creek.

DRAINAGE AREA.--221 mi² (572 km²).

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

GAGE.--Water-stage recorder. Datum of gage is 796.8 ft (242.86 m) National Geodetic Vertical Datum of 1929.

Prior to Dec. 20, 1939, nonrecording gage at bridge 50 ft (15 m) upstream at same datum. Auxiliary nonrecording gage 2.7 mi (4.3 km) upstream at same datum read every six hours or more often when stages exceed 10 ft (3 m).

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

AVERAGE DISCHARGE.--41 years, 140 ft³/s (3.965 m³/s), 8.60 in/yr (218 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 11,700 ft³/s (331 m³/s) Feb. 28, 1948, gage height, 15.74 ft (4.798 m); minimum, 18 ft³/s (0.51 m³/s) Nov. 29, 1966.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 1,300 ft³/s (36.8 m³/s) and maximum (*):

DATE	TIME	DISCHARGE (ft ³ /s) (m ³ /s)	GAGE HEIGHT (ft) (m)	DATE	TIME	DISCHARGE (ft ³ /s) (m ³ /s)	GAGE HEIGHT (ft) (m)
Jan. 17	--	1,490 42.2	ICE JAM	Mar. 17	0900	*2,010 56.9	*12.40 3.780

minimum discharge, 75 ft³/s (2.12 m³/s) Jan. 5, gage height, 3.16 ft (0.963 m) result of freezeup.

RATING TABLE (gage height, in feet, and discharge, in cubic feet per second).
(Stage-discharge relation affected by ice Dec. 2-5, 17-21, Jan. 4-18, and Jan. 21 to Mar. 15.)

3.2	78	9.0	704
4.0	142	10.0	932
6.0	349	11.0	1,250
8.0	584	12.0	1,730

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DAY	MEAN VALUES											
	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	100	135	110	110	92	110	111	116	93	89	79	101
2	120	119	100	102	92	100	111	110	97	87	80	97
3	110	111	110	100	92	94	134	107	158	85	94	92
4	110	109	110	90	92	94	212	104	111	84	82	93
5	110	109	110	86	96	94	147	102	126	84	84	94
6	110	118	110	88	98	94	133	101	265	84	81	90
7	110	118	109	98	96	94	143	98	301	83	81	147
8	110	113	104	100	94	94	259	100	178	81	91	240
9	109	111	98	100	90	90	504	100	124	87	100	129
10	108	110	105	110	88	90	270	101	117	88	96	118
11	112	105	106	140	88	88	202	104	112	83	103	107
12	113	105	104	130	88	86	187	100	107	82	95	131
13	110	108	91	120	88	86	169	106	104	80	95	248
14	108	106	105	120	88	90	160	111	108	80	114	168
15	109	106	143	130	88	200	165	105	112	81	93	131
16	112	108	112	420	88	1510	170	100	111	155	90	125
17	112	106	100	1140	88	1610	154	107	101	136	120	201
18	110	107	110	410	88	385	149	134	99	86	109	149
19	128	107	110	175	88	260	146	145	98	84	99	128
20	131	105	120	134	88	187	142	119	96	82	111	138
21	119	130	120	130	150	145	137	105	93	81	143	169
22	130	162	129	120	900	126	133	99	91	80	140	316
23	176	137	143	120	860	118	127	96	90	79	98	336
24	140	121	165	110	370	116	121	96	90	79	92	180
25	119	115	179	110	250	112	120	95	89	79	90	162
26	114	128	128	110	200	111	118	92	89	106	89	153
27	114	149	116	100	150	113	117	90	89	101	87	143
28	114	126	110	100	130	112	114	90	102	84	90	137
29	111	117	105	98	120	117	115	101	96	81	100	136
30	109	107	107	96	---	117	119	105	89	79	112	132
31	112	---	108	94	---	115	---	98	---	81	115	---
TOTAL	3600	3508	3577	5091	4940	6758	4889	3237	3536	2731	3053	4591
MEAN	116	117	115	164	170	218	163	104	118	88.1	98.5	153
MAX	100	162	179	1140	900	1610	504	145	301	155	143	336
MIN	100	105	91	86	88	86	111	90	89	79	90	90
CFSM	.53	.53	.52	.74	.77	.99	.74	.47	.53	.40	.45	.69
IN.	.61	.59	.60	.86	.83	1.14	.82	.54	.60	.46	.51	.77
CAL YR 1979	TOTAL	60127	MEAN 165	MAX 1210	MIN 84	CFSM .75	IN 10.12.					
WTR YR 1980	TOTAL	49511	MEAN 135	MAX 1610	MIN 79	CFSM .61	IN 8.33					

ROCK RIVER BASIN

05434235 SKINNER CREEK AT SKINNER HOLLOW ROAD NEAR MONROE, WI

LOCATION.--Lat 42°38'23", long 89°43'47", in NW 1/4 NE 1/4 sec.24, T.2 N., R.6 E., Green County, Hydrologic Unit 07090003, near the left upstream corner of the bridge on Skinner Hollow Road, about 0.8 mi (1.3 km) south of State Highway 81, 5.3 mi (8.5 km) west of Monroe, and 8.8 mi (14.2 km) above the mouth.

DRAINAGE AREA.--32.6 mi² (84.4 km²).

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

GAGE.--Water-stage recorder. Datum of gage is 803.05 ft (244.770 m) National Geodetic Vertical Datum of 1929.

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

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

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 702 ft³/s (19.9 m³/s) July 1, 1978, gage height, 7.78 ft (2.371 m); minimum daily, 8.6 ft³/s (0.244 m³/s) Mar. 2, 1979.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 100 ft³/s (2.83 m³/s) and maximum (*); peak discharges above base for period of record:

DATE	TIME	DISCHARGE		GAGE	HEIGHT	DATE	TIME	DISCHARGE		GAGE	HEIGHT
		(ft ³ /s)	(m ³ /s)	(ft)	(m)			(ft ³ /s)	(m ³ /s)	(ft)	(m)
June 17, 1978	1830	568	16.1	7.68	2.341	Aug. 18, 1979	0130	200	5.66	7.09	2.161
July 1, 1978	1600	*702	19.9	*7.78	2.371	Jan. 16, 1980	1400	269	7.62	7.37	2.246
Sept. 18, 1978	0730	141	3.99	6.77	2.063	Feb. 21, 1980	2230	430	12.2	7.55	2.301
Mar. 19, 1979	1800	195	5.52	7.18	2.188	Mar. 15, 1980	2130	371	10.5	7.49	2.283
Mar. 23, 1979	1930	187	5.30	7.13	2.173	Apr. 8, 1980	1230	102	2.89	6.24	1.902
Mar. 30, 1979	0630	134	3.79	6.68	2.036						

minimum daily discharge, 9.8 ft³/s (0.278 m³/s) July 24.

RATING TABLE (gage height, in feet, and discharge, in cubic feet per second).
(Shifting-control method used Oct. 1-31, July 28 to Sept. 13, 27-30; stage-discharge relation affected by ice Dec. 15-19, Jan. 7-13, Jan. 20 to Feb. 9, Feb. 25 to Mar. 11.)

2.9	9.8	5.5	67
3.0	11	6.0	89
3.5	20	6.5	120
4.0	30	7.0	168
4.5	40	7.5	380
5.0	52		

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	17	17	16	15	13	13	15	16	13	12	11	13
2	18	16	15	15	13	12	15	16	14	11	12	11
3	17	16	15	15	13	12	21	15	16	11	12	10
4	17	16	15	15	13	12	20	15	13	11	12	12
5	17	16	16	14	13	12	17	14	14	11	13	11
6	17	17	15	14	13	12	17	14	18	11	12	11
7	16	16	16	14	13	12	18	14	21	11	12	22
8	16	16	14	14	13	12	58	14	16	11	12	15
9	16	16	14	14	13	13	36	14	15	13	12	17
10	16	16	15	15	13	12	27	14	14	12	14	13
11	16	15	15	16	13	12	24	14	13	11	14	12
12	16	15	14	19	13	12	25	13	13	11	13	20
13	16	16	14	17	13	12	22	14	13	11	14	46
14	16	15	13	14	13	16	22	13	14	11	14	27
15	17	16	13	14	13	128	23	13	18	11	12	24
16	17	15	13	183	13	131	22	13	16	18	13	23
17	16	15	13	54	13	30	21	15	14	12	16	24
18	16	15	13	25	13	19	20	15	14	11	13	21
19	19	15	13	22	15	19	20	14	14	11	13	20
20	17	15	13	19	20	18	19	13	13	11	12	23
21	17	22	14	19	140	17	19	13	13	10	48	22
22	18	20	15	18	245	16	18	13	12	10	17	22
23	23	18	18	18	49	16	18	13	12	10	13	21
24	18	17	23	17	23	16	17	13	12	9.8	12	19
25	17	16	24	17	19	15	17	13	12	10	11	19
26	17	21	18	16	17	15	17	12	12	13	11	18
27	17	19	17	15	15	15	17	12	12	11	10	17
28	16	17	16	15	14	15	16	12	14	10	10	16
29	16	17	16	14	13	16	17	14	12	10	11	16
30	16	16	16	14	---	16	17	13	12	11	11	15
31	17	---	16	13	---	15	---	13	---	11	11	---
TOTAL	525	497	478	704	804	691	635	424	419	347.8	421	560
MEAN	16.9	16.6	15.4	22.7	27.7	22.3	21.2	13.7	14.0	11.2	13.6	18.7
MAX	23	22	24	183	245	131	58	16	21	18	48	46
MIN	16	15	13	13	13	12	15	12	12	9.8	10	10
CAL YR 1979	TOTAL	8794.1	MEAN	24.1	MAX	180	MIN	8.6				
WTR YR 1980	TOTAL	6505.8	MEAN	17.8	MAX	245	MIN	9.8				

ROCK RIVER BASIN

05434240 SKINNER CREEK AT KLONDIKE ROAD NEAR MONROE, WI

LOCATION.--Lat 42°37'32", long 89°44'39", in SE 1/4 SE 1/4 sec.23, T.2 N., R.6 E., Green County, Hydrologic Unit 07090003, near the right upstream corner of the bridge on Klondyke Road at the intersection with County Highway Y, 5.0 mi (8.0 km) west of Monroe, and 7.1 mi (11.4 km) above the mouth.

DRAINAGE AREA.--35.0 mi² (90.6 km²).

WATER-DISCHARGE RECORDS

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

GAGE.--Water-stage recorder. Datum of gage is 790.00 ft (240.792 m) National Geodetic Vertical Datum of 1929.

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

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

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 353 ft³/s (10.0 m³/s) July 1, 1978, gage height, 11.25 ft (3.429 m); minimum daily, 8.6 ft³/s (0.244 m³/s) July 8, 1980.

EXTREMES FOR CURRENT YEAR.--Peak discharge above base of 100 ft³/s (2.83 m³/s) and maximum (*); peak discharges above base for period of record:

DATE	TIME	DISCHARGE (ft ³ /s) (m ³ /s)	GAGE HEIGHT (ft) (m)	DATE	TIME	DISCHARGE (ft ³ /s) (m ³ /s)	GAGE HEIGHT (ft) (m)
June 18, 1978	0045	320 9.06	10.82 3.298	Aug. 9, 1979	0630	107 3.03	8.17 2.490
July 1, 1978	2045	*353 10.0	*11.25 3.429	Aug. 17, 1979	2245	231 6.54	9.76 2.975
Sept. 18, 1978	0815	119 3.37	8.33 2.539	Jan. 16, 1980	2000	246 6.97	9.91 3.021
Mar. 19, 1979	2315	232 6.57	9.41 2.868	Feb. 22, 1980	0230	251 7.11	9.98 3.042
Mar. 23, 1979	2400	219 6.20	9.22 2.810	Mar. 16, 1980	0245	209 5.92	9.45 2.880
Mar. 30, 1979	0745	139 3.94	8.31 2.533	Apr. 8, 1980	1130	113 3.20	8.30 2.530

minimum daily discharge, 8.6 ft³/s (0.244 m³/s) July 8.

RATING TABLE (gage height, in feet, and discharge, in cubic feet per second).
(Shifting-control method used July 15 to Aug. 22, Sept. 28-30; stage-discharge relation affected by ice Dec. 2, 3, 16-19, Jan. 7-14, 21-27, 29-31, Feb. 26, 27, Feb. 29 to Mar. 4, Mar. 6, 8-11.)

6.6	8.0	8.0	96
6.8	15	9.0	173
7.0	26	10.0	253

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	18	21	16	17	14	13	13	18	13	11	13	17
2	20	19	16	17	14	13	14	17	14	11	16	15
3	19	19	15	16	14	12	24	17	19	10	17	14
4	18	19	15	16	14	12	23	17	14	10	15	15
5	18	19	16	15	14	12	18	16	14	10	16	14
6	18	21	16	15	14	12	17	15	20	9.8	14	13
7	18	20	15	14	14	12	18	15	25	8.9	14	31
8	20	19	15	14	14	12	71	15	18	8.6	15	24
9	19	19	15	14	14	13	51	15	16	13	16	25
10	19	18	15	15	14	12	35	15	14	12	19	20
11	19	18	15	16	14	12	29	15	13	10	19	18
12	19	18	14	19	14	12	30	15	13	9.8	16	28
13	19	18	14	18	14	13	25	16	13	9.2	17	60
14	19	17	16	16	14	22	25	16	14	8.7	17	31
15	18	18	14	14	14	86	27	15	21	13	15	26
16	19	17	14	149	14	138	26	15	18	27	16	25
17	19	18	14	87	14	43	24	18	15	13	18	25
18	19	18	14	27	14	19	23	19	15	11	12	22
19	24	19	14	21	16	19	22	17	14	11	12	20
20	22	18	14	20	22	17	22	15	13	12	13	24
21	21	29	14	19	100	16	21	15	12	11	57	22
22	22	27	16	18	189	15	21	14	12	11	20	22
23	30	22	20	18	61	14	19	14	12	12	18	21
24	24	19	31	18	22	13	19	14	12	13	16	19
25	22	19	32	17	20	12	19	15	11	13	16	19
26	20	25	21	17	18	12	18	13	11	20	14	17
27	20	22	19	16	14	11	18	13	11	17	14	17
28	20	19	18	15	14	12	17	13	14	15	14	16
29	19	17	17	15	13	14	18	15	12	14	14	16
30	19	17	17	15	---	14	19	14	11	14	15	16
31	20	---	17	14	---	13	---	14	---	14	16	---
TOTAL	621	589	519	722	741	650	726	475	434	383.0	524	652
MEAN	20.0	19.6	16.7	23.3	25.6	21.0	24.2	15.3	14.5	12.4	16.9	21.7
MAX	30	29	32	149	189	138	71	19	25	27	57	60
MIN	18	17	14	14	13	11	13	13	11	8.6	12	13
CAL YR 1979	TOTAL	9915.6	MEAN	27.2	MAX	205	MIN	9.4				
WTR YR 1980	TOTAL	7036.0	MEAN	19.2	MAX	189	MIN	8.6				

ROCK RIVER BASIN

05434500 PECATONICA RIVER AT MARTINTOWN, WI

LOCATION.--Lat 42°30'34", long 89°47'58", in SE 1/4 sec.32, T.1 N., R.6 E., Green County, Hydrologic Unit 07090003, on right bank about 400 ft (120 m) downstream from highway bridge in Martintown, 0.3 mi (0.5 km) upstream from Wisconsin-Illinois State line and 8.8 mi (14.1 km) downstream from Skinner Creek.

DRAINAGE AREA.--1,034 mi² (2,678 km²).

WATER-DISCHARGE RECORDS

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

REVISED RECORDS.--WSP 1308: 1949-50(M). WDR WI-71-1: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 757.83 ft (230.99 m) National Geodetic Vertical Datum of 1929. Prior to Jan. 6, 1940, nonrecording gage at same site and datum. Auxiliary recording gage 1.2 mi (1.9 km) downstream, at same datum, which records stage above 7.4 ft (2.26 m).

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

AVERAGE DISCHARGE.--41 years, 701 ft³/s (19.85 m³/s), 9.21 in/yr (234 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 15,100 ft³/s (428 m³/s) July 1, 1969, gage height, 21.46 ft (6.541 m); no flow for part of Dec. 14, 1939.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 3,470 ft³/s (98.3 m³/s) Mar. 19, gage height, 13.51 ft (4.118 m), no peaks above base of 4,000 ft³/s (113 m³/s); minimum daily discharge, 363 ft³/s (10.3 m³/s) Aug. 9.

RATING TABLE (gage height, in feet, and discharge, in cubic feet per second).
(Shifting-control method used June 20 to July 25, Sept. 3-30; stage-discharge relation affected by ice Dec. 3-6, Dec. 15 to Mar. 17.)

3.8	350	10.0	1,990
4.0	396	12.0	2,640
6.0	896	14.0	3,810
8.0	1,430		

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980												
DAY	MEAN VALUES											
	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	533	584	545	440	540	640	559	558	469	477	378	467
2	547	605	527	430	540	580	546	548	468	459	382	455
3	568	602	540	420	520	540	584	529	566	443	386	414
4	578	568	560	420	520	520	772	510	690	440	445	402
5	560	546	580	410	520	520	895	488	645	422	440	405
6	547	553	580	400	520	500	815	479	650	433	401	401
7	539	576	549	400	520	500	718	459	1010	415	388	447
8	543	585	540	390	500	490	849	454	1210	413	367	1060
9	549	569	513	440	500	490	1350	454	1100	439	363	1280
10	539	553	488	480	500	490	1600	454	768	585	424	1110
11	524	543	513	500	500	480	1400	457	643	665	494	773
12	536	518	514	520	490	480	1120	466	588	502	506	740
13	532	519	494	500	490	480	984	461	554	433	481	1300
14	527	521	408	500	490	470	896	478	551	423	473	1440
15	514	523	480	480	490	520	859	498	642	406	494	1160
16	519	523	480	800	480	1000	859	482	944	455	477	917
17	536	524	480	1000	480	2100	829	466	887	588	539	835
18	527	524	470	1300	480	2810	781	573	714	658	558	842
19	553	508	480	1800	480	3330	745	666	623	509	589	803
20	601	511	490	1900	500	3290	720	614	589	428	525	748
21	622	588	500	1700	600	2140	698	575	549	409	814	785
22	607	695	500	1200	1100	1070	675	521	537	398	873	778
23	681	739	520	900	1500	752	650	477	506	383	809	863
24	743	699	600	800	2000	660	624	459	511	373	621	1010
25	698	636	900	720	2300	615	602	448	495	372	487	847
26	622	637	820	640	2400	585	587	445	488	403	448	734
27	580	683	700	600	2000	564	575	428	461	526	425	685
28	567	687	620	580	1300	558	563	410	507	617	399	652
29	563	649	560	560	900	573	557	465	553	452	398	634
30	557	601	450	560	---	579	558	500	538	405	465	619
31	556	---	450	540	---	572	---	496	---	373	456	---
TOTAL	17668	17569	16851	22330	24160	28898	23970	15318	19456	14304	15345	23606
MEAN	570	586	544	720	833	932	799	494	649	461	495	787
MAX	743	739	900	1900	2400	3330	1600	666	1210	665	873	1440
MIN	514	508	408	390	480	470	546	410	461	372	363	401
CFSM	.55	.57	.53	.70	.81	.90	.77	.48	.63	.45	.48	.76
IN.	.64	.63	.61	.80	.87	1.04	.86	.55	.70	.51	.55	.85
CAL YR 1979 TOTAL	310214		MEAN 850	MAX 5600	MIN 350	CFSM .82	IN 11.16					
WTR YR 1980 TOTAL	239475		MEAN 654	MAX 3330	MIN 363	CFSM .63	IN 8.62					

ROCK RIVER BASIN

05434500 PECATONICA RIVER AT MARTINTOWN, WI--CONTINUED

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1973, 1975, October 1979 to September 1980.

PERIOD OF DAILY RECORD.--

SUSPENDED-SEDIMENT DISCHARGE: October 1979 to September 1980.

REMARKS.--Sediment records are good except those for winter period which are fair.

EXTREMES FOR CURRENT YEAR.--

SUSPENDED-SEDIMENT CONCENTRATIONS: Maximum daily mean, 761 mg/l June 9; minimum daily mean, 8 mg/l

Dec. 9. Maximum observed, 940 mg/l Sept. 8; minimum observed, 5 mg/l Dec. 9.

SUSPENDED-SEDIMENT DISCHARGE: Maximum daily, 2,380 tons (2,160 tonnes) June 8; minimum daily, 11 tons (10 tonnes) Dec. 9.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

			SEDIMENT	SED.	SED.	SED.	SED.	SED.	SED.			
			DIS-	SIEVE	SIEVE	SIEVE	SIEVE	SIEVE	SIEVE			
			CHARGE,	DIAM.	DIAM.	DIAM.	DIAM.	DIAM.	DIAM.			
			SUS-	% FINER	% FINER	% FINER	% FINER	% FINER	% FINER			
			PENDED	THAN	THAN	THAN	THAN	THAN	THAN			
DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SEDIMENT (MG/L)	(T/DAY)	.062 MM	.125 MM	.250 MM	.500 MM	1.00 MM			
MAR , 1980	19...	1220	2780	225	1690	88	93	98	99	100		
			BED	BED	BED	BED	BED	BED	BED			
			MAT.	MAT.	MAT.	MAT.	MAT.	MAT.	MAT.			
			SIEVE	SIEVE	SIEVE	SIEVE	SIEVE	SIEVE	SIEVE			
			DIAM.	DIAM.	DIAM.	DIAM.	DIAM.	DIAM.	DIAM.			
			% FINER	% FINER	% FINER	% FINER	% FINER	% FINER	% FINER			
			THAN	THAN	THAN	THAN	THAN	THAN	THAN			
DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	.062 MM	.125 MM	.250 MM	.500 MM	1.00 MM	2.00 MM	4.00 MM	8.00 MM	16.0 MM	
MAR , 1980	19...	1220	2780	1	2	10	71	86	87	89	97	100

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	TEMPER- ATURE, WATER (DEG C)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)
OCT , 1979				
O8...	1410	530	12.0	460
NOV				
28...	1350	665	4.0	540
MAR , 1980				
18...	1140	2780	--	--
19...	1531	3690	3.0	235
MAY				
16...	1123	486	15.0	520
JUL				
10...	1427	606	25.0	500
AUG				
20...	1130	516	23.0	560

ROCK RIVER BASIN

05434500 PECATONICA RIVER AT MARTINTOWN, WI--CONTINUED

SUSPENDED-SEDIMENT, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DAY	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
	MEAN CONCEN- TRATION (MG/L)	LOADS (T/DAY)	MEAN CONCEN- TRATION (MG/L)	LOADS (T/DAY)	MEAN CONCEN- TRATION (MG/L)	LOADS (T/DAY)	MEAN CONCEN- TRATION (MG/L)	LOADS (T/DAY)	MEAN CONCEN- TRATION (MG/L)	LOADS (T/DAY)	MEAN CONCEN- TRATION (MG/L)	LOADS (T/DAY)
1	36	52	27	43	36	53	27	32	35	51	110	190
2	39	57	26	43	34	49	25	29	35	51	108	169
3	41	63	25	41	33	48	25	28	30	42	104	146
4	44	69	25	38	32	48	22	25	30	42	100	52
5	47	71	24	35	28	44	17	19	30	42	97	54
6	50	74	23	34	20	31	22	24	30	42	94	127
7	54	79	22	35	20	30	24	26	30	42	91	123
8	57	84	22	34	20	30	24	25	30	40	88	116
9	56	83	21	32	8	11	24	29	30	40	85	112
10	55	79	20	30	16	21	24	31	30	40	82	108
11	53	75	20	29	20	27	25	34	30	40	80	104
12	51	74	19	27	15	21	25	35	25	33	77	100
13	50	71	18	25	12	16	25	34	25	33	74	96
14	48	68	17	24	10	12	25	34	25	33	72	91
15	47	64	21	30	15	19	25	32	25	33	90	126
16	45	63	20	28	18	23	176	380	25	32	160	432
17	44	63	27	39	21	27	267	720	25	32	250	1420
18	42	60	35	49	24	30	234	821	25	32	295	2240
19	41	61	37	51	28	36	198	962	25	32	194	1730
20	45	73	48	66	33	44	112	575	30	40	114	1020
21	48	81	56	89	38	51	60	275	78	126	96	551
22	43	70	60	113	44	59	36	114	98	291	91	264
23	50	92	52	103	51	72	34	83	118	478	67	137
24	58	116	49	92	63	102	35	75	150	810	47	83
25	52	98	46	78	129	313	36	70	190	1180	41	67
26	45	76	41	70	85	188	37	64	200	1300	40	64
27	40	63	43	79	34	64	38	62	160	864	51	77
28	35	54	59	109	21	35	36	56	132	463	46	69
29	30	45	44	77	14	21	35	53	120	292	37	57
30	29	43	38	62	14	17	35	53	---	---	43	67
31	28	42	---	---	18	22	35	51	---	---	51	78
TOTAL	---	2163	---	1605	---	1564	---	4851	---	6576	---	10070

DAY	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
	MEAN CONCEN- TRATION (MG/L)	LOADS (T/DAY)	MEAN CONCEN- TRATION (MG/L)	LOADS (T/DAY)	MEAN CONCEN- TRATION (MG/L)	LOADS (T/DAY)	MEAN CONCEN- TRATION (MG/L)	LOADS (T/DAY)	MEAN CONCEN- TRATION (MG/L)	LOADS (T/DAY)	MEAN CONCEN- TRATION (MG/L)	LOADS (T/DAY)
1	55	82	80	120	198	250	180	232	177	180	153	193
2	58	86	88	130	218	275	176	218	170	175	160	196
3	69	110	100	143	272	417	196	234	136	141	137	154
4	97	204	101	138	320	596	214	254	148	178	138	150
5	113	273	103	136	289	504	182	207	149	177	135	147
6	98	217	139	179	309	546	189	221	144	156	136	147
7	87	169	157	195	509	1410	161	181	153	160	155	188
8	123	288	127	156	726	2380	154	172	160	159	557	1680
9	229	851	98	121	761	2260	192	228	164	161	410	1410
10	275	1190	114	139	646	1350	322	507	162	185	272	827
11	171	663	119	147	433	754	340	615	171	228	198	416
12	82	248	110	139	342	543	222	303	141	193	189	380
13	70	187	103	128	306	458	172	201	139	181	324	1170
14	62	150	99	127	284	422	151	172	141	180	273	1060
15	53	122	131	176	254	442	142	155	135	179	193	610
16	50	116	138	181	479	1230	166	205	122	157	174	431
17	69	154	105	132	407	982	248	398	114	166	146	329
18	83	176	189	306	300	580	315	563	115	185	147	334
19	98	197	341	615	262	441	230	317	109	174	166	360
20	128	248	215	357	240	382	200	232	115	163	168	339
21	108	204	167	260	235	348	176	195	253	580	178	378
22	102	185	150	211	265	384	162	174	268	642	187	392
23	118	207	139	179	214	292	152	157	201	439	208	486
24	126	212	160	198	199	274	146	146	164	277	205	562
25	108	175	178	216	188	251	142	142	173	228	159	365
26	122	193	176	212	203	267	167	182	157	190	135	267
27	151	234	175	202	182	226	232	334	162	186	144	266
28	113	172	178	196	231	316	261	440	173	186	152	268
29	102	154	199	250	232	346	163	201	162	174	141	241
30	89	133	234	316	194	283	145	159	169	212	126	211
31	---	---	202	270	---	---	162	163	150	185	---	---
TOTAL	---	7600	---	6275	---	19209	---	7908	---	6777	---	13957

ROCK RIVER BASIN

05435980 WEST BRANCH SUGAR RIVER NEAR MOUNT VERNON, WI

LOCATION.--Lat 42°54'47", long 89°37'19", in SW 1/4 NW 1/4 NW 1/4 sec.13, T.5 N., R.7 E., Dane County, Hydrologic Unit 07090004, on right bank 70 ft (21 m) downstream from bridge on State Highway 92, 800 ft (244 m) upstream from Mount Vernon Creek, and 2.9 mi (4.7 km) southeast of Mount Vernon.

DRAINAGE AREA.--32.7 mi² (84.7 km²).

PERIOD OF RECORD.--March 1979 to September 1980 (discontinued).

GAGE.--Water-stage recorder. Altitude of gage is 870 ft (265 m), from topographic map.

REMARKS.--Records fair.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 163 ft³/s (4.62 m³/s) Jan. 16, 1980, gage height, 5.17 ft (1.576 m); minimum daily discharge, 12 ft³/s (0.340 m³/s) Dec. 16, 1979, Jan. 26 to Feb. 19, Feb. 28 to Mar. 14, July 1-4, 6-8, 18-25, July 29 to Aug. 1, 4, 1980.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 163 ft³/s (4.62 m³/s) Jan. 16, gage height, 5.17 ft (1.576 m); minimum daily discharge, 12 ft³/s (0.340 m³/s) Dec. 16, Jan. 26 to Feb. 19, Feb. 28 to Mar. 14, July 1-4, 6-8, 18-25, July 29 to Aug. 1, 4.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980												
DAY	MEAN VALUES											
	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	16	19	15	14	12	12	15	16	15	12	12	20
2	18	17	14	14	12	12	16	16	16	12	14	17
3	16	17	14	13	12	12	22	15	19	12	13	15
4	16	17	14	13	12	12	21	15	16	12	12	15
5	16	17	14	13	12	12	17	15	35	16	13	15
6	16	18	14	13	12	12	17	15	37	12	13	15
7	16	17	14	13	12	12	18	15	28	12	13	74
8	16	17	14	13	12	12	48	15	20	12	16	57
9	16	16	14	13	12	12	27	15	19	13	15	29
10	16	16	14	13	12	12	20	15	18	13	15	21
11	17	16	14	17	12	12	19	15	17	13	16	18
12	16	16	13	14	12	12	19	15	17	13	15	44
13	16	16	13	14	12	12	18	15	17	13	16	42
14	16	15	13	14	12	12	18	16	17	13	16	25
15	17	16	13	14	12	30	19	15	16	13	15	22
16	18	15	12	97	12	120	19	15	16	25	15	24
17	18	15	13	89	12	80	19	16	16	13	19	33
18	17	15	13	15	12	22	19	17	15	12	16	22
19	20	15	13	14	12	21	19	19	15	12	23	20
20	19	14	13	14	13	18	18	16	15	12	17	34
21	18	25	13	14	25	16	18	15	15	12	24	25
22	20	24	13	13	64	16	17	15	14	12	16	88
23	26	18	17	13	25	16	17	15	14	12	15	53
24	20	17	25	13	17	15	16	15	14	12	14	31
25	19	16	26	13	15	15	16	15	13	12	14	29
26	18	22	17	12	14	15	16	15	13	15	14	26
27	18	19	15	12	13	15	16	14	13	13	13	25
28	18	17	15	12	12	16	16	15	14	13	15	24
29	17	16	14	12	12	16	16	16	13	12	36	24
30	17	15	14	12	---	16	16	16	13	12	27	23
31	17	---	14	12	---	16	---	15	---	12	22	---
TOTAL	544	513	454	572	438	631	572	477	520	402	514	910
MEAN	17.5	17.1	14.6	18.5	15.1	20.4	19.1	15.4	17.3	13.0	16.6	30.3
MAX	26	25	26	97	64	120	48	19	37	25	36	88
MIN	16	14	12	12	12	12	15	14	13	12	12	15
CFSM	.53	.52	.44	.56	.46	.62	.58	.47	.53	.40	.51	.92
IN.	.62	.58	.51	.65	.50	.71	.65	.54	.59	.45	.58	1.03
WTR YR 1980	TOTAL	6547	MEAN 17.9	MAX 120	MIN 12	CFSM .54	IN 7.40					

ROCK RIVER BASIN

05436000 MOUNT VERNON CREEK NEAR MOUNT VERNON, WI

LOCATION.--Lat 42°55'20", long 89°37'30", in NW 1/4 SW 1/4 sec.12, T.5 N., R.7 E., Dane County, Hydrologic Unit 07090004, on right bank about 400 ft (122 m) downstream from bridge on State Highway 92, 0.9 mi (1.4 km) upstream from West Branch Sugar River, and 2.5 mi (4.0 km) southeast of Mount Vernon.

DRAINAGE AREA.--16.4 mi² (42.5 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--January 1954 to September 1965, December 1975 to September 1980 (discontinued).

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

GAGE.--Water-stage recorder. Altitude of gage is 875 ft (267 m), from topographic map.

REMARKS.--Records fair.

AVERAGE DISCHARGE.--15 years (1955-65, 1977-80), 17.0 ft³/s (0.481 m³/s), 14.08 in/yr (358 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 940 ft³/s (26.6 m³/s) Apr. 1, 1959, gage height, 6.32 ft (1.926 m); maximum gage height, 7.00 ft (2.134 m) Jan. 12, 1960, from floodmark, (backwater from ice); minimum discharge, 7.1 ft³/s (0.20 m³/s) Jan. 31, 1959, result of freezeup.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 90 ft³/s (2.55 m³/s) and maximum (*):

DATE	TIME	DISCHARGE (ft ³ /s) (m ³ /s)	GAGE HEIGHT (ft) (m)	DATE	TIME	DISCHARGE (ft ³ /s) (m ³ /s)	GAGE HEIGHT (ft) (m)
Jan. 16	1915	148 4.19	4.25 1.295	Apr. 8	1415	96 2.72	3.34 1.018
Feb. 22	0300	104 2.95	3.50 1.067	Sept. 7	1730	98 2.78	3.71 1.131
Mar. 16	0415	*224 6.34	*5.15 1.570	Sept.22	1230	129 3.65	4.44 1.353

minimum daily discharge, 14 ft³/s (0.40 m³/s) July 4, 12-14.

RATING TABLE (gage height, in feet, and discharge, in cubic feet per second).
(Shifting-control method used Aug. 29, Sept. 7, 8, 22; stage-discharge relation affected by ice Jan. 12, 29.)

1.0	14	3.0	79
1.5	25	4.0	133
2.0	39	5.0	210

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DAY	MEAN VALUES											
	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	19	20	18	18	16	15	17	17	16	15	15	24
2	21	19	18	18	16	15	18	17	17	15	17	20
3	19	18	18	17	16	15	24	17	19	15	15	18
4	18	18	18	17	16	15	23	17	17	14	15	18
5	18	18	18	17	16	15	19	17	33	21	15	18
6	18	19	18	17	16	15	19	17	30	15	15	17
7	18	19	18	17	16	15	20	17	29	15	15	67
8	18	18	18	17	16	15	53	16	19	15	17	39
9	18	18	18	17	16	15	29	16	18	15	16	28
10	18	18	18	17	16	15	22	17	17	15	17	22
11	18	18	18	20	16	15	21	16	17	15	17	21
12	18	18	18	17	16	15	21	16	16	14	16	39
13	18	18	17	17	16	15	19	18	16	14	18	31
14	18	18	17	17	15	15	19	17	16	14	17	23
15	18	18	17	17	16	55	21	17	16	15	16	22
16	18	18	17	106	16	152	20	17	16	30	16	24
17	18	18	17	50	16	74	19	17	16	16	19	26
18	18	18	17	20	15	22	19	18	16	16	17	22
19	21	18	17	18	15	21	19	19	16	15	22	21
20	19	18	17	18	16	19	19	17	15	15	18	31
21	19	28	17	18	33	18	18	17	15	15	26	23
22	20	26	18	17	81	18	18	16	15	15	18	89
23	26	21	21	17	35	17	18	16	15	15	17	35
24	20	20	30	17	21	17	18	16	15	15	16	26
25	19	19	25	17	19	17	18	16	15	15	16	25
26	19	25	20	16	16	17	18	16	15	17	16	24
27	19	21	19	16	16	17	17	16	15	16	16	23
28	19	20	19	16	16	18	17	17	16	15	18	23
29	19	19	18	16	15	18	18	17	15	15	38	23
30	18	19	18	16	---	18	18	17	15	15	29	22
31	19	---	18	16	---	18	---	16	---	15	23	---
TOTAL	586	583	575	654	569	746	619	520	526	487	566	844
MEAN	18.9	19.4	18.5	21.1	19.6	24.1	20.6	16.8	17.5	15.7	18.3	28.1
MAX	26	28	30	106	81	152	53	19	33	30	38	89
MIN	18	18	17	16	15	15	17	16	15	14	15	17
CFSM	1.15	1.18	1.13	1.29	1.20	1.47	1.26	1.02	1.07	.96	1.12	1.71
IN.	1.33	1.32	1.30	1.48	1.29	1.69	1.40	1.18	1.19	1.10	1.28	1.91
CAL YR 1979	TOTAL	7964	MEAN	21.8	MAX	96	MIN	14	CFSM	1.33	IN	18.06
WTR YR 1980	TOTAL	7275	MEAN	19.9	MAX	152	MIN	14	CFSM	1.21	IN	16.50

ROCK RIVER BASIN

05436000 MT VERNON CREEK NEAR MT VERNON, WI--CONTINUED

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1954-60, February 1976 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	TEMPER- ATURE, WATER (DEG C)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	SEDI- MENT, SUS- PENDE (MG/L)	SEDI- MENT DIS- CHARGE, SUS- PENDE (T/DAY)
OCT , 1979						
11...	1106	18	9.0	530	--	--
15...	0900	18	--	--	48	2.3
NOV						
19...	1025	17	9.5	450	--	--
DEC						
13...	0750	18	2.0	520	22	1.1
JAN , 1980						
15...	1045	17	5.0	--	--	--
16...	1115	127	--	--	544	187
16...	1645	144	--	--	393	153
16...	2335	138	--	--	307	114
17...	0740	56	--	--	163	25
29...	0945	16	.0	590	29	1.3
MAR						
17...	1315	32	1.5	290	--	--
APR						
08...	0800	43	--	--	317	37
21...	1245	18	--	--	24	1.2
28...	0730	17	--	--	22	1.0
MAY						
27...	1000	16	14.5	540	37	1.6
JUN						
06...	0730	42	--	--	262	30
09...	1152	18	12.5	500	--	--
JUL						
02...	1100	15	15.5	520	--	--
16...	0730	59	--	--	439	70
AUG						
04...	1340	15	15.0	550	14	.57
SEP						
07...	1000	78	--	--	170	36
07...	1800	96	--	--	127	33
12...	0945	41	--	--	110	12
12...	1300	55	15.0	380	114	17
22...	0730	94	--	--	510	129
22...	1314	128	18.0	200	--	--

ROCK RIVER BASIN

05436500 SUGAR RIVER NEAR BRODHEAD, WI

LOCATION.--Lat 42°36'42", long 89°23'53", in SW 1/4 sec.26, T.2 N., R.9 E., Green County, Hydrologic Unit 07090004, on left bank at downstream side of highway bridge, 1.2 mi (1.9 km) southwest of Brodhead, and 1.9 mi (3.1 km) upstream from Sylvester Creek.

DRAINAGE AREA.--523 mi² (1,355 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--January 1914 to current year. Monthly discharge only for January and February 1914, published in WSP 1308.

REVISED RECORDS.--WSP 1238: 1914-16, 1918, 1922, 1927, 1933. WSP 1508: 1916-17(M), 1919(M), 1920, 1921(M), 1927-28(M), 1930(M), 1931, 1936(M), 1943(M). WDR WI-71-1: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 768.14 ft (234.129 m) National Geodetic Vertical Datum of 1929. Prior to Oct. 17, 1938, nonrecording gage at same site and datum.

REMARKS.--Records good except those for periods of ice effect which are fair. Some regulation from dam and powerplant upstream.

AVERAGE DISCHARGE.--66 years, 342 ft³/s (9.685 m³/s), 8.88 in/yr (226 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 14,800 ft³/s (419 m³/s) Sept. 13, 1915, gage height, 11.4 ft (3.47 m) from floodmarks, from rating curve extended above 7,500 ft³/s (212 m³/s); minimum, 35 ft³/s (0.99 m³/s) Sept. 19, 1959, gage height, -0.16 ft (-0.049 m).

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 1,300 ft³/s (36.8 m³/s) and maximum (*):

DATE	TIME	DISCHARGE (ft ³ /s) (m ³ /s)	GAGE HEIGHT (ft) (m)	DATE	TIME	DISCHARGE (ft ³ /s) (m ³ /s)	GAGE HEIGHT (ft) (m)				
Jan. 18	1900	*1,540	43.6	*4.51	1.375	Mar. 18	0800	1,460	41.3	4.34	1.323
Feb. 24	0400	1,440	40.8	4.29	1.308						

minimum daily discharge, 209 ft³/s (5.92 m³/s) July 23.

RATING TABLES (gage height, in feet, and discharge, in cubic feet per second).
(Shifting-control method used Aug. 4-21, Sept. 5-14; stage-discharge relation affected by ice Dec. 16-20, Jan. 7-10, Jan. 25 to Feb. 20, Mar. 6, 11, 12.)

Oct. 1 to Jan. 17

Jan. 18 to Sept. 30

0.5	190	0.5	190	3.0	930
1.0	295	1.0	294	4.0	1,320
2.0	589	1.5	412	5.0	1,760
3.0	914	2.0	572		

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	240	285	323	306	270	331	295	303	245	248	218	326
2	248	292	280	297	270	315	294	281	243	257	220	303
3	259	286	274	290	270	298	320	266	295	242	221	271
4	259	272	291	284	270	273	433	278	365	228	231	239
5	255	269	319	283	290	268	501	277	329	219	236	224
6	250	277	299	243	290	260	443	270	410	220	224	217
7	247	301	290	250	270	254	405	261	734	234	217	254
8	249	306	284	270	270	256	493	254	928	230	223	408
9	247	280	277	280	270	278	736	255	963	227	242	615
10	246	273	272	350	260	263	878	259	786	260	267	687
11	249	267	274	406	260	260	874	263	462	253	290	580
12	279	262	282	516	260	260	641	260	359	234	254	437
13	240	263	276	457	260	257	507	263	320	224	262	662
14	237	264	256	439	260	269	454	270	350	218	270	888
15	238	263	265	382	260	315	430	285	390	217	272	918
16	244	289	240	506	260	716	441	273	525	232	267	739
17	244	274	210	905	260	1170	445	269	473	279	288	539
18	244	263	230	1370	260	1360	415	289	367	285	320	491
19	265	261	240	1330	270	1130	392	318	326	248	313	445
20	286	255	240	854	280	684	374	345	302	230	305	423
21	292	281	249	452	295	423	363	329	292	220	383	440
22	303	391	262	395	766	349	353	284	281	214	458	476
23	317	473	301	347	1060	325	360	268	273	209	395	482
24	381	430	357	300	1350	311	337	260	266	212	298	567
25	388	366	552	300	1020	299	323	252	262	213	264	629
26	368	376	653	300	748	290	315	241	257	247	247	557
27	304	459	570	280	432	288	304	236	251	264	235	430
28	285	471	425	280	353	250	287	233	258	258	224	391
29	280	409	367	280	341	286	292	239	264	233	226	376
30	272	346	338	280	---	302	299	280	256	221	232	363
31	273	---	319	270	---	317	---	266	---	221	280	---
TOTAL	8489	9504	9815	13502	11725	12657	13004	8427	11832	7297	8382	14377
MEAN	274	317	317	436	404	408	433	272	394	235	270	479
MAX	388	473	653	1370	1350	1360	878	345	963	285	458	918
MIN	237	255	210	243	260	250	287	233	243	209	217	217
CFSM	.52	.61	.61	.83	.77	.78	.83	.52	.75	.45	.52	.92
IN.	.60	.68	.70	.96	.83	.90	.92	.60	.84	.52	.60	1.02
CAL YR 1979	TOTAL	152031	MEAN	417	MAX	2660	MIN	210	CFSM	.80	IN	10.81
WTR YR 1980	TOTAL	129011	MEAN	352	MAX	1370	MIN	209	CFSM	.67	IN	9.18

ROCK RIVER BASIN

05436500 SUGAR RIVER NEAR BRODHEAD, WI--CONTINUED

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1965-67, 1973, 1976, October 1979 to September 1980.

PERIOD OF DAILY RECORD.--

SUSPENDED-SEDIMENT DISCHARGE: October 1979 to September 1980.

REMARKS.--Sediment records are good except those for winter period which are fair.

EXTREMES FOR CURRENT YEAR.--

SUSPENDED-SEDIMENT CONCENTRATIONS: Maximum daily mean, 179 mg/l June 8; minimum daily mean, 1 mg/l Dec. 20-23. Maximum observed, 176 mg/l June 9; minimum observed, 1 mg/l Dec. 20, 30.

SUSPENDED-SEDIMENT DISCHARGE: Maximum daily, 447 tons (406 tonnes) June 8; minimum daily, 0.65 tons (0.59 tonnes) Dec. 20.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

			STREAM- FLOW, INSTAN- TANEOUS (CFS)	SEDI- MENT, SUS- PENDE (MG/L)	SEDI- MENT DIS- CHARGE, SUS- PENDE (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM	SED. SUSP. SIEVE DIAM. % FINER THAN .125 MM	SED. SUSP. SIEVE DIAM. % FINER THAN .250 MM	SED. SUSP. SIEVE DIAM. % FINER THAN .500 MM		
DATE	TIME										
MAR , 1980											
18...	1100		1380	83	309	97	97	97	100		
SEP											
09...	1240		606	73	119	95	98	99	100		
DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	BED MAT. SIEVE DIAM. % FINER THAN .125 MM	BED MAT. SIEVE DIAM. % FINER THAN .250 MM	BED MAT. SIEVE DIAM. % FINER THAN .500 MM	BED MAT. SIEVE DIAM. % FINER THAN 1.00 MM	BED MAT. SIEVE DIAM. % FINER THAN 2.00 MM	BED MAT. SIEVE DIAM. % FINER THAN 4.00 MM	BED MAT. SIEVE DIAM. % FINER THAN 8.00 MM	BED MAT. SIEVE DIAM. % FINER THAN 16.0 MM	BED MAT. SIEVE DIAM. % FINER THAN 32.0 MM
MAR , 1980											
18...	1100	1380	0	16	60	75	80	86	94	100	--
SEP											
09...	1450	621	1	16	58	75	79	86	94	99	100
DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	TEMPER- ATURE, WATER (DEG C)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	SEDI- MENT, SUS- PENDE (MG/L)	SEDI- MENT DIS- CHARGE, SUS- PENDE (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM				
OCT , 1979											
08...	0940	249	11.0	410	--	--	--				
NOV											
28...	1020	481	3.0	590	--	--	--				
DEC											
31...	1328	316	2.5	590	--	--	--				
MAR , 1980											
18...	1100	1380	--	--	83	309	97				
18...	1353	1360	2.5	275	89	327	88				
APR											
07...	1432	409	12.0	470	--	--	--				
MAY											
16...	1404	273	16.0	500	--	--	--				
JUN											
07...	1632	880	--	--	130	309	85				
JUL											
11...	1200	255	27.5	470	--	--	--				
AUG											
20...	1525	308	27.0	530	--	--	--				
SEP											
09...	1240	606	--	--	73	119	95				
09...	1450	621	22.0	400	69	116	92				

ROCK RIVER BASIN
05436500 SUGAR RIVER NEAR BRODHEAD, WI--CONTINUED

SUSPENDED-SEDIMENT, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DAY	MEAN CONCEN- TRATION (MG/L)	LOADS (T/DAY)	MEAN CONCEN- TRATION (MG/L)	LOADS (T/DAY)	MEAN CONCEN- TRATION (MG/L)	LOADS (T/DAY)	MEAN CONCEN- TRATION (MG/L)	LOADS (T/DAY)	MEAN CONCEN- TRATION (MG/L)	LOADS (T/DAY)	MEAN CONCEN- TRATION (MG/L)	LOADS (T/DAY)	MEAN CONCEN- TRATION (MG/L)	LOADS (T/DAY)
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH			
1	66	43	27	21	15	13	9	7.3	15	11	18	16		
2	68	46	25	20	16	12	4	3.1	15	11	15	13		
3	68	48	24	18	18	13	5	3.6	15	11	12	10		
4	68	48	22	16	20	16	6	4.6	15	11	10	7.6		
5	68	47	20	15	21	18	8	5.8	15	12	9	6.2		
6														
7	77	52	19	14	14	11	10	6.3	15	12	7	4.9		
8	73	49	20	17	10	7.9	10	6.8	15	11	6	4.0		
9	70	47	30	25	8	6.0	15	11	15	11	5	3.4		
10	66	44	26	20	6	4.7	15	11	15	11	4	3.0		
11	63	42	23	17	5	3.7	25	14	12	8.4	5	3.8		
12														
13	55	37	20	15	6	4.4	32	35	12	8.4	7	4.9		
14	60	45	22	15	5	4.1	41	57	12	8.4	7	4.7		
15	50	32	29	20	5	3.4	52	64	12	8.4	6	4.2		
16	40	26	15	11	4	2.8	66	78	12	8.4	5	4.0		
17	36	23	13	9.6	3	2.1	83	86	12	8.4	10	10		
18														
19	30	20	29	23	3	1.9	90	122	12	8.4	91	181		
20	25	16	33	24	2	1.1	98	239	12	8.4	115	366		
21	23	15	31	22	2	1.2	116	429	12	8.4	94	347		
22	25	18	31	22	2	1.3	72	261	15	11	61	190		
23	25	19	38	26	1	.65	65	150	15	11	37	69		
24														
25	30	24	32	24	1	.67	64	78	15	12	22	25		
26	34	28	34	36	1	.71	50	53	46	95	16	15		
27	33	28	26	33	10	8.1	40	37	64	185	12	10		
28	43	44	15	18	18	17	35	28	60	217	5	4.5		
29	50	52	11	11	30	45	30	24	51	144	9	7.3		
30														
31	35	37	8	8.6	40	71	30	24	37	76	2	1.4		
32	39	32	10	12	35	54	30	23	31	36	5	3.6		
33	36	28	11	14	20	23	20	15	26	25	9	6.0		
34	34	25	12	13	15	15	20	15	21	20	8	6.3		
35	31	23	13	12	15	14	20	15	---	---	9	7.3		
36	29	21	---	---	15	13	20	15	---	---	10	8.7		
TOTAL	---	1059	---	552.2	---	389.73	---	1921.5	---	1008.6	---	1347.8		

DAY	MEAN CONCEN- TRATION (MG/L)	LOADS (T/DAY)	MEAN CONCEN- TRATION (MG/L)	LOADS (T/DAY)	MEAN CONCEN- TRATION (MG/L)	LOADS (T/DAY)	MEAN CONCEN- TRATION (MG/L)	LOADS (T/DAY)	MEAN CONCEN- TRATION (MG/L)	LOADS (T/DAY)	MEAN CONCEN- TRATION (MG/L)	LOADS (T/DAY)	MEAN CONCEN- TRATION (MG/L)	LOADS (T/DAY)
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER			
1	12	9.9	55	45	89	59	76	51	38	22	80	70		
2	14	11	60	45	89	59	99	69	37	22	70	57		
3	21	18	67	48	90	72	104	68	38	23	60	44		
4	28	34	68	51	95	94	96	59	39	25	51	33		
5	44	60	68	51	95	84	89	52	41	26	53	32		
6														
7	32	39	71	52	107	119	82	49	42	26	55	32		
8	31	34	72	51	131	267	76	48	44	25	57	39		
9	38	52	60	41	179	447	71	44	45	27	59	65		
10	39	77	50	34	169	439	65	40	46	30	66	111		
11	34	80	52	36	135	289	60	42	48	35	66	123		
12														
13	27	64	57	41	107	134	57	39	50	39	84	131		
14	23	40	75	53	101	97	61	38	48	33	73	86		
15	25	34	81	57	101	87	65	40	47	33	80	145		
16	24	29	70	51	102	96	70	41	45	33	95	228		
17	13	15	59	45	101	107	69	41	43	32	87	215		
18														
19	22	26	66	49	125	177	69	43	41	30	64	130		
20	26	31	72	52	101	131	90	68	40	31	49	71		
21	27	30	68	53	85	84	100	77	39	33	49	65		
22	28	30	64	55	88	77	90	60	40	34	53	63		
23	38	38	56	53	92	75	80	50	41	34	53	61		
24														
25	51	50	53	48	98	77	80	48	49	53	54	65		
26	57	54	59	45	103	78	70	41	70	87	56	71		
27	62	60	67	49	108	79	71	40	68	72	52	68		
28	84	76	76	54	99	72	71	41	63	51	55	84		
29	87	76	75	51	93	66	71	41	59	42	62	106		
30														
31	80	68	72	46	90	62	80	53	55	37	38	58		
32	72	59	68	43	87	59	90	64	51	33	14	16		
33	61	47	69	43	83	58	80	56	48	29	20	21		
34	51	41	72	46	80	57	71	45	45	27	35	35		
35	51	42	84	63	77	53	60	36	43	27	44	43		
36	---	---	88	63	---	---	48	29	60	33	---	---		
TOTAL	---	1324.9	---	1514	---	3655	---	1513	---	1084	---	2368		

ROCK RIVER BASIN

05437500 ROCK RIVER AT ROCKTON, IL

LOCATION.--Lat 42°26'55", long 89°04'11", in SW 1/4 NE 1/4 sec.24, T.46 N., R.1 E., Winnebago County, Hydrologic Unit 07090005, on right bank 750 ft (229 m) downstream from State Highway 75 in Rockton, 1.0 mi (1.6 km) downstream from Pecatonioa River, and at mile 156.1 (251.2 km).

DRAINAGE AREA.--6,363 mi² (16,480 km²).

PERIOD OF RECORD.--June 1903 to July 1906, October 1906 to March 1909, July 1914 to September 1919, October 1939 to current year. Published as "below mouth of Pecatonioa River at Rockton" 1903-09; as "at Rockford" 1914-19. Monthly discharge only for some periods, published in WSP 1308.

REVISED RECORDS.--WSP 325: 1903-9. WSP 895: 1904(M). WSP 1508: 1915, 1916-17(M). WDR IL-75: Drainage area.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 707.94 ft (215.780 m) National Geodetic Vertical Datum of 1929 (levels by Corps of Engineers). Prior to Oct. 1, 1906, nonrecording gage at same site at datum about 1 ft (0.3 m) higher. Oct. 1, 1906, to Mar. 31, 1909, nonrecording gage at same site at datum about 2 ft (0.6 m) higher. July 30, 1914, to Apr. 30, 1919, nonrecording gage at site at Rockford about 21 mi (34 km) downstream, at different datum. Oct. 1, 1939, to Aug. 10, 1973, at site 800 ft (244 m) upstream at same datum.

REMARKS.--Water-discharge records fair except those for winter periods, which are poor. Low flow regulated by powerplant above station.

AVERAGE DISCHARGE.--48 years (water years 1904-5, 1915-19, 1940-80), 3,894 ft³/s (110.3 m³/s), 8.31 in/yr (211 mm/yr), discharge for site at Rockford adjusted for difference in drainage area.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 32,500 ft³/s (920 m³/s) Mar. 30, 1916, gage height, 13.06 ft (3.981 m), site and datum then in use; minimum daily, 501 ft³/s (14.2 m³/s) Sept. 14, 1958.

EXTREMES OUTSIDE OF PERIOD OF RECORD.--Flood in February 1937 reached a stage of 14.6 ft (4.45 m), backwater from ice, from painted floodmark.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 9,200 ft³/s (261 m³/s) Sept. 13, gage height, 6.89 ft (2.100 m); minimum daily, 1,550 ft³/s (43.9 m³/s) July 25.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980												
DAY	MEAN VALUES											
	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2450	2770	4100	4750	3600	4930	3780	4710	2850	2980	1880	4780
2	2420	2660	3900	4540	3700	4190	3770	4470	3010	2660	1860	5030
3	2380	2680	3700	4490	3700	3600	3990	4520	4020	2360	2140	4940
4	2120	2920	3600	4280	3600	3350	4580	4240	4050	2290	2030	4720
5	2120	2880	4000	4140	3400	3270	4720	4150	3200	2290	2280	4330
6	1990	2780	4200	3640	3200	3000	4740	3960	3870	2220	2340	4300
7	2210	3100	3800	3080	3000	2910	4950	3760	4560	2440	2040	4400
8	2310	2880	4000	2380	2900	2920	5160	3810	5410	1900	2560	5640
9	2400	2920	3800	3500	2900	2900	5770	3610	5340	1610	2380	7400
10	2300	2940	3550	4100	2900	2870	6440	3470	6020	2000	3020	7000
11	2200	2940	3330	3600	2800	2690	6830	3290	5910	1870	3060	6660
12	2000	2870	3500	3800	2700	2840	7350	3260	5470	1910	4120	7500
13	2100	2800	3300	3300	2600	2910	7560	3140	5050	1950	4170	9000
14	2000	2730	3000	3100	2600	2840	7370	3190	5030	2250	4430	8700
15	2120	2650	3200	3570	2500	2760	7170	3110	5370	1990	4330	8500
16	2500	2810	3270	3720	2500	4110	6910	2970	5950	1900	4530	8200
17	2300	2660	3130	5800	2400	5370	6430	3180	5910	2040	4770	8800
18	2200	2810	3060	6340	2400	5000	6750	3000	5570	2060	4870	8600
19	2260	2620	3030	6340	2400	4900	6490	3090	5030	2040	5080	8400
20	2270	2680	2810	6700	2400	5600	6320	3140	4470	2190	5170	8200
21	2400	3000	2680	6570	2590	6400	6150	3190	3990	2240	5570	8000
22	2490	3620	2550	6530	4630	6200	5980	3190	3750	2380	5850	8000
23	2480	3590	2830	5400	6000	5800	5780	3020	3620	1990	6370	7840
24	2530	3390	3230	4500	5460	5400	5680	2940	3570	1590	6250	7910
25	2870	3690	4400	4000	5410	5000	5370	2960	3480	1550	5880	8030
26	2740	3680	4980	4300	5500	4400	5250	2960	3350	1850	5630	8320
27	2700	4230	4970	3800	5430	3800	5100	2760	3300	2180	5280	8670
28	2840	4120	5090	3400	5730	3700	5000	2380	3020	2280	5130	8440
29	2770	4300	5720	3300	5320	3600	4910	2210	2790	2240	4820	8390
30	2780	4200	5230	3300	---	3750	4720	2660	2760	2290	4510	8320
31	2660	---	4930	3400	---	3600	---	2540	---	2190	4500	---
TOTAL	73910	93920	116890	133670	104270	124610	171020	102880	129720	65730	126850	217020
MEAN	2384	3131	3771	4312	3596	4020	5701	3319	4324	2120	4092	7234
MAX	2870	4300	5720	6700	6000	6400	7560	4710	6020	2980	6370	9000
MIN	1990	2620	2380	2380	2400	2690	3770	2210	2760	1550	1860	4300
CFSM	.38	.49	.59	.68	.57	.63	.90	.52	.68	.33	.64	1.14
IN.	.43	.55	.68	.78	.61	.73	1.00	.60	.76	.38	.74	1.27
CAL YR 1979	TOTAL	1977590	MEAN	5418	MAX	22500	MIN	1990	CFSM	.85	IN	11.56
WTR YR 1980	TOTAL	1460490	MEAN	3990	MAX	9000	MIN	1550	CFSM	.63	IN	8.54

ILLINOIS RIVER BASIN

05527800 DES PLAINES RIVER AT RUSSELL, IL

LOCATION.--Lat 42°29'22", long 87°55'32", in SE 1/4 sec.3, T.46 N., R.11 E., Lake County, Hydrologic Unit 07120004, at center of downstream side of bridge on Russell Road, 0.3 mi (0.5 km) west of Russell, 7.2 mi (11.6 km) upstream from Mill Creek, and at mile 109.3 (175.9 km).

DRAINAGE AREA.--123 mi² (319 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--Occasional low-flow measurements, water years 1961-63, and annual maximum, water years 1962-66. June 1967 to current year.

REVISED RECORDS.--WDR IL-75: Drainage area. WDR IL-76: 1960-68(M), 1973(M).

GAGE.--Water-stage recorder. Datum of gage is 662.00 ft (201.778 m) National Geodetic Vertical Datum of 1929. Oct. 17, 1961, to June 29, 1967, crest-stage gage at left downstream side of bridge at datum 4.29 ft (1.308 m) higher.

REMARKS.--Water-discharge records good except those for winter periods, which are poor.

AVERAGE DISCHARGE.--13 years, 95.5 ft³/s (2.705 m³/s), 10.54 in/yr (268 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,120 ft³/s (60.0 m³/s) Mar. 21, 1979, gage height, 9.69 ft (2.954 m); maximum gage height, 10.75 ft (3.277 m) Mar. 6, 1976; no flow at times during several years.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 484 ft³/s (13.7 m³/s) Sept. 20, gage height, 7.16 ft (2.182 m); minimum, 1.8 ft³/s (0.051 m³/s) Oct. 9.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980												
DAY	MEAN VALUES											
	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.2	4.2	23	50	10	30	96	98	32	13	30	92
2	5.0	4.4	23	40	9.8	25	109	101	32	10	40	90
3	7.1	4.8	22	33	9.4	21	117	94	61	12	80	99
4	5.3	5.0	15	30	9.0	19	149	86	82	12	70	97
5	4.4	4.9	15	26	8.5	18	178	75	87	12	100	75
6	3.7	4.5	16	30	8.5	18	196	63	108	24	85	55
7	2.2	3.9	16	27	8.5	21	206	54	165	32	90	43
8	3.0	3.8	14	21	8.5	25	216	56	204	21	100	40
9	2.2	3.7	13	18	8.5	26	240	45	224	17	114	50
10	4.2	4.0	11	15	8.4	27	272	40	224	14	101	85
11	4.2	3.7	11	20	8.4	35	295	40	209	13	98	114
12	3.6	3.3	10	40	8.3	45	322	36	168	12	90	126
13	3.5	5.0	9.0	33	8.2	50	325	38	116	11	93	161
14	3.2	6.4	8.0	29	8.0	44	317	40	70	10	99	212
15	3.0	5.2	8.0	27	7.9	40	331	37	47	17	92	269
16	2.7	5.0	7.0	25	7.8	70	339	32	42	27	76	322
17	2.8	5.0	6.0	35	7.6	121	337	30	48	20	69	386
18	2.5	4.6	6.5	60	7.6	129	341	34	38	16	72	423
19	2.4	4.5	5.7	70	7.6	159	334	42	29	15	94	455
20	3.7	4.6	5.5	65	7.6	146	314	60	27	20	143	479
21	5.1	6.9	5.5	45	8.5	126	285	61	26	40	181	481
22	6.3	11	6.0	27	25	97	254	47	22	30	209	472
23	5.9	23	10	30	75	93	219	37	17	20	236	471
24	5.5	22	40	20	90	82	187	35	15	19	264	460
25	5.7	18	100	16	95	79	156	31	14	20	285	445
26	5.7	23	150	13	85	62	130	27	13	25	292	423
27	5.3	36	170	11	65	65	107	23	15	40	286	392
28	4.7	41	150	10	55	60	90	22	17	55	263	356
29	4.3	34	120	10	45	63	91	22	16	60	225	314
30	3.8	26	100	11	---	69	94	30	15	55	178	269
31	3.6	---	75	11	---	79	---	35	---	40	123	---
TOTAL	128.8	331.4	1171.2	898	711.6	1944	6647	1471	2183	732	4278	7756
MEAN	4.15	11.0	37.8	29.0	24.5	62.7	222	47.5	72.8	23.6	138	259
MAX	7.1	41	170	70	95	159	341	101	224	60	292	481
MIN	2.2	3.3	5.5	10	7.6	18	90	22	13	10	30	40
CFSM	.03	.09	.31	.24	.20	.51	1.81	.39	.59	.19	1.12	2.11
IN.	.04	.10	.35	.27	.22	.59	2.01	.44	.66	.22	1.29	2.35
CAL YR 1979	TOTAL	47374.8	MEAN	130	MAX	2100	MIN	2.2	CFSM	1.06	IN	14.33
WTR YR 1980	TOTAL	28252.0	MEAN	77.2	MAX	481	MIN	2.2	CFSM	.63	IN	8.54

ILLINOIS RIVER BASIN

05543830 FOX RIVER AT WAUKESHA, WI

LOCATION.--Lat 43°00'17", long 88°14'37", in SW 1/4 sec.3, T.6 N., R.18 E., Waukesha County, Hydrologic Unit 07120006, on left bank 20 ft (6.10 m) downstream from Prairie Street bridge in Waukesha, 1.0 mi (1.6 km) downstream from dam and 3.2 mi (5.1 km) downstream from Pewaukee River.

DRAINAGE AREA.--127 mi² (329 km²).

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

GAGE.--Water-stage recorder. Datum of gage is 793.04 ft (241.719 m) National Geodetic Vertical Datum of 1929 (levels by city of Waukesha).

REMARKS.--Records good except for the winter period, which are fair. Occasional regulation from mill dam 1.0 mi (1.6 km) upstream.

AVERAGE DISCHARGE.--17 years, 90.2 ft³/s (2.554 m³/s), 9.64 in/yr (245 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,260 ft³/s (64.0 m³/s) Apr. 22, 1973, gage height, 7.42 ft (2.262 m); minimum, 3.0 ft³/s (0.085 m³/s) Jan. 1, 1964, gage height, 1.52 ft (0.463 m).

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 569 ft³/s (16.1 m³/s) Aug. 19, gage height, 4.58 ft (1.396 m); minimum, 9.2 ft³/s (0.261 m³/s) Mar. 28, gage height, 1.82 ft (0.555 m), result of regulation; minimum daily, 18 ft³/s (0.510 m³/s) July 24.

RATING TABLES (gage height, in feet, and discharge, in cubic feet per second).
(Stage-discharge relation effected by ice Jan. 28.)

	Oct. 1-31				Nov. 1 to Sept. 30							
			2.0	28			1.9	14		3.0	167	
			2.3	66			2.1	31		4.0	393	
							2.5	82				
DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980												
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	35	42	55	61	46	45	82	87	46	23	32	71
2	34	43	46	56	44	46	82	79	50	23	44	69
3	34	37	44	53	43	50	88	71	53	22	39	62
4	34	33	36	51	43	49	112	64	57	22	110	57
5	33	32	33	49	47	47	137	60	87	36	205	53
6	30	38	35	47	51	46	134	54	200	27	155	51
7	29	36	36	44	53	47	140	52	251	25	204	58
8	29	41	32	44	53	48	201	50	246	23	243	55
9	34	40	32	38	52	48	255	48	213	25	237	175
10	40	38	32	40	49	48	272	47	171	24	208	177
11	41	37	35	57	50	47	258	47	143	23	203	142
12	39	39	36	50	49	47	242	46	118	22	202	186
13	38	39	35	58	49	47	229	54	79	20	200	231
14	35	39	34	50	49	47	212	57	58	20	186	229
15	36	39	35	50	49	50	203	58	54	23	173	198
16	35	39	31	96	44	66	223	55	49	45	159	199
17	35	40	29	149	43	120	216	61	42	36	146	218
18	35	40	29	139	39	107	196	75	41	28	131	223
19	51	39	31	110	49	143	177	89	40	22	199	202
20	56	38	31	91	117	129	161	83	38	20	207	249
21	49	76	28	76	144	114	144	67	36	19	213	252
22	57	99	31	69	118	93	123	55	33	19	191	292
23	56	89	38	58	104	90	104	45	31	19	145	306
24	55	70	115	58	93	92	93	44	29	18	116	290
25	46	61	206	56	78	90	93	40	29	24	101	273
26	39	91	210	53	65	71	97	37	27	54	93	258
27	36	104	161	51	57	91	87	35	26	57	85	244
28	35	89	112	50	60	63	79	33	33	43	77	226
29	37	72	85	48	51	77	90	43	28	44	74	211
30	34	59	72	47	---	78	94	51	28	35	70	193
31	41	---	64	47	---	79	---	43	---	35	71	---
TOTAL	1218	1579	1829	1946	1789	2215	4624	1730	2336	876	4519	5450
MEAN	39.3	52.6	59.0	62.8	61.7	71.5	154	55.8	77.9	28.3	146	182
MAX	57	104	210	149	144	143	272	89	251	57	243	306
MIN	29	32	28	38	39	45	79	33	26	18	32	51
CFSM	.31	.42	.47	.50	.49	.57	1.22	.44	.62	.23	1.16	1.44
IN.	.36	.47	.54	.57	.53	.65	1.37	.51	.69	.26	1.33	1.61
CAL YR 1979	TOTAL	44986	MEAN	123	MAX	1210	MIN 21	CFSM .98	IN 13.28			
WTR YR 1980	TOTAL	30111	MEAN	82.3	MAX	306	MIN 18	CFSM .65	IN 8.89			

ILLINOIS RIVER BASIN

05544200 MUKWONAGO RIVER AT MUKWONAGO, WI

LOCATION.--Lat 42°51'24", long 88°19'40", in NE 1/4 NE 1/4 sec.35, T.5 N., R.18 E., Waukesha County, Hydrologic Unit 07120006, on left bank 100 ft (30 m) upstream from bridge on State Highway 83 in Mukwonago, 100 ft (30 m) downstream from railroad bridge, and 800 ft (244 m) downstream from dam.

DRAINAGE AREA.--74.1 mi² (191.9 km²).

PERIOD OF RECORD.--July 1973 to current year.

REVISED RECORDS.--WDR WI-79-1: Drainage area.

GAGE.--Water-stage recorder. Altitude of gage is 800 ft (244 m), from topographic map.

REMARKS.--Records fair. Discharge affected by manipulation of gates at dams 800 ft (244 m) and 11.4 mi (18.3 km) upstream.

AVERAGE DISCHARGE.--7 years, 61.0 ft³/s (1.728 m³/s), 11.18 in/yr (284 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 300 ft³/s (8.50 m³/s) Mar. 5, 1976, gage height, 2.50 ft (0.762 m); minimum daily, 1.8 ft³/s (0.051 m³/s) Dec. 23, 1976.

EXTREMES FOR CURRENT YEAR.--Peak discharge above base of 140 ft³/s (3.96 m³/s) and maximum (*):

DATE	TIME	DISCHARGE (ft ³ /s) (m ³ /s)	GAGE HEIGHT (ft) (m)	DATE	TIME	DISCHARGE (ft ³ /s) (m ³ /s)	GAGE HEIGHT (ft) (m)
Nov. 30	0900	142	4.02	Aug. 21	1415	146	4.13
Apr. 10	0845	149	4.22	Sept. 17	1415	159	4.50
June 6	1330	*184	5.21				
			*2.09				2.01
			0.637				0.607

minimum daily discharge, 13 ft³/s (0.368 m³/s) June 14.

RATING TABLE (gage height, in feet, and discharge, in cubic feet per second).

1.1	8.5	1.5	56
1.2	14	1.7	95
1.3	24	2.0	164

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	30	70	80	68	44	52	45	54	44	33	63	52
2	31	68	72	63	42	50	45	54	47	33	45	50
3	33	65	67	59	42	49	47	52	56	34	44	54
4	33	57	59	56	42	49	56	52	54	36	44	61
5	31	54	59	54	41	49	57	49	89	39	47	67
6	31	54	56	52	40	47	59	47	147	39	50	76
7	31	50	54	50	40	47	65	41	130	42	76	93
8	31	50	50	47	40	45	78	37	128	47	101	95
9	33	44	50	47	39	45	106	34	123	49	110	104
10	33	42	49	47	38	45	132	34	106	47	108	95
11	34	41	49	49	39	44	130	36	95	33	108	87
12	36	41	49	45	39	44	117	34	91	30	110	93
13	33	41	47	45	38	44	104	34	37	31	101	99
14	34	41	47	47	39	42	95	36	13	29	95	104
15	34	41	47	47	39	39	61	34	20	30	82	114
16	34	42	45	50	38	44	50	34	30	39	74	117
17	34	42	44	59	38	44	59	36	42	41	70	139
18	33	42	42	67	39	45	63	42	42	37	50	132
19	37	42	44	70	40	47	65	49	42	37	63	101
20	44	42	47	72	40	41	61	54	41	34	80	95
21	54	49	47	72	42	42	54	57	41	33	128	91
22	104	63	47	67	45	44	56	54	39	36	147	87
23	117	80	49	57	56	47	50	50	36	31	132	82
24	101	91	57	56	61	49	45	47	36	28	117	78
25	56	91	82	56	63	50	44	45	41	27	104	72
26	36	93	101	50	63	50	42	41	37	33	67	67
27	44	87	104	49	61	47	41	31	34	37	52	52
28	42	91	99	47	57	47	41	36	36	41	52	50
29	41	85	91	45	54	47	44	37	34	52	49	49
30	44	91	82	45	---	45	49	42	34	68	49	49
31	67	---	74	44	---	45	---	44	---	72	49	---
TOTAL	1376	1790	1890	1682	1299	1422	1961	1327	1745	1198	2467	2505
MEAN	44.4	59.7	61.0	54.3	44.8	45.9	65.4	42.8	58.2	38.6	79.6	83.5
MAX	117	93	104	72	63	52	132	57	147	72	147	139
MIN	30	41	42	44	38	39	41	31	13	27	44	49
CFSM	.60	.81	.82	.73	.61	.62	.88	.58	.79	.52	1.07	1.13
IN.	.69	.90	.95	.84	.65	.71	.98	.67	.88	.60	1.24	1.26
CAL YR 1979	TOTAL	25640	MEAN 70.2	MAX 255	MIN 17	CFSM .95	IN 12.87					
WTR YR 1980	TOTAL	20662	MEAN 56.5	MAX 147	MIN 13	CFSM .76	IN 10.37					

ILLINOIS RIVER BASIN

05545000 NORTH LAKE NEAR ELKHORN, WI

LOCATION.--Lat 42°44'38", long 88°37'45", in SE 1/4 sec.5, T.3 N., R.16 E., Walworth County, Hydrologic Unit 07120006, attached to post in lake near end of Barker Road at south end of lake, 6.5 mi (10.5 km) northwest of Elkhorn.

DRAINAGE AREA.--10.8 mi² (28.0 km²), revised. Area of North Lake, 350 acres (1.42 km²), approximately, at high stage.

PERIOD OF RECORD.--May 1937 to current year (fragmentary). Published as Holden Lake prior to October 1958.

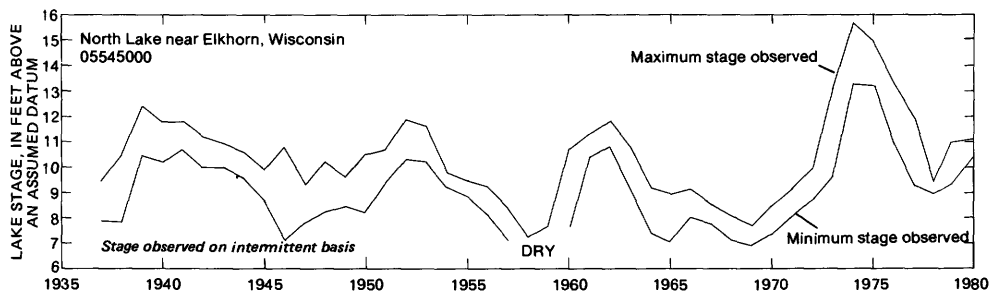
GAGE.--Nonrecording gage read about once weekly or more often except during winter. Altitude of gage is 900 ft (274 m), from topographic map.

REMARKS.--Lake has no surface outlet. Lake ice covered Dec. 2 to Mar. 31.

EXTREMES FOR PERIOD OF RECORD.--Maximum gage height observed, 15.62 ft (4.761 m) June 10, 22, 1974; lake dry for parts of period July to December 1958.

EXTREMES FOR CURRENT YEAR.--Maximum gage height observed, 11.02 ft (3.359 m) Apr. 19; minimum observed, 10.39 ft (3.167 m) July 15.

DAY	GAGE HEIGHT (FEET ABOVE DATUM), WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980											
	OCT	NOV	DEC	JAN	FEB	MEAN VALUES MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	10.90	---	---	---	---	---	---	---	---	---
2	---	---	---	---	---	---	---	---	---	---	---	---
3	---	11.00	---	---	---	---	---	---	---	---	---	---
4	---	---	---	---	---	---	---	10.87	---	---	---	---
5	---	---	---	---	---	---	10.97	---	10.67	---	---	---
6	10.80	---	---	---	---	---	---	---	---	---	---	---
7	---	---	---	---	10.90	---	---	---	---	---	---	---
8	---	10.74	---	---	---	---	---	---	10.77	---	---	---
9	---	---	---	10.96	---	---	---	---	---	---	---	---
10	---	10.90	---	---	---	---	---	10.77	---	---	---	---
11	10.66	---	---	---	---	---	---	---	---	---	---	---
12	---	---	---	---	---	---	10.97	---	10.76	---	---	---
13	10.70	---	---	---	---	---	---	---	---	---	---	---
14	---	---	---	---	---	---	---	---	10.87	---	---	---
15	---	---	---	---	---	---	---	---	---	10.39	---	---
16	---	---	---	---	---	---	---	---	---	---	---	---
17	---	10.90	---	---	---	---	---	10.82	---	---	---	10.85
18	---	---	---	---	---	---	---	---	---	---	---	---
19	---	---	---	---	---	---	11.02	---	---	---	---	10.87
20	---	---	---	---	---	---	---	---	---	---	---	---
21	---	---	---	---	---	---	---	---	10.87	---	---	---
22	---	---	---	---	---	---	---	---	---	---	---	---
23	---	---	---	---	---	---	---	---	---	---	---	---
24	---	10.90	---	---	---	---	---	10.97	---	---	---	---
25	---	---	---	---	---	---	---	---	---	---	10.77	---
26	---	---	---	---	---	10.88	10.97	---	---	---	---	---
27	10.80	---	---	---	---	---	---	---	---	---	---	---
28	---	---	---	---	---	---	10.93	---	---	---	---	---
29	---	---	---	---	---	---	---	---	---	---	---	---
30	---	---	---	---	---	---	---	---	---	---	---	---
31	---	---	---	---	---	---	---	10.77	---	---	---	---



ILLINOIS RIVER BASIN

05545300 WHITE RIVER NEAR BURLINGTON, WI

LOCATION.--Lat 42°39'57", long 88°19'03", in NE 1/4 NW 1/4 sec.1, T.2 N., R.18 E., in Walworth County, Hydrologic Unit 07120006, on right bank 10 ft (3 m) downstream from bridge on State Highway 36, 2.2 mi (3.5 km) southwest of Burlington and 3.4 mi (5.5 km) upstream from mouth.

DRAINAGE AREA.--110 mi² (285 km²).

PERIOD OF RECORD.--Annual maximum, water years 1958-64, 1967-73; August 1964 to September 1966 no winter records; April 1973 to current year.

REVISED RECORDS.--WDR WI-79-1: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 757.43 ft (230.865 m) National Geodetic Vertical Datum of 1929. Prior to August 1964, crest-stage gage.

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

AVERAGE DISCHARGE.--7 years (water years 1974-80), 89.5 ft³/s (2.535 m³/s), 11.05 in/yr (281 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,960 ft³/s (53.8 m³/s) July 18, 1969, gage height, 13.59 ft (4.142 m); minimum recorded, 2.3 ft³/s (0.065 m³/s) July 4, 1965, gage height, 7.79 ft (2.374 m).

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 380 ft³/s (10.8 m³/s) Feb. 23, gage height, 11.09 ft (3.380 m), no peak above base of 500 ft³/s (14.2 m³/s); minimum daily, 26 ft³/s (0.736 m³/s) Dec. 18.

RATING TABLE (gage height, in feet, and discharge, in cubic feet per second).
(Shifting-control method used Sept. 3-30; stage-discharge relation affected by ice Dec. 2, 17, Jan. 2-10, Jan. 19 to Feb. 20, Feb. 27 to Mar. 13.)

8.2	23	10.0	240
8.4	39	11.0	366
9.0	112		

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DAY	MEAN VALUES											
	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	33	47	48	72	72	88	54	85	78	51	73	77
2	40	38	46	64	68	84	68	79	88	50	71	83
3	37	33	43	62	66	80	87	74	125	47	78	61
4	36	32	37	58	68	78	119	68	108	45	72	51
5	34	31	45	56	74	76	92	61	112	107	92	44
6	34	33	48	54	80	74	78	57	285	71	79	36
7	33	33	48	54	82	74	98	54	283	54	112	36
8	33	33	49	52	82	74	195	50	214	49	138	44
9	32	31	44	52	80	80	228	48	165	102	109	117
10	32	33	39	64	78	82	216	47	140	78	105	138
11	31	30	44	94	78	80	175	44	117	57	118	96
12	31	29	44	67	76	74	197	40	102	51	134	135
13	30	31	42	67	76	70	165	40	105	48	116	228
14	30	31	44	60	76	76	142	42	110	44	114	193
15	30	31	38	61	74	74	149	42	142	48	103	159
16	30	32	31	94	70	90	177	54	156	90	95	138
17	30	32	27	183	66	103	148	57	118	85	125	218
18	30	32	25	107	64	77	125	82	103	65	117	186
19	36	30	29	94	74	81	108	107	92	55	176	183
20	42	29	31	88	100	88	99	88	86	50	184	199
21	42	87	45	82	163	88	87	74	77	69	148	202
22	41	110	55	78	328	100	81	66	72	59	127	184
23	55	88	78	76	356	95	74	68	63	76	102	176
24	45	65	125	74	221	96	67	66	59	77	90	160
25	37	54	227	72	149	88	62	63	55	71	79	141
26	34	105	149	70	118	83	65	58	55	110	72	123
27	33	116	121	70	100	76	67	53	52	176	78	109
28	33	79	108	70	94	78	73	53	63	112	61	99
29	32	65	99	70	92	104	88	78	61	90	50	91
30	30	54	87	74	---	65	91	82	55	82	51	83
31	31	---	81	74	---	52	---	85	---	79	52	---
TOTAL	1077	1474	1977	2313	3125	2528	3475	1965	3341	2248	3121	3790
MEAN	34.7	49.1	63.8	74.6	108	81.5	116	63.4	111	72.5	101	126
MAX	55	116	227	183	356	104	228	107	285	176	184	228
MIN	30	29	25	52	64	52	54	40	52	44	50	36
CFSM	.32	.45	.58	.68	.98	.74	1.06	.58	1.01	.66	.92	1.15
IN.	.36	.50	.67	.78	1.06	.85	1.18	.66	1.13	.76	1.06	1.28
CAL YR 1979	TOTAL	40644	MEAN	111	MAX	671	MIN	25	CFSM	1.01	IN	13.74
WTR YR 1980	TOTAL	30434	MEAN	83.2	MAX	356	MIN	25	CFSM	.76	IN	10.29

LOCATION.--Lat 42°40'34", long 88°14'57", in NE 1/4 SE 1/4 sec.33, T.3 N., R.19 E., Racine County, Hydrologic Unit 07120006, about 0.8 mi (1.3 km) east of Burlington at Camp MacLean.

PERIOD OF RECORD.--January 1967 to current year.

REMARKS.--Lake ice covered Dec. 12 to Mar. 31.

EXTREMES FOR CURRENT YEAR.--Maximum gage height observed, 5.24 ft (1.597 m) Sept. 9; minimum observed, 4.71 ft (1.436 m) Oct. 29.

[illegible]

ILLINOIS RIVER BASIN

05546500 FOX RIVER AT WILMOT, WI

LOCATION.--Lat 42°30'40", long 88°10'45", in SW 1/4 sec.30, T.1 N., R.20 E., Kenosha County, Hydrologic Unit 07120006, on right bank 100 ft (30 m) downstream from bridge on County Trunk Highway C, 300 ft (90 m) upstream from Wilmot Dam, 1.0 mi (1.6 km) north of Wisconsin-Illinois State line, and 6.0 mi (9.6 km) upstream from Fox Chain of Lakes.

DRAINAGE AREA.--868 mi² (2,248 km²).

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

REVISED RECORDS.--WSP 1308: 1943(M), 1945(M). WDR WI-67-1: Drainage area.

GAGE.--Water-stage recorder and concrete dam. Datum of gage is 735.22 ft (224.095 m) National Geodetic Vertical Datum of 1929. Prior to Sept. 1, 1956, nonrecording gage and concrete dam.

REMARKS.--Records good. Three 6 ft (1.8 m) lift gates in Wilmot dam were in operation during the year; discharge through gates computed by weir and orifice formulas and added to flow over dam. Gage-height telemeter at station.

AVERAGE DISCHARGE.--41 years, 513 ft³/s (14.53 m³/s), 8.03 in/yr (204 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 7,520 ft³/s (213 m³/s) Mar. 31, 1960, gage height, 9.25 ft (2.81 m), from graph based on gage readings; no flow part of day Oct. 26, 1945; minimum daily discharge, 35 ft³/s (0.99 m³/s) Sept. 9, 1958.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,650 ft³/s (46.7 m³/s) Aug. 20, gage height, 6.27 ft (1.91 m); minimum daily, 194 ft³/s (5.49 m³/s) July 4.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980												
DAY	OCT	NOV	DEC	JAN	FEB	MEAN VALUES MAR	APR	MAY	JUN	JUL	AUG	SEP
1	237	253	527	674	302	460	365	560	302	245	301	550
2	253	249	385	624	293	460	355	560	345	232	357	570
3	258	326	375	501	293	448	570	538	425	210	359	513
4	275	302	389	490	288	413	606	512	425	194	342	421
5	262	326	409	326	288	376	680	475	408	337	481	383
6	258	266	366	293	293	371	606	401	1040	476	553	418
7	253	371	356	208	288	331	649	373	1400	339	750	408
8	253	340	361	297	284	302	796	410	1470	341	942	381
9	253	245	370	321	279	293	1120	293	1440	274	1080	504
10	249	270	342	279	275	302	1290	279	1270	328	1030	776
11	270	321	347	335	275	293	1350	275	1030	307	1030	794
12	224	270	356	311	279	279	1330	232	923	245	1030	1010
13	220	258	370	326	284	275	1350	258	719	223	1040	1230
14	228	270	275	316	284	262	1320	249	538	216	976	1430
15	224	279	279	311	279	275	1330	220	445	214	920	1350
16	216	220	253	335	275	306	1370	237	606	292	801	1320
17	216	311	158	503	280	413	1390	262	636	393	790	1320
18	224	266	262	614	270	497	1280	316	601	346	879	1410
19	245	212	228	580	284	509	1120	413	494	302	931	1350
20	270	279	200	484	279	541	1030	522	440	271	1520	1220
21	316	392	266	491	293	600	869	460	392	285	1610	1250
22	293	541	297	541	454	554	832	350	349	274	1550	1240
23	321	640	311	397	675	491	760	306	335	248	1410	1260
24	425	575	442	408	702	437	693	275	324	244	1250	1160
25	408	628	834	408	634	466	560	249	306	230	1010	1110
26	311	648	1020	381	593	392	455	237	290	296	925	1050
27	350	766	987	350	534	376	380	200	274	615	792	985
28	302	731	923	326	466	376	480	188	253	606	831	938
29	258	675	862	316	460	392	517	208	259	467	712	906
30	266	608	774	311	---	408	566	241	265	434	534	819
31	270	---	713	311	---	381	---	275	---	325	507	---
TOTAL	8408	11838	14037	12368	10483	12279	26019	10374	18004	9809	27243	28076
MEAN	271	395	453	399	361	396	867	335	600	316	879	936
MAX	425	766	1020	674	702	600	1390	560	1470	615	1610	1430
MIN	216	212	158	208	270	262	355	188	253	194	301	381
CFSM	.31	.46	.52	.46	.42	.46	1.00	.39	.69	.36	1.01	1.08
IN.	.36	.51	.60	.53	.45	.53	1.12	.44	.77	.42	1.17	1.20
CAL YR 1979	TOTAL	306896	MEAN 841	MAX 4880	MIN 158	CFSM .97	IN 13.15					
WTR YR 1980	TOTAL	188938	MEAN 516	MAX 1610	MIN 158	CFSM .59	IN 8.10					

DISCHARGE AT PARTIAL-RECORD STATIONS AND MISCELLANEOUS SITES

CREST-STAGE PARTIAL-RECORD STATIONS

The following table contains annual maximum discharges for crest-stage stations. A crest-stage gage is a device which will register the peak stage occurring between inspections of the gage. A stage-discharge relation for each gage is developed from discharge measurements made by indirect measurements of peak flow or by current meter. The date of the maximum discharge is not always certain but is usually determined by comparison with nearby continuous-record stations, weather records, or local inquiry. Only the maximum discharge for each water year is given. Information on some lower floods may have been obtained but is not published herein. The years given in the period of record represent water years for which the annual minimum has been determined.

ANNUAL MAXIMUM DISCHARGE AT CREST-STAGE PARTIAL-RECORD STATIONS DURING WATER YEAR 1980							
STATION NO.	STATION NAME	LOCATION	DRAINAGE AREA (MI ²)	PERIOD OF RECORD	DATE	ANNUAL MAXIMUM GAGE HEIGHT (FT)	DIS-CHARGE (FT ³ /S)
STREAMS TRIBUTARY TO LAKE SUPERIOR							
04024400	STONY BROOK NEAR SUPERIOR, WI	LAT 46°35'01", LONG 92°07'10", IN SE 1/4 SEC.4, T.47 N., R.14 W., DOUGLAS COUNTY, AT BOX CULVERT ON STATE HIGHWAY 35, 12.5 MI (20.1 KM) SOUTH OF TOLL BRIDGE ON U.S. HIGHWAYS 2 AND 35 AT ST. LOUIS RIVER AT SUPERIOR.	2.20	1959-80	09-03-80	19.30	315
04025200	PEARSON CREEK NEAR MAPLE, WI	LAT 46°38'51", LONG 91°42'55", ON COMMON BOUNDARY OF SECS.11 AND 14, T.48 N., R.11 W., DOUGLAS COUNTY, AT BOX CULVERT ON STATE HIGHWAY 13, 4.0 MI (6.4 KM) NORTH OF MAPLE.	4.01	1957-80	09-03-80	17.00	670
04026200	SAND RIVER TRIBUTARY NEAR RED CLIFF, WI	LAT 46°53'53", LONG 90°56'47", IN NE 1/4 SEC.14, T.51 N., R.5 W., BAYFIELD COUNTY, AT BOX CULVERT ON STATE HIGHWAY 13, 8.0 MI (12.9 KM) NORTHWEST OF RED CLIFF.	1.14	1959-80	05-10-80	11.55	135
*04026300	SIoux RIVER NEAR WASHBURN, WI	LAT 46°41'20", LONG 90°57'02", IN NE 1/4 SEC.35, T.49 N., R.5 W., BAYFIELD COUNTY, ON COUNTY TRUNK HIGHWAY C, 2.5 MI (4.0 KM) WEST OF WASHBURN.	35.2	1959-65 1966# 1967-80	09-03-80	12.15	470
*04026400	SPILLERBERG CREEK NEAR CAYUGA, WI	LAT 46°11'48", LONG 90°37'32", IN NW 1/4 SEC.21, T.43 N., R.2 W., ASHLAND COUNTY, AT CONCRETE CULVERT PIPE ON STATE HIGHWAY 13, 4.2 MI (6.8 KM) SOUTHEAST OF CAYUGA.	6.18	1958-80	09-03-80	12.09	83
04026450	BAD RIVER NEAR MELLEN, WI	LAT 46°16'14", LONG 90°42'26", IN NE 1/4 NW 1/4 SEC.26, T.44 N., R.3 W., ASHLAND COUNTY, ON LEFT BANK 150 FT (45.7 M) DOWNSTREAM FROM BRIDGE ON U.S. FOREST SERVICE ROAD, 4.4 MI (7.1 KM) SOUTHEAST OF MELLEN.	83.4	1971-75# 1976-80	09-03-80	3.64	470
04026700	TROUT BROOK TRIBUTARY NEAR MARENGO, WI	LAT 46°23'04", LONG 90°47'04", IN NE 1/4 SEC.7, T.45 N., R.3 W., ASHLAND COUNTY, AT BOX CULVERT ON STATE HIGHWAY 13, 2.6 MI (4.2 KM) SOUTHEAST OF MARENGO.	.77	1960-80	05-11-80	10.40	74
04026850	APPLE CREEK NEAR UPSON, WI	LAT 46°20'45", LONG 90°24'18", IN SE 1/4 SEC.30, T.45 N., R.1 E., IRON COUNTY, AT 2-BARREL CORRUGATED CULVERT ON GRAVELED O'BRIEN LAKE ROAD, 1.5 MI (2.4 KM) SOUTH OF UPSON.	5.39	1970-80	05-11-80	11.78	69
*04027200	PEARL CREEK AT GRANDVIEW, WI	LAT 46°22'05", LONG 91°05'27", IN NE 1/4 SEC.22, T.45 N., R.6 W., BAYFIELD COUNTY, AT BOX CULVERT ON U.S. HIGHWAY 63, 0.8 MI (1.3 KM) EAST OF GRANDVIEW.	16.9	1960-80	1980	B	<60
*04029700	BOOMER CREEK NEAR SAXON, WI	LAT 46°29'40", LONG 90°21'02", IN N 1/2 SEC.3, T.46 N., R.1 E., IRON COUNTY, AT CONCRETE CULVERT PIPE ON U.S. HIGHWAY 2, 3.0 MI (4.8 KM) EAST OF SAXON.	5.94	1958-80	05-11-80	11.92	105

ANNUAL MAXIMUM DISCHARGE AT CREST-STAGE PARTIAL-RECORD STATIONS DURING WATER YEAR 1980

ANNUAL MAXIMUM DISCHARGE AT CREST-STAGE PARTIAL-RECORD STATIONS DURING WATER YEAR 1900					ANNUAL MAXIMUM		DIS-CHARGE (FT ³ /S)
STATION	STATION NAME	LOCATION	DRAINAGE AREA (MI ²)	PERIOD OF RECORD	DATE	GAGE HEIGHT (FT)	
STREAMS TRIBUTARY TO LAKE MICHIGAN							
*04059900	ALLEN CREEK TRIBUTARY NEAR ALVIN, WI	LAT 45°58'05", LONG 88°47'24", ON NORTH BOUNDARY SEC.7, T.40 N., R.14 E., FOREST COUNTY, AT CULVERT ON STATE HIGHWAY 70, 2.2 MI (3.5 KM) SOUTHEAST OF ALVIN.	1.22	1960-80	09-22-80	10.89	14
04063640	NORTH BRANCH PINE DAM AT WINDSOR DAM NEAR ALVIN, WI	LAT 45°55'43", LONG 88°51'38", IN SE 1/4 SEC.21, T.40 N., R.13 E., FOREST COUNTY, AT BRIDGE ON COUNTRY ROAD, AT WINDSOR DAM, 3.8 MI (6.1 KM) UPSTREAM FROM CONFLUENCE OF NORTH AND SOUTH FORKS, 4.0 MI (6.4 KM) SOUTHWEST OF ALVIN.	27.8	1967-68# 1970-80	04-09-80	3.89	165
04063688	SOUTH BRANCH POPPLE RIVER NEAR NEWALD, WI	LAT 45°44'42", LONG 88°35'31", IN NW 1/4 SEC.26, T.38 N., R.15 E., FLORENCE COUNTY, AT CORRUGATED TWIN BARREL CULVERTS ON U.S. FOREST SERVICE ROAD 2159, 5.4 MI (8.7 KM) EAST OF NEWALD.	9.47	1970-80	06-26-80	12.72	68
*04063800	WOODS CREEK NEAR FENCE, WI	LAT 45°49'53", LONG 88°23'17", IN SE 1/4 SEC.29, T.39 N., R.17 E., FLORENCE COUNTY, AT BOX CULVERT ON STATE HIGHWAY 101, 6.0 MI (9.7 KM) NORTH OF FENCE.	41.9	1958-80	04-08-80	11.97	280
04064800	LITTLE POPPLE RIVER NEAR AURORA, WI	LAT 45°47'34", LONG 88°11'40", IN SW 1/4 SEC.1, T.38 N., R.18 E., FLORENCE COUNTY, AT 3-BARREL CORRUGATED CULVERT ON COUNTY TRUNK HIGHWAY N, 5.5 MI (8.8 KM) WEST OF AURORA.	35.0	1970-80	04-08-80	12.82	340
04066300	COLE CREEK NEAR DUNBAR, WI	LAT 45°37'42", LONG 88°06'09", ON SOUTH BOUNDARY SEC.34, T.37 N., R.19 E., MARINETTE COUNTY, AT CULVERT ON U.S. HIGHWAY 8, 3.6 MI (5.8 KM) SOUTHEAST OF DUNBAR.	3.62	1960-80	04-08-80	10.50	20
04066700	MC CALL CREEK AT WAUSAUKEE, WI	LAT 45°21'37", LONG 87°57'16", IN NW 1/4 SEC.1, T.33 N., R.20 E., MARINETTE COUNTY, AT CULVERT ON U.S. HIGHWAY 141, 1.0 MI (1.6 KM) SOUTH OF WAUSAUKEE.	1.64	1959-80	04-05-80	11.28	19
04067500	MENOMINEE RIVER NEAR MC ALLISTER, WI	LAT 45°19'20", LONG 87°39'40", IN SEC.17, T.33 N., R.23 E., MARINETTE COUNTY, 300 FT (91 M) ABOVE BRIDGE ON COUNTY TRUNK HIGHWAY JJ, 2.9 MI (4.7 KM) EAST OF MC ALLISTER.	3,930	1945-61# 1962-80	09-24-80	15.67	18,200
04067760	PESHTIGO RIVER NEAR CAVOUR, WI	LAT 45°39'20", LONG 88°38'52", IN SW 1/4 SEC.29, T.37 N., R.15 E., FOREST COUNTY, AT BRIDGE ON U.S. HIGHWAY 8, 0.7 MI (1.1 KM) NORTHWEST OF CAVOUR.	150	1970-80	04-09-80	13.04	830
04067800	ARMSTRONG CREEK NEAR ARMSTRONG CREEK, WI	LAT 45°39'29", LONG 88°28'44", IN W 1/2 SEC.27, T.37 N., R.16 E., FOREST COUNTY, AT BRIDGE ON U.S. HIGHWAY 8, 1.8 MI (2.9 KM) NORTHWEST OF ARMSTRONG CREEK.	23.2	1958-80	1980	B	<70
04069700	NORTH BRANCH OCONTO RIVER NEAR WABENO, WI	LAT 45°26'19", LONG 88°37'40", IN SW 1/4 SEC.9, T.34 N., R.15 E., FOREST COUNTY, AT PIPE ARCH CULVERT ON COUNTY TRUNK HIGHWAY C, 0.6 MI (1.0 KM) EAST OF INTERSECTION WITH STATE HIGHWAY 32 AT WABENO.	34.1	1970-80	04-09-80	12.01	150
04071700	NORTH BRANCH LITTLE RIVER NEAR COLEMAN, WI	LAT 45°00'37", LONG 88°02'43", ON COMMON BOUNDARY OF SECS.2 AND 3, T.29 N., R.20 E., OCONTO COUNTY, AT BRIDGE ON U.S. HIGHWAY 141, 3.8 MI (6.1 KM) SOUTH OF COLEMAN.	21.4	1958-80	04-09-80	13.76	410

ANNUAL MAXIMUM DISCHARGE AT CREST-STAGE PARTIAL-RECORD STATIONS DURING WATER YEAR 1980

ANNUAL MAXIMUM DISCHARGE AT CREST-STAGE PARTIAL-RECORD STATIONS DURING WATER YEAR 1980						ANNUAL MAXIMUM	
STATION NO.	STATION NAME	LOCATION	DRAINAGE AREA (MI ²)	PERIOD OF RECORD	DATE	GAGE HEIGHT (FT)	DIS-CHARGE (FT ³ /S)
STREAMS TRIBUTARY TO LAKE MICHIGAN--CONTINUED							
*04071800	PENSAUKEE RIVER NEAR PULASKI, WI	LAT 44°45'48", LONG 88°15'07", IN NE 1/4 SEC.1, T.26 N., R.18 E., SHAWANO COUNTY, AT BRIDGE ON STATE HIGHWAY 32, 6.1 MI (9.8 KM) NORTH OF PULASKI.	48.8	1961-80	04-09-80	16.11	1,400
*04073400	BIRD CREEK AT WAUTOMA, WI	LAT 44°06'00", LONG 89°18'00", IN S 1/2 SEC.34, T.19 N., R.10 E., WAUSHARA COUNTY, AT CONCRETE CULVERT ON STATE HIGHWAY 21, 0.2 MI (0.3 KM) WEST OF WAUTOMA.	3.59	1959-80	08-08-80	11.60	70
04074300	MUD CREEK NEAR NASHVILLE, WI	LAT 45°34'19", LONG 89°02'39", IN SW 1/4 SEC.30, T.36 N., R.12 E., FOREST COUNTY, AT CONCRETE CIRCULAR CULVERT ON U.S. HIGHWAY 8, 3.5 MI (5.6 KM) NORTH OF NASHVILLE.	10.0	1970-80	09-21-80	12.28	56
*04074700	HUNTING RIVER NEAR ELCHO, WI	LAT 45°25'10", LONG 89°11'15", IN N 1/2 SEC.24, T.34 N., R.10 E., LANGLADE COUNTY, AT TWIN CULVERTS ON U.S. HIGHWAY 45 AND STATE HIGHWAY 47, 1.5 MI (2.4 KM) SOUTH OF ELCHO.	9.00	1958-80	04-07-80	12.09	92
*04074850	LILY RIVER NEAR LILY, WI	LAT 45°20'59", LONG 88°49'52", IN SE 1/4 SEC.11, T.33 N., R.13 E., LANGLADE COUNTY, AT CULVERT ON COUNTY TRUNK HIGHWAY A, 3.2 MI (5.1 KM) NORTH FROM JUNCTION OF STATE HIGHWAYS 55 AND 52 AT LILY.	52.4	1970-80	05-11-80	9.71	36
*04075200	EVERGREEN CREEK NEAR LANGLADE, WI	LAT 45°10'11", LONG 88°48'12", IN NW 1/4 SEC.18, T.31 N., R.14 E., LANGLADE COUNTY, AT CULVERT ON STATE HIGHWAY 64, 3.5 MI (5.6 KM) SOUTHWEST OF LANGLADE.	8.00	1959-65 1966-72# 1973-80	10-05-79	10.76	42
*04079700	SPAULDING CREEK NEAR BIG FALLS, WI	LAT 44°38'13", LONG 89°01'20", ON COMMON BOUNDARY OF SECS.14 AND 15, T.25 N., R.12 E., WAUPACA COUNTY, AT CULVERT ON COUNTY TRUNK HIGHWAY E, 1.5 MI (2.4 KM) NORTH OF BIG FALLS.	4.90	1959-65 1966# 1967-80	04-09-80	11.03	62
04081010	WAUPACA RIVER TRIBUTARY NEAR WAUPACA, WI	LAT 44°19'34", LONG 88°59'40", IN NW 1/4 SEC.1, T.21 N., R.12 E., WAUPACA COUNTY, AT CULVERT ON U.S. HIGHWAY 10, 5.0 MI (8.0 KM) SOUTHEAST OF WAUPACA.	1.00	1960-80	04-09-80	11.76	16
04081900	SAWYER CREEK AT OSHKOSH, WI	LAT 44°02'00", LONG 88°35'00", IN SW 1/4 SEC.15, T.18 N., R.16 E., WINNEBAGO COUNTY, AT BRIDGE ON U.S. HIGHWAY 41, 1.0 MI (1.6 KM) SOUTHWEST OF BRIDGE ON ALGOMA STREET AT FOX RIVER, AT OSHKOSH.	15.3	1961-80	06-06-80	11.35	200
04083400	EAST BRANCH FOND DU LAC RIVER TRIBUTARY NEAR EDEN, WI	LAT 43°41'13", LONG 88°26'29", IN NE 1/4 SEC.14, T.14 N., R.17 E., FOND DU LAC COUNTY, AT CULVERT ON U.S. HIGHWAY 41, 3.0 MI (4.8 KM) WEST OF EDEN.	1.19	1961-80	06-06-80	14.59	135
*04085030	APPLE CREEK NEAR KAUKAUNA, WI	LAT 44°19'15", LONG 88°17'33", ON WEST BOUNDARY SEC.2, T.21 N., R.18 E., OUTAGAMIE COUNTY, AT BRIDGE ON STATE HIGHWAY 55, 3.0 MI (4.8 KM) NORTH OF KAUKAUNA.	15.0	1960-80	04-08-80	14.40	930

ANNUAL MAXIMUM DISCHARGE AT CREST-STAGE PARTIAL-RECORD STATIONS DURING WATER YEAR 1980

ANNUAL MAXIMUM DISCHARGE AT CREST-STAGE PARTIAL-RECORD STATIONS DURING WATER YEAR 1960					ANNUAL MAXIMUM		
STATION NO.	STATION NAME	LOCATION	DRAINAGE AREA (MI ²)	PERIOD OF RECORD	DATE	GAGE HEIGHT (FT)	DIS-CHARGE (FT ³ /S)
STREAMS TRIBUTARY TO LAKE MICHIGAN--CONTINUED							
04085100	EAST RIVER TRIBUTARY AT GREENLEAF, WI	LAT 44°18'24", LONG 88°05'47", IN NE 1/4 SEC.8, T.21 N., R.20 E., BROWN COUNTY, AT RAILROAD BOX CULVERT, 0.5 MI (0.8 KM) SOUTH OF GREENLEAF.	8.00	1958-80	03-23-80	11.38	190
04085300	NESHOTA RIVER TRIBUTARY NEAR DENMARK, WI	LAT 44°23'43", LONG 87°52'13", IN NE 1/4 SEC.7, T.22 N., R.22 E., BROWN COUNTY, AT BOX CULVERT ON U.S. HIGHWAY 141, 3.8 MI (6.1 KM) NORTHWEST OF DENMARK.	3.08	1959-80	08-08-80	13.47	285
*04085400	KILLSNAKE RIVER NEAR CHILTON, WI	LAT 44°03'33", LONG 88°08'36", IN E 1/2 SEC.6, T.18 N., R.20 E., CALUMET COUNTY, AT BRIDGE ON COUNTRY ROAD, 2.4 MI (3.9 KM) NORTHEAST OF CHILTON.	29.5	1961-80	04-03-80	11.00	360
*04085700	SHEBOYGAN RIVER TRIBUTARY NEAR PLYMOUTH, WI	LAT 43°47'26", LONG 87°56'31", ON COMMON BOUNDARY OF SECS.2 AND 11, T.15 N., R.21 E., SHEBOYGAN COUNTY, AT CONCRETE CULVERT ON COUNTY TRUNK HIGHWAY J, 3.5 MI (5.6 KM) NORTHEAST OF PLYMOUTH.	5.51	1959-80	06-07-80	10.41	95
04086400	MILWAUKEE RIVER TRIBUTARY NEAR FREDONIA, WI	LAT 43°26'28", LONG 87°55'38", IN SE 1/4 SEC.1, T.11 N., R.21 E., OZAUKEE COUNTY, AT CULVERT ON COUNTRY ROAD, 2.3 MI (3.7 KM) SOUTHEAST OF FREDONIA.	.82	1962-80	08-08-80	12.00	70
*04087050	LITTLE MENOMONEE RIVER NEAR FREISTADT, WI	LAT 43°12'24", LONG 88°02'24", ON COMMON BOUNDARY OF SECS.29 AND 32, T.9 N., R.21 E., OZAUKEE COUNTY, AT BRIDGE ON DONGES BAY ROAD, 2.0 MI (3.2 KM) SOUTH OF FREISTADT.	8.00	1958-80	08-07-80	11.68	130
04087100	HONEY CREEK AT MILWAUKEE, WI	LAT 42°58'41", LONG 87°59'52", IN SE 1/4 SEC.15, T.6 N., R.21 E., MILWAUKEE COUNTY, 400 FT (122 M) UPSTREAM FROM BRIDGE ON S. 68TH STREET, 6.0 MI (9.7 KM) SOUTHWEST OF MOUTH OF MILWAUKEE RIVER, AT MILWAUKEE.	3.26	1959-80	06-07-80	20.22	390
*04087200	OAK CREEK NEAR SOUTH MILWAUKEE, WI	LAT 42°52'58", LONG 87°53'31", ON COMMON BOUNDARY OF SECS.21 AND 22, T.5 N., R.22 E., MILWAUKEE COUNTY, AT BRIDGE ON WEST NICHOLSON ROAD, 3.0 MI (4.8 KM) SOUTHWEST OF SOUTH MILWAUKEE.	13.8	1958-80	06-05-80	15.24	240
04087230	WEST BRANCH ROOT RIVER CANAL TRIBUTARY NEAR NORTH CAPE, WI	LAT 42°45'44", LONG 88°01'04", IN SE 1/4 SEC.33, T.4 N., R.21 E., RACINE COUNTY, AT CULVERT ON COUNTY TRUNK HIGHWAY U, 3.0 MI (4.8 KM) SOUTHEAST OF NORTH CAPE.	3.92	1962-80	08-19-80	11.80	100
*04087250	PIKE CREEK NEAR KENOSHA, WI	LAT 42°36'12", LONG 87°53'41", IN W 1/2 SEC.27, T.2 N., R.22 E., KENOSHA COUNTY, AT BOX CULVERT ON STATE HIGHWAY 43, 3.0 MI (4.8 KM) NORTHWEST OF KENOSHA.	7.25	1960-80	09-09-80	13.72	50
ST. CROIX RIVER BASIN							
*05333100	LITTLE FROG CREEK NEAR MINONG, WI	LAT 46°05'48", LONG 91°46'39", IN NW 1/4 SEC.29, T.42 N., R.11 W., WASHBURN COUNTY, AT CULVERT ON COUNTRY ROAD, 2.5 MI (4.0 KM) EAST OF MINONG.	13.0	1961-80	05-10-80	11.36	42
05334100	SAWYER CREEK NEAR SHELL LAKE, WI	LAT 45°46'08", LONG 91°54'40", IN SE 1/4 SEC.13, T.38 N., R.13 W., WASHBURN COUNTY, AT BOX CULVERT ON U.S. HIGHWAY 63, 2.0 MI (3.2 KM) NORTH OF SHELL LAKE.	1.04	1960-80	04-09-80	11.77	57
*05335380	BASHAW BROOK NEAR SHELL LAKE, WI	LAT 45°47'02", LONG 92°07'51", IN SW 1/4 SEC.8, T.38 N., R.14 W., BURNETT COUNTY, AT TWIN BOX CULVERTS ON COUNTRY ROAD, 10.5 MI (16.9 KM) NORTHWEST OF SHELL LAKE.	24.9	1959-65 1966# 1967-80	09-04-80	12.53	98

ANNUAL MAXIMUM DISCHARGE AT CREST-STAGE PARTIAL-RECORD STATIONS DURING WATER YEAR 1980

ANNUAL MAXIMUM DISCHARGE AT CREST--STAGE PARTIAL-RECORD STATIONS DURING WATER YEAR 1900						ANNUAL MAXIMUM	
STATION NO.	STATION NAME	LOCATION	DRAINAGE AREA (MI ²)	PERIOD OF RECORD	DATE	GAGE	DIS-
						HEIGHT (FT)	CHARGE (FT ³ /S)
ST. CROIX RIVER BASIN--CONTINUED							
*05340300	TRADE RIVER NEAR FREDERIC, WI	LAT 45°37'41", LONG 92°29'19", IN SW 1/4 SEC.4, T.36 N., R.17 W., POLK COUNTY, AT BOX CULVERT ON STATE HIGHWAYS 35 AND 48, 2.5 MI (4.0 KM) SOUTHWEST OF FREDERIC.	6.34	1958-80	09-04-80	11.50	112
05341700	WILLOW RIVER TRIBUTARY NEAR NEW RICHMOND, WI	LAT 45°05'23", LONG 92°28'41", IN NW 1/4 SEC.17, T.30 N., R.17 W., PIERCE COUNTY, AT TWIN BOX CULVERTS ON COUNTY TRUNK HIGHWAY GG, 3.6 MI (5.8 KM) SOUTHEAST OF NEW RICHMOND.	1.40	1959-80	09-04-80	12.75	134
05341900	KINNICKINNIC RIVER TRIBUTARY AT RIVER FALLS, WI	LAT 44°49'57", LONG 92°38'23", IN NE 1/4 SEC.14, T.27 N., R.19 W., PIERCE COUNTY, AT BRIDGE ON COUNTY TRUNK HIGHWAY FF, 1.6 MI (2.6 KM) SOUTHWEST OF RIVER FALLS.	7.26	1959-80	06-06-80	14.16	2,170
TRIMBELLE CREEK BASIN							
*05346600	LITTLE TRIMBELLE CREEK NEAR BAY CITY, WI	LAT 44°38'01", LONG 92°34'05", IN S 1/2 SEC.21, T.25 N., R.18 W., PIERCE COUNTY, AT BRIDGE ON COUNTY TRUNK HIGHWAY K, 7.0 MI (11.3 KM) NORTHWEST OF BAY CITY.	19.9	1961-80	04-09-80	11.98	1,050
CHIPPEWA RIVER BASIN							
05356200	KENYON CREEK NEAR RADISSON, WI	LAT 45°46'02", LONG 91°06'40", IN NW 1/4 SEC.22, T.38 N., R.6 W., SAWYER COUNTY, AT BRIDGE ON STATE HIGHWAY 27, 5.0 MI (8.0 KM) EAST OF RADISSON.	7.50	1960-80	09-04-80	11.38	155
05357360	BEAR RIVER NEAR POWELL, WI	LAT 46°04'40", LONG 90°00'52", IN NE 1/4 SEC.32, T.42 N., R.4 E., IRON COUNTY, AT BRIDGE ON STATE HIGHWAY 182, 3.0 MI (4.8 KM) WEST OF POWELL.	118	1970-80	1980	B	<225
05357390	WEBER CREEK NEAR MERCER, WI	LAT 46°11'16", LONG 90°07'57", IN SE 1/4 SEC.21, T.43 N., R.3 E., IRON COUNTY, AT CULVERT ON U.S. HIGHWAY 51, 3.7 MI (6.0 KM) NORTHEAST OF MERCER.	5.86	1970-80	09-13-80	11.18	76
05358100	SMITH CREEK NEAR PARK FALLS, WI	LAT 45°57'06", LONG 90°28'07", IN NE 1/4 SEC.15, T.40 N., R.1 W., PRICE COUNTY, AT CULVERT ON STATE HIGHWAY 13, 1.5 MI (2.4 KM) NORTHWEST OF PARK FALLS.	9.11	1970-80	09-13-80	12.76	188
05359200	SOUTH FORK FLAMBEAU RIVER TRIBUTARY NEAR PARK FALLS, WI	LAT 45°46'35", LONG 90°20'55", IN SW 1/4 SEC.15, T.40 N., R.1 E., PRICE COUNTY, AT CULVERT ON STATE HIGHWAY 182, 5.1 MI (8.2 KM) EAST OF PARK FALLS.	.86	1960-80	04-10-80	11.15	62
*05359600	PRICE CREEK NEAR PHILLIPS, WI	LAT 45°43'33", LONG 90°40'12", IN SW 1/4 SEC.31, T.38 N., R.2 W., PRICE COUNTY, AT CULVERT ON COUNTY TRUNK HIGHWAY W, 13.0 MI (20.9 KM) WEST OF PHILLIPS.	16.9	1958-65 1966# 1967-80	09-13-80	11.75	118
05360200	FLAMBEAU RIVER TRIBUTARY AT LADYSMITH, WI	LAT 45°28'54", LONG 91°06'40", IN SW 1/4 SEC.27, T.35 N., R.6 W., RUSK COUNTY, AT CULVERT ON STATE HIGHWAY 27, 1.0 MI (1.6 KM) NORTH OF LADYSMITH.	.80	1960-80	09-21-80	11.85	27
*05361400	HAY CREEK NEAR PRENTICE, WI	LAT 45°32'32", LONG 90°21'37", IN SE 1/4 SEC.4, T.35 N., R.1 E., PRICE COUNTY, AT CULVERT ON U.S. HIGHWAY 8, 3.5 MI (5.6 KM) WEST OF PRENTICE.	21.9	1961-80	09-21-80	12.63	590

ANNUAL MAXIMUM DISCHARGE AT CREST-STAGE PARTIAL-RECORD STATIONS DURING WATER YEAR 1980

STATION NO.	STATION NAME	LOCATION	DRAINAGE AREA (MI ²)	PERIOD OF RECORD	DATE	ANNUAL MAXIMUM GAGE HEIGHT (FT)	DIS-CHARGE (FT ³ /S)
CHIPPEWA RIVER BASIN--CONTINUED							
05361420	DOUGLAS CREEK NEAR PRENTICE, WI	LAT 45°31'06", LONG 90°15'28", IN NE 1/4 SEC.17, T.35 N., R.2 E., PRICE COUNTY, AT CULVERT ON COUNTY TRUNK HIGHWAY C, 2.3 MI (3.7 KM) SOUTHEAST OF INTERSECTION WITH STATE HIGHWAY 13 AT PRENTICE.	24.6	1970-80	04-09-80	12.75	420
05361600	NORTH FORK JUMP RIVER NEAR PHILLIPS, WI	LAT 45°37'45", LONG 90°23'32", IN SW 1/4 SEC.5, T.36 N., R.1 E., PRICE COUNTY, AT CULVERT ON STATE HIGHWAY 13, 4.0 MI (6.4 KM) SOUTH OF PHILLIPS.	10.4	1970-80	09-13-80	12.53	223
*05364000	YELLOW RIVER AT CADOTT, WI	LAT 44°57'21", LONG 91°08'48", IN NE 1/4 SEC.31, T.29 N., R.6 W., CHIPPEWA COUNTY, AT BRIDGE ON STATE HIGHWAY 27, AT CADOTT.	351	1943-61# 1962-80	08-08-80	12.03	6,600
05364100	SETH CREEK NEAR CADOTT, WI	LAT 44°59'24", LONG 91°08'48", IN SW 1/4 SEC.17, T.29 N., R.6 W., CHIPPEWA COUNTY, AT CULVERT ON STATE HIGHWAY 27, 3.1 MI (5.0 KM) NORTH OF CADOTT.	3.04	1962-80	08-08-80	16.78	690
05364500	DUNCAN CREEK AT BLOOMER, WI	LAT 45°07'00", LONG 91°30'00", IN SEC.8, T.30 N., R.9 W., CHIPPEWA COUNTY, 0.2 MI (0.3 KM) BELOW BLOOMER DAM, AT BLOOMER.	49.2	1945-51# 1958-80	06-06-80	8.12	1,250
*05365700	GOGGLE-EYE CREEK NEAR THORP, WI	LAT 44°58'40", LONG 90°48'00", ON WEST BOUNDARY SEC.19, T.29 N., R.3 W., CLARK COUNTY, AT CULVERT ON STATE HIGHWAY 73, 1.3 MI (2.1 KM) NORTH OF THORP.	6.70	1958-80	06-05-80	21.68	2,880
*05366500	EAU CLAIRE RIVER NEAR FALL CREEK, WI	LAT 44°48'35", LONG 91°16'50", IN NW 1/4 SEC.19, T.27 N., R.7 W., EAU CLAIRE COUNTY, 500 FT (152 M) EAST OF COUNTY TRUNK HIGHWAY K, 3.2 MI (5.1 KM) NORTH OF FALL CREEK.	758	1943-55# 1958-80	09-12-80	17.20	19,700
05367030	WILLOW CREEK NEAR EAU CLAIRE, WI	LAT 44°44'11", LONG 91°26'48", ON COMMON BOUNDARY OF SECS.14 AND 15, T.26 N., R.9 W., EAU CLAIRE COUNTY, AT BOX CULVERT ON STATE HIGHWAY 93, 4.0 MI (6.4 KM) SOUTH OF EAU CLAIRE.	4.38	1958-80	04-08-80	11.75	175
*05367480	EAST BRANCH PINE CREEK TRIBUTARY NEAR DALLAS, WI	LAT 45°16'50", LONG 91°48'30", IN SW 1/4 SEC.1, T.32 N., R.12 W., BARRON COUNTY, AT CULVERT ON COUNTY TRUNK HIGHWAY O, 1.5 MI (2.4 KM) NORTH OF DALLAS.	3.85	1960-80	06-06-80	12.15	115
05367500	RED CEDAR RIVER NEAR COLFAX, WI	LAT 45°03'50", LONG 91°42'45", IN SW 1/4 SEC.22, T.30 N., R.11 W., DUNN COUNTY, 3.2 MI (5.1 KM) BELOW TROUT CREEK, 4.7 MI (7.6 KM) NORTH OF COLFAX.	1,100	1914-61# 1962-80	04-09-80	6.77	9,600
05367700	LIGHTNING CREEK AT ALMENA, WI	LAT 45°25'17", LONG 92°01'57", IN NW 1/4 SEC.19, T.34 N., R.13 W., BARRON COUNTY, AT BRIDGE ON COUNTY TRUNK HIGHWAY P, AT ALMENA.	19.8	1958-80	08-07-80	11.17	530
05369800	EAU GALLE RIVER TRIBUTARY NEAR HERSEY, WI	LAT 44°56'04", LONG 92°14'10", IN SW 1/4 SEC.5, T.28 N., R.15 W., ST. CROIX COUNTY, AT BOX CULVERT ON INTERSTATE HIGHWAY 94, 2.0 MI (3.2 KM) SOUTHWEST OF HERSEY.	.65	1960-80	06-06-80	16.43	480

ANNUAL MAXIMUM DISCHARGE AT CREST-STAGE PARTIAL-RECORD STATIONS DURING WATER YEAR 1980

ANNUAL MAXIMUM DISCHARGE AT CREST-STAGE PARTIAL-RECORD STATIONS DURING WATER YEAR 1960					ANNUAL MAXIMUM		
STATION NO.	STATION NAME	LOCATION	DRAINAGE AREA (MI ²)	PERIOD OF RECORD	DATE	GAGE HEIGHT (FT)	DIS-CHARGE (FT ³ /S)
CHIPPEWA RIVER BASIN--CONTINUED							
05370600	ARKANSAW CREEK TRIBUTARY NEAR ARKANSAW, WI	LAT 44°38'31", LONG 92°03'09", IN SW 1/4 SEC.14, T.25 N., R.14 W., PEPIN COUNTY, AT BOX CULVERT ON U.S. HIGHWAY 10, 1.2 MI (1.9 KM) NORTHWEST OF ARKANSAW.	2.56	1959-80	04-09-80	12.98	280
*05370900	SPRING CREEK NEAR DURAND, WI	LAT 44°34'13", LONG 91°57'48", IN S 1/2 SEC.9, T.24 N., R.13 W., BUFFALO COUNTY, AT BRIDGE ON COUNTRY ROAD, 4.0 MI (6.4 KM) SOUTH OF BRIDGE ON CHIPPEWA RIVER AT DURAND.	6.49	1962-80	04-09-80	12.59	200
BY GOLLY CREEK BASIN							
05371300	BY GOLLY CREEK NEAR NELSON, WI	LAT 44°26'21", LONG 91°57'48", IN SW 1/4 SEC.28, T.23 N., R.13 W., BUFFALO COUNTY, AT CULVERT ON COUNTY TRUNK HIGHWAY D, 3.0 MI (4.8 KM) NORTHEAST OF NELSON.	.28	1962-80	04-09-80	11.18	48
BUFFALO RIVER BASIN							
05371800	BUFFALO RIVER TRIBUTARY NEAR OSSEO, WI	LAT 44°35'01", LONG 91°05'40", IN S 1/2 SEC.3, T.24 N., R.6 W., JACKSON COUNTY, AT CULVERT ON U.S. HIGHWAY 10, 6.5 MI (10.5 KM) EAST OF OSSEO.	1.44	1960-80	09-12-80	12.12	126
05371920	BUFFALO RIVER NEAR MONDOVI, WI	LAT 44°31'36", LONG 91°41'46", IN SW 1/4 SE 1/4 SEC.27, T.24 N., R.11 W., BUFFALO COUNTY, AT BRIDGE ON STATE HIGHWAY 88, 4.0 MI (6.4 KM) SOUTH OF MONDOVI.	280	1974-80	04-09-80	14.33	2,970
WAUMANDEE CREEK BASIN							
*05378200	EAGLE CREEK NEAR FOUNTAIN CITY, WI	LAT 44°09'49", LONG 91°42'28", IN SW 1/4 SEC.33, T.20 N., R.11 W., BUFFALO COUNTY, AT BRIDGE ON COUNTY TRUNK HIGHWAY G, 2.5 MI (4.0 KM) NORTH OF FOUNTAIN CITY.	26.8	1961-80	09-07-80	17.36	2,500
BLACK RIVER BASIN							
05380800	BLACK RIVER TRIBUTARY NEAR WHITTLESEY, WI	LAT 45°12'34", LONG 90°19'05", IN SW 1/4 SEC.35, T.32 N., R.1 E., TAYLOR COUNTY, AT BRIDGE ON STATE HIGHWAY 13, 1.1 MI (1.8 KM) SOUTH OF WHITTLESEY.	2.12	1960-80	09-21-80	13.33	305
*05380900	POPLAR RIVER NEAR OWEN, WI	LAT 44°53'10", LONG 90°34'17", IN NW 1/4 SEC.25, T.28 N., R.2 W., CLARK COUNTY, AT BRIDGE ON COUNTY TRUNK HIGHWAY N, 4.2 MI (6.8 KM) SOUTH OF OWEN.	157	1958-65 1966# 1967-80	06-06-80	20.12	12,500
*05380970	CAWLEY CREEK NEAR NEILLSVILLE, WI	LAT 44°36'42", LONG 90°34'31", IN SW 1/4 SEC.25, T.25 N., R.2 W., CLARK COUNTY, AT BRIDGE ON STATE HIGHWAY 73, 3.7 MI (6.0 KM) NORTH OF NEILLSVILLE.	38.6	1961-80	09-12-80	19.90	7,000

ANNUAL MAXIMUM DISCHARGE AT CREST-STAGE PARTIAL-RECORD STATIONS DURING WATER YEAR 1980

ANNUAL MAXIMUM DISCHARGE AT CREST-STAGE PARTIAL-RECORD STATIONS DURING WATER YEAR 1960						ANNUAL MAXIMUM	
STATION NO.	STATION NAME	LOCATION	DRAINAGE AREA (MI ²)	PERIOD OF RECORD	DATE	GAGE HEIGHT (FT)	DIS-CHARGE (FT ³ /S)
BLACK RIVER BASIN--CONTINUED							
*05382200	FRENCH CREEK NEAR ETTRICK, WI	LAT 44°11'04", LONG 91°18'49", IN NE 1/4 SEC.27, T.20 N., R.8 W., TREMPLEAU COUNTY, AT BRIDGE ON COUNTY TRUNK HIGHWAYS D AND T, 2.5 MI (4.0 KM) WEST OF ETTRICK.	14.3	1960-80	09-21-80	9.94	184
LA CROSSE RIVER BASIN							
05382300	BEAVER CREEK TRIBUTARY NEAR SPARTA, WI	LAT 43°57'58", LONG 90°49'33", IN NW 1/4 SEC.11, T.17 N., R.4 W., MONROE COUNTY, AT BOX CULVERT ON STATE HIGHWAYS 27 AND 71, 1.9 MI (3.1 KM) NORTH OF SPARTA.	1.72	1959-80	09-12-80	12.83	200
*05382500	LITTLE LA CROSSE RIVER NEAR LEON, WI	LAT 43°53'45", LONG 90°50'25", IN NE 1/4 SEC.3, T.16 N., R.4 W., MONROE COUNTY, 4.0 MI (6.4 KM) UPSTREAM FROM MOUTH, 1.5 MI (2.4 KM) NORTHWEST OF LEON.	77.1	1934-61# 1962-80	08-08-80	8.13	1,770
MORMON CREEK BASIN							
*05386300	MORMON CREEK NEAR LA CROSSE, WI	LAT 43°46'00", LONG 91°08'27", IN NE 1/4 SEC.19, T.15 N., R.6 W., LA CROSSE COUNTY, AT BRIDGE ON COUNTRY ROAD, 6.0 MI (9.7 KM) SOUTHEAST OF LA CROSSE.	25.5	1961-80	09-08-80	16.05	3,120
BAD AXE RIVER BASIN							
*05387100	NORTH FORK BAD AXE RIVER NEAR GENOA, WI	LAT 43°33'10", LONG 91°08'58", IN SW 1/4 SEC.36, T.13 N., R.7 W., VERNON COUNTY, AT BRIDGE ON STATE HIGHWAY 56, 4.1 MI (6.6 KM) SOUTHEAST OF GENOA.	80.9	1959-65 1966# 1967-80	09-07-80	15.69	1,750
DU CHARME CREEK BASIN							
05388460	DU CHARME CREEK AT EASTMAN, WI	LAT 43°10'32", LONG 91°01'53", IN NE 1/4 SEC.13, T.8 N., R.6 W., CRAWFORD COUNTY, AT CULVERT ON COUNTY TRUNK HIGHWAY D, AT EASTMAN.	.30	1961-80	03-15-80	10.21	18
WISCONSIN RIVER BASIN							
*05390140	MUSKRAT CREEK AT CONOVER, WI	LAT 46°03'27", LONG 89°15'24", IN SW 1/4 SEC.4, T.41 N., R.10 E., VILAS COUNTY, AT CORRUGATED CULVERT ON U.S. HIGHWAY 45, 0.1 MI (0.2 KM) NORTH OF CONOVER.	10.2	1970-80	04-09-80	11.87	63
05390240	FOURMILE CREEK NEAR THREE LAKES, WI	LAT 45°50'17", LONG 89°04'32", IN NE 1/4 SEC.26, T.39 N., R.11 E., ONEIDA COUNTY, AT 2-BARREL CORRUGATED CULVERT ON FOURMILE CREEK ROAD, 5.5 MI (8.9 KM) NORTHEAST OF THREE LAKES.	10.3	1970-80	09-21-80	12.38	101
05391260	GUDEGAST CREEK NEAR STARKS, WI	LAT 45°41'41", LONG 89°15'42", IN NW 1/4 SEC.16, T.37 N., R.10 E., ONEIDA COUNTY, AT CORRUGATED CULVERT ON COUNTRY ROAD, 3.0 MI (4.8 KM) NORTHWEST OF STARKS.	14.0	1970-80	04-09-80	11.81	61
05391950	SQUAW CREEK NEAR HARRISON, WI	LAT 45°32'47", LONG 89°29'16", IN SW 1/4 SEC.3, T.35 N., R.8 E., LINCOLN COUNTY, AT CULVERT ON COUNTY TRUNK HIGHWAY A, 5.0 MI (8.0 KM) NORTHEAST OF HARRISON.	3.23	1970-80	09-21-80	10.78	20
*05392150	MISHONAGON CREEK NEAR WOODRUFF, WI	LAT 45°54'41", LONG 89°45'30", IN NE 1/4 SEC.32, T.40 N., R.6 E., VILAS COUNTY, AT TWIN CULVERTS ON STATE HIGHWAY 47, 3.0 MI (4.8 KM) NORTHWEST OF WOODRUFF.	17.6	1958-80	08-27-80	10.45	76

ANNUAL MAXIMUM DISCHARGE AT CREST-STAGE PARTIAL-RECORD STATIONS DURING WATER YEAR 1980

ANNUAL MAXIMUM DISCHARGE AT CREST-STAGE PARTIAL-RECORD STATIONS DURING WATER YEAR 1980						ANNUAL MAXIMUM	
STATION NO.	STATION NAME	LOCATION	DRAINAGE AREA (MI ²)	PERIOD OF RECORD	DATE	GAGE HEIGHT (FT)	DIS-CHARGE (FT ³ /S)
WISCONSIN RIVER BASIN--CONTINUED							
*05392350	BEARSKIN CREEK NEAR HARSHAW, WI	LAT 45°38'43", LONG 89°41'12", IN SW 1/4 SEC.36, T.37 N., R.6 E., ONEIDA COUNTY, AT CULVERT ON COUNTY TRUNK HIGHWAY K, 2.1 MI (3.4 KM) SOUTHWEST OF HARSHAW.	31.1	1958-65 1966# 1967-80	10-22-79	9.71	83
05393620	SKANAWAN CREEK NEAR TOMAHAWK, WI	LAT 45°25'39", LONG 89°41'35", IN SW 1/4 SEC.13, T.34 N., R.6 E., LINCOLN COUNTY, AT CULVERT ON STATE HIGHWAY 107, 3.5 MI (5.6 KM) SOUTHEAST OF TOMAHAWK.	6.69	1970-80	10-22-79	10.94	64
05393640	LITTLE PINE CREEK NEAR IRMA, WI	LAT 45°23'37", LONG 89°40'20", IN NW 1/4 SEC.31, T.34 N., R.7 E., LINCOLN COUNTY, AT BOX CULVERT ON U.S. HIGHWAY 51, 3.0 MI (4.8 KM) NORTH OF IRMA.	22.0	1970-80	04-09-80	12.66	108
*05394000	NEW WOOD RIVER NEAR MERRILL, WI	LAT 45°15'30", LONG 89°50'40", IN E 1/2 SEC.15, T.32 N., R.5 E., LINCOLN COUNTY, AT BRIDGE ON COUNTY TRUNK HIGHWAY E, 9.5 MI (15.3 KM) NORTHWEST OF MERRILL.	82.2	1953-61# 1962-80	09-21-80	8.20	3,500
*05394200	DEVIL CREEK NEAR MERRILL, WI	LAT 45°08'56", LONG 89°47'13", IN N 1/2 SEC.30, T.31 N., R.6 E., LINCOLN COUNTY, AT CULVERT ON COUNTY TRUNK HIGHWAY F, 5.8 MI (9.3 KM) SOUTHWEST OF MERRILL.	9.58	1961-80	09-21-80	15.11	765
05395020	LLOYD CREEK NEAR DOERING, WI	LAT 45°13'57", LONG 89°22'04", IN SE 1/4 SEC.21, T.32 N., R.9 E., LANGLADE COUNTY, AT BRIDGE ON COUNTY TRUNK HIGHWAY C, 4.5 MI (7.2 KM) EAST OF DOERING.	7.80	1970-80	09-21-80	13.17	302
05395100	TRAPPE RIVER TRIBUTARY NEAR MERRILL, WI	LAT 45°08'07", LONG 89°30'08", IN SW 1/4 SEC.28, T.31 N., R.8 E., LINCOLN COUNTY, AT CULVERT ON COUNTY TRUNK HIGHWAY P, 9.5 MI (15.3 KM) SOUTHEAST OF MERRILL.	1.58	1959-80	06-06-80	13.58	185
05396100	PET BROOK TRIBUTARY NEAR EDGAR, WI	LAT 44°56'40", LONG 89°57'05", IN SE 1/4 SEC.31, T.29 N., R.5 E., MARATHON COUNTY, AT CULVERT ON STATE HIGHWAY 29, 1.5 MI (2.4 KM) NORTHEAST OF EDGAR.	6.86	1962-80	06-06-80	20.40	2,280
05397600	BIG SANDY CREEK NEAR WAUSAU, WI	LAT 45°01'55", LONG 89°27'00", IN SE 1/4 SEC.31, T.30 N., R.9 E., MARATHON COUNTY, AT BRIDGE ON STATE HIGHWAY 52, 10.0 MI (16.1 KM) NORTHEAST OF WAUSAU.	11.5	1959-80	09-21-80	12.33	455
05399200	RANDALL CREEK TRIBUTARY NEAR ABBOTSFORD, WI	LAT 44°56'50", LONG 90°11'45", ON SOUTH BOUNDARY OF SEC.36, T.29 N., R.2 E., MARATHON COUNTY, AT CONCRETE CULVERT ON STATE HIGHWAY 29, 5.8 MI (9.3 KM) EAST OF ABBOTSFORD.	.56	1959-80	06-05-80	14.29	385
05400025	JOHNSON CREEK NEAR KNOWLTON, WI	LAT 44°44'19", LONG 89°36'39", IN SE 1/4 NE 1/4 SEC.13, T.26 N., R.7 E., MARATHON COUNTY, AT BRIDGE ON COUNTY TRUNK HIGHWAY X, 2.7 MI (4.3 KM) EAST OF KNOWLTON.	25.1	1973-80	06-06-80	21.78	13,000
05401800	YELLOW RIVER TRIBUTARY NEAR PITTSVILLE, WI	LAT 44°28'58", LONG 90°07'05", ON COMMON BOUNDARY OF SECS.11 AND 14, T.23 N., R.3 E., WOOD COUNTY, AT BRIDGE ON COUNTY TRUNK HIGHWAY C, 2.0 MI (3.2 KM) NORTH OF PITTSVILLE.	7.23	1959-80	09-21-80	13.46	700

ANNUAL MAXIMUM DISCHARGE AT CREST-STAGE PARTIAL-RECORD STATIONS DURING WATER YEAR 1980

STATION NO.	STATION NAME	LOCATION	DRAINAGE AREA (MI ²)	PERIOD OF RECORD	DATE	ANNUAL MAXIMUM GAGE HEIGHT (FT)	DIS-CHARGE (FT ³ /S)
WISCONSIN RIVER BASIN--CONTINUED							
*05403520	WEBSTER CREEK AT NEW LISBON, WI	LAT 43°51'23", LONG 90°10'25", IN NE 1/4 SEC.19, T.16 N., R.3 E., JUNEAU COUNTY, AT BRIDGE ON STATE HIGHWAY 80, 1.2 MI (1.9 KM) SOUTH OF NEW LISBON.	11.8	1961-80	09-12-80	12.84	150
*05403550	ONEMILE CREEK NEAR MAUSTON, WI	LAT 43°45'50", LONG 90°04'45", IN SE 1/4 SEC.24, T.15 N., R.3 E., JUNEAU COUNTY, AT BRIDGE ON STATE HIGHWAY 58, 2.4 MI (3.9 KM) SOUTH OF MAUSTON.	30.2	1958-80	09-12-80	16.32	1,600
05403610	WISCONSIN RIVER TRIBUTARY AT WISCONSIN DELLS, WI	LAT 43°38'22", LONG 89°45'45", IN NE 1/4 SEC.3, T.13 N., R.6 E., COLUMBIA COUNTY, AT CULVERT ON STATE HIGHWAY 13, 0.8 MI (1.3 KM) NORTH OF WISCONSIN DELLS.	1.39	1962-80	09-22-80	10.45	17
05403630	HULBERT CREEK NEAR WISCONSIN DELLS, WI	LAT 43°37'37", LONG 89°48'36", IN SE 1/4 SW 1/4 SEC.5, T.13 N., R.5 E., SAUK COUNTY, 1.6 MI (2.6 KM) UPSTREAM FROM MOUTH, AND 2.0 MI (3.2 KM) WEST OF WISCONSIN DELLS.	11.2	1971-77# 1978-80	03-31-80	6.41	470
*05404200	NARROWS CREEK AT LOGANVILLE, WI	LAT 43°26'32", LONG 90°02'06", IN SE 1/4 SEC.8, T.11 N., R.4 E., SAUK COUNTY, AT BRIDGE ON STATE HIGHWAYS 23 AND 154, 0.2 MI (0.3 KM) NORTH OF LOGANVILLE.	40.1	1958-65 1966# 1967-80	03-16-80	14.65	2,100
*05405600	ROWAN CREEK AT POYNETTE, WI	LAT 43°23'13", LONG 89°23'25", IN S 1/2 SEC.35, T.11 N., R.9 E., COLUMBIA COUNTY, AT BRIDGE ON U.S. HIGHWAY 51, AT POYNETTE.	10.4	1961-80	09-22-80	13.23	370
05406800	ROCKY BRANCH NEAR RICHLAND CENTER, WI	LAT 43°18'52", LONG 90°23'22", IN E 1/2 SEC.29, T.10 N., R.1 E., RICHLAND COUNTY, AT CULVERT ON STATE HIGHWAY 80, 1.5 MI (2.4 KM) SOUTH OF RICHLAND CENTER.	1.68	1960-80	04-09-80	11.47	80
*05407100	RICHLAND CREEK NEAR PLUGTOWN, WI	LAT 43°11'12", LONG 90°44'23", IN NW 1/4 SEC.9, T.8 N., R.3 W., CRAWFORD COUNTY, AT BRIDGE ON U.S. HIGHWAY 61, 2.0 MI (3.2 KM) SOUTH OF PLUGTOWN.	19.2	1958-80	09-22-80	16.35	1,090
*05407200	CROOKED CREEK NEAR BOSCOBEL, WI	LAT 43°06'27", LONG 90°42'18", IN SE 1/4 SEC.2, T.7 N., R.3 W., GRANT COUNTY, AT BRIDGE ON U.S. HIGHWAY 61, 1.5 MI (2.6 KM) SOUTH OF BOSCOBEL.	12.9	1959-80	09-22-80	13.45	790
*05407400	MORRIS CREEK TRIBUTARY NEAR NORWALK, WI	LAT 43°51'10", LONG 90°37'32", IN NW 1/4 SEC.21, T.16 N., R.2 W., MONROE COUNTY, AT BRIDGE ON COUNTY TRUNK HIGHWAY T, 2.0 MI (3.2 KM) NORTH OF NORWALK.	4.59	1960-80	08-08-80	10.65	170
GRANT RIVER BASIN							
*05413400	PIGEON CREEK NEAR LANCASTER, WI	LAT 42°49'00", LONG 90°43'20", IN SW 1/4 SEC.15, T.4 N., R.3 W., GRANT COUNTY, AT CULVERT ON COUNTRY ROAD, 2.0 MI (3.2 KM) SOUTH OF LANCASTER.	6.93	1960-65 1966# 1967-80	03-16-80	11.34	220
PLATTE RIVER BASIN							
*05414200	BEAR BRANCH NEAR PLATTEVILLE, WI	LAT 42°45'46", LONG 90°30'06", IN NW 1/4 SEC.4, T.3 N., R.1 W., GRANT COUNTY, AT BOX CULVERT ON STATE HIGHWAY 81, 2.3 MI (3.7 KM) NORTHWEST OF PLATTEVILLE.	2.80	1958-80	09-08-80	14.93	530

ANNUAL MAXIMUM DISCHARGE AT CREST-STAGE PARTIAL-RECORD STATIONS DURING WATER YEAR 1980

STATION NO.	STATION NAME	LOCATION	DRAINAGE AREA (MI ²)	PERIOD OF RECORD	DATE	ANNUAL MAXIMUM GAGE HEIGHT (FT)	DIS-CHARGE (FT ³ /S)
GALENA RIVER BASIN							
*05414900	PATS CREEK NEAR ELK GROVE, WI	LAT 42°40'03", LONG 90°22'40", IN SW 1/4 SEC. 22, T. 2 N., R. 1 E., LAFAYETTE COUNTY, AT BRIDGE ON STATE HIGHWAY 81, 7.0 MI (11.3 KM) SOUTHEAST OF PLATTEVILLE.	8.49	1960-80	02-07-80	12.64	410
ROCK RIVER BASIN							
*05423300	SOUTH BRANCH ROCK RIVER TRIBUTARY NEAR WAUPUN, WI	LAT 43°39'46", LONG 88°48'55", IN S 1/2 SEC. 22, T. 14 N., R. 14 E., FOND DU LAC COUNTY, AT CONCRETE CULVERT ON COUNTRY ROAD, 4.5 MI (7.2 KM) NORTHWEST OF WAUPUN.	12.6	1959-80	04-09-80	10.60	60
*05423800	EAST BRANCH ROCK RIVER TRIBUTARY NEAR SLINGER, WI	LAT 43°23'06", LONG 88°18'29", IN S 1/2 SEC. 26, T. 11 N., R. 18 E., WASHINGTON COUNTY, AT CULVERT ON U.S. HIGHWAY 41, 4.0 MI (6.4 KM) NORTHWEST OF SLINGER.	4.42	1960-80	04-02-80	11.51	126
05424300	ROCK RIVER TRIBUTARY NEAR WATERTOWN, WI	LAT 43°09'51", LONG 88°38'44", IN NE 1/4 SEC. 18, T. 8 N., R. 16 E., JEFFERSON COUNTY, AT CONCRETE CULVERT ON OLD U.S. HIGHWAY 16, 5.0 MI (8.0 KM) EAST OF WATERTOWN.	4.58	1959-80	09-22-80	13.72	225
*05425700	ROBBINS CREEK AT COLUMBUS, WI	LAT 43°20'48", LONG 89°01'55", IN SE 1/4 SEC. 11, T. 10 N., R. 12 E., COLUMBIA COUNTY, AT CULVERT ON U.S. HIGHWAY 16, AT COLUMBUS.	8.01	1960-80	09-22-80	13.41	265
05425827	MAUNESHA RIVER NEAR SUN PRAIRIE, WI	LAT 43°13'37", LONG 89°09'33", IN SE 1/4 SEC. 23, T. 9 N., R. 11 E., DANE COUNTY, AT BRIDGE ON TOWN ROAD, 4.2 MI (6.8 KM) NORTHEAST OF SUN PRAIRIE.	26.0	1973-80	09-22-80	12.58	525
05426100	SCUPPERNONG CREEK NEAR WALES, WI	LAT 43°00'58", LONG 88°24'29", IN NE 1/4 SEC. 6, T. 6 N., R. 18 E., WAUKESHA COUNTY, AT CULVERT ON U.S. HIGHWAY 18, 1.8 MI (2.9 KM) NORTHWEST OF WALES.	8.39	1962-80	04-08-80	10.30	100
*05427200	ALLEN CREEK NEAR FORT ATKINSON, WI	LAT 42°53'54", LONG 88°51'35", IN NE 1/4 SEC. 17, T. 5 N., R. 14 E., JEFFERSON COUNTY, AT BOX CULVERT ON STATE HIGHWAY 26, 2.5 MI (4.0 KM) SOUTHWEST OF FORT ATKINSON.	10.2	1958-80	04-05-80	10.53	110
*05431400	LITTLE TURTLE CREEK AT ALLENS GROVE, WI	LAT 42°34'46", LONG 88°45'33", IN NE 1/4 SEC. 6, T. 1 N., R. 15 E., WALWORTH COUNTY, AT BRIDGE ON COUNTRY ROAD, 0.2 MI (0.3 KM) SOUTH OF ALLENS GROVE.	41.8	1962-80	1980	B	<200
*05432300	ROCK BRANCH NEAR MINERAL POINT, WI	LAT 42°50'02", LONG 90°09'15", IN SE 1/4 SEC. 8, T. 4 N., R. 3 E., IOWA COUNTY, AT BOX CULVERT ON STATE HIGHWAY 23, 2.5 MI (4.0 KM) SOUTH OF MINERAL POINT.	4.83	1959-80	02-06-80	11.40	160
*05433500	YELLOWSTONE RIVER NEAR BLANCHARDVILLE, WI	LAT 42°46'55", LONG 89°59'50", IN NE 1/4 SEC. 34, T. 4 N., R. 4 E., LAFAYETTE COUNTY, 0.6 MI (1.0 KM) UPSTREAM FROM BRIDGE ON COUNTY TRUNK HIGHWAY F, 7.0 MI (11.3 KM) WEST-SOUTHWEST OF BLANCHARDVILLE.	28.5	1954-65# 1966-80	09-08-80	9.80	1,600
05434200	SKINNER CREEK TRIBUTARY NEAR MONROE, WI	LAT 42°38'25", LONG 89°37'52", IN S 1/2 SEC. 14, T. 2 N., R. 7 E., GREEN COUNTY, AT CULVERT ON STATE HIGHWAY 69, 2.4 MI (3.9 KM) NORTH OF MONROE.	.48	1959-80	04-03-80	11.01	26
05435900	SUGAR RIVER TRIBUTARY NEAR PINE BLUFF, WI	LAT 43°02'48", LONG 89°38'42", IN SE 1/4 SEC. 27, T. 7 N., R. 7 E., DANE COUNTY, AT CULVERT ON COUNTY TRUNK HIGHWAY J, 1.1 MI (1.8 KM) SOUTHEAST OF PINE BLUFF.	7.42	1961-80	04-09-80	13.38	235

ANNUAL MAXIMUM DISCHARGE AT CREST-STAGE PARTIAL-RECORD STATIONS DURING WATER YEAR 1980

ANNUAL MAXIMUM DISCHARGE AT CREST-STAGE PARTIAL-RECORD STATIONS DURING WATER YEAR 1960					ANNUAL MAXIMUM		
STATION NO.	STATION	LOCATION	DRAINAGE AREA (MI ²)	PERIOD OF RECORD	DATE	GAGE HEIGHT (FT)	DIS-CHARGE (FT ³ /S)
ROCK RIVER BASIN--CONTINUED							
*05436200	GILL CREEK NEAR BROOKLYN, WI	LAT 42°49'38", LONG 89°26'43", IN NW 1/4 SEC.16, T.4 N., R.9 E., GREEN COUNTY, AT CULVERT ON STATE HIGHWAY 92, 4.3 MI (6.9 KM) WEST OF BROOKLYN.	3.33	1961-80	04-08-80	12.70	78
*05437200	EAST FORK RACCOON CREEK TRIBUTARY NEAR BELOIT, WI	LAT 42°30'44", LONG 89°06'40", ON COMMON BOUNDARY OF SECS.30 AND 31, T.1 N., R.12 E., ROCK COUNTY, AT CULVERT ON STATE HIGHWAY 81, 2.9 MI (4.7 KM) WEST OF BELOIT.	4.67	1958-80	06-15-80	11.60	85
ILLINOIS RIVER BASIN							
05544300	MUKWONAGO RIVER TRIBUTARY NEAR MUKWONAGO, WI	LAT 42°50'58", LONG 88°19'02", IN S 1/2 SEC.36, T.5 N., R.18 E., WAUKESHA COUNTY, AT CULVERT ON STATE HIGHWAY 83, 1.5 MI (2.4 KM) SOUTHEAST OF MUKWONAGO.	1.32	1960-71 1973-80	06-07-80	11.46	58
05545100	SUGAR CREEK AT ELKHORN, WI	LAT 42°41'05", LONG 88°30'50", IN SW 1/4 SEC.29, T.3 N., R.17 E., WALWORTH COUNTY, AT CULVERT ON STATE HIGHWAY 11, 2.0 MI (3.2 KM) NORTHEAST OF ELKHORN.	6.68	1962-80	06-06-80	11.74	92
05545200	WHITE RIVER TRIBUTARY NEAR BURLINGTON, WI	LAT 42°41'03", LONG 88°21'37", ON COMMON BOUNDARY OF SECS.27 AND 34, T.3 N., R.18 E., WALWORTH COUNTY, AT BOX CULVERT ON STATE HIGHWAY 11, 4.5 MI (7.2 KM) WEST OF BURLINGTON.	2.42	1958-80	06-06-80	11.51	87
*05548150	NORTH BRANCH NIPPERSINK CREEK TRIBUTARY NEAR GENOA CITY, WI	LAT 42°30'15", LONG 88°23'01", IN E 1/2 SEC.32, T.1 N., R.18 E., WALWORTH COUNTY, AT BRIDGE ON COUNTY TRUNK HIGHWAY B, 3.0 MI (4.8 KM) WEST OF GENOA CITY.	13.8	1962-80	09-12-80	11.01	135

* Also a low-flow partial-record station.

Operated as a continuous-record gaging station.

B Peak did not reach bottom of gage.

DISCHARGE AT PARTIAL-RECORD STATIONS AND MISCELLANEOUS SITES

MEASUREMENTS AT MISCELLANEOUS SITES

Measurements of streamflow at points other than gaging stations or partial-record stations are given in the following table.

Discharge measurements made at miscellaneous sites during water year 1980

Stream	Tributary to	Location	Drainage Area (mi ²)	Measured Previously (Water Years)	Date	Discharge (ft ³ /s)
STREAMS TRIBUTARY TO LAKE MICHIGAN						
Fox River	Lake Michigan	Section 22, T.20 N., R.17 E., Winnebago County, on Highway 114 bridge in Neenah-Menasha.	--	--	05-08-80 06-11-80 06-17-80 06-23-80 06-25-80	2,480 8,500 6,570 5,850 4,510
ST. CROIX RIVER BASIN						
St. Croix River	Mississippi River	Lat 46°11'32", long 92°04'16", in NE 1/4 SE 1/4 sec.23, T.43 N., R.14 W., Douglas County, St. Croix National Scenic Riverway, at bridge on County Trunk Highway T, 4.3 mi (6.9 km) southeast of Dairyland.	a440	1976-78	04-09-80 07-08-80	757 148
Namekagon River	St. Croix River	Lat 46°03'06", long 91°25'53", in NE 1/4 NE 1/4 sec.12, T.41 N., R.9 W., Sawyer County, St. Croix National Scenic Riverway, at bridge on town road, 3.7 mi (6.0 km) northeast of Hayward.	a192	1975-78	04-08-80 07-07-80	308 138
Yellow River	St. Croix River	Lat 46°00'44", long 92°21'27", in NW 1/4 NW 1/4 sec.27, T.41 N., R.16 W., Burnett County, St. Croix National Scenic Riverway, at bridge on State Highway 35, 0.7 mi (1.1 km) northeast of Danbury.	--	1976-78	04-10-80 07-09-80	326 249
Clam River	St. Croix River	Lat 45°52'50", long 92°29'15", in SW 1/4 NW 1/4 sec.9, T.39 N., R.15 W., Burnett County, St. Croix National Scenic Riverway, at ice-house bridge, 2.5 mi (4.0 km) downstream from Black Brook, and 6.0 mi (9.7 km) west of Webster.	a364	1968-69 1976-78	04-10-80 07-09-80	362 139
Kettle River	St. Croix River	Lat 45°54'13", long 92°43'47", in SW 1/4 SE 1/4 sec.33, T.40 N., R.19 W., Pine County, MN, St. Croix National Scenic Riverway, 200 ft (61 m) west of town road, 8.0 mi (12.9 km) south of Cloverdale, MN, and 9.0 mi (14.5 km) northwest of Grantsburg.	--	--	04-10-80 07-09-80	2,000 118
CHIPPEWA RIVER BASIN						
Fall Creek	Eau Claire River	Lat 44°46'05", long 91°16'21", in NW 1/4 NE 1/4 sec.6, T.26 N., R.7 W., Eau Claire County, at sewage treatment plant, 0.3 mi (0.483 km) north of U.S. Highway 12, at Fall Creek.	a15.8	1972-74	05-13-80	4.54
Eau Claire River	Chippewa River	Lat 44°48'35", long 91°16'50", in SE 1/4 NW 1/4 sec.19, T.27 N., R.7 W., Eau Claire County, 500 ft (152 m) east of County Highway K, 3.2 mi (8.4 km) north of Fall Creek.	758	1943-55# 1958-79	10-12-79 11-14-79 01-15-80	184 544 425.2
BUFFALO RIVER BASIN						
Buffalo River	Mississippi River	Lat 44°33'16", long 91°23'36", in SW 1/4 SE 1/4 sec.18, T.24 N., R.8 W., Trempealeau County, at foot bridge in city park, at Strum.	a124	1972-73 1976-77	05-13-80	86.3
WISCONSIN RIVER BASIN						
Bass Lake Inlet	Eau Claire River	Lat 89°11'45", long 45°22'00", in NW 1/4 sec.2, T.33 N., R.10 E., Langlade County, 4.8 mi (7.72 km) south of Elcho.	--	--	08-18-80	0.037
Bass Lake Outlet	Eau Claire River	Lat 89°12'21", long 45°21'20", in SE 1/4 sec.11, T.33 N., R.10 E., Langlade County, 5.5 mi (8.85 km) south of Elcho.	--	--	08-18-80	1.356

a Approximately.

Operated as a continuous-record gaging station.

WATER-QUALITY PARTIAL-RECORD STATIONS

WATER-QUALITY PARTIAL-RECORD STATIONS ARE PARTICULAR SITES WHERE CHEMICAL-QUALITY, BIOLOGICAL, PHYSICAL AND/OR SEDIMENT DATA ARE COLLECTED SYSTEMATICALLY OVER A PERIOD OF YEARS FOR USE IN HYDROLOGIC ANALYSES.

MISCELLANEOUS WATER-QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

STREAMS TRIBUTARY TO LAKE SUPERIOR

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	TEMPER- ATURE, WATER (DEG C)	DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	TEMPER- ATURE, WATER (DEG C)
04025500 - BOIS BRULE RIVER AT BRULE, WI (LAT 46 32 16 LONG 091 35 43)									
OCT , 1979					MAY , 1980				
23... 1400	226	110	6.0		13... 1800	150	108	12.5	
DEC 05... 1200	144	125	2.0		JUN 11... 0840	129	114	13.5	
FEB , 1980					JUL 08... 0830	115	118	17.5	
12... 0925	138	127	.5		SEP 10... 1150	181	108	14.0	
MAR 19... 0930	126	132	3.0						

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	TEMPER- ATURE, WATER (DEG C)	PHOS- PHORUS, TOTAL (MG/L AS P)	SEDI- MENT, SUS- PENDE (MG/L)	SEDI- MENT DIS- CHARGE, SUS- PENDE (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .0625 MM
04026190 - SAND RIVER NEAR RED CLIFF, WI (LAT 46 54 00 LONG 090 57 20)								
JAN , 1980								
10... 1230	4.8	200	.5	--	--	--	--	--
SEP 11... 1220	7.7	183	12.0	.070	36	.75	91	

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	TEMPER- ATURE, WATER (DEG C)	DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	TEMPER- ATURE, WATER (DEG C)
04027500 - WHITE RIVER NEAR ASHLAND, WI (LAT 46 29 50 LONG 090 54 15)									
OCT , 1979					APR , 1980				
25... 0830	362	140	4.0		09... 1420	489	100	1.0	
NOV 06... 1320	171	--	3.0		MAY 15... 0800	298	172	12.0	
DEC 05... 0955	160	180	1.0		JUN 12... 1510	181	166	18.0	
JAN , 1980					JUL 23... 0940	313	156	19.5	
10... 1040	165	85	.5		SEP 11... 1820	183	163	16.0	
FEB 11... 1630	162	173	.0						
MAR 18... 1515	174	192	.5						

STREAMS TRIBUTARY TO LAKE MICHIGAN

04066000 - MENOMINEE RIVER NEAR PEMBINE, WI (LAT 45 35 56 LONG 087 46 32)									
NOV , 1979					AUG , 1980				
15... 1200	3030	210	2.0		28... 1300	5430	185	21.0	
JUL , 1980									
15... 1210	1300	205	26.0						
04071000 - OCONTO RIVER NEAR GILLETT, WI (LAT 44 51 53 LONG 088 18 00)									
NOV , 1979					APR , 1980				
14... 1015	599	180	1.0		10... 1345	2200	185	3.0	
DEC 18... 1335	416	310	.0		MAY 27... 1800	381	250	21.0	
JAN , 1980					JUL 10... 1530	359	235	28.0	
30... 1315	394	123	.5		AUG 26... 1755	415	255	20.5	
MAR 18... 1230	473	310	.5						
04071858 - PENSACKEE RIVER NEAR PENSACKEE, WI (LAT 44 49 08 LONG 087 57 12)									
NOV , 1979					MAY , 1980				
14... 1605	45	640	2.0		28... 1015	16	510	19.0	
DEC 18... 1520	22	750	.0		JUL 11... 1030	11	420	27.5	
JAN , 1980					AUG 27... 1145	33	510	19.5	
31... 1200	20	--	.0						
APR 09... 1625	2760	285	4.0						
29... 1855	84	480	13.0						

MISCELLANEOUS WATER-QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

STREAMS TRIBUTARY TO LAKE MICHIGAN--CONTINUED

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	TEMPER- ATURE, WATER (DEG C)	DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	TEMPER- ATURE, WATER (DEG C)
04073500 - FOX RIVER AT BERLIN, WI (LAT 43 57 14 LONG 088 57 08)									
FEB , 1980					JUN , 1980				
20...	1205	696	450	.5	03...	1120	1020	365	20.0
APR									
11...	1245	1980	235	6.5					
04078500 - EMBARRASS RIVER NEAR EMBARRASS, WI (LAT 44 43 29 LONG 088 44 10)									
NOV , 1979					APR , 1980				
13...	1715	262	300	1.0	28...	1740	388	300	14.0
FEB , 1980					MAY				
14...	1200	131	480	.5	27...	1505	177	355	23.0
MAR					JUL				
17...	1720	229	410	1.0	10...	1135	158	--	24.5
APR					AUG				
10...	1600	2620	130	3.5	26...	1440	292	300	21.0
17...	1240	433	240	8.5					
04079000 - WOLF RIVER AT NEW LONDON, WI (LAT 44 23 32 LONG 088 44 25)									
NOV , 1979					JUN , 1980				
13...	1515	2100	200	2.0	19...	1745	3060	320	19.0
JAN , 1980					JUL				
22...	1700	2320	370	.0	30...	1650	944	320	25.0
MAR					AUG				
03...	1505	939	290	.0	12...	1415	1980	360	24.0
APR					SEP				
16...	1710	6160	215	6.0	05...	1100	2360	330	20.0
MAY					22...	1550	3000	330	17.0
08...	1545	1980	320	9.0					
04079602 - LITTLE WOLF RIVER NEAR GALLOWAY, WI (LAT 44 41 27 LONG 089 15 51)									
OCT , 1979									
01...	1215	9.6	420	12.0					
04085200 - KEWAUNEE RIVER NEAR KEWAUNEE, WI (LAT 44 27 30 LONG 087 33 23)									
OCT , 1979					MAY , 1980				
24...	1250	38	450	6.0	13...	1215	37	--	12.5
NOV					JUN				
28...	1250	74	650	1.0	24...	1210	20	570	24.0
JAN , 1980					AUG				
09...	1115	11	--	.0	05...	1205	13	670	11.5
FEB					SEP				
20...	1330	15	620	.5	17...	1220	39	660	14.5
04086150 - MILWAUKEE RIVER AT KEWASKUM, WI (LAT 43 31 02 LONG 088 13 24)									
OCT , 1979					JUN , 1980				
29...	1100	85	695	6.5	30...	1025	27	600	22.5
NOV					AUG				
26...	1200	123	625	2.0	11...	1450	223	465	8.0
DEC					SEP				
20...	1030	34	700	.5	10...	1030	109	710	10.0
JAN , 1980					22...	1305	698	420	16.5
14...	1220	40	600	.0					
APR									
23...	1115	158	670	13.5					
04086200 - EAST BRANCH MILWAUKEE RIVER NEAR NEW FANE, WI (LAT 43 33 01 LONG 088 11 18)									
OCT , 1979					APR , 1980				
29...	1300	30	475	9.0	23...	1247	59	500	15.0
NOV					MAY				
26...	1250	42	455	3.0	14...	1440	35	430	11.0
DEC					JUN				
20...	1215	19	490	.5	30...	1220	12	550	14.5
JAN , 1980					SEP				
14...	1335	20	525	.0	10...	1155	29	600	9.5
FEB					22...	1110	69	390	16.0
13...	1220	14	515	.0					
04086340 - NORTH BRANCH MILWAUKEE RIVER NEAR FILLMORE, WI (LAT 43 28 58 LONG 088 03 39)									
OCT , 1979					JUN , 1980				
22...	1500	65	635	16.0	19...	1225	52	810	5.5
DEC					30...	1415	33	740	19.0
03...	1040	96	730	.0	AUG				
JAN , 1980					12...	1140	221	800	8.0
14...	1510	51	--	.0	SEP				
APR					10...	1345	75	790	11.0
23...	1558	154	700	16.5					

WATER-QUALITY PARTIAL-RECORD STATIONS

MISCELLANEOUS WATER-QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

STREAMS TRIBUTARY TO LAKE MICHIGAN--CONTINUED

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	TEMPER- ATURE, WATER (DEG C)	DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	TEMPER- ATURE, WATER (DEG C)
04086360 - MILWAUKEE RIVER AT WAUBEKA, WI (LAT 43 28 22 LONG 087 59 23)									
OCT , 1979					JUL , 1980				
22...	1345	160	660	17.0	02...	1040	78	865	10.0
DEC					AUG				
03...	1300	241	700	.0	12...	1430	627	670	10.0
JAN , 1980					SEP				
15...	1400	146	780	.0	11...	1715	224	620	18.0
FEB									
21...	1245	122	620	.5					
04087030 - MENOMONEE RIVER AT MENOMONEE FALLS, WI (LAT 44 10 20 LONG 088 06 14)									
OCT , 1979					JUL , 1980				
23...	1036	9.1	775	11.0	21...	1052	4.4	1080	24.0
DEC					AUG				
03...	1310	7.6	1020	.0	11...	1043	49	830	19.5
MAY , 1980					SEP				
05...	1250	15	1080	16.0	03...	1036	7.7	940	21.0
JUN									
07...	1128	123	565	17.5					
19...	1010	7.2	1150	16.5					
04087050 - LITTLE MENOMONEE RIVER NEAR FREISTADT, WI (LAT 43 12 24 LONG 088 02 24)									
OCT , 1979					JAN , 1980				
23...	1238	.93	905	9.5	04...	1055	1.9	1135	.0
DEC									
03...	1115	.90	970	.5					
04087088 - UNDERWOOD CREEK AT WAUWATOSA, WI (LAT 43 03 17 LONG 088 02 46)									
OCT , 1979					JUL , 1980				
24...	1441	2.9	1170	13.0	29...	0907	19	400	21.5
DEC					SEP				
04...	1000	3.0	1300	.0	03...	1256	5.1	940	27.0
JUL , 1980									
17...	1150	4.1	1060	29.0					
04087119 - HONEY CREEK AT WAUWATOSA, WI (LAT 43 02 38 LONG 088 00 10)									
OCT , 1979					JUL , 1980				
24...	1008	2.5	795	8.5	29...	1021	9.5	330	22.0
DEC					AUG				
04...	1200	1.6	920	2.0	07...	1043	443	135	20.5
JAN , 1980					SEP				
03...	1428	1.6	4700	1.0	03...	1500	2.2	840	22.0
JUL									
21...	1358	3.0	955	21.5					
04087120 - MENOMONEE RIVER AT WAUWATOSA, WI (LAT 43 02 44 LONG 087 59 59)									
OCT , 1979					APR , 1980				
24...	1216	25	905	8.5	29...	1041	129	1000	8.5
DEC					JUN				
03...	1410	23	1340	.0	10...	1538	106	1090	17.0
JAN , 1980					JUL				
04...	1335	37	1700	.0	21...	1533	22	1210	24.5
FEB					AUG				
04...	1137	19	2370	.0	05...	1218	1330	285	21.5
26...	1353	87	1350	.0	07...	1118	1120	240	20.5
MAR					12...	1336	222	830	21.0
19...	0945	67	1230	1.5	SEP				
11...	1355	174	1170	8.0	04...	1030	28	1050	20.5
04087138 - MENOMONEE RIVER AT MILWAUKEE, WI (LAT 43 01 28 LONG 087 57 36)									
OCT , 1979					MAR , 1980				
25...	1010	32	980	9.5	19...	1152	74	1230	4.0
JAN , 1980					APR				
14...	1315	41	2370	2.5	29...	1250	136	975	10.0
FEB									
04...	1338	25	2410	3.0					
04087160 - KINNICKINNIC RIVER AT MILWAUKEE, WI (LAT 42 59 48 LONG 087 55 13)									
OCT , 1979					APR , 1980				
25...	1240	8.7	980	12.5	29...	1520	22	865	13.5
DEC					JUN				
06...	1020	7.3	630	6.0	10...	1235	16	1230	20.0
JAN , 1980					JUL				
14...	1122	11	1760	5.0	22...	1412	10	715	26.0
FEB					SEP				
04...	1536	8.3	3460	5.5	05...	1425	10	600	26.0
MAR									
19...	1424	14	1610	10.0					

WATER-QUALITY PARTIAL-RECORD STATIONS

MISCELLANEOUS WATER-QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

STREAMS TRIBUTARY TO LAKE MICHIGAN--CONTINUED

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	TEMPER- ATURE, WATER (DEG C)	DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	TEMPER- ATURE, WATER (DEG C)
04087204 - OAK CREEK AT SOUTH MILWAUKEE, WI (LAT 42 55 30 LONG 087 52 12)									
OCT , 1979					APR , 1980				
10...	1030	.82	1000	8.0	30...	1602	21	1390	14.0
NOV					JUN				
29...	1530	5.2	1170	1.5	10...	1015	33	1060	14.0
JAN , 1980					JUL				
11...	1024	42	1700	.0	25...	1212	1.8	930	23.0
17...	1038	70	1150	.0	SEP				
MAR					09...	1010	23	510	20.0
17...	1432	88	950	.0					

04087220 - ROOT RIVER NEAR FRANKLIN, WI (LAT 42 52 25 LONG 087 59 45)

OCT , 1979					APR , 1980				
10...	1245	3.4	950	8.0	30...	0932	38	1240	10.0
NOV					JUN				
27...	1008	40	850	3.5	18...	1028	13	1370	18.0
JAN , 1980					JUL				
10...	0948	8.4	1920	.0	24...	0955	5.6	1200	20.0
FEB					SEP				
08...	1104	8.2	1880	.0	05...	1202	7.9	1040	19.0
MAR									
25...	1008	23	1540	1.0					

04087233 - ROOT RIVER CANAL NEAR FRANKLIN, WI (LAT 42 48 55 LONG 087 59 40)

OCT , 1979					APR , 1980				
10...	1450	3.2	1020	10.0	30...	1147	41	1030	10.0
NOV					JUN				
27...	1204	25	990	4.0	18...	1225	22	1050	18.5
JAN , 1980					JUL				
10...	1404	9.3	1340	.0	24...	1300	4.1	1130	23.0
17...	1236	92	760	.0	SEP				
FEB					05...	0952	16	910	17.5
08...	1408	6.5	1410	.0					
MAR									
17...	1118	121	540	1.0					

04087240 - ROOT RIVER AT RACINE, WI (LAT 42 45 05 LONG 087 49 25)

OCT , 1979					JUN , 1980				
08...	1200	7.5	810	12.0	09...	1035	811	650	17.0
NOV					JUL				
29...	1350	56	1030	2.0	23...	1010	16	800	24.5
JAN , 1980					AUG				
15...	1020	59	1650	.0	06...	1111	240	860	24.5
MAR					SEP				
20...	1043	248	730	.0	08...	1028	32	880	20.5
MAY									
01...	1000	143	1130	11.5					

04087257 - PIKE RIVER NEAR RACINE, WI (LAT 42 30 49 LONG 087 51 30)

OCT , 1979					JUN , 1980				
08...	1315	3.4	370	11.5	09...	1242	38	920	14.5
JAN , 1980					JUL				
15...	1224	11	930	1.0	23...	1246	3.6	550	21.0
MAR					SEP				
20...	1230	31	780	6.0	08...	1225	9.2	710	18.5
MAY									
01...	1208	24	920	11.0					

CHIPPEWA RIVER BASIN

05356000 - CHIPPEWA RIVER AT BISHOPS BRIDGE NEAR WINTER, WI (LAT 45 50 57 LONG 091 04 44)

OCT , 1979					MAY , 1980				
25...	1240	157	120	6.5	15...	1900	148	73	18.5
DEC					JUN				
04...	1005	822	75	.5	13...	1500	152	75	18.5
JAN , 1980					JUL				
09...	1105	1290	85	1.0	22...	1100	145	88	22.0
MAR					SEP				
11...	1105	315	60	.5	12...	1400	1590	60	18.0
APR									
08...	1310	221	80	2.5					

WATER-QUALITY PARTIAL-RECORD STATIONS

MISCELLANEOUS WATER-QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

CHIPPEWA RIVER BASIN--CONTINUED

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	TEMPER- ATURE, WATER (DEG C)	DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	TEMPER- ATURE, WATER (DEG C)
05356500 - CHIPPEWA RIVER NEAR BRUCE, WI (LAT 45 27 08 LONG 091 15 39)									
NOV , 1979					MAY , 1980				
15...	1445	1080	130	1.0	15...	1315	444	100	18.0
JAN , 1980					JUN				
18...	1110	1620	85	.5	04...	0900	628	100	20.0
FEB					JUL				
22...	1240	1380	100	.0	21...	0910	518	106	21.0
APR					AUG				
17...	1450	1280	80	11.0	25...	1400	1060	125	21.5
05360500 - PLAMBEAU RIVER NEAR BRUCE, WI (LAT 45 22 21 LONG 091 12 34)									
NOV , 1979					JUN , 1980				
16...	1110	807	110	1.5	04...	1215	991	95	23.0
JAN , 1980					JUL				
18...	1030	900	110	1.0	17...	1030	561	125	28.5
30...	1300	982	135	.0	AUG				
FEB					25...	1100	842	110	24.5
22...	1030	960	135	1.0					
APR									
17...	1115	1850	85	7.0					
05362000 - JUMP RIVER AT SHELDON, WI (LAT 45 18 29 LONG 090 57 23)									
OCT , 1979					MAY , 1980				
03...	1245	66	180	14.5	15...	1010	210	115	12.5
NOV					JUN				
15...	1100	209	140	1.0	04...	1430	156	120	24.0
DEC					JUL				
18...	1500	110	100	.5	21...	1015	69	160	22.5
JAN , 1980					AUG				
08...	1100	67	200	.5	25...	1625	227	100	23.0
30...	1000	92	185	.0	SEP				
FEB					26...	1045	1430	70	11.0
19...	1100	69	200	.0					
APR									
04...	1000	2100	70	2.0					
05365500 - CHIPPEWA RIVER AT CHIPPEWA FALLS, WI (LAT 44 55 37 LONG 091 24 33)									
OCT , 1979					MAR , 1980				
05...	0830	243	170	12.0	11...	0935	3550	180	1.0
NOV					MAY				
14...	1000	686	140	3.0	01...	1200	8190	100	10.5
DEC					JUN				
14...	1235	6580	130	2.0	03...	1300	4310	110	19.5
JAN , 1980					JUL				
16...	1000	6700	160	2.0	21...	0900	302	135	23.5
FEB					AUG				
05...	1025	5660	145	1.0	26...	1545	6540	120	22.0
05368000 - HAY RIVER AT WHEELER, WI (LAT 45 02 52 LONG 091 54 39)									
OCT , 1979					APR , 1980				
04...	1325	240	--	13.0	30...	1040	305	330	13.0
NOV					MAY				
08...	1400	270	310	2.5	23...	1540	226	340	21.5
DEC					JUN				
14...	0920	200	355	1.0	03...	0930	506	210	16.0
JAN , 1980					06...	1030	1270	165	17.0
06...	1405	220	300	.5	07...	2000	2260	130	19.0
31...	1200	192	320	.0	17...	1335	233	310	22.0
MAR					AUG				
13...	1145	214	360	1.0	07...	1325	418	165	20.0
19...	1125	241	330	2.5	28...	1205	287	325	19.0
26...	1315	663	270	3.0					
05369000 - RED CEDAR RIVER AT MENOMONIE, WI (LAT 44 53 02 LONG 091 55 57)									
NOV , 1979					MAY , 1980				
09...	1425	2060	210	4.0	01...	0825	497	205	14.5
DEC					23...	1400	2470	220	18.5
14...	1015	1880	240	2.0	JUN				
JAN , 1980					03...	0655	1150	210	21.0
16...	1315	1960	240	1.0	06...	1500	5060	200	20.0
FEB					JUL				
07...	1245	459	245	1.0	21...	1230	637	180	27.0
MAR					23...	0930	520	180	27.0
13...	0922	2640	260	.5	AUG				
26...	1000	2500	190	1.0	28...	1015	1970	195	20.5

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TREMPEALEAU - BLACK RIVER BASIN

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	TEMPER- ATURE, WATER (DEG C)	DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	TEMPER- ATURE, WATER (DEG C)
05379500 - TREMPEALEAU RIVER AT DODGE, WI (LAT 44 07 55 LONG 091 33 14)									
OCT , 1979					JUN , 1980				
09... 0940	305	255	9.0		03... 2030	815	175	21.0	
NOV 14... 0900	449	290	1.5		JUL 16... 1010	272	260	25.0	
JAN , 1980					AUG 12... 1625	472	220	23.0	
16... 1500	380	270	.5		SEP 09... 1045	573	240	19.0	
FEB 06... 0940	260	295	.0		22... 1510	2850	175	15.5	
MAR 12... 0900	258	300	.0		24... 1210	3440	135	15.0	
21... 1200	3850	320	2.0						
MAY 06... 1845	359	250	18.5						

05381000 - BLACK RIVER AT NEILLSVILLE, WI (LAT 44 33 35 LONG 090 36 54)

OCT , 1979					APR , 1980				
04... 1440	92	180	12.5		11... 1205	5100	100	3.5	
NOV 14... 1455	294	190	.5		MAY 07... 1700	194	160	15.0	
DEC 19... 1235	95	180	.0		JUN 06... 1810	20300	180	18.0	
JAN , 1980					JUL 29... 1415	137	220	27.0	
24... 1440	153	--	.0		SEP 11... 1130	1520	120	18.0	
MAR 05... 1210	52	230	.0						

WISCONSIN RIVER BASIN

05391000 - WISCONSIN R AT RAINBOW LK NEAR LAKE TOMAHAWK, WI (LAT 45 49 58 LONG 089 32 51)

NOV , 1979					MAY , 1980				
15... 1505	733	60	2.0		05... 1300	385	55	16.0	
MAR , 1980					JUN 26... 1255	514	70	22.0	
13... 1355	769	95	1.5		JUL 24... 1135	554	--	22.5	
APR 08... 1330	300	75	4.0						
16... 1250	169	60	5.0						

05393500 - SPIRIT RIVER AT SPIRIT FALLS, WI (LAT 45 26 58 LONG 089 58 47)

NOV , 1979					MAR , 1980				
06... 1050	86	93	2.0		07... 1530	12	140	.0	
DEC 21... 1245	19	148	.0		APR 25... 1430	102	76	7.0	
28... 1305	20	155	.0		MAY 12... 1300	44	90	14.0	
JAN , 1980					JUN 30... 1200	36	98	20.0	
04... 1500	15	168	.0		JUL 22... 1205	13	125	22.0	
21... 1420	32	160	.5		SEP 08... 1450	102	80	20.0	
FEB 01... 1400	15	125	.0						
07... 1455	12	160	.0						
21... 1205	15	160	.0						

05394500 - PRAIRIE RIVER NEAR MERRILL, WI (LAT 45 14 09 LONG 089 38 59)

DEC , 1979					JUN , 1980				
10... 1440	160	180	1.0		04... 1420	115	80	20.0	
FEB , 1980					17... 1600	101	145	23.0	
12... 1510	91	220	.0		JUL 09... 1120	85	140	21.5	
MAR 17... 1340	90	230	1.0		SEP 08... 1405	138	90	15.5	
APR 17... 1400	265	100	9.0						
MAY 12... 1325	185	135	13.0						

05395000 - WISCONSIN RIVER AT MERRILL, WI (LAT 45 10 41 LONG 089 40 52)

DEC , 1979					JUL , 1980				
05... 1455	1750	125	1.0		10... 1025	1200	105	23.0	
MAR , 1980					SEP 10... 1430	4580	105	17.0	
31... 1500	3260	140	4.0						

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WISCONSIN RIVER BASIN--CONTINUED

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	TEMPER- ATURE, WATER (DEG C)	DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	TEMPER- ATURE, WATER (DEG C)
05397110 - EAU CLAIRE RIVER NEAR ANTIGO, WI (LAT 45 07 33 LONG 089 14 03)									
OCT , 1979					APR , 1980				
01...	1130	51	253	12.5	10...	1900	1080	50	3.5
NOV					28...	1410	168	115	13.0
02...	1440	265	140	6.0	MAY				
29...	1300	206	135	.5	27...	1200	64	195	18.0
DEC					JUL				
11...	1245	99	215	1.0	09...	1100	49	250	22.0
JAN , 1980					AUG				
18...	1435	104	215	.5	14...	1245	72	185	21.0
FEB					26...	1005	73	205	20.0
22...	1050	57	250	.5					
MAR									
14...	1240	45	275	.5					

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	TEMPER- ATURE, WATER (DEG C)	DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	TEMPER- ATURE, WATER (DEG C)
05397500 - EAU CLAIRE RIVER AT KELLY, WI (LAT 44 55 06 LONG 089 33 00)									
DEC , 1979					MAY , 1980				
09...	1450	190	240	.0	29...	1245	106	240	20.0
27...	1500	127	240	.0	JUN				
JAN , 1980					06...	1200	2490	80	16.5
14...	1540	88	200	.0	09...	1550	1060	85	17.0
FEB					JUL				
11...	1320	81	280	.0	24...	0940	125	220	22.0
MAR					AUG				
18...	1430	123	290	.0	20...	1505	144	260	27.0
APR									
18...	1240	381	110	7.0					

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	TEMPER- ATURE, WATER (DEG C)	DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	TEMPER- ATURE, WATER (DEG C)
05398000 - WISCONSIN RIVER AT ROTHSCILD, WI (LAT 44 53 09 LONG 089 38 05)									
APR , 1980					AUG , 1980				
18...	1445	3760	110	8.5	20...	1300	2880	140	23.0
JUN									
10...	1500	5670	80	18.0					

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	TEMPER- ATURE, WATER (DEG C)
05399431 - HAMANN CREEK NEAR STRATFORD, WI (LAT 44 54 59 LONG 090 06 25)				
OCT , 1979				
02...	1420	.80	260	14.0

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SEDI- MENT, SUS- PENDE (MG/L)	SEDI- MENT DIS- CHARGE, SUS- PENDE (T/DAY)
05399550 - FENWOOD CREEK AT BRADLEY, WI (LAT 44 48 03 LONG 089 58 24)				
JUN , 1980				
05...	1310	535	224	324
05...	1440	560	141	213
06...	1235	7000	118	2230
AUG				
27...	1400	740	32	64
SEP				
21...	1150	1880	61	310

05399580 - FREEMAN CREEK AT HALDER, WI (LAT 44 47 11 LONG 089 51 42)

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SEDI- MENT, SUS- PENDE (MG/L)	SEDI- MENT DIS- CHARGE, SUS- PENDE (T/DAY)
JUN , 1980				
05...	1340	275	231	172
05...	1455	287	162	126
06...	1100	790	83	177
AUG				
27...	1440	630	40	68
SEP				
21...	1120	840	62	141

WATER-QUALITY PARTIAL-RECORD STATIONS

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WISCONSIN RIVER BASIN--CONTINUED

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	TEMPER- ATURE, WATER (DEG C)	DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	TEMPER- ATURE, WATER (DEG C)
05400650 - LITTLE PLOVER RIVER AT PLOVER, WI (LAT 44 28 26 LONG 089 31 44)									
NOV , 1979					APR , 1980				
13...	1500	11	340	5.5	30...	1530	11	370	14.0
DEC					JUN				
18...	1335	9.2	320	4.0	19...	1200	10	240	12.0
MAR , 1980					AUG				
04...	0950	8.0	340	4.5	21...	1210	10	370	17.5
APR									
10...	1015	22	260	5.0					
05400800 - WISCONSIN RIVER AT WISCONSIN RAPIDS, WI (LAT 44 22 05 LONG 089 51 30)									
APR , 1980					SEP , 1980				
10...	1430	30400	120	3.5	23...	1410	50400	110	15.5
SEP									
04...	1335	7230	140	22.5					
05401050 - TENMILE CREEK NEAR NEKOOSA, WI (LAT 44 15 44 LONG 089 48 38)									
OCT , 1979									
01...	1540	53	240	11.0					
05401100 - FOURTEENMILE CREEK NEAR NEW ROME, WI (LAT 44 12 15 LONG 089 48 29)									
OCT , 1979									
01...	1640	25	260	17.0					
05402000 - YELLOW RIVER AT BABCOCK, WI (LAT 44 18 05 LONG 090 07 15)									
OCT , 1979					MAY , 1980				
02...	1015	11	105	12.5	08...	1020	42	135	10.5
NOV					JUN				
14...	1205	54	140	2.0	18...	1630	39	100	19.0
DEC					JUL				
05...	1345	62	140	1.0	29...	1730	12	120	22.0
18...	1630	21	160	.0	SEP				
JAN , 1980					10...	1545	82	145	19.0
23...	1240	77	140	.0	21...	1720	4850	110	17.5
MAR					22...	1120	6190	72	15.5
04...	1450	12	160	.0					
APR									
09...	1325	3210	80	4.0					
05403500 - LEMONWEIR RIVER AT NEW LISBON, WI (LAT 43 52 47 LONG 090 09 40)									
OCT , 1979					APR , 1980				
24...	1520	439	140	8.5	17...	1145	978	80	6.0
DEC					JUN				
06...	1135	452	110	1.0	04...	1430	680	100	20.0
JAN , 1980					JUL				
18...	0920	635	125	.5	16...	1340	120	160	24.5
FEB					SEP				
27...	1415	175	150	.5	02...	1140	1670	85	20.5
05403700 - DELL CREEK NEAR LAKE DELTON, WI (LAT 43 33 05 LONG 089 51 55)									
OCT , 1979					APR , 1980				
25...	1147	26	170	6.5	21...	1335	33	180	13.0
DEC					MAY				
04...	1305	21	205	2.5	30...	1235	31	190	16.0
JAN , 1980					JUL				
15...	1325	21	200	3.0	15...	1322	19	220	18.0
17...	1320	210	130	.5	AUG				
FEB					26...	1230	30	190	17.5
26...	1427	27	205	.5					
05404000 - WISCONSIN RIVER NEAR WISCONSIN DELLS, WI (LAT 43 36 22 LONG 089 45 25)									
APR , 1980					AUG , 1980				
22...	1240	8070	130	7.5	11...	1145	6750	165	22.5
JUN					27...	1330	7780	190	23.5
05...	1310	5350	135	20.5	SEP				
09...	1315	43600	150	18.5	15...	1300	23800	160	--
JUL									
14...	1340	2920	150	26.5					
05405000 - BARABOO RIVER NEAR BARABOO, WI (LAT 43 28 51 LONG 089 38 09)									
OCT , 1979					MAY , 1980				
26...	1130	367	280	7.0	28...	1336	148	370	21.5
DEC					JUN				
12...	1500	223	350	1.0	09...	1727	847	225	18.5
JAN , 1980					JUL				
15...	1150	246	370	.5	15...	1105	126	320	24.5
17...	1020	829	260	.5	AUG				
FEB					08...	1425	1450	220	20.0
26...	1245	405	230	.5	11...	1435	2890	140	--
APR					SEP				
18...	1225	420	320	9.5	02...	1450	800	250	20.5

WATER-QUALITY PARTIAL-RECORD STATIONS

MISCELLANEOUS WATER-QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

WISCONSIN RIVER BASIN--CONTINUED

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	TEMPER- ATURE, WATER (DEG C)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	SEDI- MENT, SUS- PENDE (MG/L)	SEDI- MENT DIS- CHARGE, SUS- PENDE (T/DAY)
05406500 - BLACK EARTH CREEK AT BLACK EARTH, WI (LAT 43 08 03 LONG 089 43 56)						
OCT , 1979						
11...	1400	28	9.0	530	--	--
15...	0715	27	--	--	17	1.2
NOV						
19...	1240	28	10.0	550	--	--
DEC						
13...	0725	32	2.5	440	21	1.8
JAN , 1980						
16...	1710	163	--	--	299	132
29...	0655	23	.0	340	60	3.7
APR						
21...	0700	39	--	--	21	2.2
MAY						
27...	1050	28	15.5	570	16	1.2
JUN						
30...	0650	25	--	--	27	1.8
JUL						
02...	1310	23	18.0	580	--	--
AUG						
04...	0945	22	18.5	590	27	1.6

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	TEMPER- ATURE, WATER (DEG C)	DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	TEMPER- ATURE, WATER (DEG C)
05408000 - KICKAPOO RIVER AT LAFARGE, WI (LAT 43 34 27 LONG 090 38 35)									
OCT , 1979					JUL , 1980				
09...	1145	140	400	9.5	17...	1205	126	410	23.5
APR , 1980					AUG				
16...	1505	186	430	8.0	28...	1305	240	400	18.0
JUN									
03...	1411	127	450	20.0					

05409890 - NEDERLO CREEK NEAR GAYS MILLS, WI (LAT 43 21 43 LONG 090 52 44)									
OCT , 1979					APR , 1980				
22...	1216	8.9	680	10.5	16...	1245	4.9	500	7.0
DEC					JUN				
05...	1315	4.4	470	6.5	02...	1330	4.5	495	16.5
JAN , 1980					JUL				
16...	1357	16	135	1.0	16...	0755	5.2	250	16.5
FEB					AUG				
15...	1330	4.2	550	4.5	28...	1015	5.6	480	14.5

05410500 - KICKAPOO RIVER AT STEUBEN, WI (LAT 43 11 27 LONG 090 52 28)									
OCT , 1979					MAY , 1980				
11...	1045	410	600	9.0	27...	1115	395	455	19.5
NOV					JUL				
19...	1105	441	440	7.0	08...	0959	314	450	24.5
JAN , 1980					AUG				
02...	1151	427	460	.5	11...	1320	1280	200	22.0
MAR					14...	1110	1725	310	21.0
31...	1119	511	410	6.5					

PLATTE RIVER BASIN

05414000 - PLATTE RIVER NEAR ROCKVILLE, WI (LAT 42 43 52 LONG 090 38 25)									
OCT , 1979					MAY , 1980				
11...	1639	74	590	10.5	27...	1932	46	510	23.5
JAN , 1980					JUL				
03...	0950	60	560	.0	08...	1756	48	520	29.0
APR					SEP				
01...	0902	59	530	6.0	14...	1415	66	--	22.2

GALENA RIVER BASIN

05415000 - GALENA RIVER AT BUNCOMBE, WI (LAT 42 30 49 LONG 090 22 40)									
NOV , 1979					JUN , 1980				
20...	0900	41	790	6.0	11...	1320	42	--	16.7
JAN , 1980					AUG				
03...	1234	38	750	.0	13...	0950	43	--	18.3
APR					19...	1041	57	740	24.0
01...	1229	41	770	8.5					
MAY									
28...	1059	28	660	20.5					

WATER-QUALITY PARTIAL-RECORD STATIONS

MISCELLANEOUS WATER-QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

ROCK RIVER BASIN

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	TEMPER- ATURE, WATER (DEG C)	DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	TEMPER- ATURE, WATER (DEG C)
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05423000 - WEST BRANCH ROCK RIVER NEAR WAUPUN, WI (LAT 43 40 05 LONG 088 39 10)

OCT , 1979					APR , 1980				
19...	1150	6.2	810	11.5	15...	1205	44	580	4.0
NOV					MAY				
27...	1218	31	770	2.0	28...	1245	8.8	690	20.5
DEC					JUL				
11...	1040	10	850	3.0	07...	1104	8.9	790	20.5
JAN , 1980					AUG				
23...	1115	11	420	.0	18...	1136	23	780	16.5

05423100 - WEST BRANCH ROCK RIVER AT CTH D NEAR WAUPUN, WI (LAT 43 38 51 LONG 088 40 50)

OCT , 1979					APR , 1980				
15...	1315	6.4	810	11.0	15...	1330	50	600	4.0
NOV					JUN				
27...	1346	35	770	2.0	02...	1215	23	750	16.5
DEC					JUL				
11...	1200	13	820	3.0	07...	1258	10	--	24.0
JAN , 1980					AUG				
23...	1300	11	750	.0	18...	1325	25	780	18.0

05424082 - ROCK RIVER AT HUSTISFORD, WI (LAT 43 20 44 LONG 088 35 52)

OCT , 1979					MAY , 1980				
15...	1315	2.2	--	7.5	28...	1025	24	630	21.0
30...	1052	249	690	8.0	JUN				
DEC					02...	1030	24	620	19.5
11...	0900	237	750	4.0	JUL				
JAN , 1980					11...	1058	2.9	590	29.0
21...	1130	303	890	1.5	AUG				
MAY					20...	1232	364	510	--
01...	1045	558	530	12.0					

05425500 - ROCK RIVER AT WATERTOWN, WI (LAT 43 11 25 LONG 088 43 35)

OCT , 1979					MAY , 1980				
29...	1455	288	770	9.0	27...	1232	246	650	21.0
DEC					JUL				
10...	1200	438	730	.5	08...	1110	71	710	27.0
MAR , 1980					AUG				
04...	1045	348	800	.0	21...	1050	857	580	23.5

05425928 - PRATT CREEK NEAR JUNEAU, WI (LAT 43 25 23 LONG 088 43 06)

OCT , 1979				
30...	1329	.50	855	12.0

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	TEMPER- ATURE, WATER (DEG C)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	SEDI- MENT, SUS- PENDEED (MG/L)	SEDI- MENT DIS- CHARGE, SUS- PENDEED (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
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05426031 - ROCK RIVER AT JEFFERSON, WI (LAT 42 59 46 LONG 088 48 26)

MAR , 1980							
24...	1230	1300	.0	380	--	--	--
APR							
17...	1100	2240	7.0	560	46	278	93
JUN							
03...	1028	387	22.0	680	80	84	95
JUL							
17...	1110	192	28.0	620	92	48	83
AUG							
26...	1045	1750	22.5	400	109	515	86
SEP							
04...	1240	1530	--	--	103	425	88
19...	1520	2820	17.0	--	44	335	89
23...	1100	3820	--	--	61	629	91
24...	1042	4050	16.5	--	69	755	87

WATER-QUALITY PARTIAL-RECORD STATIONS

MISCELLANEOUS WATER-QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

ROCK RIVER BASIN--CONTINUED

		STREAM- FLOW, INSTAN- TANEOUS (CFS)	SEDI- MENT, SUS- PENDE (MG/L)	SEDI- MENT DIS- CHARGE, SUS- PENDE (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM	SED. SUSP. SIEVE DIAM. % FINER THAN .125 MM	SED. SUSP. SIEVE DIAM. % FINER THAN .250 MM	SED. SUSP. SIEVE DIAM. % FINER THAN .500 MM	SED. SUSP. SIEVE DIAM. % FINER THAN 1.00 MM	SED. SUSP. SIEVE DIAM. % FINER THAN 1.00 MM			
05426031 - ROCK RIVER AT JEFFERSON, WI (LAT 42 59 46 LONG 088 48 26)													
SEP , 1980													
	04...	1240	1530	103	425	88	98	99	100	--			
	23...	1100	3820	61	629	91	98	99	100	--			
	24...	1042	4050	69	755	87	91	94	98	100			
		BED MAT. SIEVE DIAM. % FINER THAN .062 MM	BED MAT. SIEVE DIAM. % FINER THAN .125 MM	BED MAT. SIEVE DIAM. % FINER THAN .250 MM	BED MAT. SIEVE DIAM. % FINER THAN .500 MM	BED MAT. SIEVE DIAM. % FINER THAN 1.00 MM	BED MAT. SIEVE DIAM. % FINER THAN 2.00 MM	BED MAT. SIEVE DIAM. % FINER THAN 4.00 MM	BED MAT. SIEVE DIAM. % FINER THAN 8.00 MM	BED MAT. SIEVE DIAM. % FINER THAN 16.0 MM	BED MAT. SIEVE DIAM. % FINER THAN 32.0 MM		
05426031 - ROCK RIVER AT JEFFERSON, WI (LAT 42 59 46 LONG 088 48 26)													
SEP , 1980													
	04...	1240	1530	2	3	15	44	55	65	74	85	100	--
	19...	1520	2820	2	4	13	53	66	73	77	84	95	100
	24...	1042	4050	1	3	20	62	72	77	84	90	100	--

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	TEMPER- ATURE, WATER (DEG C)	DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	TEMPER- ATURE, WATER (DEG C)
05426250 - BARK RIVER NEAR ROME, WI (LAT 42 57 39 LONG 088 40 09)									
OCT , 1979					APR , 1980				
18...	1535	28	490	12.0	22...	1315	109	450	20.0
31...	1101	63	615	10.0	MAY				
DEC					01...	1300	89	540	15.0
12...	1340	63	580	.0	JUN				
MAR , 1980					04...	1445	36	520	20.5
06...	1420	60	590	.0	JUL				
24...	0940	67	450	1.0	10...	1125	16	520	27.0
APR					AUG				
08...	1032	121	535	10.5	20...	1037	184	460	22.0
17...	1415	131	510	10.0	22...	1120	178	480	22.0
21...	1305	110	410	18.0					

05426900 - WHITEWATER CREEK AT MILLIS RD NR WHITEWATER, WI (LAT 42 48 14 LONG 088 42 10)									
DEC , 1979					JUN , 1980				
06...	1025	18	670	4.5	04...	1200	20	620	14.5
MAR , 1980					JUL				
06...	1210	16	580	3.0	15...	1305	15	620	20.0
APR					AUG				
22...	1135	22	600	15.5	25...	1217	16	660	16.0

05427000 - WHITEWATER CR AT WHITEWATER WI (LAT 42 49 02 LONG 088 42 36)									
OCT , 1979					APR , 1980				
11...	1010	16	--	9.0	22...	1000	25	650	14.0
DEC					JUN				
06...	1220	18	680	5.0	04...	1030	20	610	14.0
JAN , 1980					JUL				
25...	1003	17	--	.0	15...	1130	14	600	20.0
MAR					AUG				
06...	1040	16	500	.0	25...	1230	16	660	16.0

MISCELLANEOUS WATER-QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

ROCK RIVER BASIN--CONTINUED

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	TEMPER- ATURE, WATER (DEG C)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	SEDI- MENT, SUS- PENDED (MG/L)	SEDI- MENT DIS- CHARGE, SUS- PENDED (T/DAY)			
05427507 - KOSHKONONG CREEK NEAR ROCKDALE, WI (LAT 42 57 05 LONG 089 01 37)									
OCT , 1979									
15...	1000	30	--	--	48	3.9			
NOV									
06...	0920	54	6.5	730	--	--			
DEC									
13...	1030	38	--	--	12	1.2			
17...	1110	53	.0	835	--	--			
JAN , 1980									
16...	1630	133	--	--	35	13			
31...	1053	34	.5	890	--	--			
MAR									
13...	1029	39	.5	940	--	--			
APR									
21...	1115	105	--	--	62	18			
24...	1007	86	11.5	780	--	--			
JUN									
08...	0922	297	18.0	525	--	--			
30...	0825	23	--	--	90	5.6			
JUL									
16...	1325	141	25.0	545	--	--			
AUG									
27...	1018	81	23.5	740	--	--			
DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	TEMPER- ATURE, WATER (DEG C)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	TEMPER- ATURE, WATER (DEG C)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)
05427570 - ROCK RIVER AT INDIANFORD, WI (LAT 42 48 15 LONG 089 05 25)									
OCT , 1979					JUN , 1980				
10...	1318	321	380	11.5	09...	1402	2030	575	20.0
NOV					JUL				
08...	1048	816	615	5.5	17...	1006	371	505	27.5
MAR , 1980					SEP				
10...	1130	792	660	3.0	17...	1215	3200	470	18.0
APR									
25...	1350	2730	470	12.5					
05429500 - YAHARA RIVER NEAR MC FARLAND, WI (LAT 43 00 32 LONG 089 18 18)									
OCT , 1979					JUN , 1980				
15...	1156	13	385	10.5	09...	1105	175	425	20.0
NOV					JUL				
14...	1244	205	425	4.5	02...	1027	37	355	24.0
DEC					16...	0930	57	390	26.5
13...	1155	235	410	1.0	28...	1426	21	365	28.0
FEB , 1980					AUG				
25...	1600	108	350	4.0	14...	1335	151	480	25.0
MAR					SEP				
20...	1410	178	--	5.0	08...	1153	254	360	23.5
APR					23...	0918	410	390	18.0
18...	0928	84	400	10.5					
05430030 - OREGON BRANCH AT OREGON, WI (LAT 42 55 38 LONG 089 23 05)									
MAY , 1980									
30...	0715	.15	265	19.5					
05430150 - BADFISH CREEK NEAR COOKSVILLE, WI (LAT 42 50 00 LONG 089 11 48)									
NOV , 1979					APR , 1980				
11...	1308	88	1240	9.5	23...	1036	100	1320	14.0
DEC					JUL				
18...	1030	91	1090	2.5	15...	1455	83	1260	27.0
JAN , 1980					28...	1042	78	1135	20.5
28...	1322	84	950	.5	SEP				
MAR					11...	1318	109	1050	19.5
10...	1510	63	1300	7.5	29...	1205	99	1260	22.0
05430175 - YAHARA RIVER NEAR FULTON, WI (LAT 42 49 50 LONG 089 10 09)									
NOV , 1979					MAR , 1980				
06...	1145	113	900	9.0	10...	1323	340	1180	7.0
DEC					JUL				
17...	1417	378	995	.5	15...	1156	105	1125	25.0
JAN , 1980					AUG				
28...	1111	280	1165	.5	28...	1410	117	1220	24.0
FEB									
07...	1249	102	1320	.5					

WATER-QUALITY PARTIAL-RECORD STATIONS

MISCELLANEOUS WATER-QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

ROCK RIVER BASIN--CONTINUED

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	TEMPER- ATURE, WATER (DEG C)	DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	TEMPER- ATURE, WATER (DEG C)
05432280 - BREWERY CREEK NEAR MINERAL POINT, WI (LAT 42 50 33 LONG 090 10 44)									
OCT , 1979	--	3.4	1300	9.0	NOV , 1979	--	4.3	600	7.5
10...					20...				
05432500 - PECATONICA RIVER AT DARLINGTON, WI (LAT 42 40 40 LONG 090 07 07)									
NOV , 1979					MAY , 1980				
27... 1300	151		950	8.0	20... 1337	140		910	13.5
APR , 1980					JUL				
02... 1157	110		660	9.5	07... 1238	87		740	19.0
05433000 - EAST BR PECATONICA RIVER NEAR BLANCHARDVILLE, WI (LAT 42 47 10 LONG 089 51 40)									
NOV , 1979					MAY , 1980				
27... 1030	151		560	4.5	20... 1137	120		540	16.0
APR , 1980									
02... 0947	111		520	8.5					
05434235 - SKINNER CR AT SKINNER HOLLOW RD NR MONROE, WI (LAT 42 38 23 LONG 089 43 47)									
NOV , 1979					MAY , 1980				
26... 1251	24		590	6.0	19... 1349	15		630	15.5
APR , 1980					JUL				
04... 1145	20		620	7.0	10... 1158	12		570	20.5
05434240 - SKINNER CR AT KLONDYKE RD NR MONROE, WI (LAT 42 37 32 LONG 089 44 39)									
NOV , 1979					MAY , 1980				
27... 1048	30		700	3.0	19... 1033	15		590	12.0
JAN , 1980					JUL				
04... 1030	15		600	.5	10... 1041	11		570	19.5
APR									
04... 1014	23		560	5.0					
05435980 - WEST BRANCH SUGAR RIVER NEAR MT. VERNON, WI (LAT 42 54 47 LONG 089 37 18)									
OCT , 1979					JUN , 1980				
11... 0949	16		600	8.5	09... 1325	19		580	14.5
NOV					JUL				
19... 0929	14		600	9.0	02... 0944	12		660	16.0
DEC					AUG				
13... 1158	13		600	2.0	04... 1050	12		650	17.0
JAN , 1980					08... 1023	16		580	17.5
29... 1229	14		500	.0	SEP				
MAR					12... 1108	48		470	15.0
17... 1220	89		210	1.5	22... 1140	114		250	18.0
19... 1330	17		430	7.0					
MAY									
27... 1409	14		620	17.0					
DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SEDI- MENT, SUS- PENDE (MG/L)	SEDI- MENT DIS- CHARGE, SUS- PENDE (T/DAY)	DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SEDI- MENT, SUS- PENDE (MG/L)	SEDI- MENT DIS- CHARGE, SUS- PENDE (T/DAY)
05436010 - WEST BRANCH SUGAR RIVER NEAR BELLEVILLE, WI (LAT 42 54 11 LONG 089 33 54)									
OCT , 1979					JUN , 1980				
15... 0915	16		32	1.4	05... 1400	48		1060	137
DEC					06... 0740	49		561	74
13... 0745	13		30	1.1	JUL				
JAN , 1980					16... 0745	38		512	53
16... 1110	129		650	226	AUG				
16... 1700	159		251	108	04... 1330	12		38	1.2
16... 2350	161		208	90	SEP				
17... 0745	120		171	55	07... 1010	86		506	117
29... 1000	12		25	.81	07... 1810	109		353	104
APR					12... 1000	38		217	22
08... 0815	39		555	58	12... 1310	60		233	38
21... 1230	18		23	1.1	22... 0740	94		639	162
MAY									
27... 0920	14		68	2.6					

MISCELLANEOUS WATER-QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

ILLINOIS RIVER BASIN

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	TEMPER- ATURE, WATER (DEG C)	DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	TEMPER- ATURE, WATER (DEG C)
05543830 - FOX RIVER AT WAUKESHA, WI (LAT 43 00 17 LONG 088 14 37)									
OCT , 1979					MAY , 1980				
12...	0915	40	800	9.0	05...	1245	61	--	20.0
NOV					JUN				
09...	0931	43	1060	4.0	07...	1354	261	650	20.0
DEC					18...	1507	41	1145	22.5
19...	1541	31	1440	1.5	JUL				
FEB , 1980					25...	0928	21	1100	22.5
05...	1140	47	1140	.0	SEP				
MAR					09...	1620	176	610	21.5
14...	1050	43	1420	2.0					
21...	1234	115	860	4.5					
05544200 - MUKWONAGO RIVER AT MUKWONAGO, WI (LAT 42 51 24 LONG 088 19 40)									
OCT , 1979					MAR , 1980				
12...	1130	35	450	9.0	14...	1240	42	760	2.0
NOV					MAY				
09...	1140	46	535	3.5	05...	1015	50	530	19.0
DEC					JUN				
19...	0927	44	620	2.5	03...	1505	55	440	22.0
FEB , 1980					AUG				
05...	0927	42	680	.5	26...	1431	52	440	25.5
05545300 - WHITE RIVER NEAR BURLINGTON, WI (LAT 42 39 57 LONG 088 19 03)									
OCT , 1979					APR , 1980				
11...	1420	31	565	11.0	28...	1310	75	710	8.5
NOV					JUN				
28...	0908	79	740	1.5	17...	1230	115	630	18.0
JAN , 1980					JUL				
09...	1528	52	740	.0	29...	1508	102	620	24.0
FEB					SEP				
07...	1222	83	605	.0	09...	1320	134	475	21.0
MAR					25...	1235	134	530	16.0
26...	1305	79	595	4.5					
05546500 - FOX RIVER AT WILMOT, WI (LAT 42 30 40 LONG 088 10 45)									
JUL , 1980									
28...	1228	611	630	--					

GROUND-WATER RECORDS

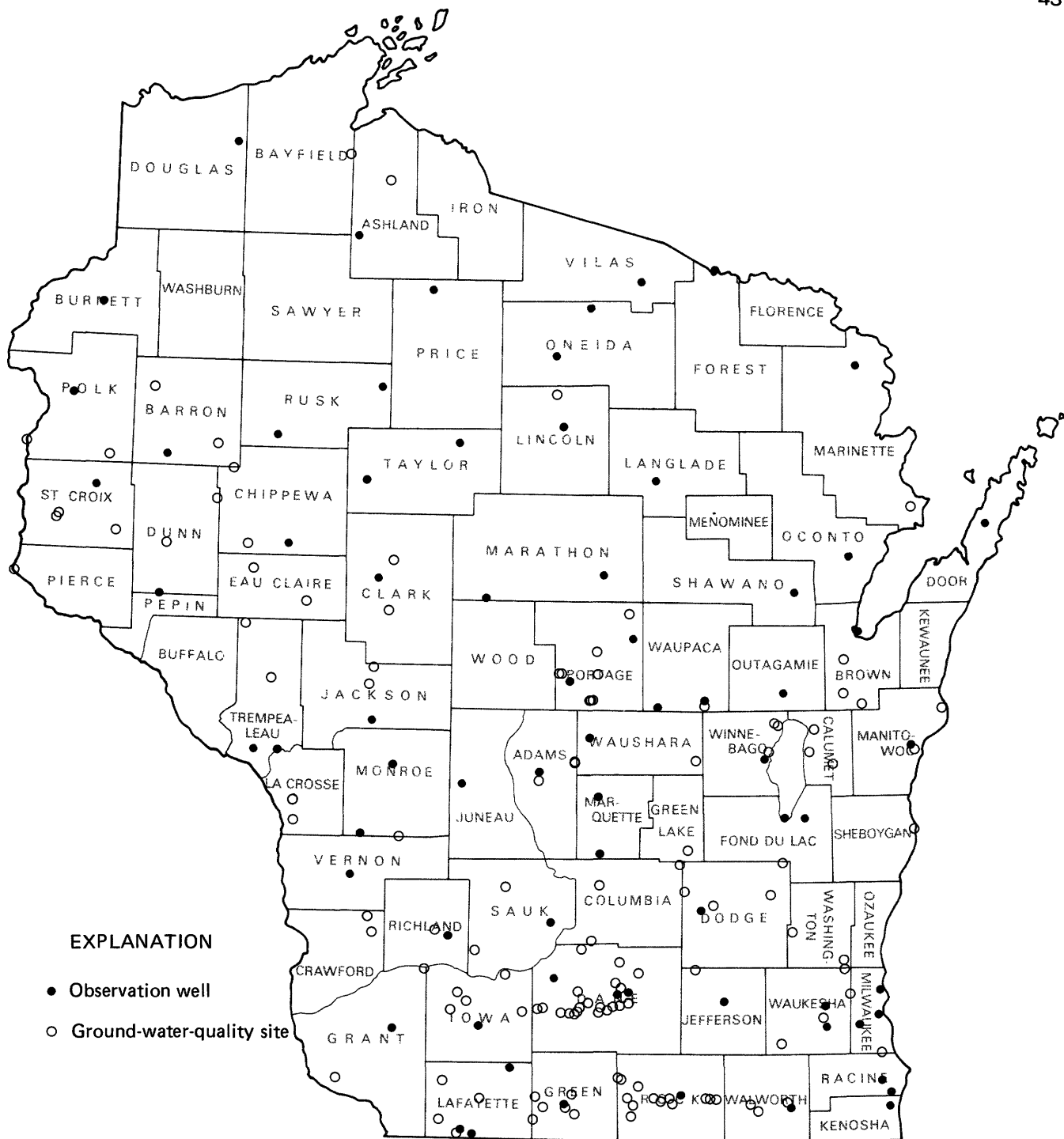


Figure 5. Location of observation wells and ground-water-quality sites in Wisconsin.

GROUND-WATER LEVELS

ADAMS COUNTY

435759089490001. Local number, AD-17/06E/08-0076.

LOCATION.--Lat 43°57'59", long 89°49'00", Hydrologic Unit 07070003. Owner: Wi. Dept. of Natural Resources.

AQUIFER.--Sand and gravel.

WELL CHARACTERISTICS.--Driven observation water table well, diameter 1 1/4 in (0.03 m), depth 21 ft (6.4 m), cased to 19 ft (5.8 m), well point 19-21 ft (5.8-6.4 m).

DATUM.--Altitude of land-surface is 955 ft (291 m) National Geodetic Vertical Datum of 1929. Measuring point: top of casing, 1.50 ft (0.46 m) above land-surface datum.

PERIOD OF RECORD.--September 1969 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 9.61 ft (2.93 m) below land-surface datum, May 29, 1973; lowest water level measured, 18.14 ft (5.53 m) below land-surface datum, Mar. 7, 1977.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 3	14.09	JAN 2	15.04	APR 28	14.63	JUN 4	14.89	JUL 28	15.14	SEP 3	13.05
15	14.25	9	15.41	MAY 8	14.77	13	14.14	AUG 3	14.94	8	12.92
NOV 1	14.20	15	15.39	14	14.70	30	14.28	12	12.84	15	12.24
13	14.60	APR 8	15.62	21	14.66	JUL 9	14.90	18	12.74	22	12.34
26	14.46	15	14.97	29	14.92	21	15.06	25	13.46		

ASHLAND COUNTY

460936090531701. Local number, AS-43/04W/32-0006.

LOCATION.--Lat 46°09'36", long 90°53'17", Hydrologic Unit 07050001. Owner: U.S. Forest Service.

AQUIFER.--Sand and gravel.

WELL CHARACTERISTICS.--Drilled unused water-table well, diameter 5 in (0.13 m), depth 89 ft (27 m).

DATUM.--Altitude of land-surface datum is 1,470 ft (448 m) National Geodetic Vertical Datum of 1929. measuring point: top of hole in pump base, at land-surface datum.

PERIOD OF RECORD.--August 1957 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 25.5 ft (7.8 m) below land-surface datum, Mar. 2, 1978; lowest water level measured, 32.4 ft (9.8 m) below land-surface datum, Apr. 1, 1964.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 30	28.75	DEC 21	28.60	FEB 18	27.50	APR 17	29.50	JUN 19	29.60	AUG 20	27.70
NOV 26	28.90	JAN 20	28.90	MAR 18	26.50	MAY 21	29.50	JUL 25	29.05	SEP 23	29.80

BARRON COUNTY

451514091582101. Local number, BR-33/13W/21-0046.

LOCATION.--Lat 45°15'14", long 91°58'21", Hydrologic Unit 07050007. Owner: Edward Thuftin.

AQUIFER.--Sandstone.

WELL CHARACTERISTICS.--Drilled unused water-table well, diameter 4 in (0.10 m), depth 65 ft (19.8 m).

DATUM.--Altitude of land-surface is 1,115 ft (340 m) National Geodetic Vertical Datum of 1929. Measuring point: top of casing, 2.00 ft (0.60 m) above land-surface datum.

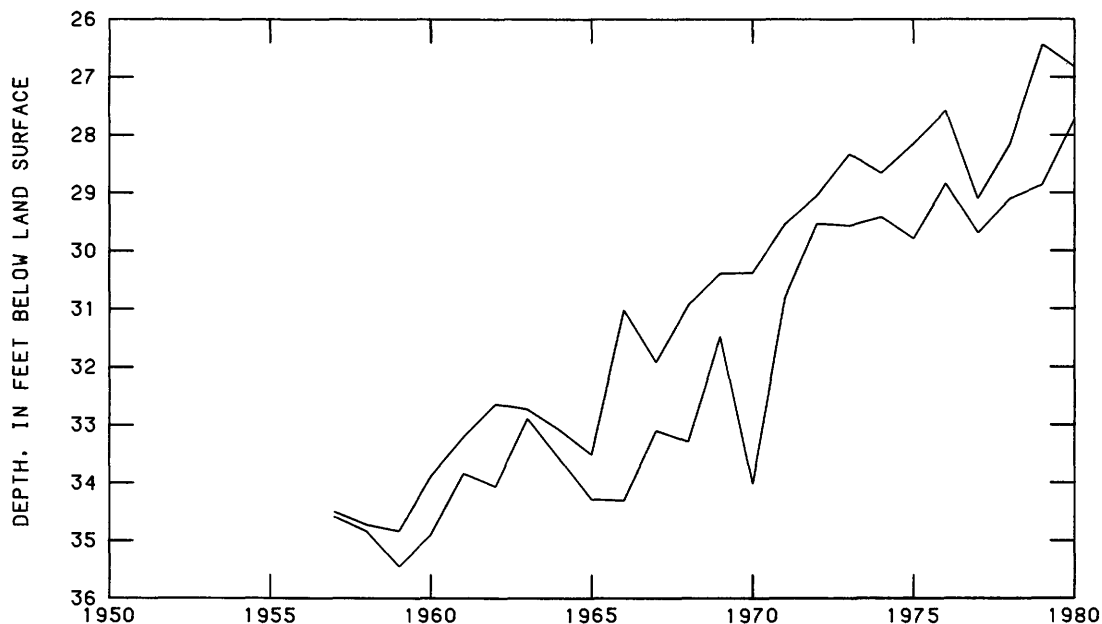
PERIOD OF RECORD.--October 1956 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 26.44 ft (8.06 m) below land-surface datum, Aug 6, 1979; lowest water level measured, 35.45 ft (10.81 m) below land-surface datum, May 13, 1959.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 3	26.90	DEC 21	27.26	FEB 4	27.50	APR 11	27.58	JUN 2	27.48	AUG 28h	27.13
NOV 8	27.29	JAN 8	27.55	MAR 20	27.72	MAY 12	27.46	JUL 14	26.85	SEP 8	27.10

BARRON COUNTY



BR-33/13W/21-0046

YEARLY MAX-MIN WATER LEVEL

BROWN COUNTY

443228088003101. Local number, BN-24/20E/24-0076.

LOCATION.--Lat 44°32'28", long 88°00'31", Hydrologic Unit 04030204. Owner: Wisconsin Public Service Corp.

AQUIFER.--Sandstone.

WELL CHARACTERISTICS.--Drilled unused artesian well, diameter 5 in (0.13 m), depth 500 ft (152 m), cased to 150 ft (45.7 m), open end.

DATUM.--Altitude of land-surface is 590 ft (180 m) National Geodetic Vertical Datum of 1929. Measuring point: top of 3 in pipe, 4.00 ft (1.21 m) above land-surface datum.

PERIOD OF RECORD.--April 1950 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 41.24 ft (12.58 m) below land-surface datum, May 3, 1961; lowest water level measured, 248.97 ft (75.94 m) below land-surface datum, Aug. 30, 1955.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 26	89.39	DEC 19	87.79	FEB 19	81.54	APR 21	80.20	JUN 20	87.10	AUG 20	97.27
NOV 22	87.72	JAN 21	83.69	MAR 18	79.98	MAY 21	82.70	JUL 17	91.85	SEP 25	96.07

GROUND-WATER LEVELS

BURNETT COUNTY

455224092215601. Local number, BT-39/16W/17-0002.

LOCATION.--Lat 45°52'24", long 92°21'56", Hydrologic Unit 07030001. Owner: Wi. Dept. of Natural Resources.

AQUIFER.--Sand and gravel.

WELL CHARACTERISTICS.--Drilled observation water-table well, diameter 8 in (0.20 m), depth 46 ft (14.0 m), cased to 46 ft (14.0 m), perforated 44 1/2-46 ft (13.6-14.0 m).

DATUM.--Altitude of land-surface is 981 ft (299 m) National Geodetic Vertical Datum of 1929. Measuring point: pointer on float gage, 4.87 ft (1.48 m) above land-surface datum.

PERIOD OF RECORD.--May 1937 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 30.33 ft (9.25 m) below land-surface datum, June 28, 1968; lowest water level measured, 35.10 ft (10.71 m) below land-surface datum, Mar. 26, 1965.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 5	33.58	DEC 7	33.44	FEB 8	33.75	APR 11	33.83	JUN 20	34.03	AUG 15	34.07
12	33.56	14	33.67	15	33.72	18	33.87	27	34.03	22	34.10
19	33.50	21	33.66	25	33.71	25	33.90	27	34.04	29	34.12
26	33.69	28	33.76	29	33.73	MAY 2	33.93	11	34.05	SEP 5	34.12
NOV 2	33.53	JAN 4	33.73	MAR 7	33.73	16	33.97	18	34.05	12	34.10
9	33.53	11	33.51	14	33.77	23	33.98	25	34.06	19	34.09
16	33.61	18	32.65	21	33.79	30	33.95	AUG 1	34.11	26	34.13
23	33.59	25	33.57	28	33.85	JUN 6	33.93	8	34.08		
30	33.57	FEB 1	33.75	APR 4	33.84	13	33.97				

CHIPPEWA COUNTY

445544091155701. Local number, CH-28/07W/17-0142.

LOCATION.--Lat 44°55'44", long 91°15'57", Hydrologic Unit 07050005. Owner: Wi. Dept. of Transportation.

AQUIFER.--Sandstone.

WELL CHARACTERISTICS.--Drilled domestic artesian well, diameter 6 in (0.15 m), depth 60 ft (18.3 m), cased to 39 ft (11.9 m), open end.

DATUM.--Altitude of land-surface is 965 ft (294 m) National Geodetic Vertical Datum of 1929. Measuring point: 1/4 in hole in pump base, 2.20 ft (0.67 m) above land-surface datum.

PERIOD OF RECORD.--January 1968 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 27.72 ft (8.45 m) below land-surface datum, July 10, 1973; lowest water level measured, 33.46 ft (10.21 m) below land-surface datum, Jan. 10, 1978.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 4	30.16	JAN 4	32.31	MAR 4	31.14	MAY 4	30.18	JUN 18	29.82	JUL 31	30.18
NOV 5	32.50	FEB 4	30.12	APR 5	30.18	JUN 6	29.97	JUL 6	28.87	AUG 31	29.06
DEC 4	31.71										

CLARK COUNTY

444525090443201. Local number, CK-26/03W/04-0001.

LOCATION.--Lat 44°45'25", long 90°44'32", Hydrologic Unit 07050006. Owner: Wi. Dept. of Natural Resources.

AQUIFER.--Sandstone.

WELL CHARACTERISTICS.--Drilled domestic artesian well, diameter 6 in (0.15 m), depth 150 ft (45.7 m), cased to 53 ft (16.2 m), open end.

DATUM.--Altitude of land-surface is 1,210 ft (369 m) National Geodetic Vertical Datum of 1929. Measuring point: hole in pump base, at land-surface datum.

PERIOD OF RECORD.--May 1953 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 55.45 ft (16.91 m) Aug. 16, 1973; lowest water level measured, 70.64 ft (21.55 m) below land-surface datum, Sept. 17, 1965.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 4	57.12	DEC 19	56.86	MAR 5	57.56	MAY 7	57.62	JUL 29	57.65	SEP 11	57.33
NOV 14	57.12	JAN 24	56.55	APR 11	57.89	JUN 4	57.99				

GROUND-WATER LEVELS

DANE COUNTY

430429089230301. Local number, DN-07/09E/23-0005.

LOCATION.--Lat 43°04'29", long 89°23'03", Hydrologic Unit 07090001. Owner: State of Wisconsin.

AQUIFER.--Sandstone.

WELL CHARACTERISTICS.--Drilled unused artesian well, diameter 8 in (0.20 m), depth 346 ft (106 m), cased to 265 ft (80.8 m), open end.

DATUM.--Altitude of land-surface is 930 ft (284 m) National Geodetic Vertical Datum of 1929. Measuring point: hole in pump base, 3.50 ft (1.07 m) below land-surface datum.

REMARKS.--Water level affected by pumping of nearby wells.

PERIOD OF RECORD.--July 1946 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 83.37 ft (25.43 m) below land-surface datum, Jan. 2, 1961; lowest water level measured, 120.27 ft (36.66m) below land-surface datum, Jul 30, 1980.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 29	95.13	DEC 26	100.11	FEB 25	106.01	APR 29	109.53	JUN 24	119.58	AUG 18	109.76
NOV 28	97.00	JAN 23	110.30	MAR 24	104.79	MAY 30	108.55	JUL 30	120.27	SEP 25	114.24

430456089190601. Local number, DN-07/10E/09-0105.

LOCATION.--Lat 43°04'56", long 89°19'06", Hydrologic Unit 07070005. Owner: City of Madison.

AQUIFER.--Sandstone.

WELL CHARACTERISTICS.--Drilled unused artesian well, diameter 10 in (0.25 m), depth 380 ft (116 m), cased to 85 ft (26 m), open end.

DATUM.--Altitude of land-surface is 870 ft (265 m) National Geodetic Vertical Datum of 1929. Measuring point: top of casing, 1.00 ft (0.30 m) above land-surface datum.

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

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 21.74 ft (6.63 m) below land-surface datum, July 6, 1975; lowest water level measured, 32.76 ft (9.99 m) below land-surface datum, June 30, 1977.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
LOWEST VALUE

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	26.11	26.44	26.63	27.51	26.92	27.47	27.67	28.91	27.56	29.41	28.42	27.68
10	27.81	26.43	26.32	26.79	26.76	27.86	27.60	28.71	26.91	29.59	27.47	26.72
15	26.17	27.11	27.44	27.46	27.26	27.04	26.98	27.37	27.07	29.67	27.94	25.43
20	26.05	26.33	26.82	26.70	27.22	27.34	27.10	27.00	29.67	29.00	27.79	25.38
25	26.00	25.65	26.63	27.43	27.23	27.47	27.20	27.60	30.29	30.11	28.31	24.82
EOM	26.30	27.12	26.28	27.13	27.09	27.43	27.06	27.76	29.84	28.57	26.83	24.59

WTR YEAR 1980 MAX 23.31 SEP 27 MIN 30.64 JUN 27

DODGE COUNTY

432407088552701. Local number, DG-11/13E/23-0081.

LOCATION.--Lat 43°24'15", long 88°55'26", Hydrologic Unit 07090002. Owner: Wi. Dept. of Transportation.

AQUIFER.--Sandstone.

WELL CHARACTERISTICS.--Drilled domestic artesian well, diameter 6 in (0.15 m), depth 125 ft (38.1 m), cased to 57 ft (17.4 m), open end.

DATUM.--Altitude of land-surface is 880 ft (268 m) National Geodetic Vertical Datum of 1929. Measuring point: 1/4 in hole in side of casing, 1.30 ft (0.40 m) above land-surface datum.

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

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 16.22 ft (4.95 m) below land-surface datum, Mar. 30, 1979; lowest water level measured, 26.67 ft (8.13 m) below land-surface datum, Feb. 3, 1965.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 25	21.35	DEC 20	20.83	FEB	20.83	APR 24	19.21	JUN 27	20.33	AUG 28	18.93
NOV 28	20.60	JAN 17	20.25	MAR	20.71	MAY 30	20.16	JUL 30	21.46	SEP 18	17.34

[illegible]

GROUND-WATER LEVELS

FOND DU LAC COUNTY

434725088255601. Local number, FL-15/17E/11-0012.

LOCATION.--Lat 43°47'25", long 88°25'56", Hydrologic Unit 04030203. Owner: City of Fond du Lac.

AQUIFER.--Sandstone.

WELL CHARACTERISTICS.--Drilled unused artesian well, diameter 4 in (0.10 m), depth 817 ft (249 m), cased to 127 ft (38.7 m), open end.

DATUM.--Altitude of land-surface is 753 ft (230 m) National Geodetic Vertical Datum of 1929. Measuring point: top of casing, at land-surface datum.

REMARKS.--Water level affected by pumping of nearby municipal wells.

PERIOD OF RECORD.--October 1953 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 50.03 ft (15.25 m) below land-surface datum, Feb. 10 1962; lowest water level, 72.36 ft (22.07 m) below land-surface datum, July 30, 1965.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
LOWEST VALUE

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	57.08	55.97	54.10	52.93	52.37	54.53	54.55	56.90	58.91	60.05	58.86	59.57
10	57.27	56.13	53.56	52.92	51.61	54.94	54.97	57.04	58.66	61.33	59.15	59.47
15	55.96	54.96	52.54	52.99	52.59		55.60	57.45	58.23	60.04	59.30	58.49
20	55.70	54.39	53.46	52.85	52.45	55.14	56.46	57.38	59.20	60.03	59.07	58.05
25	56.78	52.76	52.88	52.22	52.73	55.37	56.79	58.38	59.46	59.59	59.41	58.27
EOM	56.48	53.93	53.14	52.60	54.54	54.99	56.59	58.58	59.80	59.27	58.45	57.43

WTR YEAR 1980 MAX 50.03 FEB 10 MIN 61.30 AUG 26

434358088301001. Local number, FL-15/17E/30-0374.

LOCATION.--Lat 43°43'58", long 88°30'46", Hydrologic Unit 04030203. Owner: Wi. Dept. of Transportation.

AQUIFER.--Galena-Platteville.

WELL CHARACTERISTICS.--Drilled domestic artesian well, diameter 6 in (0.15 m), depth 120 ft 63.6 m), cased to 63 ft (19 m), open end.

DATUM.--Altitude of land-surface is 835 ft (255 m) National Geodetic Vertical Datum of 1928. Measuring point: hole in pump base, 1.50 ft (0.46 m) above land-surface datum.

PERIOD OF RECORD.--October 16, 1967 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 14.37 ft (4.38 m) below land-surface datum, May 23, 1968; lowest water level measured, 34.99 ft (10.67 m) below land-surface datum, Mar. 21, 1977.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 25	25.43	DEC 20	25.70	FEB 28	25.33	APR 22	23.32	JUN 27	21.87	AUG 26	24.07
NOV 28	25.67	JAN 16	24.54	MAR 28	25.48	MAY 28	23.74	JUL 30	24.17	SEP 9	23.92

FOREST COUNTY

460156088474901. Local number, FR-41/14E/18-0002.

LOCATION.--Lat 46°01'56", long 88°47'49", Hydrologic Unit 04030106. Owner: Wi. Dept. of Transportation.

AQUIFER.--Sand and gravel.

WELL CHARACTERISTICS.--Driven observation water-table well, diameter 1 1/4 in (0.03 m), depth 18 ft (5.5 m), cased to 15 ft (4.6 m), well point 15-18 ft (4.6-5.5 m).

DATUM.--Land-surface datum is 1,551.69 ft (472.96 m) National Geodetic Vertical Datum of 1929. Measuring point: top of casing, 1.70 ft (0.52 m) above land-surface datum.

PERIOD OF RECORD.--October 1948 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 7.96 ft (2.43 m) below land-surface datum, Apr. 29, 1954; lowest water level measured, 11.89 ft (3.63 m) below land-surface datum, Aug. 13, 1968.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 1	10.57	JAN 2	10.84	FEB 29	10.49	MAY 1	10.62	JUL 1	11.28	JUL 31	11.02
30	10.98	FEB 1	10.54	APR 1	10.99	30	11.25				

GROUND-WATER LEVELS

GRANT COUNTY

425551090391301. Local number, GR-05/02W/06-0005.

LOCATION.--Lat 42°55'51", long 90°39'13", Hydrologic Unit 07060003. Owner: Ralph Shackelford.

AQUIFER.--Prairie du Chien.

WELL CHARACTERISTICS.--Drilled unused water-table well, diameter 5 in (0.13 m), depth 35 ft (10.7 m), cased to 5 ft (1.5 m), open end.

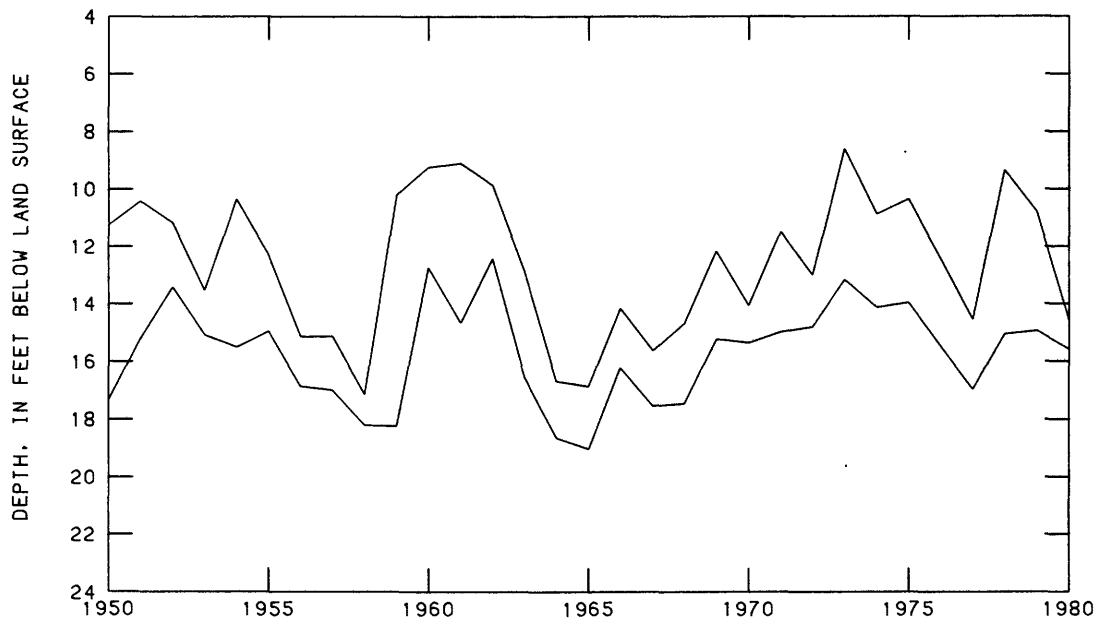
DATUM.--Altitude of land-surface is 980 ft (299 m) National Geodetic Vertical Datum of 1929. Measuring point: edge of pump base, 0.50 ft (0.15 m) above land-surface datum.

PERIOD OF RECORD.--July 1946 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 8.60 ft (2.62 m) below land-surface datum, May 22, 1973; lowest water level measured, 19.03 ft (5.80 m) below land-surface datum, Aug. 17, 1965.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 17	14.45	DEC 19	14.94	FEB 19	15.18	APR 23	15.02	JUN 19	15.18	AUG 14	15.58
NOV 20	14.68	JAN 14	14.94	MAR 25	15.04	MAY 21	15.37	JUL 17	15.59	SEP 19	14.86



GR-05/02W/06-0005

YEARLY MAX-MIN WATER LEVEL

GROUND-WATER LEVELS

GREEN COUNTY

423815089404201. Local number, GN-02/07E/21-0001.

LOCATION.--Lat 42°38'15", long 89°40'42", Hydrologic Unit 07090003. Owner: Charles Segner.

AQUIFER.--Galena-Platteville.

WELL CHARACTERISTICS.--Drilled unused water-table well, diameter 6 in (0.15 m), depth 75 ft (22.9 m).

DATUM.--Altitude of land-surface is 995 ft (303 m) National Geodetic Vertical Datum of 1929. Measuring point: top of casing, 4.50 ft (1.37 m) above land-surface datum.

PERIOD OF RECORD.--July 1946 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 47.96 ft (14.63 m) below land-surface datum, Apr. 13, 1966; lowest water level measured, 69.72 ft (21.26 m) below land-surface datum, Feb. 17, 1964.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 8	57.28	DEC 3	61.08	FEB 13	59.92	MAR 12	61.02	MAY 6	59.93	SEP 3	60.31
NOV 22	61.32	JAN 10	60.82								

IOWA COUNTY

425644090101901. Local number, IW-06/03E/32-0032.

LOCATION.--Lat 42°56'44", long 90°10'19", Hydrologic Unit 07090003. Owner: Archie Lee.

AQUIFER.--Galena-Platteville.

WELL CHARACTERISTICS.--Drilled unused artesian well, diameter 6 in (0.15 m), depth 92 ft (28 m).

DATUM.--Altitude of land-surface is 1,200 ft (366 m) National Geodetic Vertical Datum of 1929. Measuring point: 1/4 in hole pump base, at land-surface datum.

PERIOD OF RECORD.--August 1957 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 39.40 ft (12.02 m) below land-surface datum, May 17, 1960; lowest water level measured, 68.81 ft (20.99 m) below land-surface datum, Aug. 18, 1965.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 10	57.36	NOV 20	58.55

JACKSON COUNTY

441051090470901. Local number, JA-20/03W/30-0005.

LOCATION.--Lat 44°10'51", long 90°47'09", Hydrologic Unit 07040007. Owner: Robert Foulker.

AQUIFER.--Sandstone.

WELL CHARACTERISTICS.--Drilled unused artesian well, diameter 10 in (0.25 m), depth 190 ft (57.9 m), cased to 54 ft (16.5 m), open end.

DATUM.--Altitude of land-surface is 845 ft (258 m) National Geodetic Vertical Datum of 1929. Measuring point: hole in pump base, at land-surface datum.

PERIOD OF RECORD.--June 1953 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 15.53 ft (4.74 m) below land-surface datum, May 22, 1973; lowest water level measured, 22.60 ft (6.89 m) below land-surface datum, Dec. 19, 1958.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 16	17.95	DEC 3	18.42	FEB 19	19.00	APR 1	19.67	JUN 24	18.92	AUG 19	19.40
NOV 15	17.89	JAN 14	18.97	MAR 14	19.96	MAY 1	19.00	JUL 16	19.33	SEP 10	18.40

GROUND-WATER LEVELS

JEFFERSON COUNTY

430213088472201. Local number, JE-07/14E/25-0009.

LOCATION.--Lat 43°02'13", long 88°47'22", Hydrologic Unit 07090001. Owner: Ladish Malting Co.

AQUIFER.--Sandstone.

WELL CHARACTERISTICS.--Drilled unused artesian well, diameter 8 in (0.20 m), depth 716 ft (218 m), cased to 326 ft (99.4 m), open end.

DATUM.--Altitude of land-surface is 813 ft (248 m) National Geodetic Vertical Datum of 1929. Measuring point: pump base, 2.10 ft (0.64 m) above land-surface datum.

REMARKS.--Water level affected by pumping of nearby wells.

PERIOD OF RECORD.--September 1946 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 15.16 ft (4.62 m) below land-surface datum, Feb. 28, 1949; lowest water level measured, 50.65 ft (15.45 m) below land-surface datum, May 28, 1958.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
MAY 19	22.10	JUN 13	22.34	JUL 17	26.91	AUG 13	26.25	SEP 25	19.45

JUNEAU COUNTY

435515090152901. Local number, JU-17/02E/28-0098.

LOCATION.--Lat 43°55'15", long 90°15'29", Hydrologic Unit 07070003. Owner: Wi. Dept. of Transportation.

AQUIFER.--Sandstone.

WELL CHARACTERISTICS.--Drilled domestic water-table well, diameter 6 in (0.15 m), depth 71 ft (21.6 m), cased to 42 ft (12.8 m), open end.

DATUM.--Altitude of land-surface is 930 ft (284 m) National Geodetic Vertical Datum of 1929. Measuring point: 1/4 in hole in pump base, 1.00 ft (0.30 m) above land-surface datum.

PERIOD OF RECORD.--July 1969 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 9.86 ft (3.01 m) below land-surface datum, May 24, 1973; lowest water level measured, 13.90 ft (4.24 m) below land-surface datum, Jan. 10, 1979.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 16	13.61	DEC 31	13.11	FEB 29	12.95	APR 17	12.94	JUN 17	12.31	AUG 21	11.96
NOV 21	11.77	JAN 30	12.37	MAR 31	12.41	MAY 16	12.33	JUL 18	12.73	SEP 30	11.39

KENOSHA COUNTY

423611087530001. Local number, KE-02/22E/27-0004.

LOCATION.--Lat 42°36'11", long 87°53'00", Hydrologic Unit 04040002. Owner: Sunset Ridge Memorial Park.

AQUIFER.--Silurian dolomite.

WELL CHARACTERISTICS.--Drilled domestic and irrigation water-table well, diameter 6 in (0.15 m), depth 190 ft (57.9 m).

DATUM.--Altitude of land-surface is 730 ft (222 m) National Geodetic Vertical Datum of 1929. Measuring point: 1/4 in hole in manhole, at land-surface datum.

REMARKS.--Water level affected by regional pumping of wells.

PERIOD OF RECORD.--June 1946 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 73.70 ft (22.48 m) below land-surface datum, Apr. 16, 1952; lowest water level, 97.35 ft (29.69 m) below land-surface datum, Aug. 4, 1970.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 11	88.14	JAN 22	86.91	MAR 20	86.26	JUN 9	86.93	JUL 23	89.75	SEP 8	87.30
NOV 29	86.90	FEB 12	86.47	MAY 1	85.08						

GROUND-WATER LEVELS

KENOSHA COUNTY

423907087521701. Local number, KE-02/22E/11-0006.

LOCATION.--Lat 42°39'07", long 87°52'17", Hydrologic Unit 04040002. Owner: Kenosha County.

AQUIFER.--Sandstone.

WELL CHARACTERISTICS.--Drilled unaged artesian well, diameter 10 in (0.25 m), depth 1,751 ft (534 m), cased to 492 ft (150 m), open end.

DATUM.--Altitude of land-surface is 639 ft (195 m) National Geodetic Vertical Datum of 1929. Measuring point: bottom of breather pipe, 1.35 ft (0.41 m) above land-surface datum.

REMARKS.--Water level affected by regional pumping of wells.

PERIOD OF RECORD.--July 1946 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 21.10 ft (6.44 m) below land-surface datum, Dec. 3, 1947; lowest water level measured, 175.59 ft (53.52 m) below land-surface datum, Sept. 8, 1980.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 8	169.32	JAN 15	170.64	MAY 20	171.35	JUN 9	173.46	JUL 23	174.74
NOV 29	169.89	FEB 12	170.97	MAR 1	172.83			SEP 8	175.59

LAFAYETTE COUNTY

423113090161101. Local number, LF-01/02E/33-0057.

LOCATION.--Lat 42°31'13", long 90°16'11", Hydrologic Unit 07060005. Owner: Coulthard Estate.

AQUIFER.--Galena-Platteville.

WELL CHARACTERISTICS.--Drilled unused artesian well, diameter 10 in (0.25 m), depth 265 ft (80.8 m) , cased to 16 ft (4.9 m), open end.

DATUM.--Altitude of land-surface is 1,000 ft (305 m) National Geodetic Vertical Datum of 1929. Measuring point: top of casing, 3.00 ft (0.91 m) above land-surface datum.

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

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 63.67 ft (19.42 m) below land-surface datum, Apr. 29, 1952;
lowest water level, 130.99 ft (39.95 m) below land-surface datum, Nov. 6, 1959.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	97.89	97.82	97.20	97.55	97.60	97.70	97.78	97.68	98.10		97.67	97.67
10			97.54	97.62	97.52	97.67	97.77	97.61	97.89	97.70	97.57	97.70
15	97.86		97.58	97.65	97.65	97.75	97.88	98.02	97.82	97.68	97.66	97.57
20	97.50	97.83	97.60	97.80	97.40	97.47	97.76	97.86	97.94	97.72	97.50	97.30
25	97.99	97.55	97.55	97.62	97.39	97.79	97.80	97.85	97.83	97.65	97.64	97.53
EOM	97.55	97.55	97.40	97.81	98.04	97.71	97.78	97.70	97.78	97.60	97.50	97.51

WTR YEAR 1980 MAX 97.05 SEP 21 MIN 98.15 OCT 13

424620089590001. Local number, LF-04/04E/35-0078.

LOCATION.--Lat 42°46'20", long 89°58'57", Hydrologic Unit 07090003. Owner: Wi. Dept. of Natural Resources.

AQUIFER.--Sandstone.

WELL CHARACTERISTICS.--Drilled unused artesian well, diameter 6 in (0.15 m), depth 29 ft (8.8 m), cased to 4 ft (1.2 m), open end.

DATUM.--Altitude of land-surface is 850 ft (259 m) National Geodetic Vertical Datum of 1929. Measuring point: top of casing, 0.20 ft (0.06 m) above land-surface datum.

PERIOD OF RECORD.--May 1953 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 3.89 ft (1.19 m) below land-surface datum, May 23, 1974; lowest water level measured, 19.81 ft (6.04 m) below land-surface datum, Mar. 3, 1959.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 9	16.25	JAN 1	16.58	APR 2	17.08	MAY 20	14.64	JUL 7	14.42	AUG 21	16.29
NOV 27	16.53	FEB 21	16.90								

GROUND-WATER LEVELS

LAFAYETTE COUNTY

423029090125601. Local number, LF-01/02E/35-0121.

LOCATION.--Lat 42°30'29", long 90°12'56", Hydrologic Unit 07060005. Owner: Arthur Hancock.

AQUIFER.--Galena-Platteville.

WELL CHARACTERISTICS.--Drilled unused artesian well, diameter 6 in (0.15 m), depth 237 ft (72.2 m), cased to 20 ft (6.1 m), open end.

DATUM.--Altitude of land-surface is 1,030 ft (314 m) National Geodetic Vertical Datum of 1929. Measuring point: top of south side of casing, 1.00 ft (0.30 m) above land-surface datum.

PERIOD OF RECORD.--November 1953 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 56.77 ft (17.31 m) below land-surface datum, May 23, 1973; lowest water level measured, 78.72 ft (24.01 m) below land-surface datum, Apr. 14, 1957.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 12	60.92	JAN 3	62.25	APR 1	63.26	MAY 28	60.80	JUL 9	59.72	AUG 19	60.89
NOV 20	62.17	FEB 20	61.40								

LANGLADE COUNTY

450942089085301. Local number, LA-31/11E/20-0118.

LOCATION.--Lat 45°09'42", long 89°08'53", Hydrologic Unit 07070002. Owner: Wi. Public Service Corp.

AQUIFER.--Sand and gravel.

WELL CHARACTERISTICS.--Driven observation water-table well, diameter 1 1/2 in (0.03 m), depth 21 ft (6.4 m), cased to 19 ft (5.8 m), well point 19-21 ft (5.8-6.4 m).

DATUM.--Land-surface datum is 1,510.45 ft (460.38 m) National Geodetic Vertical Datum of 1929. Measuring point: top of casing, 2.50 ft (0.76 m) above land-surface datum.

PERIOD OF RECORD.--August 1942 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 5.09 ft (1.55 m) below land-surface datum, May 18, 1973; lowest water level measured, 13.84 ft (4.22 m) below land-surface datum, Feb. 28, 1949.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 24	9.78	DEC 17	9.97	FEB 26	9.85	APR 22	9.88	JUN 27	9.43	AUG 23	10.14
NOV 26	9.92	JAN 28	9.35	MAR 24	10.87	MAY 21	10.13	JUL 23	9.69	SEP 23	9.73

LINCOLN COUNTY

452318089402501. Local number, LN-34/06E/36-0025.

LOCATION.--Lat 45°23'18", long 89°40'25", Hydrologic Unit 07070002. Owner: U.S. Geol. Survey.

AQUIFER.--Sand and gravel.

WELL CHARACTERISTICS.--Driven observation water-table well, diameter 1 1/4 in (0.03 m), depth 22 ft (6.7 m), cased to 20 ft (6.1 m), well point 20-22 ft (6.1-6.7 m).

DATUM.--Altitude of land-surface is 1,435 ft (437 m) National Geodetic Vertical Datum of 1929. Measuring point: top of pipe, 3.00 ft (0.91 m) above land-surface datum.

PERIOD OF RECORD.--July 1955 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 6.38 ft (1.95 m) below land-surface datum, May 15, 1960; lowest water level measured, 10.18 ft (3.10 m) below land-surface datum, Dec. 20, 1976.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 6	7.94	FEB 7	8.77	MAY 12	8.20	JUN 30	8.52	AUG 22	8.97	SEP 5	8.31
DEC 14	8.27	APR 11	8.35	JUN 24	8.42	AUG 14	9.06	SEP 3	8.15	SEP 23	7.40

MANITOWOC COUNTY

440430087420401. Local number, MN-19/23E/35-0028.

LOCATION.--Lat 44°04'30", long 87°42'04", Hydrologic Unit 04030101. Owner: Wi. Dept. of Transportation.

AQUIFER.--Silurian dolomite.

WELL CHARACTERISTICS.--Drilled domestic artesian well, diameter 6 in (0.15 m), depth 147 ft (44.8 m), cased to 133 ft (40.5 m), open end.

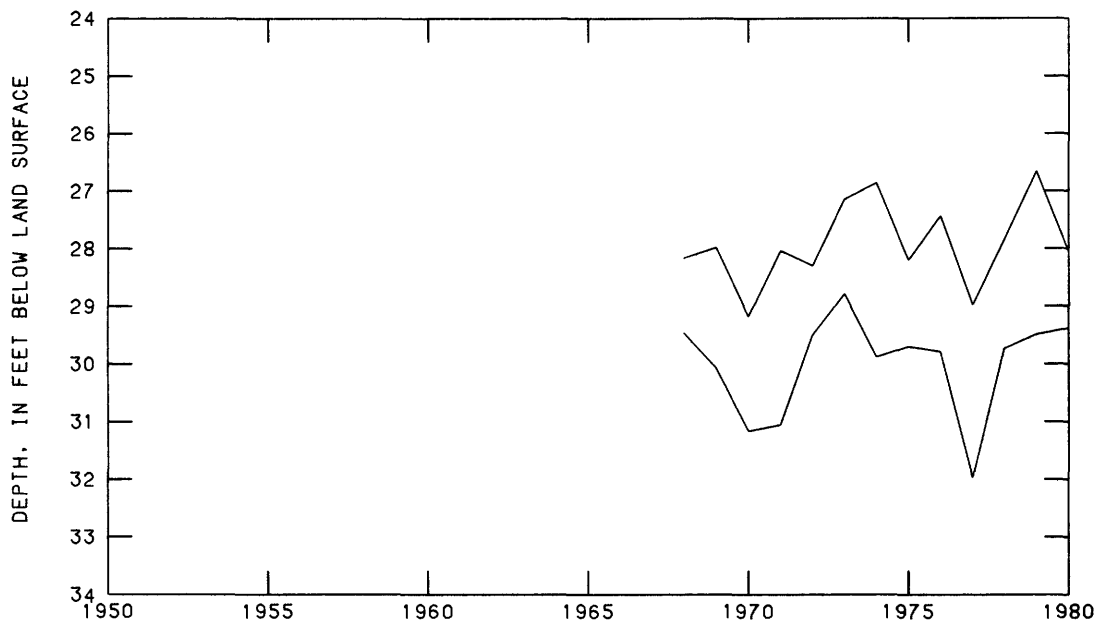
DATUM.--Altitude of land-surface is 670 ft (204 m) National Geodetic Vertical Datum of 1929. Measuring point: 1/4 in hole in pump base, 1.00 ft (0.30 m) above land-surface datum.

PERIOD OF RECORD.--June 1968 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 26.66 ft (8.13 m) below land-surface datum, Jun. 11, 1979; lowest water level measured, 31.97 ft (9.75 m) below land-surface datum, Jan. 26, 1977.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 23	29.01	JAN 8	29.18	APR 1	29.38	JUN 23	29.21	AUG 4	29.36	SEP 16	28.68
NOV 27	29.49	FEB 19	28.06	MAY 12	29.28						



MN-19/23E/35-0028

YEARLY MAX-MIN WATER LEVEL

GROUND-WATER LEVELS

MARATHON COUNTY

444114090082501. Local number, MR-26/03E/33-0007.

LOCATION.--Lat 44°41'14", long 90°08'25", Hydrologic Unit 07070002. Owner: City of Marshfield.

AQUIFER.--Sand and gravel.

WELL CHARACTERISTICS.--Drilled unused water-table well, diameter 7 in (0.18 m), depth 49 ft (14.9 m), cased to 30 ft (9.1 m), screened 30-49 ft (9.1-14.9 m).

DATUM.--Altitude of land-surface is 1,190 ft (363 m) National Geodetic Vertical Datum of 1929. Measuring point: top of casing, 1.00 ft (0.30 m) above land-surface datum.

REMARKS.--Water level affected by pumping of nearby wells.

PERIOD OF RECORD.--June 1950 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 2.47 ft (0.75 m) below land-surface datum, May. 19, 1979; lowest water level, 38.96 ft (11.88 m) below land-surface datum, Jan. 9, 1975.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
LOWEST VALUE

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	28.00			16.54								4.57
10		6.93	7.27									5.20
15		7.10						8.50			9.17	3.41
20		7.27	8.55							19.17	6.98	4.39
25		6.63	9.14							22.94		3.96
EOM		5.80	12.76				7.30			25.83		5.20

WTR YEAR 1980 MAX 2.01 SEP 20 MIN 28.00 OCT 5

444709089265301. Local number, MR-27/09E/31-0028.

LOCATION.--Lat 44°47'09", long 89°26'53", Hydrologic Unit 07070002. Owner: U.S. Geol. Survey.

AQUIFER.--Sand and gravel.

WELL CHARACTERISTICS.--Driven observation water-table well, diameter 1 1/4 in (0.03 m), depth 27 ft (8.2 m), cased to 25 ft (7.6 m), well point 25-27 ft (7.6-8.2 m).

DATUM.--Altitude of land-surface is 1,229 ft (375 m) National Geodetic Vertical Datum of 1929. Measuring point: top of pipe, 0.80 ft (0.24 m) above land-surface datum.

PERIOD OF RECORD.--November 1944 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 12.77 ft (3.89 m) below land-surface datum, July 21, 1973; lowest water level measured, 26.09 ft (7.96 m) below land-surface datum, Mar. 30, 1959.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 7	15.55	DEC 8	16.02	FEB 9	16.57	APR 12	16.57	JUN 21	15.98	AUG 16	16.31
14	15.52	15	16.04	17	16.61	20	16.63	28	16.81	23	16.32
21	15.64	23	16.13	24	16.77	27	16.72	JUL 6	16.10	31	16.32
28	15.58	29	16.26	MAR 2	16.81	MAY 4	16.73	13	16.13	SEP 7	16.36
NOV 4	15.52	JAN 6	16.35	9	16.76	11	16.88	19	16.15	13	16.32
11	15.72	13	16.18	16	16.92	18	16.49	27	16.18	20	16.18
18	15.83	19	16.18	23	16.90	26	17.00	AUG 2	16.19	28	15.79
25	15.86	26	16.34	30	16.80	JUN 8	17.05	9	16.28		
DEC 2	15.97	FEB 3	16.19	APR 5	16.78	14	15.93				

MARINETTE COUNTY

453816087590101. Local number, MT-37/20E/34-0007.

LOCATION.--Lat 45°38'16", long 87°59'01", Hydrologic Unit 04030108. Owner: Wi. Dept. of Natural Resources.

AQUIFER.--Sand and gravel.

WELL CHARACTERISTICS.--Drilled unused water-table well, diameter 8 in (0.20 m), depth 33 ft (10 m), cased to 33 ft (10 m), open end.

DATUM.--Altitude of land-surface is 980 ft (299 m) National Geodetic Vertical Datum of 1929. Measuring point: pointer on float gage, 4.00 ft (1.22 m) above land-surface datum.

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

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 18.01 ft (5.49 m) below land-surface datum, May 17, 1960; lowest water level measured, 23.26 ft (7.09 m) below land-surface datum, Nov. 2, 1948.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 2	20.45	DEC 4	20.50	FEB 5	20.72	APR 8	20.82	JUN 10	20.92	AUG 12	21.09
9	20.54	11	20.55	12	20.85	15	20.57	17	20.95	19	21.20
16	20.60	18	20.60	19	20.91	22	20.55	24	20.96	26	21.19
23	20.51	25	20.64	26	20.99	29	20.56	JUL 1	21.01	SEP 2	21.07
30	20.42	JAN 1	20.67	MAR 4	21.07	MAY 5	20.60	8	21.09	9	21.07
NOV 6	20.40	8	20.74	11	21.11	12	20.71	15	21.17	16	21.00
13	20.40	15	20.79	18	21.17	19	20.78	22	21.19	23	20.92
20	20.53	22	20.59	25	20.98	26	20.86	29	21.14	30	20.52
27	20.50	29	20.69	APR 1	20.97	JUN 3	20.93	AUG 5	21.13		

GROUND-WATER LEVELS

MARINETTE COUNTY



MT-37/20E/34-0007

YEARLY MAX-MIN WATER LEVEL

MARQUETTE COUNTY

435244089293401. Local number, MQ-16/08E/12-0009.

LOCATION.--Lat 43°52'44", long 89°29'34", Hydrologic Unit 04030201. Owner: Village of Westfield.

AQUIFER.--Sandstone.

WELL CHARACTERISTICS.--Drilled unused artesian well, diameter 6 in (0.15 m), depth 274 ft (83.5 m).

DATUM.--Altitude of land-surface is 880 ft (268 m) National Geodetic Vertical Datum of 1929. Measuring point: top of casing, at land-surface datum.

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

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 13.87 ft (4.23 m) below land-surface datum, July 11, 1973; lowest water level measured, 18.21 ft (5.55 m) below land-surface datum, Feb. 18, 1965.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 22	15.46	FEB 20	15.59	MAR 21	15.50	MAY 23	15.82	JUL 29	16.09	SEP 11	15.31
NOV 27	15.38	28	15.73	APR 24	15.28	JUN 25	15.79	AUG 26	15.39	26	15.19
DEC 20	15.59										

GROUND-WATER LEVELS

MARQUETTE COUNTY

433956089275601. Local number, MQ-14/09E/30-0026.

LOCATION.--Lat 43°39'56", long 89°27'56", Hydrologic Unit 04030201. Owner: Wi. Dept. of Transportation.

AQUIFER.--Sandstone.

WELL CHARACTERISTICS.--Drilled domestic water-table well, diameter 6 in (0.15 m), depth 170 ft (5.18 m), cased to 145 ft (44.2 m), open end.

DATUM.--Altitude of land-surface is 800 ft (244 m) National Geodetic Vertical Datum of 1929. Measuring point: 1/4 in hole in pump base, 1.00 ft (0.30 m) above land-surface datum.

PERIOD OF RECORD.--May 1965 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 12.80 ft (3.90 m) below land-surface datum, Apr. 2, 1973; lowest water level measured, 19.22 ft (5.86 m) below land-surface datum, Feb. 22, 1977.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 22	16.24	JAN 26	16.35	MAR 21	16.86	MAY 23	15.86	JUL 29	15.96	SEP 11	13.74
NOV 27	16.01	FEB 20	16.73	APR 24	15.68	JUN 25	15.99	AUG 26	14.38	26	13.67
DEC 20	16.09	28	16.74								

MILWAUKEE COUNTY

425819087551201. Local number, ML-06/22E/20-0085.

LOCATION.--Lat 42°58'19", long 87°55'12", Hydrologic Unit 04040003. Owner: City of Milwaukee.

AQUIFER.--Sandstone.

WELL CHARACTERISTICS.--Drilled unused artesian well, diameter 16 in (0.41 m), depth 1,834 ft (559.0), cased to 705 ft (214.9 m), open end.

DATUM.--Altitude of land-surface is 705 ft (217.9 m) National Geodetic Vertical Datum of 1929. Measuring point: hole in cover on casing, 6.00 ft (1.83 m) below land-surface datum.

PERIOD OF RECORD.--Water years 1938, 1944, 1946, 1950, 1952, 1961, 1973 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 110.00 ft (33.55 m) below land-surface datum, 1938; lowest water level, 288.29 ft (87.87 m) below land-surface datum, Oct 14, 1979.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
LOWEST VALUE

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	287.40	288.22	285.04	282.01	280.30				276.50	276.61	278.75	280.68
10	287.88	288.00	285.03	281.87	279.89				276.42	276.35	279.16	280.70
15	288.05	287.81	284.72	281.62	279.56			277.20	276.64	276.40	279.65	280.63
20	287.70	287.59	284.40	281.20				276.74	276.70	277.87	279.59	280.55
25	288.18	286.89	283.28	281.06				276.58	276.69	277.80	280.17	280.58
EOM	287.84	286.00	282.40	280.94				276.36	276.88	278.27	280.37	280.11

WTR YEAR 1980 MAX 275.95 MAY 30 MIN 288.29 OCT 14

430412087545801. Local number, ML-07/22E/17-0120.

LOCATION.--Lat 43°04'12", long 87°54'58", Hydrologic Unit 04040003. Owner: Nunn-Bush Shoe Co.

AQUIFER.--Silurian dolomite.

WELL CHARACTERISTICS.--Drilled unused artesian well, diameter 10 in (0.25 m), depth 400 ft (122 m), cased to 215 ft (65.5 m), open end.

DATUM.--Altitude of land-surface is 685 ft (209 m) National Geodetic Vertical Datum of 1929. Measuring point: top of concrete, 8.75 ft (2.68 m) below land-surface datum.

REMARKS.--Water level affected by pumping of nearby wells.

PERIOD OF RECORD.--April 1946 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 60.95 ft (18.58 m) below land-surface datum, Apr 9, 1980; lowest water level, 107.95 ft (32.92 m) below land-surface datum, Feb. 28, 1964.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
LOWEST VALUE

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5		63.13	62.35	62.18		61.71	61.55	61.29	61.45	61.51	62.07	62.84
10		62.86	62.53	61.97		61.47	61.32	61.26	61.34	61.66	62.25	62.93
15		62.89	62.35	62.12		61.84	61.41	61.56	61.30	61.75	62.44	62.81
20		62.97	62.32	62.33	61.55	61.47	61.57	61.35	61.33	61.95	62.40	62.53
25		62.68	61.97		61.96	61.78	61.46	61.36	61.30	62.15	62.77	62.62
EOM	62.85	62.58	62.14		62.22	61.60	61.35	61.40	61.38	62.02	62.61	62.47

WTR YEAR 1980 MAX 60.95 APR 9 MIN 63.13 NOV 7

GROUND-WATER LEVELS

MILWAUKEE COUNTY

425613088014301. Local number, ML-06/21E/32-0148.

LOCATION.--Lat 42°56'13", long 88°01'43", Hydrologic Unit 04040002. Owner: Milwaukee County.

AQUIFER.--Silurian dolomite.

WELL CHARACTERISTICS.--Drilled unused water-table well, diameter 5 in (0.13 m), depth 180 ft (54.9 m), cased to 43 ft (13.1 m), open end.

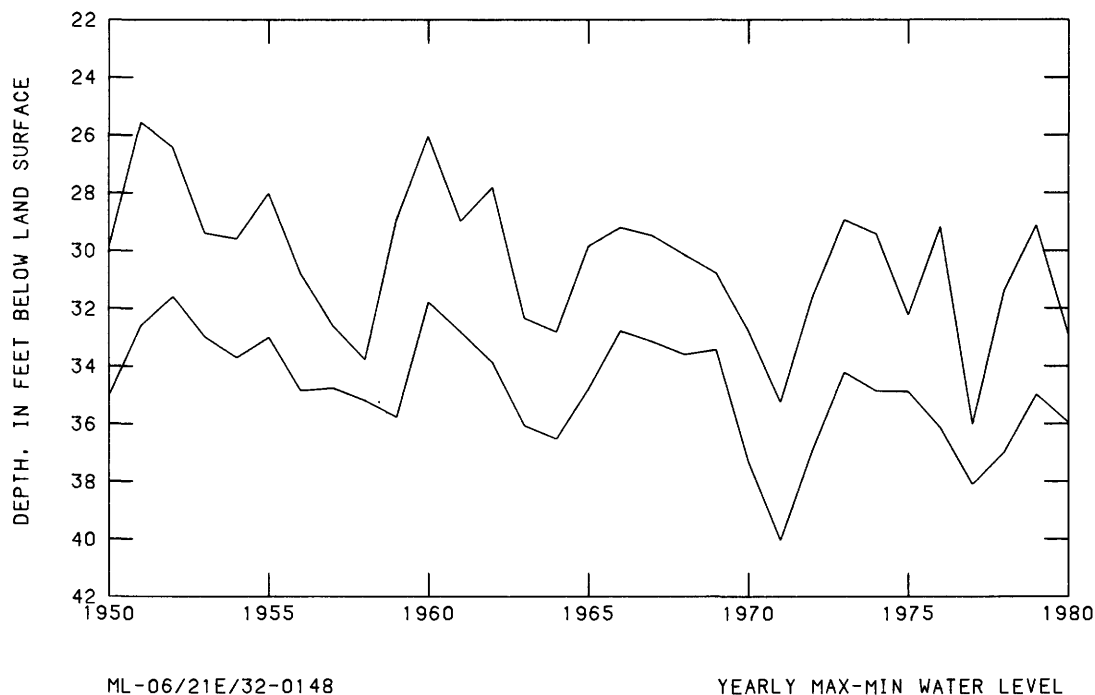
DATUM.--Altitude of land-surface is 774 ft (236 m) National Geodetic Vertical Datum of 1929. Measuring point: top of 1/4 in pipe, at land-surface datum.

PERIOD OF RECORD.--September 1946 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 25.44 ft (7.75 m) below land-surface datum, May 3, 1951; lowest water level measured, 40.03 ft (12.21 m) below land-surface datum, Aug. 13, 1971.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 31	33.97	DEC 27	34.98	FEB 21	35.96	APR 18	34.37	JUN 11	33.76	JUL 31	33.81
NOV 21	34.66	JAN 25	35.41	MAR 21	34.81	MAY 23	34.05	JUL 8	33.85	SEP 2	33.25



GROUND-WATER LEVELS

MONROE COUNTY

434342090495601. Local number, MO-15/04W/34-0002.

LOCATION.--Lat 43°43'42", long 90°49'56", Hydrologic Unit 07060001. Owner: Joseph Anderson.

AQUIFER.--Sandstone.

WELL CHARACTERISTICS.--Drilled unused water-table well, diameter 5 in (0.13 m), depth 44 ft (13.4 m).

DATUM.--Altitude of land-surface is 1,100 ft (335 m) National Geodetic Vertical Datum of 1929. Measuring point: top of casing, 0.50 ft (0.15 m) above land-surface datum.

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

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 4.70 ft (1.43 m) below land-surface datum, Apr. 10, 1976; lowest water level measured, 18.23 ft (5.56 m) below land-surface datum, Mar. 27, 1959.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 28	5.90	MAY 2	6.20

440026090390101. Local number, MO-18/02W/29-0017.

LOCATION.--Lat 44°00'26", long 90°39'01", Hydrologic Unit 07040006. Owner: U.S. Army.

AQUIFER.--Sandstone.

WELL CHARACTERISTICS.--Drilled unused artesian well, diameter 9 in (0.23 m), depth 192 ft (58.5 m), cased to 109 ft (33.2 m), open end.

DATUM.--Altitude of land-surface is 909 ft (277 m) National Geodetic Vertical Datum of 1929. Measuring point: top of casing, 1.00 ft (0.30 m) above land-surface datum.

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

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 0.43 ft (0.13 m) below land-surface datum, May 8, 1973; lowest water level, 7.75 ft (2.36 m) below land-surface datum, Mar. 2, 1977.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
LOWEST VALUE

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	4.96	4.90		5.47	5.68	6.06	6.00	5.38	4.30	4.53	5.46	4.18
10	5.05	4.96	5.11	5.53	5.73	6.13	5.63	5.49	3.55	4.70	4.94	4.10
15	5.16	5.04	5.20	5.60	5.80	6.18	5.09	5.59	3.75	4.92	4.95	3.60
20	5.26	5.10	5.27	5.30	5.87	5.83	4.99	5.65	3.95	5.05	5.10	3.62
25	4.84	5.10	5.34	5.44	5.93	5.95	5.08	5.77	4.14	5.17	5.18	3.25
EOM	4.73	5.05	5.41	5.61	6.00	6.02	5.23	5.01	4.31	5.36	4.61	3.33

WTR YEAR 1980 MAX 3.22 SEP 25 MIN 6.18 MAR 15

OCONTO COUNTY

445054088025201. Local number, OC-27/20E/03-0020.

LOCATION.--Lat 44°50'54", long 88°02'52", Hydrologic Unit 04030104. Owner: Wi. Dept. of Transportation.

AQUIFER.--Prairie du Chien.

WELL CHARACTERISTICS.--Drilled domestic water-table well, diameter 6 in (0.15 m), depth 100 ft (30.5 m), cased to 88 ft (26.8 m), open end.

DATUM.--Altitude of land-surface is 640 ft (195 m) National Geodetic Vertical Datum of 1929. Measuring point: 1/4 in hole in pump base, 2.00 ft (0.61 m) above land-surface datum.

PERIOD OF RECORD.--February 1968 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 8.07 ft (2.46 m) below land-surface datum, June 20, 1969; lowest water level measured, 11.02 ft (3.42 m) below land-surface datum, Aug. 31, 1977.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 23	9.89	DEC 18	9.70	FEB 15	9.92	APR 12	9.80	JUL 22	9.58	SEP 24	10.39
NOV 14	9.80	JAN 24	9.70	MAR 27	10.09	MAY 19	9.82				

ONEIDA COUNTY

455213089323501. Local number, ON-39/08E/18-0022.

LOCATION.--Lat 45°52'13", long 89°32'35", Hydrologic Unit 07070001. Owner: Wisconsin Valley Improvement Co.

AQUIFER.--Sand and gravel.

WELL CHARACTERISTICS.--Jetted unused water-table well, diameter 6 in (0.15 m), depth 27 ft (8.2 m), cased to 27 ft (8.2 m), open end.

DATUM.--Altitude of land-surface is 1,607 ft (489.8 m) National Geodetic Vertical Datum of 1929. measuring point: top of casing, 6.00 ft (1.83 m) above land-surface datum.

PERIOD OF RECORD.--October 1944 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 12.29 ft (3.75 m) below land-surface datum, May 28, 1973; lowest water level, 19.29 ft (5.88 m) below land-surface datum, Apr. 9, 1949.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
LOWEST VALUE

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	15.52	15.75	15.81	16.05	16.28	16.59	17.11	16.79	16.40	16.43	16.61	16.29
10	15.59	15.75	15.85	16.10	16.30	16.71	17.15	16.70	16.37	16.47	16.60	16.12
15	15.62	15.77	15.92	16.12	16.39	16.79	17.13	16.64	16.38	16.47	16.60	15.94
20	15.66		15.94	16.16	16.44	16.88	17.08	16.57	16.40	16.50	16.64	15.77
25	15.70		15.99	16.17	16.50	16.96	17.00	16.50	16.39	16.50	16.64	15.49
EOM	15.74	15.82	16.01	16.25	16.56	17.05	16.90	16.48	16.38	16.53	16.45	15.25

WTR YEAR 1980 MAX 15.47 OCT 1 MIN 17.15 APR 10

454026089425301. Local number, ON-37/06E/27-0023.

LOCATION.--Lat 45°40'26", long 89°42'53", Hydrologic Unit 07070001. Owner: U.S. Geol. Survey.

AQUIFER.--Sand and gravel.

WELL CHARACTERISTICS.--Driven observation water-table well, diameter 1 1/4 in (0.03 m), depth 37 ft (11.3 m), cased to 35 ft (10.7 m), well point 35-37 ft (10.7-11.3 m).

DATUM.--Altitude of land-surface is 1,529 ft (466 m) National Geodetic Vertical Datum of 1929. Measuring point: top of casing, 1.00 ft (0.30 m) above land-surface datum.

PERIOD OF RECORD.--November 1944 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 26.35 ft (8.04 m) below land-surface datum, July 22, 1973; lowest water level measured, 33.67 ft (10.27 m) below land-surface datum, Apr. 15, 1965.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980											
DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 7	28.87	DEC 16	29.35	FEB 17	29.77	APR 20	30.10	JUN 22	30.14	AUG 17	30.21
14	28.83	23	29.37	24	29.87	27	30.37	29	30.15	24	30.25
21	28.97	30	29.45	MAR 2	29.87	MAY 4	30.13	JUL 6	30.18	31	30.25
29	29.03	JAN 6	29.47	9	29.88	12	30.10	13	30.20	SEP 8	30.22
NOV 11	29.15	13	29.52	16	30.02	18	30.12	20	30.17	14	30.18
18	29.17	20	29.60	23	30.06	25	30.13	27	30.18	21	30.11
25	29.20	27	29.65	30	30.05	JUN 1	30.14	AUG 3	30.19	28	29.95
DEC 2	29.26	FEB 2	29.70	APR 7	30.07	8	30.08	10	30.17		
9	29.28	10	29.77	13	30.08	15	30.11				

OUTAGAMIE COUNTY

441734088251101. Local number, OU-21/17E/15-0029.

LOCATION.--Lat 44°17'34", long 88°25'11", Hydrologic Unit 04030204. Owner: Highland Memorial Park.

AQUIFER.--Sandstone.

WELL CHARACTERISTICS.--Drilled irrigation artesian well, diameter 10 in (0.25 m), depth 300 ft (91.4 m).

DATUM.--Altitude of land-surface is 839 ft (255 m) National Geodetic Vertical Datum of 1929. Measuring point: top of breather hole, 2.00 ft (0.61 m) above land-surface datum.

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

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 54.84 ft (16.73 m) below land-surface datum, Nov. 24, 1955; lowest water level measured, 64.48 ft (19.67 m) below land-surface datum, Dec. 30, 1976.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 8	61.01	JAN 14	60.24	APR 1	61.93	JUN 6	61.13	AUG 4	61.34	SEP 10	61.39
DEC 6	59.68	MAR 5	61.13	MAY 13	60.32	JUL 2	60.96				

GROUND-WATER LEVELS

POLK COUNTY

453013092314601. Local number, PK-35/17W/08-0040.

LOCATION.--Lat 45°30'13", long 92°31'46", Hydrologic Unit 07030005. Owner: Village of Milltown.

AQUIFER.--Sand and gravel.

WELL CHARACTERISTICS.--Drilled unused water-table well, diameter 5 in (0.13 m), depth 52 ft (15.8 m).

DATUM.--Altitude of land-surface is 1,250 ft (381 m) National Geodetic Vertical Datum of 1929. Measuring point: hole in pump base, at land-surface datum.

PERIOD OF RECORD.--September 1957 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 31.04 ft (9.47 m) below land-surface datum, Oct. 1, 1975; Apr. 27, 1976; lowest water level measured, 41.38 ft (12.62 m) below land-surface datum, July 22, 1959.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 10	33.52	JAN 8	34.17	MAR 20	34.86	JUN 13	35.16	JUL 14	35.16	AUG 28	35.53
DEC 19	33.95	FEB 4	34.37	MAY 12	35.42						

452352092332001. Local number, PK-34/18W/26-0093.

LOCATION.--Lat 45°23'52", long 92°33'20", Hydrologic Unit 07030005. Owner: Wl. Dept. of Transportation.

AQUIFER.--Sand and gravel.

WELL CHARACTERISTICS.--Drilled domestic artesian well, diameter 6 in (0.15 m), depth 64 ft (19.52 m), cased to 60 ft (18.29 m), open end.

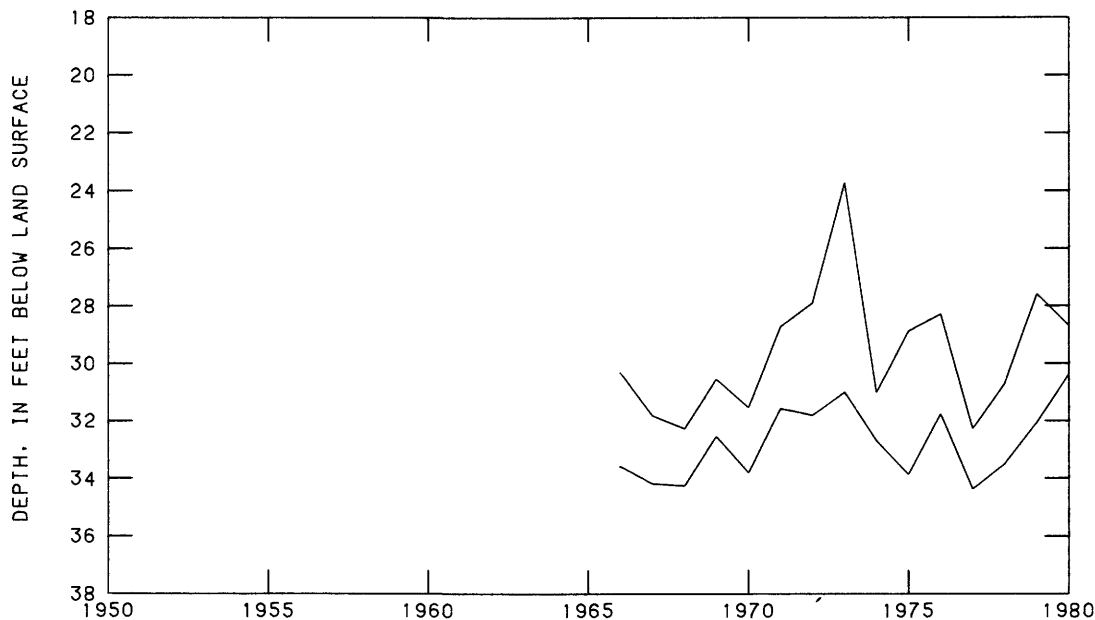
DATUM.--Altitude of land-surface is 1,140 ft (348 m) National Geodetic Vertical Datum of 1929. Measuring point: hole in pump base, 2.00 ft (0.61 m) above land-surface datum.

PERIOD OF RECORD.--March 10, 1966 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 23.72 ft (7.23 m) below land-surface datum, June 20, 1973; lowest water level measured, 34.37 ft (10.48 m) below land-surface datum, September 6, 1977.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 23	27.80	DEC 19	28.87	FEB 4	29.66	APR 11	29.68	JUN 9	29.99	AUG 13	29.81
NOV 29	28.54	JAN 8	29.21	MAR 20	30.38	MAY 12	29.86	JUL 14	30.28	SEP 6	29.15



PK-34/18W/26-0093

YEARLY MAX-MIN WATER LEVEL

443127089174101. Local number, PT-24/10E/28-0015.

AQUIFER.--Sand and gravel.

WELL CHARACTERISTICS.--Driven unused water-table well, diameter 2 in (0.05 m), depth 52 ft (15.8 m), cased to 50 ft (15.2 m), screened 50-52 ft (15.2-15.8 m).

DATUM.--Altitude of land-surface is 1,133 ft (345 m) National Geodetic Vertical Datum of 1929. Measuring point: rim of casing, 1.50 ft (0.46 m) above land-surface datum.

PERIOD OF RECORD.--August 1950 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 28.50 ft (8.69 m) below land-surface datum, Aug. 4, 1973; lowest water level measured, 38.81 ft (11.84 m) below land-surface datum, Nov. 12, 1959.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

[illegible]

442100089384901. Local number, PT-22/07E/35-0035.

LOCATION.--Lat 44°21'00". long 89°38'49". Hydrologic Unit 07070003. Owner: U.S. Geol. Survey.

AQUIFER.--Sand and gravel.

WELL CHARACTERISTICS.--Driven observation water-table well, diameter 1 1/4 in (0.03 m), depth 11 ft (3.4 m), cased to 9 ft (2.7 m). well point 9-11 ft (2.7-3.4 m).

DATUM.--Altitude of land-surface is 1,054 ft (321 m) National Geodetic Vertical Datum of 1929. Measuring point: top of casing, 1.00 ft (0.30 m) above land-surface datum.

PERIOD OF RECORD.--September 1950 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 0.99 ft (0.30 m) below land-surface datum, Apr. 9, 1951; lowest water level measured, 6.43 ft (1.96 m) below land-surface datum, Sept. 4, 1974.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

[illegible]

GROUND-WATER LEVELS

PORTAGE COUNTY

442623089302701. Local number, PT-23/08E/25-0376.

LOCATION.--Lat44°26'23", long 89°30'27", Hydrologic Unit 07070003. Owner: U. S. Geol. Survey.

AQUIFER.--Sand and gravel.

WELL CHARACTERISTICS.--Driven observation water table well, diameter 1 1/4 in (0.03 m), depth 36 ft (10.98 m), cased to 34 ft (10.37 m), well point 34-36 ft (10.37-10.98 m).

DATUM.--Altitude of land-surface is 1,099 ft (335 m) National Geodetic Vertical Datum of 1929. Measuring point: top of casing, 4.20 ft (1.28 m) above land-surface datum.

PERIOD OF RECORD.--December 1, 1959 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 4.77 ft (1.45 m) below land-surface datum, June 5, 1973; lowest water level measured, 14.78 ft (4.51 m) below sand-surface dattum, February 28, 1965.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 1	11.35	DEC 29	12.05	FEB 27	12.20	APR 28	12.30	JUN 30	12.50	AUG 30	12.30
26	11.50	JAN 27	12.00	MAR 31	12.20	MAY 30	12.30	JUL 28	13.00	SEP 30	11.50
NOV 21	11.62										



PT-23/08E/25-0376

YEARLY MAX-MIN WATER LEVEL

PRICE COUNTY

455548090263401. Local number, PR-40/01W/24-0006.

LOCATION.--Lat 45°54'48", long 90°26'34", Hydrologic Unit 07050002. Owner: Wi. Dept. of Natural Resources.

AQUIFER.--Sand and gravel.

WELL CHARACTERISTICS.--Jetted unused water-table well, diameter 8 in (0.20 m), depth 13 ft (4.0 m), cased to 13 ft (4.0 m).

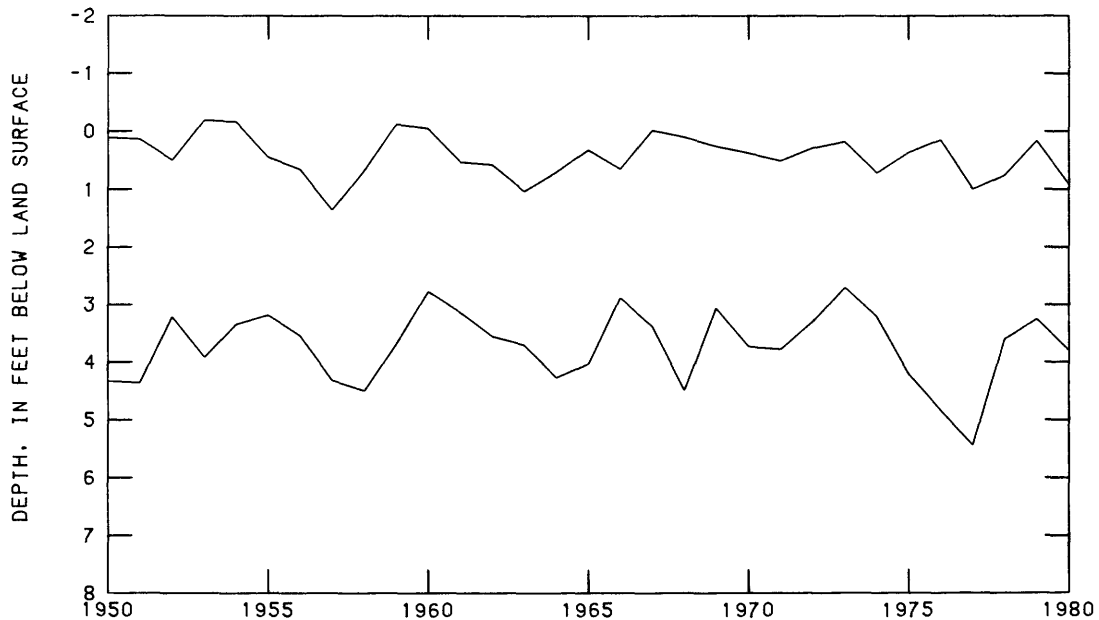
DATUM.--Altitude of land-surface is 1,510 ft (460 m) National Geodetic Vertical Datum of 1929. Measuring point: top of casing, 5.00 ft (1.52 m) above land-surface datum.

PERIOD OF RECORD.--March 1937 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 0.41 ft (0.13 m) above land-surface datum, June 29, 1946; lowest water level measured, 5.67 ft (1.73 m) below land-surface datum, Oct. 31, 1948.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 5	2.60	DEC 7	2.50	FEB 8	3.39	APR 11	1.70	JUN 13	2.54	AUG 8	1.20
12	2.73	14	2.70	15	3.55	18	1.53	20	2.23	15	1.84
19	2.71	21	2.91	22	3.62	25	1.74	27	2.70	22	1.79
26	1.74	28	2.99	29	3.66	MAY 2	2.93	JUL 4	2.40	29	1.34
NOV 2	1.81	JAN 4	3.11	MAR 7	3.76	9	2.16	11	2.83	SEP 5	0.92
9	2.11	11	3.27	14	3.80	16	2.33	18	3.00	12	1.25
16	2.25	18	3.21	21	2.28	23	2.34	25	2.31	19	1.12
23	2.20	25	3.27	28	1.45	30	2.38	AUG 1	2.33	26	1.09
30	2.14	FEB 1	3.34	APR 4	1.52	JUN 6	2.10				



PR-40/01W/24-0006

YEARLY MAX-MIN WATER LEVEL

GROUND-WATER LEVELS

RACINE COUNTY

424202087542301. Local number, RA-03/22E/21-0005.

LOCATION.--Lat 42°42'02", long 87°54'23", Hydrologic Unit 04040002. Owner: Chicago, Milwaukee, St. Paul and Pacific Railroad Co.

AQUIFER.--Sandstone.

WELL CHARACTERISTICS.--Drilled unused artesian well, diameter 12 in (0.30 m), depth 1,176 ft (358 m), cased to 586 ft (179 m), 10 in (0.25 m) liner 976-1,083 ft (297-330 m).

DATUM.--Altitude of land-surface is 730 ft (225 m) National Geodetic Vertical Datum of 1929. Measuring point: top of casing, 1.00 ft (0.30 m) above land-surface datum.

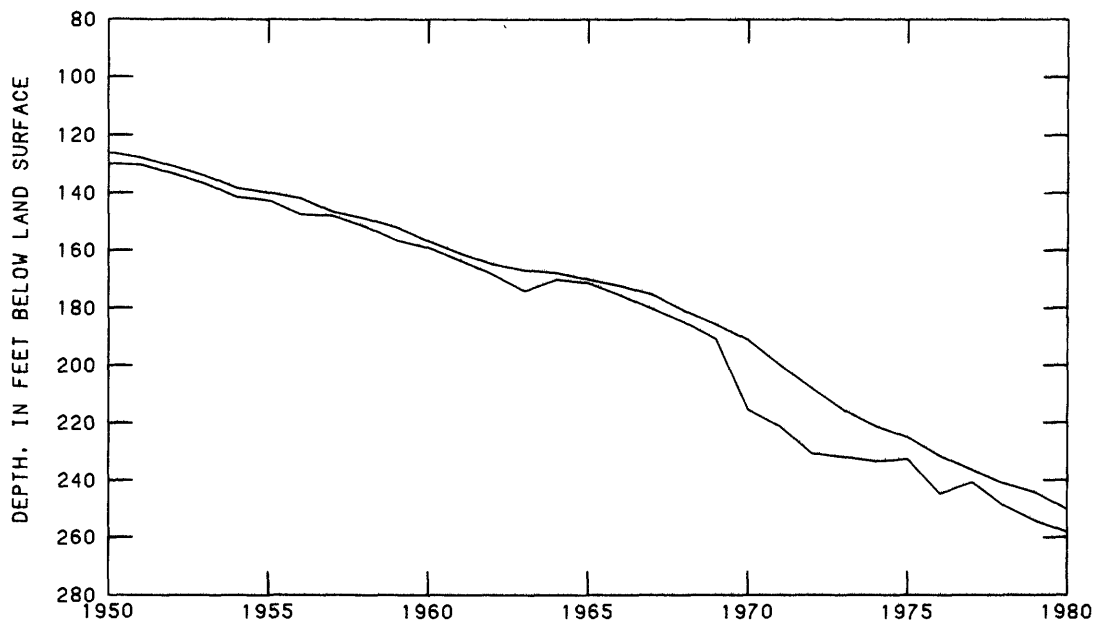
REMARKS.--Water level affected by regional pumping of wells.

PERIOD OF RECORD.--July 1946 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 109.00 ft (33.25 m) below land-surface datum, July 29, 1946; lowest water level measured, 258.20 ft (78.70 m) below land-surface datum, Aug, 1979.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 17	250.84	DEC 20	254.20	FEB 5	250.20	APR 1	258.20	AUG 1	256.00
NOV 7	251.16	JAN 14	253.89	MAR 12	254.90	MAY 6	253.00	AUG 28	257.70



RA-03/22E/21-0005

YEARLY MAX-MIN WATER LEVEL

GROUND-WATER LEVELS

RICHLAND COUNTY

431840090203201. Local number, RI-10/01E/26-0023.

LOCATION.--Lat 43°18'40", long 90°20'32", Hydrologic Unit 07070005. Owner: Koch Tractor, Inc.

AQUIFER.--Sandstone.

WELL CHARACTERISTICS.--Drilled domestic artesian well, diameter 6 in (0.15 m), depth 160 ft (48.8 m), cased to 135 ft (41.1 m), open end.

DATUM.--Altitude of land-surface is 725 ft (221 m) National Geodetic Vertical Datum of 1929. Measuring point: top of 1 in breather pipe, 1.00 FT (0.30 m) above land-surface datum.

PERIOD OF RECORD.--February 1965 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 9.11 ft (2.78 m) below land-surface datum, May 22, 1973; lowest water level measured, 15.70 ft (4.79 m) below land-surface datum, Dec. 13, 1977.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 24	13.47	JAN 16	14.13	APR 16	13.80	JUN 2	14.09	JUL 17	14.32	AUG 28	14.09
NOV 30	13.64	FEB 27	14.11								

ROCK COUNTY

423956089022301. Local number, RO-02/12E/02-0003.

LOCATION.--Lat 42°39'56", long 89°02'23", Hydrologic Unit 07090001. Owner: School for the Blind, Janesville.

AQUIFER.--Sandstone.

WELL CHARACTERISTICS.--Drilled unused artesian well, diameter 10 in (0.25 m), depth 470 ft (143 m), cased to 113 ft (34.4 m), open end.

DATUM.--Altitude of land-surface is 824 ft (251 m) National Geodetic Vertical Datum of 1929. Measuring point: 1/4 in hole cap of casing, 1.50 ft (0.46 m) above land-surface datum.

PERIOD OF RECORD.--July 1947 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 49.88 ft (15.21 m) below land-surface datum, July 22, 1974; lowest water level measured, 59.43 ft (18.13 m) below land-surface datum, Aug. 5, 1970.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 10	52.13	DEC 26	52.92	MAR 4	52.77	APR 2	52.44	JUN 11	51.70	AUG 19	50.91
DEC 13	52.10	JAN 31	52.86	18	52.31	MAY 7	52.02	JUL 8	51.51	SEP 12	50.73

RUSK COUNTY

452110091195701. Local number, RU-33/08W/11-0037.

LOCATION.--Lat 45°21'10", long 91°19'57", Hydrologic Unit 07050001. Owner: Tony Shydowski.

AQUIFER.--Sand and gravel.

WELL CHARACTERISTICS.--Drilled domestic and stock water-table well, diameter 4 in (0.10 m), depth 77 ft (23.5 m), cased to 27 ft (8.2 m), open end.

DATUM.--Altitude of land-surface is 1,085 ft (331 m) National Geodetic Vertical Datum of 1929. Measuring point: top of casing, 0.50 ft (0.15 m) above land-surface datum.

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

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 10.36 ft (3.16 m) below land-surface datum, May 18, 1966; lowest water level measured, 14.80 ft (4.51 m) below land-surface datum, Sept. 29, 1976.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 3	13.40	JAN 8	12.85	MAR 21	13.04	JUN 4	13.25	JUL 17	13.81	AUG 25	13.64
NOV 16	12.96	FEB 19	12.80	APR 17	12.41						

GROUND-WATER LEVELS

RUSK COUNTY

453107090420101. Local number, RU-35/03W/14-0089.

LOCATION.--Lat 45°31'07", long 90°42'01", Hydrologic Unit 07050004. Owner: Hawkins Cemetery.

AQUIFER.--Sand and gravel.

WELL CHARACTERISTICS.--Drilled public-supply water-table well, diameter 6 in (0.15 m), depth 25 ft (7.6 m).

DATUM.--Altitude of land-surface is 1,380 ft (421 m) National Geodetic Vertical Datum of 1929. Measuring point: top of casing, 1.00 ft (0.30 m) above land-surface datum.

PERIOD OF RECORD.--April 1957 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 11.10 ft (3.39 m) below land-surface datum, Apr. 17, 1972; lowest water level measured, 23.50 ft (7.17 m) below land-surface datum, Mar. 2, 1977.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 3	15.75	JAN 8	16.58	MAR 11	17.32	JUN 13	15.83	JUL 21	15.99	AUG 25	16.37
NOV 15	16.30	FEB 19	17.08	APR 3	17.20						

ST. CROIX COUNTY

450812092223601. Local number, SC-31/16W/29-0094.

LOCATION.--Lat 45°08'12", long 92°22'36", Hydrologic Unit 07030005. Owner: Cylon Methodist Church.

AQUIFER.--Sandstone.

WELL CHARACTERISTICS.--Drilled domestic artesian well, diameter 4 in (0.10 m), depth 73 ft (22.2 m), cased to 63 ft (19.2 m), open end.

DATUM.--Altitude of land-surface is 1,059 ft (323 m) National Geodetic Vertical Datum of 1929. Measuring point: top of casing, 2.90 ft (0.88 m) above land-surface datum.

PERIOD OF RECORD.--October 1957 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 28.29 ft (8.63 m) below land-surface datum, Sept. 24, 1973; lowest water level measured, 36.04 ft (10.99 m) below land-surface datum, Sept. 13, 1961.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 9	30.11	MAR 10	31.11	MAY 13	31.10	JUL 15	31.05	AUG 25	30.92	SEP 26	30.46
JAN 25	30.76	APR 19	30.86	JUN 10	31.04						

SAUK COUNTY

432201089460101. Local number, SK-10/06E/03-0001.

LOCATION.--Lat 43°22'01", long 89°46'01", Hydrologic Unit 07070005. Owner: Badger Army Ammunition Plant.

AQUIFER.--Sandstone.

WELL CHARACTERISTICS.--Drilled unused artesian well, diameter 16 in (0.40 m), depth 426 ft (130 m), cased to 203 ft (61.9 m), open end.

DATUM.--Altitude of land-surface is 865 ft (264 m) National Geodetic Vertical Datum of 1929. Measuring point: top of casing, 1.43 ft (0.44 m) above land-surface datum.

REMARKS.--Water level affected by pumping of nearby wells.

PERIOD OF RECORD.--March 1946 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 58.45 ft (17.83 m) below land-surface datum, May 20, 1953; lowest water level, 93.25 ft (28.44 m) below land-surface datum, June 4, 1964.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
LOWEST VALUE

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	67.90	71.90	70.54	69.06	71.55	69.08	67.93	70.06	72.57	71.70	70.21	69.35
10	68.29	72.67	70.69	69.34	69.79	69.07	67.70	69.28	72.49	72.86	69.61	69.30
15	68.70	73.00	69.55	69.21	69.28	69.39	67.83	68.72	72.68	72.65	69.87	68.87
20	68.91	82.23	69.71	68.99	68.79	68.66	68.26	68.61	72.56	71.22	69.51	68.62
25	70.39	72.20	69.13	69.03	69.33	68.80	67.97	71.09	72.69	71.03	69.50	68.61
ROM	71.50	71.98	69.08	71.52	69.50	68.30	68.96	72.53	71.37	70.45	69.34	68.26

WTR YEAR 1980 MAX 67.15 APR 8 MIN 73.25 JUN 16

GROUND-WATER LEVELS

SHAWANO COUNTY

444203088214601. Local number, SH-26/18E/30-0001.

LOCATION.--Lat 44°42'03", long 88°21'46", Hydrologic Unit 04030103. Owner: Harry Sievert.

AQUIFER.--Prairie du Chien.

WELL CHARACTERISTICS.--Drilled unused water-table well, diameter 6 in (0.15 m), depth 132 ft (40.2 m).

DATUM.--Altitude of land-surface is 917 ft (280 m) National Geodetic Vertical Datum of 1929. Measuring point: hole in pump base, 1.00 ft (0.30 m) above land-surface datum.

PERIOD OF RECORD.--April 1947 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 52.86 ft (16.12 m) below land-surface datum, Apr. 25, 1973; lowest water level measured, 64.60 ft (19.70 m) below land-surface datum, Jan. 11, 1956.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 24	58.03	DEC 19	57.33	FEB 27	60.10	APR 23	56.95	JUN 26	58.18	AUG 28	58.21
NOV 27	57.17	JAN 17	57.81	MAR 28	59.59	MAY 29	58.33	JUL 30	58.69	SEP 9	57.84

TAYLOR COUNTY

450947090483901. Local number, TA-31/04W/13-0001.

LOCATION.--Lat 45°09'47", long 90°48'39", Hydrologic Unit 07050005. Owner: Village of Gilman.

AQUIFER.--Sand and gravel.

WELL CHARACTERISTICS.--Drilled unused water-table well, diameter 18 in (0.46 m), depth 26 ft (7.9 m), cased to 16 ft (4.9 m), screened 16-26 ft (4.9-7.9 m).

DATUM.--Altitude of land-surface is 1,200 ft (366 m) National Geodetic Vertical Datum of 1929. Measuring point: top of casing, 2.00 ft (0.61 m) above land-surface datum.

REMARKS.--Water level affected by pumping of nearby wells.

PERIOD OF RECORD.--April 1957 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 4.00 ft (1.22 m) below land-surface datum, Mar. 15, 1973; lowest water level, 13.11 ft (4.00 m) below land-surface datum, Oct. 15, 1959.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
LOWEST VALUE

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	9.57	8.84		9.71	9.54	9.73	7.91	9.20	9.44	9.06		
10	9.65	8.97		9.58	9.60	9.72	6.40	9.44	7.33			8.40
15	9.73	9.25		9.63	9.70	9.86	7.55	9.45	8.66			7.32
20	9.95	9.24	9.27	9.29	9.73	8.37	8.08	8.93	8.90			8.34
25	7.78	8.77	9.24	9.30	9.75	8.75	8.52	9.19	9.11			7.26
EOM	8.51	8.78	9.35	9.42	9.80	8.19	8.90	9.36	8.23			8.35

WTR YEAR 1980 MAX 9.95 OCT 20 MIN 6.33 SEP 8

450830090215201. Local number, TA-31/01E/28-0006.

LOCATION.--Lat 45°08'30", long 90°21'52", hydrologic unit 07040007. Owner: P. J. Ziehle.

AQUIFER.--Sand and gravel.

WELL CHARACTERISTICS.--Dug domestic water table well, diameter 3.00 ft (0.92 m), depth 35 ft (10.68 m), open end.

DATUM.--Altitude of land-surface is 1,460 ft (445 m) National Geodetic Vertical Datum of 1929. Measuring point: top of curb, 1.00 ft (0.31 m) above land-surface datum.

PERIOD OF RECORD.--August 20, 1957 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 15.91 ft (4.85 m) below sand-surface datum, May 31, 1973; lowest water level measured, 27.10 ft (8.27 m) below land-surface datum, March 13, 1958.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 30	19.88	JAN 24	20.39	FEB 29	21.59



DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 19	31.88	JAN 22	31.80	MAR 27	32.47	JUN 20	31.79	AUG 19	32.15	SEP 9	31.55
NOV 30	30.29	FEB 29	32.41								

GROUND-WATER LEVELS

TREMPEALEAU COUNTY

440422091182901. Local number, TR-19/08W/35-0001.

LOCATION.--Lat 44°04'22", long 91°18'29", Hydrologic Unit 07040007. Owner: Mrs. William Davidson.

AQUIFER.--Sandstone.

WELL CHARACTERISTICS.--Drilled unused water-table well, diameter 6 in (0.15 m), depth 195 ft (59.4 m).

DATUM.--Altitude of land-surface is 820 ft (250 m) National Geodetic Vertical Datum of 1929. Measuring point: top of casing, 1.00 ft (0.30 m) above land-surface datum.

PERIOD OF RECORD.--October 1947 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 133.18 ft (40.62 m) below land-surface datum, Jan. 13, 1955; lowest water level measured, 144.95 ft (44.21 m) below land-surface datum, Oct. 27, 1966.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 13	139.61	NOV 15	139.43	APR 1	137.10	MAY 19	134.59	AUG 19	139.06	SEP 15	137.53

440414091270401. Local number, TR-19/09W/33-0009.

LOCATION.--Lat 44°04'14", long 91°27'04", Hydrologic Unit 07040005. Owner: Village of Centerville.

AQUIFER.--Sand and gravel.

WELL CHARACTERISTICS.--Drilled public-supply water-table, diameter 6 in (0.15 m), depth 71 ft (21.6 m), cased to 66 ft (20.1 m), screened 66-71 ft (20.1-21.6 m).

DATUM.--Altitude of land-surface is 740 ft (226 m) National Geodetic Vertical Datum of 1929. Measuring point: top of breather pipe, at land-surface datum.

REMARKS.--Water level affected by pumping of nearby wells.

PERIOD OF RECORD.--May 1953 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 44.51 ft (13.58 m) below land-surface datum, June 18, 1975; lowest water level measured, 57.11 ft (17.42 m) below land-surface datum, Mar. 16, 1965.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 15	48.27	AUG 19	50.01	SEP 8	50.93

VERNON COUNTY

433324090533301. Local number, VE-13/04W/31-0041.

LOCATION.--Lat 43°33'24", long 90°53'33", Hydrologic Unit 07060001. Owner: City of Viroqua.

AQUIFER.--Sandstone.

WELL CHARACTERISTICS.--Drilled unused artesian well, diameter 10 in (0.25 m), depth 507 ft (154 m).

DATUM.--Altitude of land-surface is 1,260 ft (384 m) National Geodetic Vertical Datum of 1929. Measuring point: top of breather pipe, at land-surface datum.

PERIOD OF RECORD.--August 1957 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 98.18 ft (29.94 m) below land-surface datum, Sept. 18, 1975; lowest water level measured, 149.60 ft (45.63 m) below land-surface datum, June 9, 1965.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 18	107.75	DEC 5	108.56	JAN 16	107.87	APR 16	109.22	JUN 2	109.57	SEP 5	110.00

GROUND-WATER LEVELS

VILAS COUNTY

455814089130301. Local number, VI-40/10E/10-0021.

LOCATION.--Lat 45°58'14", long 89°13'03", Hydrologic Unit 07070001. Owner: U.S. Geol. Survey.

AQUIFER.--Sand and gravel.

WELL CHARACTERISTICS.--Driven observation water-table well, diameter 1 1/4 in (0.03 m), depth 27 ft (8.2 m), cased to 25 ft (7.6 m), well point 25-27 ft (7.6-8.2 m).

DATUM.--Altitude of land-surface is 1,640 ft (500 m) National Geodetic Vertical Datum of 1929. Measuring point: top of casing, 1.00 ft (0.30 m) above land-surface datum.

PERIOD OF RECORD.--November 1944 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 11.38 ft (3.47 m) below land-surface datum, May 21, 1973; lowest water level measured, 16.86 ft (5.14 m) below land-surface datum, Mar. 21, 1949.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 1	13.60	DEC 3	13.88	FEB 4	14.00	APR 7	14.19	JUN 16	13.78	AUG 18	14.05
8	13.65	10	13.88	11	14.00	14	13.99	23	13.78	SEP 1	14.02
15	13.70	17	13.90	18	14.05	21	13.82	JUL 7	13.79	8	14.01
22	13.77	24	13.91	25	14.06	28	13.67	14	13.79	15	14.00
29	13.80	31	13.92	MAR 3	14.08	MAY 5	13.59	21	13.80	22	13.98
NOV 5	13.82	JAN 7	13.94	10	14.09	12	13.57	28	14.00	29	13.79
12	13.84	14	13.96	17	14.22	19	13.59	AUG 4	14.00		
19	13.84	21	13.98	24	14.24	26	13.76	11	14.05		
26	13.86	28	13.99	31	14.26	JUN 2	13.77				

WALWORTH COUNTY

423532088254601. Local number, WW-02/17E/36-0037.

LOCATION.--Lat 42°35'32", long 88°25'46", Hydrologic Unit 07120006. Owner: Lake Geneva Water Works.

AQUIFER.--Sandstone.

WELL CHARACTERISTICS.--Drilled unused artesian well, diameter 10 in (0.25 m), depth 820 ft (250 m), cased to 10 in (0.25 m) 0-214 ft (0-65 m), 8 in (0.20 m) 214-227 ft (65-69 m), open end.

DATUM.--Altitude of land-surface is 860 ft (262 m) National Geodetic Vertical Datum of 1929. Measuring point: top of casing, 2.00 ft (0.61 m) above land-surface datum.

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

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 129.48 ft (39.49 m) below land-surface datum, Feb. 14, 1962; lowest water level measured, 198.26 ft (60.43 m) below land-surface datum, Apr. 30, 1980.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 30	192.72	JAN 31	194.16	MAR 28	194.03	MAY 21	194.98	JUL 14	196.59	SEP 28	196.41
DEC 14	193.79	FEB 18	194.20	APR 30	198.26	JUN 27	195.27	AUG 20	196.41		

WAUKESHA COUNTY

430049088131301. Local number, WK-06/19E/02-0014.

LOCATION.--Lat 43°00'49", long 88°13'13", Hydrologic Unit 07120006. Owner: New Tribes Mission, Waukesha.

AQUIFER.--Sandstone.

WELL CHARACTERISTICS.--Drilled unused artesian well, diameter 8 in (0.20 m), depth 1,300 ft (396 m).

DATUM.--Altitude of land-surface is 875.03 ft (266.71 m) National Geodetic Vertical Datum of 1929. measuring point: top of casing, at land-surface datum.

REMARKS.--Water level affected by pumping of nearby municipal wells.

PERIOD OF RECORD.--September 1946 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 249.86 ft (76.21 m) below land-surface datum, July 6, 1947; lowest water level, 469.40 ft (143.07 m) below land-surface datum, Jul. 23, 1980.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
LOWEST VALUE

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	460.95	457.90	452.52	452.64	458.08	451.38	456.18	460.98	466.56	466.80	463.55	459.08
10	460.00	461.59	456.50	454.87	456.01	456.47	453.80	465.02	461.20	467.65	463.08	457.48
15	459.28	457.36	455.22	455.88	456.64	458.42	454.70	465.90	463.05		465.95	456.98
20	458.07	457.57	456.02	456.80	458.45	458.00	454.25	464.70	463.05	469.60	464.25	455.75
25	459.20	458.60	450.00	457.83	456.82	459.42	454.40	466.98	466.90	468.70	462.93	456.38
EOM	459.00	455.00	450.31	457.34	455.05	459.00	457.23		464.62	463.30	459.90	462.23

WTR YEAR 1980 MAX 444.08 DEC 30 MIN 469.60 JUL 25

GROUND-WATER LEVELS

WAUKESHA COUNTY

425535088131701. Local number, WK-05/19E/02-0031.

LOCATION.--Lat 42°55'35", long 88°13'17", Hydrologic Unit 07120006. Owner: William M. Foss.

AQUIFER.--Silurian dolomite.

WELL CHARACTERISTICS.--Drilled unused artesian well, diameter 6 in (0.15 m), depth 508 ft (155 m), cased to 434 ft (132 m), open end.

DATUM.--Altitude of land-surface is 962 ft (293 m) National Geodetic Vertical Datum of 1929. Measuring point: top of casing, 1.00 ft (0.30 m) above land-surface datum.

PERIOD OF RECORD.--May 1947 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 126.28 ft (38.52 m) below land-surface datum, June 10, 1974; lowest water level, 138.14 ft (42.13 m) below land-surface datum, Feb. 2, 1959.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
LOWEST VALUE

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	131.06	131.30	131.35		131.99	132.16	132.37	132.40	132.80		133.47	133.14
10	131.18	131.28	131.57		131.96	132.24	132.31	132.55	132.71	133.79	133.38	133.12
15	131.33	131.31	131.75		132.09	132.43	132.26	132.66	132.85	133.95	133.33	133.00
20	131.20	131.46	131.61		132.07	132.29	132.30	132.59	132.99	133.88	133.23	132.92
25	131.17	131.38	131.80	131.78	132.22	132.40	132.28	133.08	133.98	133.79	133.15	132.86
EOM	131.18	131.38	131.71	131.95	132.29	132.40	132.23	133.13	133.44	133.49	133.15	132.85

WTR YEAR 1980 MAX 130.87 OCT 6 MIN 134.34 JUN 26

WAUPACA COUNTY

441545088522901. Local number, WP-21/13E/25-0002.

LOCATION.--Lat 44°15'45", long 88°52'29", Hydrologic Unit 04030202. Owner: Village of Fremont.

AQUIFER.--Sandstone.

WELL CHARACTERISTICS.--Drilled unused artesian well, diameter 8 in (0.20 m), depth 205 ft (62.5 m), cased to 109 ft (33.2 m), open end.

DATUM.--Altitude of land-surface is 764 ft (233 m) National Geodetic Vertical Datum of 1929. Measuring point: hole in cap, 1.00 ft (0.30 m) above land-surface datum.

PERIOD OF RECORD.--August 1950 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 8.65 ft (2.64 m) below land-surface datum, Apr. 7, 1979; lowest water level measured, 15.91 ft (4.85 m) below land-surface datum, Feb. 23, 1954.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 6	14.10	DEC 15	13.75	FEB 16	14.38	APR 19	13.12	JUN 21	13.18	AUG 16	13.60
13	14.40	22	14.15	23	14.73	26	13.26	28	13.40	23	13.52
20	14.28	29	14.29	MAR 1	14.84	MAY 3	13.51	JUL 5	13.64	30	13.30
27	13.91	JAN 5	14.42	8	14.92	10	13.54	12	13.79	SEP 6	13.35
NOV 10	13.82	12	14.48	15	14.91	17	13.61	19	13.91	13	13.22
17	13.81	19	14.05	22	14.34	24	13.81	26	13.89	20	13.06
24	13.74	26	14.04	29	14.37	31	13.76	AUG 2	14.03	27	13.08
DEC 1	13.74	FEB 2	14.25	APR 5	14.12	JUN 8	13.24	9	13.65		
8	13.77	9	14.20	12	13.87	14	13.03				

WAUSHARA COUNTY

440713089320801. Local number, WS-19/08E/15-0008.

LOCATION.--Lat 44°07'13", long 89°32'08", Hydrologic Unit 07070003. Owner: University of Wisconsin Experiment Farm, Hancock.

AQUIFER.--Sand and gravel.

WELL CHARACTERISTICS.--Jetted observation water-table well, diameter 4 in (0.10 m), depth 18 ft (5.5 m), cased to 18 ft (5.5 m).

DATUM.--Altitude of land-surface is 1,080 ft (329 m) National Geodetic Vertical Datum of 1929. Measuring point: top of casing, 1.00 ft (0.30 m) above land-surface datum.

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

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 5.88 ft (1.79 m) below land-surface datum, July 5, 1973; lowest water level, 15.71 ft (4.79 m) below land-surface datum, June 10, 1959.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
LOWEST VALUE

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	8.12	8.40	8.60	8.72		9.24	9.24	8.84	8.86	8.65	9.10	8.53
10	8.18	8.41	8.66	8.72		9.29	9.19	8.84	8.82	8.81	8.66	8.50
15	8.26	8.57	8.66	8.72		9.32	9.05	8.88	8.56	8.73	8.62	8.42
20	8.26	8.59	8.73	8.59		8.80	9.00	9.07	8.51	8.84	8.61	8.27
25	8.34	8.59	8.73	8.68		9.10	8.95	8.92	8.62	9.03	8.62	8.20
EOM	8.37	8.61	8.73	8.68		9.16		8.85	8.67	8.98	8.56	8.16

WTR YEAR 1980 MAX 8.10 OCT 1 MIN 9.32 MAR 18

WAUSHARA COUNTY

441414089091101. Local number, WS-20/11E/02-0053.

LOCATION.--Lat 44°14'14", long 89°09'11", Hydrologic Unit 04030202. Owner: Merle Knox.

AQUIFER.--Sand and gravel,

WELL CHARACTERISTICS.--Drilled domestic water-table well, diameter 6 in (0.15 m), depth 177 ft (53.9 m), cased to 172 ft (52.4 m), screened 172-177 ft (52.4-53.9 m).

DATUM.--Altitude of land-surface is 923 ft (281 m) National Geodetic Vertical Datum of 1929. Measuring point: top of casing, 1.00 ft (0.30 m) above land-surface datum.

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

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 32.97 ft (10.06 m) below land-surface datum, June 26, 1973; lowest water level measured, 40.41 ft (12.33 m) below land-surface datum, Mar. 4, 1959.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 31	35.85	DEC 26	36.15	FEB 27	36.10	MAR 28	36.10	JUL 19	36.22	SEP 9	36.30

WINNEBAGO COUNTY

440122088324601. Local number, WI-18/16E/23-0006.

LOCATION.--Lat 44°01'22", long 88°32'46", Hydrologic Unit 04030201. Owner: City of Oshkosh.

AQUIFER.--Sandstone.

WELL CHARACTERISTICS.--Drilled unused artesian well, diameter 8 in (0.20 m), depth 200 ft (61 m).

DATUM.--Altitude of land-surface is 765 ft (233 m) National Geodetic Vertical Datum of 1929. Measuring point: top of 1 in pipe, at land-surface datum.

REMARKS.--Water level affected by pumping of nearby wells.

PERIOD OF RECORD.--August 1950 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 17.20 ft (5.25 m) below land-surface datum, Apr. 26, 1979; lowest water level measured, 39.75 ft (12.12 m) below land-surface datum, Sept. 1, 1960.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 26	19.55	MAR 31	20.20	JUN 13	18.74	JUN 26	19.76	AUG 21	22.43	SEP 25	20.41
JAN 31	19.35	MAY 1	19.22								

QUALITY OF GROUND WATER

WATER-QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

AQUIFER.--100 SDGV, sand-and-gravel aquifer, includes deposits of the Holocene and Pleistocene Series of the Quaternary System. 350 SLDL, Silurian Dolomite aquifer, includes rocks of the Upper and Middle Series of the Devonian System and the Cayugan, Niagaran, and Alexandrian Series of the Silurian System. 362 MQKS, Maquoketa Shale aquifer, includes rocks of the Cincinnati Series of the Ordovician System. 365 GLPV, Galena-Platteville aquifer, includes rocks of the Sinipee Group of the Champlainian Series of the Ordovician System. 300 SNDS, sandstone aquifer, includes rocks of the Champlainian and Canadian Series of the Ordovician System and the St Croixan Series of the Cambrian System. 400 LKSS, Lake Superior Sandstone aquifer, includes rocks of the Bayfield and Oconto Groups of the Precambrian Erathem. 400 LVFL, lava flow aquifer, includes extrusive igneous rocks of the Keweenaw Super Group of the Precambrian Erathem. 400 BCPX, basement complex aquifer, includes other rocks of the Precambrian Erathem.

GEOLOGIC UNIT.--350 SLRN, rocks of the Cayugan, Niagaran, and Alexandrian Series of the Silurian System. 300 SDPV, rocks of the Silurian-Ordovician System of the Paleozoic Erathem. 365 STPR, St. Peter Sandstone. 368 PRDC, Prairie du Chien Group of the Ordovician System. 360 OVCB, rocks of the Ordovician-Cambrian System of the Paleozoic Erathem. 372 TMPL, Trempealeau Group of the Cambrian System. 372 TNLC, Tunnel City Group of the Cambrian System. 372 EKMD, Elk Mound Group of the Cambrian System. 372 DRBC, Dresbach Group of the Cambrian System. 372 JRDN, Jordan Sandstone. 372 WNW, Wonegan Formation. 372 ECLR, Eau Claire Sandstone. 372 MNSN, Mount Simon Sandstone.

STATION NUMBER	LOCAL IDENTIFIER	AQUIFER	GEOLOGIC UNIT	DEPTH OF WELL, TOTAL (FEET)	DATE OF SAMPLE	DEPTH TO BOTTOM OF SAMPLE INTER-VAL (FT)	DEPTH TO TOP OF SAMPLE INTER-VAL (FT)	FLOW RATE, INSTANTANEOUS (GPM)	SPECIFIC CONDUCTANCE (MICRO-MHOS)
ADAMS									
435743089485701	AD-17/06E/08-0005	300SNDS	372MNSN	240	80-08-21	--	--	494	170
435743089485901	AD-17/06E/08-0232	100SDGV	--	85	80-08-21	--	--	5.0	180
440146089364401	AD-18/07E/13-0223	100SDGV	--	70	80-09-05	--	--	--	410
440146089364402	AD-18/07E/13-0224	100SDGV	--	27	80-09-05	--	--	--	460
440151089363001	AD-18/07E/13-0225	100SDGV	--	70	80-09-03	--	--	--	180
440151089363002	AD-18/07E/13-0226	100SDGV	--	28	80-09-03	--	--	--	200
440159089370501	AD-18/07E/13-0221	100SDGV	--	62	80-09-03	--	--	--	370
440159089370502	AD-18/07E/13-0222	100SDGV	--	28	80-09-03	--	--	--	150
450158089364701	AD-18/07E/13-0138	100SDGV	--	100	80-06-11	--	--	--	250
			--	100	80-09-03	--	--	--	330
440207089363001	AD-18/07E/13-0227	100SDGV	--	70	80-09-03	--	--	--	260
440207089363002	AD-18/07E/13-0228	100SDGV	--	20	80-09-03	--	--	--	160
440211089365101	AD-18/07E/13-0229	100SDGV	--	70	80-09-03	--	--	--	230
440211089365102	AD-18/07E/13-0230	100SDGV	--	30	80-09-03	--	--	--	140
ASHLAND									
462309090413101	AS-45/03W/12-0066	420LVFL	--	172	80-06-19	--	--	--	1490
462956090541101	AS-46/04W/06-0073	420LKSS	--	78	80-06-19	--	--	--	4000
BARRON									
451840091391301	BR-33/10W/30-0009	300SNDS	372MNSN	261	80-08-04	--	--	494	118
453145092012301	BR-35/13W/07-0152	300SNDS	372DRBC	295	80-07-28	--	--	718	335
BROWN									
441609087585101	BN-21/21E/29-0140	350SLDL	350SLRN	47	80-05-28	--	--	--	730
441849088051801	BN-21/20E/04-0141	300SNDS	365STPR	900	80-08-08	596	491	112	1890
			372WNWC	900	80-08-15	847	782	49	2160
			372TNLC	900	80-08-18	775	725	18	2050
442708088045701	BN-23/20E/21-0132	300SNDS	--	795	80-05-14	--	--	--	550
CALUMET									
440127088092401	CA-18/20E/18-0051	350SLDL	350SLRN	213	80-05-28	--	--	--	1370
440417088172701	CA-19/18E/36-0065	300SNDS	300SDPV	480	79-11-14	--	--	--	420
440941088154301	CA-20/19E/32-0064	300SNDS	360OVCB	895	79-12-04	--	--	--	2200
CHIPPEWA									
445400091281101	CH-28/09W/21-0167	300SNDS	--	93	80-06-18	--	--	--	190
450512091385101	CH-30/10W/18-0163	300SNDS	--	87	80-06-18	--	--	--	220
451214091334301	CH-31/10W/02-0012	300SNDS	372MNSN	168	80-07-30	--	--	269	130
CLARK									
443841090393001	CK-25/02W/17-0046	300SNDS	372MNSN	175	80-08-20	--	--	18	280
445052090382101	CK-27/02W/05-0426	300SNDS	--	100	80-06-18	--	--	--	80
COLUMBIA									
431849089311002	CO-10/08E/26-0052	300SNDS	372ECLR	334	80-07-24	--	--	215	440
433220089282601	CO-12/09E/07-0005	300SNDS	372ECLR	250	80-09-05	--	--	148	600
433714089012201	CO-13/12E/01-0084	100SDGV	--	45	80-07-08	--	--	--	830
CRAWFORD									
431946090442701	CR-10/03W/21-0169	300SNDS	--	525	80-05-21	--	--	--	1270
432336090460601	CR-11/03W/31-0004	300SNDS	372DRBC	358	80-08-28	--	--	67	390

QUALITY OF GROUND WATER

WATER-QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

STATION	NUMBER	DATE OF SAMPLE	PH FIELD (UNITS)	TEMPER- ATURE, WATER (DEG C)	HARD- NESS, NONCAR- BONATE (MG/L CACO3)	HARD- NESS (MG/L AS CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	PERCENT SODIUM	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)
ADAMS												
435743089485701		80-08-21	7.8	10.5	0	90	21	9.0	1.6	4	.1	.4
435743089485901		80-08-21	8.4	11.5	--	--	--	--	--	--	--	--
440146089364401		80-09-05	8.1	10.5	--	--	--	--	1.6	--	--	.6
440146089364402		80-09-05	7.9	10.0	--	--	--	--	2.4	--	--	1.2
440151089363001		80-09-03	8.1	11.0	--	--	--	--	10	--	--	.1
440151089363002		80-09-03	8.1	10.0	--	--	--	--	1.1	--	--	.5
440159089370501		80-09-03	8.2	11.0	--	--	--	--	1.4	--	--	.5
440159089370502		80-09-03	8.6	8.5	--	--	--	--	1.2	--	--	.8
450158089364701		80-08-11	8.2	10.5	37	120	26	13	1.2	2	.0	.4
		80-09-03	8.1	10.0	92	180	38	20	1.6	2	.1	.5
440207089363001		80-09-03	7.9	11.0	--	--	--	--	2.1	--	--	3.0
440207089363002		80-09-03	8.5	11.0	--	--	--	--	1.1	--	--	.5
440211089365101		80-09-03	8.0	11.0	--	--	--	--	10	--	--	.3
440211089365102		80-09-03	8.5	10.5	--	--	--	--	.9	--	--	.4
ASHLAND												
462309090413101		80-06-19	8.7	10.0	19	93	34	1.7	240	85	11	2.2
462956090541101		80-06-19	7.3	8.0	740	780	270	25	490	58	7.7	8.1
BARRON												
451840091391301		80-08-04	6.8	10.0	19	46	12	3.8	4.8	18	.3	1.3
453145092012301		80-07-28	7.4	9.0	0	170	43	16	4.6	5	.2	1.0
BROWN												
441609087585101		80-05-28	7.1	9.0	58	370	73	45	4.6	3	.1	1.0
441849088051801		80-08-08	7.3	14.5	800	960	298	48	110	20	1.6	15
		80-08-15	7.2	15.0	870	1000	318	48	120	21	1.7	16
		80-08-18	7.3	14.5	840	990	305	50	120	21	1.8	15
442708088045701		80-05-14	7.4	10.5	34	240	53	26	17	13	.5	4.7
CALUMET												
440127088092401		80-05-28	7.1	9.5	160	540	110	65	67	21	1.3	2.1
440417088172701		79-11-14	7.8	10.0	--	150	38	14	51	40	1.8	12
440941088154301		79-12-04	--	14.0	--	--	--	--	--	--	--	--
CHIPPEWA												
445400091281101		80-06-18	6.2	12.0	45	67	16	6.6	3.7	11	.2	1.2
450512091385101		80-06-18	5.6	10.0	68	92	25	7.1	4.1	9	.2	1.6
451214091334301		80-07-30	6.5	10.0	29	45	11	4.3	4.4	17	.3	.9
CLARK												
443841090393001		80-08-20	6.7	10.3	41	120	34	8.9	7.7	12	.3	1.0
445052090382101		80-06-18	5.2	11.0	12	25	5.8	2.5	4.0	25	.4	.7
COLUMBIA												
431849089311002		80-07-24	7.7	11.0	0	250	51	29	2.5	2	.1	.9
433220089282601		80-09-05	7.4	12.5	25	340	65	42	1.8	1	.0	.6
433714089012201		80-07-08	7.3	8.0	69	380	79	44	5.3	3	.1	2.2
CRAWFORD												
431946090442701		80-05-21	7.2	10.0	63	470	92	59	58	21	1.2	.6
432336090460601		80-08-28	7.6	11.5	20	240	50	28	1.7	2	.1	1.0

QUALITY OF GROUND WATER

WATER-QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

STATION NUMBER	DATE OF SAMPLE	ALKA-LINITY (MG/L AS CaCO ₃)	SULFIDE TOTAL (MG/L AS S)	SULFATE DIS- SOLVED (MG/L AS SO ₄)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	BROMIDE DIS- SOLVED (MG/L AS BR)	SILICA, DIS- SOLVED (MG/L AS SiO ₂)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, SUM OF CONSTITUENTS, DIS- SOLVED (MG/L)	NITRO- GEN, NITRATE DIS- SOLVED (MG/L AS N)
ADAMS											
435743089485701	80-08-21	90	.0	4.2	.7	.2	.0	8.9	--	102	.25
435743089485901	80-08-21	--	--	--	--	--	--	--	--	--	--
440146089364401	80-09-05	--	--	--	12	--	--	--	--	--	10
440146089364402	80-09-05	--	--	--	44	--	--	--	--	--	12
440151089363001	80-09-03	--	--	--	.9	--	--	--	--	--	.98
440151089363002	80-09-03	--	--	--	.6	--	--	--	--	--	.49
440159089370501	80-09-03	--	--	--	50	--	--	--	--	--	13
440159089370502	80-09-03	--	--	--	1.4	--	--	--	--	--	.56
450158089364701	80-06-11	81	--	8.8	11	--	--	--	176	--	6.1
	80-09-03	85	--	11	23	--	--	--	202	--	10
440207089363001	80-09-03	--	--	--	12	--	--	--	--	--	8.0
440207089363002	80-09-03	--	--	--	8.9	--	--	--	--	--	7.4
440211089365101	80-09-03	--	--	--	1.0	--	--	--	--	--	4.5
440211089365102	80-09-03	--	--	--	.6	--	--	--	--	--	.50
ASHLAND											
462309090413101	80-06-19	74	--	14	390	.5	--	6.8	772	735	.04
462956090541101	80-06-19	45	--	53	1300	.3	--	4.1	2840	2200	.02
BARRON											
451840091391301	80-08-04	27	.0	7.0	7.4	.2	.5	20	--	84	2.5
453145092012301	80-07-28	180	.0	2.7	8.7	.1	.2	28	--	218	1.1
BROWN											
441609087585101	80-05-28	310	--	51	14	.2	--	18	447	405	2.7
441849088051801	80-08-08	160	.0	870	170	1.3	.9	9.8	--	1640	.02
	80-08-15	140	.3	990	160	1.9	.9	8.1	--	1770	.02
	80-08-18	150	--	960	180	1.8	.8	8.7	--	1750	.00
442708088045701	80-05-14	210	--	51	18	2.0	--	6.9	313	309	.01
CALUMET											
440127088092401	80-05-28	380	--	83	160	.1	--	17	749	745	2.8
440417088172701	79-11-14	250	--	.9	6.2	1.5	.1	7.7	--	--	.19
440941088154301	79-12-04	--	--	--	--	--	--	--	--	--	--
CHIPPEWA											
445400091281101	80-06-18	22	--	13	16	.1	--	20	134	116	6.0
450512091385101	80-06-18	24	--	21	15	--	--	--	172	--	9.9
451214091334301	80-07-30	16	3.4	2.3	18	.1	.3	23	--	84	2.3
CLARK											
443841090393001	80-08-20	81	.0	14	17	.2	.1	20	--	184	7.3
445052090382101	80-06-18	13	--	3.6	3.4	.1	--	30	83	69	2.6
COLUMBIA											
431849089311002	80-07-24	270	.0	3.0	.8	.1	.2	13	--	265	.54
433220089282601	80-09-05	310	.0	32	5.0	.1	.4	7.1	--	345	.80
433714089012201	80-07-08	310	--	44	19	--	--	--	507	--	12
CRAWFORD											
431946090442701	80-05-21	410	--	21	130	.1	--	11	718	650	7.2
432336090460601	80-08-28	220	.0	17	.9	.1	.3	11	--	243	.07

QUALITY OF GROUND WATER

WATER-QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

STATION NUMBER	DATE OF SAMPLE	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N)	NITRO-GEN, ORGANIC DIS-SOLVED (MG/L AS N)	NITRO-GEN, AM-MONIA + ORGANIC DIS-SOLVED (MG/L AS N)	PHOS-PHORUS, DIS-SOLVED (MG/L AS P)	PHOS-PHORUS, ORTHOPHOSPHATE DISSOL. (MG/L AS P)	ARSENIC DIS-SOLVED (UG/L AS AS)	BARIUM, DIS-SOLVED (UG/L AS BA)	BERYL-LIUM, DIS-SOLVED (UG/L AS BE)
ADAMS											
435743089485701	80-08-21	.000	.25	--	--	--	.150	.140	1	40	3
435743089485901	80-08-21	--	--	--	--	--	--	--	--	--	--
440146089364401	80-09-05	.000	10	.000	--	--	--	--	--	--	--
440146089364402	80-09-05	.000	12	.000	--	--	--	--	--	--	--
440151089363001	80-09-03	.000	.98	.000	--	--	--	--	--	--	--
440151089363002	80-09-03	.000	.49	.000	--	--	--	--	--	--	--
440159089370501	80-09-03	.000	13	.000	--	--	--	--	--	--	--
440159089370502	80-09-03	.000	.56	.000	--	--	--	--	--	--	--
450158089364701	80-06-11	.000	6.1	.010	.12	.13	.020	.010	1	10	--
	80-09-03	.000	10	.000	.14	.14	.040	.020	0	100	--
440207089363001	80-09-03	.010	8.0	.000	--	--	--	--	--	--	--
440207089363002	80-09-03	.000	7.4	.020	--	--	--	--	--	--	--
440211089365101	80-09-03	.010	4.5	.030	--	--	--	--	--	--	--
440211089365102	80-09-03	.000	.50	.000	--	--	--	--	--	--	--
ASHLAND											
462309090413101	80-06-19	.010	.05	--	--	--	--	--	--	--	--
462956090541101	80-06-19	.000	.02	--	--	--	--	--	--	--	--
BARRON											
451840091391301	80-08-04	.000	2.5	--	--	--	.480	.350	0	20	0
453145092012301	80-07-28	.000	1.1	--	--	--	.050	.040	1	10	0
BROWN											
441609087585101	80-05-28	.000	2.7	--	--	--	--	--	--	--	--
441849088051801	80-08-08	.000	.02	--	--	--	.010	.000	7	20	0
	80-08-15	.000	.02	--	--	--	.000	.000	2	30	0
	80-08-18	.010	.01	--	--	--	.020	.000	4	30	1
442708088045701	80-05-14	.000	.01	--	--	--	--	--	--	--	--
CALUMET											
440127088092401	80-05-28	.000	2.8	--	--	--	--	--	--	--	--
440417088172701	79-11-14	.020	.21	--	--	--	.000	.000	0	80	1
440941088154301	79-12-04	--	--	--	--	--	--	--	--	--	--
CHIPPEWA											
445400091281101	80-06-18	.010	6.0	--	--	--	--	--	--	--	--
450512091385101	80-06-18	.000	9.9	.020	.05	.07	.540	.540	0	6	--
451214091334301	80-07-30	.010	2.3	--	--	--	.370	.280	1	30	0
CLARK											
443841090393001	80-08-20	.000	7.3	--	--	--	.050	.030	1	60	0
445052090382101	80-06-18	.000	2.6	--	--	--	--	--	--	--	--
COLUMBIA											
431849089311002	80-07-24	.000	.54	--	--	--	.010	.010	4	30	0
433220089282601	80-09-05	.000	.80	--	--	--	.050	.000	1	40	0
433714089012201	80-07-08	.000	12	.000	.01	.01	.090	.070	0	100	--
CRAWFORD											
431946090442701	80-05-21	.000	7.2	--	--	--	--	--	--	--	--
432336090460601	80-08-28	.000	.07	--	--	--	.010	.000	1	50	0

QUALITY OF GROUND WATER

WATER-QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

STATION	NUMBER	DATE OF SAMPLE	BORON, DIS- SOLVED (UG/L AS B)	CADMIUM DIS- SOLVED (UG/L AS CD)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR)	COBALT, DIS- SOLVED (UG/L AS CO)	COPPER, DIS- SOLVED (UG/L AS CU)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	IRON, SUS- PENDE RECOV- ERABLE (UG/L AS FE)	IRON, DIS- SOLVED (UG/L AS FE)	LEAD, DIS- SOLVED (UG/L AS PB)	LITHIUM DIS- SOLVED (UG/L AS LI)
ADAMS												
435743089485701		80-08-21	8	2	--	<3	<10	160	--	<3	<10	<4
435743089485901		80-08-21	--	--	--	--	--	--	--	--	--	--
440146089364401		80-09-05	--	--	--	--	--	--	--	--	--	--
440146089364402		80-09-05	--	--	--	--	--	--	--	--	--	--
440151089363001		80-09-03	--	--	--	--	--	--	--	--	--	--
440151089363002		80-09-03	--	--	--	--	--	--	--	--	--	--
440159089370501		80-09-03	--	--	--	--	--	--	--	--	--	--
440159089370502		80-09-03	--	--	--	--	--	--	--	--	--	--
450158089364701		80-06-11	40	1	--	--	0	--	--	10	0	--
		80-09-03	20	0	--	--	2	--	--	20	2	--
440207089363001		80-09-03	--	--	--	--	--	--	--	--	--	--
440207089363002		80-09-03	--	--	--	--	--	--	--	--	--	--
440211089365101		80-09-03	--	--	--	--	--	--	--	--	--	--
440211089365102		80-09-03	--	--	--	--	--	--	--	--	--	--
ASHLAND												
462309090413101		80-06-19	--	--	--	--	--	--	--	0	--	--
462956090541101		80-06-19	--	--	--	--	--	--	--	18000	--	--
BARRON												
451840091391301		80-08-04	0	2	--	<3	<10	130	110	25	<10	<4
453145092012301		80-07-28	20	3	--	<3	<10	110	--	<3	14	6
BROWN												
441609087585101		80-05-28	--	--	--	--	--	--	--	0	--	--
441849088051801		80-08-08	400	4	--	<3	<10	2700	200	2500	18	90
		80-08-15	310	4	--	<3	<10	4600	200	4400	21	100
		80-08-18	330	4	--	<3	<10	3600	0	3700	21	98
442708088045701		80-05-14	--	--	--	--	--	--	--	220	--	--
CALUMET												
440127088092401		80-05-28	--	--	--	--	--	--	--	40	--	--
440417088172701		79-11-14	1300	<1	--	5	<10	300	--	130	<10	59
440941088154301		79-12-04	--	--	--	--	--	--	--	--	--	--
CHIPPEWA												
445400091281101		80-06-18	--	--	--	--	--	--	--	20	0	--
450512091385101		80-06-18	--	0	3	--	51	--	--	--	0	--
451214091334301		80-07-30	0	<1	--	<3	<10	90	--	<3	<10	<4
CLARK												
443841090393001		80-08-20	10	6	--	<3	10	480	--	<3	13	5
445052090382101		80-06-18	--	--	--	--	--	--	--	10	--	--
COLUMBIA												
431849089311002		80-07-24	6	3	--	<3	<10	40	--	<3	<10	<4
433220089282601		80-09-05	0	3	--	<3	11	750	740	9	<10	<4
433714089012201		80-07-08	--	3	1	--	3	--	--	--	0	--
CRAWFORD												
431946090442701		80-05-21	--	--	--	--	--	--	--	30	--	--
432336090460601		80-08-28	20	3	--	<3	<10	360	50	310	17	<4

QUALITY OF GROUND WATER

WATER-QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

STATION NUMBER	DATE OF SAMPLE	MANGANESE, DIS-SOLVED (UG/L AS MN)	MERCURY DIS-SOLVED (UG/L AS HG)	MOLYBDENUM, DIS-SOLVED (UG/L AS MO)	SELENIUM, DIS-SOLVED (UG/L AS SE)	STRONTIUM, DIS-SOLVED (UG/L AS SR)	VANADIUM, DIS-SOLVED (UG/L AS V)	ZINC, DIS-SOLVED (UG/L AS ZN)	RA-226, DIS-SOLVED, PLAN-CHET COUNT (PCI/L)	URANIUM NATURAL DIS-SOLVED (UG/L AS U)	CARBON, ORGANIC DIS-SOLVED (MG/L AS C)
ADAMS											
435743089485701	80-08-21	260	--	<10	0	39	<6.0	10	.5	2.0	--
435743089485901	80-08-21	--	--	--	--	--	--	--	--	--	--
440146089364401	80-09-05	--	--	--	--	--	--	--	--	--	--
440146089364402	80-09-05	--	--	--	--	--	--	--	--	--	--
440151089363001	80-09-03	--	--	--	--	--	--	--	--	--	--
440151089363002	80-09-03	--	--	--	--	--	--	--	--	--	--
440159089370501	80-09-03	--	--	--	--	--	--	--	--	--	--
440159089370502	80-09-03	--	--	--	--	--	--	--	--	--	--
450158089364701	80-06-11	3	<.1	0	--	--	--	0	--	--	.8
	80-09-03	0	<.1	0	--	--	--	20	--	--	3.5
440207089363001	80-09-03	--	--	--	--	--	--	--	--	--	--
440207089363002	80-09-03	--	--	--	--	--	--	--	--	--	--
440211089365101	80-09-03	--	--	--	--	--	--	--	--	--	--
440211089365102	80-09-03	--	--	--	--	--	--	--	--	--	--
ASHLAND											
462309090413101	80-06-19	30	--	--	--	640	--	--	--	--	--
462956090541101	80-06-19	1000	--	--	--	4900	--	--	--	--	--
BARRON											
451840091391301	80-08-04	2	--	<10	0	43	<6.0	14	--	--	--
453145092012301	80-07-28	110	--	<10	0	63	<6.0	4	--	--	--
BROWN											
441609087585101	80-05-28	3	--	--	--	--	--	--	--	--	--
441849088051801	80-08-08	65	--	<10	0	15000	<6.0	35	8.9	1.4	--
	80-08-15	87	--	<10	0	15000	<6.0	39	11	<.7	--
	80-08-18	86	--	<10	0	16000	<6.0	190	6.0	1.1	--
442708088045701	80-05-14	10	--	--	--	4200	--	--	--	--	--
CALUMET											
440127088092401	80-05-28	30	--	--	--	160	--	--	--	--	--
440447088172701	79-11-14	13	--	<10	0	1500	<6.0	29	.5	3.3	--
440941088154301	79-12-04	--	--	--	--	--	--	--	--	--	--
CHIPPEWA											
445400091281101	80-06-18	4	--	--	--	--	--	--	--	--	--
450512091385101	80-06-18	--	<.1	--	3	--	--	0	--	--	--
451214091334301	80-07-30	<1	--	<10	0	36	<6.0	32	--	--	--
CLARK											
443841090393001	80-08-20	5	--	<10	0	58	<6.0	13	.4	<.6	--
445052090382101	80-06-18	2	--	--	--	20	--	--	--	--	--
COLUMBIA											
431849089311002	80-07-24	<1	--	<10	0	46	<6.0	6	<.1	.9	--
433220089282601	80-09-05	5	--	<10	0	44	<6.0	720	.2	<.6	--
433714089012201	80-07-08	--	.1	--	0	--	--	20	--	--	--
CRAWFORD											
431946090442701	80-05-21	4	--	--	--	80	--	--	--	--	--
432336090460601	80-08-28	14	--	<10	0	40	<6.0	210	.9	<.6	--

QUALITY OF GROUND WATER

WATER-QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

STATION NUMBER	LOCAL IDENT- I- FIER	AQUIFER	GEO- LOGIC UNIT	DEPTH OF WELL, TOTAL (FEET)	DATE OF SAMPLE	DEPTH TO BOT- TOM OF SAMPLE INTER- VAL (FT)	DEPTH TO TOP OF SAMPLE INTER- VAL (FT)	FLOW RATE, INSTAN- TANEOUS (GPM)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)
DANE									
430004089381801	DN-06/07E/14-0473	300SNDS	--	65	80-09-04	--	--	--	580
430007089361901	DN-06/07E/13-0463	300SNDS	--	131	80-09-04	--	--	--	630
430022089405801	DN-06/07E/08-0474	300SNDS	--	241	80-09-04	--	--	--	760
430031089353101	DN-06/08E/07-0453	300SNDS	--	125	80-09-04	--	--	--	670
430032089310501	DN-06/09E/07-0202	300SNDS	--	300	80-09-02	--	--	--	470
430038089372001	DN-06/07E/11-0465	300SNDS	--	150	80-09-04	--	--	--	1000
430058089251401	DN-06/09E/04-0981	300SNDS	372MNSN	1000	80-07-22	--	--	987	440
				1000	80-09-02	--	--	--	520
430104089250401	DN-06/09E/03-0127	300SNDS	--	162	80-08-22	--	--	--	560
430113089485001	DN/06/06E/05-0117	300SNDS	--	490	80-09-04	--	--	--	630
430128089465601	DN-06/06E/04-0485	300SNDS	--	105	80-09-04	--	--	--	680
430134089342501	DN-06/08E/05-0305	300SNDS	--	380	80-09-04	--	--	--	500
430136089274301	DN-06/09E/05-0882	300SNDS	372WNV	310	80-05-12	263	245	112	890
430147089232801	DN-06/09E/02-0724	300SNDS	--	148	80-09-05	--	--	--	>1000
430201089212601	DN-07/10E/30-0121	300SNDS	--	828	80-09-03	--	--	--	440
430230089181801	DN-07/10E/27-0846	300SNDS	--	297	80-09-03	--	--	--	570
430251089313001	DN-07/08E/27-0964	300SNDS	--	525	80-09-05	--	--	--	670
430531089351401	DN-07/08E/07-0224	100SDGV	--	71	80-09-05	--	--	--	680
430630089212201	DN-08/10E/31-0075	300SNDS	--	730	80-09-03	--	--	--	>1000
430747089225101	DN-08/09E/36-0070	300SNDS	--	222	80-09-03	--	--	--	680
431045089151601	DN-08/10E/01-0941	300SNDS	--	884	80-09-03	--	--	--	640
431331089212601	DN-09/10E/19-0906	300SNDS	--	290	80-09-03	--	--	--	470
431645089341001	DN-09/08E/08-1135	100SDGV	--	60	80-09-06	--	--	5.0	480
DODGE									
432717088501701	DG-11/14E/04-0025	300SNDS	372DRBC	585	80-09-05	--	--	1350	500
432947088304601	DG-12/17E/19-1010	365GLPV	365SNNP	495	79-10-16	--	--	--	1090
433034088595801	DG-12/13E/18-1012	365GLPV	365SNNP	105	79-11-14	105	63	--	675
433729088265401	DG-13/17E/03-0094	300SNDS	--	1273	80-05-27	--	--	--	680
DOOR									
450955087132501	DR-31/27E/16-0018	362MQKS	--	452	80-05-16	--	--	--	2150
DUNN									
445330091554901	DU-28/13W/23-0007	300SNDS	394 EAU CLAIRE	394	80-07-31	--	--	808	375
444034091072901	EC-25/06W/04-0065	300SNDS	372ECLR	88	80-08-07	--	--	180	90
444811091261302	EC-27/09W/23-0078	300SNDS	372MNSN	188	80-08-15	--	--	189	133
424423090552801	GR-03/05W/14-0028	365GLPV	365SNNP	280	80-08-26	--	--	9.0	915
431108090263101	GR-08/01W/12-0020	300SNDS	372ECLR GREEN	650	80-08-29	--	--	148	460
423442089494201	GN-01/06E/07-0016	300SNDS	--	140	80-08-27	--	--	--	580
423555089362401	GN-02/07E/36-0041	300SNDS	--	200	80-08-26	--	--	--	820
423723089392601	GN-02/07E/27-0010	300SNDS	--	713	80-08-26	--	--	--	560
423751089462801	GN-02/06E/22-0033	300SNDS	--	80	80-08-26	--	--	--	680
424026089485701	GN-02/06E/05-0032	300SNDS	--	151	80-08-27	--	--	--	540
424044089372301	GN-02/07E/02-0040	300SNDS	--	180	80-08-26	--	--	--	930
424450089220701	GN-03/09E/12-0079	350SLDL	--	100	80-09-05	--	--	5.0	700
GREEN LAKE									
434039088583301	GL-14/13E/17-0043	300SNDS	--	110	80-05-23	--	--	--	860
IOWA									
430055089534001	IW-06/05E/10-0004	300SNDS	365STPR	307	80-07-18	--	--	135	520
430117090173201	IW-06/02E/06-0142	300SNDS	372JRDN	325	80-08-27	--	--	22	500
430132090172601	IW-06/02E/05-0141	300SNDS	365STPR	72	80-08-27	--	--	3.0	120
430323090121601	IW-07/02E/25-0131	300SNDS	--	275	80-05-21	--	--	--	570
430536090152101	IW-07/02E/09-0214	100SDGV	--	20	80-08-27	--	--	1.0	385
430954089592901	IW-08/04E/14-0053	100SDGV	--	110	80-07-08	--	--	--	300
JACKSON									
442045090453601	JA-22/03W/33-0037	300SNDS	372MNSN	90	80-08-20	--	--	180	45
442451090440801	JA-22/03W/03-0039	400BCPX	--	25	80-06-18	--	--	--	210
JEFFERSON									
431130088561001	JE-08/13E/03-0823	400BCPX	--	278	80-05-22	--	--	--	1180
LA CROSSE									
434646091113701	LC-15/07W/15-0079	300SNDS	372MNSN	457	80-08-12	--	--	247	377
435135091114601	LC-16/07W/15-0037	300SNDS	372ECLR	245	80-08-12	--	--	94	430

QUALITY OF GROUND WATER

WATER-QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

STATION NUMBER	DATE OF SAMPLE	PH FIELD (UNITS)	TEMPERATURE, WATER (DEG C)	HARDNESS, NONCARBONATE (MG/L CaCO3)	HARDNESS (MG/L AS CaCO3)	CALCIUM DIS-SOLVED (MG/L AS Ca)	MAGNESIUM, DIS-SOLVED (MG/L AS Mg)	SODIUM, DIS-SOLVED (MG/L AS Na)	PERCENT SODIUM	SODIUM ADSORPTION RATIO	POTASSIUM, DIS-SOLVED (MG/L AS K)
DANE											
430004089381801	80-09-04	7.1	10.5	42	310	64	37	2.3	2	.1	5.3
430007089361901	80-09-04	7.4	11.0	70	360	75	42	2.6	2	.1	.5
430022089405801	80-09-04	7.1	12.5	110	410	78	53	12	6	.3	2.3
430031089353101	80-09-04	7.0	10.0	100	340	72	40	7.7	5	.2	2.1
430032089310501	80-09-02	7.0	11.5	53	260	54	31	3.5	3	.1	3.5
430038089372001	80-09-04	4.5	13.0	220	220	54	20	64	37	1.9	12
430058089251401	80-07-22	7.6	13.0	--	--	--	--	--	--	--	--
	80-09-02	7.3	11.0	32	290	61	34	2.8	2	.1	1.5
430104089250401	80-08-22	6.9	11.0	27	280	58	32	3.1	2	.1	1.3
430113089485001	80-09-04	7.3	9.5	56	360	70	44	2.0	1	.0	1.6
430128089465601	80-09-04	7.1	12.0	58	340	71	39	3.9	2	.1	3.1
430134089342501	80-09-04	7.1	12.0	28	260	52	31	2.7	2	.1	6.8
430136089274301	80-05-12	7.5	11.5	120	440	94	49	21	9	.5	1.1
430147089232801	80-09-05	7.2	11.5	150	460	100	51	23	10	.5	1.6
430201089212601	80-09-03	7.2	11.0	9	290	58	35	3.6	3	.1	1.5
430230089181801	80-09-03	7.1	13.0	9	330	64	41	3.7	2	.1	1.0
430251089313001	80-09-05	7.3	10.0	63	360	76	42	6.9	4	.2	.6
430531089351401	80-09-05	7.3	10.5	52	400	85	46	2.4	1	.1	.8
430630089212201	80-09-03	7.2	10.5	130	450	94	53	16	7	.3	2.3
430747089225101	80-09-03	7.1	11.5	20	320	59	42	6.3	4	.2	1.0
431045089151601	80-09-03	7.2	9.5	30	340	70	40	3.4	2	.1	.8
431331089212601	80-09-03	7.6	9.5	10	240	53	26	1.6	1	.0	2.4
431645089341001	80-09-06	7.3	11.0	--	--	--	--	--	--	--	--
DODGE											
432717088501701	80-09-05	7.3	12.3	--	280	60	31	3.7	3	.1	1.7
432947088304601	79-10-16	7.0	10.0	--	440	112	37	46	18	1.0	22
433034088595801	79-11-14	7.5	9.0	--	380	80	43	8.4	5	.2	1.4
433729088265401	80-05-27	7.7	13.0	95	270	58	28	31	20	.8	3.9
DOOR											
450955087132501	80-05-16	7.1	8.0	1100	1300	330	110	9.4	2	.1	4.4
DUNN											
445330091554901	80-07-31	7.3	10.5	13	200	45	22	7.8	8	.3	1.7
EAU CLAIRE											
444034091072901	80-08-07	6.1	9.5	13	33	7.7	3.4	2.9	15	.2	1.1
444811091261302	80-08-15	6.8	11.5	0	270	63	27	2.1	2	.1	2.0
GRANT											
424423090552801	80-08-26	7.1	11.5	160	520	115	57	17	7	.4	.7
431108090263101	80-08-29	7.4	13.5	24	270	57	32	5.2	4	.2	1.5
GREEN											
423442089494201	80-08-27	7.4	14.0	43	350	62	48	2.1	1	.0	1.3
423555089362401	80-08-26	6.9	10.5	69	450	94	52	2.9	1	.1	.3
423723089392601	80-08-26	7.3	11.0	22	300	60	37	3.0	2	.1	.6
423751089462801	80-08-26	7.1	14.0	0	13	.9	2.7	160	96	19	.4
424026089485701	80-08-27	7.3	12.5	--	--	--	--	--	--	--	--
424044089372301	80-08-26	7.0	10.5	100	430	88	52	7.8	4	.2	2.4
424450089220701	80-09-05	7.3	12.0	--	--	--	--	--	--	--	--
GREEN LAKE											
434039088583301	80-05-23	7.3	8.5	59	390	80	46	20	10	.4	.7
IOWA											
430055089534001	80-07-18	7.3	12.0	30	320	67	37	6.0	4	.2	1.0
430117090173201	80-08-27	7.6	10.5	23	290	63	33	2.3	2	.1	.8
430132090172601	80-08-27	6.8	10.5	13	55	12	6.1	3.2	11	.2	.7
430323090121601	80-05-21	7.4	9.5	26	290	60	33	3.3	2	.1	.6
430536090152101	80-08-27	7.6	11.0	--	--	--	--	--	--	--	--
430954089592901	80-07-08	7.8	11.0	49	130	28	15	2.0	3	.1	.8
JACKSON											
442045090453601	80-08-20	6.4	10.0	0	12	2.8	1.2	1.2	16	.2	1.4
442451090440801	80-06-18	6.1	11.0	4	24	6.3	1.9	27	69	2.4	1.8
JEFFERSON											
431130088561001	80-05-22	6.8	8.5	8	460	86	59	22	8	.4	56
LA CROSSE											
434646091113701	80-08-12	8.0	12.5	9	250	55	27	1.8	2	.1	1.5
435135091114601	80-08-12	7.4	10.5	25	220	45	25	1.7	2	.1	1.2

QUALITY OF GROUND WATER

WATER-QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

STATION NUMBER	DATE OF SAMPLE	ALKA-LINITY (MG/L AS CaCO3)	SULFIDE TOTAL (MG/L AS S)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	BROMIDE DIS-SOLVED (MG/L AS BR)	SILICA, DIS-SOLVED (MG/L AS SiO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	NITRO-GEN, NITRATE DIS-SOLVED (MG/L AS N)
DANE											
430004089381801	80-09-04	270	--	16	2.9	.1	--	10	317	312	2.6
430007089361901	80-09-04	290	--	12	6.5	.1	--	13	348	354	6.3
430022089405801	80-09-04	300	--	25	22	.2	--	8.2	445	434	12
430031089353101	80-09-04	240	--	20	23	.1	--	13	395	384	14
430032089310501	80-09-02	210	--	22	8.7	.1	--	15	272	271	1.6
430038089372001	80-09-04	2	--	38	150	.3	--	18	538	523	37
430058089251401	80-07-22	--	--	--	--	--	--	--	--	--	--
	80-09-02	260	--	16	1.4	.1	--	11	282	285	.03
430104089250401	80-08-22	250	--	9.3	5.0	.2	--	16	300	288	2.8
430113089485001	80-09-04	300	--	29	6.4	.2	--	9.7	354	346	.64
430128089465601	80-09-04	280	--	21	8.2	.1	--	11	360	353	6.1
430134089342501	80-09-04	230	--	8.7	11	.1	--	12	276	264	.14
430136089274301	80-05-12	320	--	34	91	.1	.0	20	--	523	4.5
430147089232801	80-09-05	310	--	29	77	.1	--	14	550	493	2.3
430201089212601	80-09-03	280	--	13	1.9	.2	--	12	289	295	.17
430230089181801	80-09-03	320	--	3.8	.8	.2	--	22	316	330	.10
430251089313001	80-09-05	300	--	13	18	.1	--	14	362	360	2.1
430531089351401	80-09-05	350	--	9.6	3.4	.1	--	21	371	387	1.8
430630089212201	80-09-03	320	--	79	37	.1	--	15	537	490	.01
430747089225101	80-09-03	300	--	41	10	.2	--	21	433	372	2.4
431045089151601	80-09-03	310	--	7.9	2.3	.2	--	17	336	336	1.8
431331089212601	80-09-03	230	--	1.1	.9	.1	--	15	232	246	1.7
431645089341001	80-09-06	--	--	--	--	--	--	--	--	--	--
DODGE											
432717088501701	80-09-05	--	.0	21	3.7	.3	.3	9.4	--	27	.07
432947088304601	79-10-16	440	5.5	120	9.8	.9	.1	7.7	--	--	.01
433034088595801	79-11-14	290	.0	78	38	.1	.3	17	--	--	.00
433729088265401	80-05-27	170	--	52	68	.5	--	7.8	397	356	.01
DOOR											
450955087132501	80-05-16	170	--	1200	22	1.7	--	8.6	2080	1790	.02
DUNN											
445330091554901	80-07-31	190	.0	5.6	9.8	.1	.3	11	--	218	.01
EAU CLAIRE											
444034091072901	80-08-07	20	.0	12	3.6	.2	.1	21	--	68	.76
444811091261302	80-08-15	280	.0	33	1.7	.2	.1	10	--	309	.20
GRANT											
424423090552801	80-08-26	360	.0	47	41	.2	.4	26	--	636	26
431108090263101	80-08-29	250	.2	6.0	5.3	.2	.2	12	--	271	.02
GREEN											
423442089494201	80-08-27	310	--	15	3.1	.2	--	12	338	337	1.4
423555089362401	80-08-26	380	--	20	5.0	.2	--	19	456	451	6.6
423723089392601	80-08-26	280	--	9.4	1.6	.2	--	13	293	295	.44
423751089462801	80-08-26	290	--	28	5.2	.1	--	11	419	384	.25
424026089485701	80-08-27	270	--	14	1.5	.2	--	--	301	--	.00
424044089372301	80-08-26	330	--	41	17	.1	--	11	493	467	11
424450089220701	80-09-05	--	--	--	--	--	--	--	--	--	--
GREEN LAKE											
434039088583301	80-05-23	330	--	27	46	.2	--	15	511	471	8.4
IOWA											
430055089534001	80-07-18	290	.0	28	13	.1	.9	6.7	--	359	5.7
430117090173201	80-08-27	270	.0	16	4.5	.2	.3	13	--	307	2.5
430132090172601	80-08-27	42	.0	13	2.8	.1	.3	22	--	89	.71
430323090121601	80-05-21	260	--	11	6.4	.1	--	13	324	302	4.1
430536090152101	80-08-27	--	--	--	--	--	--	--	--	--	--
430954089592901	80-07-08	83	--	11	8.1	--	--	--	176	--	8.7
JACKSON											
442045090453601	80-08-20	13	.0	6.1	1.3	.1	.0	11	--	36	.68
442451090440801	80-06-18	20	--	11	35	.1	--	5.6	95	105	.06
JEFFERSON											
431130088561001	80-05-22	450	--	65	40	.1	--	18	694	653	8.1
LA CROSSE											
434646091113701	80-08-12	240	.0	18	1.9	.1	.3	11	--	262	.06
435135091114601	80-08-12	190	.2	17	.7	.1	.1	10	--	215	.01

QUALITY OF GROUND WATER

WATER-QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

STATION	NUMBER	DATE OF SAMPLE	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N)	NITRO- GEN, ORGANIC DIS- SOLVED (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC DIS- SOLVED (MG/L AS N)	PHOS- PHORUS, DIS- SOLVED (MG/L AS P)	PHOS- PHORUS, ORTHOPH OSPHATE DISSOL. (MG/L AS P)	ARSENIC DIS- SOLVED (UG/L AS AS)	BARIUM, DIS- SOLVED (UG/L AS BA)	BERYL- LIUM, DIS- SOLVED (UG/L AS BE)
DANE												
430004089381801		80-09-04	.000	2.6	.000	.06	.06	--	--	--	0	--
430007089361901		80-09-04	.000	6.3	.000	.01	.01	--	--	--	0	--
430022089405801		80-09-04	.000	12	.010	.00	.01	--	--	--	0	--
430031089353101		80-09-04	.000	14	.000	.01	.01	--	--	--	0	--
430032089310501		80-09-02	.000	1.6	.000	.01	.01	--	--	--	0	--
430038089372001		80-09-04	.000	37	.140	.00	.02	--	--	--	0	--
430058089251401		80-07-22	--	--	--	--	--	--	--	--	--	--
		80-09-02	.000	.03	.030	.12	.15	--	--	--	0	--
430104089250401		80-08-22	.000	2.8	.000	.05	.05	--	--	--	0	--
430113089485001		80-09-04	.000	.64	.000	.01	.01	--	--	--	0	--
430128089465601		80-09-04	.000	6.1	.000	.01	.01	--	--	--	0	--
430134089342501		80-09-04	.000	.14	.110	.15	.26	--	--	--	0	--
430136089274301		80-05-12	.020	4.5	--	--	--	.040	.030	2	90	0
430147089232801		80-09-05	.020	2.3	.000	.04	.04	--	--	--	100	--
430201089212601		80-09-03	.000	.17	.100	.10	.20	--	--	--	0	--
430230089181801		80-09-03	.000	.10	.030	.00	.01	--	--	--	100	--
430251089313001		80-09-05	.000	2.1	.000	.02	.02	--	--	--	0	--
430531089351401		80-09-05	.010	1.8	.020	.00	.01	--	--	--	0	--
430630089212201		80-09-03	.000	.01	.110	.02	.13	--	--	--	0	--
430747089225101		80-09-03	.000	2.4	.000	.21	.21	--	--	--	0	--
431045089151601		80-09-03	.000	1.8	.000	.01	.01	--	--	--	0	--
431331089212601		80-09-03	.000	1.7	.020	.00	.02	--	--	--	100	--
431645089341001		80-09-06	--	--	--	--	--	--	--	--	--	--
DODGE												
432717088501701		80-09-05	.000	.07	--	--	--	.070	.000	1	250	0
432947088304601		79-10-16	.000	.01	--	--	--	.010	.000	0	30	0
433034088595801		79-11-14	.010	.00	--	--	--	.000	.020	0	100	0
433729088265401		80-05-27	.000	.01	--	--	--	--	--	--	--	--
DOOR												
450955087132501		80-05-16	.010	.03	--	--	--	--	--	--	--	--
DUNN												
445330091554901		80-07-31	.000	.01	--	--	--	.010	.000	0	50	0
EAU CLAIRE												
444034091072901		80-08-07	.020	.78	--	--	--	.280	.190	0	20	5
444811091261302		80-08-15	.040	.24	--	--	--	.000	.000	0	50	2
GRANT												
424423090552801		80-08-26	.000	26	--	--	--	.060	.050	1	160	0
431108090263101		80-08-29	.000	.02	--	--	--	.010	.000	1	50	0
GREEN												
423442089494201		80-08-27	.000	1.4	.090	.12	.21	--	--	--	100	--
423555089362401		80-08-26	.000	6.6	.000	.01	.01	--	--	--	0	--
423723089392601		80-08-26	.000	.44	.000	.05	.05	--	--	--	0	--
423751089462801		80-08-26	.000	.25	.000	.17	.17	--	--	--	100	--
424026089485701		80-08-27	.000	.00	.000	.02	.02	--	--	--	--	--
424044089372301		80-08-26	.000	11	.000	.30	.30	--	--	--	100	--
424450089220701		80-09-05	--	--	--	--	--	--	--	--	--	--
GREEN LAKE												
434039088583301		80-05-23	.000	8.4	--	--	--	--	--	--	--	--
IOWA												
430055089534001		80-07-18	.000	5.7	--	--	--	.050	.020	1	60	0
430117090173201		80-08-27	.000	2.5	--	--	--	.010	.000	1	30	0
430132090172601		80-08-27	.000	.71	--	--	--	.020	.010	1	30	0
430323090121601		80-05-21	.000	4.1	--	--	--	--	--	--	--	--
430536090152101		80-08-27	--	--	--	--	--	--	--	--	--	--
430954089592901		80-07-08	.010	8.7	.020	.00	.01	.040	.030	1	20	--
JACKSON												
442045090453601		80-08-20	.000	.68	--	--	--	.040	.010	2	20	3
442451090440801		80-06-18	.010	.07	--	--	--	--	--	--	--	--
JEFFERSON												
431130088561001		80-05-22	.140	8.2	--	--	--	--	--	--	--	--
LA CROSSE												
434646091113701		80-08-12	.010	.07	--	--	--	.010	.000	1	40	2
435135091114601		80-08-12	.000	.01	--	--	--	.000	.000	0	30	4

QUALITY OF GROUND WATER
WATER-QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

STATION NUMBER	DATE OF SAMPLE	BORON, DIS-SOLVED (UG/L AS B)	CADMIUM DIS-SOLVED (UG/L AS CD)	CHROMIUM, DIS-SOLVED (UG/L AS CR)	COBALT, DIS-SOLVED (UG/L AS CO)	COPPER, DIS-SOLVED (UG/L AS CU)	IRON, TOTAL RECOVERABLE (UG/L AS FE)	IRON, SUSPENDED RECOVERABLE (UG/L AS FE)	IRON, DIS-SOLVED (UG/L AS FE)	LEAD, DIS-SOLVED (UG/L AS PB)	LITHIUM DIS-SOLVED (UG/L AS LI)
DANE											
430004089381801	80-09-04	--	--	--	--	--	--	--	10	--	10
430007089361901	80-09-04	--	--	--	--	--	--	--	10	--	10
430022089405801	80-09-04	--	--	--	--	--	--	--	30	--	10
430031089353101	80-09-04	--	--	--	--	--	--	--	30	--	10
430032089310501	80-09-02	--	--	--	--	--	--	--	30	--	10
430038089372001	80-09-04	--	--	--	--	--	--	--	380	--	10
430058089251401	80-07-22	--	--	--	--	--	--	--	--	--	--
430104089250401	80-09-02	--	--	--	--	--	--	--	180	--	0
430113089485001	80-08-22	--	--	--	--	--	--	--	20	--	10
	80-09-04	--	--	--	--	--	--	--	50	--	10
430128089465601	80-09-04	--	--	--	--	--	--	--	40	--	10
430138089342501	80-09-04	--	--	--	--	--	--	--	50	--	10
430136089274301	80-05-12	30	6	--	<3	<10	4300	4300	14	<10	<4
430147089232801	80-09-05	--	--	--	--	--	--	--	10	--	10
430201089212601	80-09-03	--	--	--	--	--	--	--	80	--	0
430230089181801	80-09-03	--	--	--	--	--	--	--	20	--	0
430251089313001	80-09-05	--	--	--	--	--	--	--	40	--	10
430531089351401	80-09-05	--	--	--	--	--	--	--	20	--	10
430630089212201	80-09-03	--	--	--	--	--	--	--	780	--	0
430747089225101	80-09-03	--	--	--	--	--	--	--	20	--	0
431045089151601	80-09-03	--	--	--	--	--	--	--	30	--	0
431331089212601	80-09-03	--	--	--	--	--	--	--	170	--	10
431645089341001	80-09-06	--	--	--	--	--	--	--	--	--	--
DODGE											
432717088501701	80-09-05	30	2	--	<3	<10	1200	360	840	<10	<4
432947088304601	79-10-16	1600	<1	--	<3	<10	200	--	170	14	74
433034088595801	79-11-14	10	3	--	4	<10	110	--	63	<10	6
433729088265401	80-05-27	--	--	--	--	--	--	--	40	--	--
DOOR											
450955087132501	80-05-16	--	--	--	--	--	--	--	2700	--	130
DUNN											
445330091554901	80-07-31	20	2	--	<3	<10	490	20	470	16	6
EAU CLAIRE											
444034091072901	80-08-07	30	2	--	<3	11	230	90	140	<10	<4
444811091261302	80-08-15	10	3	--	<3	<10	290	180	110	12	<4
GRANT											
424423090552801	80-08-26	30	4	--	<3	<10	80	--	<3	13	5
431108090263101	80-08-29	50	3	--	<3	<10	930	180	750	<10	5
GREEN											
423442089494201	80-08-27	--	--	--	--	--	--	--	40	--	10
423555089362401	80-08-26	--	--	--	--	--	--	--	20	--	0
423723089392601	80-08-26	--	--	--	--	--	--	--	40	--	0
423751089462801	80-08-26	--	--	--	--	--	--	--	30	--	10
424026089485701	80-08-27	--	--	--	--	--	--	--	--	--	--
424044089372301	80-08-26	--	--	--	--	--	--	--	30	--	0
424450089220701	80-09-05	--	--	--	--	--	--	--	--	--	--
GREEN LAKE											
434039088583301	80-05-23	--	--	--	--	--	--	--	20	--	--
IOWA											
430055089534001	80-07-18	9	3	--	<3	<10	130	120	8	13	<4
430117090173201	80-08-27	30	6	--	4	<10	170	160	7	17	<4
430132090172601	80-08-27	30	3	--	<3	<10	290	250	45	<10	<4
430323090121601	80-05-21	--	--	--	--	--	--	--	0	--	--
430536090152101	80-08-27	--	--	--	--	--	--	--	--	--	--
430954089592901	80-07-08	--	0	2	--	1	--	--	--	0	--
JACKSON											
442045090453601	80-08-20	10	2	--	<3	<10	80	--	<3	<10	<4
442451090440801	80-06-18	--	--	--	--	--	--	--	1600	--	--
JEFFERSON											
431130088561001	80-05-22	--	--	--	--	--	--	--	140	--	--
LA CROSSE											
434646091113701	80-08-12	10	3	--	<3	<10	720	200	520	<10	<4
435135091114601	80-08-12	20	1	--	<3	<10	500	380	120	<10	<4

QUALITY OF GROUND WATER
WATER-QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

STATION NUMBER	DATE OF SAMPLE	MANGANESE, DIS-SOLVED (UG/L AS MN)	MERCURY DIS-SOLVED (UG/L AS HG)	MOLYBDENUM, DIS-SOLVED (UG/L AS MO)	SELENIUM, DIS-SOLVED (UG/L AS SE)	STRONTIUM, DIS-SOLVED (UG/L AS SR)	VANADIUM, DIS-SOLVED (UG/L AS V)	ZINC, DIS-SOLVED (UG/L AS ZN)	RA-226, DIS-SOLVED, PLAN-CHEM COUNT (PCI/L)	URANIUM NATURAL DIS-SOLVED (UG/L AS U)	CARBON, ORGANIC DIS-SOLVED (MG/L AS C)
DANE											
430004089381801	80-09-04	10	--	--	--	50	--	--	--	--	11
430007089361901	80-09-04	10	--	--	--	60	--	--	--	--	1.3
430022089405801	80-09-04	10	--	--	--	50	--	--	--	--	.6
430031089353101	80-09-04	0	--	--	--	70	--	--	--	--	.6
430032089310501	80-09-02	10	--	--	--	50	--	--	--	--	.9
430038089372001	80-09-04	660	--	--	--	430	--	--	--	--	3.0
430058089251401	80-07-22	--	--	--	--	--	--	--	1.2	.8	--
	80-09-02	20	--	--	--	100	--	--	--	--	1.1
430104089250401	80-08-22	10	--	--	--	100	--	--	--	--	.0
430113089485001	80-09-04	0	--	--	--	90	--	--	--	--	1.0
430128089465601	80-09-04	0	--	--	--	60	--	--	--	--	1.0
430134089342501	80-09-04	490	--	--	--	50	--	--	--	--	1.1
430136089274301	80-05-12	2	--	21	0	78	<6.0	11	<.1	22	--
430147089232801	80-09-05	310	--	--	--	100	--	--	--	--	.9
430201089212601	80-09-03	10	--	--	--	110	--	--	--	--	2.1
430230089181801	80-09-03	20	--	--	--	90	--	--	--	--	.7
430251089313001	80-09-05	0	--	--	--	70	--	--	--	--	.7
430531089351401	80-09-05	10	--	--	--	0	--	--	--	--	1.0
430630089212201	80-09-03	120	--	--	--	130	--	--	--	--	1.7
430747089225101	80-09-03	10	--	--	--	90	--	--	--	--	1.3
431045089151601	80-09-03	10	--	--	--	70	--	--	--	--	.8
431331089212601	80-09-03	70	--	--	--	40	--	--	--	--	.7
431645089341001	80-09-06	--	--	--	--	--	--	--	--	--	--
DODGE											
432717088501701	80-09-05	49	--	<10	0	1700	<6.0	5	5.9	<.6	--
432947088304601	79-10-16	46	--	<10	0	8100	<6.0	15	--	--	--
433034088595801	79-11-14	25	--	<10	0	88	<6.0	71	1.8	1.6	--
433729088265401	80-05-27	30	--	--	--	4300	--	--	--	--	--
DOOR											
450955087132501	80-05-16	50	--	--	--	2700	--	--	--	--	--
DUNN											
445330091554901	80-07-31	88	--	<10	0	82	<6.0	7	--	--	--
EAU CLAIRE											
444034091072901	80-08-07	12	--	<10	0	16	<6.0	5	--	--	--
444811091261302	80-08-15	73	--	<10	0	81	<6.0	10	--	--	--
GRANT											
4424423090552801	80-08-26	2	--	<10	0	120	<6.0	64	<.1	<.9	--
431108090263101	80-08-29	26	--	<10	0	58	<6.0	12	1.7	<.5	--
GREEN											
423442089494201	80-08-27	10	--	--	--	70	--	--	--	--	1.2
423555089362401	80-08-26	10	--	--	--	80	--	--	--	--	.7
423723089392601	80-08-26	10	--	--	--	40	--	--	--	--	3.5
423751089462801	80-08-26	10	--	--	--	30	--	--	--	--	1.3
424026089485701	80-08-27	--	--	--	--	--	--	--	--	--	.4
424044089372301	80-08-26	10	--	--	--	70	--	--	--	--	4.2
424450089220701	80-09-05	--	--	--	--	--	--	--	--	--	--
GREEN LAKE											
434039088583301	80-05-23	4	--	--	--	--	--	--	--	--	--
IOWA											
430055089534001	80-07-18	<1	--	<10	0	38	<6.0	11	.8	--	--
430117090173201	80-08-27	1	--	<10	0	50	<6.0	460	<.1	<.5	--
430132090172601	80-08-27	7	--	<10	0	15	<6.0	480	<.2	<.6	--
430323090121601	80-05-21	2	--	--	--	50	--	--	--	--	--
430536090152101	80-08-27	--	--	--	--	--	--	--	--	--	--
430954089592901	80-07-08	--	.1	--	0	--	--	10	--	--	3.5
JACKSON											
442045090453601	80-08-20	2	--	<10	0	12	<6.0	5	.3	<.6	--
442451090440801	80-06-18	1900	--	--	--	40	--	--	--	--	--
JEFFERSON											
431130088561001	80-05-22	350	--	--	--	--	--	--	--	--	--
LA CROSSE											
434646091113701	80-08-12	56	--	<10	0	45	<6.0	21	--	--	--
435135091114601	80-08-12	47	--	<10	0	39	<6.0	<4	--	--	--

QUALITY OF GROUND WATER

WATER-QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

STATION NUMBER	LOCAL IDENTIFIER	AQUIFER	GEO-LOGIC UNIT	DEPTH OF WELL, TOTAL (FEET)	DATE OF SAMPLE	DEPTH TO BOTTOM OF SAMPLE INTERVAL (FT)	DEPTH TO TOP OF SAMPLE INTERVAL (FT)	FLOW RATE, INSTANTANEOUS (GPM)	SPECIFIC CONDUCTANCE (MICROMHOS)
LAFAYETTE									
423112090145701	LF-01/02E/34-0077	300SNDS	--	345	80-05-22	--	--	--	950
423435090210901	LF-01/01E/10-0306	300SNDS	--	220	80-05-22	--	--	--	560
424055090070001	LF-02/03E/03-0292	300SNDS	--	875	80-08-27	--	--	--	540
424407090200001	LF-03/01E/14-0071	300SNDS	365STPR LINCOLN	500	80-08-26	--	--	359	510
453157089423301	LN-35/06E/11-0004	100SDGV	--	78	80-05-15	--	--	--	410
MANITOWOC									
440430087420401	MN-19/23E/35-0028	350SLDL	--	147	80-05-13	--	--	--	440
441432087323901	MN-21/24E/35-0055	100SDGV	--	124	80-05-13	--	--	--	1180
MARINETTE									
450356087413901	MT-30/23E/15-0031	300SNDS	--	395	80-05-14	--	--	--	2150
PIERCE									
444504092473601	PI-26/20W/10-0007	300SNDS	372ECLR POLK	400	80-08-14	--	--	494	490
451502092160801	PK-32/15W/19-0001	300SNDS	372TMPL	304	80-07-29	--	--	301	370
451650092451501	PK-32/19W/07-0091	300SNDS	372MWWC PORTAGE	230	80-07-30	--	--	67	215
441650089305001	PT-21/08E/23-1003	100SDGV	--	54	80-09-04	--	--	--	65
441650089305002	PT-21/08E/23-1004	100SDGV	--	20	80-09-04	--	--	--	180
441651089311101	PT-21/08E/23-1001	100SDGV	--	49	80-09-04	--	--	--	130
441651089311102	PT-21/08E/23-1002	100SDGV	--	20	80-09-04	--	--	--	180
441702089310401	PT-21/08E/23-0403	100SDGV	--	85	80-06-11	--	--	--	440
441704089304101	PT-21/08E/23-1009	100SDGV	--	85	80-09-04	--	--	--	410
441704089304102	PT-21/08E/23-1010	100SDGV	--	49	80-09-04	--	--	--	310
441706089312301	PT-21/08E/23-1005	100SDGV	--	14	80-09-04	--	--	--	200
441706089312302	PT-21/08E/23-1006	100SDGV	--	49	80-09-04	--	--	--	270
441711089310601	PT-21/08E/23-1007	100SDGV	--	15	80-09-04	--	--	--	240
441711089310602	PT-21/08E/23-1008	100SDGV	--	49	80-09-04	--	--	--	300
442329089282001	PT-22/09E/18-0591	100SDGV	--	20	80-09-04	--	--	--	880
442330089405801	PT-22/07E/16-1018	100SDGV	--	106	80-06-17	--	--	--	400
442330089413601	PT-22/07E/17-1026	100SDGV	--	64	80-09-05	--	--	--	200
442850089290101	PT-23/09E/18-0279	100SDGV	--	49	80-09-05	--	--	--	90
443806089180001	PT-25/10E/16-0750	100SDGV	--	87	80-06-17	--	--	--	280
RACINE									
425027087542601	RA-04/22E/04-0048	300SNDS	--	76	80-06-17	--	--	--	310
RICHLAND									
432042090231701	RI-10/01E/16-0002	300SNDS	372MNSN ROCK	1625	80-05-30	--	--	90	830
423510089173401	RO-02/10E/34-0144	300SNDS	--	678	80-08-28	--	--	--	380
423749089164701	RO-02/10E/14-0280	300SNDS	--	118	80-08-19	--	--	--	510
423817089035001	RO-02/12E/15-0504	300SNDS	--	151	80-08-20	--	--	--	605
423849089072701	RO-02/12E/07-0346	300SNDS	--	353	80-08-20	--	--	--	560
423915088491601	RO-02/14E/03-0091	365GLPV	--	179	80-08-19	--	--	--	650
423919088515001	RO-02/14E/05-0096	365GLPV	--	135	80-08-21	--	--	--	--
423924088530001	RO-02/14E/06-0093	365GLPV	--	130	80-08-21	--	--	--	--
423925089045201	RO-02/12E/09-0336	300SNDS	--	110	80-08-19	--	--	--	770
423930089101201	RO-02/11E/03-0350	300SNDS	--	156	80-08-19	--	--	--	--
423930089190401	RO-02/10E/16-0210	300SNDS	--	81	80-08-19	--	--	--	700
424236089151101	RO-03/10E/24-0511	300SNDS	--	71	80-08-18	--	--	--	1490
424404089204701	RO-03/10E/07-0506	300SNDS	365STPR	98	80-05-22	--	--	--	580
				185	80-09-04	--	--	2.5	580

QUALITY OF GROUND WATER

WATER-QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

STATION NUMBER	DATE OF SAMPLE	PH FIELD (UNITS)	TEMPERATURE, WATER (DEG C)	HARDNESS, NONCARBONATE (MG/L CaCO3)	HARDNESS (MG/L AS CaCO3)	CALCIUM DIS-SOLVED (MG/L AS Ca)	MAGNESIUM, DIS-SOLVED (MG/L AS Mg)	SODIUM, DIS-SOLVED (MG/L AS Na)	PERCENT SODIUM	SODIUM AD-SORPTION RATIO	POTASSIUM, DIS-SOLVED (MG/L AS K)
LAFAYETTE											
423112090145701	80-05-22	7.1	10.0	220	510	110	57	4.2	2	.1	1.7
423435090210901	80-05-22	7.1	9.5	0	300	67	32	3.4	2	.1	.9
424055090070001	80-08-27	7.2	13.0	27	310	62	37	1.9	1	.0	1.2
424407090200001	80-08-26	7.6	11.5	37	320	66	37	3.8	3	.1	.5
LINCOLN											
453157089423301	80-05-15	6.9	7.5	29	44	13	2.7	54	72	3.6	1.7
MANITOWOC											
440430087420401	80-05-13	7.9	7.0	0	190	33	26	21	19	.7	1.0
441432087323901	80-05-13	7.7	9.0	360	450	110	41	65	24	1.3	1.4
MARINETTE											
450356087413901	80-05-14	7.2	8.0	800	960	250	80	110	20	1.6	12
PIERCE											
444504092473601	80-08-14	7.5	10.5	18	56	13	5.8	2.5	9	.2	.8
POLK											
451502092160801	80-07-29	7.7	9.5	6	210	51	19	5.0	5	.2	1.0
451650092451501	80-07-30	7.9	9.8	21	110	29	9.8	2.3	4	.1	1.1
PORTAGE											
4416500893305001	80-09-04	6.3	10.5	--	--	--	--	.8	--	--	.5
4416500893305002	80-09-04	8.4	10.5	--	--	--	--	10	--	--	.4
441651089311101	80-09-04	8.6	9.5	--	--	--	--	10	--	--	.4
441651089311102	80-09-04	8.4	10.5	--	--	--	--	2.3	--	--	.6
441702089310401	80-06-11	8.0	10.0	140	190	46	18	3.0	3	.1	3.2
80-09-04											
441704089304101	80-09-04	8.2	10.0	140	190	47	18	2.7	3	.1	3.2
441704089304102	80-09-04	8.3	11.0	--	--	--	--	7.6	--	--	.4
441706089312301	80-09-04	7.8	12.5	--	--	--	--	10	--	--	.2
441706089312302	80-09-04	8.3	10.0	--	--	--	--	2.1	--	--	.6
441706089312302	80-09-04	8.7	12.5	--	--	--	--	1.9	--	--	1.2
80-09-04											
441714089310601	80-09-04	8.4	10.5	--	--	--	--	2.3	--	--	.5
441714089310602	80-09-04	8.2	11.0	--	--	--	--	4.3	--	--	13
442329089282001	80-06-17	7.5	10.0	45	200	44	23	2.1	2	.1	.7
442330089405801	80-09-05	7.2	10.0	--	--	--	--	--	--	--	--
442330089413601	80-09-05	6.9	9.0	6	36	8.3	3.6	1.6	9	.1	.6
80-06-17											
442850089290101	80-06-17	7.5	10.0	13	140	31	16	2.2	3	.1	.7
443806089180001	80-06-17	7.9	10.0	32	160	35	18	2.9	4	.1	.8
RACINE											
425027087542601	80-05-30	7.3	10.0	120	280	68	20	22	16	.6	5.5
RICHLAND											
432042090231701	80-08-28	7.7	13.0	54	240	55	26	2.7	2	.1	1.0
ROCK											
423510089173401	80-08-19	6.6	11.5	33	270	55	33	5.4	4	.1	1.0
423749089164701	80-08-20	6.6	12.5	48	330	67	39	1.3	1	.0	.5
423817089035001	80-08-20	6.8	12.5	4	320	49	49	2.7	2	.1	1.5
423849089072701	80-08-19	6.5	11.5	41	320	69	36	2.7	2	.1	.5
423915088491601	80-08-21	6.7	12.0	82	390	81	46	16	8	.4	.4
80-08-21											
423919088515001	80-08-21	6.7	11.5	27	300	61	35	10	7	.3	.6
423924088530001	80-08-21	6.8	10.5	77	380	80	43	4.2	2	.1	.5
423925089045201	80-08-19	6.5	17.0	110	410	90	46	8.3	4	.2	1.0
423930089101201	80-08-19	6.4	12.5	47	350	78	37	8.3	5	.2	6.2
423930089190401	80-08-18	6.6	13.5	210	780	180	81	29	7	.5	9.9
80-05-22											
424236089151101	80-05-22	7.3	10.5	32	290	64	32	5.1	4	.1	.3
424404089204701	80-09-04	7.5	12.0	36	270	57	30	20	14	.6	3.9

QUALITY OF GROUND WATER
WATER-QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

STATION NUMBER	DATE OF SAMPLE	ALKALINITY (MG/L AS CaCO3)	SULFIDE TOTAL (MG/L AS S)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLORIDE, DIS-SOLVED (MG/L AS CL)	FLUORIDE, DIS-SOLVED (MG/L AS F)	BROMIDE DIS-SOLVED (MG/L AS BR)	SILICA, DIS-SOLVED (MG/L AS SiO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L)	SOLIDS, SUM OF CONSTITUENTS, DIS-SOLVED (MG/L)	NITROGEN, NITRATE DIS-SOLVED (MG/L AS N)
LAFAYETTE											
423112090145701	80-05-22	290	--	190	1.1	.2	--	8.5	546	548	.01
423435090210901	80-05-22	300	--	15	1.1	.2	--	9.1	311	311	.04
424055090070001	80-08-27	280	--	15	.7	.2	--	10	295	297	.01
424407090200001	80-08-26	280	.0	19	3.1	.2	.1	11	--	312	.70
LINCOLN											
453157089423301	80-05-15	15	--	15	97	.0	--	11	230	210	1.4
MANITOWOC											
440430087420401	80-05-13	190	--	38	2.8	.7	--	22	264	260	.07
441432087323901	80-05-13	87	--	480	13	1.4	--	10	877	782	.02
MARINETTE											
450356087413901	80-05-14	160	--	960	60	1.2	--	8.9	1850	1590	.13
PIERCE											
444504092473601	80-08-14	38	.0	13	2.3	.1	.9	19	--	94	3.0
POLK											
451502092160801	80-07-29	200	29	3.9	5.3	.1	.3	30	--	243	1.6
451650092451501	80-07-30	92	.2	5.4	2.0	.1	.2	18	--	123	.00
PORTAGE											
441650089305001	80-09-04	--	--	--	.6	--	--	--	--	--	1.3
441650089305002	80-09-04	--	--	--	5.0	--	--	--	--	--	2.1
441651089311101	80-09-04	--	--	--	.8	--	--	--	--	--	.13
441651089311102	80-09-04	--	--	--	4.1	--	--	--	--	--	1.2
441702089310401	80-06-11	54	--	16	37	--	--	--	393	--	24
RACINE											
441704089304101	80-09-04	55	--	13	33	--	--	--	342	--	21
441704089304102	80-09-04	--	--	--	21	--	--	--	--	--	18
441706089312301	80-09-04	--	--	--	.8	--	--	--	--	--	2.0
441706089312302	80-09-04	--	--	--	13	--	--	--	--	--	9.9
441714089310601	80-09-04	--	--	--	15	--	--	--	--	--	16
441714089310602	80-09-04	--	--	--	31	--	--	--	--	--	18
442329089282001	80-06-17	160	--	8.8	110	--	--	--	--	--	53
442330089405801	80-09-05	52	--	23	13	--	--	--	238	--	8.8
442330089413601	80-09-05	30	--	12	6.5	--	--	--	137	--	3.9
442850089290101	80-06-17	130	--	5.7	1.5	--	--	--	71	--	.38
443806089180001	80-06-17	130	--	12	3.2	--	--	--	164	--	4.1
RICHLAND											
425027087542601	80-05-30	160	--	140	8.1	--	--	--	194	--	4.7
ROCK											
432042090231701	80-08-28	190	.0	18	11	.5	--	6.7	480	397	.02
423510089173401	80-08-19	240	--	24	3.2	.1	.2	12	--	233	.01
423749089164701	80-08-20	280	--	16	5.0	.2	--	11	290	291	2.7
423817089035001	80-08-20	320	--	2.2	2.8	.2	--	9.0	353	332	6.3
423849089072701	80-08-19	280	--	17	1.0	.2	--	11	308	310	.02
423915088491601	80-08-21	310	--	42	4.6	.2	--	12	340	330	4.4
423919088515001	80-08-21	270	--	17	25	.2	--	15	502	461	11
423924088530001	80-08-21	300	--	27	15	.2	--	14	336	324	2.0
423925089045201	80-08-19	300	--	44	14	.2	--	16	473	408	9.5
423930089101201	80-08-19	300	--	32	25	.1	--	14	497	484	17
423930089190401	80-08-18	570	--	91	17	.2	--	15	405	396	5.0
424236089151101	80-05-22	260	--	34	110	.2	--	19	1010	952	20
424404089204701	80-09-04	230	.0	31	5.4	.1	.3	15	337	338	6.1
					41				--	342	1.2

QUALITY OF GROUND WATER

WATER-QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

STATION NUMBER	DATE OF SAMPLE	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N)	NITRO-GEN, ORGANIC DIS-SOLVED (MG/L AS N)	NITRO-GEN, AM-MONIA + ORGANIC DIS-SOLVED (MG/L AS N)	PHOS-PHORUS, DIS-SOLVED (MG/L AS P)	PHOS-PHORUS, ORTHOPHOSPHATE DISSOL. (MG/L AS P)	ARSENIC DIS-SOLVED (UG/L AS AS)	BARIUM, DIS-SOLVED (UG/L AS BA)	BERYL-LIUM, DIS-SOLVED (UG/L AS BE)
LAFAYETTE											
423112090145701	80-05-22	.000	.01	--	--	--	--	--	1	70	--
423435090210901	80-05-22	.000	.04	--	--	--	--	--	1	80	--
424055090070001	80-08-27	.000	.01	.020	.09	.11	--	--	--	100	--
424407090200001	80-08-26	.000	.70	--	--	--	.010	.030	1	40	0
LINCOLN											
453157089423301	80-05-15	.010	1.4	--	--	--	--	--	--	--	--
MANITOWOC											
440430087420401	80-05-13	.010	.08	--	--	--	--	--	--	--	--
441432087323901	80-05-13	.010	.03	--	--	--	--	--	--	--	--
MARINETTE											
450356087413901	80-05-14	.009	.14	--	--	--	--	--	--	--	--
PIERCE											
444504092473601	80-08-14	.000	3.0	--	--	--	.240	.210	1	20	2
POLK											
451502092160801	80-07-29	.000	1.6	--	--	--	.040	.030	1	20	0
451650092451501	80-07-30	.000	.00	--	--	--	.050	.030	2	20	0
PORTAGE											
441650089305001	80-09-04	.000	1.3	.020	--	--	--	--	--	--	--
441650089305002	80-09-04	.000	2.1	.000	--	--	--	--	--	--	--
441651089311101	80-09-04	.000	.13	.000	--	--	--	--	--	--	--
441651089311102	80-09-04	.000	1.2	.000	--	--	--	--	--	--	--
441702089310401	80-06-11	.060	24	.240	.00	.01	.020	.000	0	30	--
80-09-04											
441704089304101	80-09-04	.000	21	.020	.00	.00	.030	.020	0	0	--
441704089304102	80-09-04	.000	18	.000	--	--	--	--	--	--	--
441706089312301	80-09-04	.000	2.0	.000	--	--	--	--	--	--	--
441706089312302	80-09-04	.000	9.9	.010	--	--	--	--	--	--	--
80-09-04											
441714089310501	80-09-04	.000	18	.000	--	--	--	--	--	--	--
441714089310602	80-09-04	.000	53	.000	--	--	--	--	--	--	--
442329089282001	80-06-17	.000	8.8	.020	.00	.01	.020	.010	0	10	--
442330089405801	80-09-05	.010	3.9	.040	.49	.53	.100	.050	--	--	--
442330089413601	80-09-05	.000	.38	.050	.10	.15	.070	.020	0	0	--
442850089290101	80-06-17	.000	4.1	.020	.09	.11	.030	.030	0	10	--
443806089180001	80-06-17	.010	4.7	.030	.00	.01	.010	.000	1	20	--
RACINE											
425027087542601	80-05-30	.000	.02	--	--	--	--	--	--	--	--
RICHLAND											
432042090231701	80-08-28	.000	.01	--	--	--	.030	.000	2	30	1
ROCK											
423510089173401	80-08-19	.000	2.7	.010	.14	.15	--	--	--	100	--
423749089164701	80-08-20	.000	6.3	.000	.08	.08	--	--	--	0	--
423817089035001	80-08-20	.000	.02	.010	.03	.04	--	--	--	100	--
423849089072701	80-08-19	.000	4.4	.030	.05	.08	--	--	--	0	--
423915088491601	80-08-21	.000	11	.000	.22	.22	--	--	--	0	--
423919088515001	80-08-21	.000	2.0	.020	.07	.09	--	--	--	100	--
423924088530001	80-08-21	.000	9.5	.000	.14	.14	--	--	--	100	--
423925089045201	80-08-19	.000	17	.010	.10	.11	--	--	--	0	--
423930089101201	80-08-19	.030	5.0	.300	.31	.61	--	--	--	0	--
423930089190401	80-08-18	.000	20	.030	.78	.81	--	--	--	200	--
424236089151101	80-05-22	.000	6.1	--	--	--	--	--	--	--	--
424404089204701	80-09-04	.000	1.2	--	--	--	.050	.000	1	40	0

QUALITY OF GROUND WATER
WATER-QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

STATION	NUMBER	DATE OF SAMPLE	BORON, DIS- SOLVED (UG/L AS B)	CADMIUM DIS- SOLVED (UG/L AS CD)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR)	COBALT, DIS- SOLVED (UG/L AS CO)	COPPER, DIS- SOLVED (UG/L AS CU)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	IRON, SUS- PENDE RECOV- ERABLE (UG/L AS FE)	IRON, DIS- SOLVED (UG/L AS FE)	LEAD, DIS- SOLVED (UG/L AS PB)	LITHIUM DIS- SOLVED (UG/L AS LI)
LAFAYETTE												
423112090145701	80-05-22		--	5	1	--	4	--	--	160	0	--
423435090210901	80-05-22		--	4	3	--	1	--	--	1500	0	--
424055090070001	80-08-27		--	--	--	--	--	--	--	180	--	10
424407090200001	80-08-26		30	5	--	--	<10	30	30	3	<10	<4
LINCOLN												
453157089423301	80-05-15		--	--	--	--	--	--	--	340	--	1
MANITOWOC												
440430087420401	80-05-13		--	--	--	--	--	--	--	10	--	--
441432087323901	80-05-13		--	--	--	--	--	--	--	1100	--	--
MARINETTE												
450356087413901	80-05-14		--	--	--	--	--	--	--	370	--	--
PIERCE												
444504092473601	80-08-14		3	4	--	<3	<10	70	--	<3	14	<4
POLK												
451502092160801	80-07-29		0	<1	--	<3	<10	60	--	<3	11	5
451650092451501	80-07-30		0	<1	--	<3	<10	620	610	10	13	<4
PORTAGE												
441650089305001	80-09-04		--	--	--	--	--	--	--	--	--	--
441650089305002	80-09-04		--	--	--	--	--	--	--	--	--	--
441651089311101	80-09-04		--	--	--	--	--	--	--	--	--	--
441651089311102	80-09-04		--	--	--	--	--	--	--	--	--	--
441702089310401	80-06-11		0	5	--	--	0	--	--	0	1	--
RACINE												
441704089304101	80-09-04		10	0	--	--	0	--	--	10	0	--
441704089304102	80-09-04		--	--	--	--	--	--	--	--	--	--
441706089312301	80-09-04		--	--	--	--	--	--	--	--	--	--
441706089312302	80-09-04		--	--	--	--	--	--	--	--	--	--
441714089310601	80-09-04		--	--	--	--	--	--	--	--	--	--
441714089310602	80-09-04		--	--	--	--	--	--	--	--	--	--
442329089282001	80-06-17		--	0	4	--	5	--	--	--	0	--
442330089405801	80-09-05		50	--	--	--	--	--	--	--	--	--
442330089413601	80-09-05		40	1	--	--	1	--	--	4300	5	--
442850089290101	80-06-17		--	0	8	--	4	--	--	--	0	--
443806089180001	80-06-17		--	0	4	--	5	--	--	--	0	--
RICHLAND												
425027087542601	80-05-30		--	--	--	--	--	--	--	320	--	10
ROCK												
432042090231701	80-08-28		30	4	--	<3	<10	540	390	150	<10	<4
SUSSEX												
423510089173401	80-08-19		--	--	--	--	--	--	--	10	--	10
423749089164701	80-08-20		--	--	--	--	--	--	--	20	--	10
423817089035001	80-08-20		--	--	--	--	--	--	--	680	--	10
423849089072701	80-08-19		--	--	--	--	--	--	--	20	--	10
423915088491601	80-08-21		--	--	--	--	--	--	--	20	--	10
423919088515001	80-08-21		--	--	--	--	--	--	--	250	--	10
423924088530001	80-08-21		--	--	--	--	--	--	--	10	--	10
423925089045201	80-08-19		--	--	--	--	--	--	--	20	--	10
423930089101201	80-08-19		--	--	--	--	--	--	--	20	--	10
423930089190401	80-08-18		--	--	--	--	--	--	--	10	--	10
424236089151101	80-05-22		--	--	--	--	--	--	--	1	--	5
424404089204701	80-09-04		80	3	--	<3	<10	170	110	59	<10	<4

QUALITY OF GROUND WATER

WATER-QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

STATION	NUMBER	DATE OF SAMPLE	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	MERCURY DIS- SOLVED (UG/L AS HG)	MOLYB- DENUM, DIS- SOLVED (UG/L AS MO)	SELE- NIUM, DIS- SOLVED (UG/L AS SE)	STRON- TIUM, DIS- SOLVED (UG/L AS SR)	VANA- DIUM, DIS- SOLVED (UG/L AS V)	ZINC, DIS- SOLVED (UG/L AS ZN)	RA-226, DIS- SOLVED, FLAN- CHET COUNT (PCI/L)	URANIUM NATURAL DIS- SOLVED (UG/L AS U)	CARBON, ORGANIC DIS- SOLVED (MG/L AS C)
LAFAYETTE												
423112090145701	80-05-22	40	<.1	--	--	0	130	--	240	--	--	2.3
423435090210901	80-05-22	20	<.1	--	--	0	60	--	30	--	--	8.7
424055090070001	80-08-27	10	--	--	--	--	60	--	--	--	--	.4
424407090200001	80-08-26	2	--	--	<10	0	58	<6.0	9	.5	1.0	--
LINCOLN												
453157089423301	80-05-15	20	--	--	--	--	130	--	--	--	--	--
MANITOWOC												
440430087420401	80-05-13	20	--	--	--	--	880	--	--	--	--	--
441432087323901	80-05-13	50	--	--	--	--	6800	--	--	--	--	--
MARINETTE												
450356087413901	80-05-14	40	--	--	--	--	7000	--	--	--	--	--
PIERCE												
444504092473601	80-08-14	1	--	--	<10	0	21	<6.0	<4	.5	1.5	--
POLK												
451502092160801	80-07-29	<1	--	--	<10	0	73	<6.0	10	--	--	--
451650092451501	80-07-30	<1	--	--	<10	0	34	<6.0	49	--	--	--
PORTAGE												
441650089305001	80-09-04	--	--	--	--	--	--	--	--	--	--	--
441650089305002	80-09-04	--	--	--	--	--	--	--	--	--	--	--
441651089311101	80-09-04	--	--	--	--	--	--	--	--	--	--	--
441651089311102	80-09-04	--	--	--	--	--	--	--	--	--	--	--
441702089310401	80-06-11	2	<.1	0	--	--	--	--	0	--	--	2.3
441704089304101	80-09-04	0	<.1	0	--	--	--	--	10	--	--	.5
441704089304102	80-09-04	--	--	--	--	--	--	--	--	--	--	--
441706089312301	80-09-04	--	--	--	--	--	--	--	--	--	--	--
441706089312302	80-09-04	--	--	--	--	--	--	--	--	--	--	--
441714089310601	80-09-04	--	--	--	--	--	--	--	--	--	--	--
441714089310602	80-09-04	--	--	--	--	--	--	--	0	--	--	6.4
442329089282001	80-06-17	--	.1	--	--	0	--	--	--	--	--	2.7
442330089405801	80-09-05	--	--	--	--	--	--	--	50	--	--	2.2
442330089413601	80-09-05	150	<.1	0	--	--	--	--	--	--	--	--
442850089290101	80-06-17	--	<.1	--	--	0	--	--	0	--	--	2.4
443806089180001	80-06-17	--	.1	--	--	0	--	--	10	--	--	2.9
RACINE												
425027087542601	80-05-30	20	--	--	--	--	27000	--	--	--	--	--
RICHLAND												
432042090231701	80-08-28	16	--	--	<10	0	45	<6.0	160	.7	<.6	--
ROCK												
423510089173401	80-08-19	10	--	--	--	--	60	--	--	--	--	.6
423749089164701	80-08-20	10	--	--	--	--	80	--	--	--	--	.1
423817089035001	80-08-20	30	--	--	--	--	100	--	--	--	--	1.0
423849089072701	80-08-19	10	--	--	--	--	70	--	--	--	--	.3
423915088491601	80-08-21	10	--	--	--	--	110	--	--	--	--	--
423919088515001	80-08-21	10	--	--	--	--	80	--	--	--	--	.1
423924088530001	80-08-21	10	--	--	--	--	100	--	--	--	--	.1
423925089045201	80-08-19	10	--	--	--	--	100	--	--	--	--	.6
423930089101201	80-08-19	80	--	--	--	--	110	--	--	--	--	1.2
423930089190401	80-08-18	30	--	--	--	--	150	--	--	--	--	4.7
424236089151101	80-05-22	1	--	--	--	--	70	--	--	--	--	--

QUALITY OF GROUND WATER

WATER-QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

STATION NUMBER	LOCAL IDENTIFIER	AQUIFER	GEO-LOGIC UNIT	DEPTH OF WELL, TOTAL (FEET)	DATE OF SAMPLE	DEPTH TO BOTTOM OF SAMPLE INTER-VAL (FT)	DEPTH TO TOP OF SAMPLE INTER-VAL (FT)	FLOW RATE, INSTANTANEOUS (GPM)	SPECIFIC CONDUCTANCE (MICRO-MHOS)
ST CROIX									
445604092133001	SC-28/15W/05-0107	300SNDS	368PRDC	145	80-07-31	--	--	49	350
445830092335201	SC-29/18W/28-0749	100SDGV	--	89	80-08-15	--	--	1.0	430
445910092331301	SC-29/18W/22-0017	300SNDS	368PRDC	302	80-08-04	--	--	224	312
SAUK									
431553090093301	SK-09/03E/08-0136	300SNDS	--	114	80-05-21	--	--	--	630
433144089595901	SK-12/04E/10-0126	300SNDS	372EKMD	400	80-09-05	--	--	987	200
SHEBOYGAN									
434521087424701	SB-15/23E/23-0045	300SNDS	--	1475	80-05-13	--	--	--	14600
TREMPEALEAU									
442141091185601	TR-22/08W/26-0003	300SNDS	372MNSN	233	80-08-13	--	--	404	170
443436091281401	TR-24/09W/09-0004	300SNDS	372ECLR	203	80-08-06	--	--	148	138
443437091281501	TR-24/09W/09-0076	100SDGV	--	25	80-08-13	--	--	1.0	160
VERNON									
434312090353901	VE-14/02W/03-0012	300SNDS	372WNWC	186	80-08-22	--	--	166	410
WALWORTH									
423623088353501	WW-02/16E/27-0180	365GLPV	--	293	80-08-28	--	--	--	>1000
423755088380501	WW-02/16E/17-0041	300SNDS	--	1680	80-08-28	--	--	--	860
423821088254401	WW-02/17E/13-0233	350SLDL	--	111	80-08-28	--	--	--	710
WASHINGTON									
431136088063601	WN-09/20E/34-0030	300SNDS	--	1302	80-05-29	--	--	--	730
431347088063001	WN-09/20E/22-0417	350SLDL	--	180	80-05-29	--	--	--	1490
432028088233801	WN-10/18E/08-0055	350SLDL	--	109	80-05-27	--	--	--	920
WAUKESHA									
425245088274701	WK-05/17E/23-1232	365GLPV	365SNP	1350	80-05-28	479	252	67	490
425913088134101	WK-06/19E/15-0125	300SNDS	365STPR	1350	80-05-29	612	542	58	455
			372WNWC	1350	80-06-02	752	681	112	430
			372MNSN	1350	80-06-04	1350	1037	103	450
			--	2120	80-05-29	--	--	--	870
430540088043201	WK-07/20E/01-0229	350SLDL	--	385	80-05-29	--	--	--	1450
WAUPACA									
441544088522501	WP-21/13E/25-0723	300SNDS	--	140	80-05-28	--	--	--	250
WAUCHARA									
440219088555701	WS-18/13E/15-0052	300SNDS	372MNSN	411	80-08-19	--	--	247	400
WINNEBAGO									
440424088310401	WI-19/17E/31-0039	300SNDS	--	716	80-05-27	--	--	--	1270
441042088275401	WI-20/17E/28-0059	300SNDS	--	600	80-05-28	--	--	--	1550
441125088292201	WI-20/17E/20-0001	300SNDS	--	340	80-05-28	--	--	--	950

QUALITY OF GROUND WATER

WATER-QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

STATION NUMBER	DATE OF SAMPLE	PH FIELD (UNITS)	TEMPERATURE, WATER (DEG C)	HARDNESS, NONCARBONATE (MG/L CaCO ₃)	HARDNESS (MG/L AS CaCO ₃)	CALCIUM DIS-SOLVED (MG/L AS Ca)	MAGNESIUM, DIS-SOLVED (MG/L AS Mg)	SODIUM, DIS-SOLVED (MG/L AS Na)	PERCENT SODIUM	SODIUM ADSORPTION RATIO	POTASSIUM, DIS-SOLVED (MG/L AS K)
ST CROIX											
445604092133001	80-07-31	7.7	9.5	12	200	43	23	2.0	2	.1	.8
445830092335201	80-08-15	--	10.5	--	--	--	--	--	--	--	--
445910092331301	80-08-04	7.8	9.0	12	170	36	20	2.9	4	.1	.8
SAUK											
431553090093301	80-05-21	7.4	10.0	44	290	60	35	7.0	5	.2	1.0
433144089595901	80-09-05	7.2	11.3	--	100	22	11	3.9	8	.2	2.5
SHEBOYGAN											
434521087424701	80-05-13	6.7	10.0	3000	3100	890	200	1900	57	15	63
TREMPEALEAU											
442141091185601	80-08-13	7.2	10.0	12	68	16	6.7	3.8	10	.2	3.6
443436091281401	80-08-06	6.8	10.0	4	57	13	5.9	2.0	7	.1	1.7
443437091281501	80-08-13	--	10.5	--	--	--	--	--	--	--	--
VERNON											
434312090353901	80-08-22	7.8	10.0	19	240	51	27	1.2	1	.0	1.0
WALWORTH											
423623088353501	80-08-28	7.1	10.0	0	410	86	48	60	24	1.3	3.9
423755088380501	80-08-28	7.1	11.0	120	420	92	46	6.3	3	.1	1.5
423821088254401	80-08-28	7.2	10.5	18	360	69	45	11	6	.3	1.7
WASHINGTON											
4311136088063601	80-05-29	7.3	11.5	130	370	82	24	6.8	5	.2	1.9
431347088063001	80-05-29	7.2	10.0	510	730	180	66	7.0	2	.1	3.0
432028088233801	80-05-27	--	9.5	130	460	87	58	20	9	.4	1.2
WAUKESHA											
425245088274701	80-05-28	7.5	12.5	45	260	59	28	3.7	3	.1	1.8
	80-05-29	7.5	13.0	7	260	56	28	4.4	4	.1	1.8
	80-06-02	7.6	13.0	0	230	47	26	4.1	4	.1	1.7
	80-06-04	7.6	12.5	0	220	46	26	4.0	4	.1	1.8
425913088134101	80-05-29	7.1	14.0	210	420	120	22	12	6	.3	4.3
430540088043201	80-05-29	7.2	9.5	140	460	87	58	83	28	1.7	2.1
WAUPACA											
441544088522501	80-05-28	8.2	11.0	0	49	9.5	6.2	41	64	2.5	.9
WAUSHARA											
440219088555701	80-08-19	8.0	12.0	0	210	27	34	15	13	.5	1.8
WINNEBAGO											
440424088310401	80-05-27	--	10.0	370	550	190	15	49	16	.9	4.5
441042088275401	80-05-28	7.0	9.5	550	780	260	28	16	4	.3	3.1
441125088292201	80-05-28	7.2	9.0	240	480	130	30	16	7	.3	2.8

QUALITY OF GROUND WATER

WATER-QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

STATION	NUMBER	DATE OF SAMPLE	ALKA- LITY (MG/L AS CAO3)	SULFIDE TOTAL (MG/L AS S)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	BROMIDE DIS- SOLVED (MG/L AS BR)	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, SUM OF CONSTITUENTS, DIS- SOLVED (MG/L)	NITRO- GEN, NITRATE DIS- SOLVED (MG/L AS N)
ST CROIX												
445604092133001		80-07-31	190	.1	3.5	3.5	.1	.2	15	--	211	1.3
445830092335201		80-08-15	--	--	--	--	--	--	--	--	--	--
445910092331301		80-08-04	160	.0	6.5	3.5	.2	.6	19	--	198	2.7
SAUK												
431553090093301		80-05-21	250	--	22	14	.1	--	17	370	338	7.1
433144089595901		80-09-05	--	.2	13	7.1	.1	.4	11	--	51	6.4
SHEBOYGAN												
434521087424701		80-05-13	120	--	1800	4100	1.5	--	7.1	10100	9060	.03
TREMPEALEAU												
442141091185601		80-08-13	56	.0	19	4.2	.6	.7	17	--	112	.00
443436091281401		80-08-06	53	.0	11	1.2	.5	.4	16	--	84	.03
443437091281501		80-08-13	--	--	--	--	--	--	--	--	--	--
VERNON												
434312090353901		80-08-22	220	--	19	1.0	.2	.3	9.8	--	243	.06
WALWORTH												
423623088353501		80-08-28	480	--	40	1.9	.4	--	16	566	555	.08
423755088380501		80-08-28	300	--	73	20	.2	--	17	463	438	.00
423821088254401		80-08-28	340	--	16	6.8	.4	--	24	360	380	.01
WASHINGTON												
431136088063601		80-05-29	240	--	120	2.1	.3	--	9.6	491	447	.00
431347088063001		80-05-29	220	--	560	9.2	.3	--	9.9	1200	977	.01
432028088233801		80-05-27	330	--	88	49	.1	--	20	602	526	.79
WAUKESHA												
425245088274701		80-05-28	220	.7	2.6	1.4	.4	.0	11	--	243	.01
		80-05-29	250	.6	2.2	1.3	.3	.0	9.9	--	257	.00
		80-06-02	240	.2	3.4	.9	.3	.0	9.3	--	239	.00
		80-06-04	260	.2	3.4	1.1	.3	.0	9.4	--	251	.00
425913088134101		80-05-29	210	--	210	4.6	.6	--	8.1	608	530	.02
430540088043201		80-05-29	320	--	140	160	.3	--	16	945	747	.03
WAUPACA												
441544088522501		80-05-28	99	--	13	3.6	1.6	--	11	145	146	.02
WAUSHARA												
440219088555701		80-08-19	210	.0	27	2.3	.4	.2	21	--	256	.01
WINNEBAGO												
440424088310401		80-05-27	180	--	360	63	1.3	--	7.8	920	809	.03
441042088275401		80-05-28	230	--	590	10	.9	--	14	1260	1080	.00
441125088292201		80-05-28	240	--	270	3.2	.5	--	8.7	712	637	.01

QUALITY OF GROUND WATER

WATER-QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

STATION	NUMBER	DATE OF SAMPLE	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N)	NITRO- GEN, NO2-NO3 DIS- SOLVED (MG/L AS N)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N)	NITRO- GEN, ORGANIC DIS- SOLVED (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC DIS- SOLVED (MG/L AS N)	PHOS- PHORUS, DIS- SOLVED (MG/L AS P)	PHOS- PHORUS, ORTHOPH OSPATE DISSOL. (MG/L AS P)	ARSENIC DIS- SOLVED (UG/L AS AS)	BARIUM, DIS- SOLVED (UG/L AS BA)	BERYL- LIUM, DIS- SOLVED (UG/L AS BE)
ST CROIX												
445604092133001	80-07-31		.000	1.3	--	--	--	.010	.000	0	30	0
445830092335201	80-08-15		--	--	--	--	--	--	--	--	--	--
445910092331301	80-08-04		.000	2.7	--	--	--	.020	.000	0	20	0
SAUK												
431553090093301	80-05-21		.000	7.1	--	--	--	--	--	--	--	--
433144089595901	80-09-05		.000	6.4	--	--	--	.110	.050	1	40	0
SHEBOYGAN												
434521087424701	80-05-13		.009	.04	--	--	--	--	--	--	--	--
TREMPEALEAU												
442141091185601	80-08-13		.000	.00	--	--	--	.570	.080	0	20	2
443436091281401	80-08-06		.010	.04	--	--	--	.290	.000	1	20	0
443437091281501	80-08-13		--	--	--	--	--	--	--	--	--	--
VERNON												
434312090353901	80-08-22		.000	.06	--	--	--	.080	.010	1	20	4
WALWORTH												
423623088353501	80-08-28		.000	.08	.190	24	24	--	--	--	700	--
423755088380501	80-08-28		.000	.00	.010	.04	.05	--	--	--	0	--
423821088254401	80-08-28		.000	.01	.390	.08	.47	--	--	--	100	--
WASHINGTON												
431136088063601	80-05-29		.000	.00	--	--	--	--	--	--	--	--
431347088063001	80-05-29		.000	.01	--	--	--	--	--	--	--	--
432028088233801	80-05-27		.020	.81	--	--	--	--	--	--	--	--
WAUKESHA												
425245088274701	80-05-28		.010	.02	--	--	--	.010	.000	1	990	0
	80-05-29		.010	.01	--	--	--	.010	.000	0	950	0
	80-06-02		.000	.00	--	--	--	.000	.010	0	730	0
	80-06-04		.000	.00	--	--	--	.000	.010	0	770	2
425913088134101	80-05-29		.000	.02	--	--	--	--	--	--	--	--
430540088043201	80-05-29		.000	.03	--	--	--	--	--	--	--	--
WAUPACA												
441544088522501	80-05-28		.000	.02	--	--	--	--	--	--	--	--
WAUSHARA												
440219088555701	80-08-19		.000	.01	--	--	--	.020	.010	6	80	2
WINNEBAGO												
440424088310401	80-05-27		.000	.03	--	--	--	--	--	--	--	--
441042088275401	80-05-28		.000	.00	--	--	--	--	--	--	--	--
441125088292201	80-05-28		.000	.01	--	--	--	--	--	--	--	--

QUALITY OF GROUND WATER
WATER-QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

STATION	NUMBER	DATE OF SAMPLE	BORON, DIS- SOLVED (UG/L AS B)	CADMIUM DIS- SOLVED (UG/L AS CD)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR)	COBALT, DIS- SOLVED (UG/L AS CO)	COPPER, DIS- SOLVED (UG/L AS CU)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	IRON, SUS- PENDED RECOV- ERABLE (UG/L AS FE)	IRON, DIS- SOLVED (UG/L AS FE)	LEAD, DIS- SOLVED (UG/L AS PB)	LITHIUM DIS- SOLVED (UG/L AS LI)
ST CROIX												
445604092133001	80-07-31		7	2	--	<3	<10	70	70	5	13	<4
445830092335201	80-08-15		--	--	--	--	--	--	--	--	--	--
445910092331301	80-08-04		0	2	--	<3	<10	70	--	<3	<10	<4
SAUK												
431553090093301	80-05-21		--	--	--	--	--	--	--	10	--	--
433144089595901	80-09-05		20	2	--	<3	<10	70	60	10	<10	<4
SHEBOYGAN												
434521087424701	80-05-13		--	--	--	--	--	--	--	2200	--	680
TREMPEALEAU												
442141091185601	80-08-13		40	5	--	<3	<10	6800	300	6500	<10	<4
443436091281401	80-08-06		0	5	--	0	10	6000	6000	6	10	0
443437091281501	80-08-13		--	--	--	--	--	--	--	--	--	--
VERNON												
434312090353901	80-08-22		0	<1	--	<3	<10	590	550	40	16	<4
WALWORTH												
423623088353501	80-08-28		--	--	--	--	--	--	--	8800	--	20
423755088380501	80-08-28		--	--	--	--	--	--	--	980	--	10
423821088254401	80-08-28		--	--	--	--	--	--	--	710	--	10
WASHINGTON												
431136088063601	80-05-29		--	--	--	--	--	--	--	240	--	--
431347088063001	80-05-29		--	--	--	--	--	--	--	2100	--	--
432028088233801	80-05-27		--	--	--	--	--	--	--	10	--	--
WAUKESHA												
425245088274701	80-05-28		80	2	--	<3	<10	500	70	430	59	7
	80-05-29		80	<1	--	<3	<10	510	70	440	<10	8
	80-06-02		50	0	--	0	0	500	290	210	0	4
	80-06-04		50	2	--	<3	<10	970	580	390	<10	<4
425913088134101	80-05-29		--	--	--	--	--	--	--	230	--	--
430540088043201	80-05-29		--	--	--	--	--	--	--	7800	--	--
WAUPACA												
441544088522501	80-05-28		--	--	--	--	--	--	--	10	--	--
WAUSHARA												
440219088555701	80-08-19		50	3	--	<3	<10	260	210	50	<10	7
WINNEBAGO												
440424088310401	80-05-27		--	--	--	--	--	--	--	1600	--	--
441042088275401	80-05-28		--	--	--	--	--	--	--	670	--	--
441125088292201	80-05-28		--	--	--	--	--	--	--	460	--	--

QUALITY OF GROUND WATER
WATER-QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

STATION	NUMBER	DATE OF SAMPLE	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	MERCURY DIS- SOLVED (UG/L AS HG)	MOLYB- DENUM, DIS- SOLVED (UG/L AS MO)	SELE- NIUM, DIS- SOLVED (UG/L AS SE)	STRON- TIUM, DIS- SOLVED (UG/L AS SR)	VANA- DIUM, DIS- SOLVED (UG/L AS V)	ZINC, DIS- SOLVED (UG/L AS ZN)	RA-226, DIS- SOLVED, PLAN- CHET COUNT (PCI/L)	URANIUM NATURAL DIS- SOLVED (UG/L AS U)	CARBON, ORGANIC DIS- SOLVED (MG/L AS C)
ST CROIX												
445604092133001		80-07-31	<1	--	<10	0	39	<6.0	37	--	--	--
445830092335201		80-08-15	--	--	--	--	--	--	--	--	--	--
445910092331301		80-08-04	<1	--	<10	0	34	<6.0	<4	<.1	<.6	--
SAUK												
431553090093301		80-05-21	1	--	--	--	--	--	--	--	--	--
433144089595901		80-09-05	45	--	<10	0	41	<6.0	23	.5	<.6	--
SHEBOYGAN												
434521087424701		80-05-13	270	--	--	--	22000	--	--	--	--	--
TREMPEALEAU												
442141091185601		80-08-13	190	--	<10	0	20	<6.0	6	.5	<.7	--
443436091281401		80-08-06	210	--	0	0	24	.0	5	.2	<.6	--
443437091281501		80-08-13	--	--	--	--	--	--	--	--	--	--
VERNON												
434312090353901		80-08-22	29	--	<10	0	36	<6.0	<4	.2	<.5	--
WALWORTH												
423623088353501		80-08-28	40	--	--	--	480	--	--	--	--	10
423755088380501		80-08-28	60	--	--	--	90	--	--	--	--	.8
423821088254401		80-08-28	10	--	--	--	480	--	--	--	--	1.6
WASHINGTON												
431136088063601		80-05-29	20	--	--	--	56000	--	--	--	--	--
431347088063001		80-05-29	30	--	--	--	6800	--	--	--	--	--
432028088233801		80-05-27	20	--	--	--	210	--	--	--	--	--
WAUKESHA												
425245088274701		80-05-28	6	--	<10	0	1200	<6.0	9	--	--	--
		80-05-29	6	--	<10	0	1200	<6.0	<4	--	--	--
		80-06-02	9	--	0	0	990	.0	0	7.6	<.5	--
		80-06-04	9	--	<10	0	1100	<6.0	<4	6.9	<.5	--
425913088134101		80-05-29	20	--	--	--	22000	--	--	--	--	--
430540088043201		80-05-29	100	--	--	--	600	--	--	--	--	--
WAUPACA												
441544088522501		80-05-28	6	--	--	--	--	--	--	--	--	--
WAUSHARA												
440219088555701		80-08-19	11	--	<10	0	1100	<6.0	<4	.5	3.7	--
WINNEBAGO												
440424088310401		80-05-27	30	--	--	--	8300	--	--	--	--	--
441042088275401		80-05-28	20	--	--	--	14000	--	--	--	--	--
441125088292201		80-05-28	10	--	--	--	31000	--	--	--	--	--

QUALITY OF GROUND WATER

WATER-QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

STATION NUMBER	LOCAL IDENTIFIER	AQUIFER	DEPTH OF WELL, TOTAL (FEET)	DATE OF SAMPLE	PCB, TOTAL (UG/L)	NAPH-THA-LENES, POLY-CHLOR. TOTAL (UG/L)	ALDRIN, TOTAL (UG/L)	AME-TRYNE TOTAL (UG/L)	ATRA-ZINE, TOTAL (UG/L)
ADAMS									
450158089364701	AD-18/07E/13-0138	100SDGV	100	80-06-11	--	--	--	--	.00
			100	80-09-03	--	--	--	--	.20
CHIPPEWA									
450512091385101	CH-30/10W/18-0163	300SNDS	87	80-06-18	.0	.00	.00	--	--
COLUMBIA									
433714089012201	CO-13/12E/01-0084	100SDGV	45	80-07-08	.0	.00	.00	--	--
IOWA									
430954089592901	IW-08/04E/14-0053	100SDGV	110	80-07-08	.0	.00	.00	--	--
PORTAGE									
441702089310401	PT-21/08E/23-0403	100SDGV	85	80-06-11	--	--	--	--	.00
			85	80-09-04	--	--	--	.00	.00
442329089282001	PT-22/09E/18-0591	100SDGV	106	80-06-17	.0	.00	.00	--	--
442330089405801	PT-22/07E/16-1018	100SDGV	64	80-09-05	.0	.00	.00	--	.00
442330089413601	PT-22/07E/17-1026	100SDGV	49	80-09-05	.0	.00	.00	--	.00
442850089290101	PT-23/09E/18-0279	100SDGV	87	80-06-17	.0	.00	.00	--	--
443806089180001	PT-25/10E/16-0750	100SDGV	76	80-06-17	.0	.00	.00	--	--

STATION NUMBER	DATE OF SAMPLE	ATRA-TONE TOTAL (UG/L)	CHLOR-DANE, TOTAL (UG/L)	CYAN-AZINE TOTAL (UG/L)	CYPRA-ZINE TOTAL (UG/L)	DDD, TOTAL (UG/L)	DDE, TOTAL (UG/L)	DDT, TOTAL (UG/L)	DI-AZINON, TOTAL (UG/L)	DI-ELDRIN TOTAL (UG/L)	ENDO-SULFAN, TOTAL (UG/L)
ADAMS											
450158089364701	80-06-11	--	--	--	--	--	--	--	.00	--	--
	80-09-03	--	--	--	--	--	--	--	.00	--	--
CHIPPEWA											
450512091385101	80-06-18	--	.0	--	--	.00	.00	.00	.00	.00	.00
COLUMBIA											
433714089012201	80-07-08	--	.0	--	--	.00	.00	.00	.00	.00	.00
IOWA											
430954089592901	80-07-08	--	.0	--	--	.00	.00	.00	.00	.00	.00
PORTAGE											
441702089310401	80-06-11	--	--	--	--	--	--	--	.00	--	--
	80-09-04	.00	--	.00	.00	--	--	--	.00	--	--
442329089282001	80-06-17	--	.0	--	--	.00	.00	.00	.00	.00	.00
442330089405801	80-09-05	--	.0	--	--	.00	.00	.00	.00	.00	.00
442330089413601	80-09-05	--	.0	--	--	.00	.00	.00	.00	.00	.00
442850089290101	80-06-17	--	.0	--	--	.00	.00	.00	.00	.00	.00
443806089180001	80-06-17	--	.0	--	--	.00	.00	.00	.00	.00	.00

STATION NUMBER	DATE OF SAMPLE	ENDRIN, TOTAL (UG/L)	ETHION, TOTAL (UG/L)	HEPTA-CHLOR, TOTAL (UG/L)	HEPTA-CHLOR EPOXIDE TOTAL (UG/L)	LINDANE TOTAL (UG/L)	MALA-THION, TOTAL (UG/L)	METHO-MYL TOTAL (UG/L)	METH-OXY-CHLOR, TOTAL (UG/L)	METHYL PARA-THION, TOTAL (UG/L)	METHYL TRI-THION, TOTAL (UG/L)
ADAMS											
450158089364701	80-06-11	--	.00	--	--	--	.00	.0	--	.00	.00
	80-09-03	--	.00	--	--	--	.00	.0	--	.00	.00
CHIPPEWA											
450512091385101	80-06-18	.00	.00	.00	.00	.00	.00	--	.00	.00	.00
COLUMBIA											
433714089012201	80-07-08	.00	.00	.00	.00	.00	.00	--	.00	.00	.00
IOWA											
430954089592901	80-07-08	.00	.00	.00	.00	.00	.00	--	.00	.00	.00
PORTAGE											
441702089310401	80-06-11	--	.00	--	--	--	.00	.0	--	.00	.00
	80-09-04	--	.00	--	--	--	.00	.0	--	.00	.00
442329089282001	80-06-17	.00	.00	.00	.00	.00	.00	--	.00	.00	.00
442330089405801	80-09-05	.00	.00	.00	.00	.00	.00	.0	.00	.00	.00
442330089413601	80-09-05	.00	.00	.00	.00	.00	.00	.0	.00	.00	.00
442850089290101	80-06-17	.00	.00	.00	.00	.00	.00	--	.00	.00	.00
443806089180001	80-06-17	.00	.00	.00	.00	.00	.00	--	.00	.00	.00

QUALITY OF GROUND WATER

WATER-QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

STATION NUMBER	DATE OF SAMPLE	MIREX, TOTAL (UG/L)	PARATHION, TOTAL (UG/L)	PERTHANE, TOTAL (UG/L)	PROPAZINE, TOTAL (UG/L)	PROPHAM, TOTAL (UG/L)	PROMETHONE, TOTAL (UG/L)	PROMETHYNE, TOTAL (UG/L)	SILVEX, TOTAL (UG/L)	SIMAZINE, TOTAL (UG/L)	SIMETHONE, TOTAL (UG/L)
ADAMS											
450158089364701	80-06-11	--	.00	--	--	.0	.0	.0	--	.0	--
	80-09-03	--	.00	--	.000	--	.0	.0	--	.0	--
CHIPPEWA											
450512091385101	80-06-18	.00	.00	.00	--	--	--	--	.00	--	--
COLUMBIA											
433714089012201	80-07-08	.00	.00	.00	--	--	--	--	.00	--	--
IOWA											
430954089592901	80-07-08	.00	.00	.00	--	--	--	--	.00	--	--
PORTAGE											
441702089310401	80-06-11	--	.00	--	--	.0	.0	.0	--	.0	--
	80-09-04	--	.00	--	.000	--	.0	.0	--	.0	.00
442329089282001	80-06-17	.00	.00	.00	--	--	--	--	.00	--	--
442330089405801	80-09-05	.00	.00	.00	.000	--	.0	.0	--	.0	--
442330089413601	80-09-05	.00	.00	.00	.000	--	.0	.0	--	.0	--
442850089290101	80-06-17	.00	.00	.00	--	--	--	--	.00	--	--
443806089180001	80-06-17	.00	.00	.00	--	--	--	--	.00	--	--

STATION NUMBER	DATE OF SAMPLE	SIMETHYNE, TOTAL (UG/L)	SEVIN, TOTAL (UG/L)	TRITHION, TOTAL (UG/L)	2,4-D, TOTAL (UG/L)	2,4,5-T, TOTAL (UG/L)
ADAMS						
450158089364701	80-06-11	.0	.00	.00	--	--
	80-09-03	.0	.00	.00	--	--
CHIPPEWA						
450512091385101	80-06-18	--	--	.00	.00	.00
COLUMBIA						
433714089012201	80-07-08	--	--	.00	.00	.00
IOWA						
430954089592901	80-07-08	--	--	.00	.00	.00
PORTAGE						
441702089310401	80-06-11	.0	.00	.00	--	--
	80-09-04	.0	.00	.00	--	--
442329089282001	80-06-17	--	--	.00	.00	.00
442330089405801	80-09-05	.0	.00	.00	--	--
442330089413601	80-09-05	.0	.00	.00	--	--
442850089290101	80-06-17	--	--	.00	.00	.00
443806089180001	80-06-17	--	--	.00	.00	.00

The following streamflow stations have been discontinued in Wisconsin. Continuous daily streamflow records were collected and published for the period of record shown for each station.

Station number	Station name	Drainage area (sq mi)	Period of record
04024314	Little Balsam Creek at Patzau, WI	5.00	1976-78
04024315	Little Balsam Creek near Patzau, WI	5.18	1975-78
04024318	Little Balsam Creek Tributary near Patzau, WI	0.54	1976-78
04024320	Little Balsam Creek near Foxboro, WI	6.27	1977-78
04025000	Amnicon River near Poplar (Amnicon Falls), WI	112	1914-16
04026000	Bois Brule (Brule) River near Brule, WI	153	1914-17
04026300	Sioux River near Washburn, WI	14.9	1964-66
04026347	Pine Creek at Moquah, WI	5.90	1975-78
04026348	Pine Creek Tributary at Moquah, WI	0.57	1976-78
04026349	Pine Creek near Moquah, WI	21.5	1975-78
04026450	Bad River near Mellen, WI	83.4	1970-75
04026500	Bad River at Mellen, WI	101	1948-55
04026870	Alder Creek near Upsen, WI	22.3	1972-77
04028500	Montreal River near Kimball, WI	109	1924-25
04029000	West Fork Montreal River at Gile, WI	78	1918-25, 1942-47
04029500	West Fork Montreal River near Kimball, WI	96	1924-25
04030000	Montreal River near Saxon, WI	262	1938-70
04063640	North Branch Pine River at Windsor Dam nr Alvin, WI	29.4	1966-68
04064000	Pine River near Florence, WI	500	1913-23
04064500	Pine River below Pine River Powerplant near Florence, WI	528	1923-75
04066500	Pike River at Amberg, WI	253	1914-70
04068000	Peshtigo River at High Falls near Crivitz, WI	554	1912-57
04072000	Suamico River at Suamico, WI	57.0	1951-52
04072750	Lawrence Creek near Westfield, WI	16.0	1967-73
04073050	Grand River near Kingston, WI	73.7	1968-75
04073405	West Branch White River near Wautoma, WI	43	1963-65
04074548	Swamp Creek Below Rice Lake at Mole Lake, WI	56.7	1977-79
04075000	Wolf River near White Lake, WI	482	1935-37
04075200	Evergreen Creek near Langlade, WI	8.0	1964-73
04075500	Wolf River above West Branch Wolf River, WI	633	1927-62
04076000	West Branch Wolf River at Neopit, WI	108	1911-17
04076500	West Branch Wolf River near Keshena, WI	170	1928-31
04079602	Little Wolf River near Galloway, WI	22.5	1973-79
04079700	Spaulding Creek near Big Falls, WI	4.9	1964-66
04080000	Little Wolf River at Royalton, WI	514	1914-70
04080950	Emmons Creek near Rural, WI	27	1968-74
04080976	Storm Sewer to Mirror Lake at Waupaca, WI	0.04	1971-74
04081000	Waupaca River near Waupaca (Weyauwega), WI	272	1916-66
04081800	Daggets Creek at Butte Des Morts, WI	10.3	1976-77
04083000	West Branch Fond du Lac River at Fond du Lac, WI	84.5	1939-54
04083500	East Branch Fond du Lac River near Fond du Lac, WI	77.9	1939-54
04084200	Brotherton Creek at Brothertown, WI	5.59	1976-77
04087018	Menomonee River at Germantown, WI	19.0	1974-77
04087019	Jefferson Park Drainageway at Germantown, WI	1.82	1976-78
04087050	Little Menomonee River near Freistadt, WI	8.00	1974-79
04087060	Noyes Creek at Milwaukee, WI	1.94	1974-79
04087070	Little Menomonee River at Milwaukee, WI	19.7	1974-77
04087088	Underwood Creek at Wauwatosa, WI	18.2	1974-79
04087119	Honey Creek at Wauwatosa, WI	10.3	1974-80
04087125	Schoonmaker Creek at Wauwatosa, WI	1.94	1974-78
04087130	Hawley Road Storm Sewer at Milwaukee, WI	1.83	1975-77
05332000	Namekagon River at Trego, WI	460	1914-27
05332500	Namekagon River near Trego, WI	503	1927-70
05335010	Loon Creek near Danbury, WI	16.9	1970-71
05335380	Bashaw Brook near Shell Lake, WI	24.9	1964-66
05335500	Clam River near Webster, WI	364	1940-42
05336000	St. Croix River near Grantsburg, WI	2,820	1923-70
05339000	Wood River near Grantsburg, WI	190	1939
05341500	Apple River near Somerset, WI	555	1901-70
05342000	Kinnickinnic River near River Falls, WI	167	1916-21
05355500	West Fork Chippewa River at Lessards, nr Winter, WI	577	1911-16
05357500	Flambeau River at Flambeau Flowage (Flambeau Reservoir), WI	666	1927-61
05358000	Flambeau River near Butternut, WI	737	1914-38
05358300	Pine Creek near Oxbo, WI	37.8	1970-75
05358500	Flambeau River at Babbs Island near Winter, WI	1,000	1929-75
05359500	South Fork Flambeau River near Phillips, WI	615	1929-75
05359600	Price Creek near Phillips, WI	14.7	1964-66
05360000	Flambeau River near (at) Ladysmith, WI	1,823	1903-6, 1914-61
05361000	Chippewa River near Holcombe, WI	3,790	1944-49
05361500	South Fork Jump River near Ogema, WI	328	1944-54
05362500	Chippewa River at Holcombe, WI	4,700	1942-49
05363000	Fisher River at (near) Holcombe, WI	76	1944-45
05363500	O'Neil Creek near Chippewa Falls, WI	67.1	1944-45
05363700	Yellow River near Hannibal, WI	91.2	1962-63
05364000	Yellow River at Cadott, WI	351	1942-61

LIST OF DISCONTINUED STATIONS -- CONTINUED

05364500	Duncan Creek at Blcomer, WI	49.2	1943-51
05365000	Duncan Creek at Chippewa Falls, WI	114	1942-55
05366000	Eau Claire River near Augusta, WI	500	1914-26
05366500	Eau Claire River near Fall Creek, WI	758	1942-55
05367000	Chippewa River at (near) Eau Claire, WI	6,630	1902-9, 1944-54
05367425	Red Cedar River near Cameron, WI	450	1966-70
05367426	Red Cedar River near Cameron, WI	453	1971-73
05367500	Red Cedar River near Colfax, WI	1,100	1914-61
05370500	Eau Galle River at Elmwood, WI	91.9	1942-53
05372000	Buffalo River near Tell, WI	406	1932-51
05379400	Trempealeau River at Arcadia, WI	552	1960-77
05380000	Trempealeau River near Trempealeau, WI	722	1931-34
05380900	Poplar River near Owen, WI	157	1964-66
05383000	LaCrosse River near West Salem, WI	398	1913-70
05387100	North Fork Bad Axe River near Genca, WI	68.8	1964-66
05390180	Wisconsin River at Conover, WI	176	1966-71
05391226	Pelican River near Rhinelander, WI	101	1976-79
05392000	Wisconsin River at Whirlpool Rapids, near Rhinelander, WI	1,200	1905-61
05392350	Bearskin Creek near Harshaw, WI	27.8	1964-66
05392400	Tomahawk River near Bradley, WI	422	1914-27, 1928-29
05393000	Tomahawk River at Bradley, WI	545	1930-73
05394000	New Wood River near Merrill, WI	83.1	1952-61
05396000	Rib River at Rib Falls, WI	309	1925-57
05396500	Little Rib River near Wausau, WI	76	1914-16
05397000	East Branch Eau Claire River near Antigo, WI	75	1949-55
05398500	Bull Junior Creek (Bull Creek Junior) near Rothschild, WI	26.4	1944-51
05399000	Big Eau Pleine River near Colby, WI	79	1941-54
05399431	Hamann Creek near Stratford, WI	11.3	1976-79
05400000	Wisconsin River at Knowlton, WI	4,520	1920-42
05400500	Plover River near Stevens Point, WI	136	1914-19, 1944-51
05400600	Little Plover River near Arnett, WI	1.5	1959-75
05400840	Fourmile Creek near Kellner, WI	51	1964-67
05400853	Buena Vista Creek near Kellner, WI	44	1964-67
05401020	Tenmile Creek Ditch 5 near Bancroft, WI	8.8	1964-73
05401050	Tenmile Creek near Nekocsa, WI	73.3	1963-79
05401100	Fourteenmile Creek near New Rome, WI	91.9	1964-79
05401500	Wisconsin River near Necedah, WI	5,860	1902-14, 1944-50
05401510	Big Roche a Cri Creek near Hancock, WI	9.5	1963-67
05401535	Big Roche a Cri Creek near Adams, WI	52.8	1963-78
05402500	Yellow River at Sprague, WI	420	1926-40
05403000	Yellow River at Necedah, WI	526	1940-57
05403630	Hulbert Creek near Wisconsin Dells, WI	11.2	1970-77
05404200	Narrows Creek at Loganville, WI	40.0	1964-66
05406000	Wisconsin River at Prairie du Sac, WI	8,950	1946-53
05406573	Trout Creek at Confluence with Arneson Creek near Barneveld, WI	8.37	1975-79
05406574	Trout Creek at Twin Parks Dam 8 nr Barneveld, WI	9.02	1975-79
05406575	Trout Creek at County Highway T nr Barneveld, WI	12.1	1975-79
05406577	Trout Creek near Ridgeway, WI	13.5	1975-79
05406590	Knight Hollow Creek near Arena, WI	7.57	1976-77
05406640	Otter Creek near Highland, WI	16.6	1968-69, 1970-75
05407500	Kickapoo River at Ontario, WI	151	1938-39, 1973-77
05408500	Knapp Creek near Bloomingdale, WI	8.47	1954-69
05409000	West Fork Kickapoo River near Readstown, WI	106	1938-39
05409500	Kickapoo River at Soldiers Grove, WI	530	1938-39
05409830	North Fork Nederic Creek near Gays Mills, WI	2.21	1967-79
05410000	Kickapoo River at Gays Mills, WI	617	1913-34, 1964-77
05413400	Pigeon Creek near Lancaster, WI	6.81	1964-66
05423500	South Branch Rock River at Waupun, WI	62.8	1948-69
05424000	East Branch Rock River near Mayville, WI	179	1949-70
05425537	Johnson Creek near Johnson Creek, WI	1.13	1978-79
05425539	Johnson Creek near Johnson Creek, WI	13.3	1978-79
05425928	Pratt Creek near Juneau, WI	3.54	1978-80
05426500	Whitewater Creek near Whitewater, WI	7.2	1926-28, 1946-54
05429040	Manitou Way Storm Sewer at Madison, WI	0.22	1970-77
05429050	Nakoma Storm Sewer at Madison, WI	2.35	1971-77
05429118	Lake Wingra at Madison, WI	6.08	1970-79
05429120	Lake Wingra Outlet at Madison, WI	6.08	1970-77
05430000	Yahara River near Edgerton, WI	459	1916-17
05430100	Badfish Creek near Stoughton, WI	43.5	1956-66
05433000	East Branch Pecatonica River nr Blanchardville, WI	221	1939-79
05434000	Pecatonica River at Dill, WI	951	1914-19
05433510	Steiner Branch near Waldwick, WI	5.9	1977-79

DEFINITION OF TERMS

Terms used in this report with reference to streamflow, water-quality, and other hydrologic data are defined below. See also the conversion table for inch-pound units and International System (SI) units on the inside of the back cover.

Acre-foot (AC-FT, acre-ft) is the quantity of water required to cover 1 acre to a depth of 1 foot. It is the equivalent of 43,560 cubic feet, 325,851 gallons, or 1,233 cubic meters.

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

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

Bacteria are microscopic, unicellular organisms, typically spherical, rod-like, or spiral and threadlike in shape, and often clumped into colonies. Some bacteria cause disease; others perform essential roles in the natural recycling of materials such as decomposing organic matter into forms available for reuse by plants.

Total coliform bacteria are characterized as aerobic or facultative anaerobic, gram-negative, nonspore-forming, rod-shaped bacteria that ferment lactose, with gas formation within 48 hours at 35°C. In the laboratory these bacteria are defined as those organisms that produce colonies having a golden-green metallic sheen within 24 hours when incubated at 35°C + 1.0°C on M-Endo medium (culture medium). Their concentrations are expressed as number of colonies per 100 milliliters (ml) of sample.

Fecal coliform bacteria are present in the intestines of warmblooded animals and are used to determine the sanitary quality of the water. In the laboratory they are defined as those organisms that produce blue colonies within 24 hours when incubated at 44.5°C + 0.2°C on FC medium (culture medium). Their concentrations are expressed as number of colonies per 100 ml of sample.

Fecal streptococcal bacteria are also found in the intestines of warmblooded animals. Their presence in water is used to verify fecal pollution. They are characterized as gram-positive, spherical bacteria capable of growth in brain-heart infusion broth. In the laboratory they are defined as those organisms that produce red or pink colonies within 48 hours at 35°C + 1.0°C on M-enterococcus medium (culture medium). Their concentrations are expressed as number of colonies per 100 ml of sample.

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

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

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

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

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

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

Chlorophyll is the green pigment in plants. Chlorophyll a and b are the two most common types in plants.

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

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

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

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

Discharge is the volume of fluid or mass of suspended sediment passing a given point in a given period of time.

Mean discharge (MEAN) is the arithmetic average of all daily mean discharges for a specific period of time.

Instantaneous discharge is the discharge at a particular time.

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

Drainage area of a stream at a specified location is measured in a horizontal plane and constitutes an area enclosed by a topographic divide from which surface runoff above the specified point drains by gravity into the stream. Values of the drainage areas given herein include closed basins and non-contributing areas within the basin, as noted.

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

Gaging station is a particular site on a stream, lake, or reservoir where systematic hydrologic data are collected.

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

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

Micrograms per gram ($\mu\text{G/G}$, $\mu\text{g/g}$) indicates the concentration of a chemical constituent as the mass (micrograms) of that constituent per unit mass (gram) of sediment.

Micrograms per kilogram ($\mu\text{G/KG}$, $\mu\text{g/kg}$) indicates the concentration of a chemical constituent as mass (micrograms) of that constituent per unit mass (kilogram) of sediment.

Micrograms per liter ($\mu\text{g/L}$, $\mu\text{g/L}$) indicates the concentration of a chemical constituent as the mass (micrograms) of that constituent per unit volume (liter) of water. One thousand micrograms per liter is equivalent to 1 milligram per liter.

Milligrams per liter (MG/L , mg/L) indicates the concentration of a chemical constituent as the mass (milligrams) of that constituent per unit volume (liter) of water. Suspended sediment concentration also is expressed in mg/L , as the weight of sediment per liter of water-sediment mixture.

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

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

Cells/volume designates the number of cells of an organism counted by using a microscope and grid. Planktonic organisms are often multicellular and are tabulated as the number of cells per volume of the sample, usually milliliters (ml) or liters (L).

Partial-record station is a site for the systematic collection of limited streamflow or water-quality data over a period of years.

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

Particle-size classification for this report is based on recommendations of the American Geophysical Union Subcommittee on Sediment Terminology. The classification is as follows:

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

The data reported herein may not represent all particle sizes in transport in the stream. Most organic material is removed from the sample, which undergoes mechanical and chemical dispersion before analysis in distilled water. Chemical dispersion is not used for native-water analyses.

Periphyton are microorganisms that attach themselves to and grow upon solid surfaces. They are primarily algae, but also include bacteria, fungi, protozoa, rotifers, and other small organisms. Periphyton is a useful indicator of water quality.

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

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

Plankton is a community of suspended, floating, or weakly swimming organisms that lives in the open waters of lakes and rivers.

Phytoplankton are microscopic plants usually that form part of the plankton. Commonly known as algae, they are the primary food source in the aquatic environment. They depend upon solar radiation and nutrient substances for growth and move with the water currents. Because they are able to incorporate materials from or release them to the surrounding water, phytoplankton have a profound effect upon the water quality.

Blue-green algae are phytoplankton having a blue pigment and green pigment called chlorophyll. Often they are a nuisance in water.

Diatoms are unicellular or colonial algae with a siliceous shell. Their concentration is expressed as number of cells/ml of sample.

Green algae are phytoplankton with chlorophyll pigments similar to those of higher green plants. Some forms produce algal mats or floating "moss" in lakes. Their concentration is expressed as number of cells/ml of sample.

Zooplankton are the animals forming part of the plankton. They can move extensively within the water column, and often can be seen with the unaided eye. Zooplankton are the grazers in the aquatic environment, feeding upon bacteria, phytoplankton, and detritus. As such they are a vital link in the aquatic food chain. The zooplankton community is dominated by small crustaceans and rotifers.

Polychlorinated biphenyls (PCB's) are industrial chemicals composed of biphenyl compounds containing various amounts of chlorine. Their chemical structure is similar to the organochlorine insecticides.

Polychlorinated naphthalenes (PCN's) are industrial chemicals composed of naphthalene compounds containing various amounts of chlorine. Their chemical structure is similar to the organochlorine insecticides.

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

Runoff in inches (IN, in) indicates the depth of water that would cover a drainage area if all runoff for a given time period were uniformly distributed on it.

Sediment originates mostly from disintegrated rocks and is transported by, suspended in, and deposited by water; it includes chemical and biochemical precipitates and decomposed organic material such as humus. Topography, geology, soil type, land cover, land use, quantity and intensity of precipitation, and other environmental factors influence the quantity, characteristics, and cause of sediment in streams.

Suspended sediment is sediment maintained in suspension by turbulent currents or as a colloid.

Suspended-sediment discharge is the quantity of suspended sediment passing through a stream cross section in a unit of time. It is computed by multiplying water discharge times suspended-sediment concentration times 0.0027.

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

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

Sodium-adsorption ratio (SAR) expresses the relative activity of sodium ions in exchange reactions with soil.

Solute is any substance dissolved in water.

Specific conductance is a measure of the ability of water to conduct electrical current as expressed in micromhos per centimeter at 25°C. It is related to the number and specific types of ions in solution, and is useful for approximating the concentration of dissolved solids in the water. Commonly, the concentration of dissolved solids (in milligrams per liter) is about 65 percent of the specific conductance.

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

Streamflow uniquely describes discharge in the natural channel of a surface stream course as opposed to the term "discharge", which can be applied to the flow of a canal. Unlike the term "runoff", streamflow may be applied to discharge whether it is affected by diversion or regulation or not.

Substrate is the surface upon which an organism lives.

Natural substrate is any natural solid surface, emersed or submersed upon which an organism lives. A rock or tree are examples.

Artificial substrate, such as a basket sampler, a multiplate sampler (made of hardboard) for benthic organism collection, or a polyethylene strip for collecting periphyton, is a device placed in a stream or lake for colonization of organisms. Its use simplifies the community structure by standardizing the substrate from which each sample is taken.

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

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

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

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

Taxonomy is the division of biology concerned with the classification and naming of organisms. Classification is based upon a hierarchical scheme beginning with kingdom and ending with species. For example, the taxonomy of the dragonfly *Anax junius* is:

Kingdom.....Animal
Phylum.....Arthropoda
Class.....Insecta
Order.....Odonata
Family.....Aeshnidae
Genus.....*Anax*
Species.....*junius*

Thermograph is an instrument that continuously and automatically records temperature. "Temperature recorder" is used here to refer to a thermograph that automatically records water temperatures on paper tape.

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

Tons per day is the measure of a substance that passes a stream section in solution or suspension during a 24-hour period. It is computed by multiplying the concentration of the substance (in milligrams per liter) by 0.0027 times the discharge of the stream (in cubic feet per second).

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

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

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

WRD is the abbreviation for "Water-Resources Data" used in the summary REVISIONS paragraph to indicate previously published State annual basic data reports.

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

PUBLICATIONS ON TECHNIQUES OF WATER-RESOURCES INVESTIGATIONS

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

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

- 1-D1. *Water temperature--influential factors, field measurement, and data presentation*, by H. H. Stevens, Jr., J. F. Ficke, and G. F. Smoot: USGS--TWRI Book 1, Chapter D1. 1975. 65 pages.
- 1-D2. *Guidelines for collection and field analysis of ground-water samples for selected unstable constituents*, by W. W. Wood: USGS--TWRI Book 1, Chapter D2. 1976. 24 pages.
- 2-D1. *Application of surface geophysics to ground-water investigations*, by A. A. R. Zohdy, G. P. Eaton, and D. R. Mabey: USGS--TWRI Book 2, Chapter D1. 1974. 116 pages.
- 2-E1. *Application of borehole geophysics to water-resources investigations*, by W. S. Keys and L. M. MacCary: USGS--TWRI Book 2, Chapter E1. 1971. 126 pages.
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- 3-A3. *Measurement of peak discharge at culverts by indirect methods*, by G. L. Bodhaine: USGS--TWRI Book 3, Chapter A3. 1968. 60 pages.
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- 3-A5. *Measurement of peak discharge at dams by indirect methods*, by Harry Hulsing: USGS--TWRI Book 3, Chapter A5. 1967. 29 pages.
- 3-A6. *General procedure for gaging streams*, by R. W. Carter and Jacob Davidian: USGS--TWRI Book 3, Chapter A6. 1968. 13 pages.
- 3-A7. *Stage measurements at gaging stations*, by T. J. Buchanan and W. P. Somers: USGS--TWRI Book 3, Chapter A7. 1968. 28 pages.
- 3-A8. *Discharge measurements at gaging stations*, by T. J. Buchanan and W. P. Somers: USGS--TWRI Book 3, Chapter A8. 1969. 65 pages.
- 3-A11. *Measurement of discharge by moving-boat method*, by G. F. Smoot and C. E. Novak: USGS--TWRI Book 3, Chapter A11. 1969. 22 pages.
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- 3-B2. *Introduction to ground-water hydraulics, a programed text for self-instruction*, by G. D. Bennett: USGS--TWRI Book 3, Chapter B2. 1976. 172 pages.
- 3-C1. *Fluvial sediment concepts*, by H. P. Guy: USGS--TWRI Book 3, Chapter C1. 1970. 55 pages.
- 3-C2. *Field methods for measurement of fluvial sediment*, by H. P. Guy and V. W. Norman: USGS--TWRI Book 3, Chapter C2. 1970. 59 pages.
- 3-C3. *Computation of fluvial-sediment discharge*, by George Porterfield: USGS--TWRI Book 3, Chapter C3. 1972. 66 pages.
- 4-A1. *Some statistical tools in hydrology*, by H. C. Riggs: USGS--TWRI Book 4, Chapter A1. 1968. 39 pages.
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- 5-A2. *Determination of minor elements in water by emission spectroscopy*, by P. R. Barnett and E. C. Mallory, Jr.: USGS--TWRI Book 5, Chapter A2. 1971. 31 pages.
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- 5-A4. *Methods for collection and analysis of aquatic biological and microbiological samples*, edited by P. E. Greeson, T. A. Ehlike, G. A. Irwin, B. W. Lium, and K. V. Slack: USGS--TWRI Book 5, Chapter A4. 1977. 332 pages.
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- 5-C1. *Laboratory theory and methods for sediment analysis*, by H. P. Guy: USGS--TWRI Book 5, Chapter C1. 1969. 58 pages.
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- 7-C2. *Computer model of two-dimensional solute transport and dispersion in ground water*, by L. F. Konikow and J. D. Bredehoeft: USGS--TWRI Book 7, Chapter C2. 1978. 90 pages.
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- 8-B2. *Calibration and maintenance of vertical-axis type current meters*, by G. F. Smoot and C. E. Novak: USGS--TWRI Book 8, Chapter B2. 1968. 15 pages.

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FACTORS FOR CONVERTING INCH-POUND UNITS TO INTERNATIONAL SYSTEM UNITS (SI)

The following factors may be used to convert the inch-pound units published herein to the International System of Units (SI). This report contains both the inch-pound and SI unit equivalents in the station manuscript descriptions.

Multiply inch-pound units	By	To obtain SI units
<i>Length</i>		
inches (in)	2.54×10^1	millimeters (mm)
	2.54×10^{-2}	meters (m)
feet (ft)	3.048×10^{-1}	meters (m)
miles (mi)	1.609×10^0	kilometers (km)
<i>Area</i>		
acres	4.047×10^3	square meters (m ²)
	4.047×10^{-1}	square hectometers (hm ²)
	4.047×10^{-3}	square kilometers (km ²)
square miles (mi ²)	2.590×10^0	square kilometers (km ²)
<i>Volume</i>		
gallons (gal)	3.785×10^0	liters (L)
	3.785×10^0	cubic decimeters (dm ³)
	3.785×10^{-3}	cubic meters (m ³)
million gallons	3.785×10^3	cubic meters (m ³)
	3.785×10^{-3}	cubic hectometers (hm ³)
cubic feet (ft ³)	2.832×10^1	cubic decimeters (dm ³)
	2.832×10^{-2}	cubic meters (m ³)
cfs-days	2.447×10^3	cubic meters (m ³)
	2.447×10^{-3}	cubic hectometers (hm ³)
acre-feet (acre-ft)	1.233×10^3	cubic meters (m ³)
	1.233×10^{-3}	cubic hectometers (hm ³)
	1.233×10^{-6}	cubic kilometers (km ³)
<i>Flow</i>		
cubic feet per second (ft ³ /s)	2.832×10^1	liters per second (L/s)
	2.832×10^1	cubic decimeters per second (dm ³ /s)
	2.832×10^{-2}	cubic meters per second (m ³ /s)
gallons per minute (gal/min)	6.309×10^{-2}	liters per second (L/s)
	6.309×10^{-2}	cubic decimeters per second (dm ³ /s)
	6.309×10^{-5}	cubic meters per second (m ³ /s)
million gallons per day	4.381×10^1	cubic decimeters per second (dm ³ /s)
	4.381×10^{-2}	cubic meters per second (m ³ /s)
<i>Mass</i>		
tons (short)	9.072×10^{-1}	megagrams (Mg) or metric tons

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